



Symbol Key

Application

- Interior** Product suitable for interior use
- Exterior** Product suitable for exterior use according to IP rating

Cover Effect

- Homogenous** Full diffusion with no visible LED nodes when illuminated
- Spotting** LED nodes visible on diffused cover when illuminated

LED Types

- n-line** Full Spectrum high CRI LED, replicating natural daylight
- s-line** Premium LED for high-end specification, tight binning with high CRI
- e-line** Economy specification LED with high CRI
- h-line** Constant Voltage Lensed High Power LED
- h-line** Constant Current Lensed High Power LED

Dynamic LED

- RGB** Red, Green & Blue dynamic LED colour mixing
- RGBW** Red, Green, Blue & White dynamic LED colour mixing
- LEDmix** Dynamic white 2-Channel LED colour mixing

Ingress Protection

- IP68** Suitable for underwater use

Product Category

- Linear** KKDC range of rigid Linear LED strips & housings
- Flexible** KKDC range of Flexible LED strips & housings
- High Output** KKDC range of High Power LED strips & housings
- Spotlights** KKDC range of Spotlighting products
- General Lighting** KKDC range of General Lighting luminaires
- Power** KKDC range of Power & Control options



Product Page Description

- Product family housing name
- Family photo image (not all variants)
- Family icons and data
- Family Polar Curve Diagram (based on 500mm or closest samples)
- Family Technical Drawing (Metric & Imperial)
- Family Section Diagram 1:1 scale
- Available LED type options
- Product names & data chart
- Images of available LED strip options

The diagram illustrates the components of a product page description for a linear LED strip. It includes:

- 1 TIMI**: A photograph of the LED strip with numbered callouts.
- 2**: A photograph of the LED strip showing the LED nodes.
- 3**: A table of technical specifications including Beam Angle, IP Rating, Power, and Product Data.
- 4**: A Polar Curve Diagram showing the beam spread.
- 5**: A technical drawing showing the strip's dimensions and mounting details.
- 6**: A section diagram showing the internal components of the strip.
- 7**: A table of LED Options showing different color and power configurations.
- 8**: A table of Product Names & Data Chart listing various product variants.
- 9**: A series of small images showing different LED strip options.

KKDC products and manufacturing processes are assessed and certified to comply with international standards. Certification and accreditation information is published both here and on our website – www.kkdc.lighting. Please consult your local KKDC branch or distributor with any queries relating to standards and accreditation for specific KKDC products or territories. Where KKDC distribute products produced by 3rd parties – please consult the original manufacturer's product specification details for information on safety compliance and performance standards.

Key Product Standards

- CE (DoC)** European safety standard confirming products conform to relevant EU Legislation.
- EN 60598** Luminaires-part 1: General requirements and tests – Extra Low Voltage Safety (SELV).
- EN 55015** Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.
- EN 61547** Equipment for general lighting purposes. EMC immunity requirements.
- EN 62741:2008** Photobiological safety and optical hazard assessment.
- IEEE 1798-2015** Recommended practices for modulating current in high-brightness LEDs for mitigating health risks to viewers.

Product Listings

UL KKDC have products listed with UL, please visit UL's 'Online Certification Directory' for full details on the listed products – www.ul.com

Product Performance

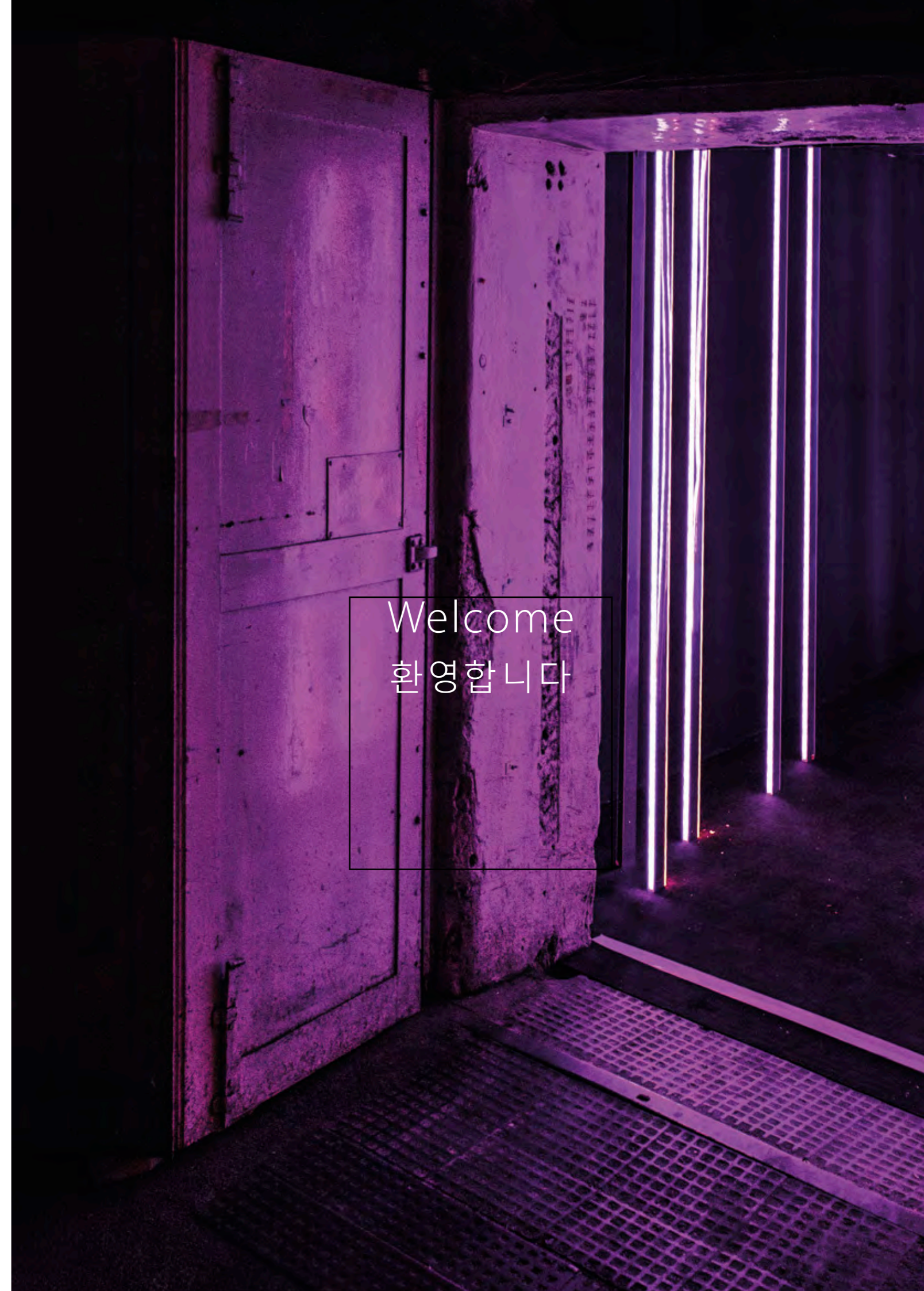
- LM 79-08** Electrical and photometric measurements of solid-state lighting products.
- LM 80-08 and TM 21-11** All KKDC white linear product data has been derived from UKAS accredited LUX-TSI test data. Measuring lumen maintenance of LED light sources and projecting long term lumen maintenance of LED light sources.
- TM-30-15** Method for evaluating light source colour rendition.

Environmental Standards

- RoHS Directive 2002/95/EC** Restriction of hazardous substances in electrical and electronic equipment.
- WEEE Directive** Waste electronic and electrical equipment directive.

KKDC Quality Management Systems

- ISO 14001** Environment management system.
- ISO 9001** Quality management system.





Welcome
환영합니다

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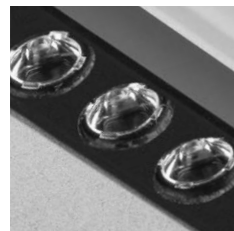
Technical Information

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KKDÖ 2017/18

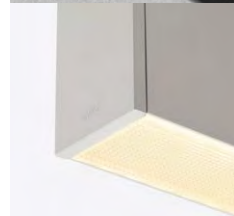
KKDC is pleased to announce the following products and company news for 2017.

NEW Products and Technology



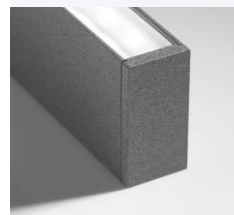
TANA Spot

TANA Spot is a compact and adjustable luminaire designed for shelf display spotlighting and used in conjunction with the popular TANA shelf lighting system.



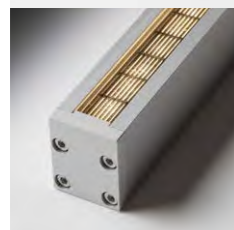
KOH 40

Under the new category 'General Lighting' the KOH family of housings provides larger aperture linear luminaires suitable for interior office environments and commercial spaces. (See page 12).



LiNi BLADE-S

Premium finish linear housing designed to accommodate the new & innovative KKLN-01 linear lens. Can be surface mounted or suspended.



MoMo-L

Expansion of MoMo series, with increased housing height to accommodate 45° Micro Louvre.



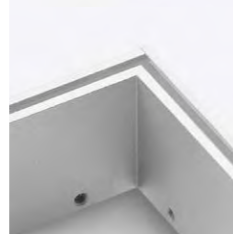
SEN CV

Constant Voltage version of the powerful and versatile SEN exterior high power luminaire.



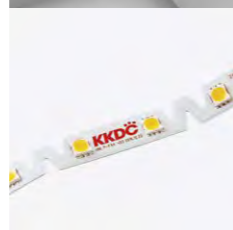
visDIM – Dimming 3X faster

Dimming frequency has been made 3 times faster, from 1.1Khz to 3.3Khz. Greatly improving dimming quality in accordance with IEEE 1789:2015.



Groove X & L

Accessories to Groove Light, Groove-X & Groove-L are new illuminated end forms to create interesting architectural lighting details.



UNI P-FX4

Innovative flexible, universally directional PCB design with self-adhesive backing designed for concealment into curved and organic architectural forms.



n-line (Natural LED)

Complementing the existing s-line & e-line series, the new KKDC n-line technology has been developed to produce highly accurate colour rendition of white shades, inspired by the natural effect of daylight (See page 10).



h-line (High Power LED)

The new h-line icon has been added to clearly define all KKDC 'Power LED' product types.

- Constant Voltage Lensed High Power LED
- Constant Current Lensed High Power LED



Dynamic LED

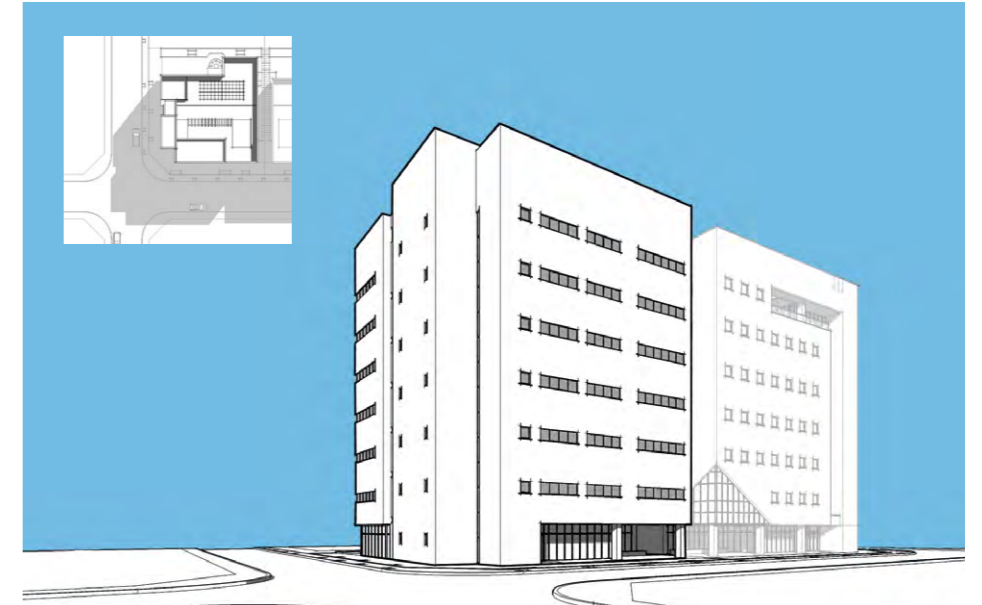
New LEDmix, RGB & RGBW icons to define the range of dynamic LED options.

Company Expansion

NEW KKDC R&D Centre, Seoul

Due for completion in the summer 2017, KKDC is excited to announce the construction of a large Research & Development Facility in Seoul, which is set to house cutting-edge design & testing machinery, including an impressive new 80-inch Integrating Sphere-photometer (LMT Type-C Gonio-photometer) and Sphere-spectroradiometer System (NeoLight PL5000-2M) ensuring continuation of the accurate, accredited data production that KKDC is known for.

Conveniently located for strong international communication links at the new Gangseo-gu district development in Seoul, the new KKDC R&D centre marks a milestone of investment, ensuring KKDC remains at the forefront of future technological trends.



KKDÖ England

KKDC opens the new London based global sales branch supporting local, EU and Middle Eastern territories.



KKDÖ Milan

The KKDC Global sales family continues to expand within Europe, with the opening of KKDC Italy, with new premises in the fashionable Milan.



KKDÖ North America

KKDC continues to drive expansion within the US and North America, with feedback from this important market being accommodated where possible, ensuring these market requirements are targeted within technical data and testing standards.

Website Upgrades

The KKDC website (www.kkdc.lighting) is currently undergoing major upgrade works to ensure it remains a functional specification tool for lighting design professionals, architects & specifiers.

These upgrades include International **language options**, dedicated **US site**, Product **Code Generator** and a client **login area** for access to detailed design data.





About KKDC

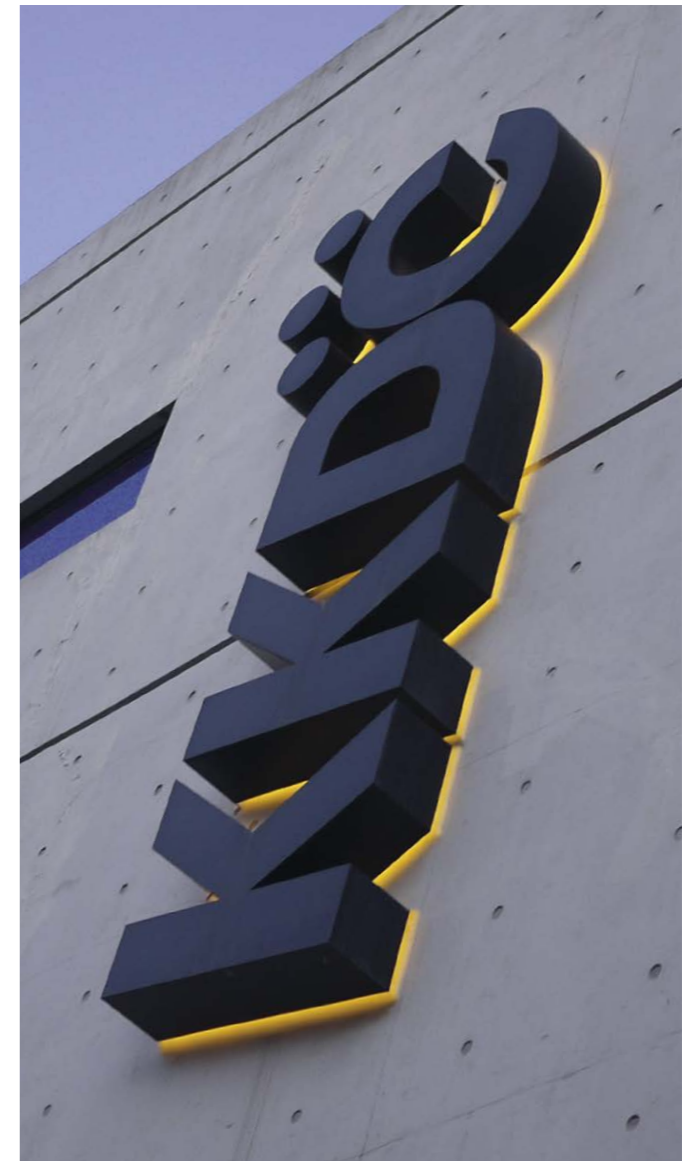
KKDC is an established LED lighting manufacturer based in South Korea. With Research, development and manufacture taking place at our facility outside Seoul. The exciting expansion of a large R&D facility in Seoul opening in 2017 ensures KKDC continues to lead the way with LED technology advancements.

Initially founded in 2003 as an LED lighting and IT company under the name 'Konkuk Data Communication Co Ltd' in South Korea, KKDC was a small company with valuable expertise in three core areas of technology: LED, Hardware & Software Engineering.

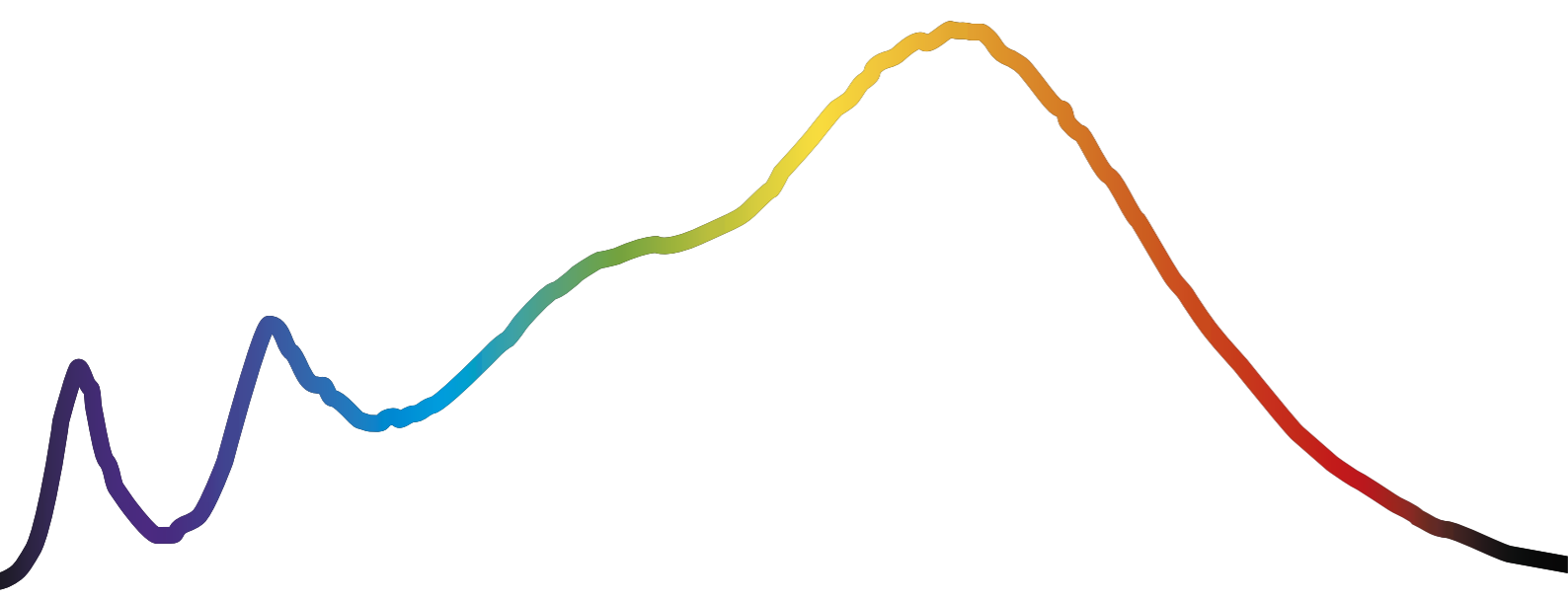
In 2005, founder Jack Choo moved to Sydney, Australia with his family to establish the company name known as KKDC PTY Ltd. From this time, KKDC was able to utilize these three core areas of technical skill and apply to the Architectural Lighting Industry. Building up the KKDC brand and product range with cutting edge technology and minimalist design, KKDC was able to offer professional LED lighting solutions to meet the growing demands of Lighting Designers worldwide. After dramatic international growth KKDC Design House Ltd was established in 2014 in the UK to expand professional design, marketing and technical support for KKDC branches globally.

With extensive in-house electronic engineering expertise from our Korean R&D team and working in partnership with UK based KKDC Design House, KKDC remains uniquely positioned and committed to meeting the growing demands of high-end architectural lighting projects worldwide.

Product sales and technical support services continue to expand with newly opened KKDC Branches in Milan and New Delhi, while KKDC North America continues to focus resources developing the US market, together with our valued network of partners. These established international relationships enable KKDC to benefit from a wealth of experience and meet the needs of our clients across continents.



n-line Full Spectrum LED



NEW

n-line Full Spectrum LED

Full Spectrum LED

- ▶ Emitting light across the entire visible spectrum (red, orange, yellow, green, blue, indigo and violet).

Rendering Natural Colours

- ▶ Allowing objects to appear as they would naturally under daylight.

Illuminating White

- ▶ Render white tones, and soft hues more accurately due to the violet content of the light.
- ▶ Making white look brighter and more vibrant – violet content of light removes the yellow/warm appearance that whites and soft hues often take on under LED lighting.

The Science of n-line

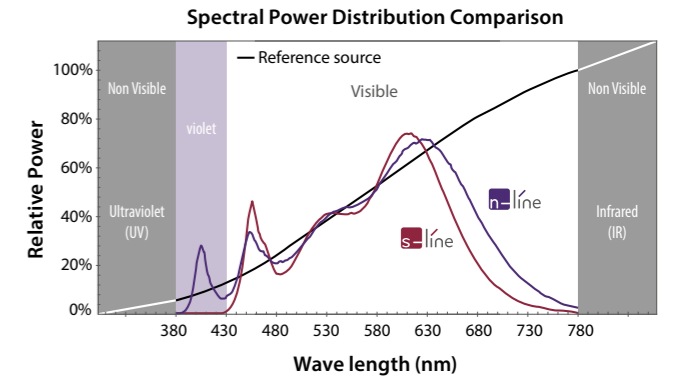
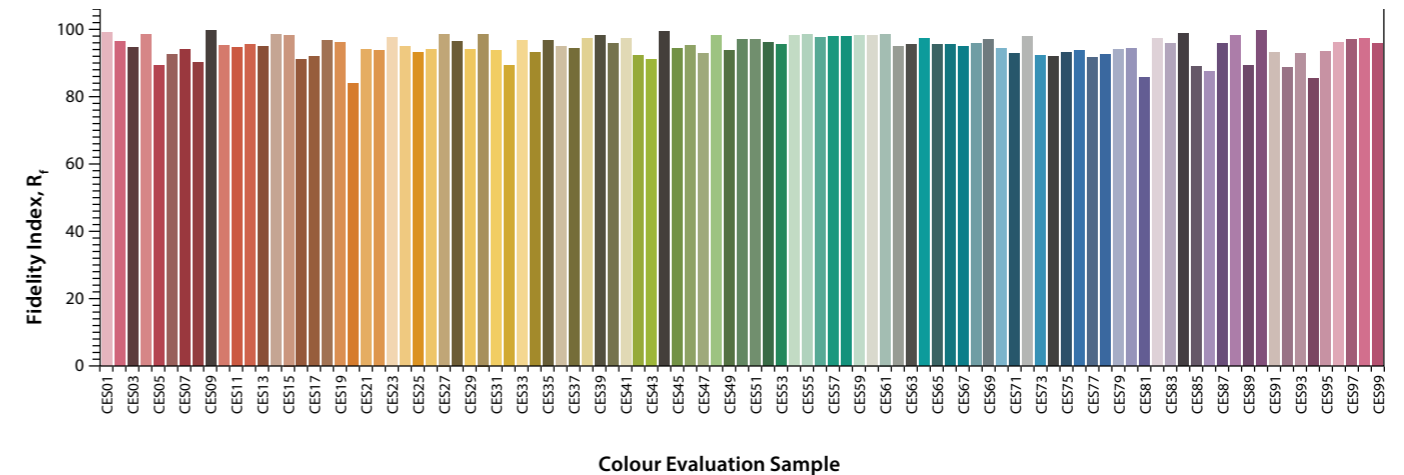
- ▶ Creating light by using Violet and blue based LED chips means light is being generated across the full visible spectrum. In normal Blue based LED lighting, there is no light emitted within the violet spectrum (below 430nm).
- ▶ Emission of violet light (380nm – 430nm) means that light is now interacting with 'optical brightening agents' (OBAs) or 'fluorescent brightening agents' (FBAs). These are chemicals that absorb ultraviolet and violet light and re-emit the light with a longer wavelength. This process greatly affects the rendering of whites and soft hues.
- ▶ OBAs and FBAs can be found naturally in objects such as flowers, eyes and teeth, or generated artificially and added to objects such as fabrics, papers and cosmetics to purposefully affect the appearance of objects under certain lighting.

IESNA TM-30-15 Colour Analysis

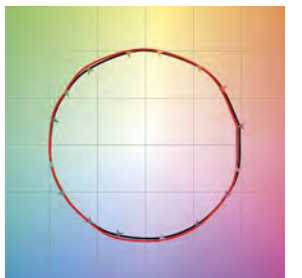
R_f	95
R_g	101

CIE CRI Colour Analysis

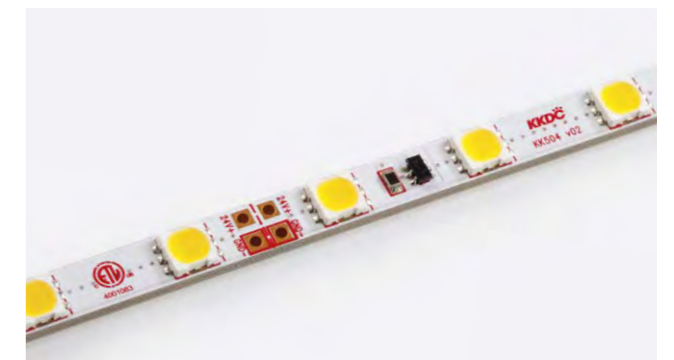
CRI (R_a)	97
R_g	80



Colour Vector Graphic



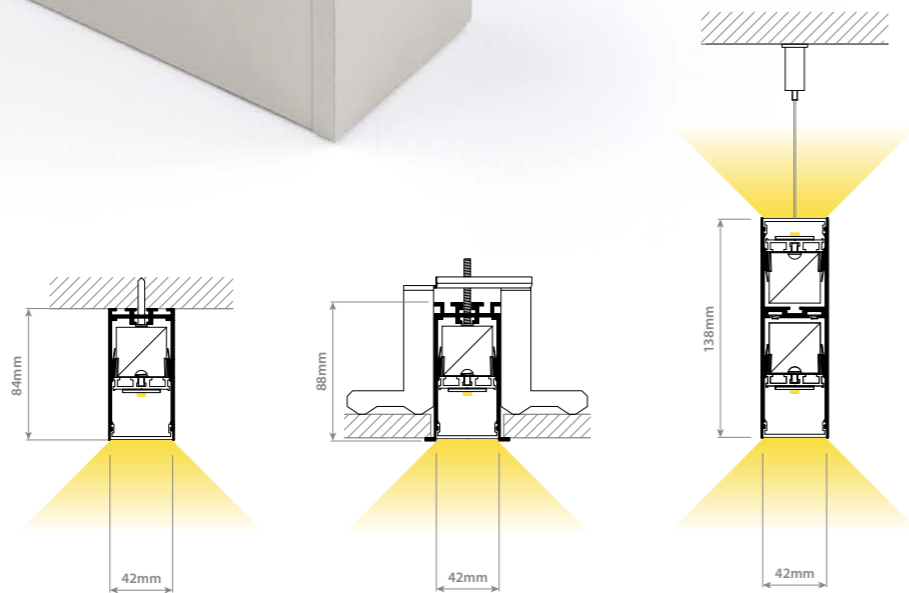
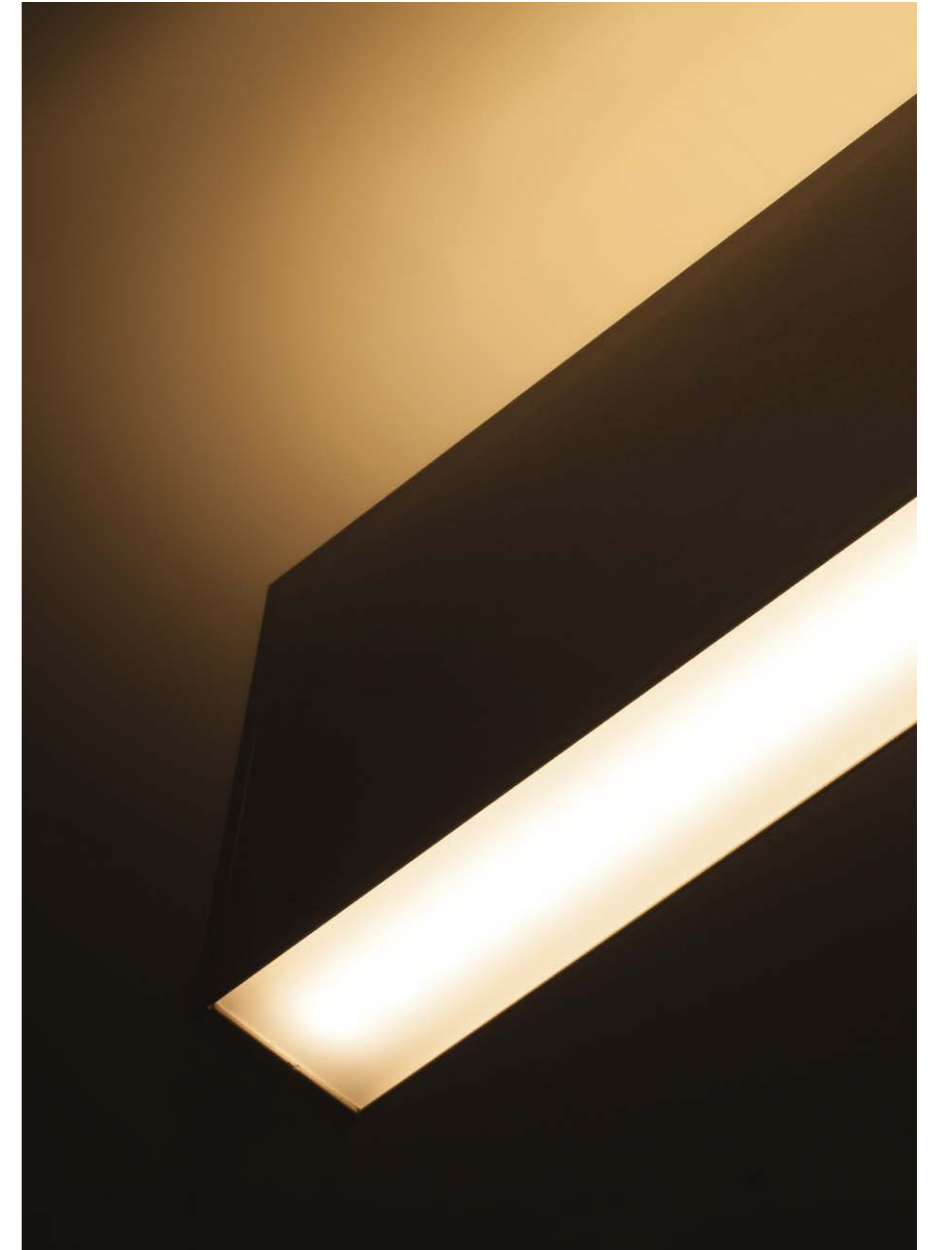
— Reference Source
— Test Source



NEW KOH System



KOH 40-S & KOH 40-R shown (white finish)



General Lighting

Under the new KKDC 'General Lighting' product category, KOH System – soft launched at Light + Building 2016 – is a new range of high power linear profiles with large luminous apertures, suitable for general interior downlighting applications. Recommended for office environments and commercial spaces, KOH products share a range of powerful, linear LED light engines with integral PSU (Switched/1-10V or DALI).

Available as KOH 40, KOH 60 & KOH 100 variants – where the number denotes the luminous aperture width in mm – KOH is available surface mounted, recessed or suspended for direct/indirect lighting.

With KOH 40 initially offered to the market, and KOH 60 & 100 to follow, KOH System will provide an installer friendly and versatile General Lighting Solution.

Key Features:

- ▶ Fully homogenous or Prismatic snap on covers.
- ▶ Optional dark-light louvre baffles.
- ▶ Easy to install and removable LED light engines using special tool.
- ▶ Continuous linear light runs possible with 'quick link' LED modules.
- ▶ Integral PSU for AC input.
- ▶ Wide range of high power LED package options & lenses.

Single Channel LED

- n-line** Full Spectrum, high rendering LED
- s-line** High-end specification with tight binning and high rendering
- e-line** Economy specification with tight binning and high rendering

Dynamic LED

- LEDmix** Dynamic lighting options with 2 channel white LED strips
- RGB** RGB LED
- RGBW** RGBW LED strip using RGB tri-chip and 2.5 step white LED

High Power LED

- h** Constant Voltage Lensed High Power LED
- h^{CC}** Constant Current Lensed High Power LED

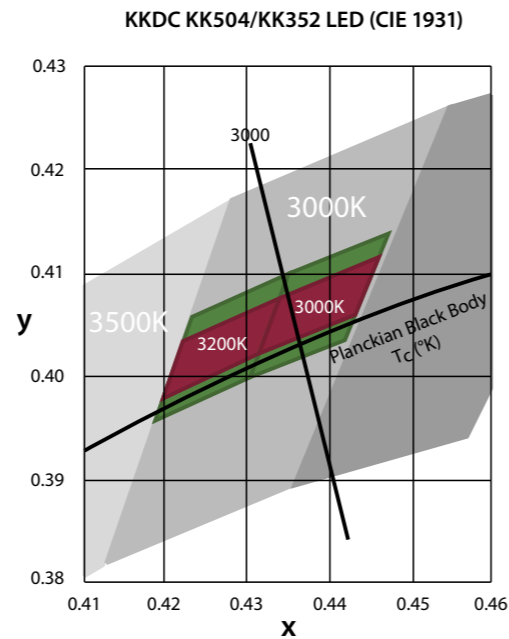


Fig 1. Diagram showing s-line and e-line binning relationship for 3200K and 3000K.

All data is based on 3000K

Single Channel LED

	n	s	e
TM-30-15	R _f 95 R _g 101	R _f 88 R _g 97	R _f 88 R _g 97
CRI	R _a 95 R _y 80	R _s 90 R _y 45+ (≤75 @ 5000K)	R _a 90 R _y 45+ (≤75 @ 5000K)
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	White: 2700K/3000K	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K Single colours: Red/Green/Blue/Orange/Amber	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K
Chip	Toyoda Gosei	Toyoda Gosei	Toyoda Gosei
PCBs	n504/508	s352/s007/s504/s508/s512	e352/e007/e504/e508/e512

Dynamic LED

	LEDmix (Dynamic white)	RGB	RGBW
TM-30-15	R _f 88 R _g 97	R _f 88 R _g 97	R _f 88 R _g 97
CRI	R _a 90 R _y 45+ (≤75 @ 5000K)	R _a 90 R _y 45+ (≤75 @ 5000K)	R _a 90 R _y 45+ (≤75 @ 5000K)
Bin/Step	2.5 Step MacAdam ellipse	5nm tolerance	White 2.5 Step MacAdam ellipse/ RGB: 5nm tolerance
Colours	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K	Red: 620-625nm/ Blue: 455-460nm/ Green: 520-525nm	Red: 620-625nm/ Blue: 455-460nm/ Green: 520-525nm White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K
Chip	Toyoda Gosei	Red Opto tech/Green EPILEDs/Blue ETI	White Toyoda Gosei/Red Opto tech/ Green EPILEDs/Blue ETI
PCBs	d207/d208	dRGB	dRGBW

High Power LED

	h Constant Voltage	h^{CC} Constant Current	h High Power RGB
TM-30-15	R _f 83 (90 @3000K) R _g 95 (102 @3000K)	R _f 95 R _g 101	n/a n/a
CRI	R _a 80 (90 @3000K) R _y 16 (76@3000K)	R _a 80 R _y 26	n/a n/a
Bin/Step	3 Step MacAdam ellipse (4 Step for 5000K)	2 Step MacAdam ellipse (4 Step for 5000K, 6500K)	n/a
Colours	White: 2700K/3000K/3500K/4000K/5000K (90CRI for 2700K, 3000K)	White: 2800K/3000K/3200K/3800K/5000K/6500K (70 CRI for 5000K,6500K) Single colours: Red/Green/Blue	Red: 618-629nm/ Blue: 455-465nm/ Green: 518-535nm
PCBs	h035	h033/h050/h100	h047/h094
Chip	Lumileds	Cree	SEOUL SEMICONDUCTOR

Colour vs Output

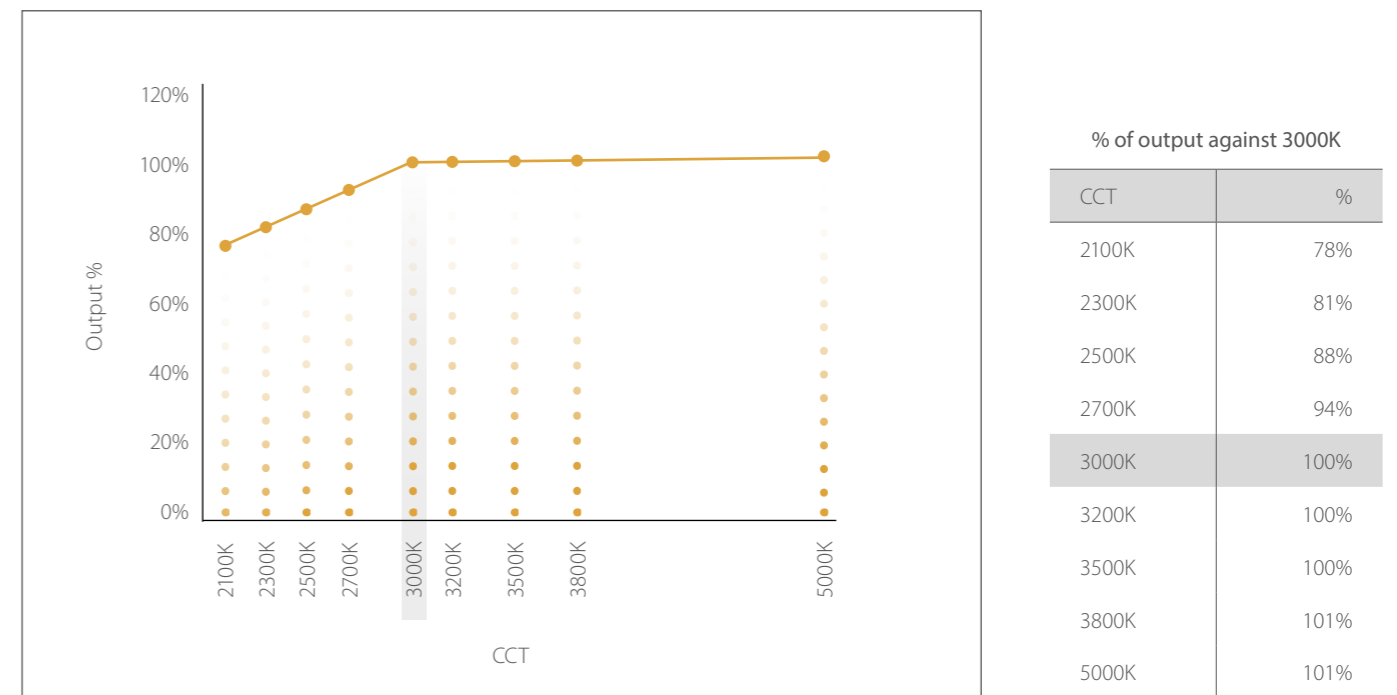


Fig 2. CAT 3.0 based on 3000K testing using the following % to calculate lumens based on CCT as required.

Testing Standards

LM79-08 testing

All products are tested in accordance with LM79. The majority of products have accredited test data.

Test Lab



TM 30-15 and CRI

Both data sets are now standard for all KKDC products.

Test Lab




LM80-08 Testing

All products life are covered by testing carried out on behalf of KKDC.


Test Lab





352

 Power 5.52 W/m
 Im/W in TiMi 74 lm/W
 LED pitch 13.9mm
 PCB increment 83.3mm
 Lower output, single channel LED strip.




007

 Power 10.83 W/m
 Im/W in TiMi 73 lm/W
 LED pitch 6.9mm
 PCB increment 41.7mm
 Medium/lower output, single channel LED strip. Tight LED pitch suited to homogenous, and reduced spotted diffusion in small profile/housings.




504

 Power 12.24 W/m
 Im/W in TiMi s/e-line 99 lm/W
 TiMi n-line 69 lm/W
 LED pitch 16.7mm
 PCB increment 100mm
 The 'flagship' KKDC LED strip. High to medium output, with high efficacy, single channel LED strip.




508

 Power 17.28 W/m
 Im/W in TiMi s/e-line 98 lm/W
 TiMi n-line 69 lm/W
 LED pitch 11.9mm
 PCB increment 71.4mm
 Higher output, tighter pitch, with high efficacy, single channel LED strip.




512

 Power 30.24 W/m
 Im/W in Power Cove with 30° lens 90 lm/W
 LED pitch 11.9mm
 PCB increment 71.4mm
 High power, high efficacy, single channel LED strip.




Groove Light/Groove IN

 Power 8 W/m
 Im/W in Groove Light 5 lm/W
 LED pitch Homogenous output
 PCB increment 100mm
 Homogenous line of light, single channel LED strip.




P-FX4

 Power 14.98 W/m
 Im/W 96.6 lm/W
 LED pitch 20.8mm
 PCB increment 125mm
 Medium output, high efficacy, single channel flexible LED strip.




P-FX8

 Power 17.14 W/m
 Im/W 96.4 lm/W
 LED pitch 10.4mm
 PCB increment 62.5mm
 High output, high efficacy, single channel flexible LED strip.




UNI P-FX4

 Power 14.98 W/m
 Im/W 96.6 lm/W
 LED pitch 20.8mm
 PCB increment 125mm
 Medium output, high efficacy, single channel flexible on 2 axis LED strip.




FX

 Power 6.96 W/m
 Im/W 61 lm/W
 LED pitch 12.5mm
 PCB increment 62.5mm
 Low output, single channel flexible LED strip.




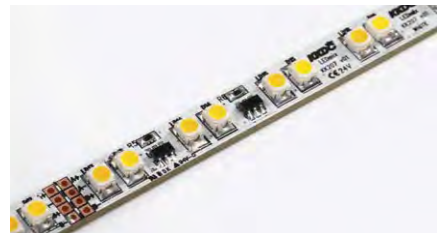
KKFS

 Power 6.5 W/m
 Im/W 60 lm/W
 LED pitch 12.5mm
 PCB increment 62.5mm
 Edge lit, single channel flexible LED strip.



Duo Luna

 Power 5.27/3.65 W/m @ 9V
 Im/W ≤87.1 lm/W
 Module pitch 77mm/111mm
 2 chips per module, high efficacy, IP68 flexible LED.

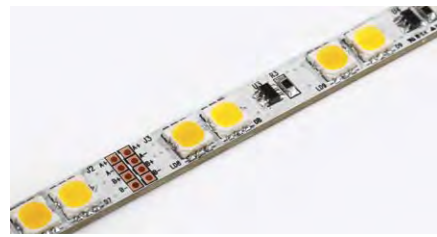


Quadro Luna

 Power 10.5/7.2 W/m @ 9V
 Im/W ≤88.6 lm/W
 Module pitch 77mm/111mm
 4 chips per module, high efficacy, IP68 flexible LED.



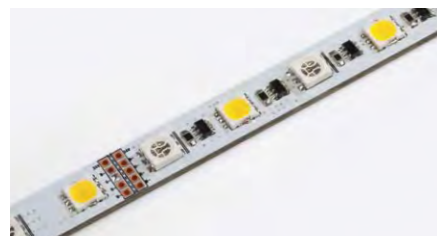
207 LEDmix

Power 10.95 W/m LED pitch (between same coloured chips) 13.9mm
 Im/W 71 lm/W PCB increment 83.3mm
 2 channel LED strip, allowing Dynamic white and Dim to Warm control options.



208 LEDmix

Power 15.55 W/m LED pitch (between same coloured chips) 23.8mm
 Im/W 107.5 lm/W PCB increment 166.7mm
 High power 2 channel LED strip, allowing Dynamic white and Dim to Warm control options.



RGBW LEDmix

Power 15.12 W/m LED pitch (between same coloured chips) 27.8mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W PCB increment 166.7mm
 RGBW 4 channel LED strip. White selectable from e-line colour options.



501 RGB

Power 15.6 W/m LED pitch 13.9mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W PCB increment 83.3mm
 Highly saturated RGB 3 channel LED strip.



FX RGB

Power 9.84 W/m LED pitch 25mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W PCB increment 125mm
 Flexible highly saturated colour RGB 3 channel LED strip.



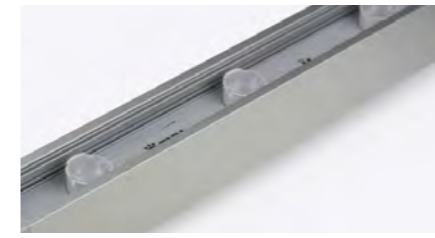
Duo Luna RGB

Power 7.8/5.4 W/m Module Pitch 77mm/111mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W
 2 chips per module, flexible highly saturated colour RGB 3 channel LED strip.



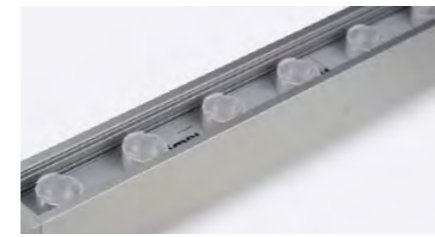
Quadro Luna RGB

Power 14.04/9.72 W/m Module Pitch 77mm/111mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W
 4 chips per module, flexible highly saturated colour RGB 3 channel LED strip.



100

Power 10.675/23.1 W/m LED pitch 100mm
 Im/W in SEN 63.3/48.4 lm/W PCB increment 100mm
 Low power single channel LED strip with lens options as per SEN, SEN Louvre and SEN-F housings.



050

Power 21.53/46.2 W/m LED pitch 50mm
 Im/W in SEN 65.8/49.8 lm/W PCB increment 100mm
 Medium power single channel LED strip with lens options as per SEN, SEN Louvre and SEN-F housings.



033

Power 32.025/69.3 W/m LED pitch 33mm
 Im/W in SEN 63.6/48.2 lm/W PCB increment 100mm
 High power single channel LED strip with lens options as per SEN, SEN Louvre and SEN-F housings.



035 (Constant Voltage)

Power 67.2 W/m LED pitch 35mm
 Im/W in SEN 68 lm/W PCB increment 250mm
 High power single channel LED strip with lens options as per SEN and now in constant voltage.



094 RGB (Constant Voltage)

Power 16.34 W/m LED pitch 94mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W
 Medium/high power RGB with lens options as per SEN, SEN Louvre and SEN-F housings.



047 RGB (Constant Voltage)

Power 32.68 W/m LED pitch 47mm
 Im/W in TiMi-C, all channels on full 49.2 lm/W
 High power RGB with lens options as per SEN, SEN Louvre and SEN-F housings.



- ▶ TiMi is a very robust compact aluminium housing for linear strips with a notably wide choice of colour temperature, white colour mixes, single colours & RGB.
- ▶ Upgraded housing now allows an optional snap-in dust cover for dry wipe maintenance & subtle diffuser.
- ▶ Output options range from 409 to 1400 lumens per metre.



Beam Angle No cover: 110°
Semi-diffused: 150°
KKLN-01 lower position: 14°
KKLN-01 upper position: 36°

IP Rating IP20

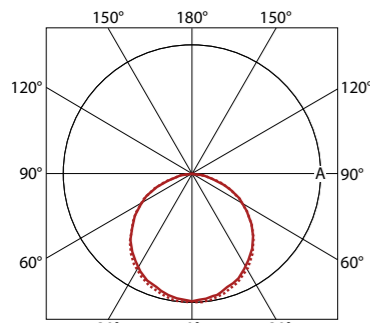
Finish Silver Anodised

Cover/Lens No cover/Semi-diffused/
KKLN-01 14° or 36° Lens Accessory

Mounting Surface mounting clips

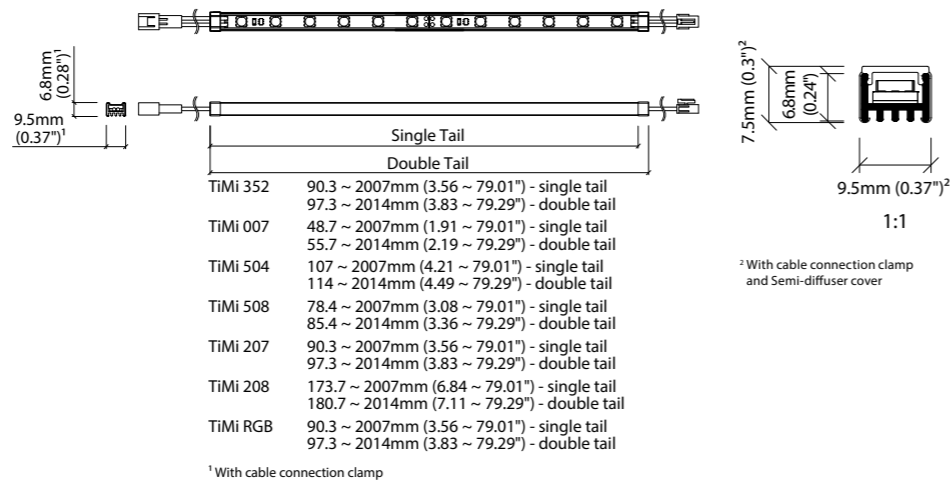
Connection Hardwire tails or male/female connectors

Control 0-10v/1-10v/DMX/DALI (see visDIM range)



— C0/C180 candela (cd) C90/C270

TiMi s352/e352	A 76
TiMi s007/e007	A 131
TiMi n504/s504/e504	A ≤167
TiMi n508/s508/e508	A ≤250
TiMi d207	A 128
TiMi d208	A 221



Product Data

	White				LEDmix Dynamic White		RGB
	TiMi s352 TiMi e352	TiMi s007 TiMi e007	TiMi n504 TiMi s504 TiMi e504	TiMi n508 TiMi s508 TiMi e508	TiMi d207	TiMi d208	TiMi dRGB
No Cover, 3000K	408 lm/m 74 lm/W	791 lm/m 73 lm/W	≤ 1212 lm/m ≤ 99 lm/W	≤ 1693 lm/m ≤ 98 lm/W	777 lm/m 71 lm/W	1672 lm/m 107.5 lm/W	Red: 148 lm/m Green: 319 lm/m Blue: 53 lm/m White: 462 lm/m
Semi-diffused Cover, 3000K	348 lm/m 63 lm/W	663 lm/m 61.2 lm/W	≤ 1016 lm/m ≤ 83 lm/W	≤ 1434 lm/m ≤ 83 lm/W	652 lm/m 59.5 lm/W	1401 lm/m 90.1 lm/W	Red: 124 lm/m Green: 267 lm/m Blue: 44 lm/m White: 387 lm/m
KKLN-01 14°, 3000K	385 lm/m 69.7 lm/W	745 lm/m 68.8 lm/W	≤ 1098 lm/m ≤ 89.7 lm/W	≤ 1597 lm/m ≤ 92.4 lm/W	733 lm/m 66.9 lm/W	1575 lm/m 101.3 lm/W	Red: 139 lm/m Green: 300 lm/m Blue: 50 lm/m White: 435 lm/m
KKLN-01 36°, 3000K	382 lm/m 69.2 lm/W	740 lm/m 68.3 lm/W	≤ 1133 lm/m ≤ 92.6 lm/W	≤ 1585 lm/m ≤ 91.7 lm/W	727 lm/m 66.4 lm/W	1564 lm/m 100.6 lm/W	Red: 138 lm/m Green: 298 lm/m Blue: 49 lm/m White: 432 lm/m
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H6.8/W9.5/ L97.3-2014mm	H6.8/W9.5/ L55.7-2014mm	H6.8/W9.5/ L114-2014mm	H6.8/W9.5/ L85.4-2014mm	H6.8/W9.5/ L97.3-2014mm	H6.8/W9.5/ L180.7-2014mm	H6.8/W9.5/ L97.3-2014mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	40,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 75°C)	T _a = -25 to 50°C (T _c Max = 71.2°C)	T _a = -25 to 50°C (T _c Max = 70°C)	T _a = -25 to 40°C (T _c Max = 70°C)	T _a = -25 to 60°C (T _c Max = 76.5°C)	T _a = -25 to 35°C (T _c Max = 70.3°C)	T _a = -25 to 50°C (T _c Max = 80°C)



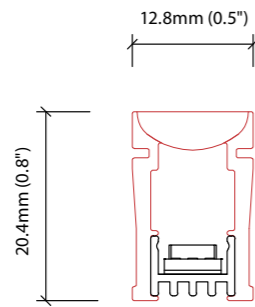
LED Options

	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

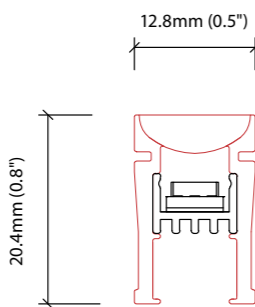
Innovative co-extruded linear lens accessory design for multiple applications.
 High efficiency with 90% LOR.
 KKLN-01 can be used with TiMi or LiNi BLADE-S housings for interior applications or inside MoMo for exterior facade lighting.
 Compatible with extensive range of KKDC LED strips with minimal light distortion.
 Various beam angles possible according to housing type & position, with excellent narrow beam performance.



TiMi cable connections now reinforced with cable clamp clip.



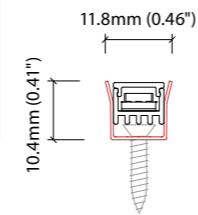
KKLN-01D
 14° beam angle lens accessory
 TiMi factory fitted in lower position
 Co-extruded PMMA



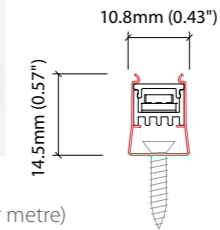
KKLN-01U
 36° beam angle lens accessory
 TiMi factory fitted in upper position
 Co-extruded PMMA

Other Accessories

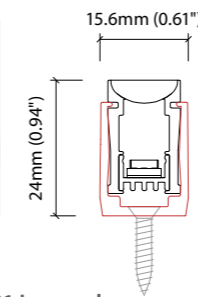
Mounting Options



KKCP-01 (1no.)
KKCP-51 (500no.)
 Clip (Allow 3 per metre)
 S/Steel finish



KKCP-13
 Lock clip (Allow 2 per metre)
 S/Steel finish



KKCP-05 (1no.)
KKCP-55 (500no.)
 For use with KKLN-01 Lens only
 Lens Lock clip (Allow 3 per metre)
 Clear polycarbonate finish

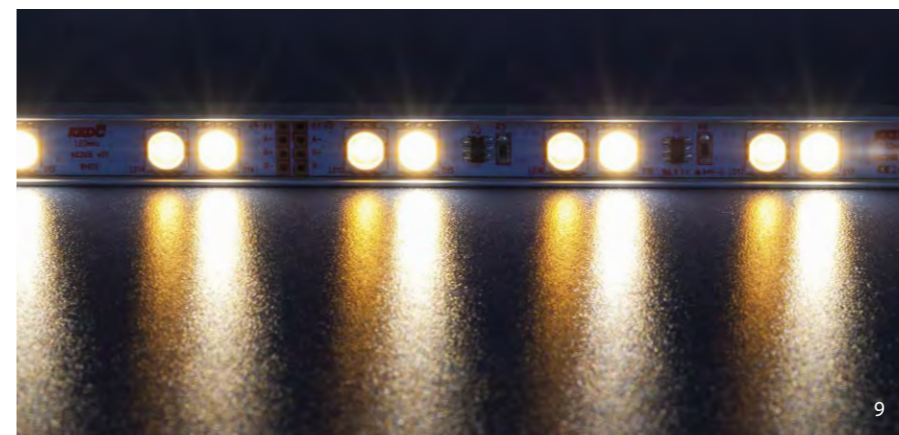
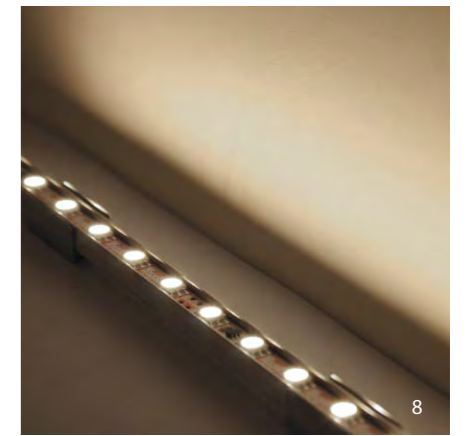
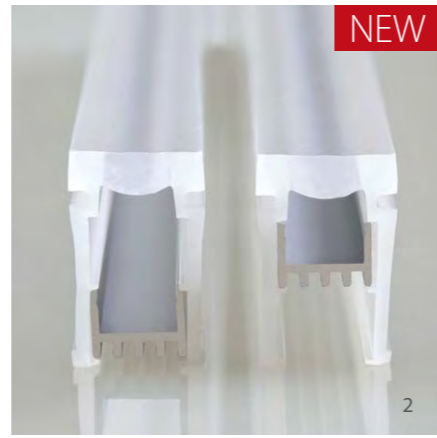
Connectors

- KKCN-01 & KKC-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKC-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKC-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. TiMi LED strip range
2. New KKLN-01 narrow beam co-extruded lens
3. New cable clamp feature
4. TiMi extrusion with snap cover
5. Removable semi-diffused dust cover
6. Innovative PCB design
7. TiMi 504 with KKLN-01 Lens
8. TiMi 504 clip mounted
9. LEDmix dynamic colour mixing

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage					
TiMi, Silver anodised	No cover ⁴	X	n- 504 ⁵ n504	2100K	21K	TiMi 352	M	97.3-2014mm ² 90.3-2007mm ³ 83.3mm increments	IP20, 50mm Single IP20 connector	20a3	24V DC g
				2300K	23K					IP20, 50mm Double IP20 connector		20a4
	Semi-diffused ⁴	D	508 ⁵ n508	2500K	25K	TiMi 007	M	55.7-2014mm ² 48.7-2007mm ³ 41.7mm increments	IP20, 300mm Single tail	20c1	
				2700K	27K					IP20, 300mm Double tail		20c2
	KKLN-01U (36°) ⁴	R	s- 352 s352	3000K	30K	TiMi 504	M	114-2014mm ² 107-2007mm ³ 100mm increments	IP20, 300mm Single IP20 connector	20c3	
				3200K	32K					IP20, 300mm Double IP20 connector		20c4
	KKLN-01D (14°) ⁴	S	007 e007	3500K	35K	TiMi 508	M	85.4-2014mm ² 78.4-2007mm ³ 71.4mm increments			
				3800K	38K						
			504 e504	5000K	50K	TiMi 207	M	97.3-2014mm ² 90.3-2007mm ³ 83.3mm increments			
				508 e508	RED	RED					
			207 ¹ d207	GREEN	GRN	TiMi 208	M	180.7-2014mm ² 173.7-2007mm ³ 166.7mm increments			
				208 ¹ d208	BLUE	BLU					
			RGB d501	ORANGE	ORN	TiMi RGB	M	97.3-2014mm ² 90.3-2007mm ³ 83.3mm increments			
				AMBER	AMB						
			RGB	RGB							

¹ LEDmix requires two colour temperature choices

² Double tail TiMi length

³ Single tail TiMi length

⁴ Operating temperatures vary for TiMi with cover and TiMi without cover; please check with a KKDC engineer if operating temperature is limiting product application

⁵ n-line: 2700K/3000K

Code Example:

TISA	-	D	-	s504	-	35K	-	M	514	-	20a4	-	g
TiMi, Silver anodised		Semi-diffused		s-line 504		3500K		514mm			IP20, 50mm Double IP20 connector		24V DC

¹ LEDmix Code Example:

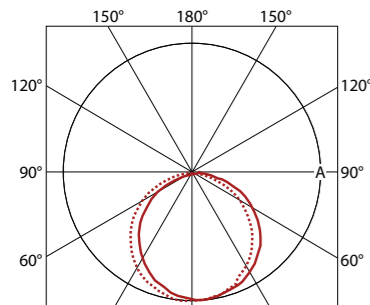
TISA	-	D	-	d207	-	21	-	35	-	M	514	-	20a4	-	g
TiMi, Silver anodised		Semi-diffused		LEDmix 207		2100K		3500K		514mm			IP20, 50mm Double IP20 connector		24V DC



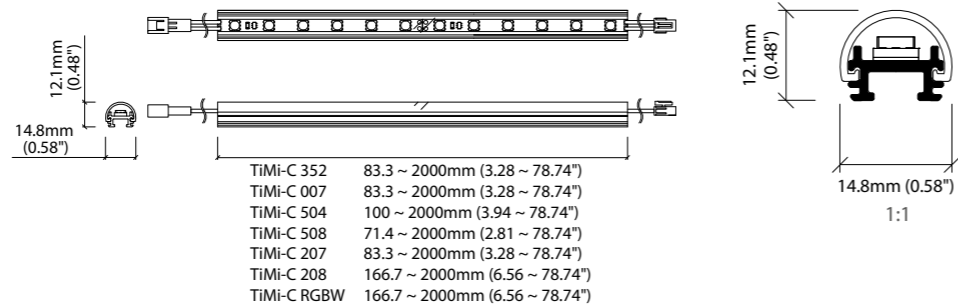




Beam Angle	Clear cover: 110° Diffused cover: 125°
IP Rating	IP20
Finish	Silver Anodised
Cover/Lens	Diffused/Clear
Mounting	Surface mounting via clips or magnets
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



— C0/C180	candela (cd)	..... C90/C270
TiMi-C s352/e352	A 76	
TiMi-C s007/e007	A 138	
TiMi-C n504/s504/e504	A ≤162	
TiMi-C n508/s508/e508	A ≤145	
TiMi-C d207	A 128	
TiMi-C d208	A 231	
TiMi-C dRGBW	A 133	



LED Options

	n -line	s -line	e -line	LEDmix	RGBW
CRI (R_a)	95+	90+	90+	90+	90+
CRI (R_g)	78+	45+	45+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	White: R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	White: 2.5 Step MacAdam ellipse Red: 620-625nm Blue: 455-460nm Green: 520-525nm
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K

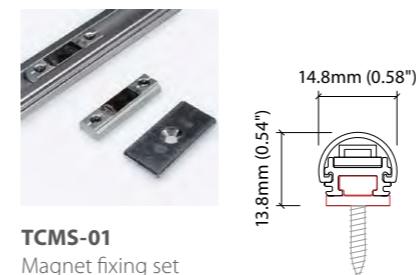
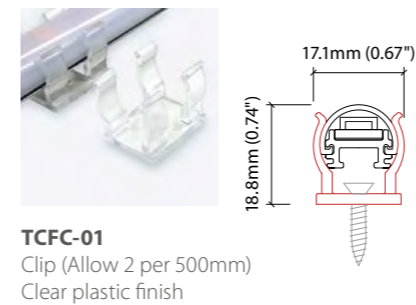
Product Data

	White				LEDmix Dynamic White		RGBW
	TiMi-C s352 TiMi-C e352	TiMi-C s007 TiMi-C e007	TiMi-C n504 TiMi-C s504 TiMi-C e504	TiMi-C n508 TiMi-C s508 TiMi-C e508	TiMi-C d207	TiMi-C d208	TiMi-C dRGBW
Clear Cover, 3000K	392 lm/m 71.1 lm/W	759 lm/m 70.1 lm/W	≤ 1151 lm/m ≤ 94 lm/W	≤ 1628 lm/m ≤ 94.2 lm/W	747 lm/m 68.2 lm/W	1606 lm/m 103.3 lm/W	966 lm/m 63.9 lm/W
Diffused Cover, 3000K	342 lm/m 61.9 lm/W	662 lm/m 61.1 lm/W	≤ 1015 lm/m ≤ 82.9 lm/W	≤ 1417 lm/m ≤ 82 lm/W	650 lm/m 59.4 lm/W	1400 lm/m 90 lm/W	847 lm/m 56 lm/W
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.12 W/m
Dimension	H12.1/W14.8/ L83.3-2000mm	H12.1/W14.8/ L83.3-2000mm	H12.1/W14.8/ L100-2000mm	H12.1/W14.8/ L71.4-2000mm	H12.1/W14.8/ L83.3-2000mm	H12.1/W14.8/ L166.7-2000mm	H12.1/W14.8/ L166.7-2000mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm	83.3mm	166.7mm	166.7mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	27.8mm (between same coloured chips) – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	40,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 66.3°C)	T _a = -25 to 50°C (T _c Max = 69.5°C)	T _a = -25 to 50°C (T _c Max = 66.2°C)	T _a = -25 to 50°C (T _c Max = 71.9°C)	T _a = -25 to 50°C (T _c Max = 68.3°C)	T _a = -25 to 50°C (T _c Max = 74.3°C)	T _a = -25 to 55°C (T _c Max = 74.6°C)



Accessories

Mounting Options



TCJT-01
Joint bar (allow 1 per join)

Connectors

- KKCN-01 & KKC-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKC-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKC-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead
- KKCN-29 & KKC-30**
5 PIN LEDmix RGBW male+female
50mm & 300mm pair

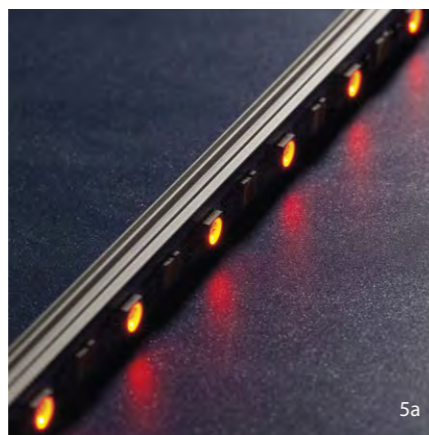
Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel,
screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



- 1. Clear or Diffused covers
- 2. TiMi-C 504
- 3. Rotational clear mounting clip
- 4. TiMi-C LEDmix RGBW
- 5. LEDmix Dynamic colour mixing





TiMi-C Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage					
TiMi-C, Silver anodised	Clear cover	B	n 504 ⁴ n504	2100K	21K	TiMi-C 352	M	83.3-2000mm 83.3mm increments	IP20, 50mm Single IP20 connector	20a3	24V DC g
				2300K	23K	TiMi-C 007	M	83.3-2000mm ³ 41.7mm increments	IP20, 50mm Double IP20 connector	20a4	
	Diffused cover	C	s 352 s352	2500K	25K	TiMi-C 504	M	100-2000mm 100mm increments	IP20, 300mm Single tail	20c1	
				2700K	27K	TiMi-C 508	M	71.4-2000mm 71.4mm increments	IP20, 300mm Double tail	20c2	
				3000K	30K	TiMi-C 207	M	83.3-2000mm 83.3mm increments	IP20, 300mm Single IP20 connector	20c3	
				3200K	32K	TiMi-C 208	M	166.7-2000mm 166.7mm increments	IP20, 300mm Double IP20 connector	20c4	
				3500K	35K	TiMi-C RGBW	M	166.7-2000mm 166.7mm increments			
				3800K	38K						
				5000K	50K						
				RED	RED	s s352, s007, s504 only					
				GREEN	GRN						
				BLUE	BLU						
	RGBW ²	d201	ORANGE	ORN							
			AMBER	AMB							
			207 ¹	d207	GREEN	GRN					
		208 ¹	d208	BLUE	BLU						

¹ LEDmix requires two colour temperature choices

² LEDmix RGBW requires white colour choice

³ Minimum product length of 83.3mm to allow 2 mounting clips

⁴ n-line: 2700K/3000K

Code Example:

TCSA	-	C	-	s504	-	35K	-	M	500	-	20a4	-	g
TiMi-C, Silver anodised		Diffused cover		s-line 504		3500K		500mm			IP20, 50mm Double IP20 connector		24V DC

¹ LEDmix Code Example:

TCSA	-	C	-	d207	-	21	-	35	-	M	500	-	20a4	-	g
TiMi-C, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		500mm			IP20, 50mm Double IP20 connector		24V DC

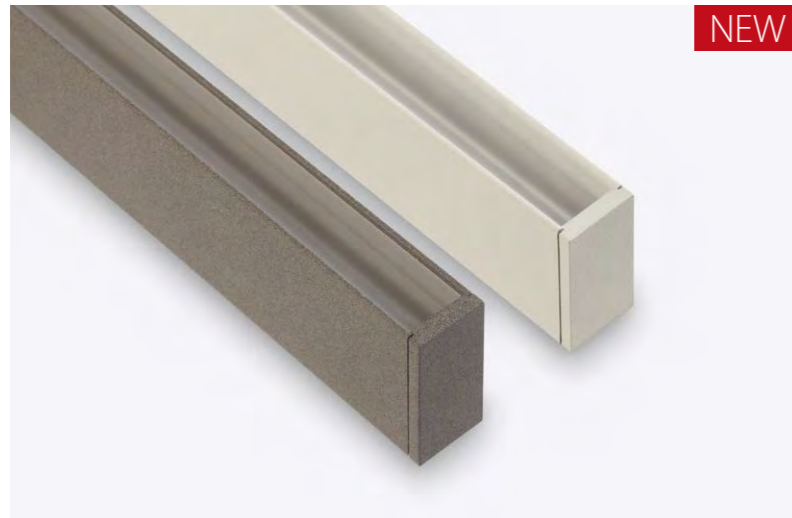
² LEDmix RGBW Code Example:

TCSA	-	C	-	d201	-	35K	-	M	514	-	20a4	-	g
TiMi-C, Silver anodised		Diffused cover		RGBW 201		RGB + 3500K		514mm			IP20, 50mm Double IP20 connector		24V DC

LiNi BLADE-S

- ▶ Premium finish, surface mounted linear luminaire compatible with a wide range of KKDC LED strips.
- ▶ Designed to accommodate KKLN-01 linear lens for narrow beam optic control, LiNi BLADE-S also has fully homogenous push-fit cover available.
- ▶ Innovative & robust end-cap design to minimise light leakage & provide cable stress relief.
- ▶ High quality powder coat finish options available as standard: White, Silver, Graphite Grey, Black & textured Bronze.





NEW



Beam Angle KKLN-01 lens: 14°
Diffused cover: 110°

IP Rating IP40

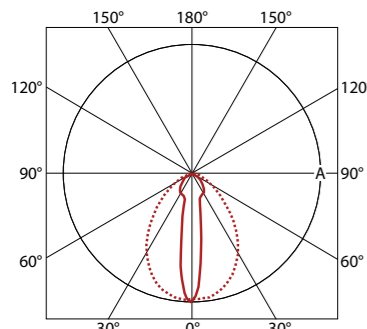
Finish White(RAL9010)/Black(RAL9011)/
Grey(RAL9007)/Silver(RAL9006)/
Bronze Matt Powder coating

Cover/Lens Diffused/KKLN-01 Lens

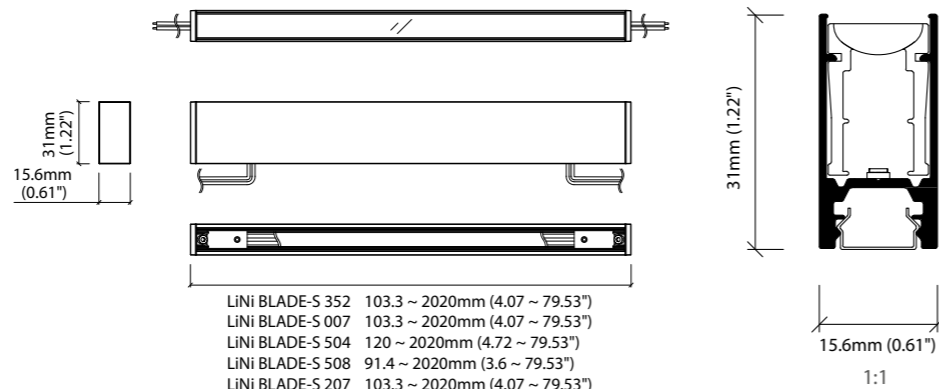
Mounting Surface mounting via concealed clips

Connection Hardwire tails

Control 0-10V/1-10V/DMX/DALI
(see visDIM range)



Model	A
LiNi BLADE-S s352/e352	141
LiNi BLADE-S s007/e007	240
LiNi BLADE-S s504/e504	308
LiNi BLADE-S s508/e508	443
LiNi BLADE-S d207	204
LiNi BLADE-S d208	411



LiNi BLADE-S 352	103.3 ~ 2020mm (4.07 ~ 79.53")
LiNi BLADE-S 007	103.3 ~ 2020mm (4.07 ~ 79.53")
LiNi BLADE-S 504	120 ~ 2020mm (4.72 ~ 79.53")
LiNi BLADE-S 508	91.4 ~ 2020mm (3.6 ~ 79.53")
LiNi BLADE-S 207	103.3 ~ 2020mm (4.07 ~ 79.53")
LiNi BLADE-S 208	186.7 ~ 2020mm (7.35 ~ 79.53")
LiNi BLADE-S RGB	103.3 ~ 2020mm (4.07 ~ 79.53")

LED Options

	s-line	e-line	LEDmix	RGB
CRI (R_a)	90+	90+	90+	n/a
CRI (R_g)	45+	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Product Data

	White				LEDmix Dynamic White		RGB
	LiNi BLADE-S s352 LiNi BLADE-S e352	LiNi BLADE-S s007 LiNi BLADE-S e007	LiNi BLADE-S s504 LiNi BLADE-S e504	LiNi BLADE-S s508 LiNi BLADE-S e508	LiNi BLADE-S d207	LiNi BLADE-S d208	LiNi BLADE-S dRGB
KKLN-01, 3000K	195 lm/m 35.4 lm/W	379 lm/m 35 lm/W	563 lm/m 46 lm/W	810 lm/m 46.9 lm/W	372 lm/m 34 lm/W	801 lm/m 51.5 lm/W	Red: 71 lm/m Green: 153 lm/m Blue: 25 lm/m White: 221 lm/m
Diffused Cover, 3000K	106 lm/m 19.2 lm/W	205 lm/m 18.9 lm/W	282 lm/m 23 lm/W	439 lm/m 25.4 lm/W	201 lm/m 18.4 lm/W	434 lm/m 27.9 lm/W	Red: 38 lm/m Green: 83 lm/m Blue: 14 lm/m White: 120 lm/m
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H31/W15.6/ L103.3-2020mm	H31/W15.6/ L103.3-2020mm	H31/W15.6/ L120-2020mm	H31/W15.6/ L91.4-2020mm	H31/W15.6/ L103.3-2020mm	H31/W15.6/ L186.7-2020mm	H31/W15.6/ L103.3-2020mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	35,000 hours @ 25°C	35,000 hours @ 25°C	35,000 hours @ 25°C	35,000 hours @ 25°C	35,000 hours @ 25°C	35,000 hours @ 25°C	35,000 hours @ 25°C
Operation Temp	T _a = -25 to 45°C (T _c Max = 54.3°C)	T _a = -25 to 41°C (T _c Max = 58.9°C)	T _a = -25 to 45°C (T _c Max = 66.5°C)	T _a = -25 to 40°C (T _c max = 70°C)	T _a = -25 to 45°C (T _c Max = 64.6°C)	T _a = -25 to 43°C (T _c Max = 65°C)	T _a = -25 to 44°C (T _c Max = 68.3°C)

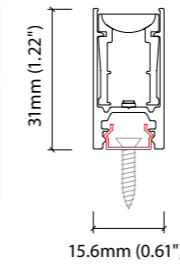


Accessories

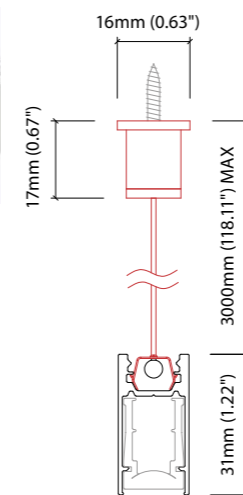
Mounting Options



KKCP-10
Concealed Clip
(Allow 2 per metre)
S/Steel finish



KKSW-06
Suspension
Mounting Kit
(Allow 2 per metre)
S/Steel finish



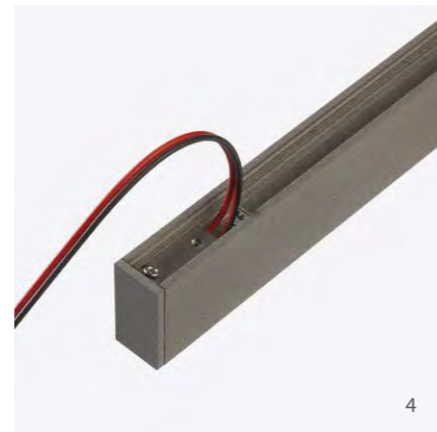
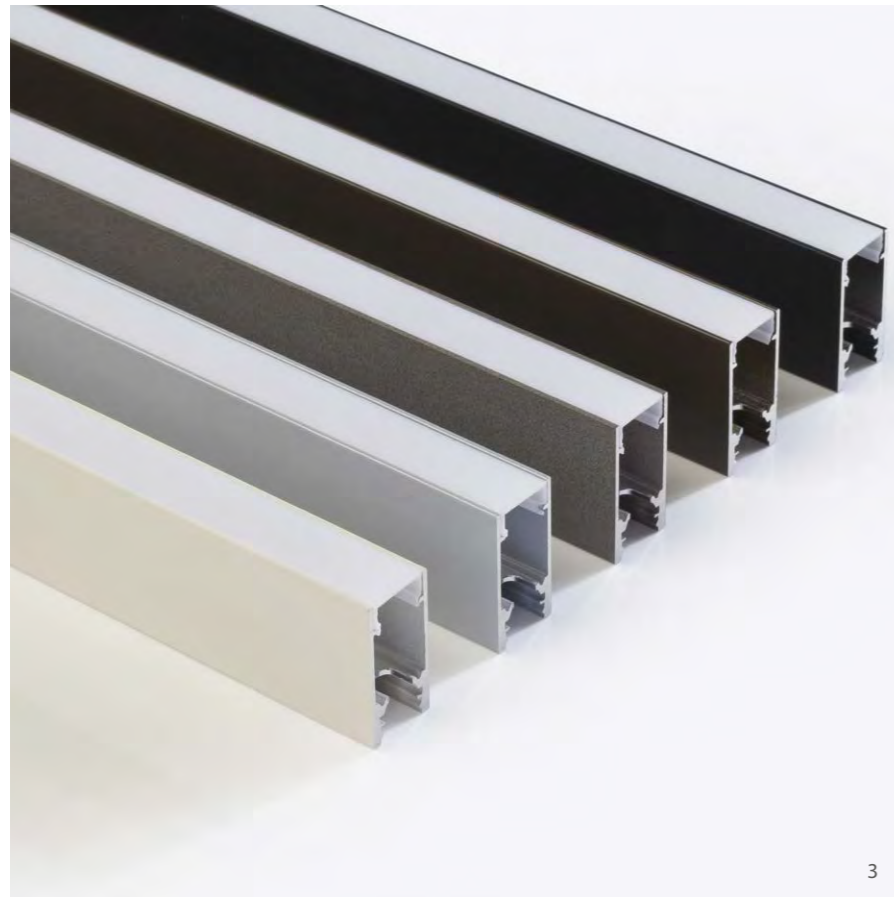
Connectors

- KKCN-01 & KKC-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKC-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKC-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. LiNi BLADE housing section with homogenous cover
2. LiNi BLADE with suspension kit
3. Standard paint finishes:
White, Silver, Grey, Black, Bronze
4. Robust end cap and cable grip



LiNi BLADE-S Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage
LiNi BLADE-S, BSMW Matt white paint	Diffused cover	352	2100K	LiNi BLADE-S 352 103.3-2020mm 83.3mm increments	IP40, 300mm Single tail	40c1 24V DC
	KKLN-01	007	2300K	LiNi BLADE-S 007 103.3-2020mm 41.7mm increments	IP40, 300mm Double tail	40c2
LiNi BLADE-S, BSMS Matt silver paint		504	2500K	LiNi BLADE-S 504 120-2020mm 100mm increments	IP40, 300mm Single IP20 connector	40c3
		508	2700K	LiNi Blade-S 508 91.4-2020mm 71.4mm increments	IP40, 300mm Double IP20 connector	40c4
LiNi BLADE-S, BSMG Matt grey paint		352	3000K	LiNi BLADE-S 207 103.3-2020mm 83.3mm increments	IP40, 3000mm Suspension Single tail ²	40eb
		007	3200K	LiNi BLADE-S 208 86.7-2020mm 166.7mm increments		
LiNi BLADE-S, BSMB Matt black paint		504	3500K	LiNi BLADE-S RGB 103.3-2020mm 83.3mm increments		
		508	3800K			
LiNi BLADE-S, BSBP Matt bronze paint		207 ¹	5000K			
		208 ¹	RED			
		RGB	GREEN			
			BLUE			
			ORANGE			
			AMBER			
		RGB				

¹ LEDmix requires two colour temperature choices

² Transparent suspension wire

Code Example:

BSMW	-	C	-	s504	-	35K	-	M	520	-	40c2	-	g
LiNi BLADE-S, Matt white paint		Diffused cover		s-line 504		3500K		520mm			IP40, 300mm Double tail		24V DC

¹ LEDmix Code Example:

BSMW	-	C	-	d207	-	21	-	35	-	M	520	-	40c2	-	g
LiNi BLADE-S, Matt white paint		Diffused cover		LEDmix 207		2100K		3500K		520mm			IP40, 300mm Double tail		24V DC

LiNi-S

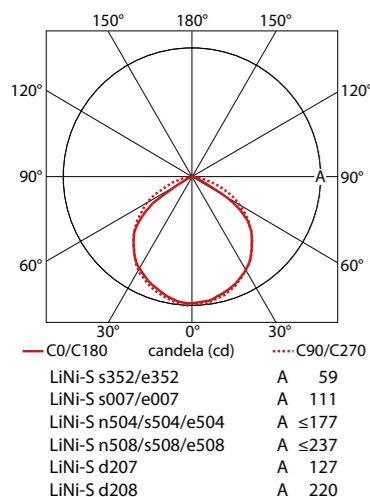
- ▶ LiNi-S is a compact linear interior profile with a wide range of LED strip options available.
- ▶ LEDmix d208 & d207 LED strips are now available for creative lighting control.
- ▶ For use with concealed clip mountings and available with clear, diffused or prismatic cover options.

KKDÖ





Beam Angle	Clear cover: 105° Diffused cover: 110° Prismatic cover: 85°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused/Clear/Prismatic
Mounting	Surface mounting via concealed clips
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



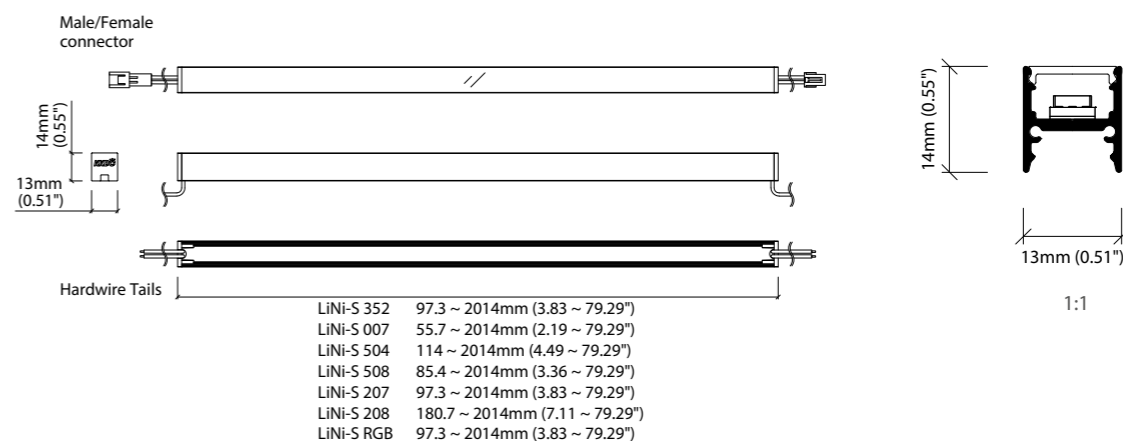
Product Data

	White				LEDmix Dynamic White		RGB
	LiNi-S s352 LiNi-S e352	LiNi-S s007 LiNi-S e007	LiNi-S n504 LiNi-S e504	LiNi-S n508 LiNi-S e508	LiNi-S d207	LiNi-S d208	LiNi-S dRGB
Clear Cover, 3000K	354 lm/m 64.1 lm/W	684 lm/m 63.2 lm/W	≤ 1040 lm/m ≤ 85 lm/W	≤ 1467 lm/m ≤ 84.9 lm/W	673 lm/m 61.5 lm/W	1449 lm/m 93.2 lm/W	Red: 134 lm/m Green: 284 lm/m Blue: 46 lm/m White: 423 lm/m
Diffused Cover, 3000K	258 lm/m 46.8 lm/W	500 lm/m 46.2 lm/W	≤ 759 lm/m ≤ 62 lm/W	≤ 1071 lm/m ≤ 62 lm/W	492 lm/m 44.9 lm/W	1057 lm/m 68 lm/W	Red: 94 lm/m Green: 202 lm/m Blue: 33 lm/m White: 292 lm/m
Prismatic Cover, 3000K	284 lm/m 51.5 lm/W	550 lm/m 50.8 lm/W	≤ 842 lm/m ≤ 68.8 lm/W	≤ 1177 lm/m ≤ 68.1 lm/W	541 lm/m 49.4 lm/W	1163 lm/m 74.8 lm/W	Red: 103 lm/m Green: 222 lm/m Blue: 37 lm/m White: 321 lm/m
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H14/W13/ L97.3-2014mm	H14/W13/ L55.7-2014mm	H14/W13/ L114-2014mm	H14/W13/ L85.4-2014mm	H14/W13/ L97.3-2014mm	H14/W13/ L180.7-2014mm	H14/W13/ L97.3-2014mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 72°C)	T _a = -25 to 50°C (T _c Max = 69°C)	T _a = -25 to 50°C (T _c Max = 65°C)	T _a = -25 to 45°C (T _c Max = 78°C)	T _a = -25 to 60°C (T _c Max = 74.8°C)	T _a = -25 to 50°C (T _c Max = 75.1°C)	T _a = -25 to 50°C (T _c Max = 76°C)



LED Options

	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

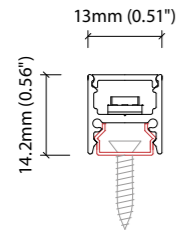


Accessories

Mounting Options



KKCP-10
Concealed Clip
(Allow 2 per metre)
S/Steel finish



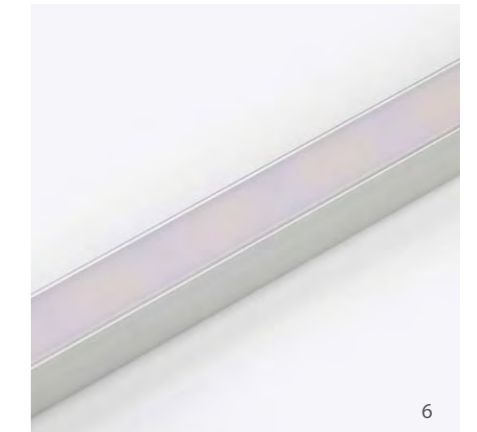
Connectors

- KKCN-01 & KKC-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKC-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKC-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. LiNi-S section with concealed clip
2. End cap with side cable exit (included)
3. Snap fit diffused cover
4. LiNi-S 207 and 208 LEDmix dynamic LED
5. Linear prismatic cover
6. Diffused cover

LiNi-S Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage	
LiNi-S, Silver anodised LSSA	Clear cover	B	n 504 ² n504	2100K 21K	LiNi-S 352 M 93.3-2014mm 83.3mm increments	IP40, 50mm Single IP20 connector 40a3	24V DC g
			508 ² n508	2300K 23K	LiNi-S 007 M 55.7-2014mm 41.7mm increments	IP40, 50mm Double IP20 connector 40a4	
	Diffused cover	C	s 352 s352	2500K 25K	LiNi-S 504 M 114-2014mm 100mm increments	IP40, 300mm Single tail 40c1	
				2700K 27K	LiNi-S 508 M 85.4-2014mm 71.4mm increments	IP40, 300mm Double tail 40c2	
			3000K 30K	LiNi-S 207 M 97.3-2014mm 83.3mm increments	IP40, 300mm Single IP20 connector 40c3		
			3200K 32K	LiNi-S 208 M 180.7-2014mm 166.7mm increments	IP40, 300mm Double IP20 connector 40c4		
			e 352 e352	3500K 35K	LiNi-S RGB M 97.3-2014mm 83.3mm increments	IP40, 1000mm Single tail 40d1	
				3800K 38K			
				5000K 50K			
				RED RED s s352, s007, s504 only			
				GREEN GRN			
			207 ¹ d207	208 ¹ d208	BLUE BLU		
				RGB d501	ORANGE ORN		
					AMBER AMB		
					RGB RGB		

¹ LEDmix requires two colour temperature choices

² n-line: 2700K/3000K

Code Example:

LSSA	-	C	-	s504	-	35K	-	M 514	-	40c2	-	g
LiNi-S, Silver anodised		Diffused cover		s-line 504		3500K		514mm		IP40, 300mm Double tail		24V DC

¹ LEDmix Code Example:

LSSA	-	C	-	d207	-	21	-	35	-	M 514	-	40c2	-	g
LiNi-S, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		514mm		IP40, 300mm Double tail		24V DC

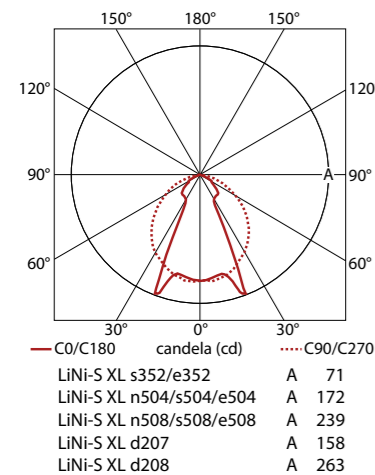


LiNi-S XL

- ▶ Fully homogenous diffusion on cover.
- ▶ Full range of LED strips available, including LEDmix for dynamic lighting control.
- ▶ Concealed surface mounting clips and optional snap-fit cable raceway accessory.



Beam Angle	Clear cover: 50° Diffused cover: 110°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused/Clear
Mounting	Surface mounting via concealed clips or cable raceway
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



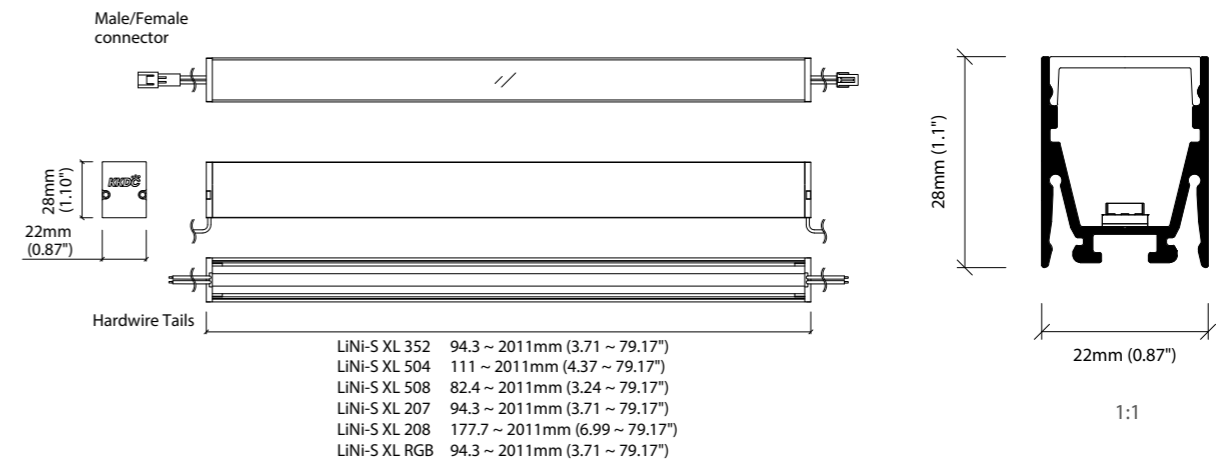
Product Data

	White			LEDmix Dynamic White		RGB
	LiNi-S XL s352 LiNi-S XL e352	LiNi-S XL n504 LiNi-S XL s504 LiNi-S XL e504	LiNi-S XL n508 LiNi-S XL s508 LiNi-S XL e508	LiNi-S XL d207	LiNi-S XL d208	LiNi-S XL dRGB
Clear Cover, 3000K	236 lm/m 42.7 lm/W	≤ 700 lm/m ≤ 57.2 lm/W	≤ 978 lm/m ≤ 56.6 lm/W	449 lm/m 41 lm/W	966 lm/m 62.1 lm/W	Red: 85 lm/m Green: 184 lm/m Blue: 30 lm/m White: 267 lm/m
Diffused Cover, 3000K	167 lm/m 30.3 lm/W	≤ 497 lm/m ≤ 40.6 lm/W	≤ 695 lm/m ≤ 40.2 lm/W	319 lm/m 29.1 lm/W	686 lm/m 44.1 lm/W	Red: 61 lm/m Green: 131 lm/m Blue: 22 lm/m White: 189 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H28/W22/ L94.3-2011mm	H28/W22/ L111-2011mm	H28/W22/ L82.4-2011mm	H28/W22/ L94.3-2011mm	H28/W22/ L177.7-2011mm	H28/W22/ L94.3-2011mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 66°C)	T _a = -25 to 50°C (T _c Max = 62.8°C)	T _a = -25 to 45°C (T _c Max = 61.5°C)	T _a = -25 to 60°C (T _c Max = 69.1°C)	T _a = -25 to 60°C (T _c Max = 76.2°C)	T _a = -25 to 60°C (T _c Max = 72.5°C)



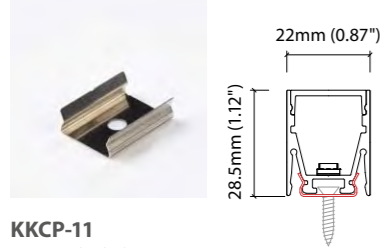
LED Options

	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

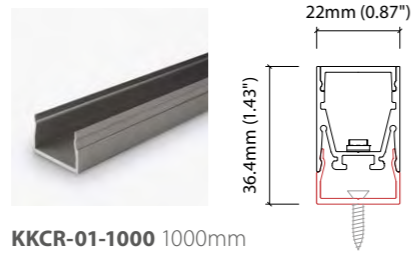


Accessories

Mounting Options



KKCP-11
Concealed clip
(Allow 3 per metre)
S/Steel finish



KKCR-01-1000 1000mm
KKCR-01-2000 2000mm
KKCR-01-3000 3000mm
Cable Raceway*
Anodised aluminium finish
*Cut & drilled to fit on site



KKJT-02
Joining Bar (Allow 1 per join)
Anodised aluminium finish

Connectors

KKCN-01 & KKC-03

2 PIN male+female 50mm & 300mm pair

KKCN-07 & KKC-09

4 PIN RGB male+female 50mm & 300mm pair

KKCN-18 & KKC-19

4 PIN LEDmix male+female 50mm & 300mm pair

KKCN-06

2 PIN 300mm extension lead

KKCN-11

4 PIN RGB 300mm extension lead

KKCN-24

4 PIN LEDmix 300mm extension lead

Power & Control

KKPS-01

visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02

visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03

visDIM D 100W PSU, 24V (3-channel)

KKDM-05

visDIM 1-10V sub-controller

KKSC-03A DMX

visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX

visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01

visDIM D sub-controller (3-channel)

See pages 332-335 for more details



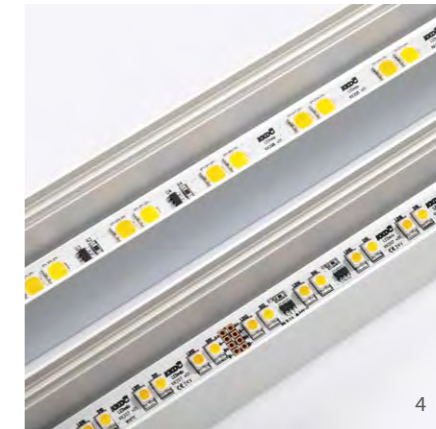
1



2



3



4

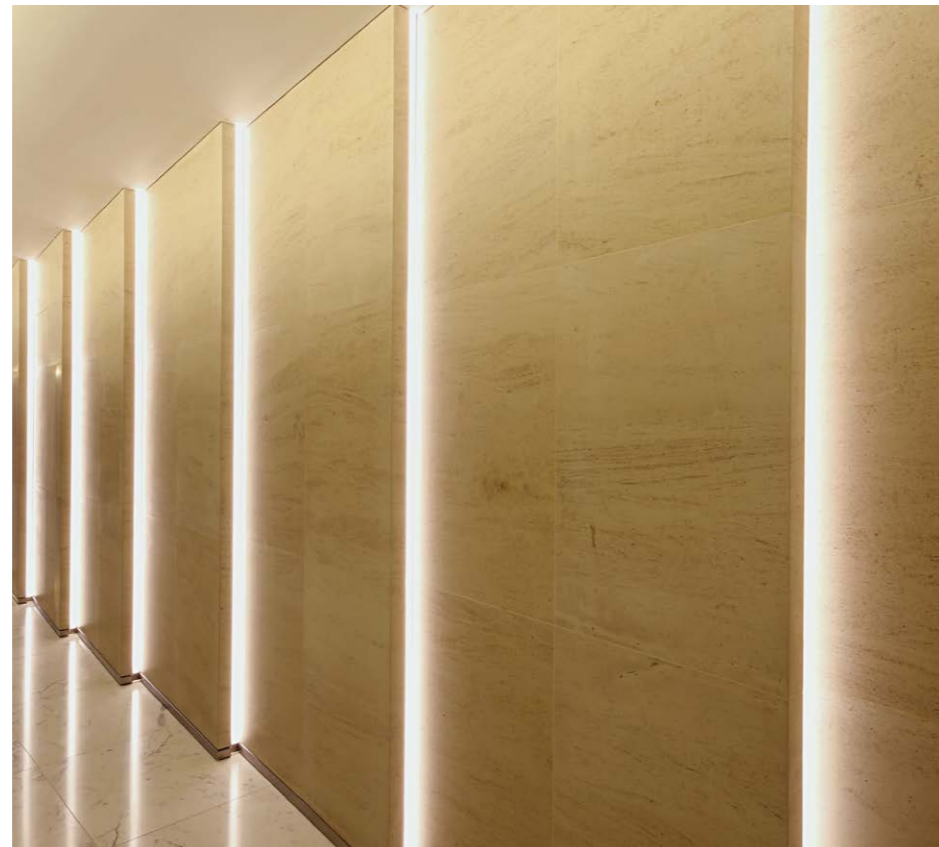


5

1. Snap-on diffused cover
2. Fully homogenous diffusion
3. Screw-on plastic end caps
4. LiNi-S XL 207 and 208 LEDmix dynamic LED
5. Snap-fit cable raceway mounting



Fenchurch Street, London
Lighting Design: MBLD
Architect: Rafael Vinoly
KKDC UK



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage
LiNi-S XL, Silver anodised SXSA	Clear cover B	n 504 ² n504	2100K 21K	LiNi-S XL 352 M 94.3-2011mm 83.3mm increments	IP40, 50mm Single IP20 connector	40a3 24V DC g
	Diffused cover C	508 ² n508	2300K 23K	LiNi-S XL 504 M 111-2011mm 100mm increments	IP40, 50mm Double IP20 connector	40a4
s 352 s352		2500K 25K	LiNi-S XL 508 M 82.4-2011mm 71.4mm increments	IP40, 300mm Single tail	40c1	
504 s504		2700K 27K	LiNi-S XL 207 M 94.3-2011mm 83.3mm increments	IP40, 300mm Double tail	40c2	
508 s508		3000K 30K	LiNi-S XL 208 M 177.7-2011mm 166.7mm increments	IP40, 300mm Single IP20 connector	40c3	
e 352 e352		3200K 32K	LiNi-S XL RGB M 94.3-2011mm 83.3mm increments	IP40, 300mm Double IP20 connector	40c4	
504 e504		3500K 35K		IP40, 1000mm Single tail	40d1	
508 e508		3800K 38K				
207 ¹ d207		5000K 50K				
208 ¹ d208		RED RED s-s352, s504 only				
RGB d501		GREEN GRN				
		BLUE BLU				
		ORANGE ORN				
		AMBER AMB				
	RGB RGB					

¹ LEDmix requires two colour temperature choices

² n-line: 2700K/3000K

Code Example:

SXSA	-	C	-	s504	-	35K	-	M 511	-	40c2	-	g
LiNi-S XL, Silver anodised		Diffused cover		s-line 504		3500K		511mm		IP40, 300mm Double tail		24V DC

¹ LEDmix Code Example:

SXSA	-	C	-	d207	-	21	-	35	-	M 511	-	40c2	-	g
LiNi-S XL, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		511mm		IP40, 300mm Double tail		24V DC

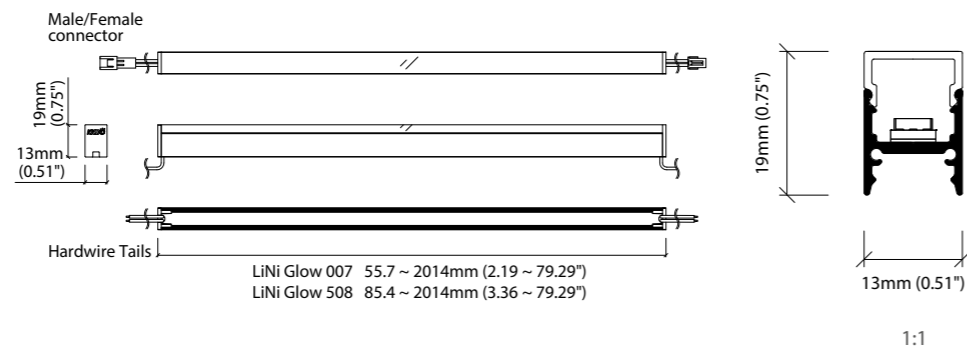
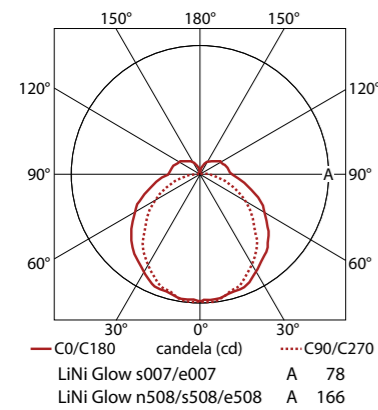
LiNi Glow

- ▶ LiNi Glow is a very compact housing with an extended cover to provide soft diffused lighting to 180°.
- ▶ Offered with tight pitch LED strips 007 & 508 to minimise hot spots on diffuser.





Beam Angle	130°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	Surface mounting via concealed clips
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



Product Data

	White	
	LiNi Glow s007 LiNi Glow e007	LiNi Glow n508 LiNi Glow s508 LiNi Glow e508
Luminous Flux, 3000K	474 lm/m 43.8 lm/W	≤ 1016 lm/m ≤ 58.8 lm/W
Wattage	10.83 W/m	17.28 W/m
Dimension	H19/W13/ L55.7-2014mm	H19/W13/ L85.4-2014mm
PCB Increment	41.7mm	71.4mm
LED Pitch	6.9mm – 144 LED/m	11.9mm – 84 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 55°C (T _c Max = 73°C)	T _a = -25 to 45°C (T _c Max = 78°C)



Accessories

Mounting Options



KKCP-10
 Concealed Clip
 (Allow 3 per metre)
 S/Steel finish

Connectors

KKCN-01 & KKC-03
 2 PIN male+female 50mm & 300mm pair
KKCN-06
 2 PIN 300mm extension lead

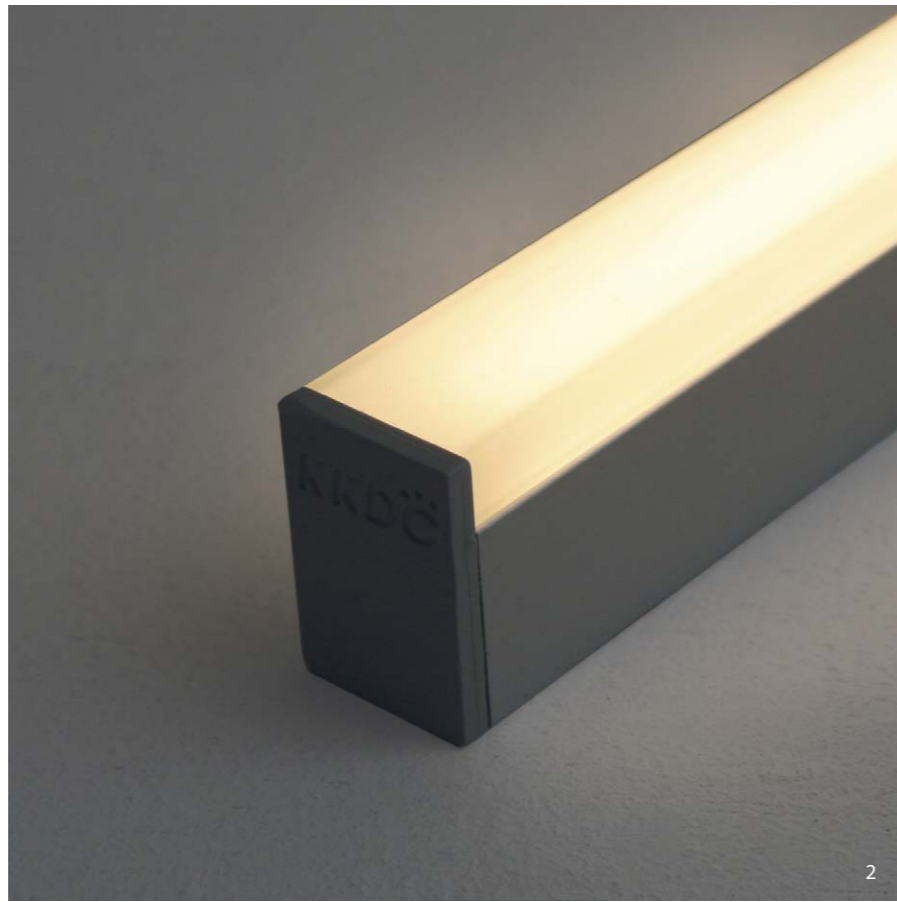
Power & Control

KKPS-01
 visDIM 1-10V 100W PSU, 24V (1-channel)
KKPS-02
 visDIM DMX 100W PSU, 24V (3-channel)
KKPS-03
 visDIM D 100W PSU, 24V (3-channel)
KKDM-05
 visDIM 1-10V sub-controller
KKSC-03A DMX
 visDIM DMX sub-controller (3-channel, screw terminal)
KKSC-03B DMX
 visDIM DMX sub-controller (3-channel, RJ45)
KKDL-01
 visDIM D sub-controller (3-channel)

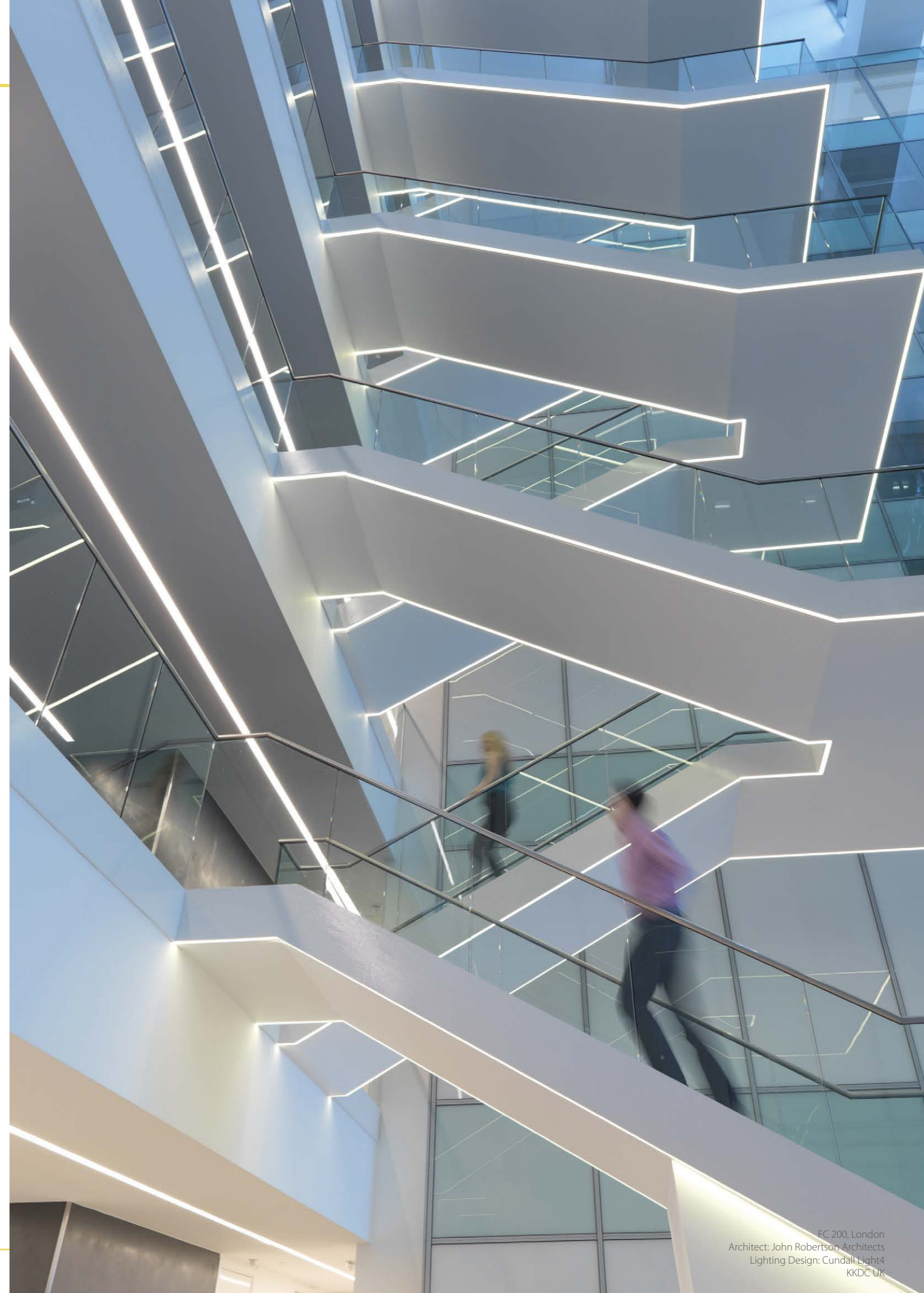
See pages 332-335 for more details

LED Options

	n -line	s -line	e -line
CRI (R_a)	95+	90+	90+
CRI (R_g)	78+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K



- 1. Side cable exit end cap (included)
- 2. Fully homogenous 180° diffusion
- 3. Concealed mounting clip



LiNi Glow Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage
LiNi Glow, Silver anodised LGSA	Diffused U cover 0	n- 508 ¹ n508	2100K 21K	LiNi Glow 007 M 55.7-2014mm 41.7mm increments	IP40, 50mm Single IP20 connector 40a3	24V DC g
			2300K 23K			
			2500K 25K			
		e- 007 s007	2700K 27K	LiNi Glow 508 M 85.4-2014mm 71.4mm increments	IP40, 50mm Double IP20 connector 40a4	
			3000K 30K			
			3200K 32K			
		e- 508 s508	3500K 35K	IP40, 300mm Single tail 40c1	IP40, 300mm Double tail 40c2	
			3800K 38K			
			5000K 50K			
		RED RED s- s007 only	IP40, 300mm Single IP20 connector 40c3	IP40, 300mm Double IP20 connector 40c4		
		GREEN GRN				
		BLUE BLU				
		ORANGE ORN				
		AMBER AMB	IP40, 1000mm Single tail 40d1			

¹ n-line: 2700K/3000K

Code Example:

LGSA	-	0	-	s508	-	35K	-	M 514	-	40c2	-	g
LiNi Glow, Silver anodised		Diffused U cover		s-line 508		3500K		514mm		IP40, 300mm Double tail		24V DC



LiNi Glow XL

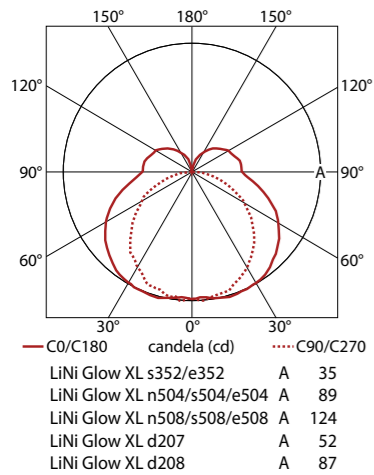
KKDÖ

- ▶ LiNi Glow XL provides fully homogenous diffusion with extended diffuser to provide 180° lighting.
- ▶ Available with wide range of LED strip options including LEDmix for dynamic lighting control.



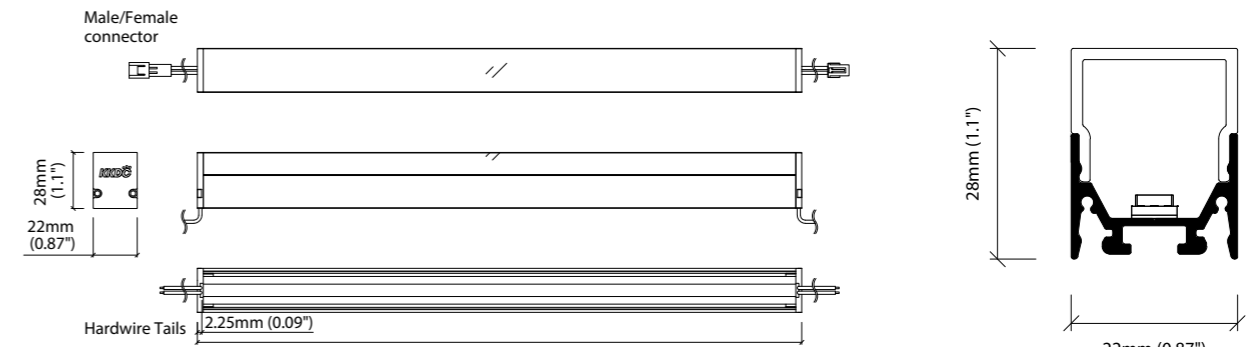
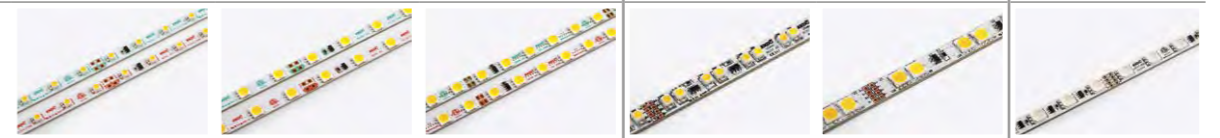


Beam Angle	130°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	Surface mounting via concealed clips or cable raceway
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



Product Data

	White			LEDmix Dynamic White		RGB
	LiNi Glow XL s352 LiNi Glow XL e352	LiNi Glow XL n504 LiNi Glow XL e504	LiNi Glow XL n508 LiNi Glow XL e508	LiNi Glow XL d207	LiNi Glow XL d208	LiNi Glow XL dRGB
Luminous Flux, 3000K	248 lm/m 44.9 lm/W	≤ 734 lm/m ≤ 60 lm/W	≤ 1026 lm/m ≤ 59.4 lm/W	472 lm/m 43.1 lm/W	1014 lm/m 65.2 lm/W	Red: 90 lm/m Green: 193 lm/m Blue: 32 lm/m White: 280 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H28/W22/ L94.3-2011mm	H28/W22/ L111-2011mm	H28/W22/ L82.4-2011mm	H28/W22/ L94.3-2011mm	H28/W22/ L177.7-2011mm	H28/W22/ L94.3-2011mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 67°C)	T _a = -25 to 60°C (T _c Max = 72°C)	T _a = -25 to 50°C (T _c Max = 63°C)	T _a = -25 to 60°C (T _c Max = 70.9°C)	T _a = -25 to 60°C (T _c Max = 73.4°C)	T _a = -25 to 55°C (T _c Max = 70°C)



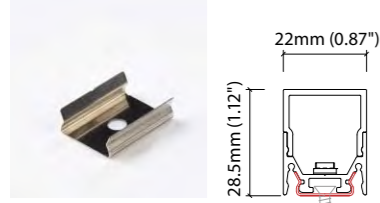
LiNi Glow XL 352 94.3 ~ 2011mm (3.71 ~ 79.17")
 LiNi Glow XL 504 111 ~ 2011mm (4.37 ~ 79.17")
 LiNi Glow XL 508 82.4 ~ 2011mm (3.24 ~ 79.17")
 LiNi Glow XL 207 94.3 ~ 2011mm (3.71 ~ 79.17")
 LiNi Glow XL 208 177.7 ~ 2011mm (6.99 ~ 79.17")
 LiNi Glow XL RGB 94.3 ~ 2011mm (3.71 ~ 79.17")

LED Options

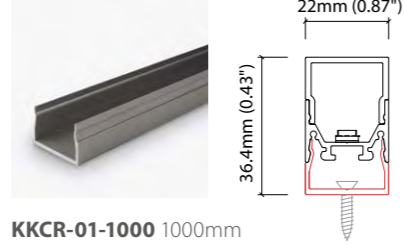
	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Accessories

Mounting Options



KKCP-11
Concealed clip
(Allow 3 per metre)
S/Steel finish



KKCR-01-1000 1000mm
KKCR-01-2000 2000mm
KKCR-01-3000 3000mm
Cable Raceway*
Anodised aluminium finish
*Cut & drilled to fit on site



KKJT-02
Joining Bar (Allow 1 per join)
Anodised aluminium finish

Connectors

KKCN-01 & KKC-03

2 PIN male+female 50mm & 300mm pair

KKCN-07 & KKC-09

4 PIN RGB male+female 50mm & 300mm pair

KKCN-18 & KKC-19

4 PIN LEDmix male+female 50mm & 300mm pair

KKCN-06

2 PIN 300mm extension lead

KKCN-11

4 PIN RGB 300mm extension lead

KKCN-24

4 PIN LEDmix 300mm extension lead

Power & Control

KKPS-01

visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02

visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03

visDIM D 100W PSU, 24V (3-channel)

KKDM-05

visDIM 1-10V sub-controller

KKSC-03A DMX

visDIM DMX sub-controller (3-channel, screw terminal)

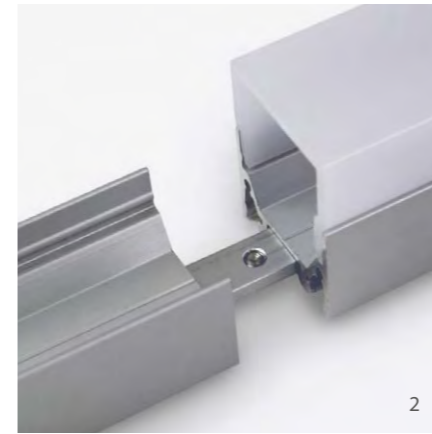
KKSC-03B DMX

visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01

visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. LiNi Glow XL LEDmix dynamic LED
2. Joining bar with grub screw
3. LiNi Glow XL with 180° viewable homogenous diffusion
4. Push-fit cable raceway mounting accessory channel
5. Concealed mounting clip
6. U-shaped snap-fit cover for edge to edge illumination

LiNi Glow XL Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage
LiNi Glow XL, GXSA Silver anodised	Diffused U cover 0	n- 504 ² n504	2100K 21K	LiNi Glow XL 352 M 94.3-2011mm 83.3mm increments	IP40, 300mm Single tail 40c1	24V DC g
			2300K 23K			
		s- 352 s352	2500K 25K	LiNi Glow XL 504 M 111-2011mm 100mm increments	IP40, 300mm Double tail 40c2	
			2700K 27K			
		e- 504 e504	2700K 27K	LiNi Glow XL 508 M 82.4-2011mm 71.4mm increments	IP40, 300mm Single IP20 connector 40c3	
			3000K 30K			
		e- 352 e352	3200K 32K	LiNi Glow XL 207 M 94.3-2011mm 83.3mm increments	IP40, 300mm Double IP20 connector 40c4	
			3500K 35K			
		e- 504 e504	3500K 35K	LiNi Glow XL 208 M 177.7-2011mm 166.7mm increments	IP40, 1000mm Single tail 40d1	
			3800K 38K			
		c- 207 ¹ d207	5000K 50K	LiNi Glow XL RGB M 94.3-2011mm 83.3mm increments		
			RED RED s- s352, s504 only			
		c- 208 ¹ d208	GREEN GRN			
			BLUE BLU			
		c- RGB d501	ORANGE ORN			
			AMBER AMB			
	RGB RGB					

¹ LEDmix requires two colour temperature choices

² n-line : 2700K, 3000K

Code Example:

GXSA	-	0	-	s504	-	35K	-	M 511	-	40c2	-	g
LiNi Glow XL, Silver anodised		Diffused U cover		s-line 504		3500K		511mm		IP40, 300mm Double tail		24V DC

¹ LEDmix Code Example:

GXSA	-	0	-	d207	-	21	-	35	-	M 511	-	40c2	-	g
LiNi Glow XL, Silver anodised		Diffused U cover		LEDmix 207		2100K		3500K		511mm		IP40, 300mm Double tail		24V DC

LiNi-M XL

KKDÖ

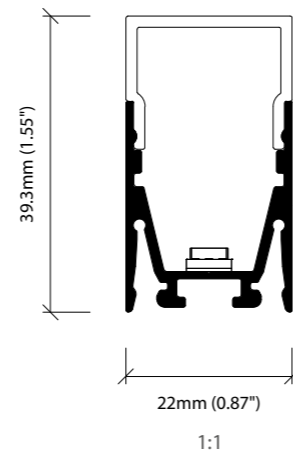
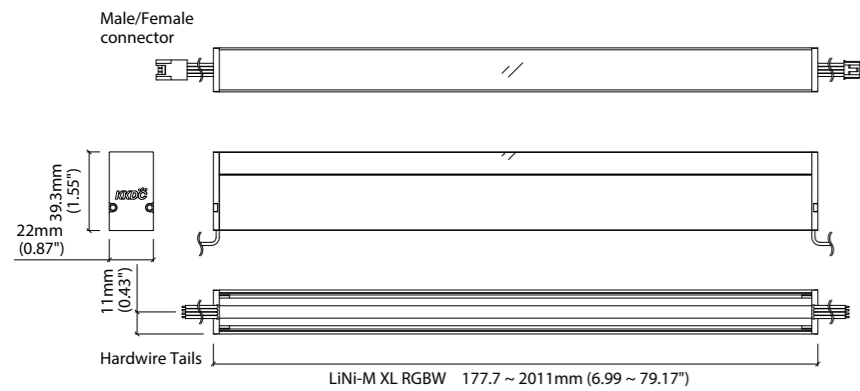
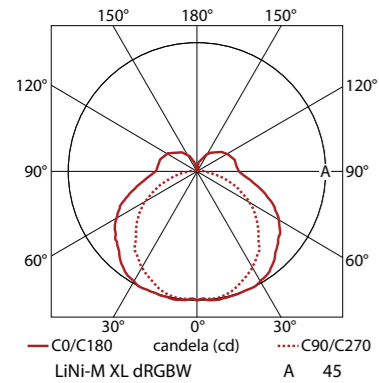
- ▶ With increased housing height, LiNi-M XL is designed for full & uniform diffusion of the dynamic LEDmix RGBW strip.
- ▶ Switch or mix between RGB and any KKDC white LED colour temperature.





LiNi-M XL RGBW

Luminous Flux,	470 lm/m
3000K	30.1 lm/W
Wattage	15.6 W/m
Dimension	H39.3/W22.2/L177.7-2011mm
PCB Increment	166.7mm
LED pitch	23.8mm (between same coloured chips) – 84 LED/m
Lifetime	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c max = 75.9°C)
Beam Angle	130°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	3M double sided tape (IP20) surface mounting clips (IP65)
Connection	Surface mounting via concealed clips or cable raceway
Control	0-10V/1-10V/DMX/DALI (see visDIM range)
LED Strip	d201



LED Options



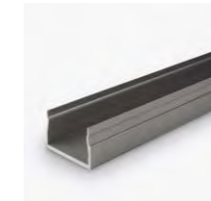
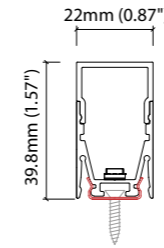
CRI (R_a)	90+
CRI (R_g)	45+
TM-30-15	White: R _f 88+, R _g 97+
Bin/Step	White: 2.5 Step MacAdam ellipse Red: 620-625nm Blue: 455-460nm Green: 520-525nm
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K

Accessories

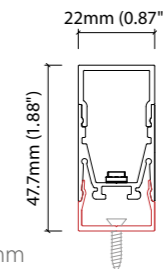
Mounting Options



KKCP-11
Concealed clip
(Allow 3 per metre)
S/Steel finish



KKCR-01-1000 1000mm
KKCR-01-2000 2000mm
KKCR-01-3000 3000mm
Cable Raceway*
Anodised aluminium finish
*Cut & drilled to fit on site



KKJT-02
Joining Bar (Allow 1 per join)
Anodised aluminium finish

Connectors

KKCN-29 & KKCN-30
5 PIN LEDmix RGBW male+female 50mm & 300mm pair

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

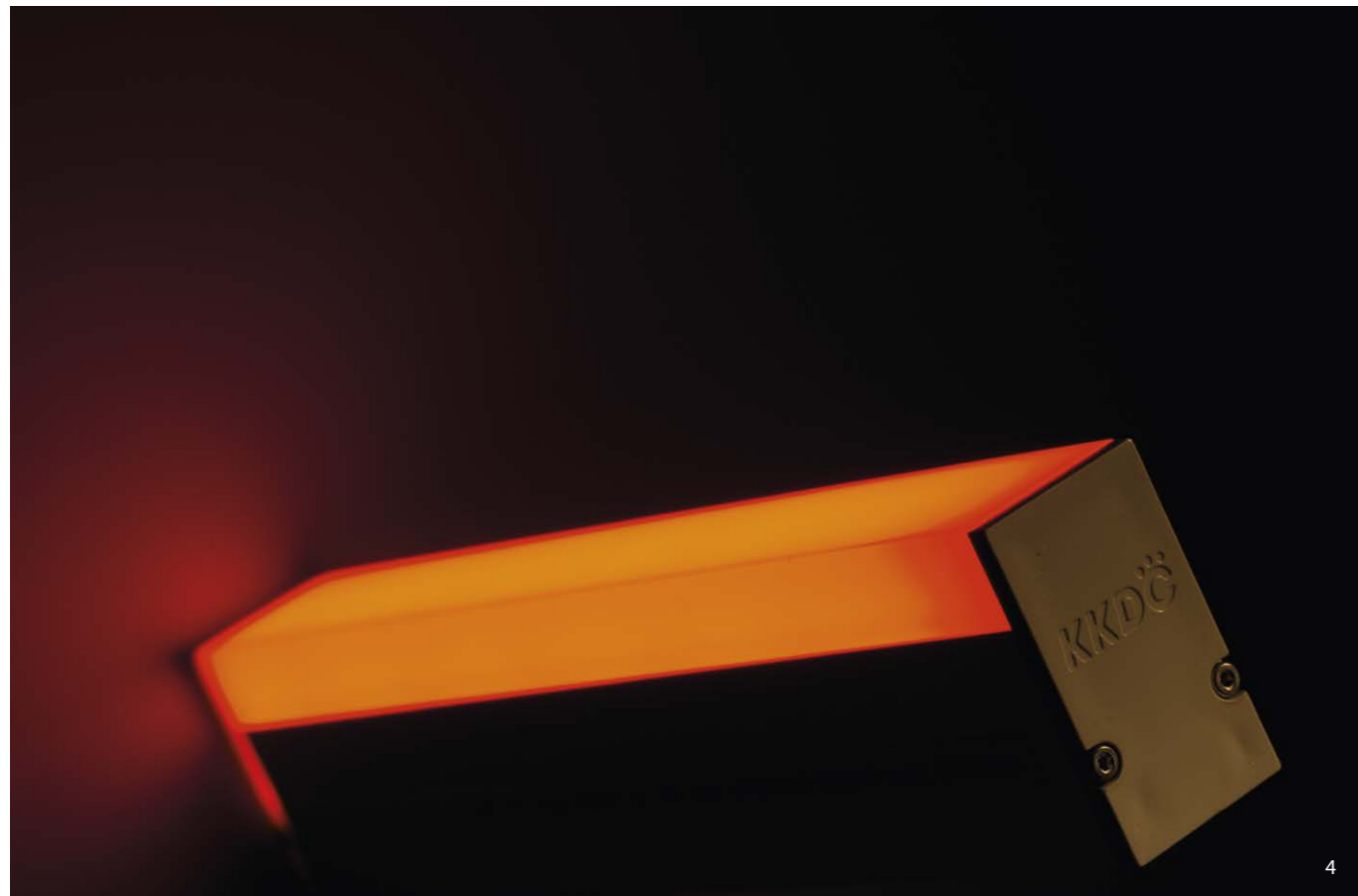
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. 180° fully homogenous diffusion
2. RGBW LEDmix dynamic colour mixing
3. Rear cable exit
4. Dynamic LED effect lighting with full diffusion





LiNi-M XL Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage			
LiNi-M XL, Silver anodised	Diffused U cover	0	RGBW d201	RGB+2100K	21K	M 177.7-2011mm 166.7mm increments	IP40, 300mm Single tail	40c1	24V DC g
				RGB+2300K	23K		IP40, 300mm Double tail	40c2	
				RGB+2500K	25K		IP40, 300mm Single IP20 connector	40c3	
				RGB+2700K	27K		IP40, 300mm Double IP20 connector	40c4	
				RGB+3000K	30K		IP40, 1000mm Single tail	40d1	
				RGB+3200K	32K				
				RGB+3500K	35K				
				RGB+3800K	38K				
				RGB+5000K	50K				

Code Example:

GMSA	-	0	-	d201	-	35K	-	M 511	-	40c1	-	g
LiNi-M XL, Silver anodised		Diffused U cover		RGBW 201		RGB + 3500K		511mm		IP40, 300mm Single tail		24V

LiNi-R

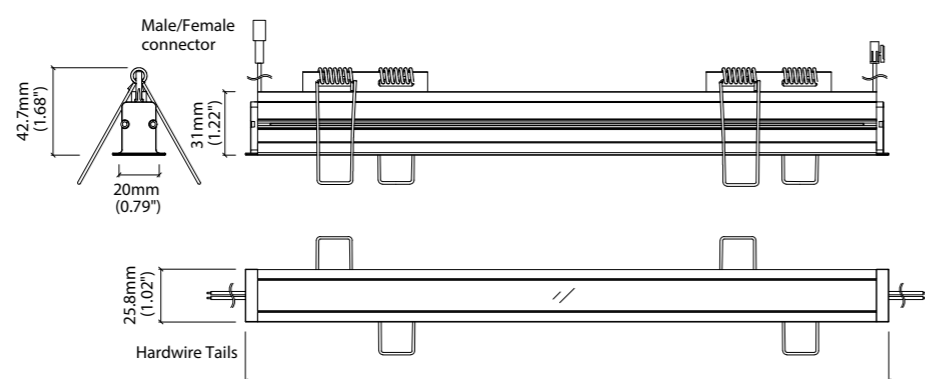
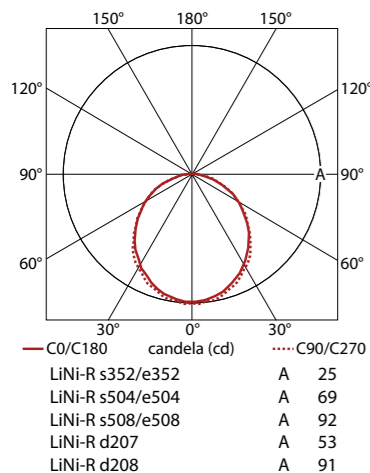


- ▶ Recessed, slim aperture linear profile with spring fixings.
- ▶ Fully homogenous diffusion across full range of KKDC LED strips.





Beam Angle	110°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	Recessed mounting via spring clip
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



LiNi-R 352	100.3 ~ 2017mm (3.95 ~ 79.41")
LiNi-R 504	117 ~ 2017mm (4.61 ~ 79.41")
LiNi-R 508	88.4 ~ 2017mm (3.48 ~ 79.41")
LiNi-R 207	100.3 ~ 2017mm (3.95 ~ 79.41")
LiNi-R 208	183.7 ~ 2017mm (7.23 ~ 79.41")
LiNi-R RGB	100.3 ~ 2017mm (3.95 ~ 79.41")

Product Data

	White			LEDmix Dynamic White		RGB
	LiNi-R s352 LiNi-R e352	LiNi-R s504 LiNi-R e504	LiNi-R s508 LiNi-R e508	LiNi-R d207	LiNi-R d208	LiNi-R dRGB
Luminous Flux, 3000K	148 lm/m 26.8 lm/W	428 lm/m 35 lm/W	613 lm/m 35.5 lm/W	281 lm/m 25.7 lm/W	606 lm/m 39 lm/W	Red: 54 lm/m Green: 116 lm/m Blue: 19 lm/m White: 167 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H42.7/W25.8/ L100.3-2017mm	H42.7/W25.8/ L117-2017mm	H42.7/W25.8/ L88.4-2017mm	H42.7/W25.8/ L100.3-2017mm	H42.7/W25.8/ L183.7-2017mm	H42.7/W25.8/ L100.3-2017mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 70°C)	T _a = -25 to 55°C (T _c Max = 70°C)	T _a = -25 to 45°C (T _c Max = 60°C)	T _a = -25 to 60°C (T _c Max = 69.1°C)	T _a = -25 to 50°C (T _c Max = 76.6°C)	T _a = -25 to 50°C (T _c Max = 74°C)



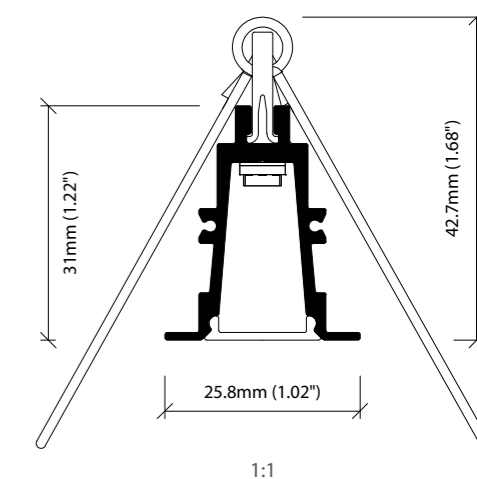
Accessories

Connectors

- KKCN-01 & KKCN-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKCN-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKCN-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead

Power & Control

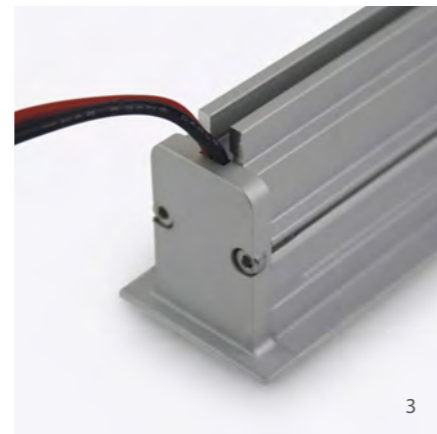
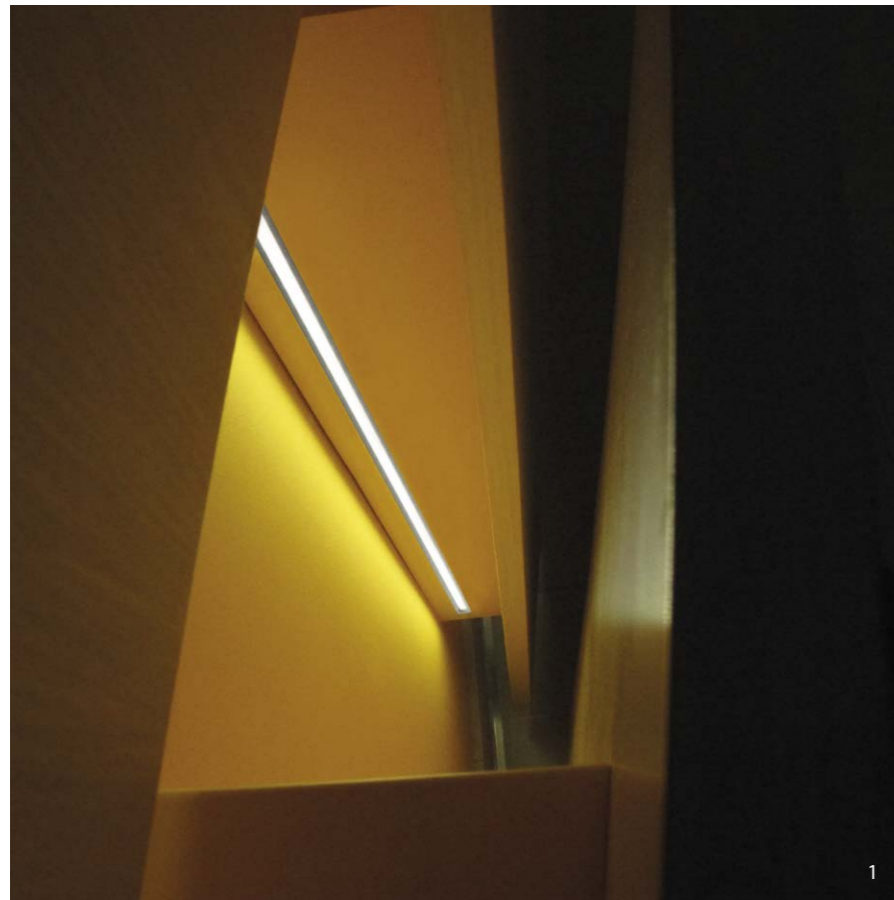
- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)



See pages 332-335 for more details

LED Options

	s-line	e-line	LEDmix	RGB
CRI (R_a)	90+	90+	90+	n/a
CRI (R_g)	45+	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm



1. Recessed and concealed into joinery
2. Easy fit recessed spring fixings
3. Cable exit from end cap
4. Anodised, machined aluminium end caps
5. Dynamic LEDmix LED options
6. Low profile recessed with fully homogenous snap cover

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage		
LiNi-R, Silver anodised LRSA	Diffused cover C	s	352 s352	2100K 21K	LiNi-R 352 M 100.3-2017mm 83.3mm increments	IP40, 50mm Single IP20 connector	40a3 24V DC g	
			504 s504	2300K 23K	LiNi-R 504 M 117-2017mm 100mm increments	IP40, 50mm Double IP20 connector	40a4	
			508 s508	2500K 25K	LiNi-R 508 M 88.4-2017mm 71.4mm increments	IP40, 300mm Single tail	40c1	
		e	352 e352	2700K 27K	LiNi-R 207 M 100.3-2017mm 83.3mm increments	IP40, 300mm Double tail	40c2	
			504 e504	3000K 30K	LiNi-R 208 M 183.7-2017mm 166.7mm increments	IP40, 300mm Single IP20 connector	40c3	
			508 e508	3200K 32K	LiNi-R RGB M 100.3-2017mm 83.3mm increments	IP40, 300mm Double IP20 connector	40c4	
		LEDmix	207 ¹ d207	3500K 35K	RED RED s-s352, s504 only GREEN GRN BLUE BLU ORANGE ORN AMBER AMB RGB RGB			
			208 ¹ d208	3800K 38K				
			RGB d501	5000K 50K				

¹ LEDmix requires two colour temperature choices

Code Example:

LRSA	-	C	-	s504	-	35K	-	M 517	-	40c1	-	g
LiNi-R, Silver anodised		Diffused cover		s-line 504		3500K		517mm		IP40, 300mm Single tail		24V DC

¹ LEDmix Code Example:

LRSA	-	C	-	d207	-	21	-	35	-	M 517	-	40c1	-	g
LiNi-R, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		517mm		IP40, 300mm Single tail		24V DC

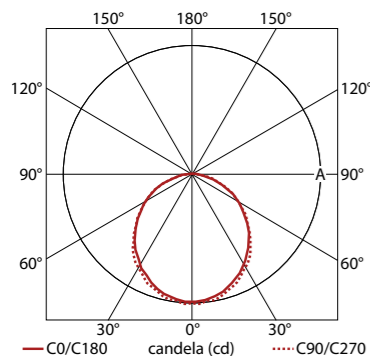
LiNi-R XL



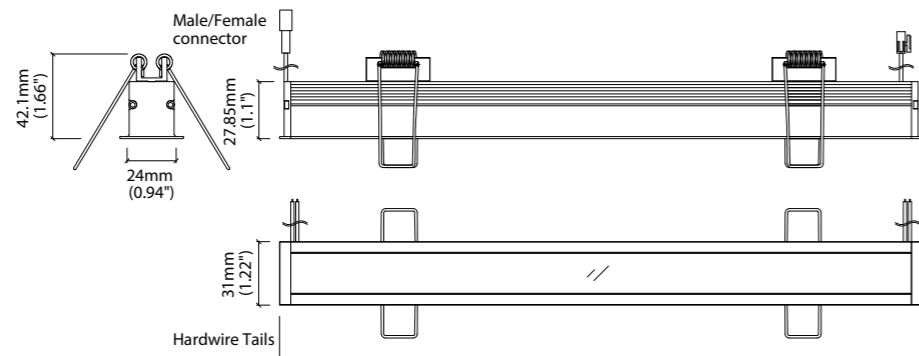
- ▶ Recessed, linear profile with full homogenous diffusion across KKDC LED strip range.
- ▶ Anodised aluminium housing with diffused or clear snap-fit covers.



Beam Angle	Diffused
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	Recessed mounting via spring clip
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



— C0/C180	candela (cd)	..... C90/C270
LiNi-R XL s352/e352	A	25
LiNi-R XL s504/e504	A	69
LiNi-R XL s508/e508	A	92
LiNi-R XL d207	A	53
LiNi-R XL d208	A	91



LiNi-R XL 352	99.3 ~ 2016mm (3.91 ~ 79.37")
LiNi-R XL 504	116 ~ 2016mm (4.57 ~ 79.37")
LiNi-R XL 508	87.4 ~ 2016mm (3.44 ~ 79.37")
LiNi-R XL 207	99.3 ~ 2016mm (3.91 ~ 79.37")
LiNi-R XL 208	182.7 ~ 2016mm (7.19 ~ 79.37")
LiNi-R XL RGB	99.3 ~ 2016mm (3.91 ~ 79.37")

Product Data

	White			LEDmix Dynamic White		RGB
	LiNi-R XL s352 LiNi-R XL e352	LiNi-R XL s504 LiNi-R XL e504	LiNi-R XL s508 LiNi-R XL e508	LiNi-R XL d207	LiNi-R XL d208	LiNi-R XL dRGB
Luminous Flux, 3000K	169 lm/m 30.7 lm/W	503 lm/m 41.1 lm/W	703 lm/m 40.7 lm/W	323 lm/m 29.5 lm/W	695 lm/m 44.7 lm/W	Red: 61 lm/m Green: 132 lm/m Blue: 22 lm/m White: 192 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H42.1/W31/ L99.3-2016mm	H42.1/W31/ L116-2016mm	H42.1/W31/ L87.4-2016mm	H42.1/W31/ L99.3-2016mm	H42.1/W31/ L182.7-2016mm	H42.1/W31/ L99.3-2016mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 66°C)	T _a = -25 to 55°C (T _c Max = 64°C)	T _a = -25 to 60°C (T _c Max = 68.3°C)	T _a = -25 to 55°C (T _c Max = 67.6°C)	T _a = -25 to 55°C (T _c Max = 66.5°C)



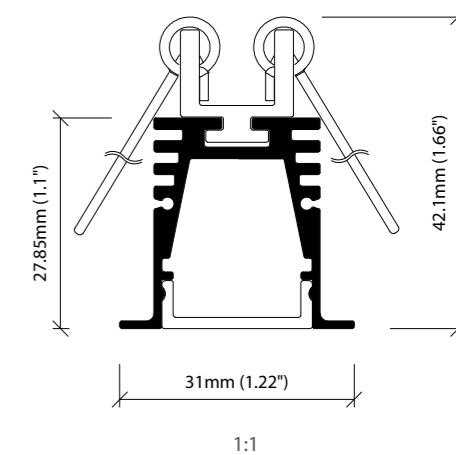
Accessories

Connectors

- KKCN-01 & KKCN-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-07 & KKCN-09**
4 PIN RGB male+female 50mm & 300mm pair
- KKCN-18 & KKCN-19**
4 PIN LEDmix male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead
- KKCN-11**
4 PIN RGB 300mm extension lead
- KKCN-24**
4 PIN LEDmix 300mm extension lead

Power & Control

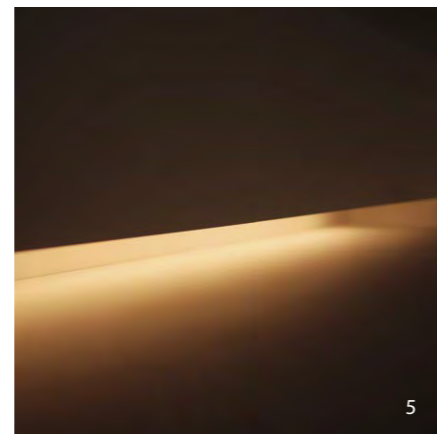
- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)



See pages 332-335 for more details

LED Options

	s-line	e-line	LEDmix	RGB
CRI (R_a)	90+	90+	90+	n/a
CRI (R_g)	45+	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm



1. Snap-fit diffused cover
2. Fully homogenous, soft, diffused lighting
3. Dynamic LEDmix LED options
4. Easy fit recessed spring fixings and machined aluminium end caps
5. Recessed concealment into joinery

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage		
LiNi-R XL, Silver anodised	Diffused cover	s	352 s352	2100K 21K	LiNi-R XL 352 M 99.3-2016mm 83.3mm increments	IP40, 50mm Single IP20 connector	40a3 24V DC g	
			504 s504	2300K 23K	LiNi-R XL 504 M 116-2016mm 100mm increments	IP40, 50mm Double IP20 connector	40a4	
			508 s508	2500K 25K	LiNi-R XL 508 M 87.4-2016mm 71.4mm increments	IP40, 300mm Single tail	40c1	
		e	352 e352	2700K 27K	LiNi-R XL 207 M 99.3-2016mm 83.3mm increments	IP40, 300mm Double tail	40c2	
			504 e504	3000K 30K	LiNi-R XL 208 M 182.7-2016mm 166.7mm increments	IP40, 300mm Single IP20 connector	40c3	
			508 e508	3200K 32K	LiNi-R XL RGB M 99.3-2016mm 83.3mm increments	IP40, 300mm Double IP20 connector	40c4	
		LEDmix	207 ¹ d207	3500K 35K	RED RED s-s352, s504 only GREEN GRN BLUE BLU ORANGE ORN AMBER AMB RGB RGB			
			208 ¹ d208	3800K 38K				
			RGB d501	5000K 50K				

¹ LEDmix requires two colour temperature choices

Code Example:

RXSA	-	C	-	s504	-	35K	-	M	516	-	40c1	-	g
------	---	---	---	------	---	-----	---	---	-----	---	------	---	---

LiNi-R XL, Silver anodised Diffused cover s-line 504 3500K 516mm IP40, 300mm Single tail 24V DC

¹ LEDmix Code Example:

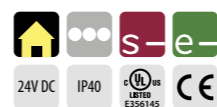
RXSA	-	C	-	d207	-	21	-	35	-	M	516	-	40c1	-	g
------	---	---	---	------	---	----	---	----	---	---	-----	---	------	---	---

LiNi-R XL, Silver anodised Diffused cover LEDmix 207 2100K 3500K 516mm IP40, 300mm Single tail 24V DC

Power Cove

- ▶ Compact and powerful linear LED solution featuring 512 high power strip.
- ▶ Suitable for ceiling coves and architectural details.
- ▶ Various snap-on cover optics including 30° lens and range of mounting options.





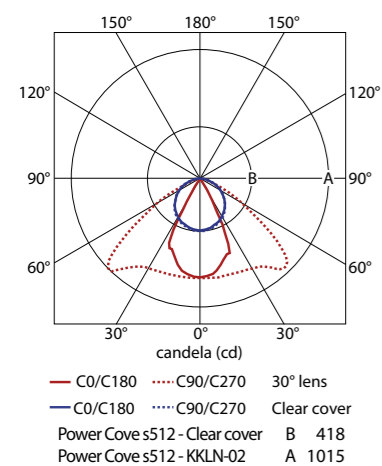
Power Cove s512 Power Cove e512

Diffused cover, 3000K	1772 lm/m 58.6 lm/W
Semi-diffused, 3000K	2625 lm/m 86.8 lm/W
Clear cover, 3000K	2782 lm/m 92 lm/W
KKLN-02, 3000K	2722 lm/m 90 lm/W
Wattage	30.24 W/m
Dimension	H23/W20.4/L84.4-2013mm (excluding brackets)
PCB Increment	71.4mm increment
LED pitch	11.9mm – 84 LED/m
Lifetime	50,000 hours @ 25°C

Operation Temp T_a = -25 to 45°C (T_c max = 75°C)

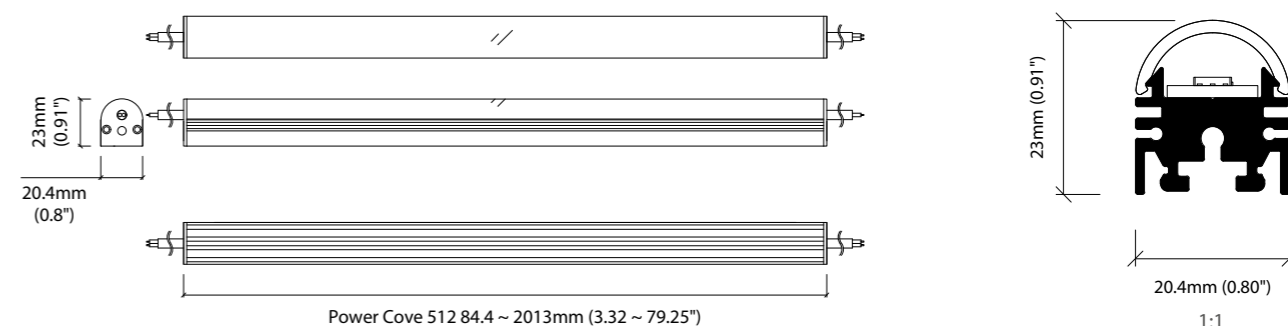
Beam Angle	Diffused: Semi-diffused: Clear: 105° KKLN-02: 30°
IP Rating	IP40
Finish	Silver Anodised
Cover/Lens	KKLN-02/Clear/Semi-diffused/Diffused
Mounting	Surface mounting via clips or brackets
Connection	Sheathed hardware tails or male/female connectors

Control 0-10V/1-10V/DMX/DALI (see visDIM range)



LED Options

	s-line	e-line
CRI (R_a)	90+	90+
CRI (R_g)	45+	45+
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K Single colours: Red/Green/Blue/Orange/Amber	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K

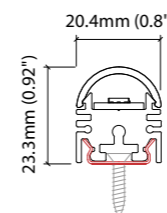


Accessories

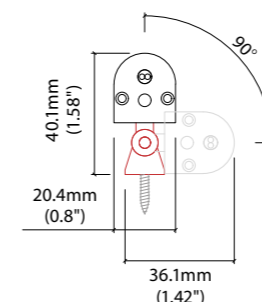
Mounting Options



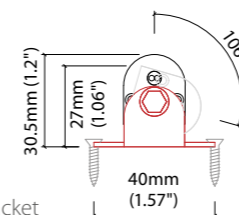
KKCP-11
Concealed clip
(Allow 3 per metre)
S/Steel finish



KKBK-05
Adjustable bracket
(Allow 2 per metre)
S/Steel finish
Pre-assembled in factory
for double tail option



KKBK-22*
Adjustable end cap bracket
(Allow 2 per length)
S/Steel finish
* When using adjustable end cap
bracket, max length is limited
to 1500mm



Connectors

KKCN-01 & KKCN-03
2 PIN male+female 50mm & 300mm pair

KKCN-06
2 PIN 300mm extension lead

Exterior Junction Boxes

KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel,
screw terminal)

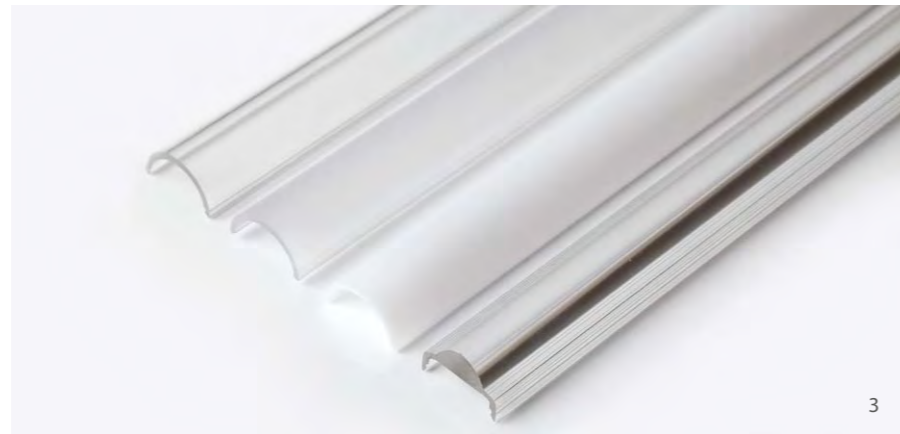
KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. Adjustable angle mounting bracket
2. Power Cove 512 close up
3. Cover options available, clear, semi-diffused, diffused, and KKLN-02 lens option
4. Power Cove with KKLN-02 lens





Private Residence, Vietnam
 Lighting Design: Project Lighting Design Pte Ltd
 KKDC Singapore

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage
Power Cove, Silver anodised PWSA	Clear cover B	s-512 s512	2100K 21K	M 84.4-2013mm 71.4mm increments ¹	IP40, 300mm Single tail 40c1	24V DC g
	Diffused cover C	e-512 e512	2300K 23K			
	Semi-diffused D		2500K 25K			
	KKLN-02 H		2700K 27K			
			3000K 30K			
			3200K 32K			
			3500K 35K			
			3800K 38K			
			5000K 50K			
			RED RED s-512 only			
		GREEN GRN				
		BLUE BLU				
		ORANGE ORN				
		AMBER AMB				

¹ When using adjustable end cap bracket, max length is limited to 1,500mm

Code Example:

PWSA	-	C	-	s512	-	35K	-	M 513	-	40c1	-	g
Power Cove, Silver anodised		Diffused cover		s-line 512		3500K		513mm		IP40, 300mm Single tail		24V DC

TANA

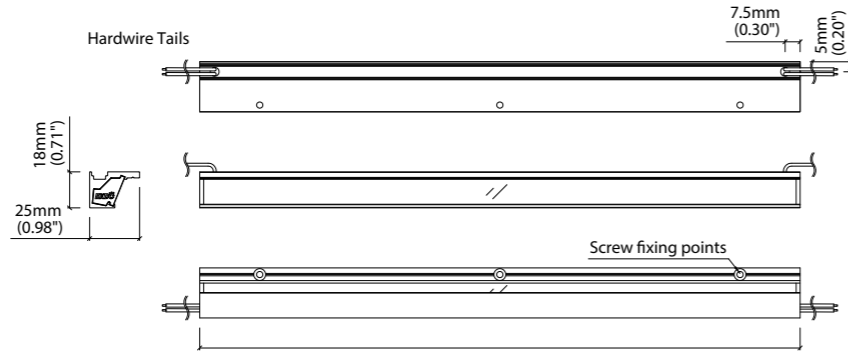
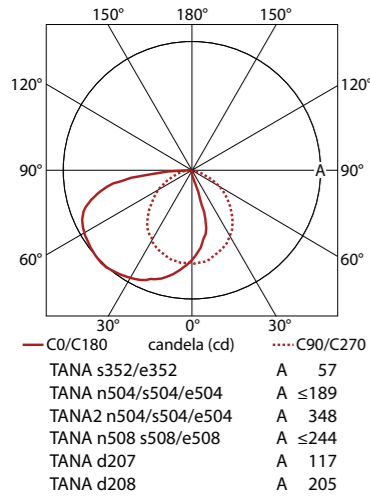
- ▶ Discreet, surface mounted linear shelf light with custom length aluminium housing.
- ▶ Diffused or clear cover options available and wide range of LED strips.
- ▶ Single strip or twin strips (TANA2 504) can be specified.
- ▶ New TANA Spot option for highlighting objects within shelving display.

KKD[©]





IP Rating IP40
Lifetime 50,000 hours @ 25°C
Finish Silver Anodised
Cover/Lens Diffused/Clear
Mounting Surface mounting via screw fixing, 3M tape or magnets
Connection Hardwire tails
Control 0-10V/1-10V/DMX/DALI (see visDIM range)



TANA 352	103.3 ~ 2020mm (4.07 ~ 79.53")
TANA 504	120 ~ 2020mm (4.72 ~ 79.53")
TANA 508	91.4 ~ 2020mm (3.60 ~ 79.53")
TANA 207	103.3 ~ 2020mm (4.07 ~ 79.53")
TANA 208	186.7 ~ 2020mm (7.35 ~ 79.53")
TANA RGB	103.3 ~ 2020mm (4.07 ~ 79.53")

Product Data

	White				LEDmix Dynamic White		RGB
	TANA s352	TANA n504	TANA2 n504 (45° & 5°)	TANA n508	TANA d207	TANA d208	TANA dRGB
	TANA e352	TANA e504	TANA2 e504 (45° & 5°)	TANA e508			
Clear Cover @ 45° LED position, 3000K	330 lm/m 59.7 lm/W	≤ 942 lm/m ≤ 77 lm/W	≤ 1584 lm/m ≤ 64.7 lm/W	≤ 1365 lm/m ≤ 79 lm/W	626 lm/m 57.2 lm/W	1348 lm/m 86.7 lm/W	Red: 119 lm/m Green: 257 lm/m Blue: 42 lm/m White: 372 lm/m
Diffused Cover @ 45° LED position, 3000K	238 lm/m 43.1 lm/W	≤ 710 lm/m ≤ 58 lm/W	≤ 1140 ≤ 46.6 lm/W	≤ 987 lm/m ≤ 57.1 lm/W	453 lm/m 41.4 lm/W	975 lm/m 62.7 lm/W	Red: 86 lm/m Green: 186 lm/m Blue: 31 lm/m White: 269 lm/m
Wattage	5.52 W/m	12.24 W/m	24.48 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H18/W25/ L103.3-2020mm	H18/W25/ L120-2020mm	H18/W25/ L120-2020mm	H18/W25/ L91.4-2020mm	H18/W25/ L103.3-2020mm	H18/W25/ L186.7-2020mm	H18/W25/ L103.3-2020mm
PCB Increment	83.3mm	100mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	16.7mm – 120 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Beam angle	Clear cover: 50° Diffused cover: 100°	Clear cover: 90° Diffused cover: 80°	Clear cover: 90° Diffused cover: 100°	Clear cover: 95° Diffused cover: 100°	Clear cover: 90° Diffused cover: 80°	Clear cover: 95° Diffused cover: 100°	Clear cover: 90° Diffused cover: 80°
Operation Temp	T _a = -25 to 60°C (T _c Max = 69°C)	T _a = -25 to 60°C (T _c Max = 77°C)	T _a = -25 to 60°C (T _c Max = 77°C)	T _a = -25 to 50°C (T _c Max = 68°C)	T _a = -25 to 60°C (T _c Max = 72.9°C)	T _a = -25 to 45°C (T _c Max = 69.2°C)	T _a = -25 to 50°C (T _c Max = 83°C)



LED Options

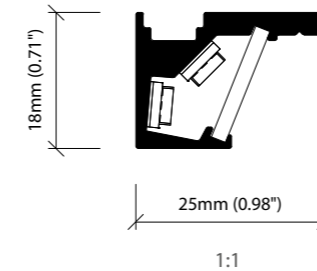
	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	90+
CRI (R_g)	78+	45+	45+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Accessories

Connectors

KKCN-01 & KKCN-03
2 PIN male+female 50mm & 300mm pair

KKCN-06
2 PIN 300mm extension lead



Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. TANA 504 installed into shelving
2. TANA end cap detail
3. Various paint finishes available
4. Flush end cap plug to prevent light leakage
5. Dynamic LEDmix LED options available
6. TANA2, twin strip positions for increased lumen output

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/ Connection Type	Mounting/ Fixing	LED Position	Voltage		
TANA, Silver anodised	Clear cover B	n 504 ² n504	2100K 21K	TANA 352 M 103.3-2020mm 83.3mm increments	IP40, 50mm Single IP20 connector	Screw Fixed	1	5°	1	24V DC g
	Diffused cover C	508 ² n508	2300K 23K							
		s 352 s352	2500K 25K	TANA 504 M 120-2020mm 100mm increments	IP40, 50mm Double IP20 connector	3M Tape Fixed	2	45°	2	
		007 s007	2700K 27K							
		504 s504	3000K 30K	TANA 508 M 91.4-2020mm 71.4mm increments	IP40, 300mm Single tail	Magnet Fixed	3	TANA(2) 5 + 45° (504 only)	3	
		508 s508	3200K 32K							
		e 352 e352	3500K 35K	TANA 207 M 103.3-2020mm 83.3mm increments	IP40, 300mm Double tail					
		007 e007	3800K 38K							
		504 e504	5000K 50K	TANA 208 M 186.7-2020mm 166.7mm increments	IP40, 1000mm Single tail					
		508 e508	RED RED s352, s504 only							
		207 ¹ d207	GREEN GRN	TANA RGB M 103.3-2020mm 83.3mm increments	IP40, 3000mm Single tail					
		208 ¹ d208	BLUE BLU							
		RGB d501	ORANGE ORN		IP40, 3000mm Double tail					
			AMBER AMB							
			RGB RGB							

¹ LEDmix requires two colour temperature choices

² n-line : 2700K, 3000K

Code Example:

TNSA	-	C	-	s504	-	35K	-	M 520	-	40d1	-	1	-	1	-	g
TANA, Silver anodised		Diffused cover		s-line 504		3500K		520mm		IP40, 1000mm Single tail		Screw Fixed		5°		24V DC

¹ LEDmix Code Example:

TNSA	-	C	-	d207	-	21	-	35	-	M 520	-	40d1	-	1	-	2	-	g
TANA, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		520mm		IP40, 1000mm Single tail		Screw Fixed		45°		24V

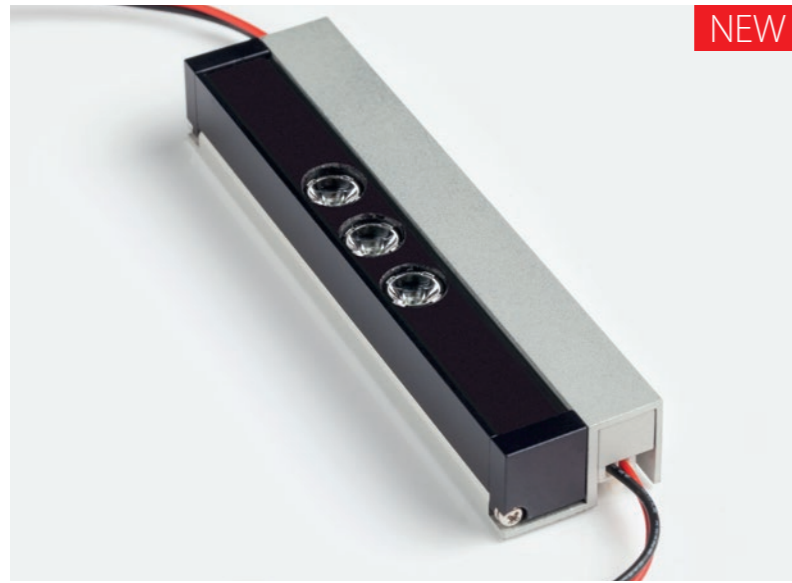


TANA Spot

- ▶ New TANA Spot is a compact and adjustable luminaire designed for shelf display feature illumination.
- ▶ High Power LED with integral converter.
- ▶ Can be used in-line with TANA profile to create linear shelf systems or as a standalone spotlighting unit.



TANA Spot



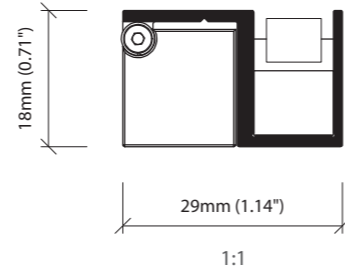
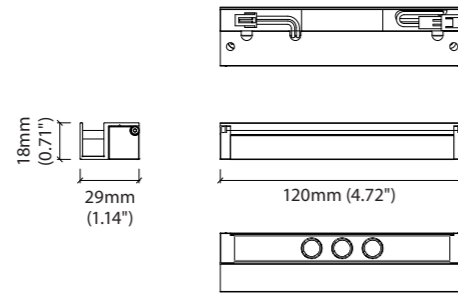
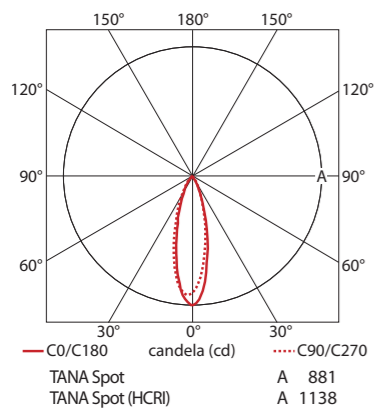
NEW



- Lifetime** 50,000 hours @ 25°C
- Operation Temp** Ta = -25 to 50°C (Tc max = 86.1°C)
@ Ta = 25°C (Tc = 61.1°C)
- IP Rating** IP40
- Finish** Silver Anodised
- Cover/Lens** 16°/24° lens (TANA Spot)/ 26° lens (TANA Spot HCRI)
- Mounting** Surface mounting via screw fixing
- Connection** Male/female connectors

Product Data

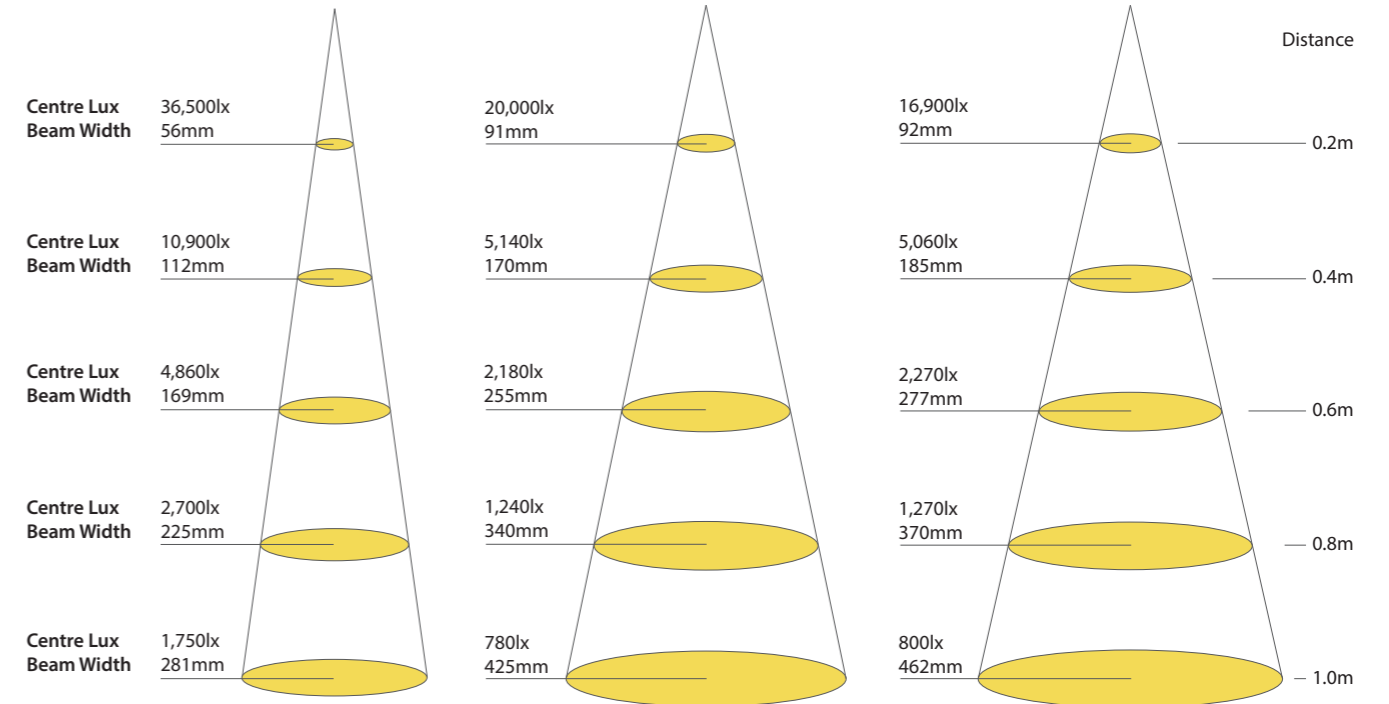
	TANA Spot	TANA Spot HCRI
Luminous flux	207 lm	257 lm
Clear Cover	58.0 lm/W	72.0 lm/W
Wattage	3.57 W	3.57 W
Dimension	H18/W29/W120mm	H18/W29/W120mm
Beam angle	16°/24°	26°



TANA SPOT with 16° lens

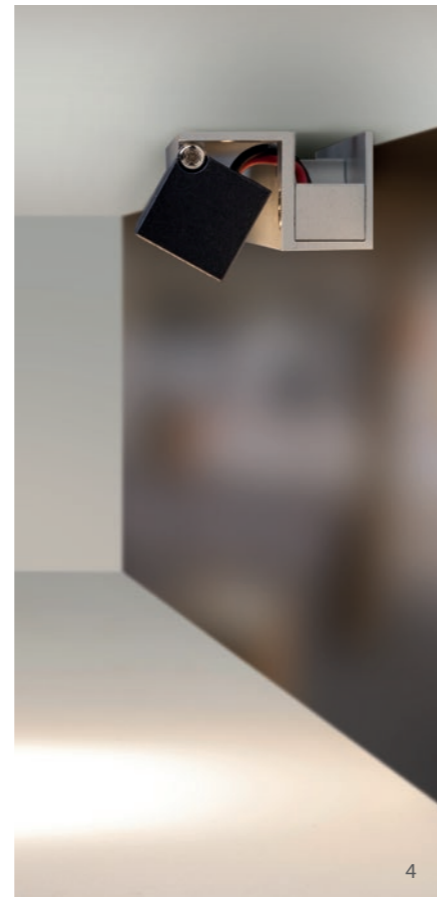
TANA SPOT with 24° lens

TANA SPOT HCRI with 26° lens



LED Options

	h- TANA Spot	h- TANA Spot HCRI
CRI (R_a)	80+	90+
CRI (R_g)	12	80+
TM-30-15	R _f 80+, R _g 90+	R _f 90+, R _g 100+
Bin/Step	3 Step MacAdam ellipse (4 Step for 5000K/6500K)	3 Step MacAdam ellipse
Colours	2800K/3000K/3200K/3800K (70CRI - 5000K/6500K)	2700K/3000K



- 1. Directional LED module, mounted in line with TANA shelf light
- 2. End-to-end link connection with TANA
- 3. Mini lensed high Power LED with integral converter
- 4. Machined black and silver anodised aluminium compact housing

Housing/Finish	LED Type	Colour (CCT)	IP Rating/Connection Type	Mounting/Fixing	Cover/Lens	Voltage
TANA Spot, Silver anodised TASA	TANA Spot h108	2800K 28K h108 only	IP40, Single IP20 connector 40x3	Screw Fixed 1	16° lens K h108 only	24V DC g
TANA Spot, Black anodised TABA	TANA Spot HCRI h109	3000K 30K 3200K 32K 3800K 38K 5000K 50K 6500K 65K 2700K 27K h109 only 3000K 30K	IP40, Double IP20 connector 40x4		24° lens I 26° lens J h109 only	

Code Example:

TASA	-	h108	-	32K	-	40x3	-	1	-	K	-	g
TANA Spot, Silver anodised		TANA Spot		3200K		IP40, Single IP20 connector		Screw Fixed		16° lens		24V

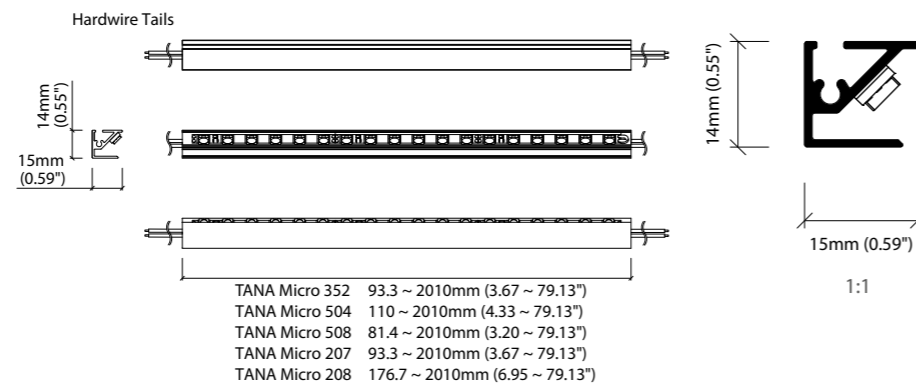
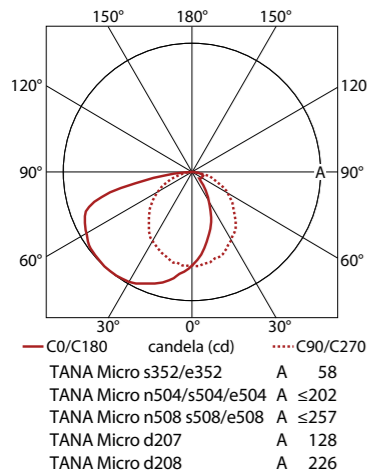
TANA Micro

- ▶ TANA Micro is a slim linear profile for discreet shelf lighting designed for concealment within architectural details.
- ▶ Wide range of LED strip options available, fixed at 45°.





IP Rating	IP20
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	N/A
Mounting	Surface mounting via 3M tape or screw mount end caps
Connection	Hardwire tails
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



LED Options

	n -line	s -line	e -line	LEDmix
CRI (R_a)	95+	90+	90+	90+
CRI (R_g)	78+	45+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K

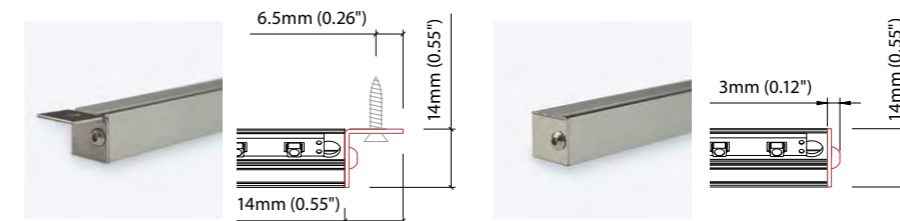
Product Data

	White			LEDmix Dynamic White	
	TANA Micro s352 TANA Micro e352	TANA Micro n504 TANA Micro s504 TANA Micro e504	TANA Micro n508 TANA Micro s508 TANA Micro e508	TANA Micro d207	TANA Micro d208
Luminous Flux, 3000K	383 lm/m 69.4 lm/W	≤ 1136 lm/m ≤ 92.8 lm/W	≤ 1588 lm/m ≤ 91.9 lm/W	729 lm/m 66.6 lm/W	1567 lm/m 100.8 lm/W
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m
Dimension	H14/W15/ L93.3-2010mm	H14/W15/ L110-2010mm	H14/W15/ L81.4-2010mm	H14/W15/ L93.3-2010mm	H14/W15/ L176.7-2010mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m
Beam angle	90°	45°	65°	95°	90°
Operation Temp	T _a = -25 to 55°C (T _c Max = 65°C)	T _a = -25 to 55°C (T _c Max = 70°C)	T _a = -25 to 45°C (T _c Max = 69°C)	T _a = -25 to 60°C (T _c Max = 69.5°C)	T _a = -25 to 50°C (T _c Max = 65.9°C)



Accessories

Mounting Options



TMEC-02*
End cap bracket pair (Includes screws)
S/Steel finish
*Not recommended for use on lengths
over 1000mm

TMEC-01
End cap pair (Includes screws)
S/Steel finish

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel,
screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. Surface mounted TANA Micro 504
 2. Private Residence in Interlace, Singapore
 3. LEDmix cable exit detail
 4. High strength self-adhesive 3M tape
 5. Optional end cap bracket accessory (sold separately)
 6. TANA Micro d207 & d208 LEDmix options



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability ²	IP Rating/Connection Type	Voltage
TANA Micro, Silver anodised	No cover X	n- 504 ³ n504	2100K 21K	TANA Micro 352 M 93.3-2010mm 83.3mm increments	IP20, 1000mm Single tail 20d1	24V DC g
			2300K 23K			
		s- 352 s352	2500K 25K	TANA Micro 504 M 110-2010mm 100mm increments	IP20, 1000mm Double tail 20d2	
			2700K 27K			
		504 s504	3000K 30K	TANA Micro 508 M 81.4-2010mm 71.4mm increments	IP20, 3000mm Single tail 20e1	
			3200K 32K			
		508 s508	3500K 35K	TANA Micro 207 M 93.3-2010mm 83.3mm increments	IP20, 3000mm Double tail 20e2	
			3800K 38K			
		e- 352 e352	5000K 50K	TANA Micro 208 M 176.7-2010mm 166.7mm increments		
			504 e504			
		508 e508	5000K 50K			
			207 ¹ d207			
		208 ¹ d208	RED RED s- s352, s504 only			
			GREEN GRN			
BLUE BLU						
ORANGE ORN						
AMBER AMB						

¹ LEDmix requires two colour temperature choices
² When using adjustable end cap bracket, max length is limited to 1000mm
³ n-line: 2700K/3000K

Code Example:

TMSA	-	X	-	s504	-	35K	-	M 510	-	20d2	-	g
TANA Micro, Silver anodised		No cover		s-line 504		3500K		510mm		IP20, 1000mm Double tail		24V DC

¹ LEDmix Code Example:

TMSA	-	X	-	d207	-	21	-	35	-	M 510	-	20d2	-	g
TANA Micro, Silver anodised		No cover		LEDmix 207		2100K		3500K		510mm		IP20, 1000mm Double tail		24V DC



TANA SP

- ▶ TANA SP is a compact linear shelf mounted profile with push-fit dust cover.
- ▶ Flush fit concealed clip mounting
- ▶ Utilises 007 tight-pitch LED strip for homogenous illumination.

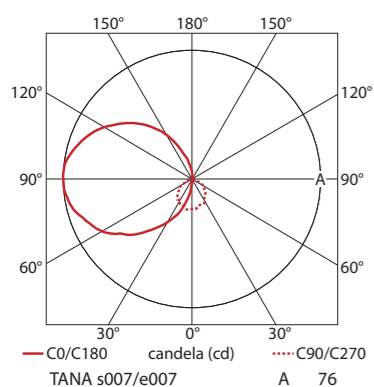
KKDÖ





TANA SP s007
TANA SP e007

Luminous Flux,	417 lm/m
3000K	38.5 lm/W
Wattage	10.83 W/m
Dimension	H15.8/W16/L61.7-2020mm
PCB Increment	41.7mm increment
LED pitch	6.9mm – 144 LED/m
Lifetime	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c max = 77.3°C)
Beam Angle	60°
IP Rating	IP40
Finish	Silver anodised
Cover/Lens	Diffused
Mounting	Surface mounted concealed clips
Connection	Hardwire tails
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



LED Options

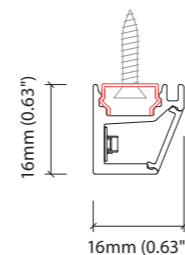
	s -line	e -line
CRI (R_a)	90+	90+
CRI (R_g)	45+	45+
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K Single colours: Red/Green/Blue/ Orange/Amber	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K

Accessories

Mounting Options



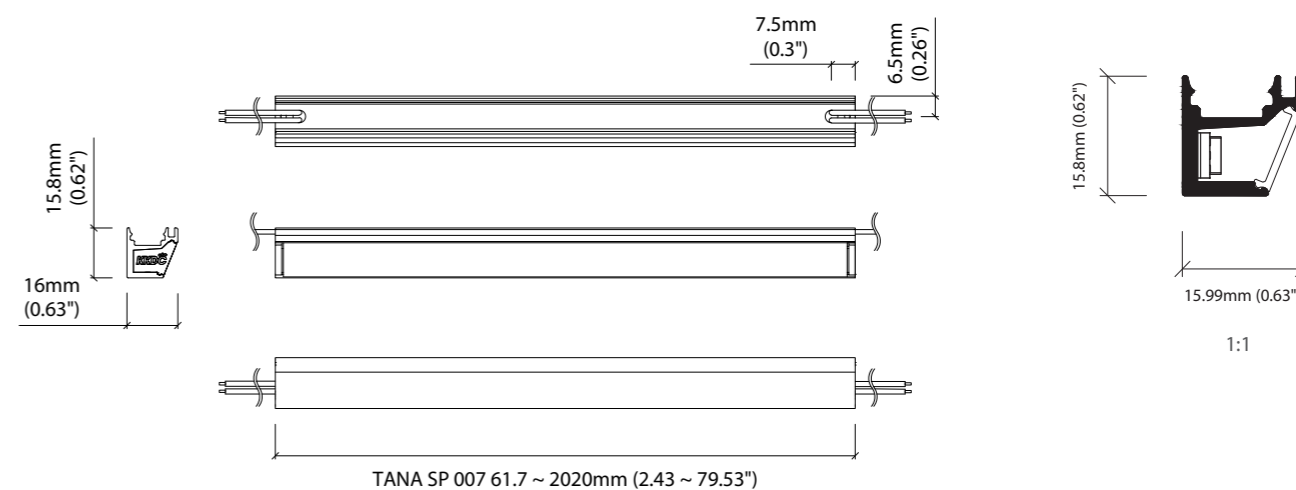
KKCP-10
Concealed Clip
(Allow 3 per metre)
S/Steel finish

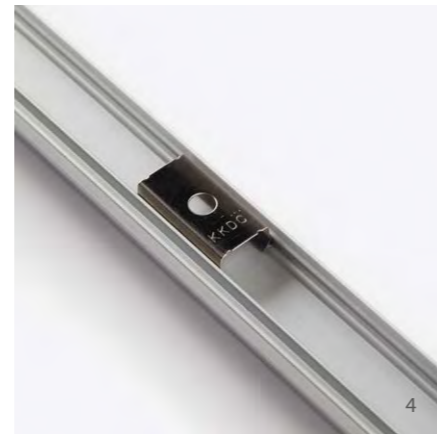


Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details





1. Private Residence in Interlace, Singapore
 2. TANA SP end detail with snap cover
 3. TANA SP 007 with cover removed
 4. TANA SP fixing clip detail

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating/Connection Type	Voltage	
TANA SP, Silver anodised	Diffused cover	C	s 007 s007	2100K 21K	M 61.7-2020mm 41.7mm increments	IP40, 1000mm Single tail 40d1 IP40, 1000mm Double tail 40d2 IP40, 3000mm Single tail 40e1 IP40, 3000mm Double tail 40e2	24V DC g
			e 007 e007	2300K 23K			
				2500K 25K			
				2700K 27K			
				3000K 30K			
				3200K 32K			
				3500K 35K			
				3800K 38K			
				5000K 50K			
			RED RED s-s007 only				
			GREEN GRN				
			BLUE BLU				
			ORANGE ORN				
AMBER AMB							

Code Example:

TSSA	-	C	-	s007	-	35K	-	M	520	-	40d2	-	g
TANA SP, Silver anodised Diffused cover s-line 007 3500K 520mm IP40, 1000mm Double tail 24V DC													

PICO

- ▶ Slim & elegant surface mounted picture luminaire with directional cover.
- ▶ Also suitable for other interior display applications.
- ▶ Machined anodised aluminium in Silver or Black with innovative quick release power connection mountings.

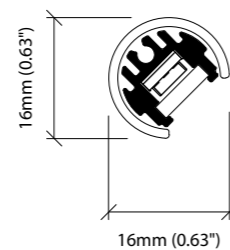
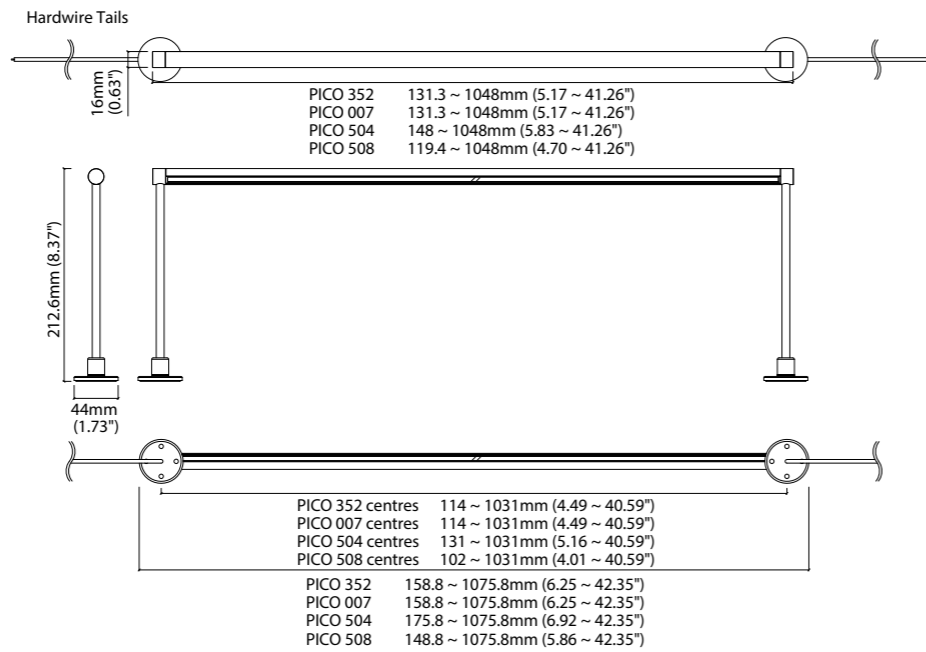
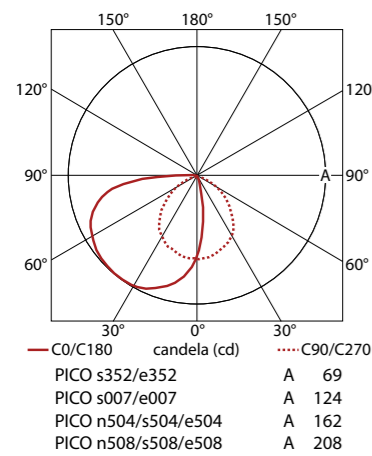




- Beam angle** 90°
- IP Rating** IP40 (diffused Cover)/IP20 (No cover)
- Lifetime** 50,000 hours @ 25°C
- Finish** Silver Anodised
- Cover/Lens** Diffused/No cover
- Mounting** Surface mounted wall brackets
- Connection** Hardwire tails
(Polarity split between mounting arms)
- Control** 0-10V/1-10V/DMX/DALI
(see visDIM range)

Product Data

	White			
	PICO s352 PICO e352	PICO s007 PICO e007	PICO n504 PICO s504 PICO e504	PICO n508 PICO s508 PICO e508
Diffused Cover, 3000K	282 lm/m 51 lm/W	545 lm/m 50.3 lm/W	≤ 835 lm/m ≤ 68.2 lm/W	≤ 1166 lm/m ≤ 67.5 lm/W
No Cover, 3000K	344 lm/m 62.3 lm/W	665 lm/m 61.5 lm/W	1020 lm/m 83.4 lm/W	1426 lm/m 82.5 lm/W
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m
Dimension (Excludes mounting plates)	H44/W212.6/Ø16mm L131-1048mm	H44/W212.6/Ø16mm L131-1048mm	H44/W212.6/Ø16mm L148-1048mm	H44/W212.6/Ø16mm L119-1048mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m
Operation Temp	T _a = -20 to 60°C (T _c max = 70.6°C)	T _a = -20 to 60°C (T _c max = 79.4°C)	T _a = -25 to 50°C (T _c Max = 76.6°C)	T _a = -25 to 45°C (T _c Max = 69°C)



1:1

LED Options

	n -line	s -line	e -line
CRI (R_a)	95+	90+	90+
CRI (R_g)	78+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K

Accessories

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. PICO wall mounted
2. Innovative pin connection
3. PICO end cap detail

Housing/Finish		Cover/Lens		LED Type		Colour (CCT)		Length Availability		IP Rating		Voltage	
PICO, Silver anodised	PCSA	No cover ¹	X	n-	504 ² n504	2100K	21K	PICO 352	M	131-1048mm 83.3mm increments	IP40	40	24V DC g
PICO, Black anodised	PCBA	Diffused cover	C	s-	508 ² n508	2300K	23K	PICO 007	M	131-1048mm 83.3mm increments	IP20 ¹	20	
					352 s352	2500K	25K	PICO 504	M	148-1048mm 100mm increments			
					007 s007	2700K	27K	PICO 508	M	119-1048mm 71.4mm increments			
					504 s504	3000K	30K						
					508 s508	3200K	32K						
					e-	352 e352	3500K	35K					
						007 e007	3800K	38K					
						504 e504	5000K	50K					
						508 e508	RED	RED	s- s352, s007, s504 only				
							GREEN	GRN					
				BLUE	BLU								
				ORANGE	ORN								
				AMBER	AMB								

¹ When no cover option is selected, product is IP20
² n-line: 2700K/3000K

Code Example:

PCSA	-	C	-	s504	-	35K	-	M	548	-	40	-	g
PICO, Silver anodised		Diffused cover		s-line 504		3500K		548mm			IP40		24V DC

Groove Light

- ▶ Now available with Groove-X and Groove-L accessory modules, Groove Light is an ultra-slim marker for continuous sharp lines.
- ▶ Designed for inseting into shop fittings, shelves, joinery and architectural features.
- ▶ End-to-end diffusion for seamless extension.
- ▶ Low glare output in a choice of colour temperatures including RGB.
- ▶ Surface mounting fixings now available.



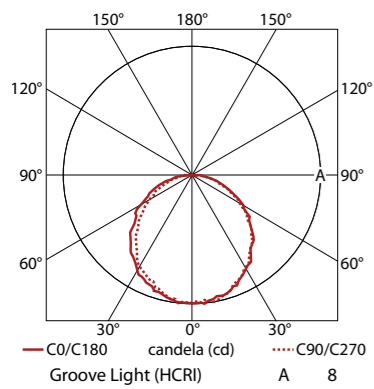
Groove Light



Beam Angle	110°
IP Rating	IP40/65
Finish	Silver Anodised
Cover/Lens	Diffused
Mounting	Recessed mounting via clips or channel (no flange)
Connection	Hardwire tails
Control	0-10V/1-10V/DMX/DALI (see visDIM range)

Product Data

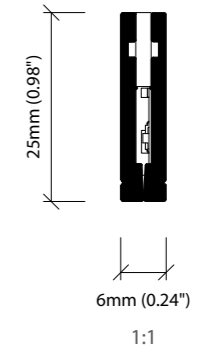
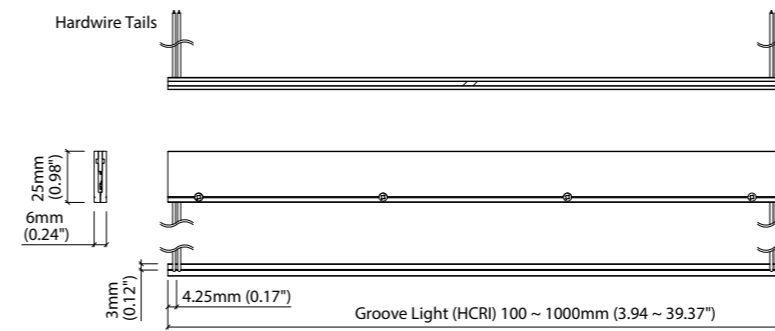
	White	RGB
	Groove Light (HCRI)	Groove Light RGB
Luminous flux	40 lm/m	Red: 2 lm/m Green: 10 lm/m Blue: 3 lm/m White: 15 lm/m
Diffused Cover	5 lm/W	
Wattage	8 W/m	21.6 W/m
Dimension	H25/W6/L100-1000mm	H35/W6/L100-1000mm
PCB Increment	100mm increment/ 1000mm max	100mm increment/ 1000mm max
Lifetime	30,000 hours @ 25°C	20,000 hours @ 25°C
Operation Temp	T _a = -25 to 50°C (T _c max = 60°C)	T _a = -25 to 35°C (T _c max = 66°C)



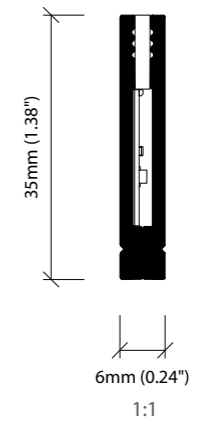
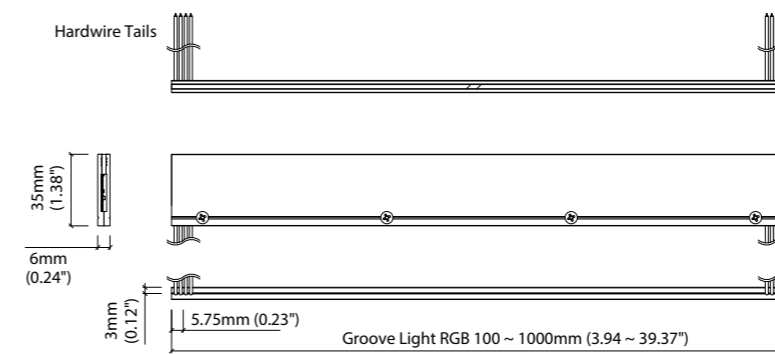
LED Options

	S-line	RGB
CRI (R_a)	90+	n/a
CRI (R_g)	90+	n/a
Bin/Step	3-3.5 Step MacAdam ellipse	12nm tolerance
Colours	White: 2700K/3000K	Red: 621-633nm Blue: 465-475 Green: 515-525nm

Groove Light (HCRI)



Groove Light RGB



Groove-X & Groove-L are accessory additions to the popular Groove Light linear product from KKDC.

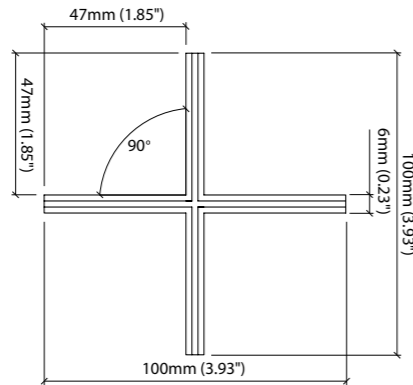
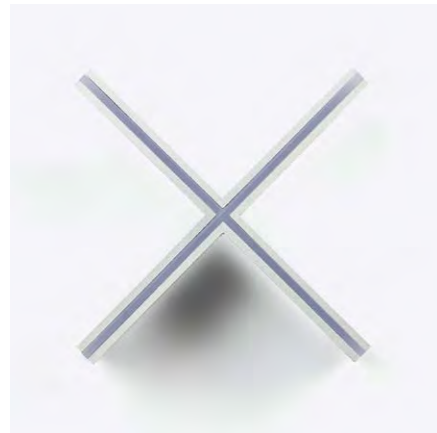
Illuminated end forms to create interesting architectural lighting details.

'Groove-X' cross-shape Junction & 'Groove-L' 90° corner junction.

For recessing into ultra slim 6mm slots & gaps.

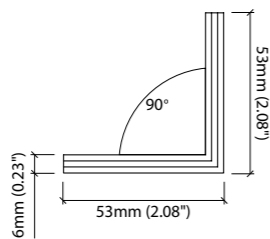
Available in a range of KKDC white LED colour temperatures.

Anodised aluminium and polycarbonate construction.



Groove Light-X accessory,
4 x 300mm single tails, IP40 only

KKLA-02A (2700K HCRI)
KKLA-02P (3000K HCRI)



Groove Light-L accessory,
2 x 300mm single tails, IP40 only

KKLA-01A (2700K HCRI)
KKLA-01P (3000K HCRI)

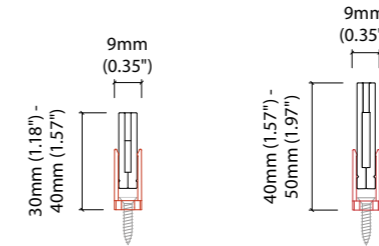


Other Accessories

Mounting Options

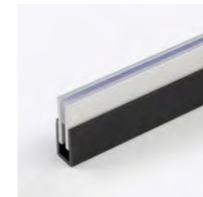


KKCP-16 (1no.)
Clip (Allow 2 per metre)
Anodised aluminium finish

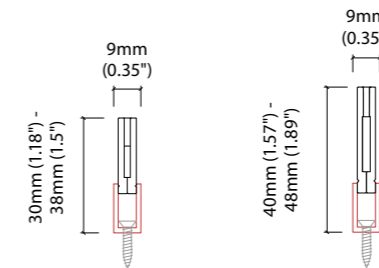


Groove Light (HCRI)

Groove Light RGB



KKCH-01*
PVC channel
(minimum 200mm PVC channel per 500mm of Groove Light)
Black PVC finish
* Specify length of channel in 1000mm increments (to be cut on site further as required)



Groove Light (HCRI)

Groove Light RGB

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

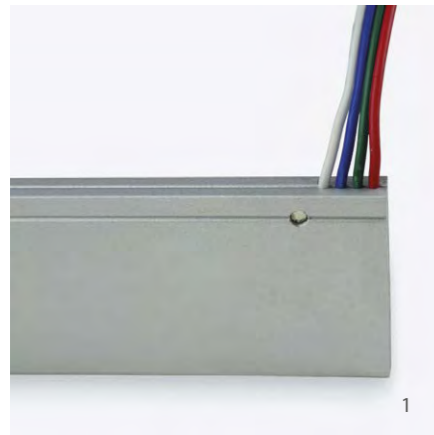
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



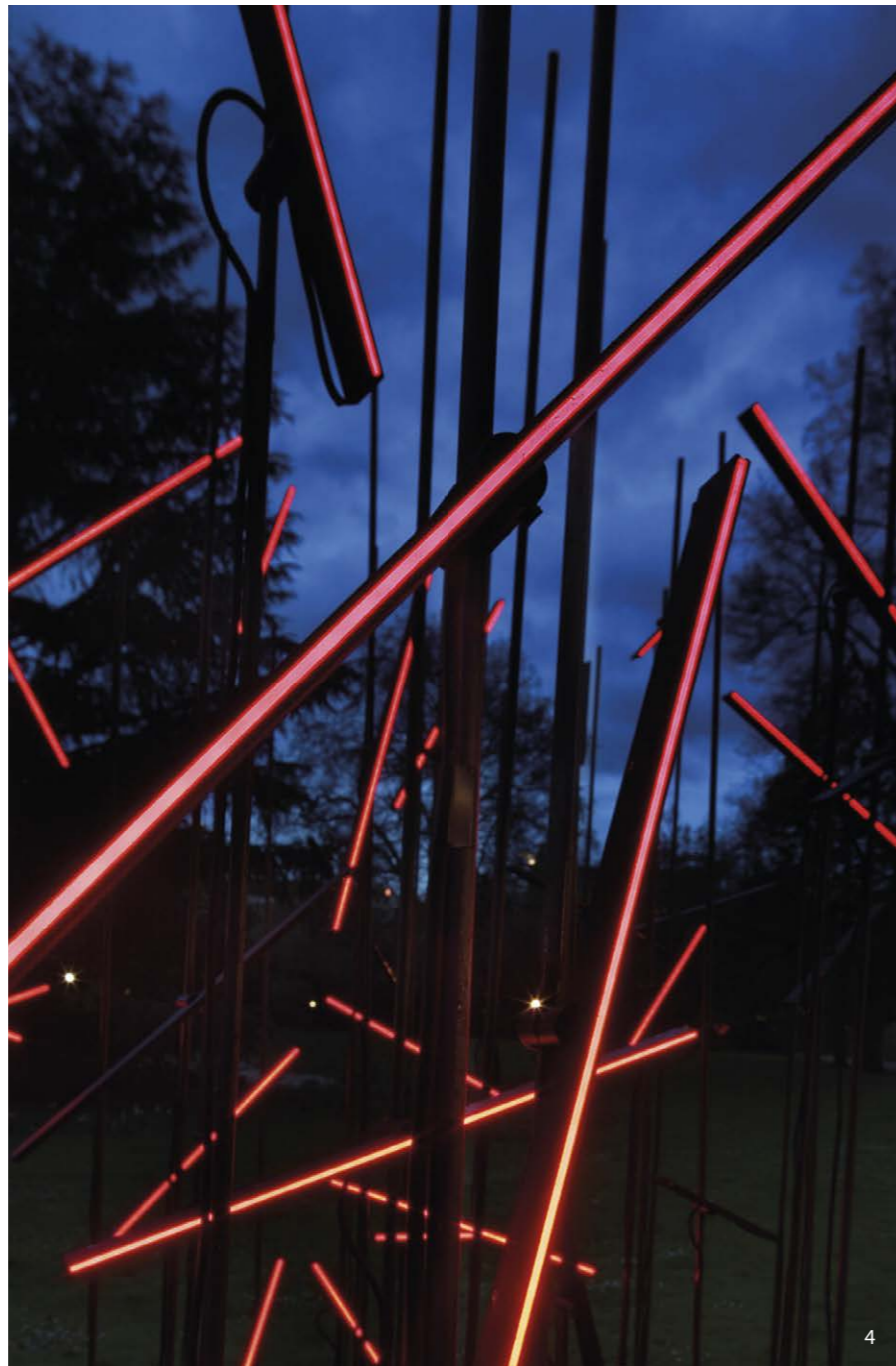
1



2



3



4

1. Groove Light RGB cable exit detail
2. Groove Light-L detail
3. Groove Light-X detail
4. "Broken Heart" Luminale, Light & Building 2012, Frankfurt Design: GNI Projects

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage
Groove Light, Silver anodised GRSA	Diffused C	s 103 s103	2700K 27K	Groove Light 103 M 100-1000mm 100mm increments	IP40 40	300mm Single tail c1	24V DC g
Groove Light RGB, Silver anodised GQSA		RGB d101	3000K 30K	Groove Light 101 M 100-1000mm 100mm increments	IP65 65	300mm Double tail c2	
		RGB	RGB				

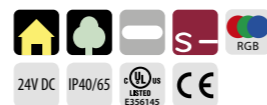
Code Example:

GRSA	-	C	-	s103	-	30K	-	M 500	-	40	-	c2	-	g
Groove Light, Silver anodised Diffused s-line 103 30K 500mm IP40 300mm Double tail 24V DC														

Groove IN

- ▶ Ultra slim linear accent marker light for sharp, straight lines.
- ▶ Low glare output in choice of colour temperatures or RGB variant.
- ▶ Spring clip fixing for hollow wall installations.

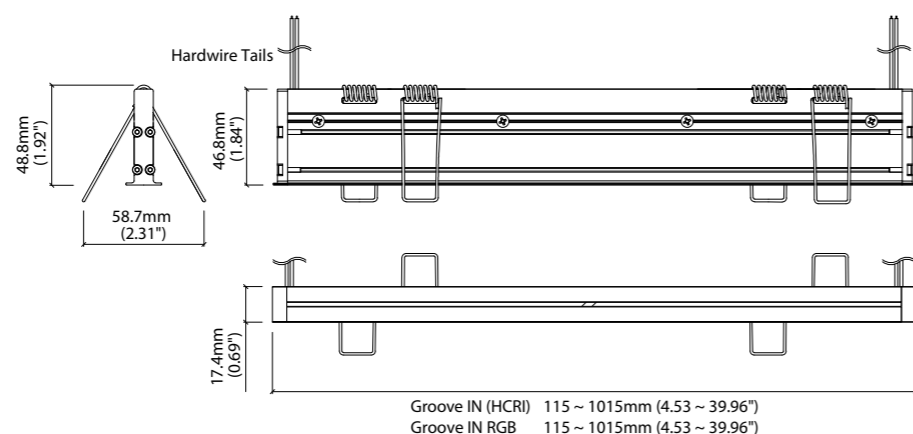
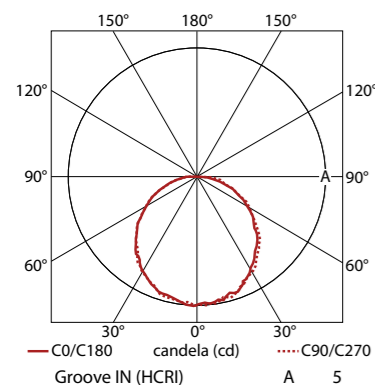




Beam Angle	110°
IP Rating	IP40/65
Finish	Silver Anodised
Cover/Lens	Diffused
Mounting	Recessed mounting via spring clips
Connection	Hardwire tails
Control	0-10V/1-10V/DMX/DALI (see visDIM range)

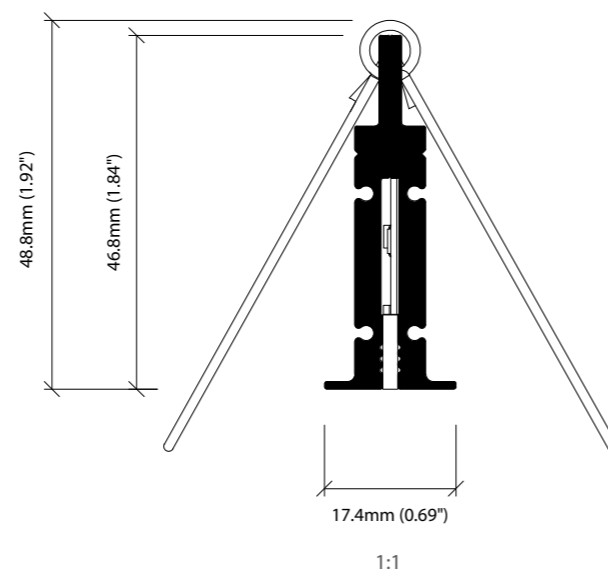
Product Data

	White	RGB
	Groove IN (HCRI)	Groove IN RGB
Luminous flux	32 lm/m	Red: 2 lm/m Green: 10 lm/m Blue: 3 lm/m White: 15 lm/m
Diffused Cover	4 lm/W	
Wattage	8 W/m	21.6 W/m
Dimension	H46.8/W17.4/L115-1015mm	H46.8/W17.4/L115-1015mm
PCB Increment	100mm increment/ 1000mm max	100mm increment/ 1000mm max
Lifetime	30,000 hours @ 25°C	20,000 hours @ 25°C
Operation Temp	T _a = -25 to 50°C (T _c max = 65°C)	T _a = -25 to 40°C (T _c max = 57°C)



LED Options

	S-line	RGB
CRI (R_a)	90+	n/a
CRI (R_g)	90+	n/a
Bin/Step	3-3.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2700K/3000K	Red: 621-633nm Blue: 465-475 Green: 515-525nm



Accessories

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



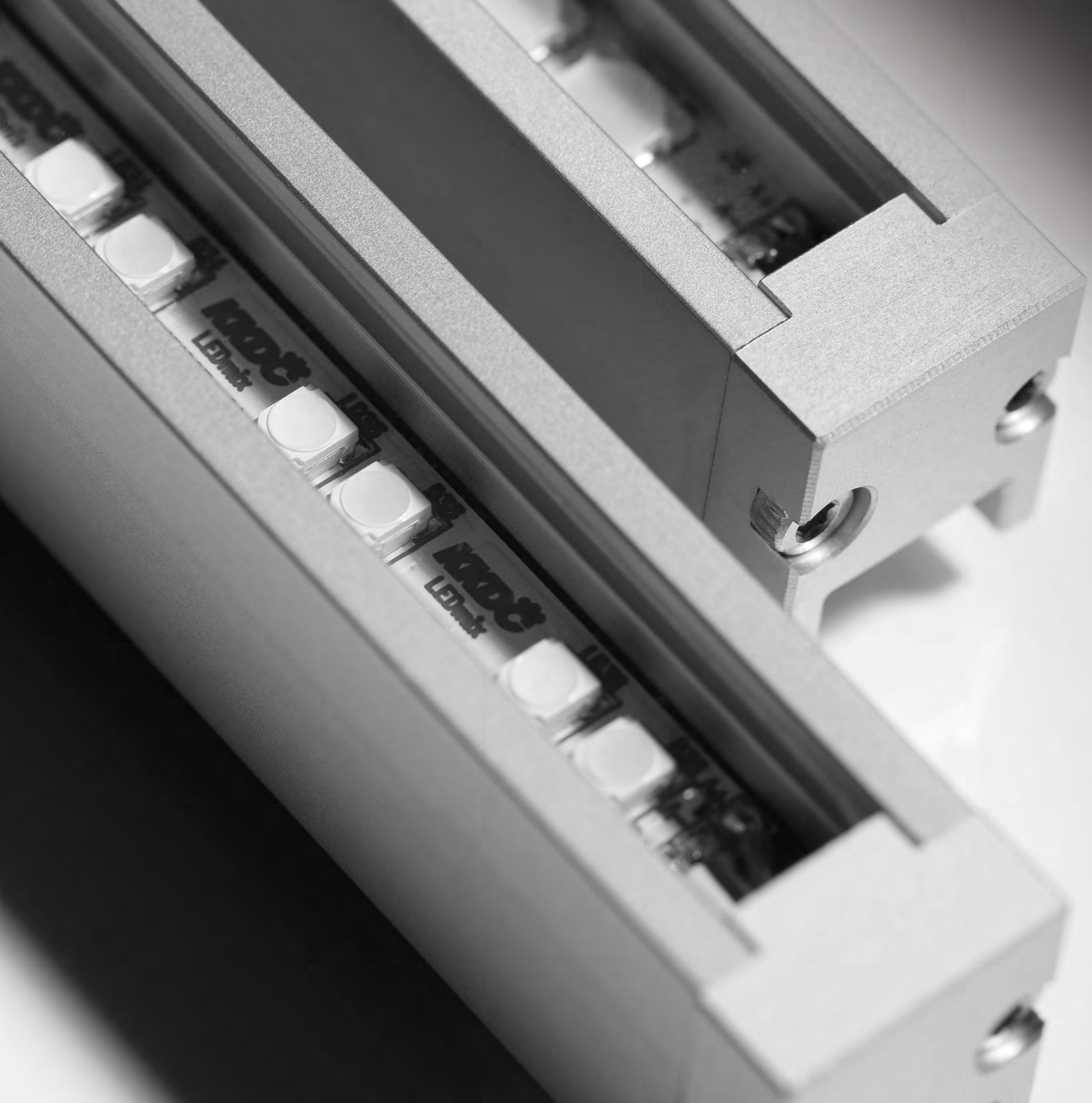
1. The Darling Hotel Lobby, Sydney
Lighting Design: Point Of View
2. Recessed as low level marker light
3. Spring fixings for hollow wall installation



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage	
Groove IN, Silver anodised	GNSA	Diffused C	S 103 s103	2700K 27K	Groove IN 103	M 115-1015mm 100mm increments	IP40 40	300mm Single tail c1 24V DC g
Groove IN RGB, Silver anodised	GLSA	RGB d101	3000K 30K	Groove IN 101	M 115-1015mm 100mm increments	IP65 65	300mm Double tail c2	
		RGB	RGB					

Code Example:

GNSA	-	C	-	s103	-	30K	-	M	515	-	40	-	c2	-	g
Groove IN, Silver anodised		Diffused		s-line 103		30K		515mm		IP40			300mm Double tail		24V DC

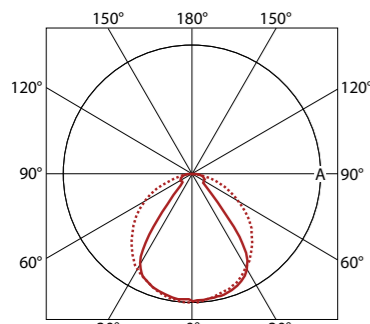


MiMi

- ▶ Compact aluminium housing suitable for exterior concealed architectural details.
- ▶ Available with full range of KKDC LED strip options.
- ▶ Range of mounting options.



Beam angle	Clear cover: 75° Diffused cover: 90°
IP Rating	IP54/67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Diffused/Clear
Mounting	Surface mounting via clips or brackets
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



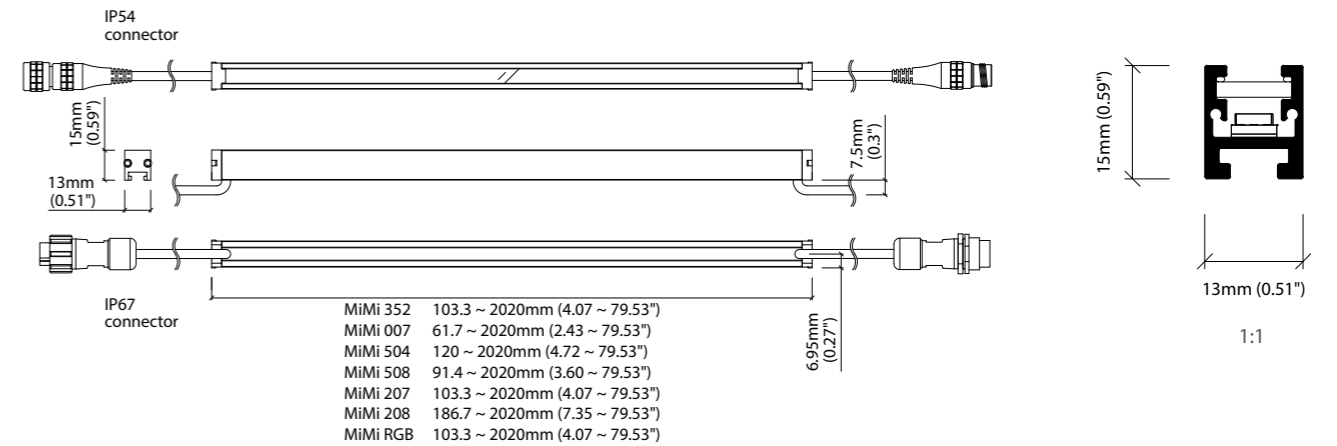
— C0/C180	candela (cd)	..... C90/C270
MiMi s352/e352	A	54
MiMi s007/e007	A	105
MiMi n504/s504/e504	A	158
MiMi n508/s508/e508	A	231
MiMi d207	A	121
MiMi d208	A	112

LED Options

	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

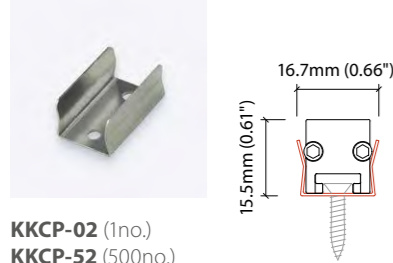
Product Data

	White				LEDmix Dynamic White		RGB
	MiMi s352 MiMi e352	MiMi s007 MiMi e007	MiMi n504 MiMi s504 MiMi e504	MiMi n508 MiMi s508 MiMi e508	MiMi d207	MiMi d208	MiMi dRGB
Clear Cover, 3000K	269 lm/m 48.8 lm/W	522 lm/m 48.2 lm/W	≤ 799 lm/m ≤ 65.3 lm/W	≤ 1118 lm/m ≤ 64.7 lm/W	514 lm/m 46.9 lm/W	1104 lm/m 71 lm/W	Red: 98 lm/m Green : 210 lm/m Blue: 35 lm/m White : 305 lm/m
Diffused Cover, 3000K	221 lm/m 40 lm/W	428 lm/m 39.5 lm/W	≤ 656 lm/m ≤ 53.6 lm/W	≤ 916 lm/m ≤ 53 lm/W	420 lm/m 38.4 lm/W	905 lm/m 58.2 lm/W	Red: 80 lm/m Green : 172 lm/m Blue: 29 lm/m White : 250 lm/m
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H15/W13/ L103.3-2020mm	H15/W13/ L61.7-2020mm	H15/W13/ L120-2020mm	H15/W13/ L91.4-2020mm	H15/W13/ L103.3-2020mm	H15/W13/ L186.7-2020mm	H15/W13/L103.3- 2020mm
PCB Increment	83.3mm	41.7mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	6.9mm – 144 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 45°C (T _c Max = 60°C)	T _a = -25 to 55°C (T _c Max = 75°C)	T _a = -25 to 45°C (T _c Max = 70°C)	T _a = -25 to 60°C (T _c Max = 69.4°C)	T _a = -25 to 55°C (T _c Max = 75.9°C)	T _a = -25 to 55°C (T _c Max = 70°C)

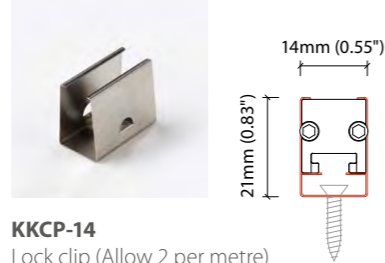


Accessories

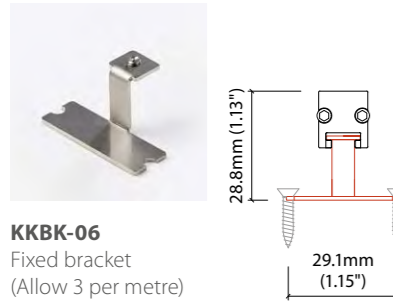
Mounting Options



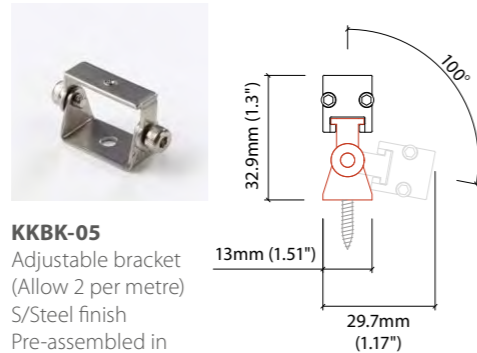
KKCP-02 (1no.)
KKCP-52 (500no.)
Clip (Allow 3 per metre)
S/Steel finish



KKCP-14
Lock clip (Allow 2 per metre)
S/Steel finish



KKBK-06
Fixed bracket
(Allow 3 per metre)
S/Steel finish
Pre-assembled in
factory for double tail
option



KKBK-05
Adjustable bracket
(Allow 2 per metre)
S/Steel finish
Pre-assembled in
factory for double tail
option

Connectors

CN54-2P-0300
2 PIN male+female 300mm pair

CN54-4P-0300
4 PIN RGB male+female 300mm pair

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000
2 PIN male + female 300mm,
1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000
4 PIN RGB male + female 300mm,
1000mm & 300mm pair

Exterior Junction Boxes

KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

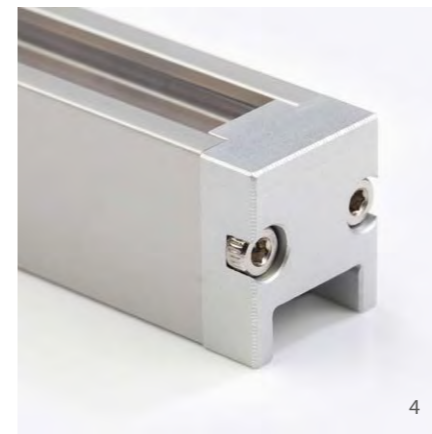
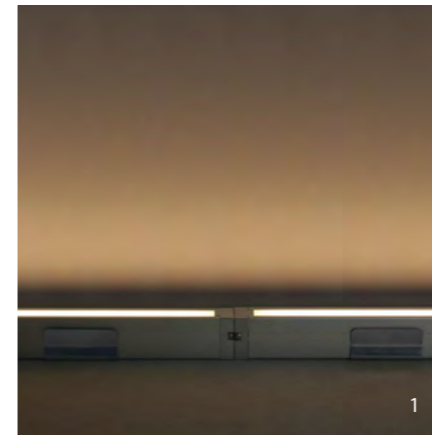
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel,
screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. End-to-end for continuous indirect lighting
2. MiMi d207 & d208 LEDmix with clear cover
3. Soft spotting on diffused cover
4. MiMi end cap detail
5. MiMi cable exit detail
6. Surface mounting options



MiMi Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage		
MiMi, Silver anodised	Clear cover	n- 504 ³ n504	2100K 21K	MiMi 352 M 103.3-2020mm 83.3mm increments	IP54 54	300mm Single tail	c1 24V DC g		
			2300K 23K					MiMi 007 M 61.7-2020mm 41.7mm increments	
	Diffused cover	C	s- 352 s352	2500K 25K	MiMi 504 M 120-2020mm 100mm increments	IP67 ² 67	300mm Double tail	c2	
				2700K 27K					MiMi 508 M 91.4-2020mm 71.4mm increments
				3000K 30K					MiMi 207 M 103.3-2020mm 83.3mm increments
				3200K 32K					MiMi 208 M 186.7-2020mm 166.7mm increments
				3500K 35K					MiMi RGB M 103.3-2020mm 83.3mm increments
				3800K 38K					
				5000K 50K					
				RED RED s- s352, s007, s504 only					
				GREEN GRN					
				BLUE BLU					
				ORANGE ORN					
				AMBER AMB					
				RGB RGB					

¹ LEDmix requires two colour temperature choices

² Due to the clear, flush potted polyurethane top layer on IP67 MiMi a colour shift of +/-20K should be expected

³ n-line: 2700K / 3000K

Code Example:

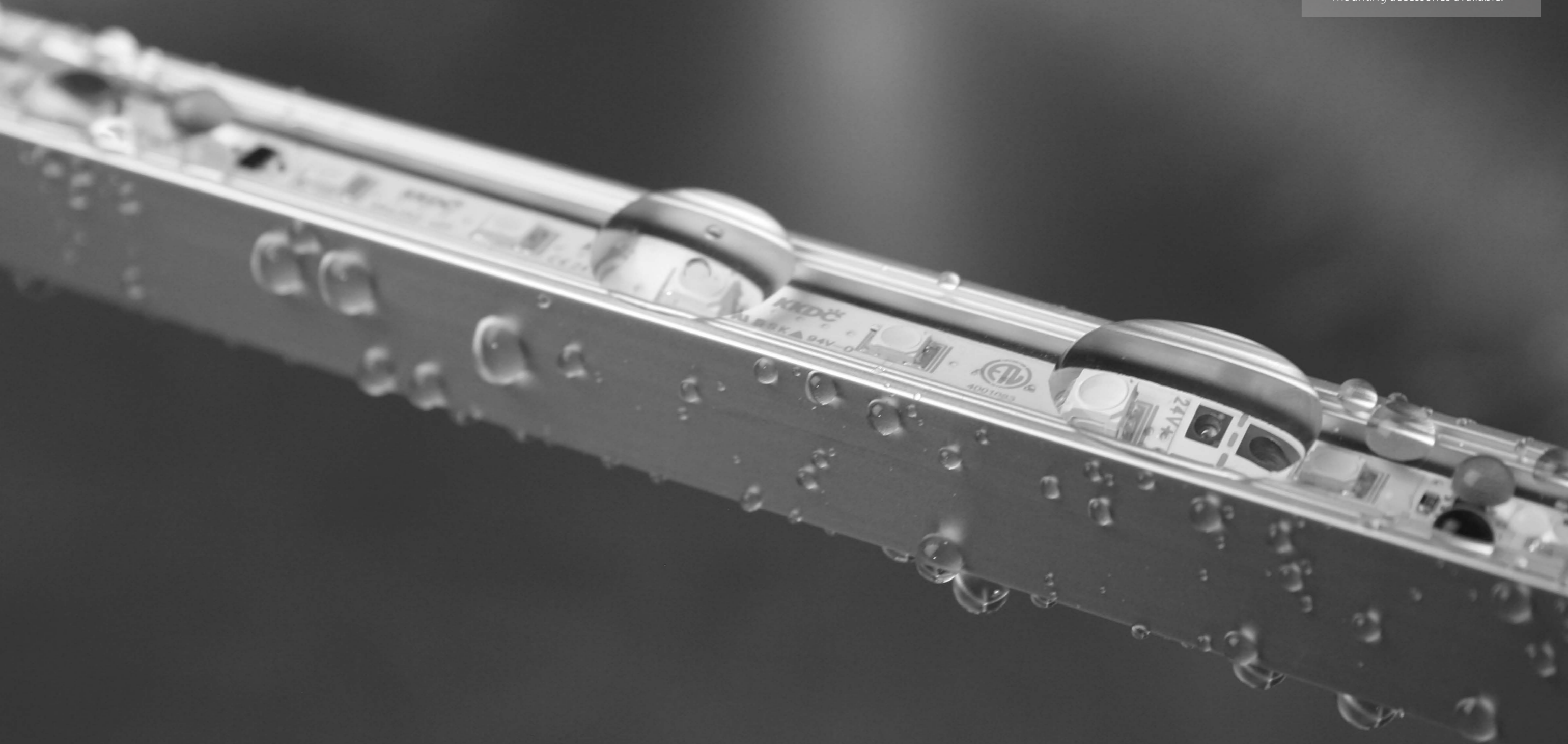
MISA	-	C	-	s504	-	35K	-	M 520	67	-	c5	-	g
MiMi, Silver anodised		Diffused cover		s-line 504		3500K		520mm	IP67		300mm Single IP54 connector		24V DC

¹ LEDmix Code Example:

MISA	-	C	-	d207	-	21	-	35	-	M 520	67	-	c5	-	g
MiMi, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		520mm	IP67		300mm Single IP54 connector		24V DC

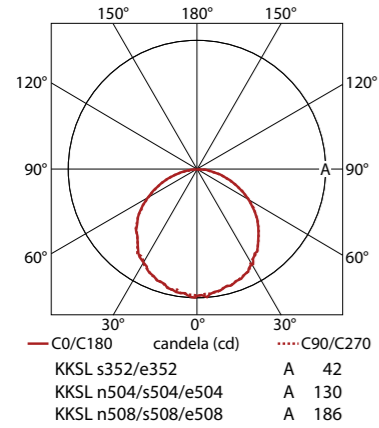
KKSL

- ▶ Compact linear solution for IP67 exterior applications.
- ▶ Silicone potted LED strip suitable for concealed accent lighting.
- ▶ Wide range of LED strip options and mounting accessories available.



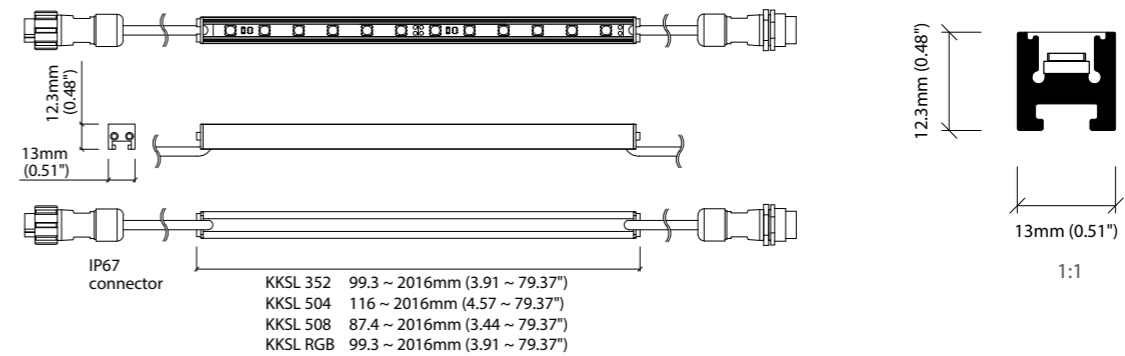


Beam angle	110°
IP Rating	IP67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Silicone potted
Mounting	Surface mounting via clips or brackets
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



Product Data

	White			RGB
	KKSL s352 KKSL e352	KKSL n504 KKSL s504 KKSL e504	KKSL n508 KKSL s508 KKSL e508	KKSL dRGB
Luminous Flux	312 lm/m 56.6 lm/W	≤ 927 lm/m ≤ 75.7 lm/W	≤ 1296 lm/m ≤ 75 lm/W	Red: 113 lm/m Green: 224 lm/m Blue: 40 lm/m White: 353 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	15.6 W/m
Dimension	H12.3/W13/ L99.3-2016mm	H12.3/W13/ L116-2016mm	H12.3/W13/ L87.4-2016mm	H12.3/W13/ L99.3-2016mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm – 72 LED/m
Operation Temp	T _a = -25 to 50°C (T _c Max = 60°C)	T _a = -25 to 50°C (T _c Max = 65°C)	T _a = -25 to 50°C (T _c Max = 75°C)	T _a = -25 to 50°C (T _c Max = 70°C)



LED Options¹

	n -line	s -line	e -line	RGB
CRI (R_a)	95+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

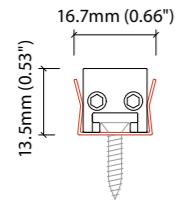
¹ Please refer to code table for colour of complete luminaire

Accessories

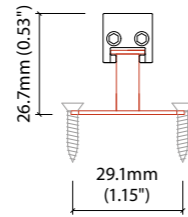
Mounting Options



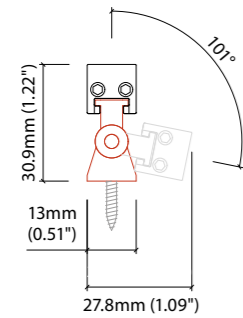
KKCP-02 (1no.)
KKCP-52 (500no.)
Clip (Allow 3 per metre)
S/Steel finish



KKBK-06
Fixed bracket
(Allow 3 per metre)
S/Steel finish
Pre-assembled in
factory for double tail
option



KKBK-05
Adjustable bracket
(Allow 2 per metre)
S/Steel finish
Pre-assembled in
factory for double tail
option



Connectors

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000

2 PIN male + female 300mm, 1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000

4 PIN RGB male + female 300mm, 1000mm & 300mm pair

Exterior Junction Boxes

KKJB-07

IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R

Potting Resin for IP67 Slim J-Box

Power & Control

KKPS-01

visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02

visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03

visDIM D 100W PSU, 24V (3-channel)

KKDM-05

visDIM 1-10V sub-controller

KKSC-03A DMX

visDIM DMX sub-controller (3-channel, screw terminal)

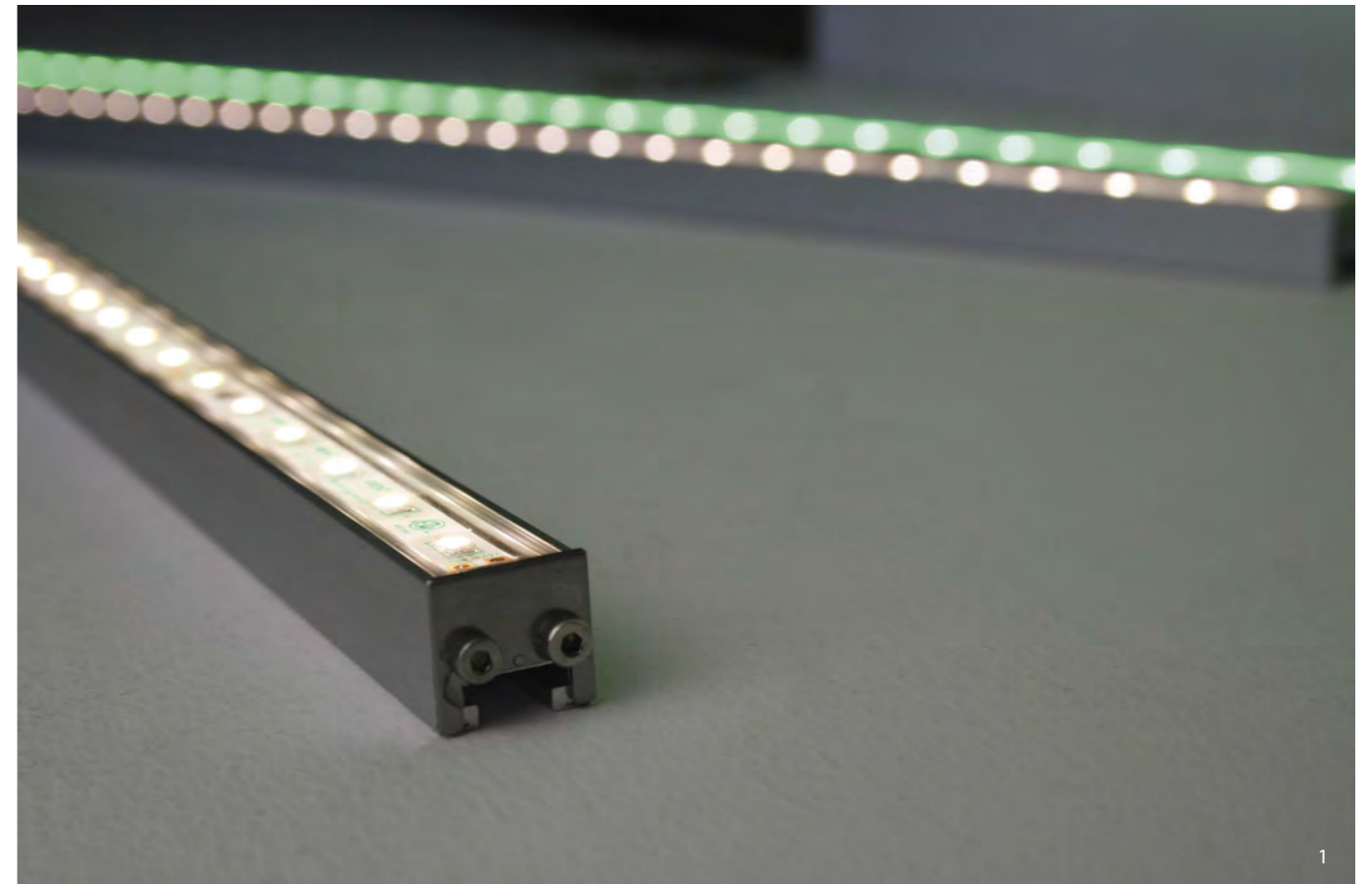
KKSC-03B DMX

visDIM DMX sub-controller (3-channel, RJ45)

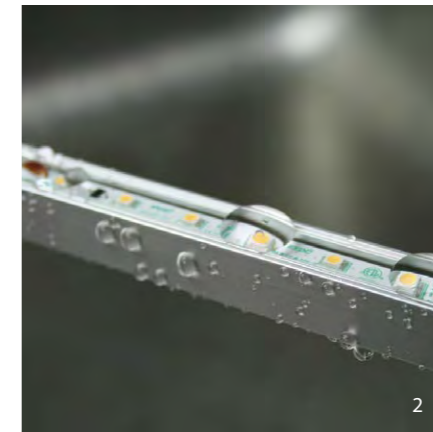
KKDL-01

visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. KKSL with range of LED options
2. Silicone potting for IP67 protection
3. Stainless steel adjustable angle bracket



KKSL Code Table



Housing/Finish	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage
KKSL, Silver anodised SLSA	n 504 ² n504	2300K ¹ (2100K PCB) 23K	KKSL 352 M 99.3-2016mm 83.3mm increments	IP67 67	300mm Single tail c1	24V DC g
		2500K ¹ (2300K PCB) 25K					KKSL 504 M 116-2016mm 100mm increments
	s 352 s352	3000K ¹ (2500K PCB) 30K	KKSL 508 M 87.4-2010mm 71.4mm increments		300mm Single IP67 connector c7	
		3400K ¹ (2700K PCB) 34K					KKSL RGB M 99.3-2016mm 83.3mm increments	300mm Double IP67 connector c8
	e 504 e504	4000K ¹ (3000K PCB) 40K	RED RED s s352, s504 only			
		508 e508			GREEN GRN	
	RGB d501				BLUE BLU	
		ORANGE ORN				
	AMBER AMB					
	RGB RGB					

¹ Actual colour temperature after colour shift caused by silicone potting

² n-line: 3400K (2700K PCB)/4000K (3000K PCB)

Code Example:

SLSA	-	s504	-	40K	-	M 516	-	67	-	c7	-	8	-	g
KKSL, Silver anodised		s-line 504		4000K ¹ (3000K PCB)		516mm		IP67		300mm Single IP67 connector		Clip		24V DC

POKI

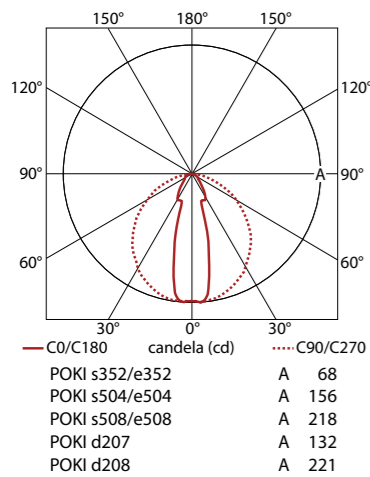


- ▶ Compact IP67 rated housing with fully homogenous diffusion suitable for incorporation into exterior building features.
- ▶ Mounted via snap-fit aluminium cable raceway rail, for secure & discreet wiring.
- ▶ Wide range of LED types & Colour temperatures available.





- Beam angle** Clear cover: 30°
Diffused cover: 70°
- IP Rating** IP54/67
- Lifetime** 50,000 hours @ 25°C
- Finish** Silver Anodised
- Cover/Lens** Diffused/Clear
- Mounting** Surface mounting via cable raceway
- Connection** Sheathed hardwire tails or male/female connectors
- Control** 0-10V/1-10V/DMX/DALI (see visDIM range)

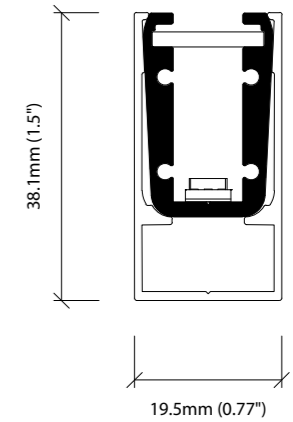
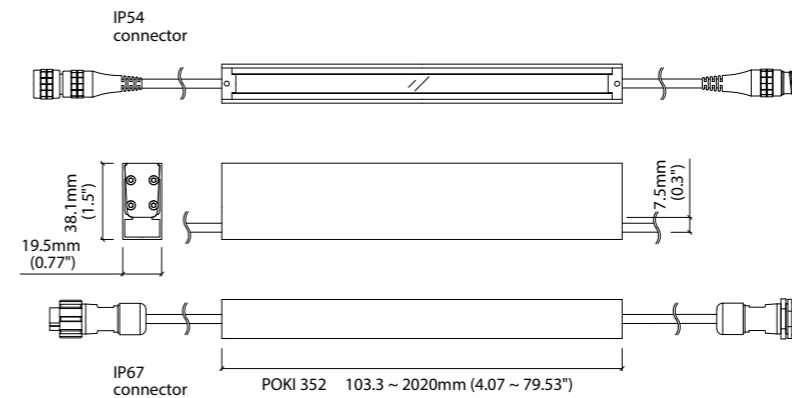


LED Options

	s-line	e-line	LEDmix	RGB
CRI (R_a)	90+	90+	90+	n/a
CRI (R_g)	45+	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Product Data

	White			LEDmix Dynamic White		RGB
	POKI s352 POKI e352	POKI s504 POKI e504	POKI s508 POKI e508	POKI d207	POKI d208	POKI dRGB
Clear Cover, 3000K	137 lm/m 24.8 lm/W	406 lm/m 33.2 lm/W	569 lm/m 32.9 lm/W	261 lm/m 23.8 lm/W	561 lm/m 36.1 lm/W	Red: 50 lm/m Green: 107 lm/m Blue: 18 lm/m White: 155 lm/m
Diffused Cover, 3000K	92 lm/m 16.7 lm/W	273 lm/m 22.3 lm/W	382 lm/m 22.1 lm/W	175 lm/m 16 lm/W	376 lm/m 24.2 lm/W	Red: 33 lm/m Green: 72 lm/m Blue: 12 lm/m White: 104 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H38.1/W19.5/ L103.3-2020mm	H38.1/W19.5/ L120-2020mm	H38.1/W19.5/ L91.4-2020mm	H38.1/W19.5/ L103.3-2020mm	H38.1/W19.5/ L186.7-2020mm	H38.1/W19.5/ L103.3-2020mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Operation Temp	T _a = -25 to 60°C (T _c Max = 67.3°C)	T _a = -25 to 45°C (T _c Max = 64.2°C)	T _a = -25 to 40°C (T _c Max = 64.5°C)	T _a = -25 to 60°C (T _c Max = 71.5°C)	T _a = -25 to 50°C (T _c Max = 64.5°C)	T _a = -25 to 50°C (T _c Max = 68.6°C)

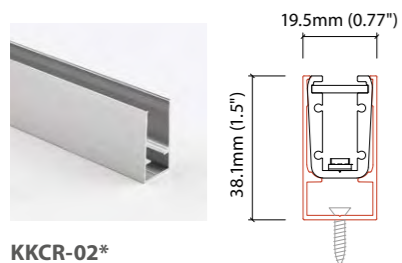


POKI 352	103.3 ~ 2020mm (4.07 ~ 79.53")
POKI 504	120 ~ 2020mm (4.72 ~ 79.53")
POKI 508	91.4 ~ 2020mm (3.60 ~ 79.53")
POKI 207	103.3 ~ 2020mm (4.07 ~ 79.53")
POKI 208	186.7 ~ 2020mm (7.35 ~ 79.53")
POKI RGB	103.3 ~ 2020mm (4.07 ~ 79.53")

1:1

Accessories

Mounting Options



KKCR-02*
Channel
Anodised aluminium finish
* Specify length to match POKI

Connectors

- CN54-2P-0300**
2 PIN male+female 300mm pair
- CN54-4P-0300**
4 PIN RGB male+female 300mm pair
- CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000**
2 PIN male + female 300mm, 1000mm & 300mm pair
- CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000**
4 PIN RGB male + female 300mm, 1000mm & 300mm pair

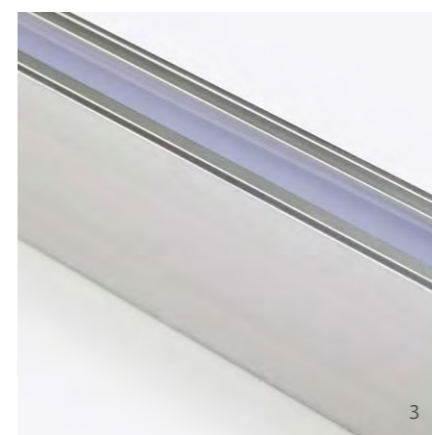
Exterior Junction Boxes

- KKJB-07**
IP67 Slim J-Box
(including type A,B,C bushings)
- KKJB-07R**
Potting Resin for IP67 Slim J-Box

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. POKI illuminated inside mounting rail
2. Snap-fit mounting rail and removal screw
3. POKI housing detail
4. POKI with dynamic LEDmix LED

POKI Code Table



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage
POKI, Silver anodised	Clear cover	B	s	352 s352	2100K 21K	POKI 352 M 103.3-2020mm 83.3mm increments	IP54 54 300mm Single tail c1 24V DC g
				007 s007	2300K 23K	POKI 007 M 61.7-2020mm 41.7mm increments	IP67 ² 67 300mm Double tail c2
				504 s504	2500K 25K	POKI 504 M 120-2020mm 100mm increments	300mm Single IP54 connector ³ c5
	Diffused cover	C	e	508 s508	2700K 27K	POKI 508 M 91.4-2020mm 71.4mm increments	300mm Double IP54 connector ³ c6
				352 e352	3000K 30K	POKI 207 M 103.3-2020mm 83.3mm increments	300mm Single IP67 connector ³ c7
				007 e007	3200K 32K	POKI 208 M 186.7-2020mm 166.7mm increments	300mm Double IP67 connector ³ c8
				504 e504	3500K 35K	POKI RGB M 103.3-2020mm 83.3mm increments	
				508 e508	3800K 38K		
				207 ¹ d207	5000K 50K		
				208 ¹ d208	RED RED s s352, s007, s504 only		
				RGB d501	GREEN GRN		
					BLUE BLU		
					ORANGE ORN		
					AMBER AMB		
					RGB RGB		

¹ LEDmix requires two colour temperature choices
² Due to the clear, flush potted polyurethane top layer on IP67 POKI a colour shift of +/-20K should be expected
³ IP rated connectors do not fit inside the cable raceway

Code Example:

PKSA	-	C	-	s504	-	35K	-	M 520	-	67	-	c5	-	g
POKI, Silver anodised		Diffused cover		s-line 504		3500K		520mm		IP67		300mm Single IP54 connector		24V DC

¹ LEDmix Code Example:

PKSA	-	C	-	d207	-	21	-	35	-	M 520	-	67	-	c5	-	g
POKI, Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		520mm		IP67		300mm Single IP54 connector		24V DC

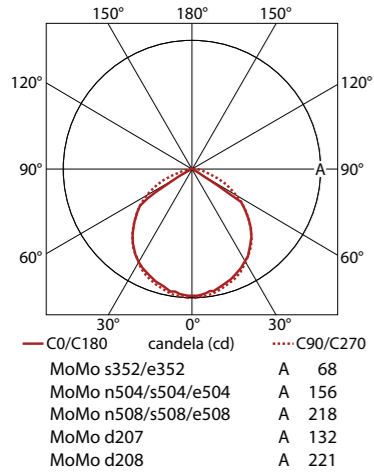
MoMo

- ▶ Robust exterior linear housing with wide range of LED strips and new KKLN-01 narrow beam lens accessory option.
- ▶ Fully homogenous diffusion on cover.
- ▶ Internal reflectors for improved performance.
- ▶ Various fixed & adjustable mounting options available.





IP Rating	IP54/67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Diffused/Clear/KKLN-01 Lens
Mounting	Surface mounting via clips or brackets
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



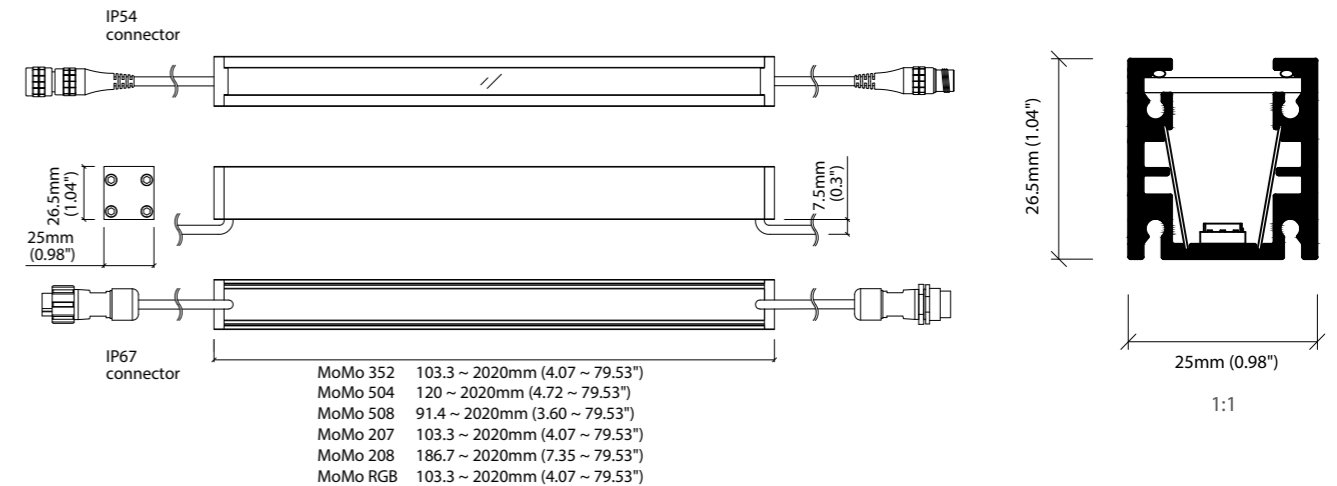
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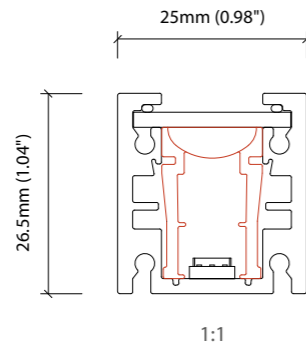
	White			LEDmix Dynamic White		RGB
	MoMo s352 MoMo e352	MoMo n504 MoMo s504 MoMo e504	MoMo n508 MoMo s508 MoMo e508	MoMo d207	MoMo d208	MoMo dRGB
Clear Cover, 3000K	326 lm/m 59.1 lm/W	≤ 968 lm/m ≤ 79.1 lm/W	≤ 1353 lm/m ≤ 78.3 lm/W	621 lm/m 56.7 lm/W	1336 lm/m 85.9 lm/W	Red: 124 lm/m Green: 252 lm/m Blue: 41 lm/m White: 398 lm/m
Diffused Cover, 3000K	179 lm/m 32.5 lm/W	≤ 532 lm/m ≤ 43.5 lm/W	≤ 745 lm/m ≤ 43.1 lm/W	342 lm/m 31.2 lm/W	736 lm/m 47.3 lm/W	Red: 65 lm/m Green: 140 lm/m Blue: 23 lm/m White: 203 lm/m
KKLN-01 Lens Clear Cover, 3000K	160 lm/m 28.9 lm/W	≤ 474 lm/m ≤ 38.7 lm/W	≤ 662 lm/m ≤ 38.3 lm/W	303 lm/m 27.7 lm/W	653 lm/m 42 lm/W	Red: 58 lm/m Green: 125 lm/m Blue: 21 lm/m White: 180 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H26.5/W25/ L103.3-2020mm	H26.5/W25/ L120-2020mm	H26.5/W25/ L91.4-2020mm	H26.5/W25/ L103.3-2020mm	H26.5/W25/ L186.7-2020mm	H26.5/W25/ L103.3-2020mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84 LED/m	13.9mm – 72 LED/m
Beam angle	50° (Clear cover) 95° (Diffused cover) 14° (KKLN-01 Lens)	50° (Clear cover) 95° (Diffused cover) 14° (KKLN-01 Lens)	45° (Clear cover) 90° (Diffused cover) 14° (KKLN-01 Lens)	105° (Clear cover) 90° (Diffused cover) 14° (KKLN-01 Lens)	100° (Clear cover) 90° (Diffused cover) 14° (KKLN-01 Lens)	45° (Clear cover) 95° (Diffused cover) 14° (KKLN-01 Lens)
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 70°C)	T _a = -25 to 45°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 66.7°C)	T _a = -25 to 60°C (T _c Max = 74.2°C)	T _a = -25 to 60°C (T _c Max = 70°C)



LED Options

	n -line	s -line	e -line	LEDmix	RGB
CRI (R_a)	95+	90+	90+	90+	n/a
CRI (R_g)	78+	45+	45+	45+	n/a
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	2700K/3000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm



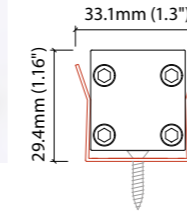
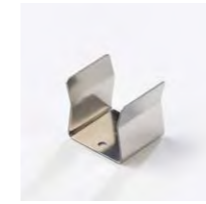


KKLN-01 with MoMo
14° beam angle lens accessory
MoMo factory fitted
Co-extruded PMMA

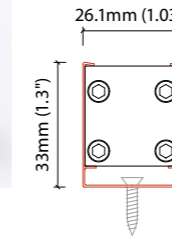


Other Accessories

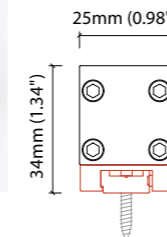
Mounting Options



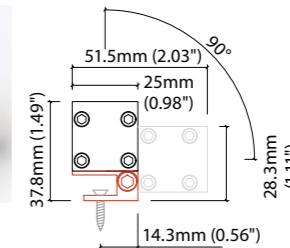
KKCP-03 (1no.)
KKCP-53 (500no.)
Clip (Allow 3 per metre)
S/Steel finish



KKCP-09
Lock clip (Allow 2 per metre)
S/Steel finish



KKBK-07
Fixing plate
(Allow 2 per metre)
Anodised aluminium finish
Pre-assembled in factory



KKBK-21
Adjustable bracket
(Allow 2 per metre)
Anodised aluminium finish
Pre-assembled in factory

Connectors

CN54-2P-0300
2 PIN male+female 300mm pair

CN54-4P-0300
4 PIN RGB male+female 300mm pair

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000
2 PIN male + female 300mm, 1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000
4 PIN RGB male + female 300mm, 1000mm & 300mm pair

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details

Exterior Junction Boxes

KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box



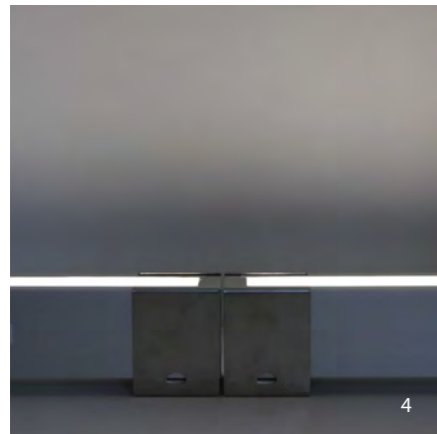
1



2



3



4



5



6



7a



7b



7c



7d



8

1. Internal reflector for increased lumen efficiency
2. MoMo cable exit detail
3. Homogenous lighting with all LED strip options
4. End-to-end for continuous indirect lighting
5. MoMo with fully homogenous diffuser
6. Adjustable angle bracket
7. Surface mounting options
8. Robust machine aluminium screwed end cap for superior ingress protection



MoMo Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage	
MoMo Silver anodised MMSA	Clear cover	B	n- 504 ¹ n504	2100K 21K	MoMo 352 M 103.3-2020mm 83.3mm increments	IP54 54	300mm Single tail c1	24V DC g
			508 ² n508	2300K 23K					MoMo 504 M 120-2020mm 100mm increments	IP67^{3} 67	300mm Double tail c2
	KKLN-01	P	s- 352 s352	2500K 25K	MoMo 508 M 91.4-2020mm 71.4mm increments	300mm Single IP54 connector ³ c5		
			Clear + 508 Louvre (508 only)	N	504 s504	2700K 27K	MoMo 207 M 103.3-2020mm 83.3mm increments		300mm Double IP54 connector^{3} c6
	508 s508	3000K 30K			MoMo 208 M 186.7-2020mm 166.7mm increments	300mm Single IP67 connector ³ c7		
	e- 352 e352	504 e504	3200K 32K	3500K 35K	MoMo RGB M 103.3-2020mm 83.3mm increments	300mm Double IP67 connector ³ c8		
							508 e508		3800K 38K
	207 ¹ d207	5000K 50K	208 ¹ d208	RED RED s- s352, s007, s504 only				
				RGB d501	GREEN GRN			
				BLUE BLU				
				ORANGE ORN				
				AMBER AMB				
				RGB RGB				

¹ LEDmix requires two colour temperature choices
² Due to the clear, flush potted polyurethane top layer on IP67 MoMo a colour shift of +/-20K should be expected
³ n-line: 2700K/3000K

Code Example:

MMSA	-	C	-	s504	-	35K	-	M 520	-	67	-	c5	-	g
MoMo Silver anodised		Diffused cover		s-line 504		3500K		520mm		IP67		300mm Single IP54 connector		24V DC

¹ LEDmix Code Example:

MMSA	-	C	-	d207	-	21	-	35	-	M 520	-	67	-	c5	-	g
MoMo Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		520mm		IP67		300mm Single IP54 connector		24V DC

MoMo-L

- ▶ Expanding the MoMo family, MoMo-L has an increased housing height to accommodate an internal anti-glare, dark light micro-louvre.
- ▶ 45° angle micro-louvre fins for wall grazing and improved visual comfort.
- ▶ Wide range of LED strips available.
- ▶ Fully homogenous diffusion on cover.
- ▶ Various fixed & adjustable mounting options available.

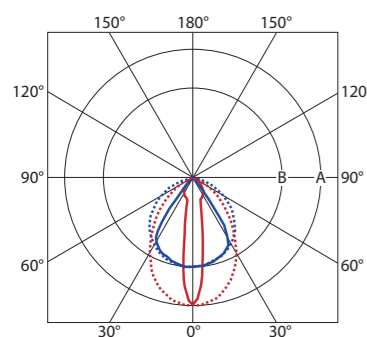




NEW



- Beam angle** 70° Clear cover
18° KKLN-01 lens
85° Diffused cover
- IP Rating** IP54/67
- Lifetime** 50,000 hours @ 25°C
- Finish** Silver Anodised
- Cover/Lens** Clear/Diffused/KKLN-01 Lens/
Micro Louvre + Clear cover
- Mounting** Surface mounting via clips or brackets
- Connection** Sheathed hardwire tails or
male/female connectors
- Control** 0-10V/1-10V/DMX/DALI
(see visDIM range)



candela (cd)

— C0/C180 — C90/C270 Clear cover
— C0/C180 — C90/C270 KKLN-01 + Clear cover

MoMo-L s352/e352 - Clear cover	B	70
MoMo-L s352/e352 - KKLN-01	A	96
MoMo-L s504/e504 - Clear cover	B	169
MoMo-L s504/e504 - KKLN-01	A	243
MoMo-L s508/e508 - Clear cover	B	282
MoMo-L s508/e508 - KKLN-01	A	322
MoMo-L d207 - Clear cover	B	139
MoMo-L d207 - KKLN-01	A	182
MoMo-L d208 - Clear cover	B	145
MoMo-L d208 - KKLN-01	A	330

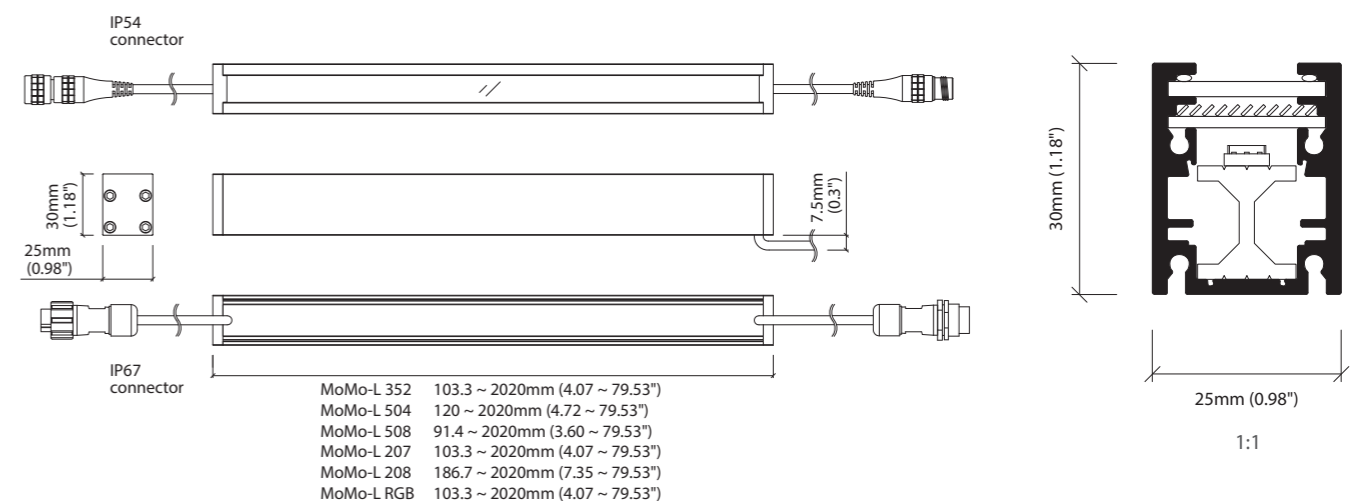
Product Data

	White			LEDmix Dynamic White		RGB
	MoMo-L s352 MoMo-L e352	MoMo-L s504 MoMo-L e504	MoMo-L s508 MoMo-L e508	MoMo-L d207	MoMo-L d208	MoMo-L dRGB
Clear Cover, 3000K	248 lm/m 44.9 lm/W	734 lm/m 60 lm/W	1028 lm/m 59.5 lm/W	472 lm/m 43.1 lm/W	1015 lm/m 65.3 lm/W	Red: 95 lm/m Green: 206 lm/m Blue: 34 lm/m White: 318 lm/m
Diffused Cover, 3000K	148 lm/m 26.9 lm/W	428 lm/m 35 lm/W	617 lm/m 35.7 lm/W	283 lm/m 25.8 lm/W	608 lm/m 39.1 lm/W	Red: 54 lm/m Green: 118 lm/m Blue: 19 lm/m White: 180 lm/m
KKLN-01 Lens + Clear Cover, 3000K	134 lm/m 24.3 lm/W	398 lm/m 32.5 lm/W	556 lm/m 32.2 lm/W	255 lm/m 23.3 lm/W	549 lm/m 35.3 lm/W	Red: 49 lm/m Green: 105 lm/m Blue: 17 lm/m White: 152 lm/m
Micro Louvre + Clear Cover, 3000K	95 lm/m 17.3 lm/W	284 lm/m 23.2 lm/W	397 lm/m 23 lm/W	182 lm/m 16.6 lm/W	392 lm/m 25.2 lm/W	Red: 35 lm/m Green: 75 lm/m Blue: 12 lm/m White: 108 lm/m
KKLN-01 Lens + Micro Louvre + Clear Cover, 3000K	43 lm/m 7.7 lm/W	126 lm/m 10.3 lm/W	176 lm/m 10.2 lm/W	81 lm/m 7.4 lm/W	174 lm/m 11.2 lm/W	Red: 15 lm/m Green: 33 lm/m Blue: 5 lm/m White: 48 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	10.95 W/m	15.55 W/m	15.6 W/m
Dimension	H30/W25/ L103.3-2020mm	H30/W25/ L120-2020mm	H30/W25/ L91.4-2020mm	H30/W25/ L103.3-2020mm	H30/W25/ L186.7-2020mm	H30/W25/ L103.3-2020mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm	166.7mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm (between same coloured chips) – 144 LED/m	23.8mm (between same coloured chips) – 84LED/m	13.9mm – 72 LED/m
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 70°C)	T _a = -25 to 45°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 66.7°C)	T _a = -25 to 60°C (T _c Max = 74.2°C)	T _a = -25 to 60°C (T _c Max = 70°C)



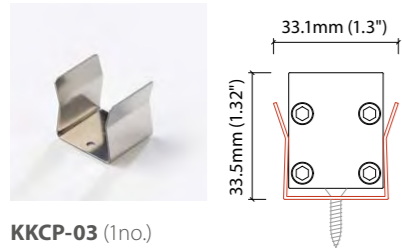
LED Options

	s-line	e-line	LEDmix	RGB
CRI (R_a)	90+	90+	90+	n/a
CRI (R_g)	45+	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	2.5 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

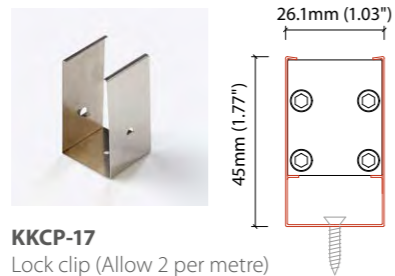


Accessories

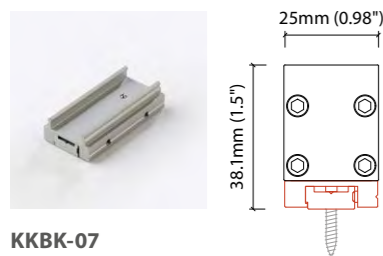
Mounting Options



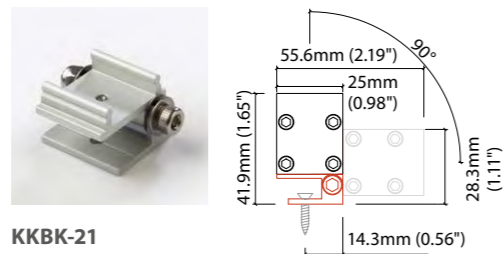
KKCP-03 (1no.)
KKCP-53 (500no.)
Clip (Allow 3 per metre)
S/Steel finish



KKCP-17
Lock clip (Allow 2 per metre)
S/Steel finish



KKBK-07
Mounting plate
(Allow 2 per metre)
Anodised aluminium finish
Pre-assembled in factory for
double tail option



KKBK-21
Adjustable bracket
(Allow 2 per metre)
Anodised aluminium finish
Pre-assembled in factory
for double tail option

Connectors

CN54-2P-0300
2 PIN male+female 300mm pair

CN54-4P-0300
4 PIN RGB male+female 300mm pair

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000

2 PIN male + female 300mm,
1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000

4 PIN RGB male + female 300mm,
1000mm & 300mm pair

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel,
screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

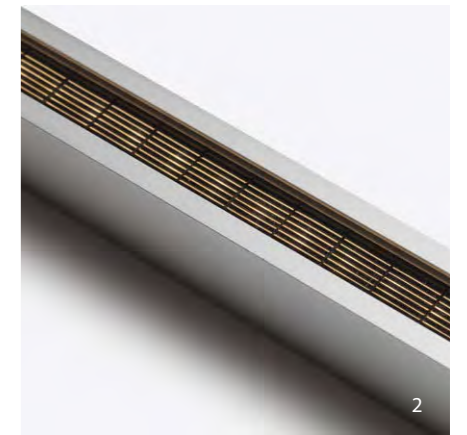
KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details

Exterior Junction Boxes

KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box



1. MoMo-L with integral 45° micro louvre
2. 'Dark light' micro louvre for glare reduction
3. NEW 'Cluster BAR' LED strip (see page 265 for details of MoMo-L Cluster)
4. 45° micro louvre angle for wall grazing



4



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage				
MoMo-L Silver anodised	Clear cover	B	352 s352	2100K 21K	MoMo-L 352	M	103.3-2020mm 83.3mm increments	IP54 54	300mm Single tail	c1	24V DC g
	Diffused cover	C	504 s504	2300K 23K	MoMo-L 007	M	61.7-2020mm 41.7mm increments	IP67 ² 67	300mm Double tail	c2	
	KKLN-01	P	508 s508	2500K 25K	MoMo-L 504	M	120-2020mm 100mm increments		300mm Single IP54 connector	c5	
	KKLN-01 + Micro Louvre	U	352 e352	2700K 27K	MoMo-L 508	M	91.4-2020mm 71.4mm increments	300mm Double IP54 connector	c6		
	Micro Louvre	K	504 e504	3000K 30K	MoMo-L 207	M	103.3-2020mm 83.3mm increments	300mm Single IP67 connector	c7		
	Clear + 508 Louvre (508 only)	N	e508	3200K 32K	MoMo-L 208	M	186.7-2020mm 166.7mm increments	300mm Double IP67 connector	c8		
			d207	3500K 35K	MoMo-L RGB	M	103.3-2020mm 83.3mm increments				
			d208	3800K 38K							
			d501	5000K 50K							
			RED RED	s352, s007, s504 only							
GREEN GRN											
BLUE BLU											
ORANGE ORN											
AMBER AMB											
RGB RGB											

¹ LEDmix requires two colour temperature choices

² Due to the clear, flush potted polyurethane top layer on IP67 MoMo-L a colour shift of +/-20K should be expected

Code Example:

MOSA	-	U	-	s504	-	35K	-	M	520	-	67	-	c5	-	g
MoMo-L Silver anodised		KKLN-01 + Micro Louvre		s-line 504		3500K		520mm			IP67		300mm Single IP54 connector		24V DC

¹ LEDmix Code Example:

MOSA	-	C	-	d207	-	21	-	35	-	M	520	-	67	-	c5	-	g
MoMo-L Silver anodised		Diffused cover		LEDmix 207		2100K		3500K		520mm		IP67		300mm Single IP54 connector		24V DC	

MoMo-F

- ▶ Recessed IP67 linear marker light designed for installation into interior floors.
- ▶ Fully homogenous diffusion on cover across full range of LED strips.
- ▶ Recessed cable raceway channel.

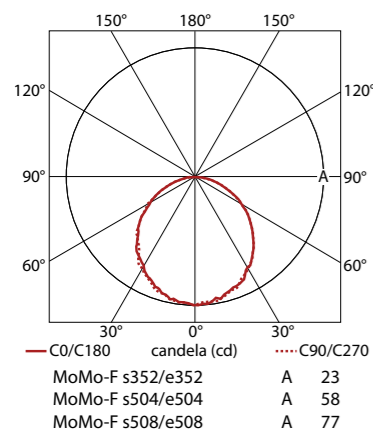




Beam angle	110°
IP Rating	IP67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Diffused
Mounting	Ground recessed
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)
IK Rating	IEC 62262:2010/IK08/IK10

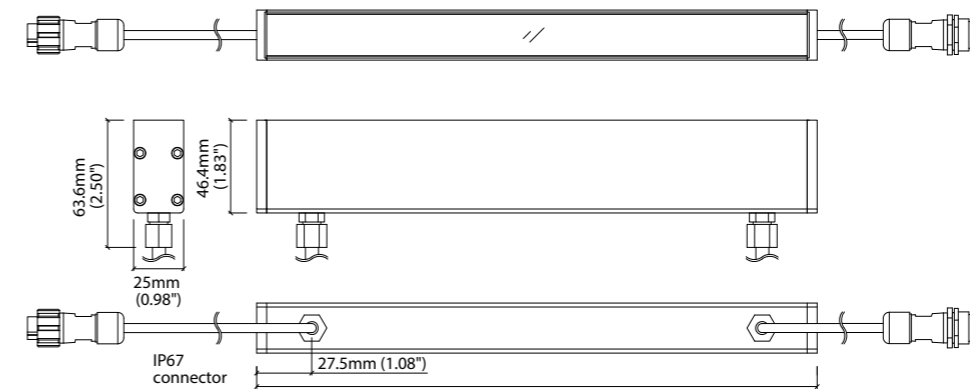
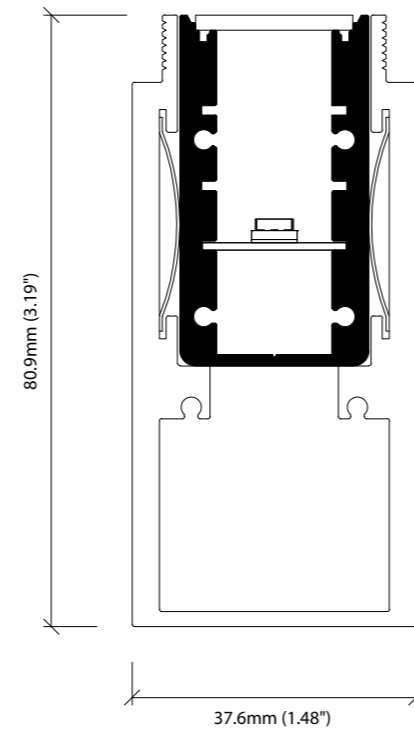
Product Data

	White			RGB
	MoMo-F s352 MoMo-F e352	MoMo-F s504 MoMo-F e504	MoMo-F s508 MoMo-F e508	MoMo-F dRGB
Luminous Flux, 3000K	112 lm/m 20.3 lm/W	333 lm/m 27.2 lm/W	465 lm/m 26.9 lm/W	Red: 41 lm/m Green: 88 lm/m Blue: 14 lm/m White: 127 lm/m
Wattage	5.52 W/m	12.24 W/m	17.28 W/m	15.6 W/m
Dimension	H46.4/W25/ L93.3-2010mm	H46.4/W25/ L110-2010mm	H46.4/W25/ L81.4-2010mm	H46.4/W25/ L93.3-2010mm
PCB Increment	83.3mm	100mm	71.4mm	83.3mm
LED Pitch	13.9mm – 72 LED/m	16.7mm – 60 LED/m	11.9mm – 84 LED/m	13.9mm – 72 LED/m
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c Max = 70°C)	T _a = -25 to 45°C (T _c Max = 65°C)	T _a = -20 to 60°C (T _c Max = 70°C)



Walk Over

- IEC 62262:2010
- IK08 and IK10 tested



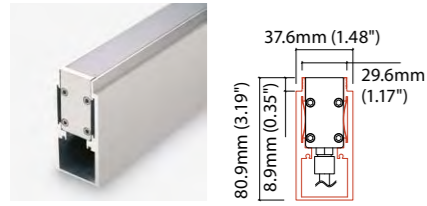
MoMo-F 352	93.3 ~ 2010mm (3.67 ~ 79.13")
MoMo-F 504	110 ~ 2010mm (4.33 ~ 79.13")
MoMo-F 508	81.4 ~ 2010mm (3.20 ~ 79.13")
MoMo-F RGB	93.3 ~ 2010mm (3.67 ~ 79.13")

LED Options

	s-line	e-line	RGB
CRI (R_a)	90+	90+	n/a
CRI (R_g)	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/ 3200K/3500K/3800K/ 5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Accessories

Mounting Options



KKFR-03*
Ground box
Anodised aluminium finish
* Specify length to match MoMo-F

Connectors

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000

2 PIN male + female 300mm, 1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000

4 PIN RGB male + female 300mm, 1000mm & 300mm pair

Exterior Junction Boxes

KKJB-07

IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R

Potting Resin for IP67 Slim J-Box

Power & Control

KKPS-01

visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02

visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03

visDIM D 100W PSU, 24V (3-channel)

KKDM-05

visDIM 1-10V sub-controller

KKSC-03A DMX

visDIM DMX sub-controller (3-channel, screw terminal)

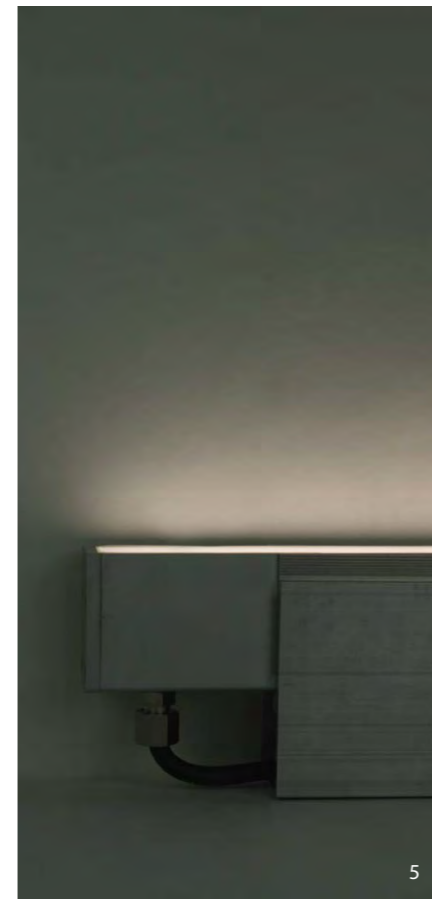
KKSC-03B DMX

visDIM DMX sub-controller (3-channel, RJ45)

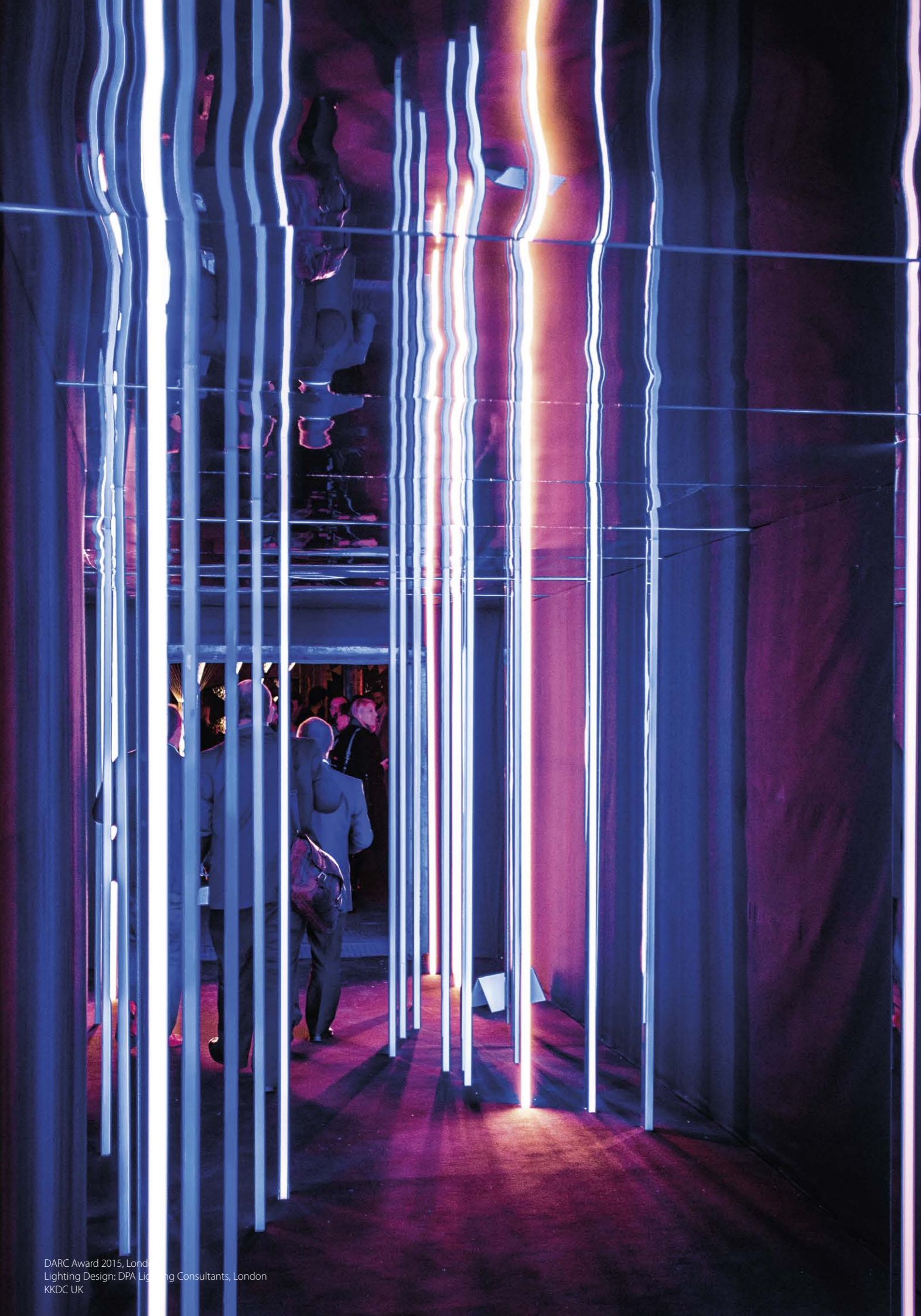
KKDL-01

visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. Recessed floor installation
2. Homogenous lighting with all LED strip options
3. MoMo-F with ground box
4. Ground box cover plate
5. Ground box for cable raceway
6. Tommy Hilfiger Store, Paris



MoMo-F Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage	
MoMo-F Silver anodised	Diffused cover C	s 352 s352	2100K 21K	MoMo-F 352 M 93.3-2010mm 83.3mm increments	IP67 67	c1	24V DC g	
			2300K 23K					MoMo-F 007 M 93.3-2010mm 41.7mm increments
			2500K 25K					
		e 352 e352	2700K 27K	MoMo-F 504 M 110-2010mm 100mm increments				
			3000K 30K			MoMo-F 508 M 81.4mm-2010mm 71.4mm increments		
			3200K 32K					
		RGB d501	3500K 35K	MoMo-F RGB M 93.3mm-2010mm 83.3mm incrementsxf				
			3800K 38K					
			5000K 50K					
			RED RED s-s352, s007, s504 only					
			GREEN GRN					
			BLUE BLU					
			ORANGE ORN					
		AMBER AMB						
		RGB RGB						

Code Example:

MESA	-	C	-	s504	-	35K	-	M	520	-	67	-	67c7	-	g
MoMo-F Silver anodised		Diffused cover		s-line 504		3500K		M	520mm		IP67		300mm Single IP67 connector		24V DC

MoMo-BLOC

- ▶ MoMo-BLOC is a heavy duty, linear in-ground IP67 marker light suitable for exterior high-traffic areas with fully homogenous diffusion.
- ▶ Dual IP67 design for superior, fail-safe ingress protection.
- ▶ Scratch resistant toughened glass and stainless steel construction.
- ▶ Full drive-over tested to EN60598-2-13:2006+A1:2012 and 3 metric ton static load.
- ▶ Various Stainless Steel ground box options to suit installation and full range of KKDC LED strip options.



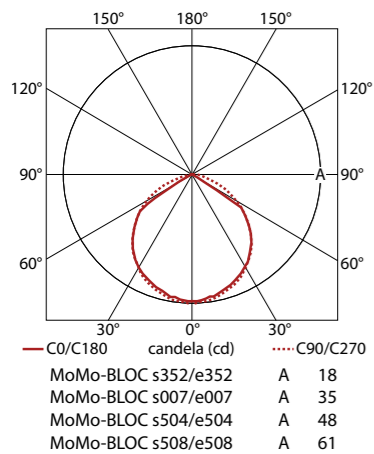
NEW



Beam angle	Frosted: 78°
IP Rating	IP67
Lifetime	50,000 hours @ 25°C
Finish	Silver/Hard anodised (stainless steel ground box)
Cover/Lens	Frosted glass
Mounting	Recessed ground box
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)
IK Rating IK08	IEC 62262:2010/IK08
Drive over	EN 60598-2-13:2006+A1:2012 (Static load, Torque and Shear load testing)

Product Data

	White				
	MoMo-BLOC s352 MoMo-BLOC e352	MoMo-BLOC s007 MoMo-BLOC e007	MoMo-BLOC s504 MoMo-BLOC e504	MoMo-BLOC s508 MoMo-BLOC e508	MoMo-BLOC dRGB
Luminous Flux	76 lm/m	146 lm/m	224 lm/m	313 lm/m	Red: 30 lm/m Green: 88lm/m Blue: 14 lm/m White: 127 lm/m
Frosted glass	13.7 lm/W	13.5 lm/W	18.3 lm/W	18.1 lm/W	
Wattage	5.52 W/m	10.83 W/m	12.24 W/m	17.28 W/m	15.6 W/m
Dimension	H50.2/W24.6/ L524-1024mm	H50.2/W24.6/ L524-1024mm	H50.2/W24.6/ L524-1024mm	H50.2/W24.6/ L524-1024mm	H50.15/W24.6/ L543-1024mm
Operation Temp	T _a = -25 to 60°C (T _c Max = 63.8°C)	T _a = -25 to 58°C (T _c Max = 64.4°C)	T _a = -25 to 60°C (T _c Max = 68.5°C)	T _a = -25 to 49°C (T _c Max = 61.2°C)	T _a = -25 to 55°C (T _c Max = 67°C)



Drive Over

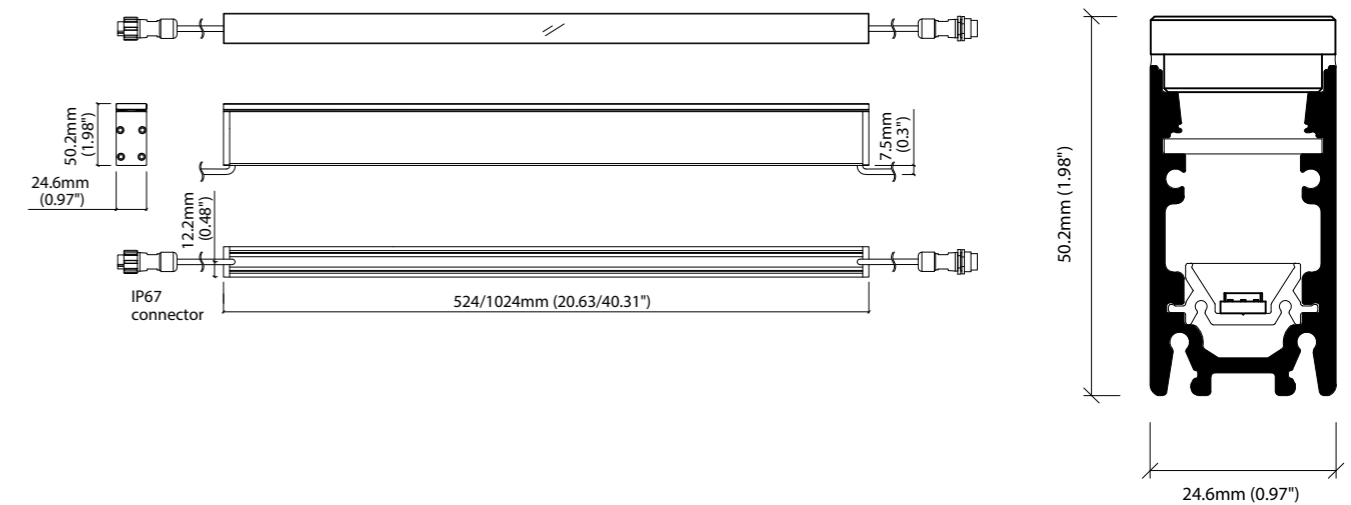
EN 60598-2-13:2006+A1:2012

- 3 ton Static
- 1 ton Torque and Shear

Walk Over

IEC 62262:2010

- IK08 tested



1:1

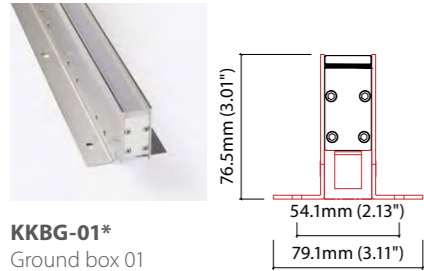
LED Options¹

	s-line	e-line	RGB
CRI (R_a)	90+	90+	n/a
CRI (R_g)	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/ 2500K/2700K/3000K/ Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/ 2500K/2700K/3000K/	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

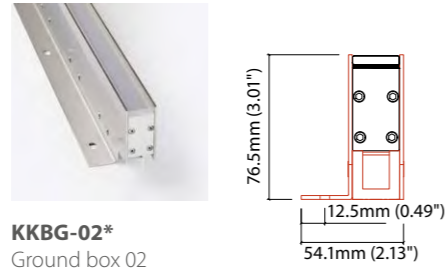
¹ Please refer to code table for colour of complete luminaire

Accessories

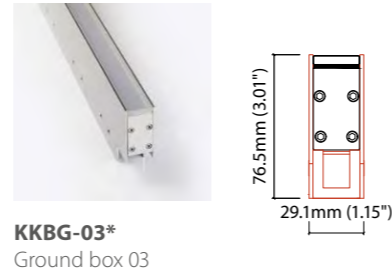
Mounting Options



KKBG-01*
Ground box 01
Stainless steel finish
* Specify length to match MoMo-BLOC



KKBG-02*
Ground box 02
Stainless steel finish
* specify length to match MoMo-BLOC



KKBG-03*
Ground box 03
Stainless steel finish
* specify length to match MoMo-BLOC

Connectors

CN67-2P-0300, CN67-2P-1000 & CN67-2P-3000
2 PIN male + female 300mm, 1000mm & 300mm pair

CN67-4P-0300, CN67-4P-1000 & CN67-4P-3000
4 PIN RGB male + female 300mm, 1000mm & 300mm pair

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details

Exterior Junction Boxes

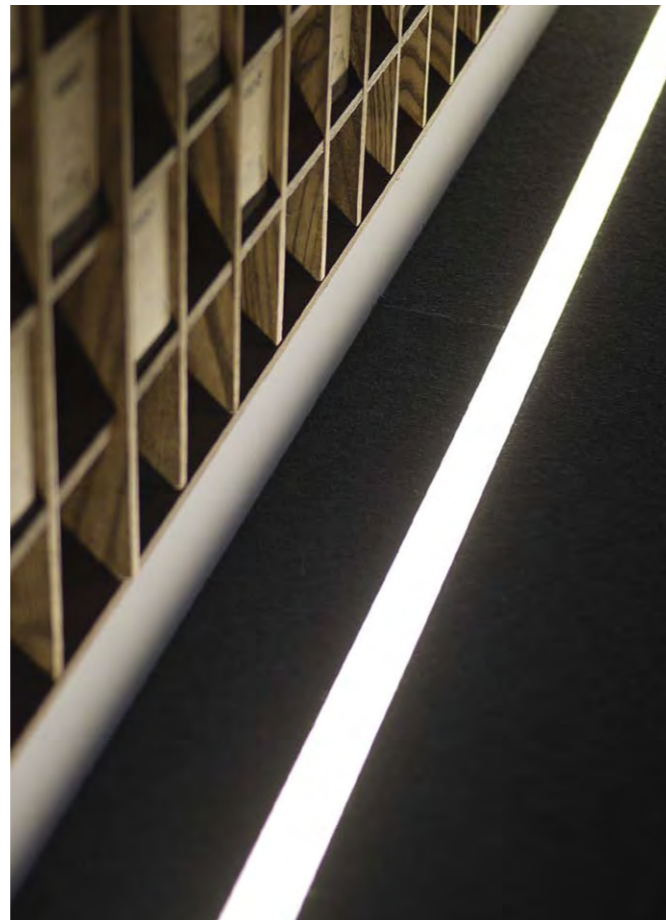
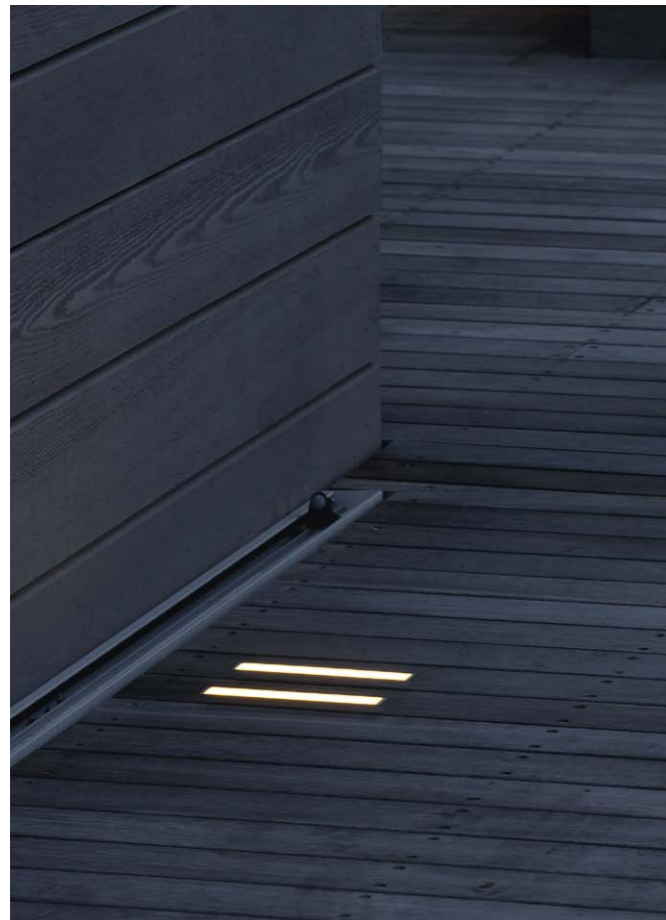
KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box



1. MoMo-BLOC with KKGB-03 S/Steel ground box
2. Cable exit detail
3. Robust screw-fit end cap and safety glass cover



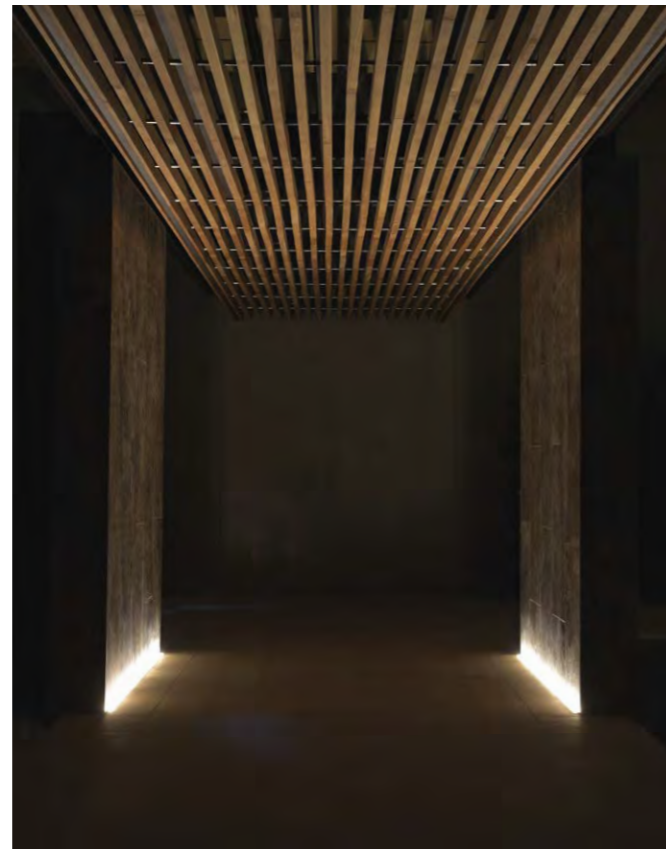


Housing/Finish	Cover/Lens	LED Type	Colour (CCT) ²	Length Availability	IP Rating	Connection Type	Voltage
MoMo BLOC Silver anodised BLSA	Frosted Glass F	s- 352 s352	2300K (2100K PCB) 23K	M 524/1024mm ³	IP67 67	300mm Single tail c1	24V DC g
MoMo BLOC Hard anodised ¹ BLHA			2500K (2300K PCB) 25K			300mm Double tail c2	
		508 s508	3000K (2500K PCB) 30K			300mm Single IP67 connector c7	
		e- 352 e352	3400K (2700K PCB) 34K			300mm Double IP67 connector c8	
		504 e504	4000K (3000K PCB) 40K				
		508 e508	RED RED s- s352, s007, s504 only				
		RGB d501	GREEN GRN				
			BLUE BLU				
			ORANGE ORN				
			AMBER AMB				
			RGB RGB				

¹ Hard anodised finish reduces light output by an average of 30%.
² Actual colour temperature after colour shift caused by silicone potting
³ 2 lengths available on all PCB types

Code Example:

BLSA	-	F	-	s504	-	40K	-	M 524	-	67	-	c8	-	g
MoMo-BLOC Silver anodised		Frosted Glass		s-line 504		4000K (3000K PCB)		524mm		IP67		300mm Double IP67 connector		24V DC



SUMO

- ▶ Robust large aperture surface mounted luminaire for exterior applications.
- ▶ Integral Power Supply with AC input, available as switched or 1-10V dimmable.
- ▶ Range of length options available.

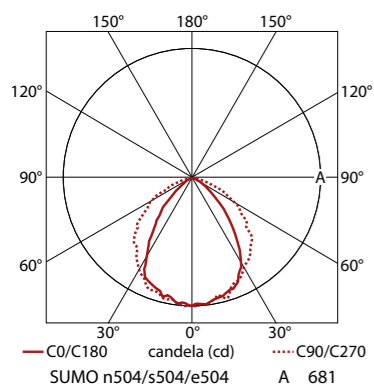




220-240V AC IP54/67 CE

SUMO n504
SUMO s504
SUMO e504

- Clear Cover, 3000K** ≤ 2131 lm/m
≤ 62.5 lm/W
- Diffused Cover, 3000K** ≤ 1800 lm/m
≤ 52.8 lm/W
- Wattage** 34.1 W/m
- Dimension** H53.2/W50/L520, 1020, 1520, 2020mm
- PCB Increment** 100mm increment
- LED pitch** 16.7mm – 120 LED/m
- Lifetime** 50,000 hours @ 25°C
- Operation Temp** T_a = -25 to 60°C (T_c max = 65°C)
- Beam Angle** Clear cover: 75°
Diffused cover: 105°
- Chip** Toyoda Gosei
- IP Rating** IP54/67
- Finish** Silver Anodised
- Cover/Lens** Diffused/Clear
- Mounting** Surface mounting via brackets
- Connection** Sheathed hardwire tails (AC Input: 220~240V AC, DIM Input: 1-10V)
- Control** Integral 1-10V/Switched



LED Options

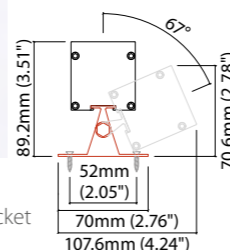
	n -line	s -line	e -line
CRI (R_a)	95+	90+	90+
CRI (R_g)	78+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K Single colours: Red/Green/Blue/Orange/Amber	White: 2100K/2300K/2500K/2700K/3000K/3200K/3500K/3800K/5000K

Accessories

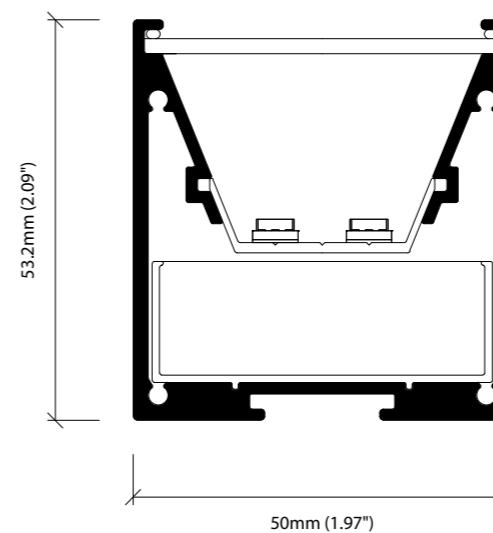
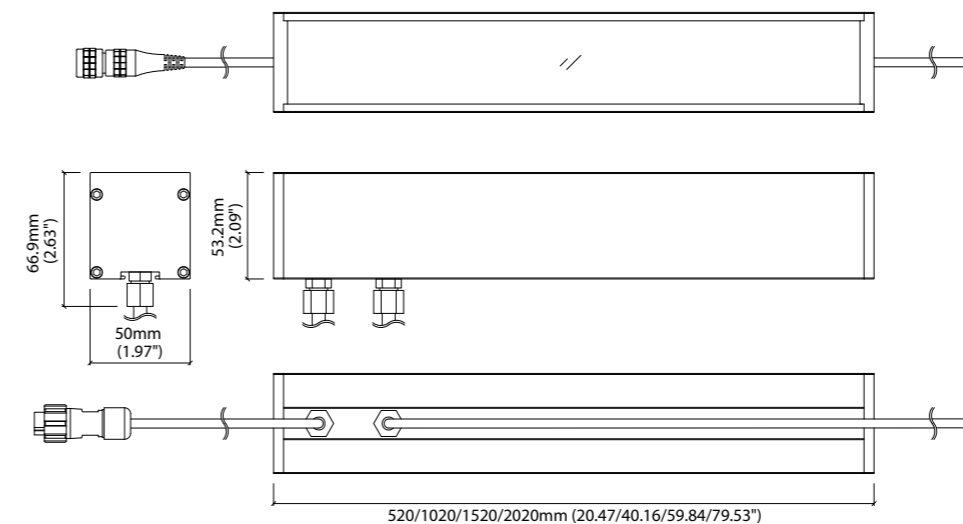
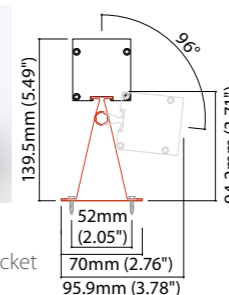
Mounting Options



KKBK-16
Small adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish
Pre-assembled in factory for double tail option



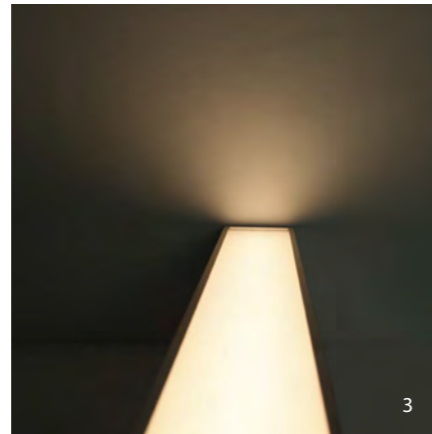
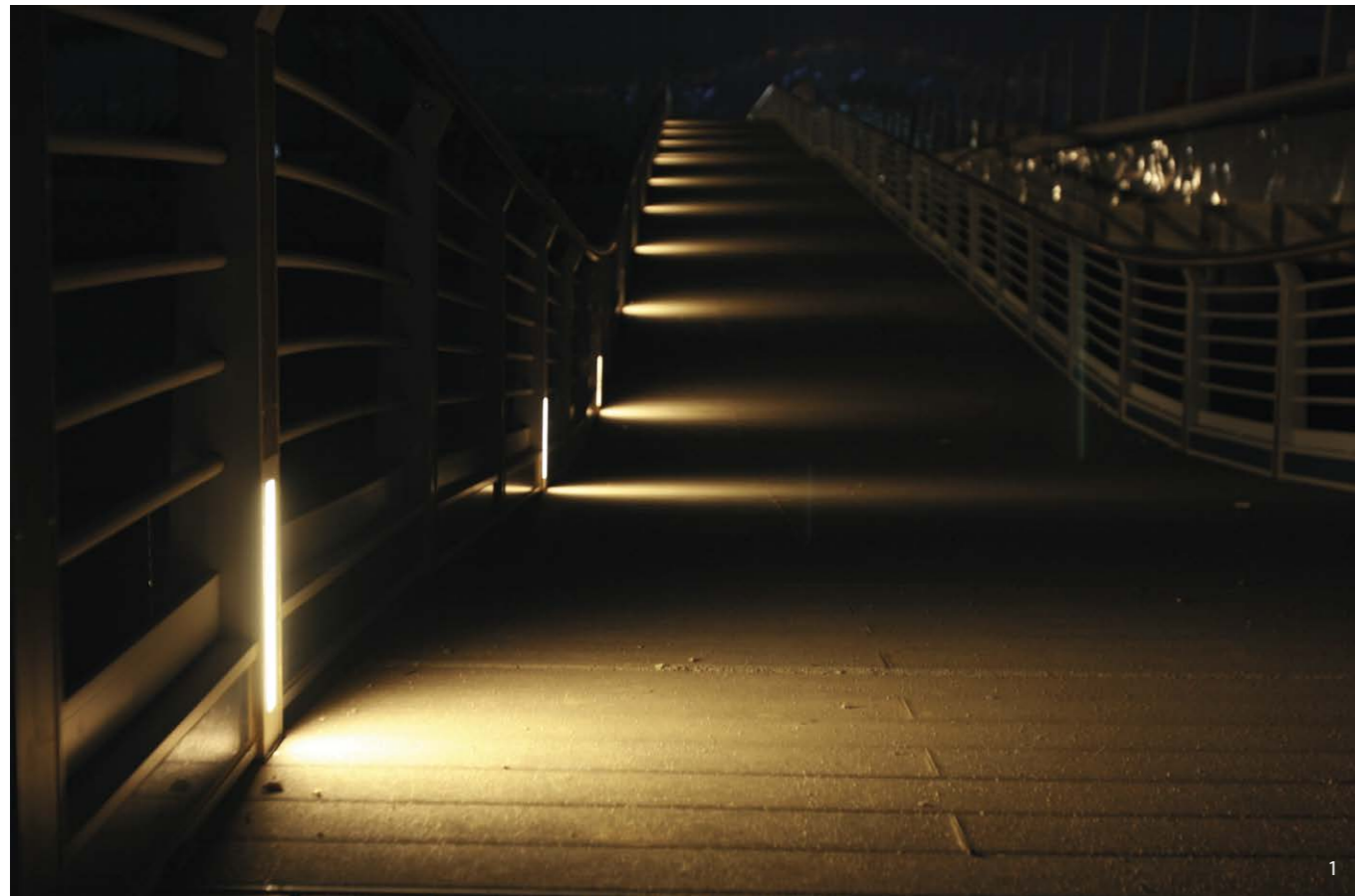
KKBK-17
Large adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish
Pre-assembled in factory for double tail option



1:1

Exterior Junction Boxes

- KKJB-07**
IP67 Slim J-Box
(including type A,B,C bushings)
- KKJB-07R**
Potting Resin for IP67 Slim J-Box



1. 2012 YEOSU Expo, South Korea
Lighting Design: Bizro
2. SUMO with small adjustable angle bracket
3. Diffused cover for homogenous lighting
4. SUMO 504 with clear cover
5. Single cable exit gland (dimmable version has two cable glands)

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Control	Voltage
SUMO Silver anodised SUSA	Clear cover B	n- 504 n504	2100K 21K	M 520/1020/1520/2020mm	IP54 54	1000mm Single tail d1	Switched 0	24V DC g
		s- 504 s504	2300K 23K					
	Diffused cover C	e- 504 e504	2500K 25K					
			2700K 27K					
			3000K 30K					
			3200K 32K					
			3500K 35K					
			3800K 38K					
			5000K 50K					
			RED RED s504 only					
			GREEN GRN					
			BLUE BLU					
	ORANGE ORN							
	AMBER AMB							

¹ Due to the clear, flush potted polyurethane top layer on IP67 SUMO a colour shift of +/-20K should be expected
² 1-10V version has two cable exits: 1000mm power connection & 1000mm dimming connection

Code Example:

SUSA - B - s504 - 35K - M 520 - 67 - d1 - 1 - g
 SUMO Silver anodised Clear cover s-line 504 3500K 520mm IP67 1000mm Single tail 1-10V Control 24V DC

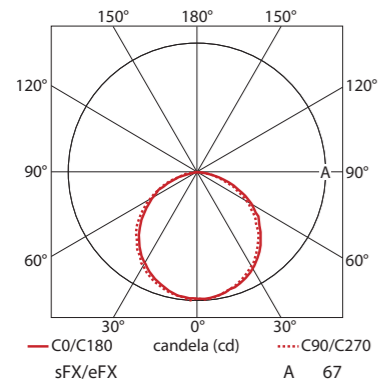
FX

- ▶ Flexible LED strip with self-adhesive backing, for concealment into curved architectural details.
- ▶ IP65 version with Silicone sheathing.
- ▶ Wide range of LED colour options available.





Beam angle	110°
IP Rating	IP20/65
Lifetime	50,000 hours @ 25°C
Finish	Silicone cover for IP65
Cover/Lens	IP65 version with silicone sheathed cover
Mounting	3M double sided tape (IP20), surface mounting clips (IP65)
Minimum bend radius	20mmØ(IP20) 35mmØ (IP65)
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)

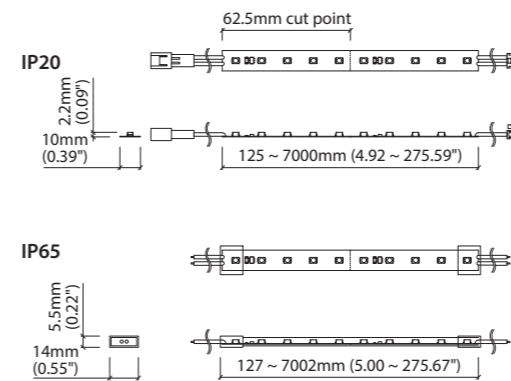


Product Data

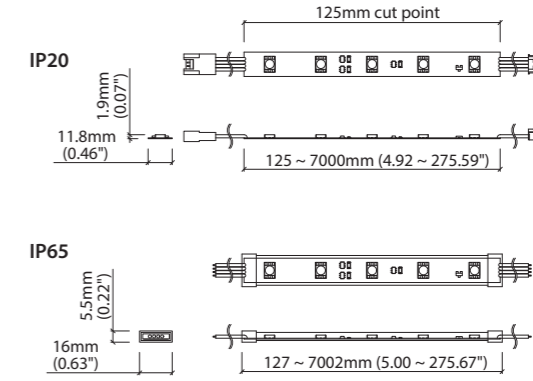
	White FX eFX	RGB FX RGB
Luminous Flux, 3000K	425 lm/m 61 lm/W	Red: 73 lm/m Green: 183 lm/m Blue: 28 lm/m White: 267 lm/m
Wattage	6.96 W/m	9.84 W/m
Dimension	H2.2mm/W10mm/L125-7000mm (IP20) H5.5/W14/L127-7002mm (IP65)	H1.9mm/W11.8mm/L125-7000mm (IP20) H5.5/W16/L127-7002mm (IP65)
PCB Increment	Power connection and cut points every 62.5mm	Power connection and cut point every 125mm
LED Pitch	12.5mm – 80 LED/m	25mm – 40 LED/m
Operation Temp	T _a = -25 to 50°C (T _c Max = 67°C)	T _a = -25 to 50°C (T _c Max = 78°C)



FX



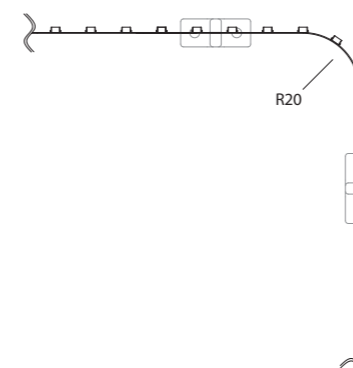
FX RGB



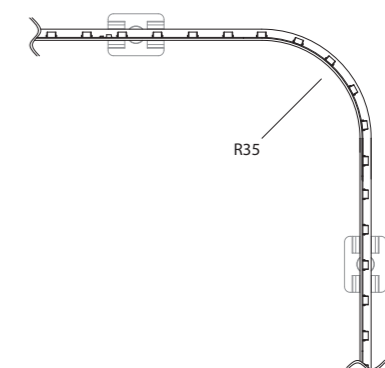
LED Options

	S-line	e-line	RGB
CRI (R_a)	90+	90+	n/a
CRI (R_g)	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

FX/FX RGB minimum bend radius

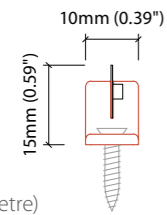


IP65 FX/FX RGB minimum bend radius

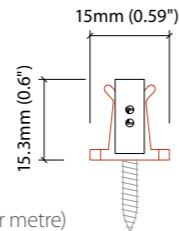


Accessories

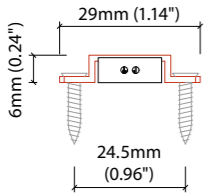
Mounting Options



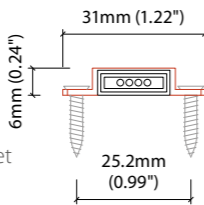
KKCP-07
Side clip (Allow 4 per metre)
White plastic



KKCP-08
IP65 side clip (Allow 4 per metre)
Clear plastic



KKBK-14
IP65 silicone bracket
(Allow 4 per metre)
Translucent silicone



KKBK-18
IP65 RGB silicone bracket
(Allow 4 per metre)
Translucent silicone

Connectors

KKCN-01 & KKC-03
2 PIN male+female 50mm & 300mm pair

KKCN-07 & KKC-09
4 PIN RGB male+female 50mm & 300mm pair

KKCN-06
2 PIN 300mm extension lead

KKCN-11
4 PIN RGB 300mm extension lead

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

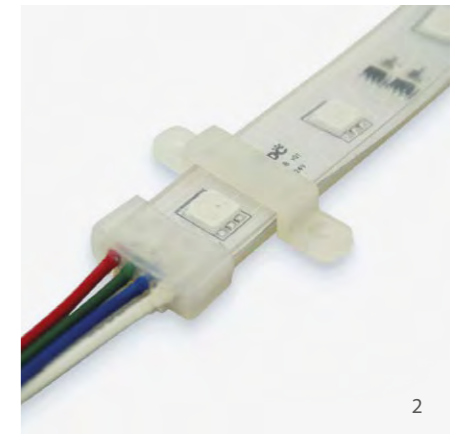
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)






KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. IP65 FX with side mounting clip
2. IP65 FX RGB end cap with cable exit
3. IP65 s-line and e-line FX with silicone brackets
4. FX RGB and IP65 FX RGB



Housing		LED Type		Colour (CCT)		Length Availability		IP Rating		Connection Type		Voltage		
FX	FX	 902	s902	2100K	21K	FX IP20	M	125-7000mm 62.5mm increments	IP20	20	50mm Single tail	a1	24V DC	g
		 902	e902	2300K	23K	FX IP65	M	127-7002mm 62.5mm increments	IP65	65	50mm Double tail	a2		
		 RGB	d901	2500K	25K	FX RGB IP20	M	125-7000mm 125mm increments			50mm Single IP20 connector	a3		
				2700K	27K	FX RGB IP65	M	127-7002mm 125mm increments			50mm Double IP20 connector	a4		
				3000K	30K						300mm Single tail	c1		
				3200K	32K						300mm Double tail	c2		
				3500K	35K						300mm Single IP20 connector	c3		
				3800K	38K						300mm Double IP20 connector	c4		
				5000K	50K									
		RED	RED	 s902	only									
		GREEN	GRN											
		BLUE	BLU											
		ORANGE	ORN											
		AMBER	AMB											
		RGB	RGB											

Code Example:

FX	-	s902	-	35K	-	M	502	-	65	-	c4	-	g
FX		s-line FX		3500K		502mm		IP65			300mm Double IP20 connector		24V DC



P-FX

- ▶ P-FX, with increased lumen output is a Flexible LED strip with self-adhesive backing, for concealment into curved architectural details.
- ▶ IP65 version with Silicone sheathing.
- ▶ Wide range of LED colour options available.

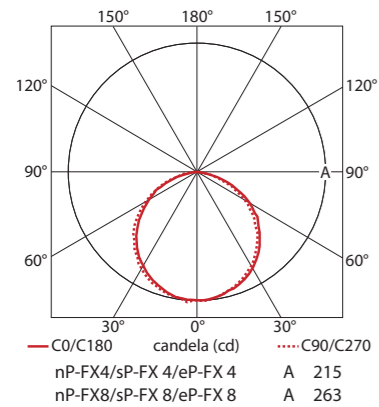




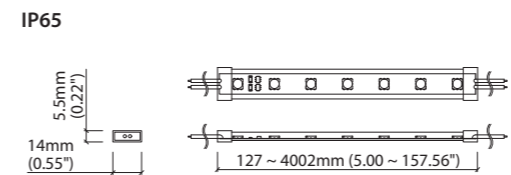
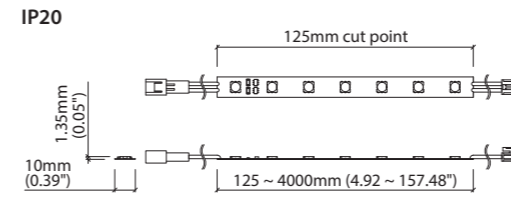
Beam angle	120°
IP Rating	IP20/65
Lifetime	50,000 hours @ 25°C
Finish	Silicone cover for IP65
Cover/Lens	IP65 version with silicone sheathed cover
Mounting	3M double sided tape (IP20), surface mounting clips (IP65)
Minimum bend radius	20mmØ (IP20) 35mmØ (IP65)
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)

Product Data

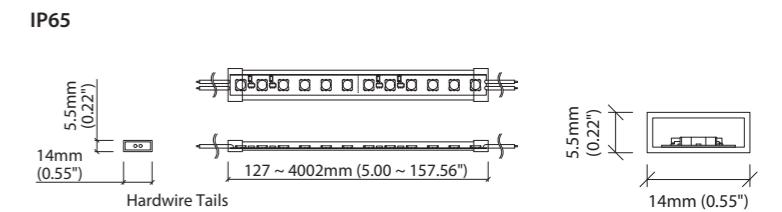
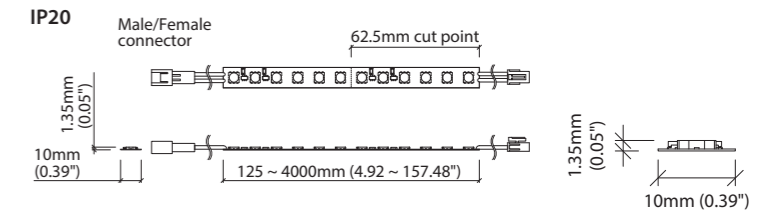
	White	
	nP-FX4 sP-FX4 eP-FX4	nP-FX8 sP-FX8 eP-FX8
Luminous Flux	≤ 1447 lm/m ≤ 96.6 lm/W	≤ 1652 lm/m ≤ 96.4 lm/W
Wattage	14.98 W/m	17.14 W/m
Dimension	H1.35/W10/L125-4000mm (IP20) H5.5/W14/L127-4002mm (IP65)	H1.35/W10/L125-4000mm (IP20) H5.5/W14/L127-4002mm (IP65)
PCB Increment	Power connection and cut point every 125mm	Power connection and cut point every 62.5mm
LED Pitch	20.8mm – 48 LED/m	10.4mm – 96 LED/m
Operation Temp	T _a = -25 to 40°C (T _c Max = 85°C) (IP20/65)	T _a = -25 to 40°C (T _c Max = 85°C) (IP20/65)



P-FX4



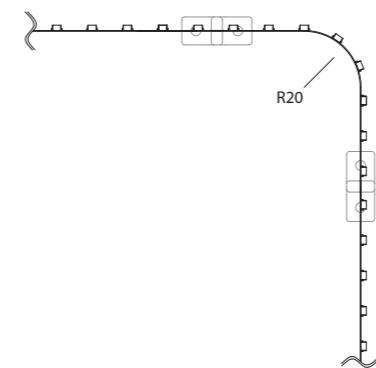
P-FX8



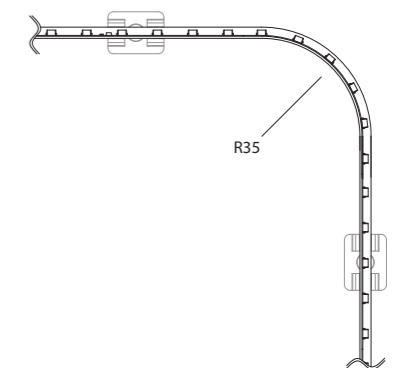
LED Options

	n-line	s-line	e-line
CRI (R_a)	95+	90+	90+
CRI (R_g)	78+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K

P-FX4/P-FX8 minimum bend radius

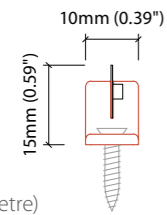


IP65 P-FX4/P-FX8 minimum bend radius

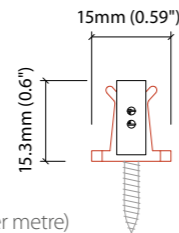


Accessories

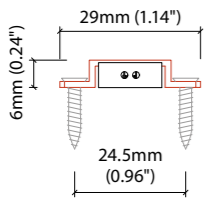
Mounting Options



KKCP-07
Side clip (Allow 4 per metre)
White plastic



KKCP-08
IP65 side clip (Allow 4 per metre)
Clear plastic



KKBK-14
IP65 silicone bracket
(Allow 4 per metre)
Translucent silicone

Connectors

KKCN-01 & KKC-03
2 PIN male+female 50mm & 300mm pair

KKCN-06
2 PIN 300mm extension lead

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

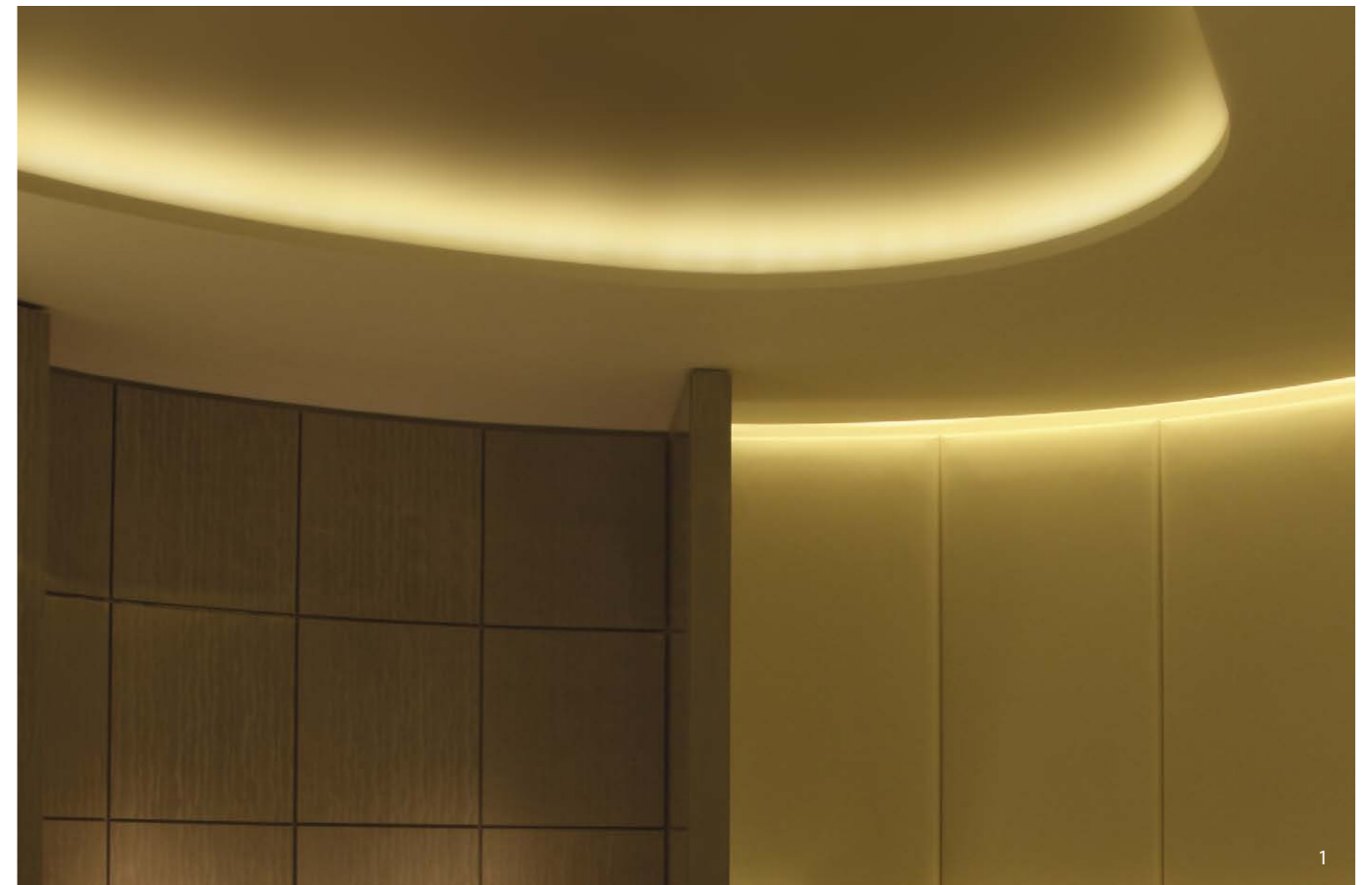
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. Concealed ceiling cove lighting installation
2. 50mm 2-PIN connector
3. P-FX4 flexible strip with self-adhesive backing
4. P-FX4 and P-FX8 flexible strips

P-FX Code Table

Housing	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Voltage							
P-FX	FX	n- P-FX4 n904 ³	2100K	21K	P-FX IP20	M	125-4000mm 125mm increments	IP20	20	50mm	a1	24V DC	g
										Single tail ²			
			P-FX8 n908 ³	2300K	23K	P-FX IP65	M	127-4002mm 125mm increments	IP65 ¹	65	50mm	a2	
					Double tail ²								
			s- P-FX4 s904	2500K	25K						50mm	a3	
						Single IP20 connector ²							
			P-FX8 s908	2700K	27K						50mm	a4	
						Double IP20 connector ²							
			e- P-FX4 e904	3000K	30K						300mm	c1	
						Single tail							
			P-FX8 e908	3200K	32K						300mm	c2	
						Double tail							
			3500K	35K						300mm	c3		
					Single IP20 connector								
			3800K	38K						300mm	c4		
					Double IP20 connector								
			5000K	50K									

¹ External dimensions of IP65 version increase slightly due to silicone sleeve cover

IP65 variant only available with tail options

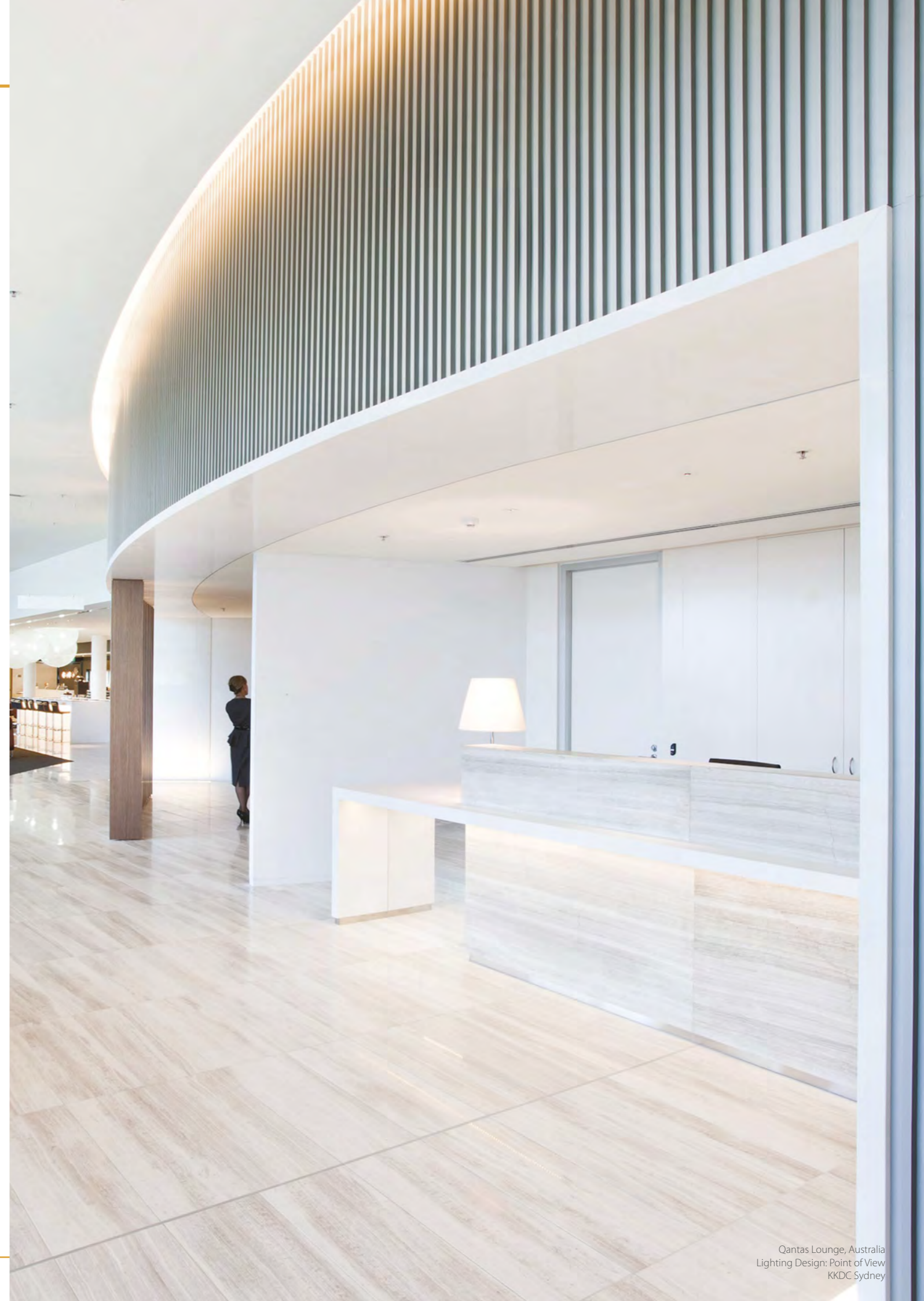
IP65 requires silicone mounting solutions, please see accessories

² Not available for IP65

³ n-line 2700K/3000K

Code Example:

FX	-	s908	-	35K	-	M	502	-	65	-	c4	-	g
P-FX		s-line P-FX8		3500K		502mm			IP65		300mm Double IP20 connector		24V DC



Qantas Lounge, Australia
Lighting Design: Point of View
KKDC Sydney

UNI P-FX

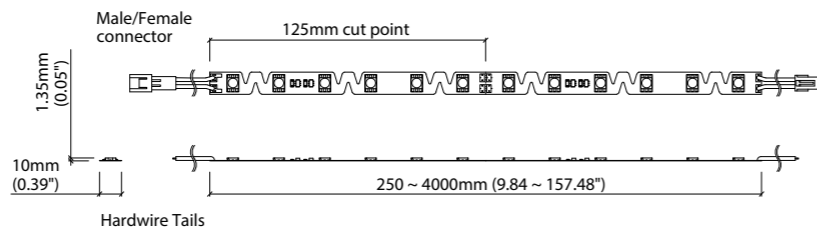
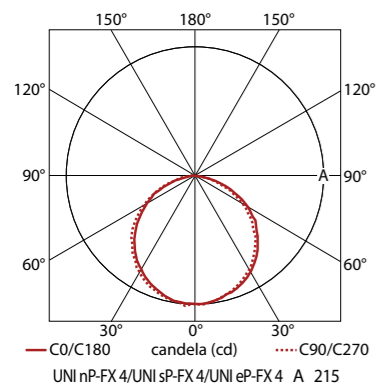
- ▶ UNI P-FX is a new flexible LED strip designed for concealment into curved architectural details and organic forms.
- ▶ Innovative, universally directional PCB design with self-adhesive backing.
- ▶ s-line and e-line variants available.





UNI nP-FX4
UNI sP-FX4
UNI eP-FX4

- Luminous Flux** ≤ 1447 lm/m
- No Cover** ≤ 96.6 lm/W
- Wattage** 14.98 W/m
- Dimension** H1.35/W10/L250-4000mm
- PCB Increment** Power connection and cut point every 125mm
- LED Pitch** 20.8mm – 48 LED/m
- Lifetime** 50,000 hours @ 25°C
- Operation Temp** T_a = -25 to 40°C (T_c max = 85°C)
- Beam angle** 120°
- IP Rating** IP20
- Finish** n/a
- Cover/Lens** n/a
- Mounting** 3M double sided tape and surface mounting clips
- Minimum bend radius** 20mmØ
- Connection** Hardwire tails or male/female connectors
- Control** 0-10V/1-10V/DMX/DALI (see visDIM range)



1. Universally directional flexibility
2. Illuminated UNI P-FX4, warm white LED
3. On-board IC drives
4. 3M self-adhesive backing

LED Options

	NEW		
	n-line	s-line	e-line
CRI (R_a)	95+	90+	90+
CRI (R_g)	78+	45+	45+
TM-30-15	R _f 94+, R _g 101+	R _f 88+, R _g 97+	R _f 88+, R _g 97+
Bin/Step	3 Step MacAdam ellipse	2 Step MacAdam ellipse	3 Step MacAdam ellipse
Colours	2700K/3000K	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K	White: 2100K/2300K/2500K/2700K/ 3000K/3200K/3500K/3800K/5000K

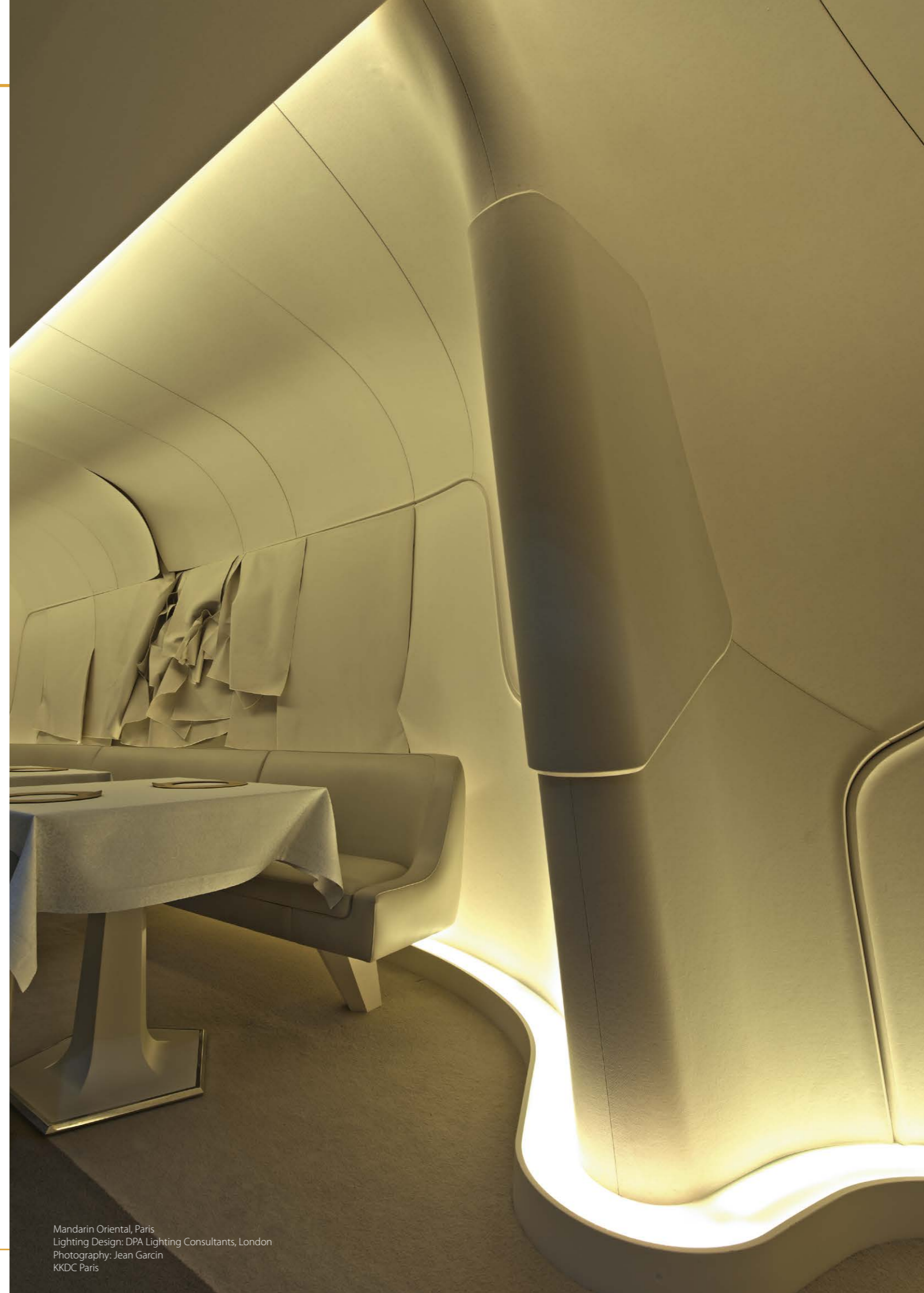
UNI P-FX4 Code Table

Housing		LED Type		Colour (CCT)		Length Availability		IP Rating		IP Rating/ Connection Type		Voltage		
UNI P-FX	FX	n	UNI nP-FX4 ¹	n903	2100K	21K	UNI P-FX	M	250-4000mm 125mm increments	IP20	20	50mm	24V DC	g
					Single tail	a1								
					50mm	a2								
					Double tail	a3								
					50mm	a4								
					Single IP20 connector	c1								
50mm	c2													
Double IP20 connector	c3													
300mm	c4													
Single tail														
300mm														
Double tail														
300mm														
Single IP20 connector														
300mm														
Double IP20 connector														
5000K	50K													

¹ n-line 2700K/3000K

Code Example:

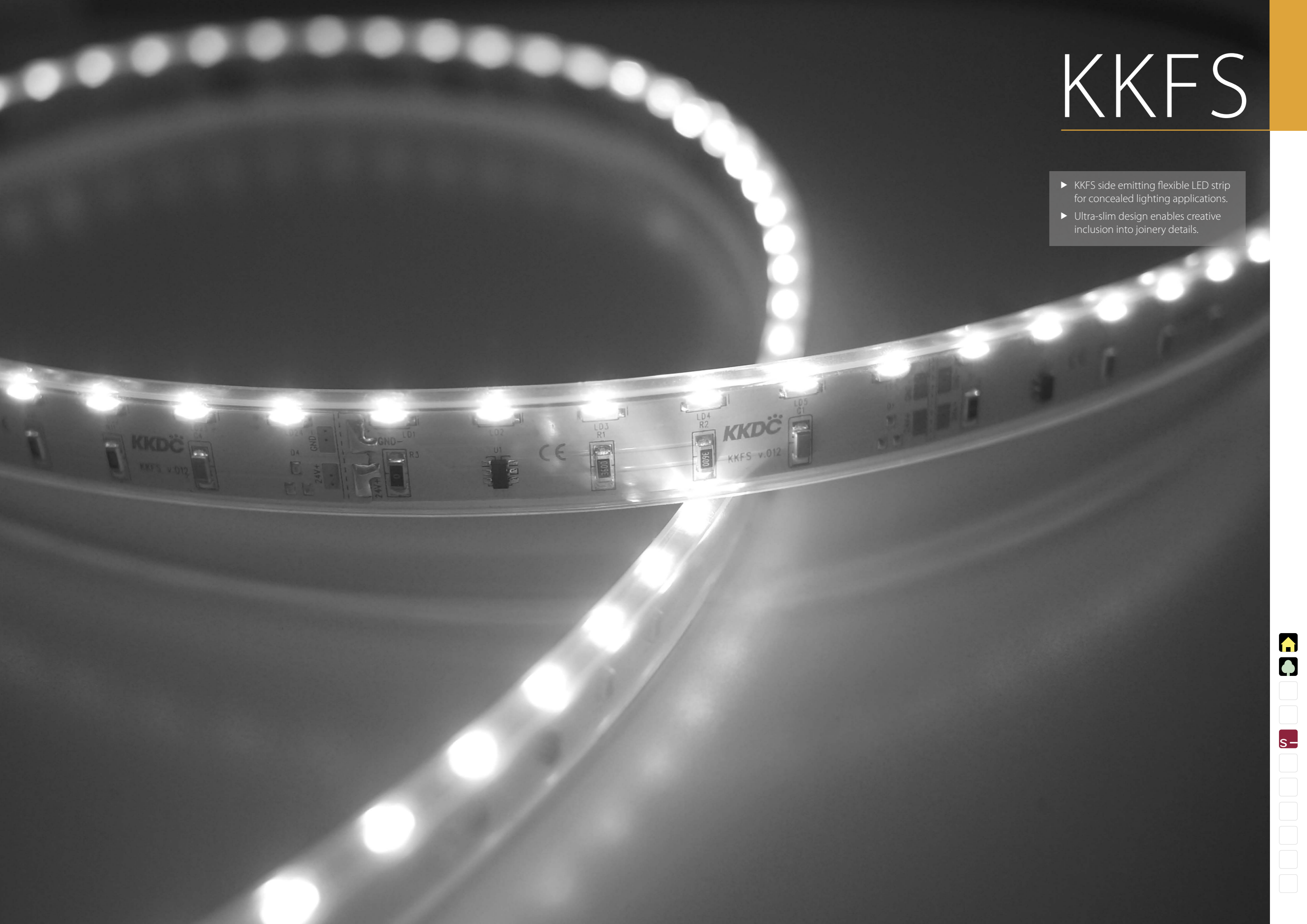
FX	-	s903	-	35K	-	M	500	-	20	-	c4	-	g
UNI P-FX		UNI sP-FX4		3500K		500mm			IP20		300mm Double IP20 connector		24V DC



Mandarin Oriental, Paris
 Lighting Design: DPA Lighting Consultants, London
 Photography: Jean Garcin
 KKDC Paris

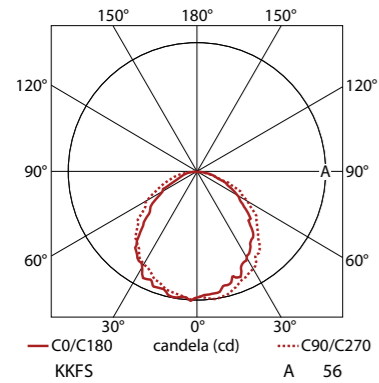
KKFS

- ▶ KKFS side emitting flexible LED strip for concealed lighting applications.
- ▶ Ultra-slim design enables creative inclusion into joinery details.





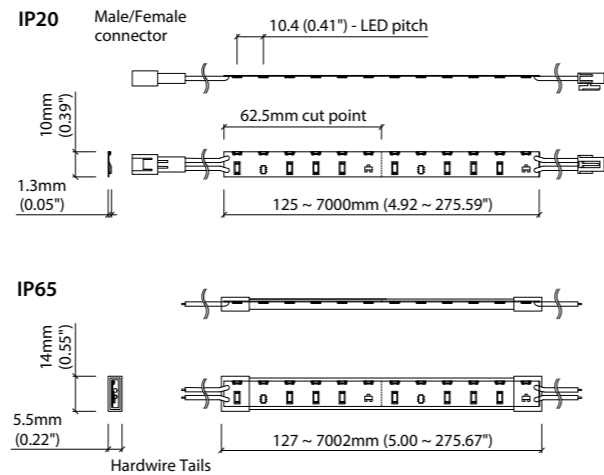
KKFS	
Luminous Flux, 3000K	390 lm/m 60 lm/W
Wattage	6.5 W/m
Dimension	H1.3mm/W10mm/L125-7000mm (IP20) H5.5/W14/L127-7002mm (IP65)
PCB Increment	Power connection possible at 125mm, cut point every 62.5mm
LED pitch	12.5mm – 96 LED/m
Lifetime	30,000 hours @ 25°C
Operation Temp	Ta = -25 to 50°C (Tc max = 65°C) (IP20/65)
Beam Angle	Diffused: 105°
Colours	2700K/3000K
Bin/Step	3 Step MacAdam ellipse
CRI	90+
Chip	Toyoda Gosei
IP Rating	IP20/65
Finish	Silicone cover for IP65
Cover/Lens	IP65 version with silicone sheathed cover
Mounting	3M double sided tape (IP20) surface mounting clips (IP65)
Minimum bend radius	20mmØ(IP20)/35mmØ (IP65)
Connection	Hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



LED Options



CRI (R_a)	90+
CRI (R_g)	80+
Bin/Step	3 Step MacAdam ellipse
Colours	White: 2700K/3000K

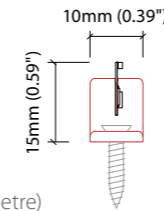


Accessories

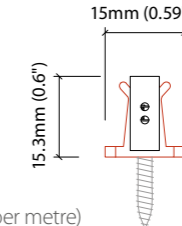
Mounting Options



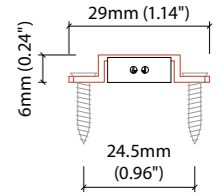
KKCP-07
Side clip (Allow 4 per metre)
White plastic



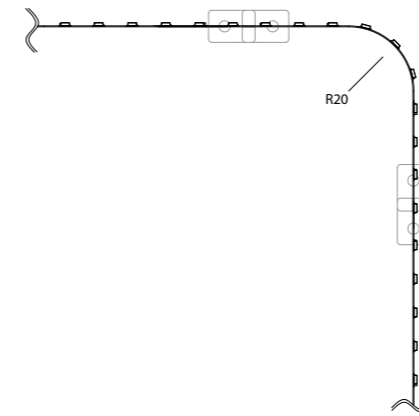
KKCP-08
IP65 side clip (Allow 4 per metre)
Clear plastic



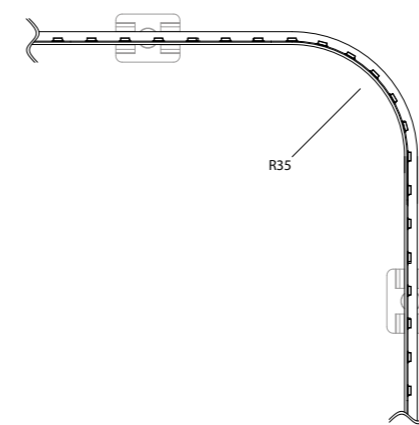
KKBK-14
IP65 silicone bracket
(Allow 4 per metre)
Translucent silicone



KKFS minimum bend radius



IP65 KKFS minimum bend radius



Connectors

- KKCN-01 & KKC-03**
2 PIN male+female 50mm & 300mm pair
- KKCN-06**
2 PIN 300mm extension lead

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1



2



3

- 1. KKFS IP65 with silicone sheath
- 2. KKFS flexible side emitting LED
- 3. KKFS adhered to surface with 3M self-adhesive backing tape
- 4. Plastic side mounting clip
- 5. KKFS IP65 silicone mounting bracket



4



5

Housing	LED Type	Colour (CCT)	Length Availability	IP Rating	IP Rating/Connection Type	Voltage
KKFS FS	s113	2700K 27K	KKFS IP20 M 125-7000mm 62.5mm increments	IP20 20	50mm Single tail a1	24V DC g
		3000K 30K	KKFS IP65 M 127-7002mm 62.5mm increments	IP65 ¹ 65	50mm Double tail a2 50mm Single IP20 connector ² a3 50mm Double IP20 connector ² a4 300mm Single tail c1 300mm Double tail c2 300mm Single IP20 connector ² c3 300mm Double IP20 connector ² c4	

¹ External dimensions of IP65 version increase slightly due to silicone sleeve cover
 IP65 variant only available with tail options
 IP65 requires silicone mounting solutions, please see accessories
² Not available for IP65

Code Example:

FS	-	s113	-	30K	-	M 502	-	65	-	c4	-	g
KKFS		s-line KKFS		3000K		502mm		IP65		300mm Double IP20 connector		24V DC



Luna

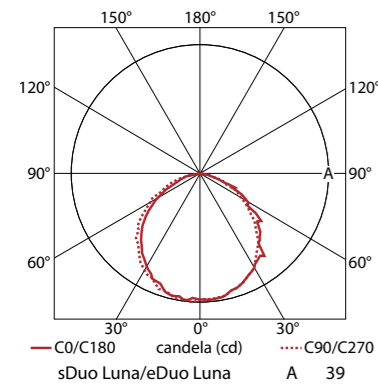


- ▶ The Luna series offers cost effective, flexible LED lighting solutions for concealing into architecture details and backlighting solutions.
- ▶ Range of IP ratings suitable for exterior use, including encapsulated IP68 for underwater installations.
- ▶ 2 or 4 LED modules with 77mm or 111mm pitch array options.





Beam angle	105°
IP Rating	IP40/65/68
Lifetime	50,000 hours @ 25°C
Finish	Polycarbonate
Cover/Lens	Clear
Mounting	3M adhesive tape (IP40/65), Screw fixing (IP68)
Minimum bend radius	130°(77mm pitch) 180°(111mm pitch)
Connection	Sheathed hardwire single/double ended sheathed tail
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



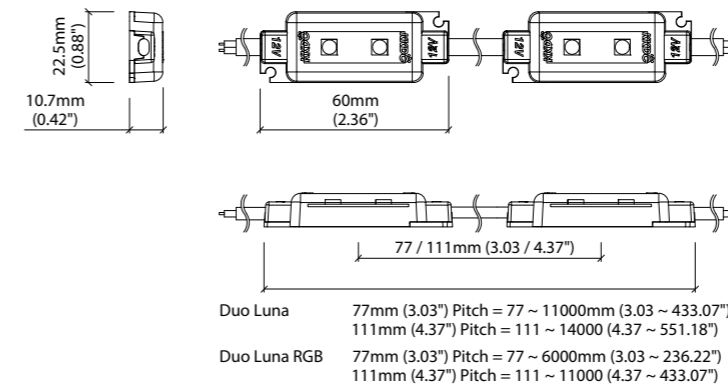
Product Data

	White Duo Luna eDuo Luna		RGB Duo Luna RGB	
Luminous Flux, 3000K	9V DC	13 modules (77mm pitch) 459 lm/m 87.1 lm/W	13 modules (77mm pitch) Red: 41 lm/m Green: 117 lm/m Blue: 17 lm/m White: 163 lm/m	
	9V DC	9 modules (111mm pitch) 320 lm/m 87.6 lm/W		
	12V DC	13 modules (77mm pitch) 455 lm/m 64.7 lm/W	9 modules (111mm pitch) Red: 26 lm/m Green: 75 lm/m Blue: 11 lm/m White: 106 lm/m	
	12V DC	9 modules (111mm pitch) 316 lm/m 64.8 lm/W		
Wattage	9V DC	13 modules (77mm pitch) 5.27 W/m	13 modules (77mm pitch) 7.8 W/m	
	9V DC	9 modules (111mm pitch) 3.65 W/m	9 modules (111mm pitch) 5.4 W/m	
	12V DC	13 modules (77mm pitch) 7.03 W/m		
	12V DC	9 modules (111mm pitch) 4.87 W/m		
Dimension	H10.7/W22.5/L60mm (9/13 modules per metre)		H10.7/W22/L60mm (9/13 modules per metre)	
Operation Temp	T _a = -25 to 50°C (T _c Max = 65°C)		T _a = -25 to 50°C (T _c Max = 65°C)	



LED Options

	S -s-line	e -e-line	RGB
CRI (R_a)	90+	90+	n/a
CRI (R_g)	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm



Accessories

Power & Control

KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

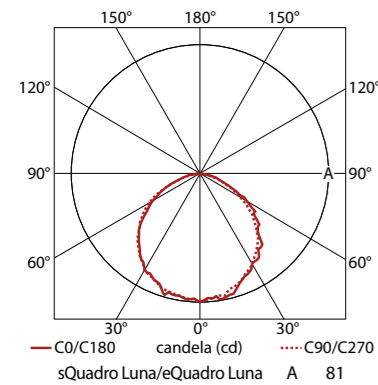
KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



Beam angle	110°
IP Rating	IP40/65/68
Lifetime	50,000 hours @ 25°C
Finish	Polycarbonate
Cover/Lens	Clear
Mounting	3M adhesive tape (IP40/65), Screw fixing (IP68)
Minimum bend radius	90°(77mm pitch) 180°(111mm pitch)
Connection	Sheathed hardwire single/double ended tail (RGB non-sheathed)
Control	0-10V/1-10V/DMX/DALI (see visDIM range)

RGB not UL listed

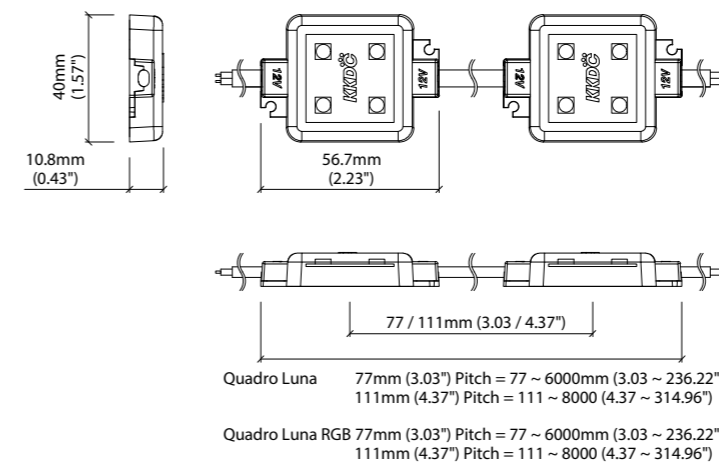
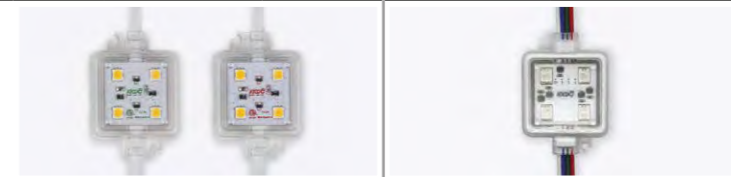


LED Options

	s-line	e-line	RGB
CRI (R_a)	90+	90+	n/a
CRI (R_g)	45+	45+	n/a
TM-30-15	R _f 88+, R _g 97+	R _f 88+, R _g 97+	n/a
Bin/Step	2 Step MacAdam ellipse	3 Step MacAdam ellipse	5nm tolerance
Colours	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K Single colours: Red/Green/ Blue/Orange/Amber	White: 2100K/2300K/2500K/ 2700K/3000K/3200K/3500K/ 3800K/5000K	Red: 620-625nm Blue: 455-460nm Green: 520-525nm

Product Data

	White Quadro Luna eQuadro Luna		RGB Quadro Luna RGB	
Luminous Flux	9V DC	13 modules (77mm pitch) 933 lm/m 88.6 lm/W	13 modules (77mm pitch)	Red: 85 lm/m Green: 225 lm/m Blue: 36 lm/m White: 322 lm/m
	9V DC	9 modules (111mm pitch) 646 lm/m 88.6 lm/W	9 modules (111mm pitch)	Red: 63 lm/m Green: 142 lm/m Blue: 25 lm/m White: 213 lm/m
	12V DC	13 modules (77mm pitch) 910 lm/m 64.8 lm/W		
	12V DC	9 modules (111mm pitch) 636 lm/m 65.4 lm/W		
Wattage	9V DC	13 modules (77mm pitch) 10.53 W/m	13 modules (77mm pitch)	14.04 W/m
	9V DC	9 modules (111mm pitch) 7.29 W/m	9 modules (111mm pitch)	9.72 W/m
	12V DC	13 modules (77mm pitch) 14.04 W/m		
	12V DC	9 modules (111mm pitch) 9.72 W/m		
Dimension	H10.8/W40/L56.7mm (9/13 modules per metre)		H10.8/W40/L56.7mm (9/13 modules per metre)	
Operation Temp	T _a = -25 to 50°C (T _c Max = 68°C)		T _a = -25 to 50°C (T _c Max = 68°C)	



Accessories

Power & Control

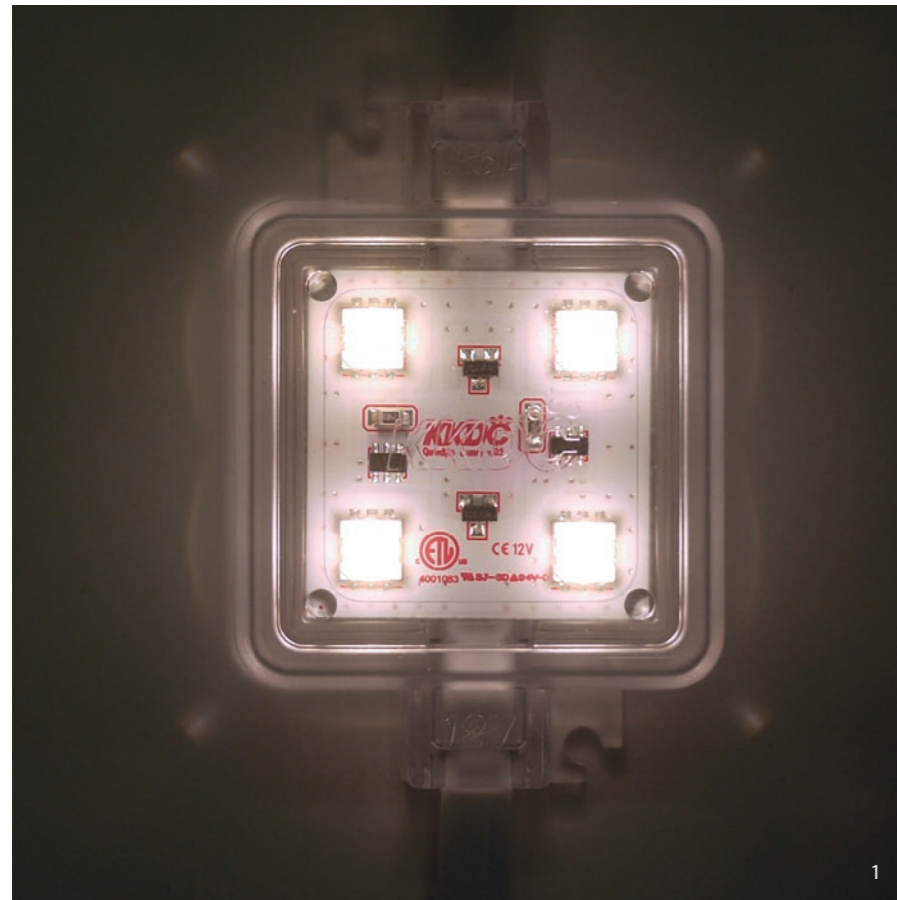
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel,
screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1. Quadro Luna robust encapsulated housing with ultra-sonic welding
2. Duo Luna with self-adhesive backing
3. Duo Luna with 90° bend (77mm pitch with 90° minimum bend radius, 111mm pitch with 180° minimum bend radius)



Housing	LED Type	Colour (CCT)	Length Availability	IP Rating	IP Rating/ Connection Type	Module Pitch	Voltage
Duo Luna DL	s Duo Luna s204	2100K 21K	Duo Luna 9V 111mm pitch M 111-5000mm	IP40 40	100mm Single tail ¹ b1	77mm ² a	9/12V DC g
Quadro Luna QL	Quadro Luna s404	2300K 23K	Duo Luna 9V 77mm pitch M 77-4000mm	IP65 65	100mm Double tail ¹ b2	111mm ³ b	
	e Duo Luna e204	2500K 25K	Duo Luna 12V 111mm pitch M 111-14000mm				
	Quadro Luna e404	2700K 27K	Duo Luna 12V 77mm pitch M 77-11000mm	IP68 68	1000mm Single tail d1		
			Quadro Luna 12V 77mm pitch M 77-11000mm		1000mm Double tail d2		
	e Duo Luna RGB e202	3000K 30K	Quadro Luna 9V 111mm pitch M 111-3000mm				
	Quadro Luna RGB d402	3200K 32K	Quadro Luna 9V 77mm pitch M 77-2000mm				
		3500K 35K	Quadro Luna 12V 111mm pitch M 111-8000mm				
		3800K 38K	Quadro Luna 12V 77mm pitch M 77-6000mm				
		5000K 50K					
	RED RED	s-s-line only					
	GREEN GRN						
	BLUE BLU						
	ORANGE ORN						
	AMBER AMB						
	RGB RGB						

¹ Not available for IP68 variant
² 13 modules per metre @ 77mm pitch
³ 9 modules per metre @ 111mm pitch

Code Example:

DL	-	s204	-	30K	-	M	1000	-	65	-	d2	-	a	-	f
Duo Luna		sDuo Luna		3000K		1000mm		IP65			1000mm Double tail		77mm		9/12V DC



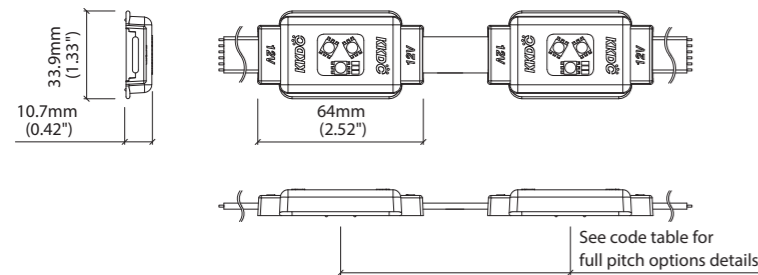
Cluster PIXEL



Dimension H10.7/W33.9/L64mm
Lifetime 50,000 hours @ 25°C
Operating temp T_a= -25 to 50°C (T_c max = 66°C)
IP rating IP67
Finish Polycarbonate
Cover/Lens Clear
Mounting Surface mounting via clips
Connection Cluster to Distributor:
4Pin typEP67 connector
Control DMX/Media display (DVI)

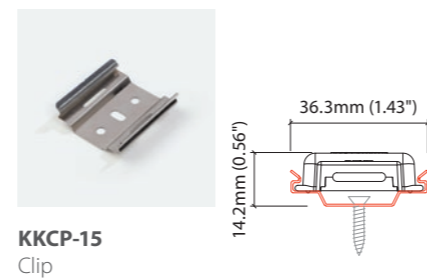
Product Data

	White Cluster sPIXEL Cluster ePIXEL	RGB Cluster PIXEL RGB
Power consumption	0.51W	0.72W
Supply voltage	12V DC	12V DC
Supply current	0.0425A	0.06A
Luminous Flux	33 lm	Red: 5 lm Green: 13 lm Blue: 2 lm White: 13 lm



Accessories

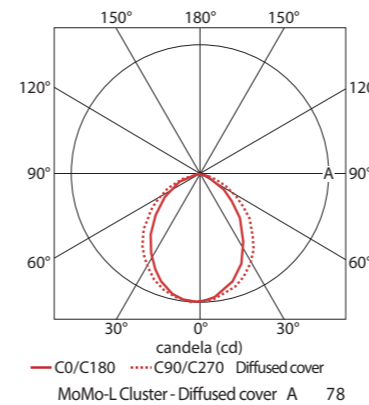
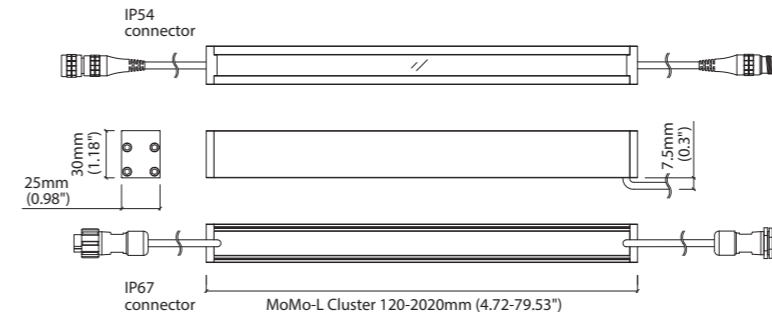
Mounting Options



MoMo-L Cluster & Cluster BAR

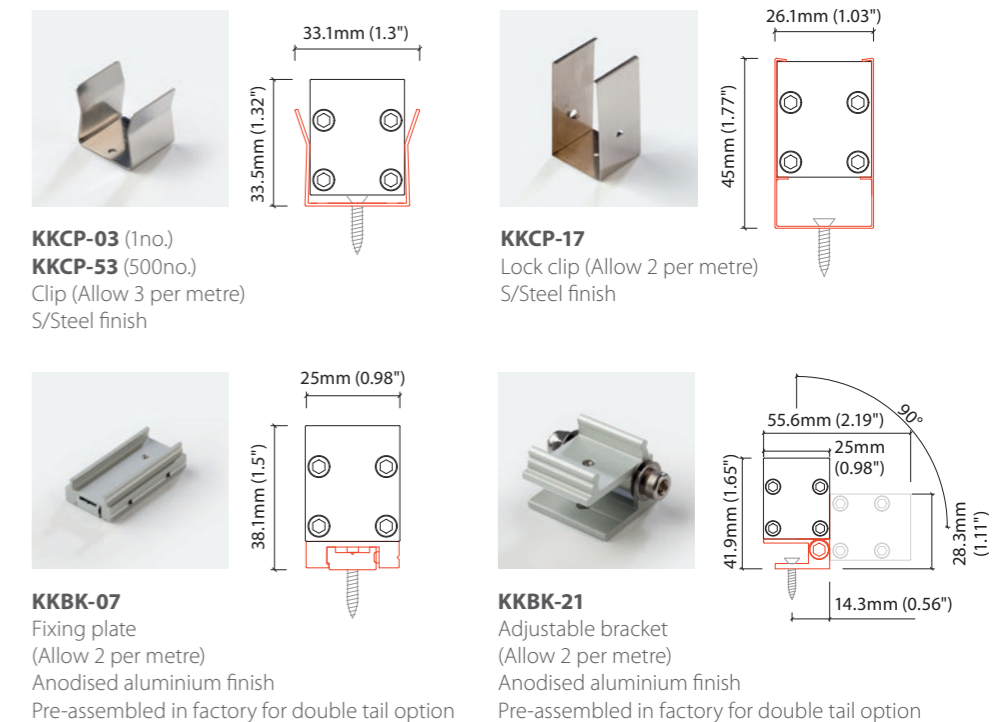


Luminous flux 515 lm/m 29.6 lm/W @ Clear cover
358 lm/m 20.6 lm/W @ Diffused cover
Power consumption 17.4 W/m
Supply voltage 24V DC
Dimension H30/W25/L120-2020mm
(100mm increment)
Lifetime 50,000 hours @ 25°C
Operating temp T_a= -25 to 45°C (T_c max = 65°C)
IP rating IP54/67
Finish Silver anodised
Cover/Lens Diffused/Clear/Micro Louvre
Mounting Surface mounting via clips or brackets
Connection Sheathed hardwire tails or male/female connectors
Control DMX/Media display (DVI)



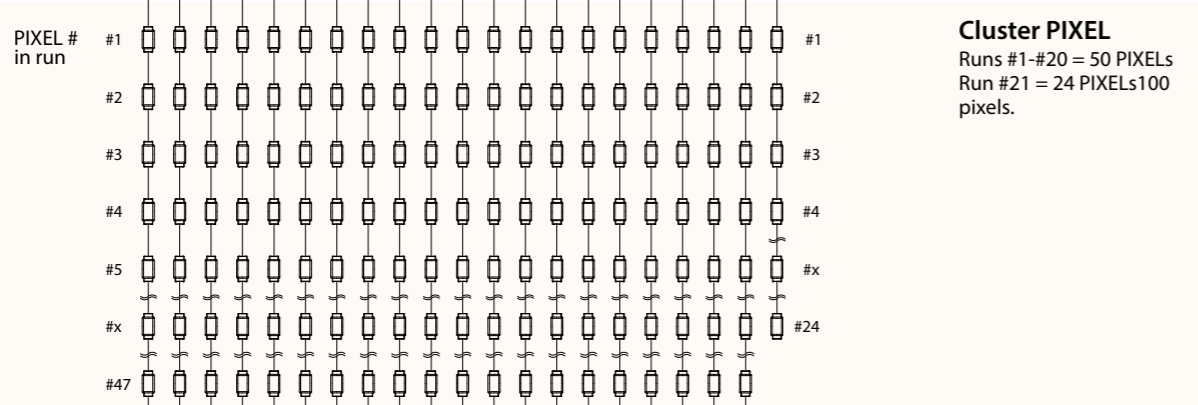
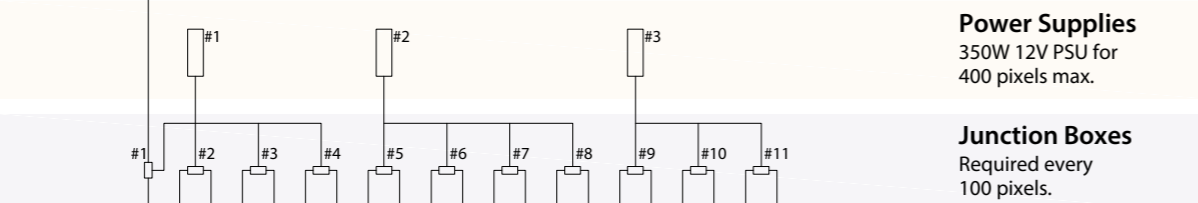
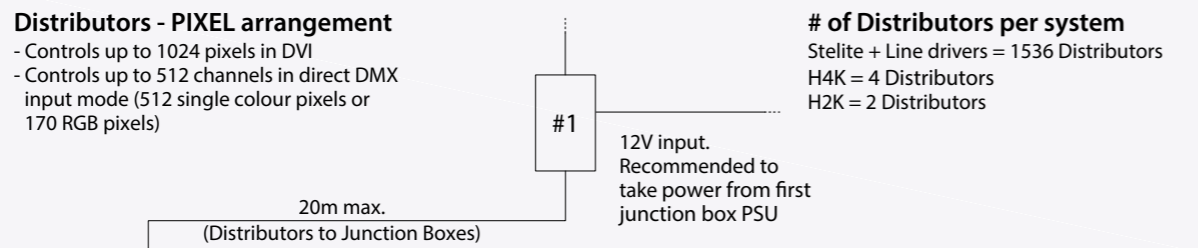
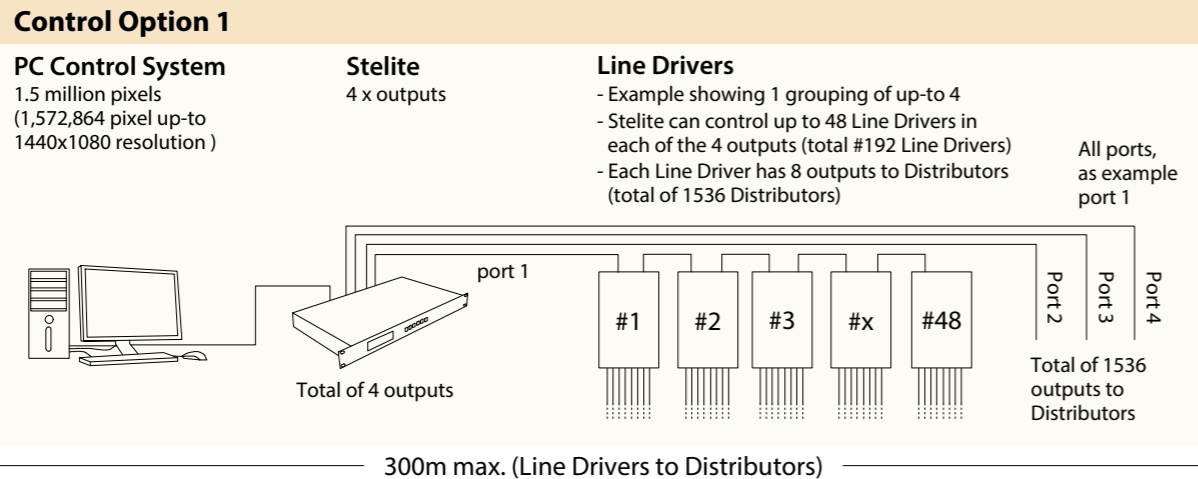
Accessories

Mounting Options



Control Options

Choose 1 of 4 system control options based on desired number of Cluster PIXELS or Cluster BAR pixels to control.



IP67 Connector
Required every 50 pixels or 7m of Cluster PIXEL.

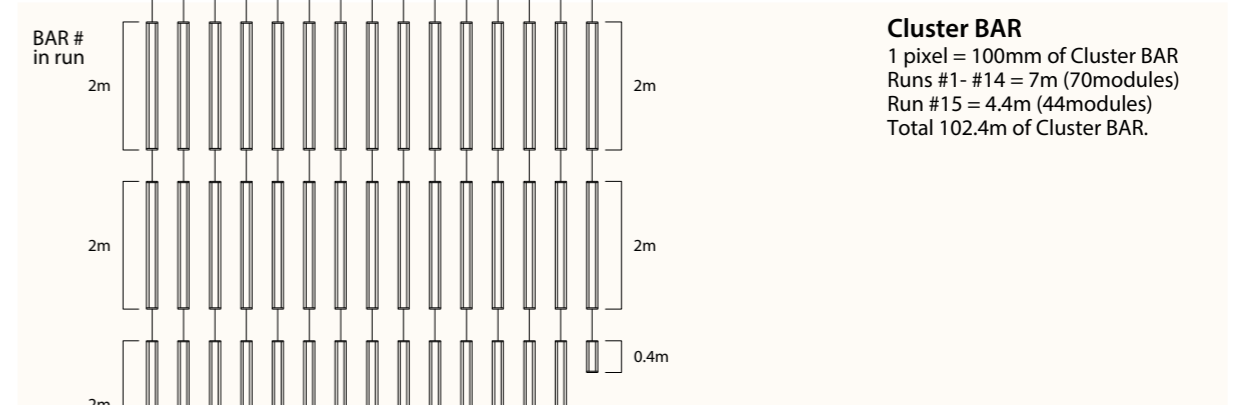
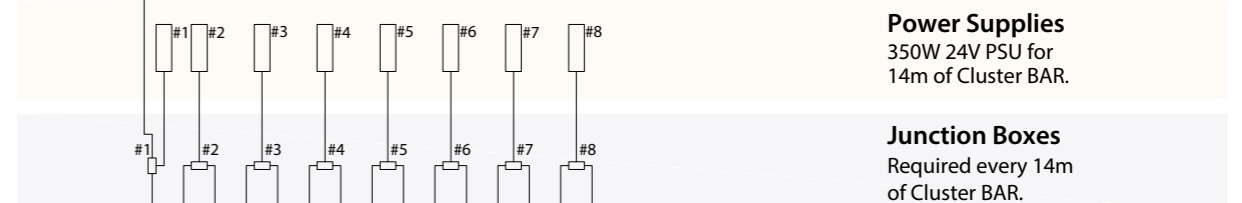
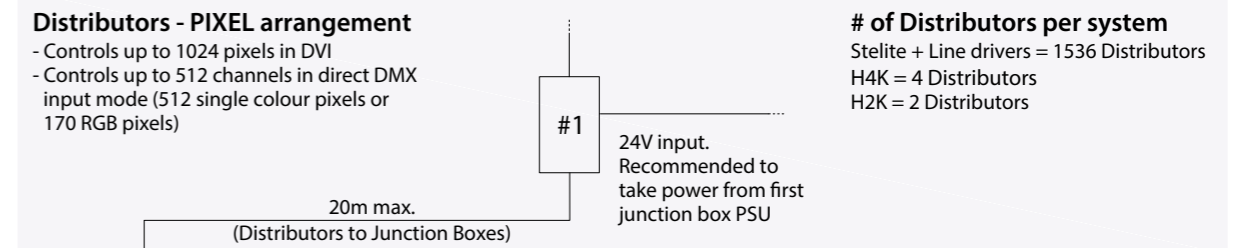
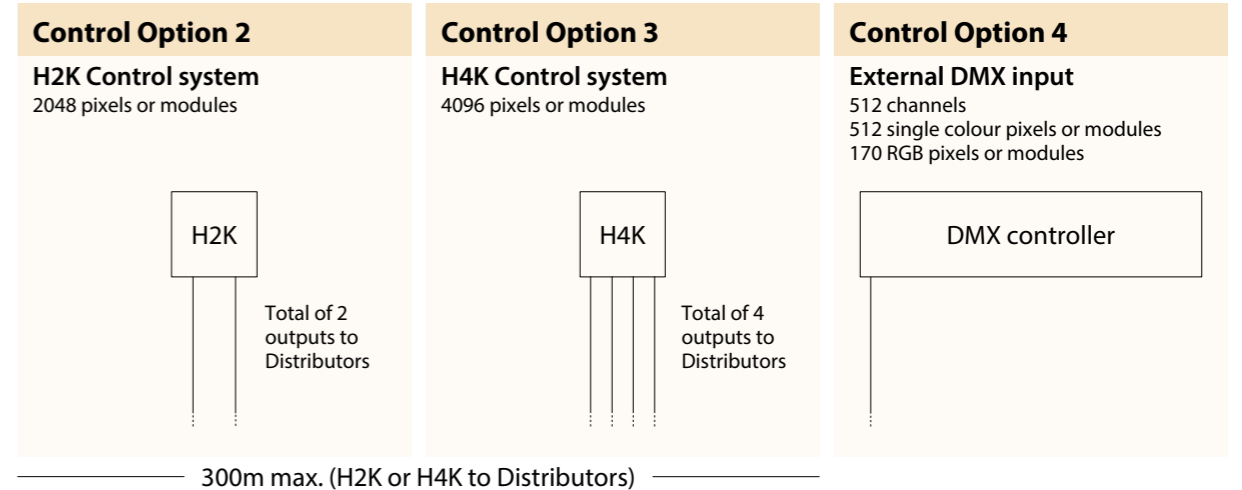
Power Isolator
Required in-between PSUs in chains. Separates power circuits while passing signal through.

Cluster PIXEL, Cluster PIXEL RGB

Choose common system components for Cluster PIXEL based on requirement.

Control Options

Choose 1 of 4 system control options based on desired number of Cluster PIXELS or Cluster BAR pixels to control.



IP67 Connector
Required every 50 pixels or 7m of Cluster BAR.

Power Isolator
Required in-between PSUs in chains. Separates power circuits while passing signal through.

Cluster BAR

Choose common system components for Cluster BAR based on requirement.

KKDC Cluster System Control Components

Stelite



- Operates in DVI mode
- DVI converter for larger systems
- 4 output ports
- 48 Line Drivers per port
- total of (4 x 48) 192 Line Drivers
- Controls 1,572,864 pixels
- IP20

Code
KKCS-04

Major system component in large PC controlled systems.

Line Driver

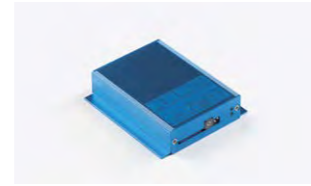


- DVI to DMX converter
- Connect up to 48 units in-line in map mode
- Each port can control a single Distributor
- 8 ports x 1024 pixels = 8192 pixels per unit
- IP20

Code
KKSC-05

Major system component in large PC controlled systems.

H2K / H4K



- Operates in DVI mode
- Simple controller for static or patterns
- H4K = 4096 pixels
- H2K = 2048 pixels
- Programmed via SSD card
- Output ports wire directly to Distributors
- IP20

Codes
H2K – KKCS-02
H4K – KKCS-03

Perfect controller options for small to medium size Cluster installations.

Distributor

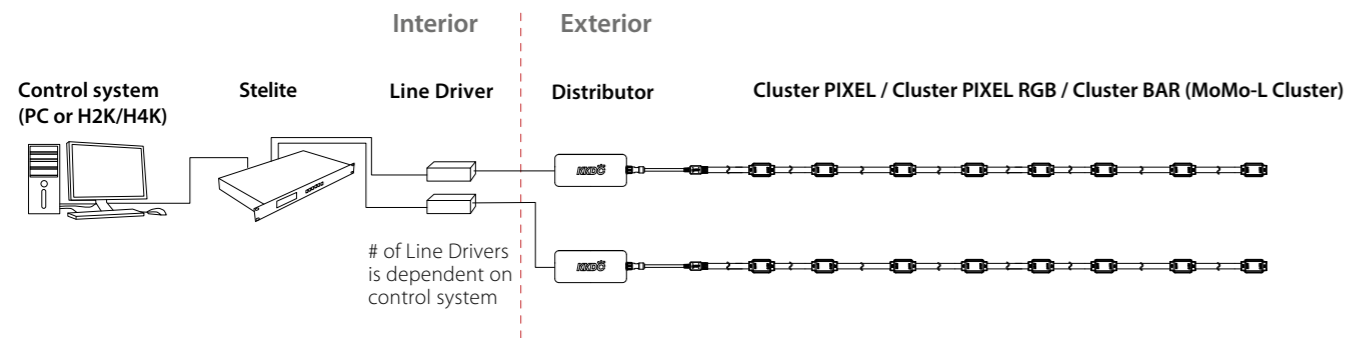


- Main Distributor for Cluster PIXEL and BAR products
- DVI mode can control 1024 pixels
- DMX mode can control 512 Channels; 512 Single colour pixels or 170 RGB pixels
- IP20

Code
KKCS-01

Main Distributor in all system setups, allows signal and power to the PIXELs or BAR modules.

Typical Cluster System example (using Cluster PIXEL)



*Note – System shown above is example only, components and materials may change due to project size and environment.

Control system options

1. PC Control system – Video output – 1920x1080 resolution (2,073,600 modules/pixels)
2. H4K Controller - 4096 modules/pixels
3. H2K Controller - 2048 modules/pixels
4. External DMX input - Wired directly to Distributor - 512 Channels; 512 single channel pixels or 170 RGB pixels

Stelite

- DVI converter for PC control systems.
- 4 ports for Line Drivers, 48 line drivers per port.

Line Driver

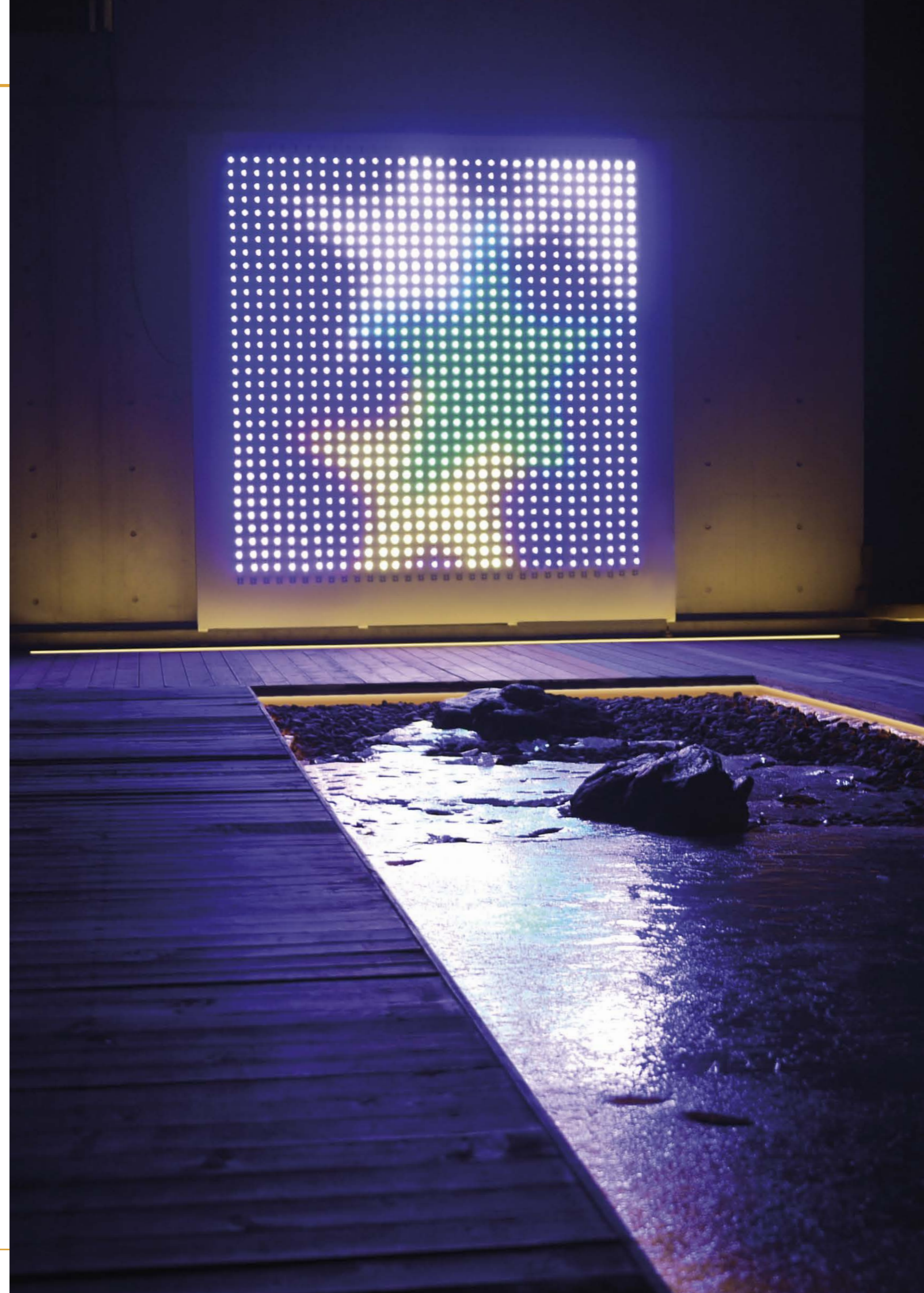
- For use with Stelite and PC control systems.
- 8 ports for connecting distributors

Distributor

- Provides power and data to Cluster products
- 170 RGB pixels for DMX 512 or 1024 pixels for DVI

Cluster PIXEL/ Cluster PIXEL RGB/ Cluster BAR (MoMo-L Cluster)

- 1~170 pixels per Line Driver in DMX 512 or 1~1024 pixels per Line Driver in DVI, or
- 1~170 modules per Line Driver in DMX 512 (up to 17m of Cluster BAR) or 1~1024 pixels per Line Driver in DVI (up to 102.4m of Cluster BAR)



Cluster PIXEL Code Table

Housing/Finish	LED Type	Colour (CCT)	Length Availability ¹	IP Rating	Connection Type	Module Pitch	Voltage	
Cluster PIXEL CP	Cluster PIXEL 304	2100K 21K s-line only	M 200-10,000mm, 1-50 modules @ 200mm pitch	IP67 67	300mm Double IP67 connector c8	200mm c	12V DC f	
		2300K 23K	M 250-11,750mm, 1-47 modules @ 250mm pitch					250mm d
		2500K 25K	M 333-14,319mm, 1-43 modules @ 333mm pitch					333mm e
		2700K 27K	M 500-19,000mm, 1-38 modules @ 500mm pitch					500mm f
		3000K 30K	M 1000-30,000mm, 1-30 modules @ 1000mm pitch					1000mm g
		3200K 32K	M 2000-44,000mm, 1-22 modules @ 2000mm pitch					2000mm h
		3500K 35K						
		3800K 38K						
		5000K 50K						
		RED RED						
		GREEN GRN						
		BLUE BLU						
		ORANGE ORN						
		AMBER AMB						
		RGB RGB dRGB only						

¹ Length dependant on Module Pitch

Code Example:

CP	-	s304	-	30K	-	M 1000	-	67	-	c8	-	d	-	f
Cluster PIXEL		s-line 304		3000K		1000mm		IP67		300mm Double tail		250mm pitch		12V DC

Cluster BAR Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP rating	Connection Type	Voltage		
MoMo-L Cluster and Cluster Bar Silver anodised	MOSA	Cluster Bar 305	2100K 21K	M 120-2020mm 100mm increments	IP54 54	300mm Single tail c1	24V DC g		
			2300K 23K					IP67 ¹ 67	300mm Double tail c2
			2500K 25K						300mm Single IP54 connector c5
			2700K 27K						300mm Double IP54 connector c6
			3000K 30K						300mm Single IP67 connector c7
			3200K 32K						300mm Double IP67 connector c8
			3500K 35K						
			3800K 38K						
			5000K 50K						
			RED RED						
			GREEN GRN						
			BLUE BLU						
			ORANGE ORN						
			AMBER AMB						

¹ Due to the clear, flush potted polyurethane top layer on IP67 MoMo-L a colour shift of +/-20K should be expected

Code Example:

MOSA	-	K	-	305	-	35K	-	M 520	-	54	-	c5	-	g
Cluster Bar Silver anodised		Micro Louvre		s-line 305		3500K		520mm		IP54		300mm Single IP54 connector		24V DC



Beam Angle 10°/20°/30°/60°/Spread lens (10°x45°)/ No lens

IP Rating IP54/67

Lifetime 50,000 hours @ 25°C

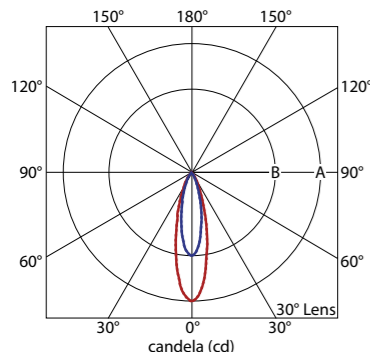
Finish Silver Anodised

Cover/Lens Clear/Clear+Micro Louvre/ Lens options

Mounting Surface mounting via brackets

Connection Sheathed hardwire tail

Control 0-10V/1-10V/DMX/DALI via. External power supply options (DMX for RGB SEN only)

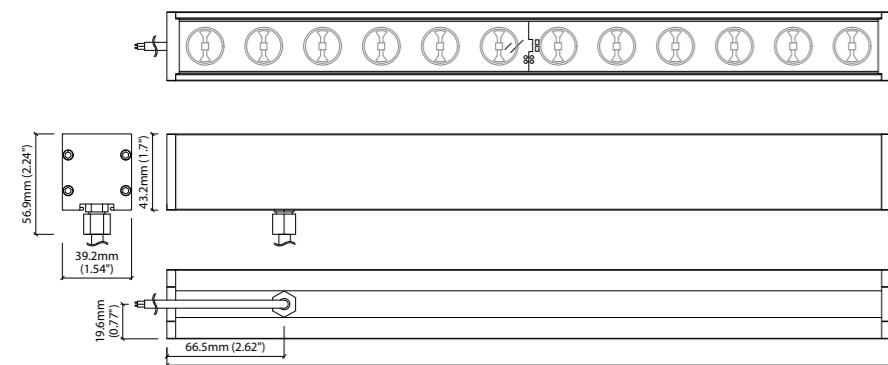


— C0/C180 C90/C270 700mA
 — C0/C180 C90/C270 350mA

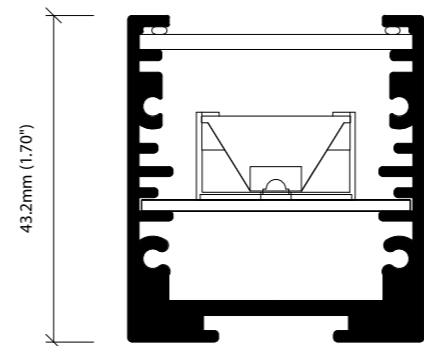
SEN 033 - 350mA B 2049
 SEN 033 - 700mA A 3220
 SEN 050 - 350mA B 1392
 SEN 050 - 700mA A 2281
 SEN 100 - 350mA B 658
 SEN 100 - 700mA A 1091

LED Options

	Constant Current		High Power RGB	
CRI (R_a)	R _a 80	R _a 26	n/a	n/a
TM-30-15	R _f 95	R _g 101	n/a	n/a
Bin/Step	2 Step MacAdam ellipse (4 Step for 5000K,6500K)		17nm tolerance	
Colours	White: 2800K/3000K/3200K/ 3800K/5000K/6500K (70CRI for 5000K, 6500K) Single colours: Red/Green/Blue		Red : 618-629nm Blue : 455-465nm Green : 518-535nm	



SEN 033 210 - 1210mm (8.27 - 24.02", Max 610mm/24.02" for UL)
 SEN 050 210 - 1810mm (8.27 - 71.26", Max 1010mm/39.76" for UL)
 SEN 100 210 - 1810mm (8.27 - 71.26", Max 1810mm/71.26" for UL)
 SEN RGB 047 480 - 1890mm (18.90 - 74.41")
 SEN RGB 094 480 - 1890mm (18.90 - 74.41")



39.2mm (1.54")

1:1

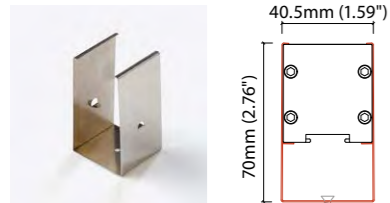
Product Data

	White			RGB	
	SEN 033	SEN 050	SEN 100	SEN 047 RGB	SEN 094 RGB
Clear Cover 10°	2168 lm/m, 67.7 lm/W @ 3200K, 350mA 3556 lm/m, 51.3 lm/W @ 3200K, 700mA	1508 lm/m, 70 lm/W @ 3200K, 350mA 2449 lm/m, 53 lm/W @ 3200K, 700mA	719 lm/m, 67.4 lm/W @ 3200K, 350mA 1190 lm/m, 51.5 lm/W @ 3200K, 700mA	Red: 187 lm/m Green: 774 lm/m Blue: 43 lm/m White: 946 lm/m	Red: 125 lm/m Green: 374 lm/m Blue: 16 lm/m White: 502 lm/m
Clear Cover 20°	2234 lm/m, 69.8 lm/W @ 3200K, 350mA 3664 lm/m, 52.9 lm/W @ 3200K, 700mA	1554 lm/m, 72.2 lm/W @ 3200K, 350mA 2523 lm/m, 54.6 lm/W @ 3200K, 700mA	741 lm/m, 69.5 lm/W @ 3200K, 350mA 1226 lm/m, 53.1 lm/W @ 3200K, 700mA	Red: 193 lm/m Green: 797 lm/m Blue: 44 lm/m White: 975 lm/m	Red: 129 lm/m Green: 385 lm/m Blue: 16 lm/m White: 518 lm/m
Clear Cover 30°	2037 lm/m, 63.6 lm/W @ 3200K 350mA 3340 lm/m, 48.2 lm/W @ 3200K 700mA	1417 lm/m, 65.8 lm/W @ 3200K 350mA 2301 lm/m, 49.8 lm/W @ 3200K 700mA	676 lm/m, 63.3 lm/W @ 3200K 350mA 1118 lm/m, 48.4 lm/W @ 3200K 700mA	Red: 176 lm/m Green: 727 lm/m Blue: 40 lm/m White: 889 lm/m	Red: 117.5 lm/m Green: 351 lm/m Blue: 15 lm/m White: 472 lm/m
Clear Cover 60°	2312 lm/m, 72.2 lm/W @ 3200K 350mA 3791 lm/m, 54.7 lm/W @ 3200K 700mA	1608 lm/m, 74.7 lm/W @ 3200K 350mA 2611 lm/m, 56.5 lm/W @ 3200K 700mA	767 lm/m, 71.8 lm/W @ 3200K 350mA 1269 lm/m, 54.9 lm/W @ 3200K 700mA	N/A	N/A
Clear Cover Spread Lens	2168 lm/m, 67.7 lm/W @ 3200K, 350mA 3556 lm/m, 51.3 lm/W @ 3200K, 700mA	1508 lm/m, 70 lm/W @ 3200K 350mA 2449 lm/m, 53 lm/W @ 3200K 700mA	719 lm/m, 67.4 lm/W @ 3200K 350mA 1190 lm/m, 51.5 lm/W @ 3200K 700mA	Red: 187 lm/m Green: 774 lm/m Blue: 43 lm/m White: 946 lm/m	Red: 125 lm/m Green: 374 lm/m Blue: 16 lm/m White: 502 lm/m
Clear Cover No Lens	1807 lm/m, 56.4 lm/W @ 3200K, 350mA 2963 lm/m, 42.8 lm/W @ 3200K, 700mA	1257 lm/m, 58.4 lm/W @ 3200K 350mA 2041 lm/m, 44.2 lm/W @ 3200K 700mA	599 lm/m, 56.5 lm/W @ 3200K 350mA 992 lm/m, 42.9 lm/W @ 3200K 700mA	Red: 156 lm/m Green: 645 lm/m Blue: 35 lm/m White: 789 lm/m	Red: 104 lm/m Green: 311 lm/m Blue: 13 lm/m White: 419 lm/m
+ Micro Louvre	-60% Output when combined with the above options		-60% Output when combined with the above options	-60% Output when combined with the above options	-60% Output when combined with the above options
Wattage	TYP. 32.025 W/m @ 350mA TYP. 69.3 W/m @ 700mA	TYP. 21.53 W/m @ 350mA TYP. 46.2 W/m @ 700mA	TYP. 10.675 W/m @ 350mA TYP. 23.1 W/m @ 700mA	32.68 W/m	16.34 W/m
Voltage	TYP. 91.5V/m @ 350mA TYP. 99.0V/m @ 700mA	TYP. 61V/m @ 350mA TYP. 66V/m @ 700mA	TYP. 30.5V/m @ 350mA TYP. 33V/m @ 700mA	24V	24V
Dimension	H43.2/W39.2/ L210-1210mm (610mm max for UL)	H43.2/W39.2/ L210-1810mm (1010mm max for UL)	H43.2/W39.2/ L210-1810mm (1810mm max for UL)	H43.2/W39.2/ L480-1890mm	H43.2/W39.2/ L480-1890mm
PCB Increment	100mm	100mm	100mm	470mm	470mm
LED Pitch	33mm - 30 LED/m	50mm - 20 LED/m	100mm - 10 LED/m	47mm - 21 LED/m	94mm - 10 LED/m
Operation Temp	350mA T _a = -25°C to 70°C (T _c max = 85°C) 700mA T _a = -25°C to 30°C (T _c max = 47°C)	350mA T _a = -25°C to 75°C (T _c max = 87°C) 700mA T _a = -25°C to 30°C (T _c max = 54°C)	350mA T _a = -25°C to 75°C (T _c max = 82°C) 700mA T _a = -25°C to 55°C (T _c max = 71°C)	T _a = -20 to 40°C (T _c max = 60°C)	T _a = -20 to 40°C (T _c max = 55°C)

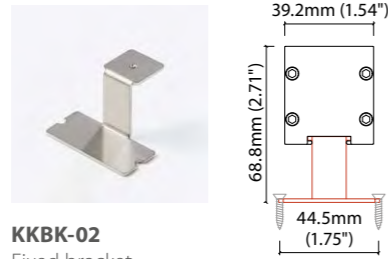


Accessories

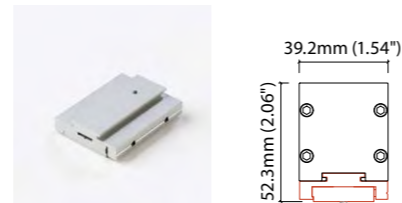
Mounting Options



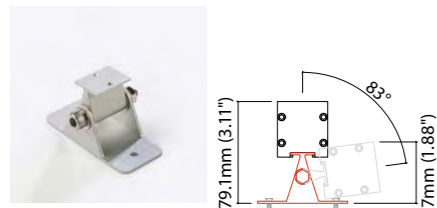
KKCP-12
Lock clip (Allow 2 per metre)
S/Steel finish



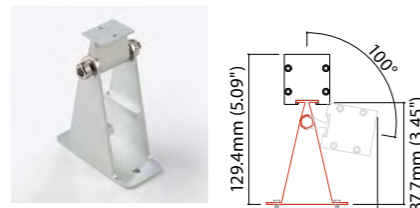
KKBK-02
Fixed bracket
(Allow 2 per metre)
Steel finish
Pre-assembled for double tail



KKBK-09
Mounting plate
(Allow 2 per metre – factory fitted)
Silver anodised aluminium finish
Pre-assembled for double tail



KKBK-16
Small adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish
Pre-assembled for double tail



KKBK-17
Large adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish
Pre-assembled for double tail

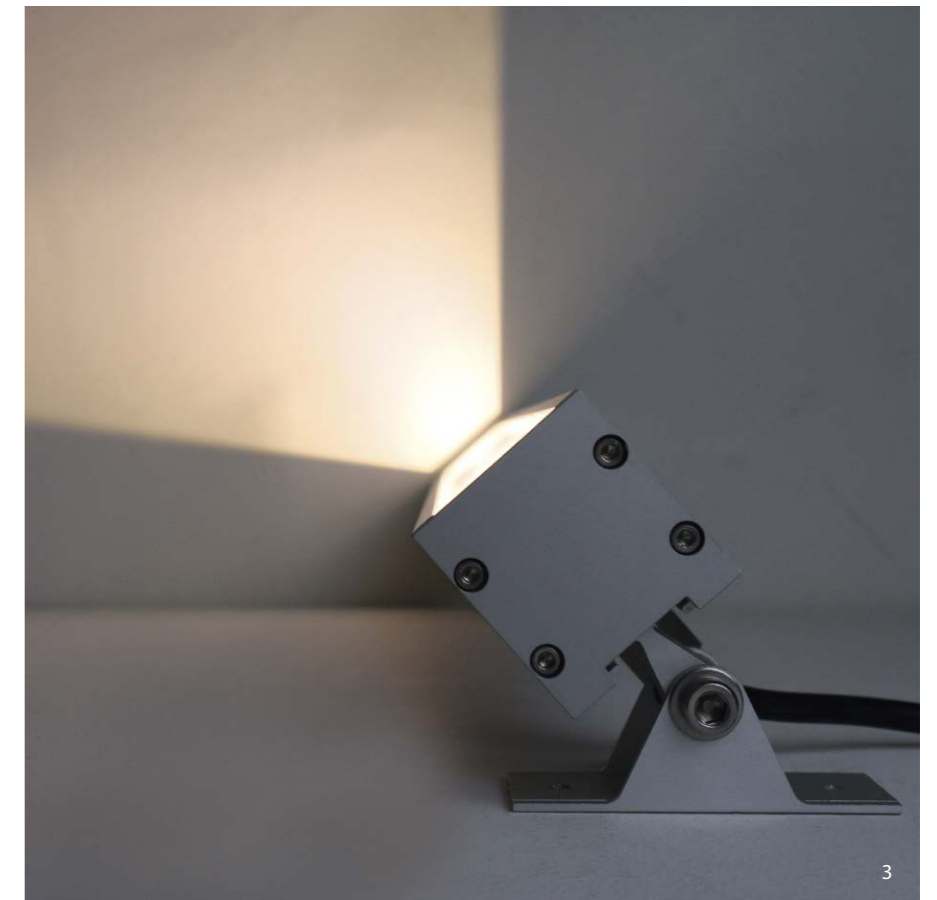
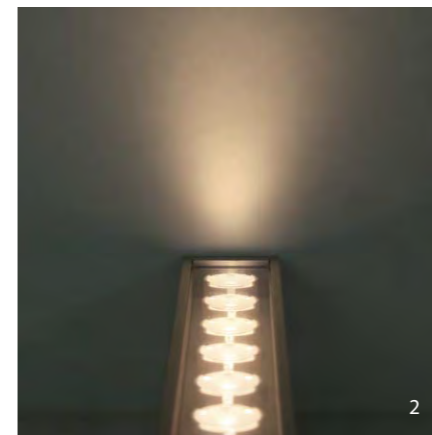
Exterior Junction boxes

KKJB-07
IP67 Slim J-Box

KKJB-07R
Potting Resin for IP67 Slim J-Box

Power & Control

Various power options available, see pages 332-335 for details and specification



1. SEN optional micro smart louvre
2. CREE high power LED with various lens options
3. SEN lighting effect with no lens
4. SEN fixed bracket
5. Small adjustable bracket and cable exit gland

SEN Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Lens	Voltage/control									
SEN, Silver anodised	Clear cover	B	h033	2800K	28K	SEN 033	M	210-1210mm 100mm increments	IP54	54	1000mm Single tail	d1	No lens	x	Constant current DC (White only)	a	
				3000K									30K				SEN 050	M	210-1810mm 100mm increments	IP67^{1}	67	1000mm Double tail	d2	10°	a	DMX, 24V DC (RGB only)	2g
	3200K	32K	SEN 100	M	210-1810mm 100mm increments	IP67 ¹	67	1000mm Double tail	d2	20°	b						
	3800K	38K								SEN 047 RGB	M	480/715/950/1185/ 1420/1655/1890mm	IP67 ¹	67	1000mm Double tail	d2	30°	c
	5000K	50K	SEN 094 RGB	M	480/950/ 1420/1890mm	IP67 ¹	67	1000mm Double tail	d2								35° (RGB only)	g
	6500K	65K								SEN 094 RGB	M	480/950/ 1420/1890mm	IP67 ¹	67	1000mm Double tail	d2	60°	d
	RED	RED	SEN 094 RGB	M	480/950/ 1420/1890mm	IP67 ¹	67	1000mm Double tail	d2								Spread Lens	e
	GREEN	GRN															
				BLUE	BLU												
				RGB	RGB												

¹ Due to the clear, flush potted polyurethane top layer on IP67 SEN a colour shift of +/-20K should be expected

Code Example:

SNSA	-	B	-	h033	-	32K	-	M	1210	-	54	-	d2	-	c	-	a
SEN, Silver anodised		Clear cover		h-line 033		3200K		1210mm			IP54		1000mm Double tail		30°		Constant current DC (White only)





SEN CV

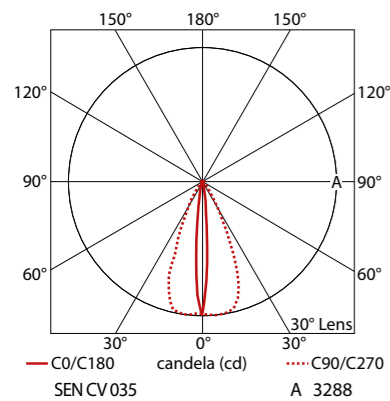
- ▶ Constant Voltage SEN CV for easy 24V DC connectivity and suitable for exterior building facades.
- ▶ Range of power outputs available depending on LED pitch.
- ▶ Various lengths, lens options and mounting accessories available.
- ▶ Consistent LED pitch array when positioned end-to-end for continuous runs.



NEW



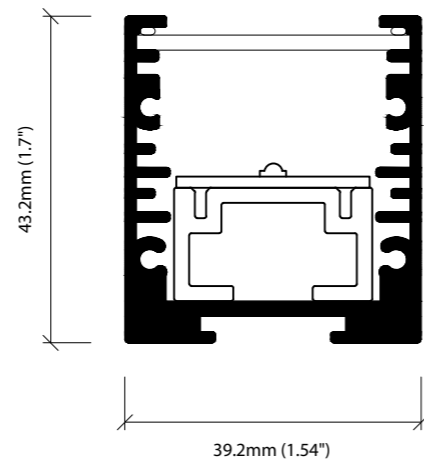
10° lens, 3000K	3567 lm/m 53.1 lm/W
20° lens, 3000K	3542 lm/m 52.7 lm/W
30° lens, 3000K	3239 lm/m 48.2 lm/W
Spread lens, 3000K	3468 lm/m 51.6 lm/W
No lens, 3000K	2863 lm/m 42.6 lm/W
Wattage	67.2 W/m
Dimension	H43.2/W39.2/L250-2000mm (1250mm max for UL)
PCB Increment	250mm
LED pitch	35mm – 28 LED/m
Lifetime	50,000 hours @ 25°C
Operation Temp	= T _a -25°C ~ 50°C (T _c max : 90°C)
Beam Angle	No lens: 75° 10° lens: 15° 20° lens: 23° 30° lens: 25° Spread lens: 15 x 45°
IP Rating	IP54/IP67
Finish	Silver Anodised
Cover/Lens	Clear Cover/No lens/10° lens/ 20° lens/30° lens/Spread lens
Mounting	Surface mounting via clips or brackets
Connection	Sheathed hardwire tails or male/female connectors
Control	0-10V/1-10V/DMX/DALI (see visDIM range)



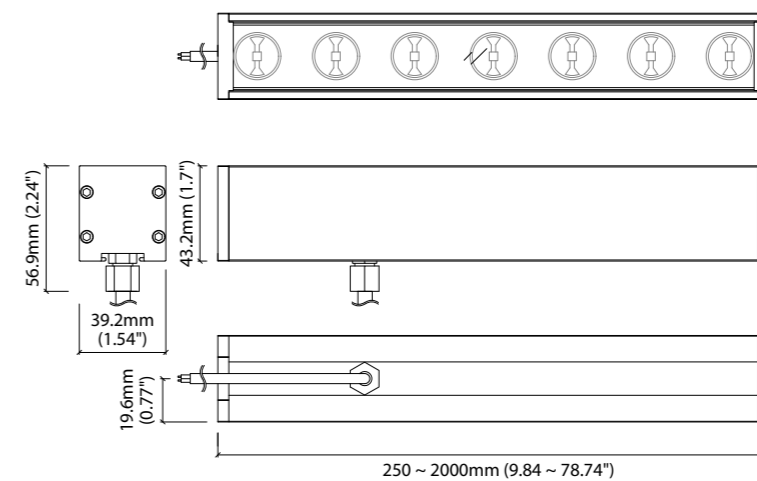
LED Options



CRI	R _g 80 (90@3000K) R _g 16 (76@3000K)
TM-30-15	R _f 83 (91@3000K) R _f 95 (102@3000K)
Bin/Step	3 Step MacAdam ellipse (4 Step for 5000K)
Colours	White: 2700K/3000K/3500K/ 4000K/5000K (90CRI for 2700K/3000K)








1:1



Accessories

Mounting Options

 <p>KKCP-12 Lock clip (Allow 2 per metre) S/Steel finish</p>	 <p>KKBK-02 Fixed bracket (Allow 2 per metre) Steel finish Pre-assembled for double tail</p>	 <p>KKBK-09 Mounting plate (Allow 2 per metre) Silver anodised aluminium finish Pre-assembled for double tail</p>
 <p>KKBK-16 Small adjustable bracket (Allow 2 per metre) Silver anodised aluminium finish Pre-assembled for double tail</p>	 <p>KKBK-17 Large adjustable bracket (Allow 2 per metre) Silver anodised aluminium finish Pre-assembled for double tail</p>	

Exterior Junction boxes

- KKJB-07**
IP67 Slim J-Box
- KKJB-07R**
Potting Resin for IP67 Slim J-Box

Power & Control

Various power options available, see pages 332-335 for details and specification



1. SEN CV 035 Lumileds LED array
2. Robust housing with machined aluminium screw-fit end caps
3. SEN Lock clip
4. Surface mounting plate
5. Small adjustable angle bracket



AUT WG Precinct, Auckland
Lighting Design: Lightworks
Architect: Jasmac
Photography: Ewen Cafe
KKDC New Zealand

SEN CV 035 Code Table

Housing/ Finish	Cover/Lens	LED Type	Colour (CCT)		Length Availability	IP Rating		Connection Type	Mounting/ Finishing	Lens		Voltage				
			h	h035		2700K	27K			IP54	54	d	4	No lens	x	24V	g
SEN CV, Silver anodised	Clear cover	h 035 h035	2700K	27K	M 250-2000mm 250mm increments	IP54	54	1000mm Single tail	d1	4	Profile Cable Exit	No lens	x	24V	g	
			3000K	30K				1000mm Double tail	d2							10°	a
	3500K		35K	1000mm Single IP54 connector				d5	20°							b
	4000K		40K	1000mm Double IP54 connector				d6	30°							c
	5000K		50K	1000mm Single IP67 connector				d7	Spread Lens							e
Micro Louvre	K				IP67 ¹	67	1000mm Double IP67 connector	d8								

¹ Due to the clear, flush potted polyurethane top layer on IP67 SEN CV 035 a colour shift of +/-20K should be expected

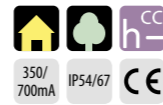
Code Example:

SNSA	-	B	-	h035	-	30K	-	M 1250	-	54	-	d2	-	4	-	c	-	g
SEN CV, Silver anodised		Clear cover		h-line 035		3000K		1250mm		IP54		1000mm Double tail		Profile Cable Exit		30°		24V DC

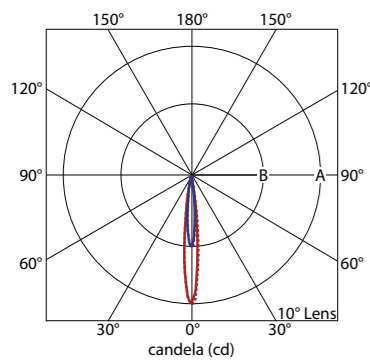
SEN Louvre

- ▶ SEN Louvre with increased height housing to accommodate black 'dark-light' louvre baffles.
- ▶ Effective glare control for improved visual comfort and high output LED source.
- ▶ Various mounting options available, suitable for exterior facade lighting applications.
- ▶ Choice of LED pitch options available depending on lumen output requirements, and many product lengths to choose from.





Beam Angle	10°/20°/30°
IP Rating	IP54/67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Clear
Mounting	Surface mounting via brackets
Connection	Sheathed hardwire tail
Control	0-10V/1-10V/DMX/DALI via. External power supply options (DMX for RGB SEN only)



— C0/C180	..... C90/C270	700mA
— C0/C180	..... C90/C270	350mA
SEN Louvre 033 - 350mA	B	12956
SEN Louvre 033 - 700mA	A	20303
SEN Louvre 050 - 350mA	B	8753
SEN Louvre 050 - 700mA	A	13949
SEN Louvre 100 - 350mA	B	4253
SEN Louvre 100 - 350mA	A	7033

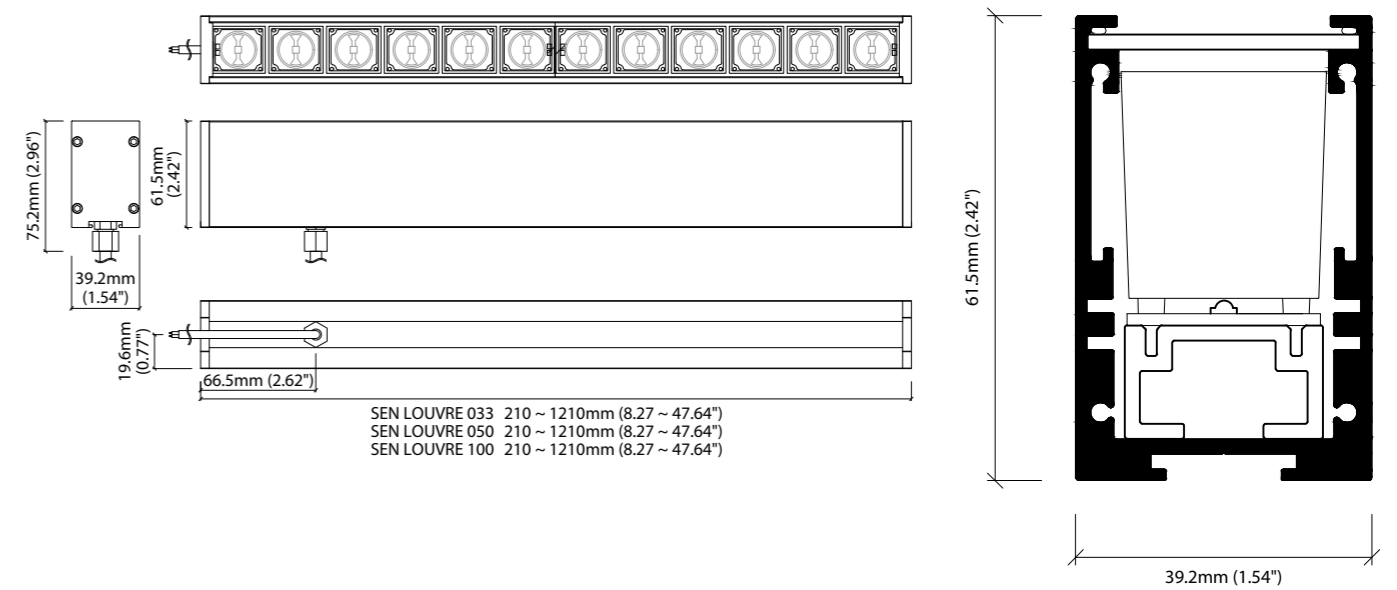
LED Options



CRI (R_g)	R _g 80	R _g 26
TM-30-15	R _f 95	R _g 101
Bin/Step	2 Step MacAdam ellipse (4 Step for 5000K,6500K)	
Colours	White: 2800K/3000K/3200K/ 3800K/5000K/6500K (70CRI for 5000K, 6500K) Single colours: Red/Green/Blue	

Product Data

	White		
	SEN Louvre 033	SEN Louvre 050	SEN Louvre 100
Clear Cover 10°	1958 lm/m, 61.1 lm/W @ 3200K, 350mA 3070 lm/m, 44.3 lm/W @ 3200K, 700mA	1323 lm/m, 61.4 lm/W @ 3200K, 350mA 2107 lm/m, 45.6 lm/W @ 3200K, 700mA	643 lm/m, 60.2 lm/W @ 3200K, 350mA 1063 lm/m, 46 lm/W @ 3200K, 700mA
Clear Cover 20°	1849 lm/m, 57.7 lm/W @ 3200K, 350mA 2901 lm/m, 41.9 lm/W @ 3200K, 700mA	1249 lm/m, 58 lm/W @ 3200K, 350mA 1991 lm/m, 43.1 lm/W @ 3200K, 700mA	607 lm/m, 56.9 lm/W @ 3200K, 350mA 1004 lm/m, 43.5 lm/W @ 3200K, 700mA
Clear Cover 30°	1464 lm/m, 45.7 lm/W @ 3200K, 350mA 2297 lm/m, 33.1 lm/W @ 3200K, 700mA	989 lm/m, 45.9 lm/W @ 3200K 350mA 1576 lm/m, 34.1 lm/W @ 3200K 700mA	481 lm/m, 45 lm/W @ 3200K 350mA 795 lm/m, 34.4 lm/W @ 3200K 700mA
Wattage	32.025 W/m @ 350mA 69.3 W/m @ 700mA	21.53 W/m @ 350mA 46.2 W/m @ 700mA	10.675 W/m @ 350mA 23.1 W/m @ 700mA
Voltage	91.5V/m @ 350mA 99.0V/m @ 700mA	61V/m @ 350mA 66V/m @ 700mA	30.5V/m @ 350mA 33V/m @ 700mA
Dimension	H61.5/W39.2/L210-1210mm (610mm max for UL)	H61.5/W39.2/L210-1810mm (1010mm max for UL)	H61.5/W39.2/L210-1810mm (1810mm max for UL)
PCB Increment	100mm	100mm	100mm
LED Pitch	33mm - 30 LED/m	50mm - 20 LED/m	100mm - 10 LED/m
Operation Temp	350mA T _a = -25°C to 75°C (T _c max = 87.6°C) 700mA T _a = -25°C to 45°C (T _c max = 67.5°C)	350mA T _a = -25°C to 75°C (T _c max = 83.9°C) 700mA T _a = -25°C to 50°C (T _c max = 65.7°C)	350mA T _a = -25°C to 80°C (T _c max = 84.8°C) 700mA T _a = -25°C to 60°C (T _c max = 69.1°C)



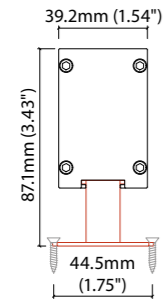
1:1

Accessories

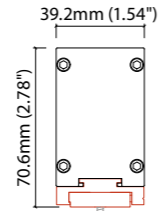
Mounting Options



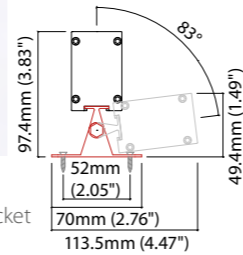
KKBK-02
Fixed bracket
(Allow 2 per metre)
Steel finish



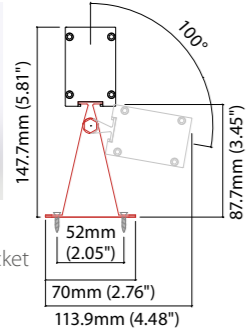
KKBK-09
Mounting plate
(Allow 2 per metre)
Silver anodised aluminium finish



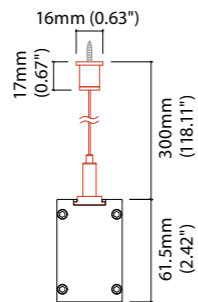
KKBK-16
Small adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish



KKBK-17
Large adjustable bracket
(Allow 2 per metre)
Silver anodised aluminium finish



KKSU-05
Quick release suspension wire kit

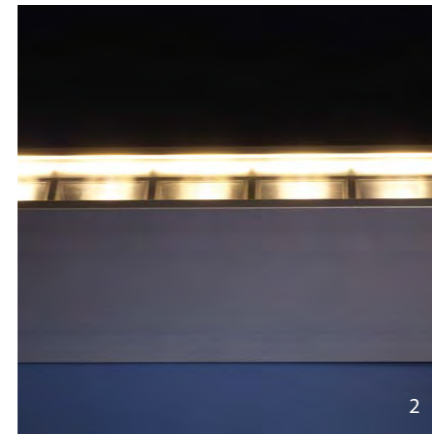
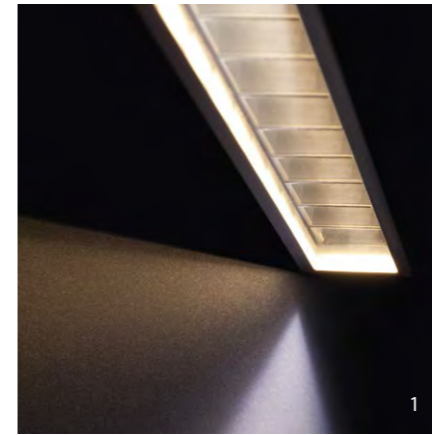


Exterior Junction boxes

KKJB-07
IP67 Slim J-Box

KKJB-07R
Potting Resin for IP67 Slim J-Box

See pages 332-335 for more details



1. SEN Louvre downlighting application
2. SEN Louvre illuminated
3. Suspended installation
4. SEN Louvre detail
5. SEN Louvre cable exit detail
6. Robust screw-fit anodised aluminium end cap

SEN Louvre Code Table

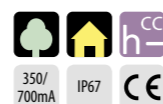
Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Mounting/Finishing	Lens	Voltage/Control												
SEN Louvre, Silver anodised	Clear cover	h33	033	h133	2800K	28K	SEN Louvre 033	M	210-1210mm 100mm increments	IP54	54	1000mm Single tail	d1	Profile Cable Exit	4	No lens	x	Constant current DC	a		
			050	h150	3000K	30K	SEN Louvre 050	M	210-1810mm 100mm increments	IP67 ¹	67	1000mm Double tail	d2	End cap Cable Exit	5	10°	a				
			100	h110	3200K	32K	SEN Louvre 100	M	210-1810mm 100mm increments							20°	b				
					3800K	38K										30°	c				
					5000K	50K															
					6500K	65K															
					RED	RED															
					GREEN	GRN															
					BLUE	BLU															

¹ Due to the clear, flush potted polyurethane top layer on IP67 SEN Louvre a colour shift of +/-20K should be expected

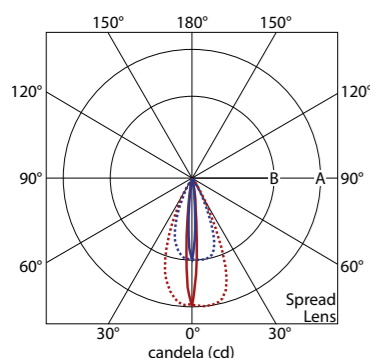
Code Example:

SVSA	-	B	-	h133	-	32K	-	M	1210	-	54	-	d2	-	4	-	c	-	a
SEN Louvre, Silver anodised		Clear cover		h-line 033		3200K		1210mm		IP54		1000mm Double tail		Profile Cable Exit		30°			Constant Current DC



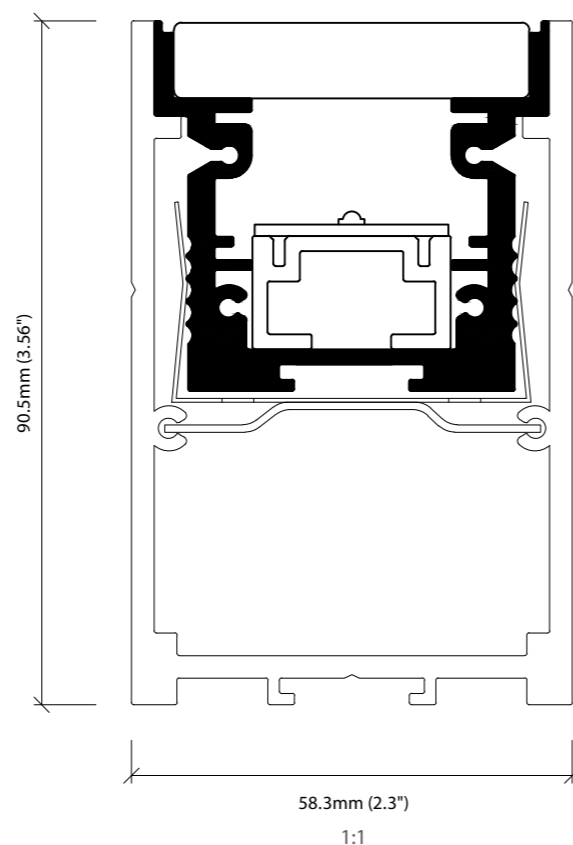


Beam Angle	10°/20°/30°/60°/Spread lens (10°x45°)/ No lens
IP Rating	IP67
Lifetime	50,000 hours @ 25°C
Finish	Silver Anodised
Cover/Lens	Clear Glass, Frosted Glass, Micro Louvre + Clear Glass
Mounting	Ground Recessed Mounting
Connection	Sheathed hardwire tail
Control	0-10V/1-10V/DMX/DALI via. External power supply options
IK Rating	IEC 62262:2010/IK08/IK10



— C0/C180	..... C90/C270	700mA
— C0/C180	..... C90/C270	350mA
SEN-F 033 - 350mA	B	4335
SEN-F 033 - 700mA	A	4983
SEN-F 050 - 350mA	B	2826
SEN-F 050 - 700mA	A	4517
SEN-F 100 - 350mA	B	1512
SEN-F 100 - 350mA	A	2339

- Drive Over**
- EN 60598-2-13:2006+A1:2012
- 3 ton Static
 - 1 ton Torque and Shear
- Walk Over**
- IEC 62262:2010
- IK08 tested



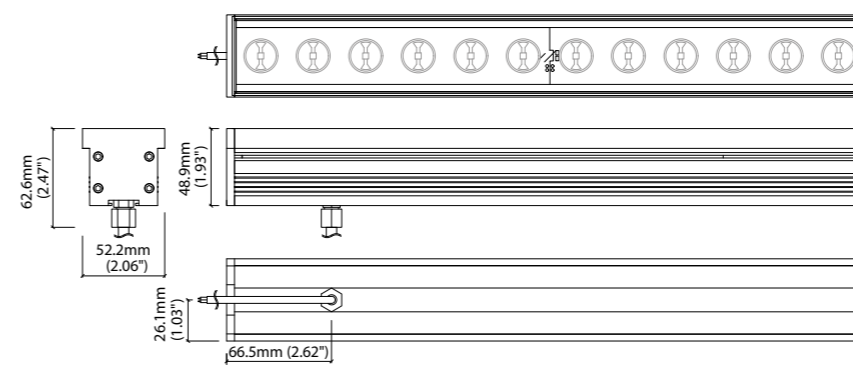
LED Options



CRI (R_g)	R _g 80	R _g 26
TM-30-15	R _f 95	R _g 101
Bin/Step	2 Step MacAdam ellipse (4 Step for 5000K,6500K)	
Colours	White: 2800K/3000K/3200K/ 3800K/5000K/6500K (70CRI for 5000K, 6500K) Single colours: Red/Green/Blue	

Product Data

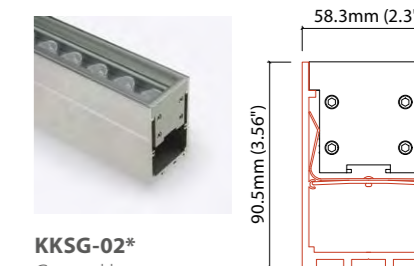
	White		
	SEN-F 033	SEN-F 050	SEN-F 100
Clear Cover 10°	2136 lm/m, 66.7 lm/W @ 3200K, 350mA 3465 lm/m, 50 lm/W @ 3200K, 700mA	1479 lm/m, 68.7 lm/W @ 3200K, 350mA 2430 lm/m, 52.6 lm/W @ 3200K, 700mA	731 lm/m, 68.5 lm/W @ 3200K, 350mA 1229 lm/m, 53.2 lm/W @ 3200K, 700mA
Clear Cover 20°	2146 lm/m, 67 lm/W @ 3200K, 350mA 3479 lm/m, 50.2 lm/W @ 3200K, 700mA	1483 lm/m, 68.9 lm/W @ 3200K, 350mA 2439 lm/m, 52.8 lm/W @ 3200K, 700mA	733 lm/m, 68.7 lm/W @ 3200K, 350mA 1236 lm/m, 53.5 lm/W @ 3200K, 700mA
Clear Cover 30°	2008 lm/m, 62.7 lm/W @ 3200K, 350mA 3264 lm/m, 47.1 lm/W @ 3200K, 700mA	1391 lm/m, 64.6 lm/W @ 3200K 350mA 2287 lm/m, 49.5 lm/W @ 3200K 700mA	687 lm/m, 64.4 lm/W @ 3200K 350mA 1157 lm/m, 50.1 lm/W @ 3200K 700mA
Clear Cover 60°	2235 lm/m, 69.8 lm/W @ 3200K, 350mA 3624 lm/m, 52.3 lm/W @ 3200K, 700mA	1546 lm/m, 71.8 lm/W @ 3200K, 350mA 2541 lm/m, 55 lm/W @ 3200K, 700mA	764 lm/m, 71.6 lm/W @ 3200K, 350mA 1287 lm/m, 55.7 lm/W @ 3200K, 700mA
Spread Lens	2050 lm/m, 64 lm/W @ 3200K, 350mA 3326 lm/m, 48 lm/W @ 3200K, 700mA	1419 lm/m, 65.9 lm/W @ 3200K, 350mA 2333 lm/m, 50.5 lm/W @ 3200K, 700mA	701 lm/m, 65.7 lm/W @ 3200K, 350mA 1180 lm/m, 51.1 lm/W @ 3200K, 700mA
Clear Cover No Lens	1726 lm/m, 53.9 lm/W @ 3200K, 350mA 2800 lm/m, 40.4 lm/W @ 3200K, 700mA	1195 lm/m, 55.5 lm/W @ 3200K, 350mA 1968 lm/m, 42.6 lm/W @ 3200K, 700mA	591 lm/m, 55.4 lm/W @ 3200K, 350mA 996 lm/m, 43.1 lm/W @ 3200K, 700mA
Wattage	32.025 W/m @ 350mA 69.3 W/m @ 700mA	21.53 W/m @ 350mA 46.2 W/m @ 700mA	10.675 W/m @ 350mA 23.1 W/m @ 700mA
Voltage	91.5V/m @ 350mA 99.0V/m @ 700mA	61V/m @ 350mA 66V/m @ 700mA	30.5V/m @ 350mA 33V/m @ 700mA
Dimension	H48.9/W52.2/L210-1010mm	H48.9/W52.2/L210-1010mm	H48.9/W52.2/L210-1010mm
PCB Increment	200mm	200mm	200mm
LED Pitch	33mm - 30 LED/m	50mm - 20 LED/m	100mm - 10 LED/m
Operation Temp	350mA T _a = -25°C to 70°C (T _c max = 76°C) 700mA T _a = -25°C to 40°C (T _c max = 57°C)	350mA T _a = -25°C to 75°C (T _c max = 83°C) 700mA T _a = -25°C to 50°C (T _c max = 70°C)	350mA T _a = -25°C to 75°C (T _c max = 80°C) 700mA T _a = -25°C to 55°C (T _c max = 67°C)



SEN-F 033 210 ~ 1010mm (8.27 ~ 39.76")
SEN-F 050 210 ~ 1010mm (8.27 ~ 39.76")
SEN-F 100 210 ~ 1010mm (8.27 ~ 39.76")

Accessories

Mounting Options



KKSG-02*
Ground box
Anodised aluminium finish
* Specify length to match SEN-F

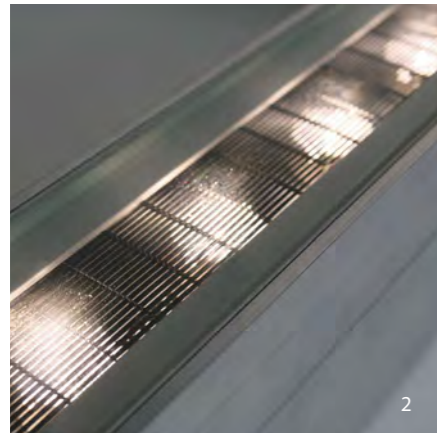
Exterior Junction boxes

- KKJB-07**
IP67 Slim J-Box
- KKJB-07R**
Potting Resin for IP67 Slim J-Box

See pages 332-335 for more details



1



2



3

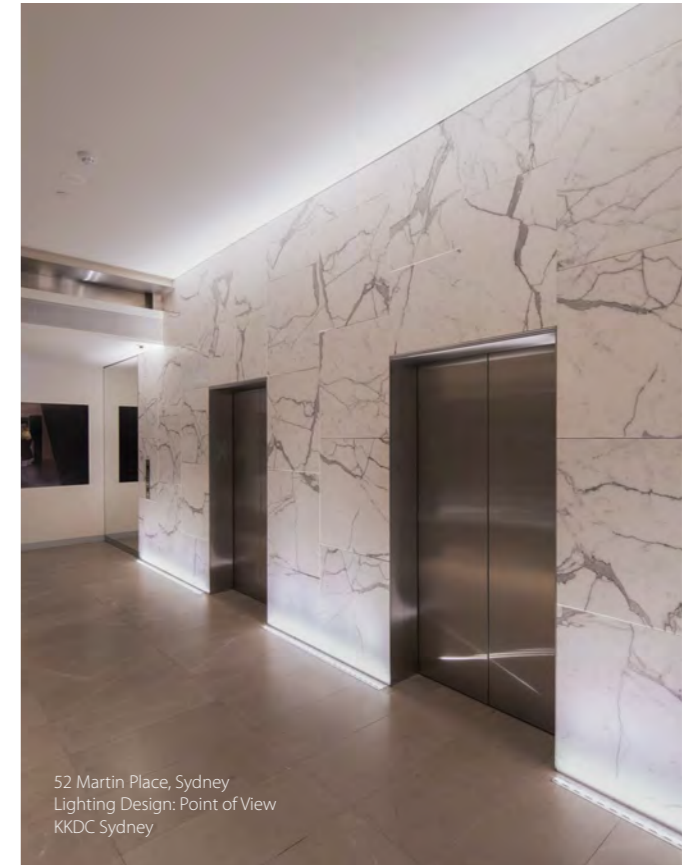


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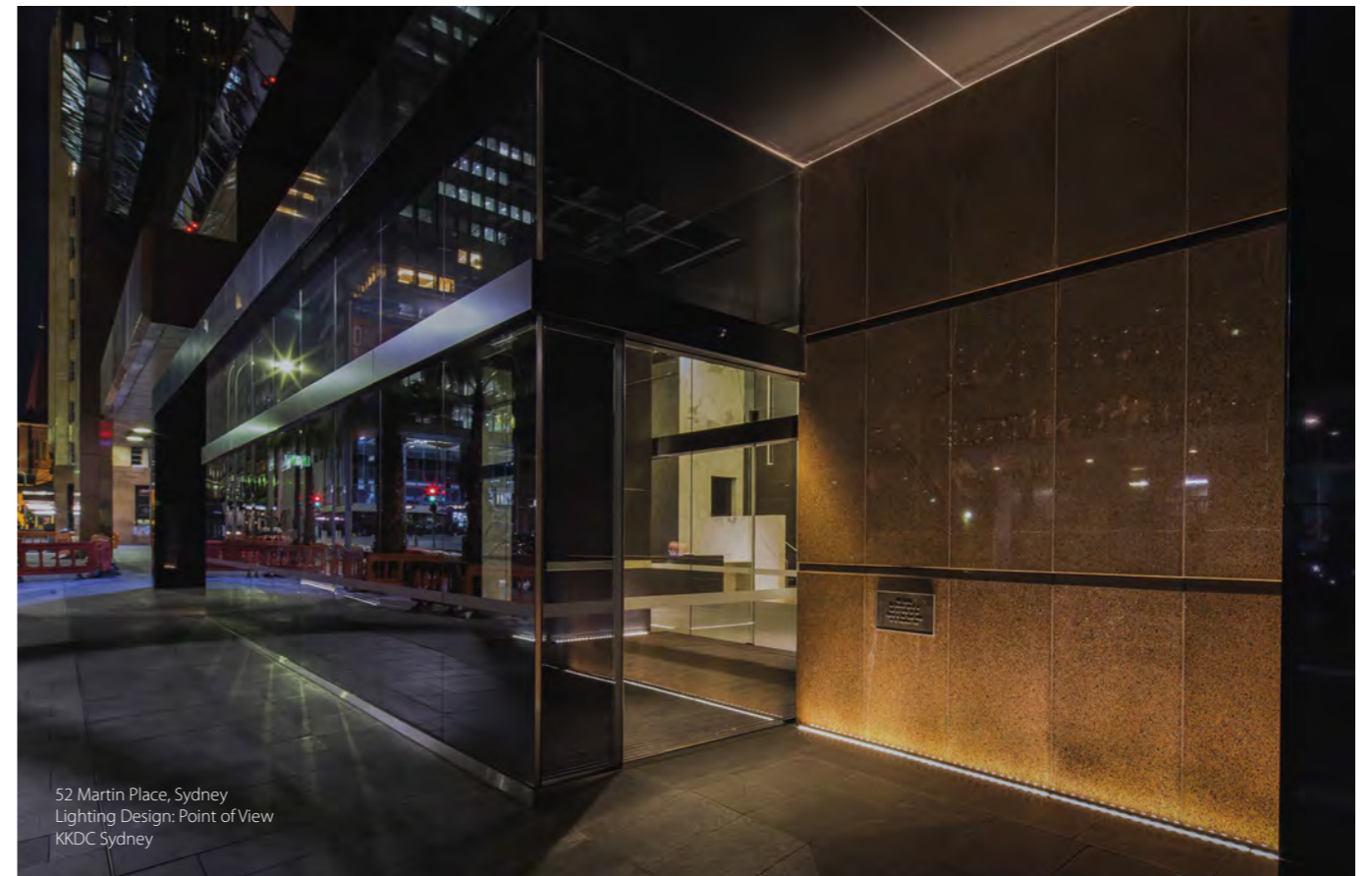


5

- 1. SEN-F inside aluminium ground box rail
- 2. 45° Micro Louvre Baffle
- 3. SEN-F end view
- 4. Installation removable ground box shield
- 5. Cable exit hole



52 Martin Place, Sydney
Lighting Design: Point of View
KKDC Sydney



52 Martin Place, Sydney
Lighting Design: Point of View
KKDC Sydney



SEN-F Code Table

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	Length Availability	IP Rating	Connection Type	Lens	Voltage/Control	
SEN-F, Silver anodised	Clear Glass	E	h033	2800K 28K	M 210-810mm 100mm increments	1000mm Single tail	No Lens	Constant current DC	
			h050	3000K 30K			10°		
	Micro Louvre	K	h050	3000K 30K			1000mm Double tail	10°	
			h100	3200K 32K				20°	
	Frosted Glass	M	h100	3200K 32K				30°	
				3800K 38K				60°	
				5000K 50K				Spread Lens	
				6500K 65K					
				RED					
				GREEN					
		BLUE							

Code Example:

SFSA - K - h050 - 30K - M 610 - 67 - d2 - c - a
 SEN-F, Silver anodised Micro Louvre h-line 050 3000K 610mm IP67 1000mm Double tail 30° Constant current DC

PUK

- ▶ Compact surface mounted luminaire designed for illumination beneath cabinets and shelves.
- ▶ High quality machined aluminium housing available in Silver or Black anodised.
- ▶ IP44 suitable for use within bathrooms (Zone 2).
- ▶ Clear or fully homogenous diffusion, and optional Anti-glare honeycomb louvre accessory.





Luminous Flux 136 lm
51.7 lm/W

Wattage 2.64W

Dimension H18/Ø70mm

Beam Angle 90° (Clear cover)

IP Rating IP44

Lifetime 50,000 hours @ 25°C

Operating temp T_a = -25 to 45°C (T_c max = 62°C)

Finish Silver Anodised or Black

Cover/Lens Diffused/Clear (Optional honeycomb louvre accessory)

Mounting Surface mounted via screws (supplied)

Connection Hardwire tails

Control 0-10V/1-10V/DMX/DALI (see visDIM range)

Accessories

Mounting Options



PUHC-01
5mm Honeycomb louvre (Includes clip)
Black finish

Exterior Junction Boxes

KKJB-07
IP67 Slim J-Box
(including type A,B,C bushings)

KKJB-07R
Potting Resin for IP67 Slim J-Box

Power & Control

KKPS-01
visDIM 1-10V 100W PSU, 24V (1-channel)

KKPS-02
visDIM DMX 100W PSU, 24V (3-channel)

KKPS-03
visDIM D 100W PSU, 24V (3-channel)

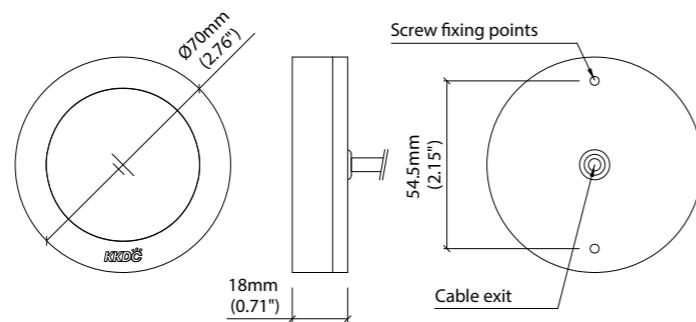
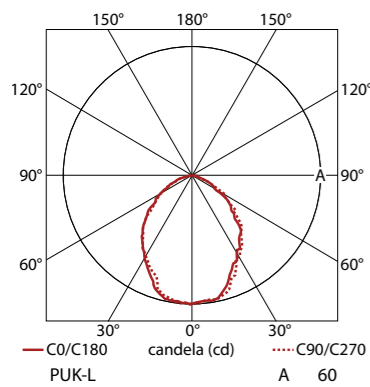
KKDM-05
visDIM 1-10V sub-controller

KKSC-03A DMX
visDIM DMX sub-controller (3-channel, screw terminal)

KKSC-03B DMX
visDIM DMX sub-controller (3-channel, RJ45)

KKDL-01
visDIM D sub-controller (3-channel)

See pages 332-335 for more details





1. PUK-L installed with diffused cover
 2. Cable exit and fixing hole positions
 3. High quality machined and anodised aluminium housing

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	IP Rating/Connection Type	Voltage
PUK-L, Silver anodised PLSA	Clear cover B	143 143	2300K 23K	IP44, 1000mm Single tail 44d1X	24V DC g
			2500K 25K		
	Diffused cover C		2700K 27K	IP44, 1000mm Single tail, Honeycomb Louvre 44d1h	
			3000K 30K		
			3500K 35K		
			4000K 40K		
		5000K 50K			

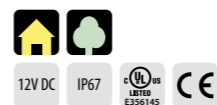
Code Example:

PLSA	-	B	-	143	-	23K	-	44d1X	-	g
PUK-L, Silver anodised		Clear cover		143		2300K		IP44, 100mm Single tail		24V DC

TAYO

- ▶ TAYO Family consists of single point source spotlight luminaires for various interior or exterior applications.
- ▶ With robust Stainless Steel housing and glass cover, TAYO Spot and TAYO Ceiling provide a high power spotlight solution for interior or exterior uplighting or downlighting applications.
- ▶ Ultra compact TAYO Micro housings for interior or exterior marker lighting.

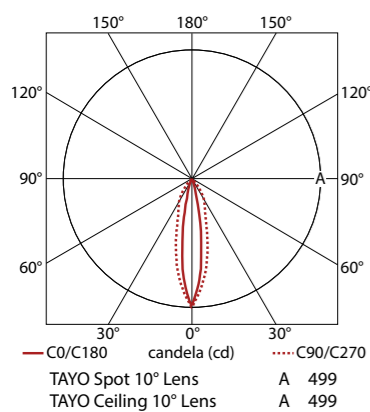




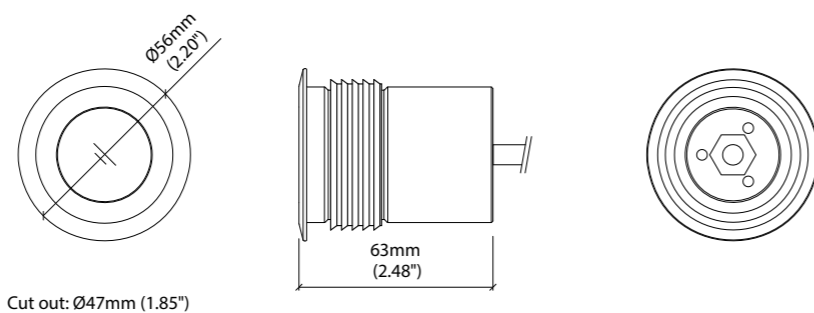
Beam Angle 10°/20°/30°/60°/Spread Lens
IP Rating IP67
Lifetime 50,000 hours @ 25°C
Finish Stainless Steel 304
Cover/Lens Clear Glass/10°/20°/30°/60°/Spread Lens
Mounting Recessed mounting
Connection Single sheathed tail
Control 0-10V/1-10V/DMX/DALI (see visDIM range)

Product Data

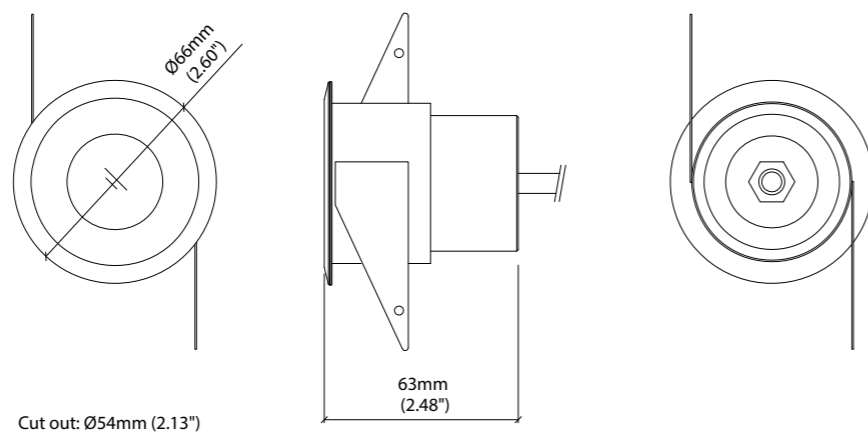
	White	
	TAYO Spot	TAYO Ceiling
Luminous Flux	49 lm	49 lm
Clear Cover	30.2 lm/W	30.2 lm/W
Wattage	1.62 W	1.62 W
Dimension	H63/Ø56mm	H63/Ø66mm
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 50°C (T _c Max = 70°C)	T _a = -25 to 50°C (T _c max = 70°C)



TAYO Spot



TAYO Ceiling



Accessories

Exterior Junction Boxes

- KKJB-07**
IP67 Slim J-Box (including type A,B,C bushings)
- KKJB-07R**
Potting Resin for IP67 Slim J-Box

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

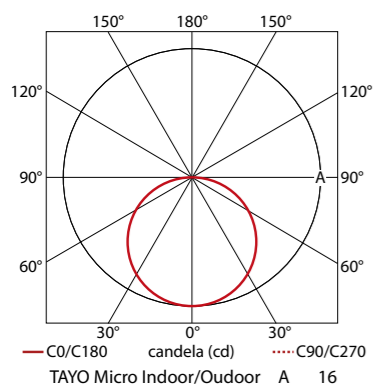
See pages 332-335 for more details



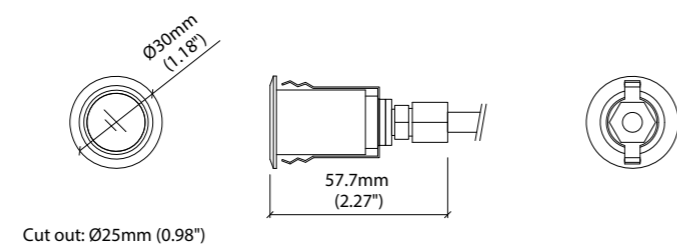
Beam Angle Diffused: 160°
IP Rating IP54/IP67
Lifetime 50,000 hours @ 25°C
Finish Silver anodised (Indoor)
 Stainless Steel 304 (Outdoor)
Cover/Lens Diffused (Indoor)
 Frosted Glass (Outdoor)
Mounting Recessed mounting
Connection Single sheathed tail
Control 0-10V/1-10V/DMX/DALI
 (see visDIM range)

Product Data

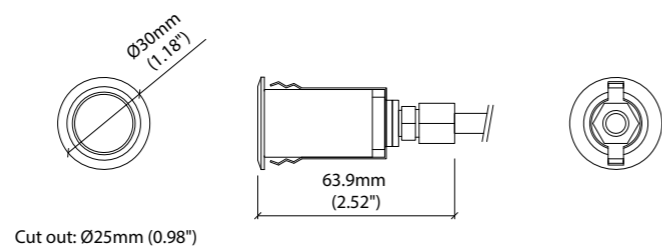
	White	
	TAYO Micro (Indoor)	TAYO Micro (Outdoor)
Luminous Flux	3.25 lm 22.6 lm/W	2.19 lm 15.2 lm/W
Wattage	0.144 W	0.144 W
Dimension	H57.7/Ø30mm	H63.9/Ø30mm
Lifetime	50,000 hours @ 25°C	50,000 hours @ 25°C
Operation Temp	T _a = -25 to 60°C (T _c Max = 65°C)	T _a = -25 to 60°C (T _c max = 65°C)
IP rating	IP54	IP67



TAYO Micro (Indoor)



TAYO Micro (Outdoor)



Accessories

Exterior Junction Boxes

- KKJB-07**
IP67 Slim J-Box
(including type A,B,C bushings)
- KKJB-07R**
Potting Resin for IP67 Slim J-Box

Power & Control

- KKPS-01**
visDIM 1-10V 100W PSU, 24V (1-channel)
- KKPS-02**
visDIM DMX 100W PSU, 24V (3-channel)
- KKPS-03**
visDIM D 100W PSU, 24V (3-channel)
- KKDM-05**
visDIM 1-10V sub-controller
- KKSC-03A DMX**
visDIM DMX sub-controller (3-channel, screw terminal)
- KKSC-03B DMX**
visDIM DMX sub-controller (3-channel, RJ45)
- KKDL-01**
visDIM D sub-controller (3-channel)

See pages 332-335 for more details



1



2



3



4



5



6

1. TAYO Spot with narrow beam optic
2. TAYO Micro
3. TAYO Spot installed in floor
4. TAYO Ceiling installed
5. TAYO Ceiling S/Steel Bezel
6. Strong spring fixing collar



Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	IP Rating/Connection Type	Lens	Voltage
TAYO Spot, Stainless Steel	TPST Clear E	h-line TAYO Spot h107	2800K 28K	IP67, 1000mm Single tail 67d1	10° a	12V DC f
TAYO Ceiling, Stainless Steel	TLST		3000K 30K		20° b	
			3200K 32K		30° c	
			3800K 38K		60° d	
			5000K 50K		Spread Lens e	
			6500K 65K			
			RED RED			
			GREEN GRN			
			BLUE BLU			

TAYO Code Example:

TLST	-	E	-	h107	-	38K	-	67d1	-	c	f
TAYO Spot, Stainless Steel		Clear		h-line TAYO Spot		3800K		IP67, 1000mm Single tail		30°	12V DC

Housing/Finish	Cover/Lens	LED Type	Colour (CCT)	IP Rating/Connection Type	Voltage
TAYO Micro Outdoor, Stainless Steel	TOST Diffused (Indoor only) C	s-line TAYO Micro s106	2700K 27K	IP67, 1000mm Single tail (Outdoor only) 67d1	12V DC f
TAYO Micro Indoor, Silver anodised	TRSA Clear glass and inner diffused (Outdoor only) Q		3000K 30K	IP54, 1000mm Single tail (Indoor only) 54d1	
			3500K 35K		
			5000K 50K		
			RED RED		
			GREEN GRN		
			BLUE BLU		

TAYO Micro Code Example:

TRSA	-	C	-	s106	-	35K	-	54d1	-	f
TAYO Micro Indoor, Silver anodised		Diffused		s-line TAYO Micro		3500K		IP54, 1000mm Single tail		12V DC

Control Gear



KKDÖ
visDIM D
Schimmel DALI/PWM dimming control gear
Schimmel DALI master controller device/console manual.
DALI Address: No. 0 - No. 63 / DALI Group: No. 0 - No. 14

Factory Delivery Channel Address Setup Table

CH1 (RED)	CH2 (GREEN)	CH3 (BLUE)
CH1=0	CH2=1	CH3=2

Max. Total Output 100W
(* MAX 3 x 5A Non UL version)

R (5A) G (5A) B (5A) +

15mm 7mm 26-12 AWG (0.5-2.5 mm²)

UL CE
IP20
SEV CONFORMS TO ANSI/UL STD. UL8750
CERTIFIED TO CSA STD. C22.2 No. 250.13

DATE: Date:
MODEL: Model:
MOC CO., Ltd. EA74410

visDIM



Dimension	H34/W64/L164mm (H1.34/W2.52/L6.46in)
Weight	160g (0.35lbs)
Operating Temp	T _a = -10 to 60°C (T _c max = 80°C) T _a = 14 to 140°F (T _c max = 176°F)
Storage Temp	T _a = -20 to 70°C T _a = -4 to 158°F
IP Rating	IP20
Finish	Plastic cover (black)
Mounting	Surface mount via screws
Input Voltage	9-24V DC
Output Voltage	as Input Voltage
PWM Frequency	3.3KHz
EMC Emission	EN 55015, EN 61547
EMC Immunity	EN 61000-4-2, 3, 4, 6
UL Safety	UL8750
CSA Safety	CSA C22.2 No. 250.13

KKDC designed, control units – for superior dimming and control of KKDC LED products.

- ▶ High Frequency dimming in accordance with 'IEEE 1789:2015, Recommended Practice 2 – No Effect Limits'.
- ▶ visDIM range high frequency minimises flicker and stroboscopic effects for comfortable dimming and interference-free video monitoring or recording.
- ▶ Dim to warm single input functions and Dynamic white control options, with 1-10V systems.
- ▶ Smooth, stable dimming across the output range with very good resolution and subtle pop-on/pop-off at low levels.
- ▶ High quality components and circuit design preserves both control and output quality over longer wiring distances, maximising the colour stability and lifetime of LED products.
- ▶ High load capacity sub-controllers (5A per channel) for reduced numbers and lower costs in larger projects.

	visDIM 1-10V Sub-controller	visDIM D Sub-controller	visDIM DMX Sub-controller	visDIM DMX 4 Channel Sub-controller
Order Code	KKDM-05 KKDM-05U (UL version)	KKDL-01 KKDL-01U (UL version)	KKSC-03A (Terminal type) KKSC-03B (RJ45 type) KKSC-03AU (UL version, Terminal type) KKSC-03BU (UL version, RJ45 type)	KKSC-04A (Terminal type) KKSC-04B (RJ45 type)
Control	1-10V sink or source control inputs (100KΩ Potentiometer)	3 DALI Channels (IEC 62386-101) or stand alone function (RGB sequence, fixed colour and white control)	DMX512 system or stand alone function (RGB sequence, fixed colour and white control)	DMX512 system or stand alone function (RGB sequence, fixed colour and white control)
Output Current	2 x 5A max. @ 9~24V DC 4A max. total output @ 24V, 8A max. total output @ 9~12V (UL version)	3 x 5A max. @ 9~24V DC 4A max. total output @ 24V, 8A max. total output @ 9~12V (UL version)	3 x 5A max. @ 9~24V DC 4A max. total output @ 24V, 8A max. total output @ 9~12V (UL version)	4 x 5A max. @ 9~24V DC 4 x 120W @ 24V, 4 x 60W @ 12V, 4 x 45W @ 9V max.
Output Wattage	2 x 120W @ 24V, 2 x 60W @ 12V, 2 x 45W @ 9V max. 96W max. total output @ 12~24V, 72W max. total output @ 9V (UL version)	3 x 120W @ 24V, 3 x 60W @ 12V, 3 x 45W @ 9V max. 96W max. total output @ 12~24V, 72W max. total output @ 9V (UL version)	3 x 120W @ 24V, 3 x 60W @ 12V, 3 x 45W @ 9V max. 96W max. total output @ 12~24V, 72W max. total output @ 9V (UL version)	4 x 120W @ 24V, 4 x 60W @ 12V, 4 x 45W @ 9V max. 96W max. total output @ 12~24V, 72W max. total output @ 9V (UL version)

visDIM 1-10V Sub-controller functions

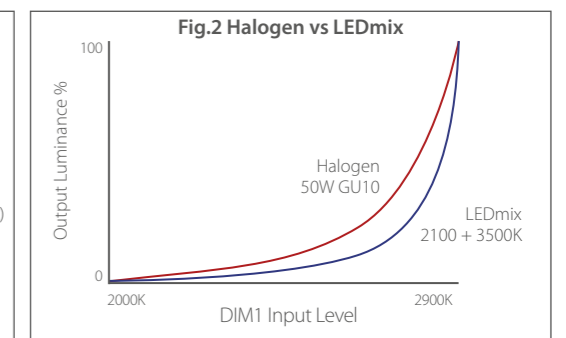
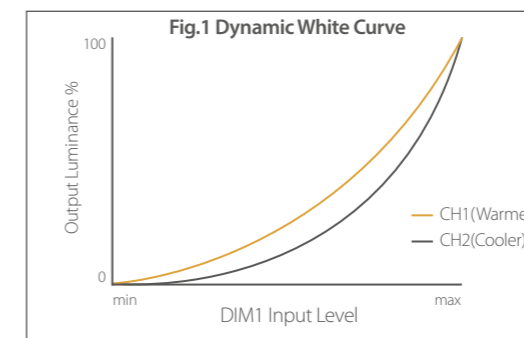
DIP Switch	1-10V Sink	1-10V Source	1-10V Sink	1-10V Source	1-10V Sink	1-10V Source	1-10V Sink (2ch)
Input Type	1-10V Sink	1-10V Source	1-10V Sink	1-10V Source	1-10V Sink	1-10V Source	1-10V Sink (2ch)
Dimming Curve	/	/	∩	∩	Dynamic White	Dynamic White	Tunable White
Output	1ch	1ch	1ch	1ch	LEDmix	LEDmix	LEDmix

Symbols explained

- Dip switch controller
- 1-10V Sink For single input 1-10V control. Requires resistive controller
- 1-10V Source For single input 1-10V control. Requires control voltage input
- 1-10V Sink (2ch) For independent 1-10V control of 2 channel input (DIM1 & DIM2)
- Linear dimming curve
- Logarithmic dimming curve

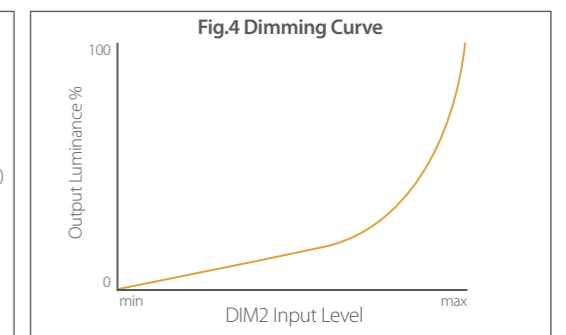
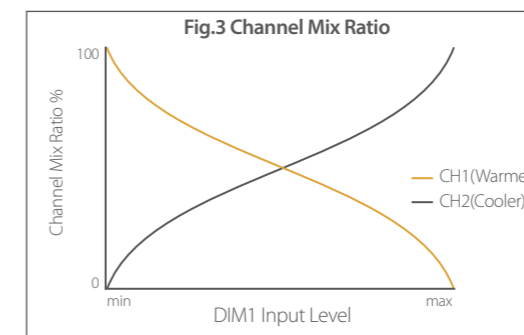
Dynamic White

Single input (DIM 1) controls both output channels as LEDmix control (Fig.1).
When using 2100K mixed with 3500K it produces dimming and CCT curves closely matched to halogen/incandescent (Fig.2).



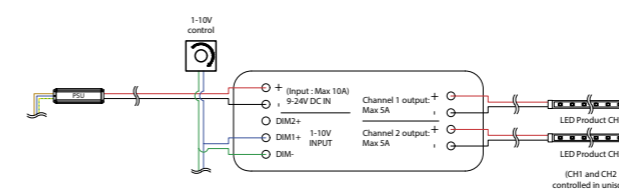
Tunable White

Two input channels to control colour and dimming for LEDmix.
DIM 1 input controls the channel mixing (cool/warm) between CH1 & CH2 outputs (Fig.3).
DIM2 input controls the overall output level, while keeping the colour mix consistent (Fig.4).

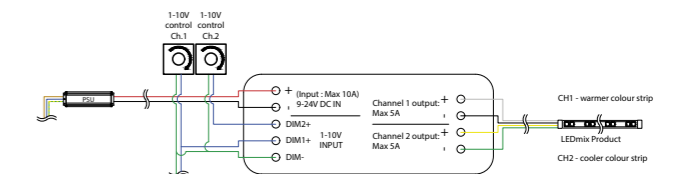


visDIM 1-10V Sub-controller wiring

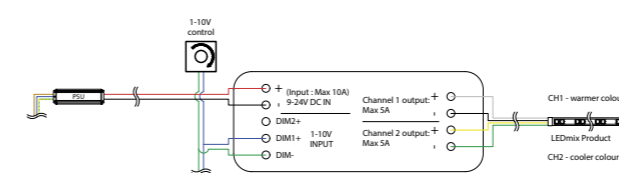
Single input dimming control



Tunable white control



Dynamic white control



Single input Dynamic white function for 207/208 family strip

visDIM DMX Sub-controller functions and wiring

- DMX Receiver Mode Rotary pots control DMX channel (Unit must be reset after changing the DMX channel, by switching unit off then on)
- DMX end of line termination Rotary pots control DMX channel (Unit must be reset after changing the DMX channel, by switching unit off then on)

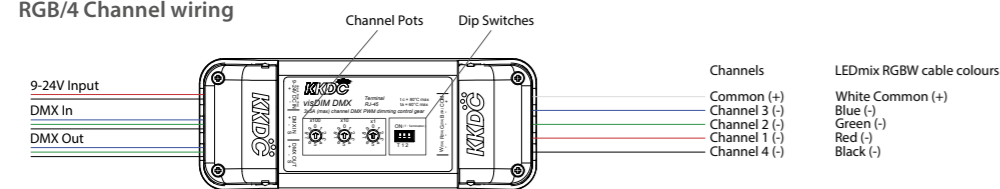
Stand alone (white/mono) Rotary pots act as dimmer
 x100 = 10% dim step
 x10 = 1% dim step
 x1 = 0.1% dim step

Stand alone (RGB) Rotary pots act as sequence control

Pot address/function			
Mode	x100	x10	x1
Fixed colour	0	Output control, 0=Low, 9=High	Static colour, 0=Blue, 1=Red, 2=Yellow, 3=Green...
RGB Scroll	1~9	Output control, 0=Low, 9=High	Scroll speed, 0=Low, 9=high

STAND ALONE SET UP

RGB/4 Channel wiring

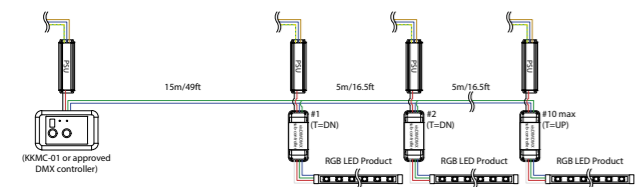


For RJ45 Pin Connections

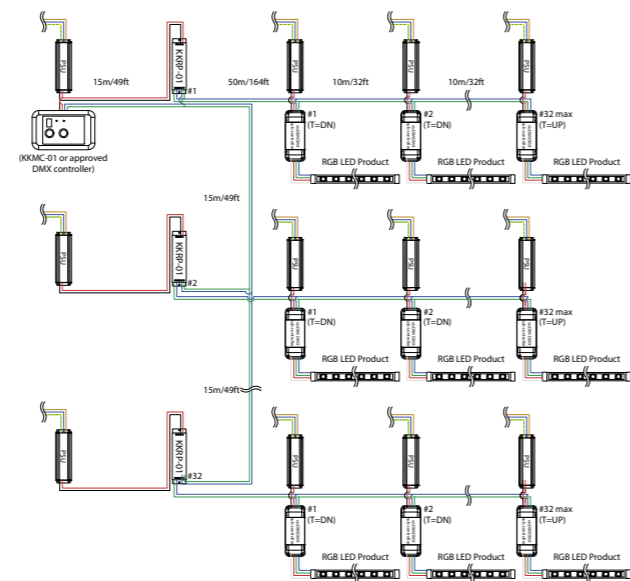
Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8
White/Green	Green	White/Orange	Blue	White/Blue	Orange	White/Brown	Brown
DMX -	DMX +	Shield	+ (supplied Voltage for DMX control gear)	+ (supplied Voltage for DMX control gear)	N/C	- (supplied Voltage for DMX control gear)	- (supplied Voltage for DMX control gear)

DMX System wiring examples

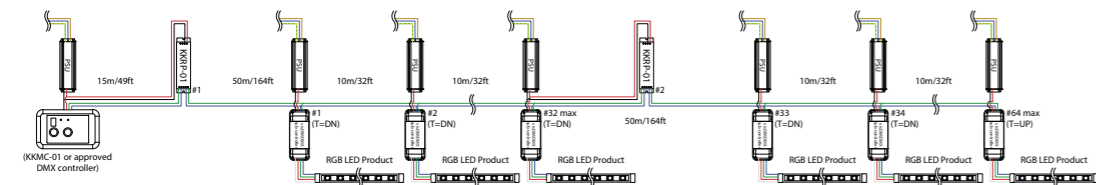
Small system – DMX controller + visDIM DMX



Large system – DMX controller + visDIM DMX + KKRP-01 DMX repeater



Linear system – DMX controller + visDIM DMX + KKRP-01 DMX repeater

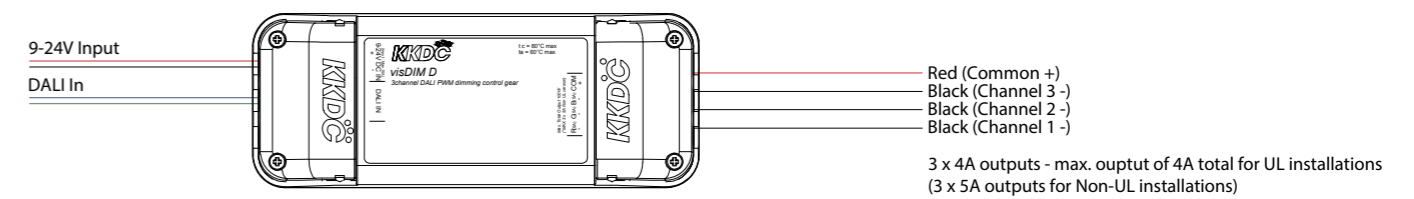


visDIM D Sub-controller functions and wiring

- When constructing DALI systems, please reference the DALI master controller device/console manual.
- Before constructing the DALI system, note for the address setup, please refer the below factory shipment setup address.
- DALI Address: No.0 ~ No.63 / DALI Group : No.0 ~ No.15

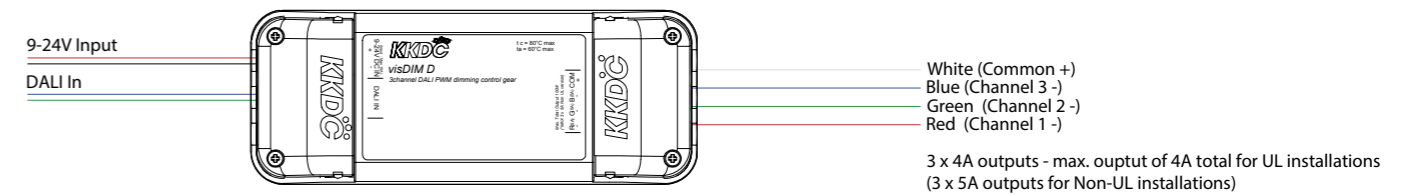
visDIM Output Channel	Ch.1 (Red)	Ch.2 (Green)	Ch.3 (Blue)
DALI Channel	DALI 0	DALI 1	DALI 2

visDIM D Sub-controller 3 white channels wiring

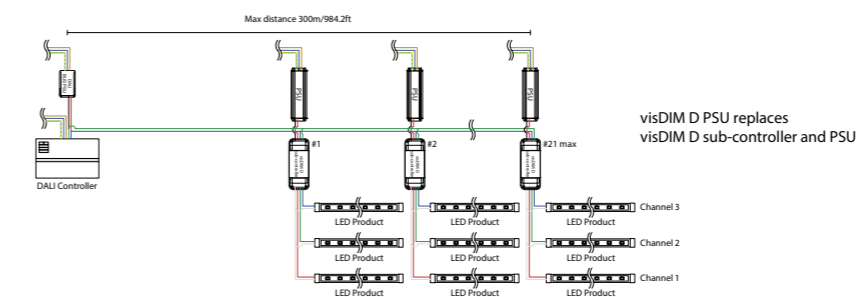


When output channels are linked, the 3 controlling channels MUST be linked and controlled in unison.

visDIM D Sub-controller RGB wiring



DALI System wiring examples



visDIM PSU (24V DC)



220-240V AC IP67 2154 CE

Dimension	H48/W73/L248mm
Weight	1.5Kg
Operating Temp	T _a = -20 to 50°C (T _c max = 85°C)
Operating Humidity	25RH to 85RH
Storage Humidity	25RH to 90RH
Storage Temp	T _a = -40°C to 85°C
IP Rating	IP67
Finish	Silver anodised
Mounting	Surface mount via screws
Input Voltage	220-240V AC
Output Voltage	24V DC
PWM Frequency	3.3KHz
DC IN +, DC IN-	DC IN +, DC IN-
Input Frequency Range	50~60Hz
Power Factor	PF > 0.9
Efficiency	Min. 80%
Ripple & Noise	< 250mV
Safety Standards	EN 61347-1, EN 61347-2-13
EMC emission	EN 55015, EN 61547, EN 61000-3-2, EN61000-3-3
EMC immunity	EN 61000-4-2, 3, 4, 5, 6, 11

	visDIM 1-10V PSU	visDIM DMX PSU	visDIM D PSU (DALI input)
Order Code	KKPS-01	KKPS-02	KKPS-03
Control	Via 1-10V system or 100KOhm Variable Resistor	DMX512 system	3 DALI Channels (DALI according to IEC 62386-101, IEC 62386-102, IEC 62386-207)
Channels	1	3	3
Output Wattage	4.3A max	4.3A max	4.3A max
Rated Power	100W max	100W max	100W max
Heat Shield			

DMX Master Controller



9-24V DC IP20 CE

Order Code	KKMC-01
Dimension	H45.4/W116.6/L72.7mm
IP Rating	IP20
Finish	Plastic cover (White)
Mounting	Surface mounting via clip
Control	DMX512 output
Input Voltage	9-24V DC
Output Voltage	Depending on the Input Voltage
Output Current	3 x 1mA (max) channels on RGB output
Unit Load	2W max
Port Description	DMX512 control output RGB output to product (Ch1 + Ch2 + Ch3)

- ▶ Simple DMX controller with variable speed RGB sequence, static colours and dimming mode.
- ▶ DMX output.
- ▶ RGB (3x1A max.) PWM output.

DMX Repeater

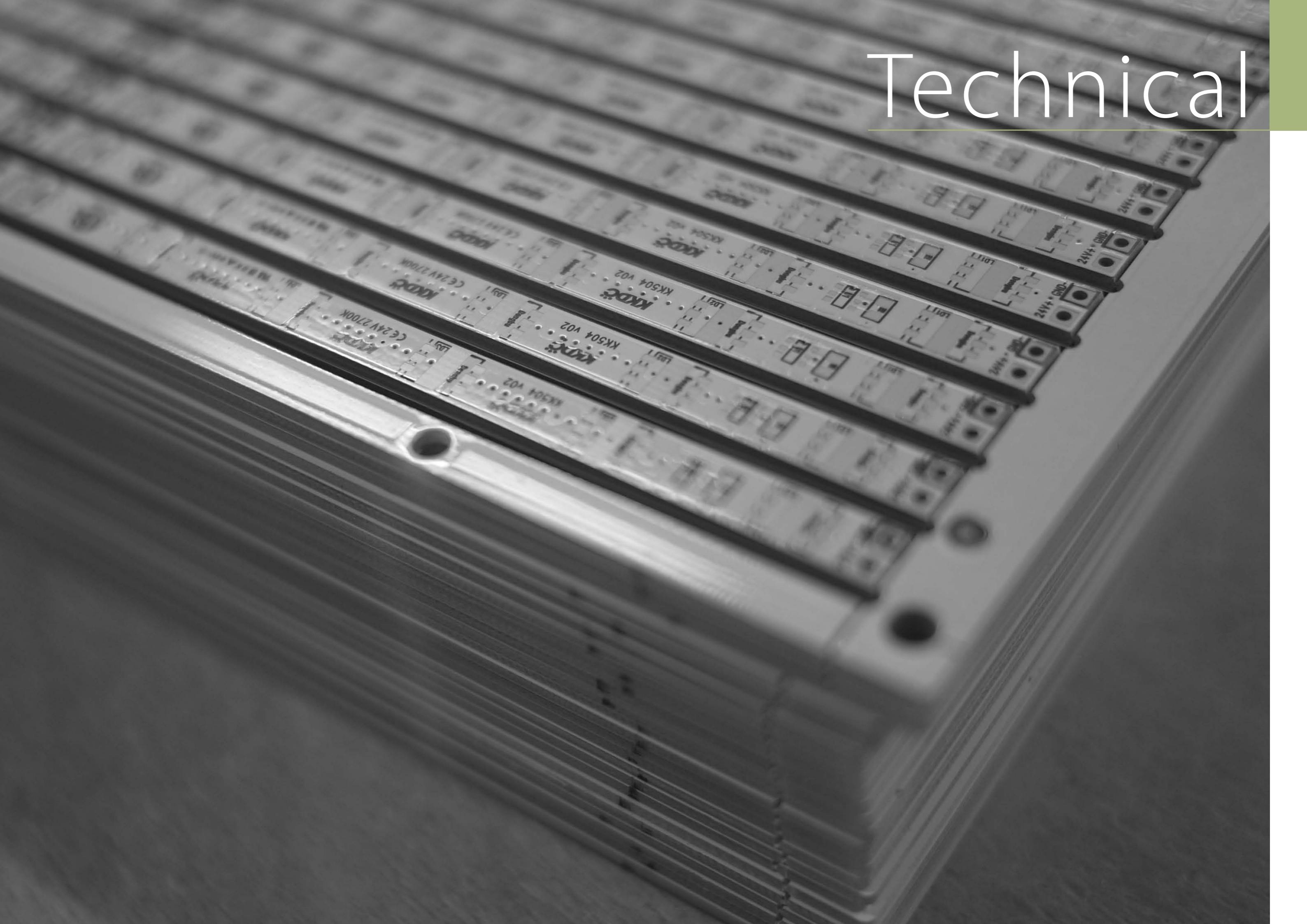


12-24V DC IP20 CE

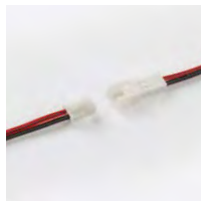
Order Code	KKRP-01
Dimension	H30/W49.5/L194.5mm
IP Rating	IP20
Finish	Metal cover (Black)
Mounting	Surface mount via screw
Input Voltage	9-24V DC
Unit load	2W max
Port Description	9-24V DC power input DMX512 control input DMX shield Boosted DMX512 output

- ▶ DMX Signal Boost.
- ▶ Preserves signal level and integrity in long/complex DMX systems or areas of high electromagnetic interface.

Technical



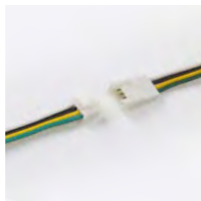
Interior Connectors



KKCN-01 (50mm pair)
KKCN-03 (300mm pair)
2 PIN male + female connector set



KKCN-07 (50mm pair)
KKCN-09 (300mm pair)
4 PIN RGB male + female connector set



KKCN-18 (50mm pair)
KKCN-19 (300mm pair)
4 PIN LEDmix WHITE male + female connector set



KKCN-29 (50mm pair)
KKCN-30 (300mm pair)
5 PIN LEDmix RGBW male + female connector set



KKCN-06
2 PIN 300mm extension lead



KKCN-24
4 PIN LEDmix WHITE 300mm extension lead



KKCN-11
4 PIN RGB 300mm extension lead

Exterior Connectors



CN54-2P-0300 (300mm pair)
CN54-2P-1000 1000mm pair
IP54
2 PIN male + female connector set



CN54-4P-0300 (300mm pair)
IP54
4 PIN RGB/LEDmix male + female connector set



CN67-2P-0300 (300mm pair)
CN67-2P-1000 (1000mm pair)
CN67-2P-3000 (3000mm pair)
IP67
2 PIN male + female connector set



CN67-4P-0300 (300mm pair)
CN67-4P-1000 (1000mm pair)
CN67-4P-3000 (3000mm pair)
IP67
4 PIN RGB/LEDmix male + female connector set

Dimming Power Supplies



KKPS-01
IP67 visDIM 1-10V 100W PSU,
24V (1-channel)
L248/W73/H48mm



KKPS-02
IP67 visDIM DMX 100W PSU,
24V (3-channel)
L248/W73/H48mm



KKPS-03
IP67 visDIM D 100W PSU,
24V (3-channel)
L248/W73/H48mm

Exterior Junction Boxes



KKJB-01
IP67 Large junction box
White Polycarbonate casing
L128mm W88mm H44mm



KKJB-06
IP68 Slimline junction box
Gel filled ABS casing
L94mm W44mm H24mm



KKJB-07
IP67 Slim J-Box
(Include Type A,B,C bushings)



KKJB-07R
Potting Resin for
IP67 Slim J-Box

Dimming Sub-controllers



KKDM-05
visDIM 1-10V sub-controller
L164/W64/H34mm



KKSC-03A DMX
visDIM DMX sub-controller
(3-channel, Screw terminal)
L164/W64/H34mm

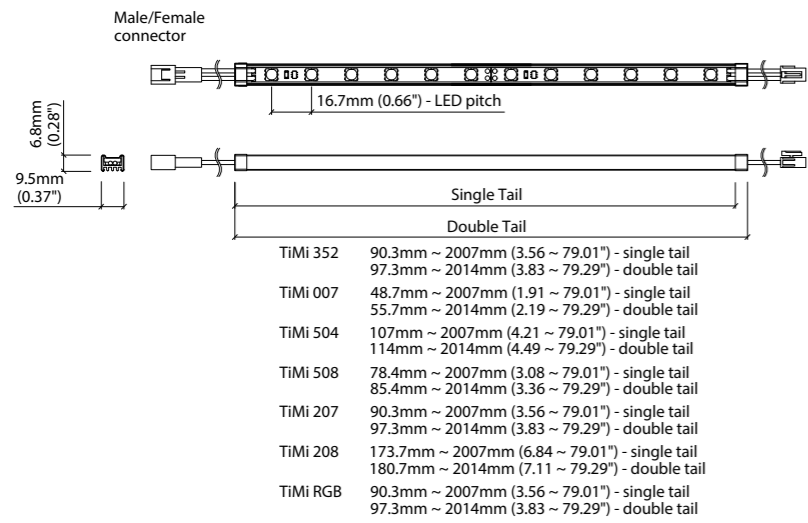


KKSC-03B DMX
visDIM DMX sub-controller
(3-channel, RJ45)
L164/W64/H34mm

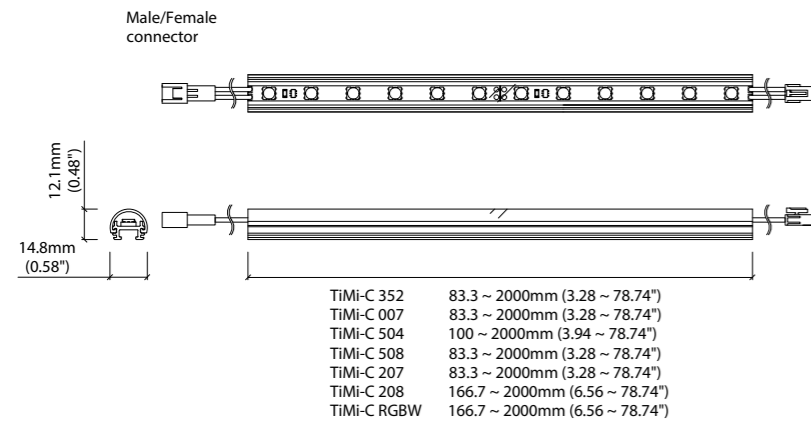


KKDL-01
visDIM D sub-controller
(3-channel)
L164/W64/H34mm

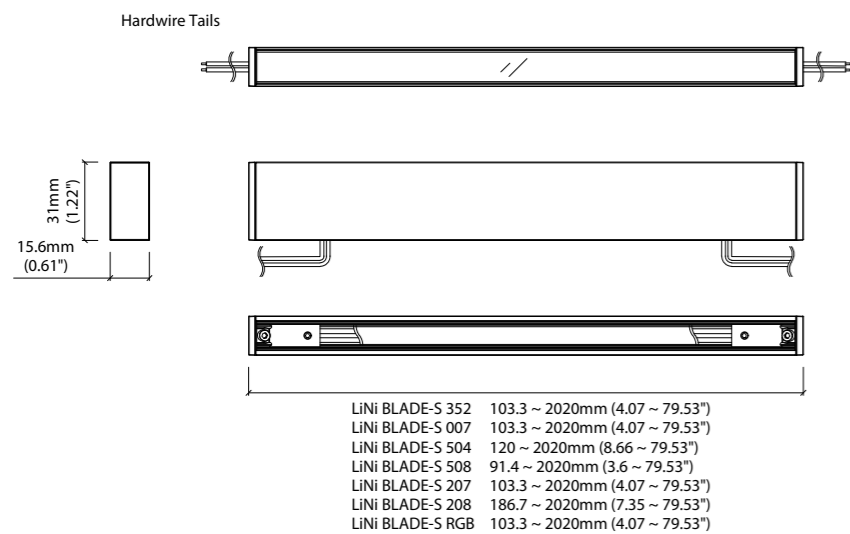
TiMi



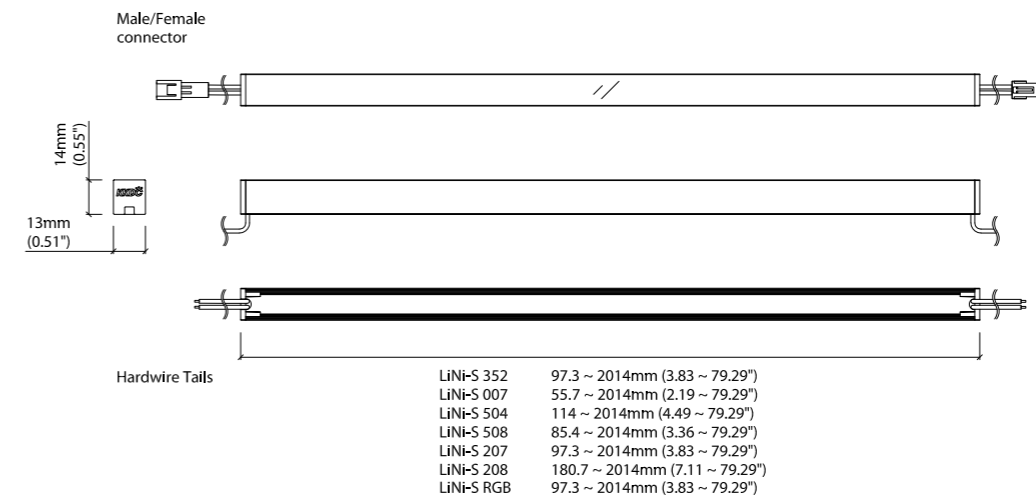
TiMi-C



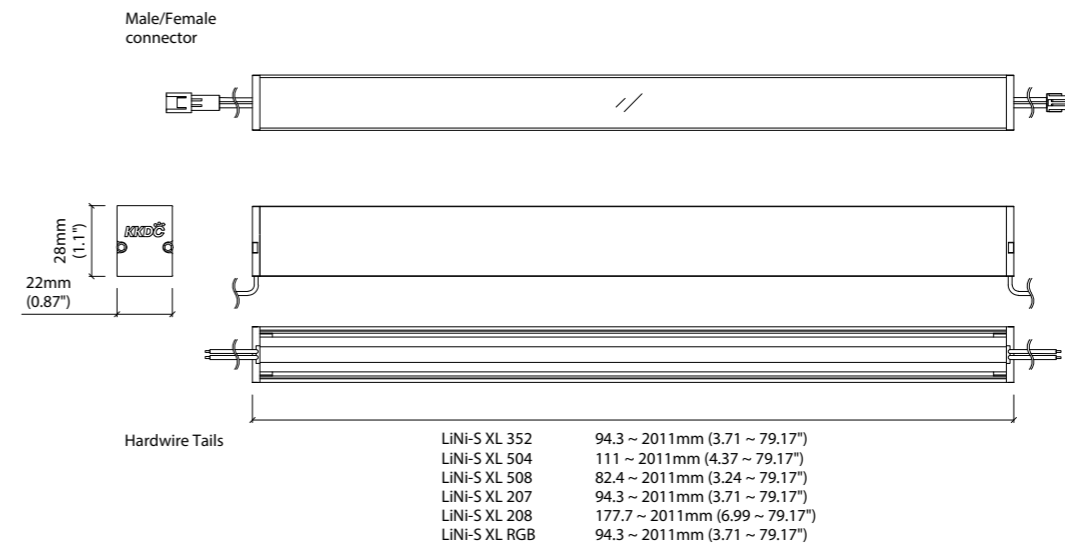
Lini BLADE-S



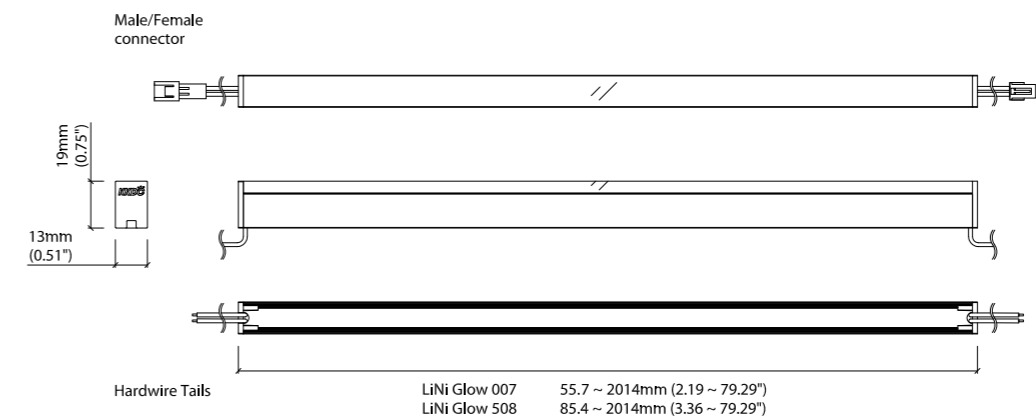
LiNi-S



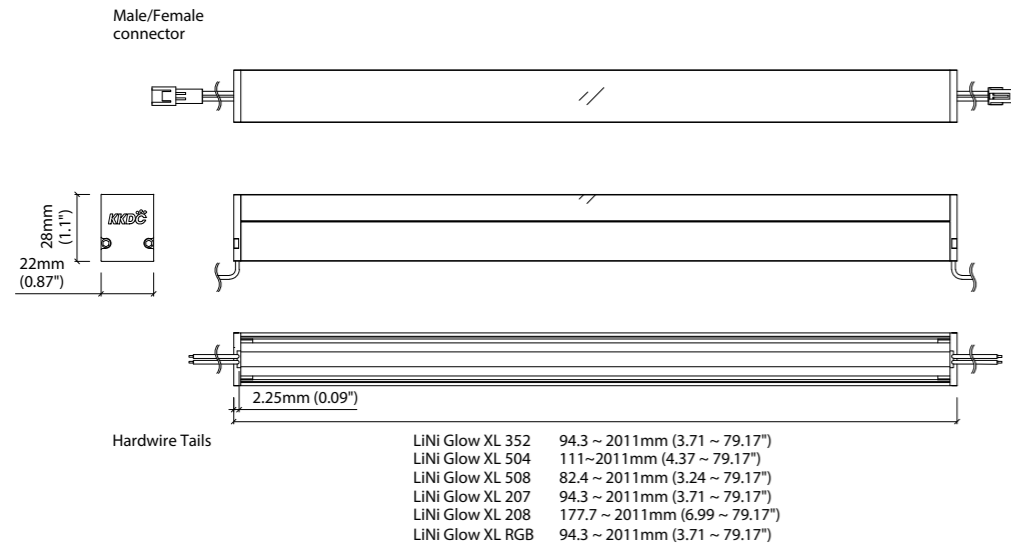
LiNi-S XL



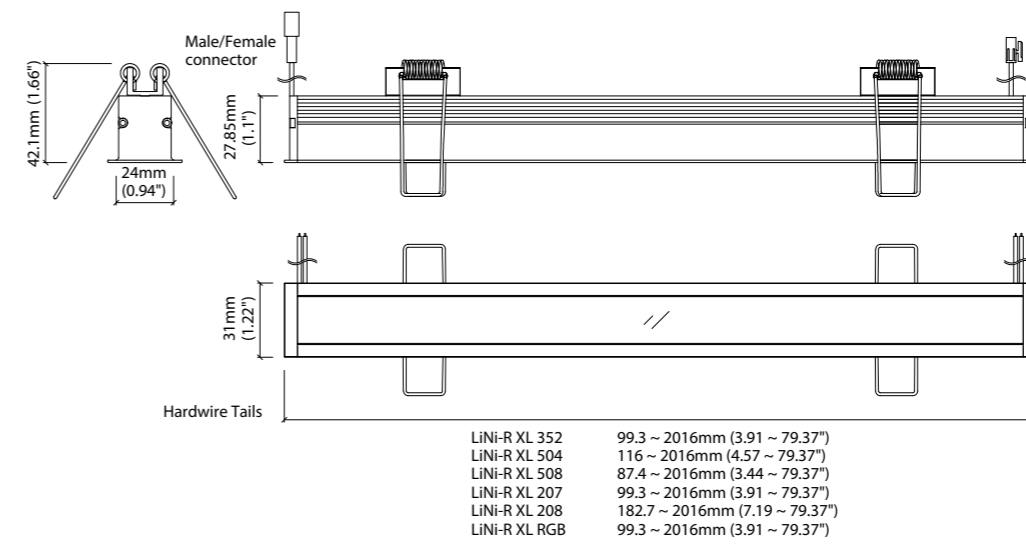
LiNi Glow



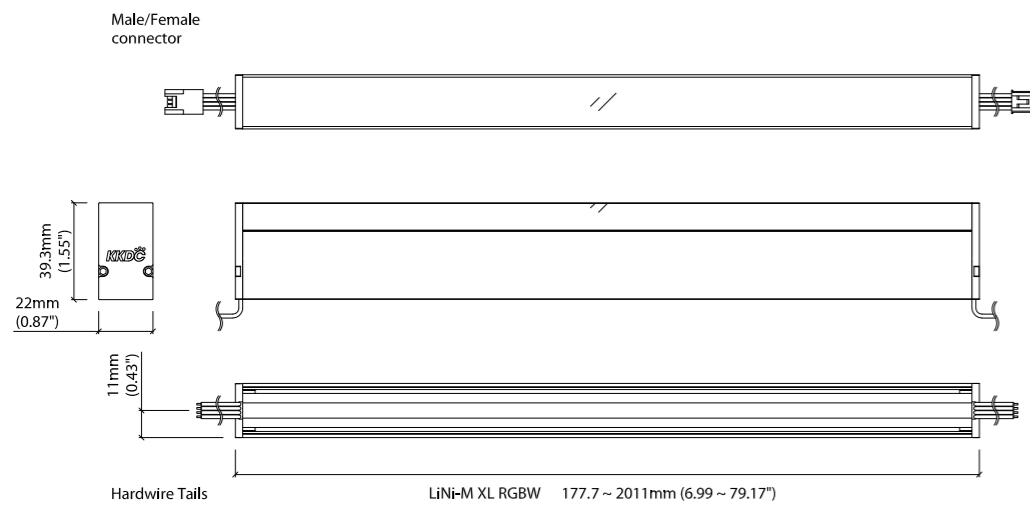
LiNi Glow XL



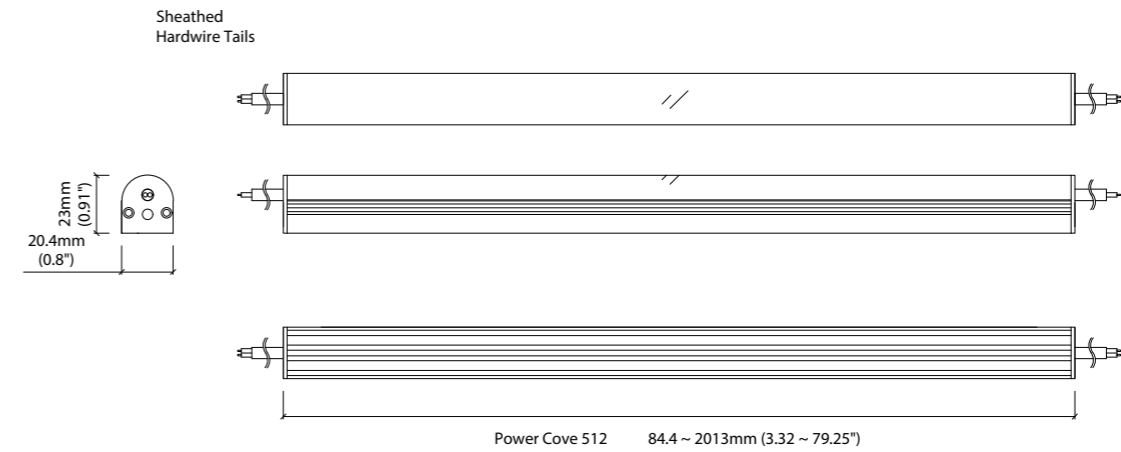
LiNi-R XL



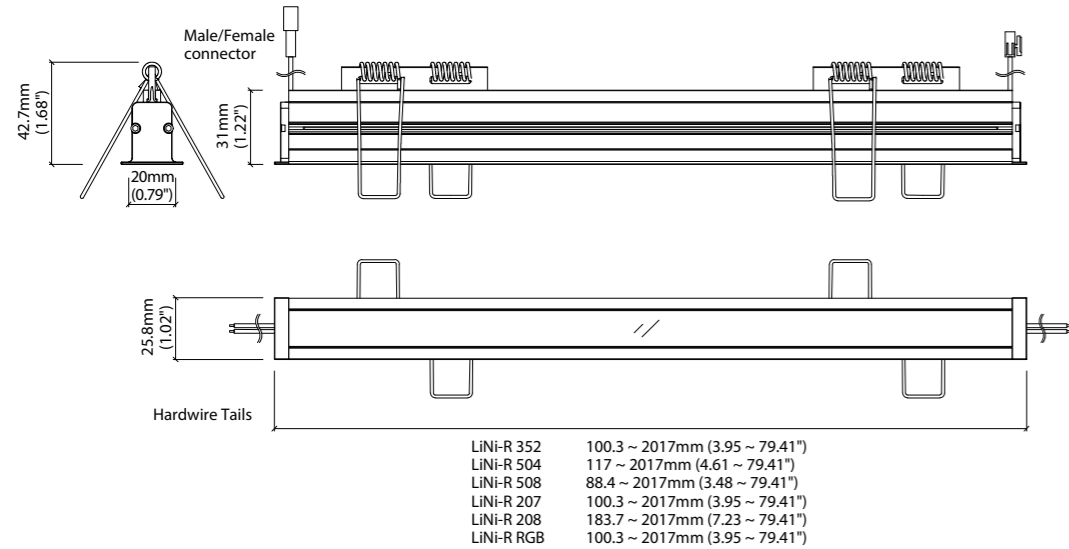
LiNi-M XL



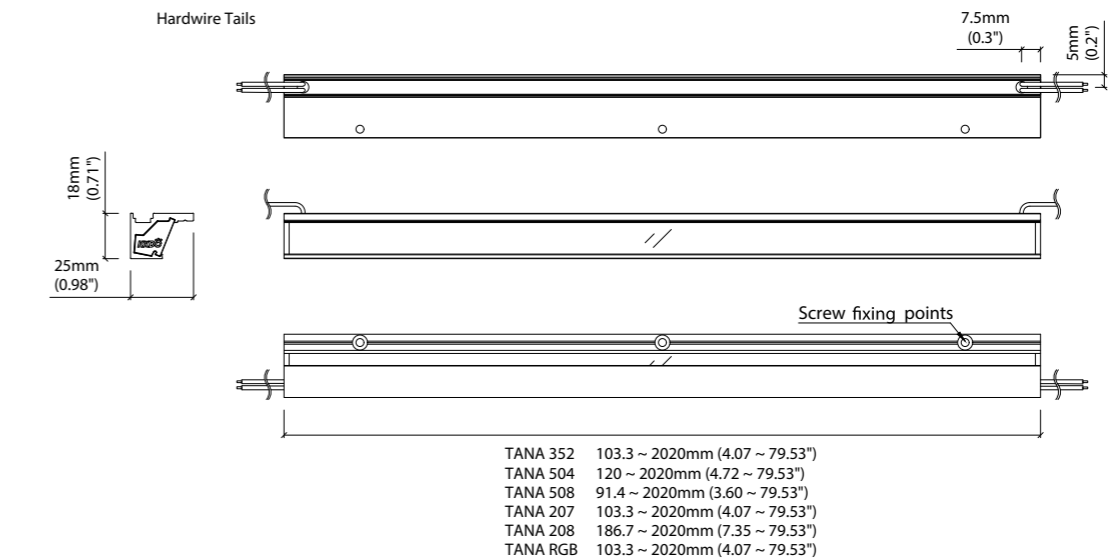
Power Cove



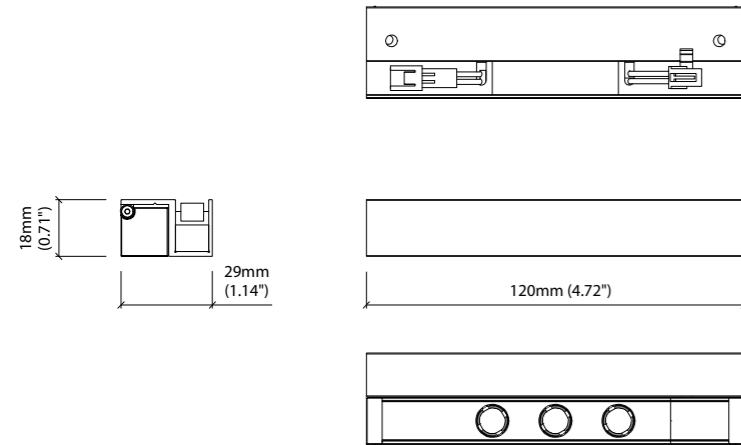
LiNi-R



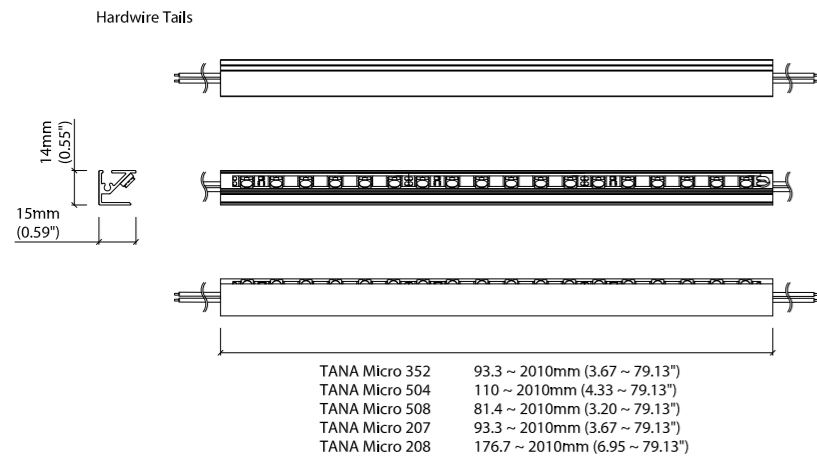
TANA



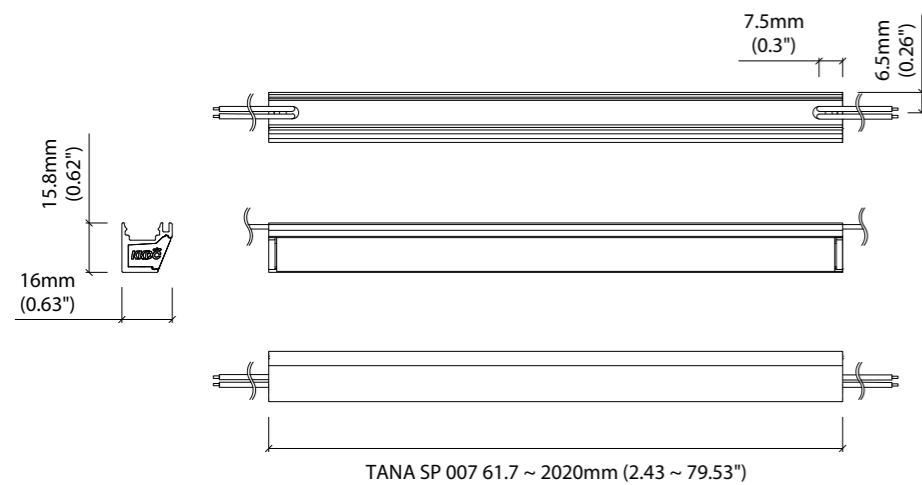
TANA Spot



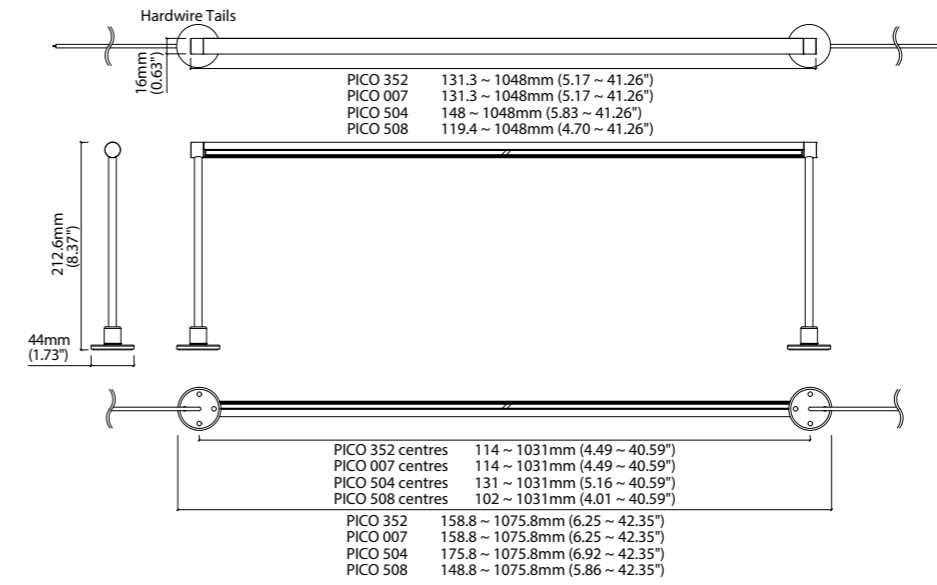
TANA Micro



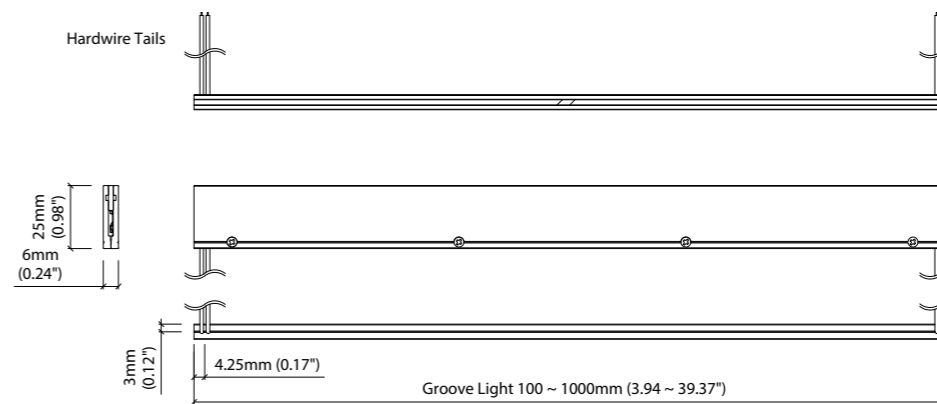
TANA SP



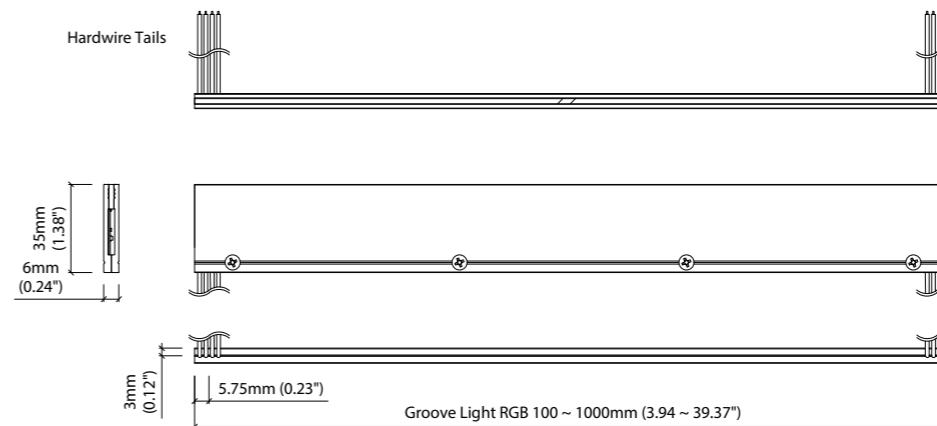
PICO



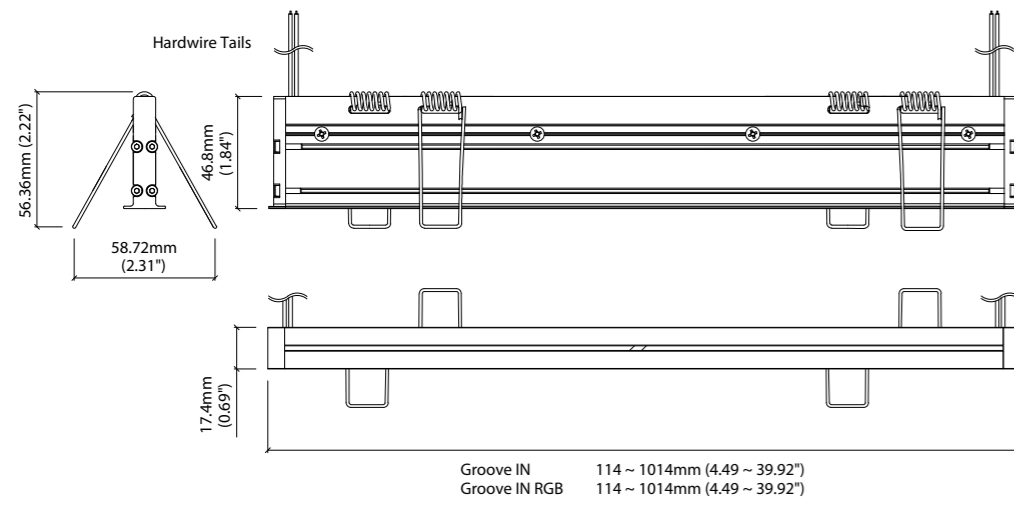
Groove Light



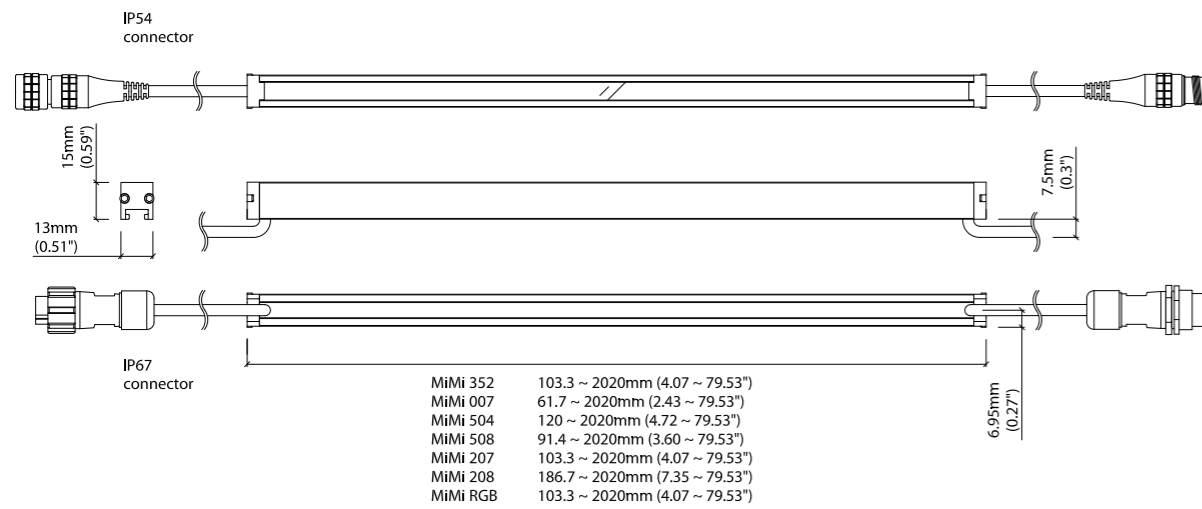
Groove Light RGB



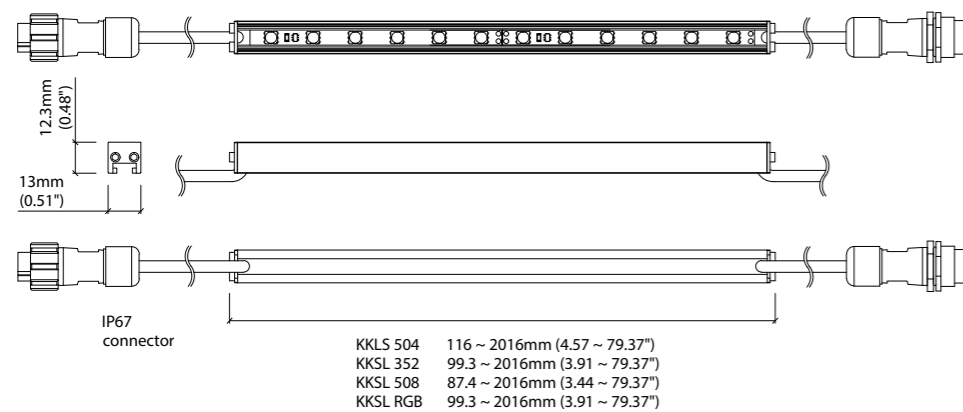
Groove IN



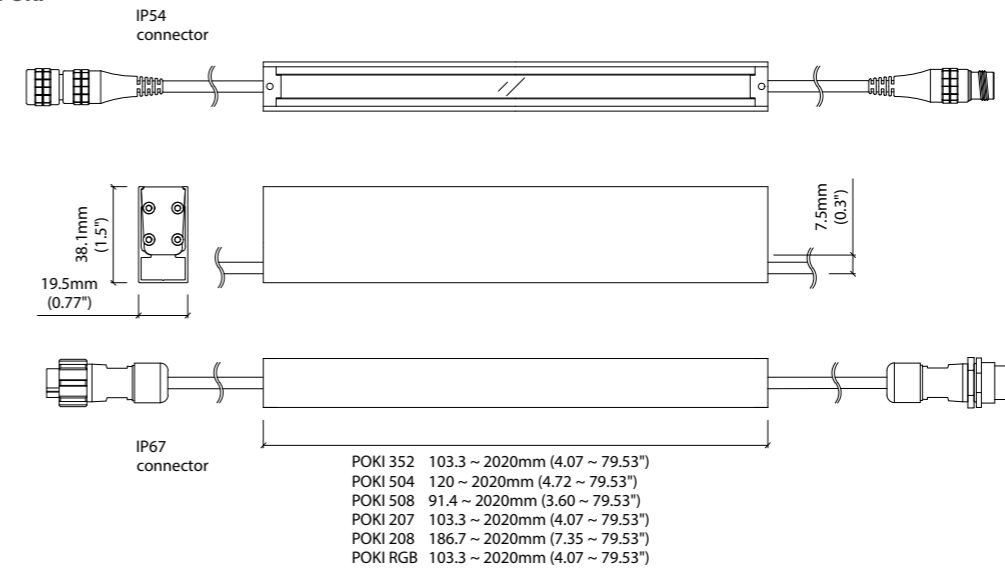
MiMi



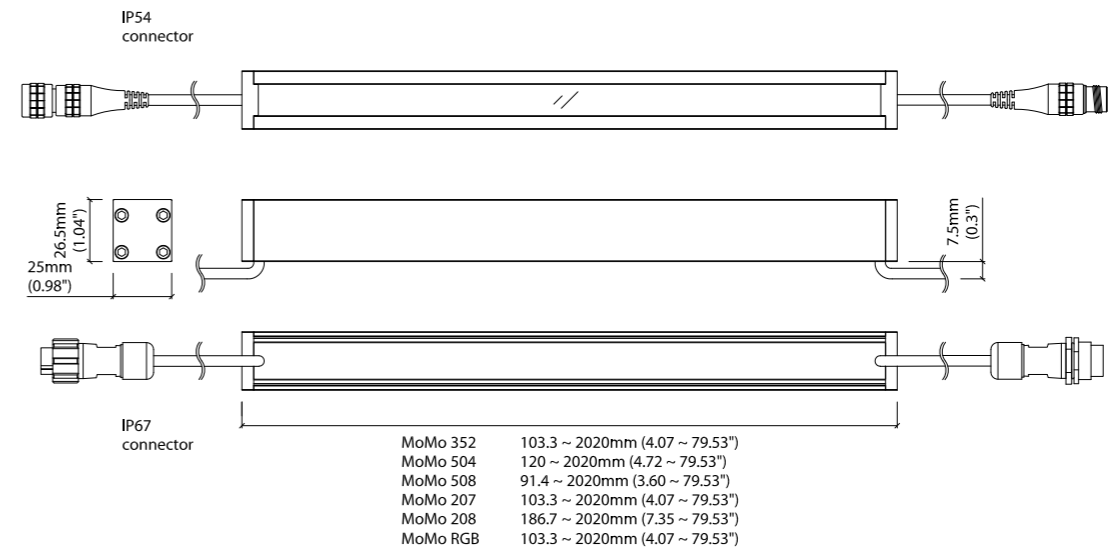
KKSL



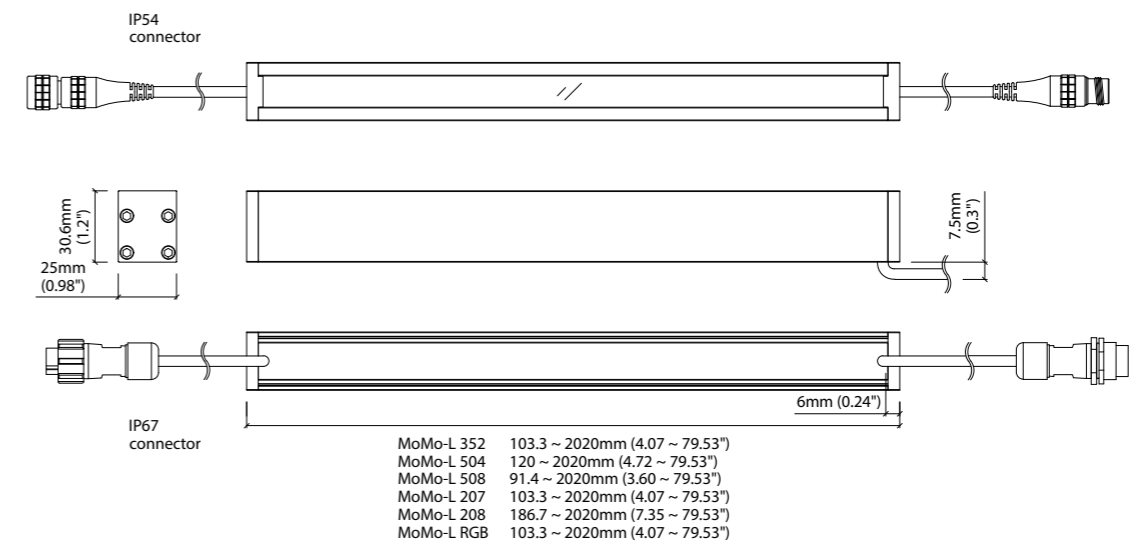
POKI



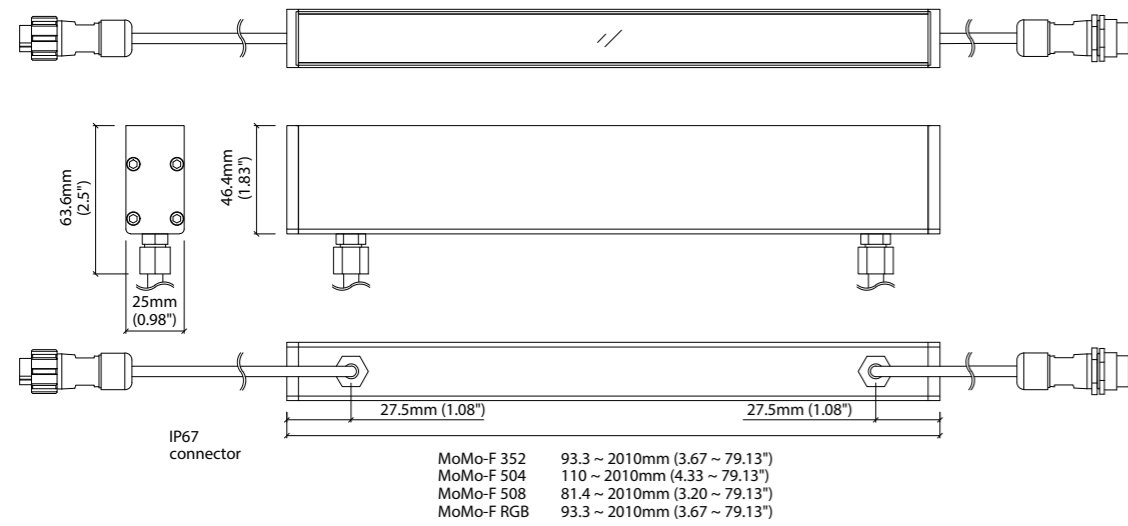
MoMo



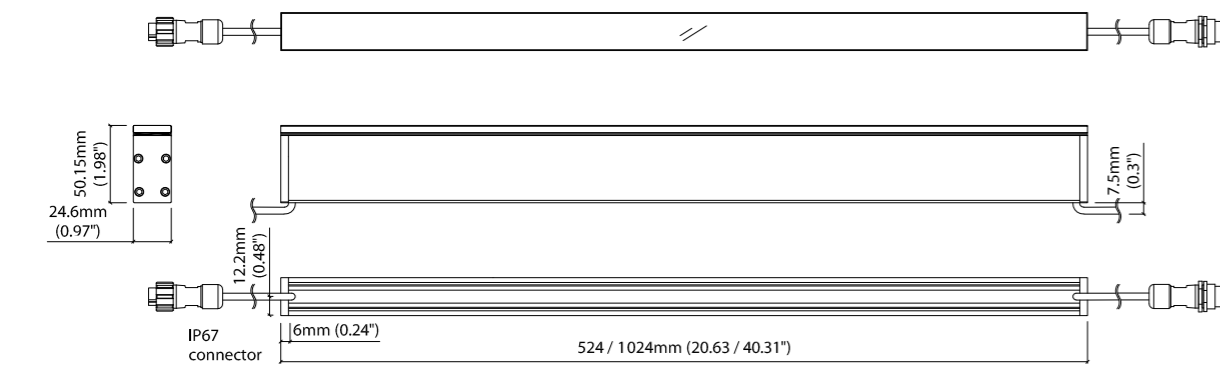
MoMo-L



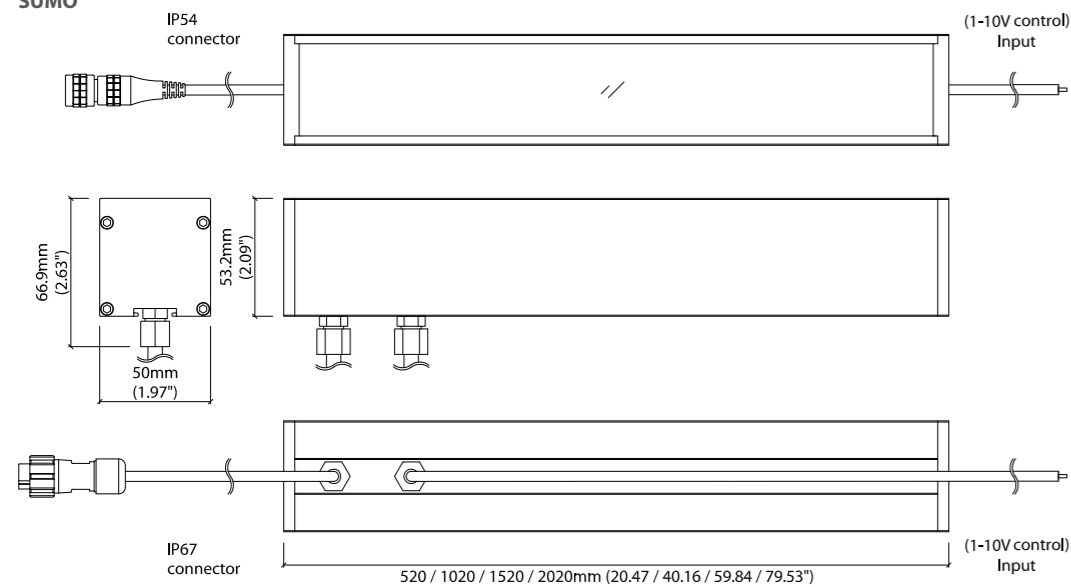
MoMo-F



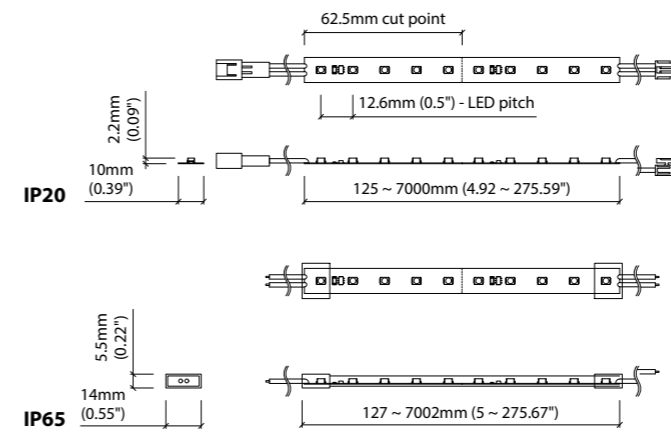
MoMo-BLOC



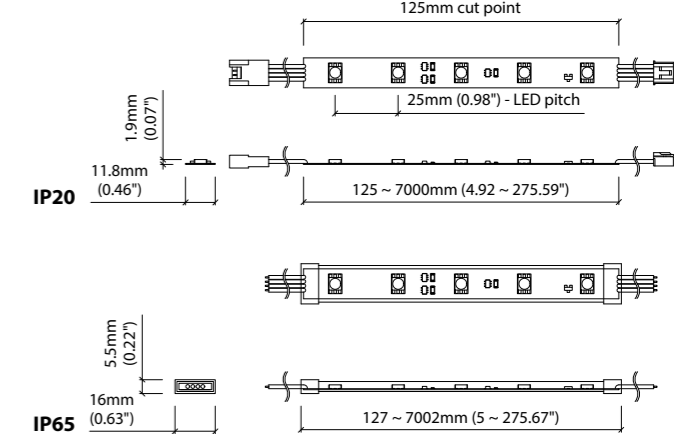
SUMO



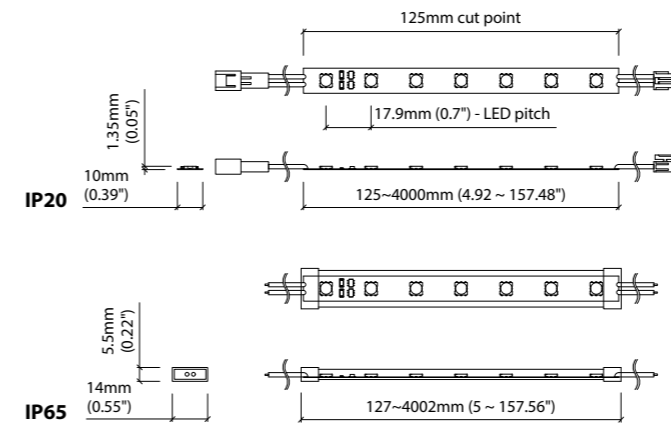
FX



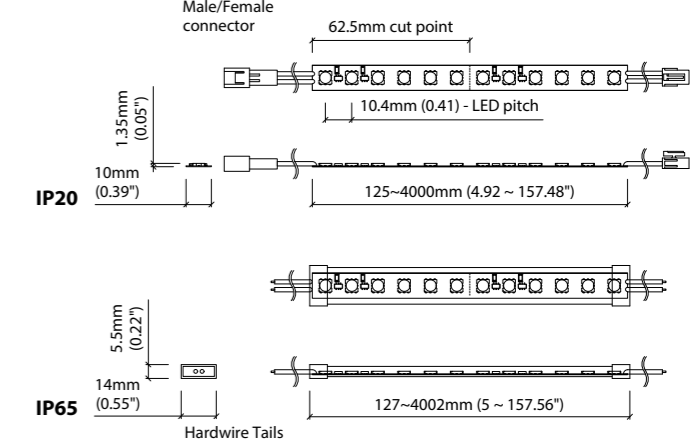
FX RGB



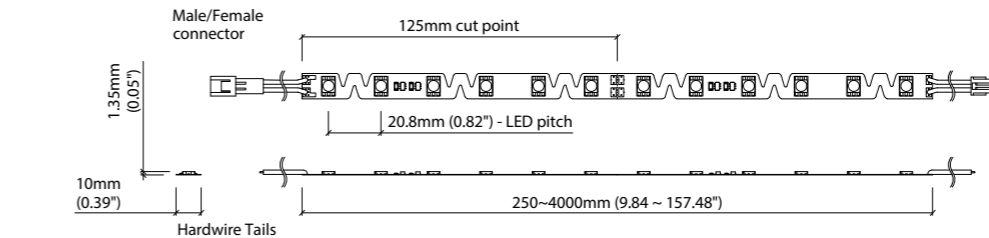
P-FX4



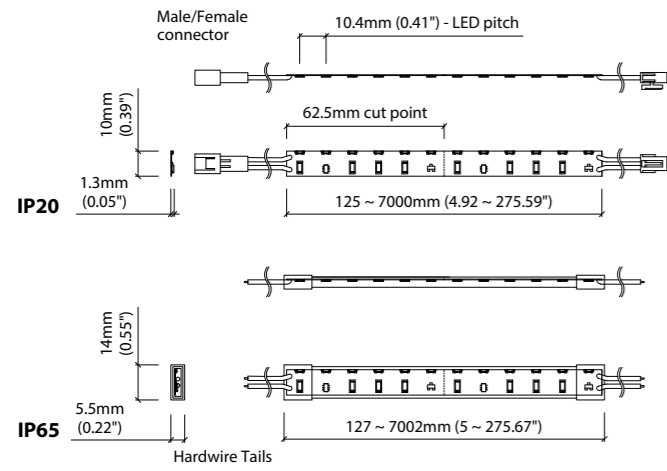
P-FX8



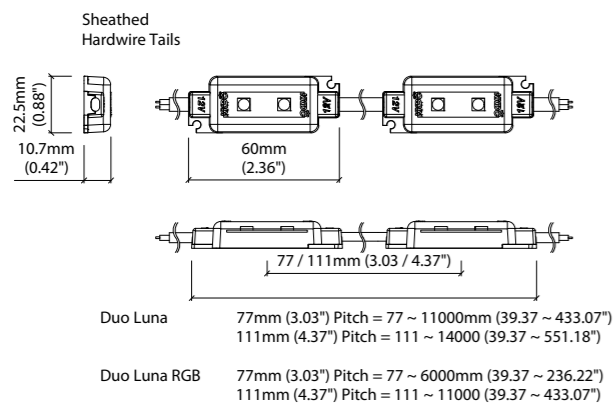
UNI P-FX



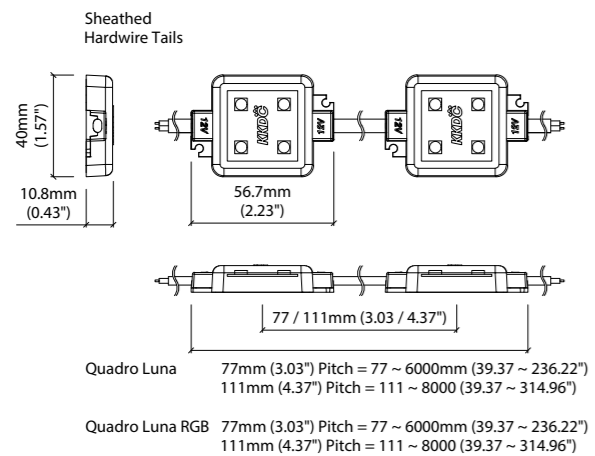
KKFS



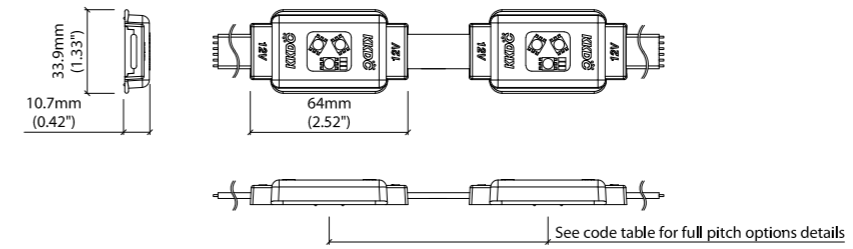
DUO Luna



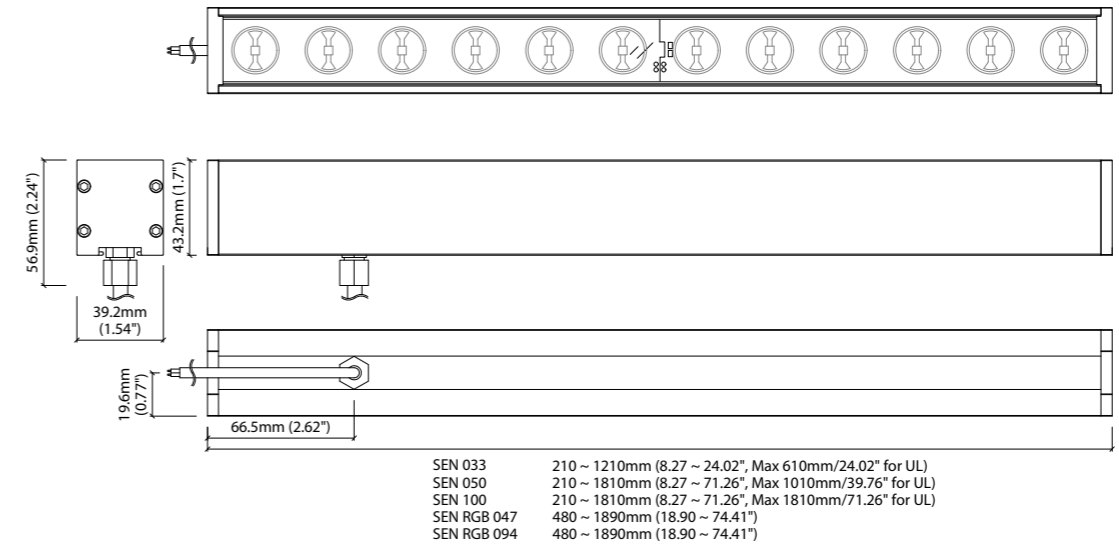
Quadro Luna



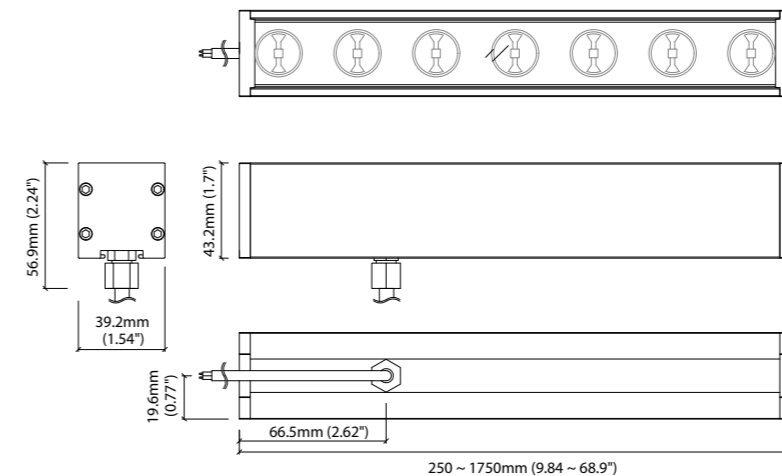
Cluster PIXEL



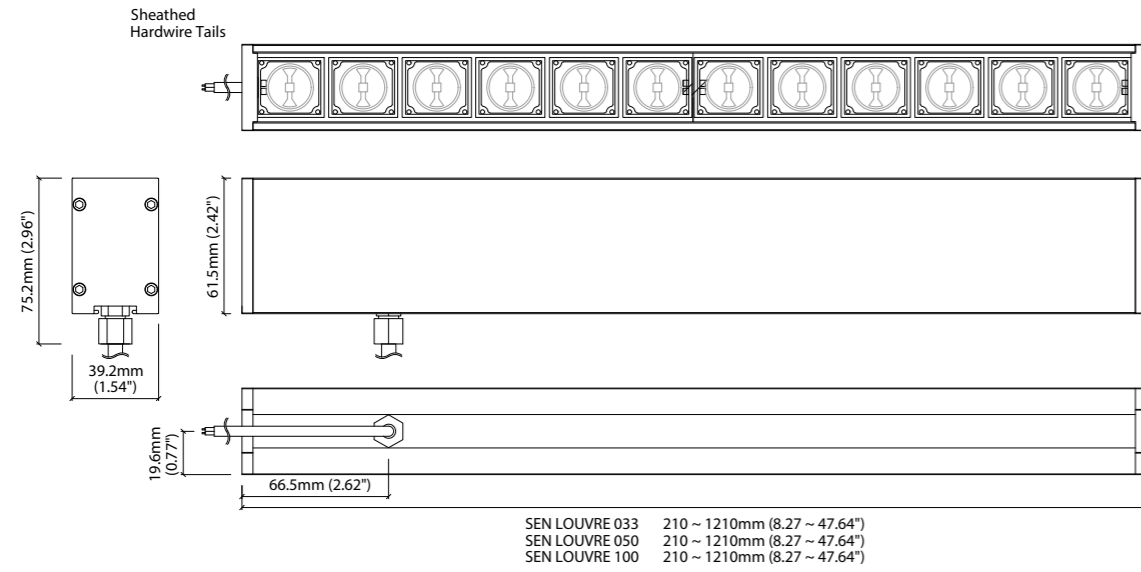
SEN



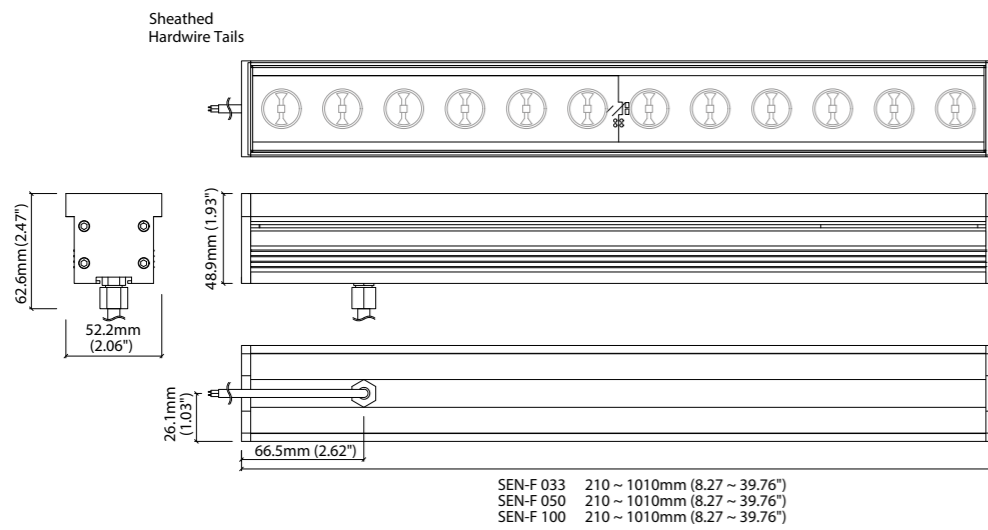
SEN CV



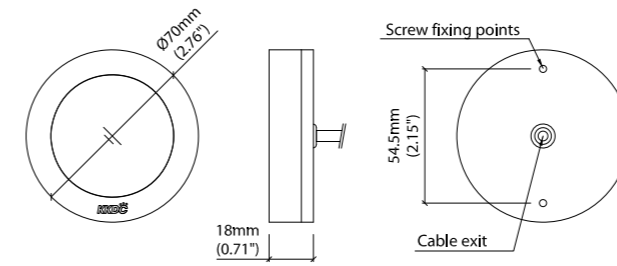
SEN Louvre



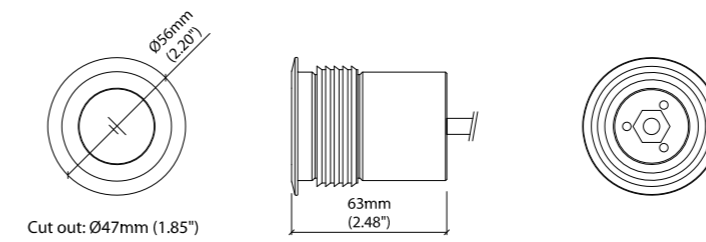
SEN-F



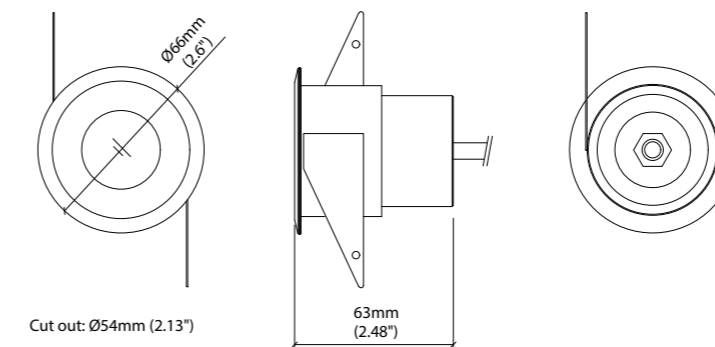
PUK-L



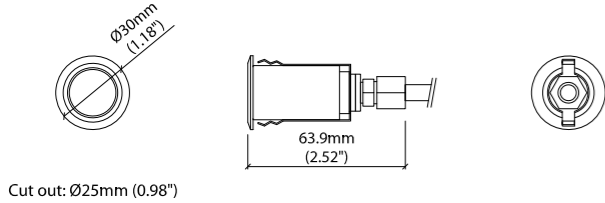
TAYO Spot



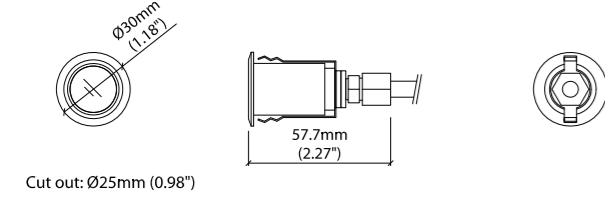
TAYO Ceiling



TAYO Micro (Outdoor)



TAYO Micro (Indoor)



1. Lighting

1.1 General Lighting Terms

- 1.1.1 Luminaire
- 1.1.2 Glare
- 1.1.3 Optic
- 1.1.4 Lens
- 1.1.5 Diffusion/Diffuser
- 1.1.6 Beam Angle
- 1.1.7 Louvre
- 1.1.8 Baffle
- 1.1.9 Flicker
- 1.1.10 Stroboscopic Effect

1.2 Photometry

- 1.2.1 Photopic Vision
- 1.2.2 Scotopic Vision
- 1.2.3 Mesopic Vision
- 1.2.4 Luminous Flux & Lumens
- 1.2.5 Radiant Flux
- 1.2.6 Illuminance & Lux
- 1.2.7 Candela (cd)
- 1.2.8 Wavelength
- 1.2.9 Nanometer
- 1.2.10 Electromagnetic Radiation
- 1.2.11 Visible Spectrum
- 1.2.12 Full Spectrum Lighting
- 1.2.13 Spectral power distribution
- 1.2.14 Ultraviolet (UV)
- 1.2.15 Infrared (IR)
- 1.2.16 Luminous Efficacy
- 1.2.17 Luminous Efficiency
- 1.2.18 Photometric Testing
- 1.2.19 Absolute Photometry
- 1.2.20 Relative Photometry
- 1.2.21 Integrating Sphere
- 1.2.22 Goniophotometer
- 1.2.23 Polar Curve

1.3 Colourimetry

- 1.3.1 Colour Space (CIE colour space/ chromaticity diagrams)
- 1.3.2 Kelvin (Correlated Colour Temperature – CCT)
- 1.3.3 Planckian Locus/ Black Body Line
- 1.3.4 MacAdam Ellipse (SDCM)
- 1.3.5 Saturation/Saturated
- 1.3.6 Hue
- 1.3.7 Colour Rendering Index (CRI)
- 1.3.8 Rendering Average (R_a)
- 1.3.9 TM-30-15
- 1.3.10 CQS (Colour Quality Scale)

2. Electrical

2.1 General Electrical

- 2.1.1 Voltage
- 2.1.2 RMS Voltage
- 2.1.3 Current
- 2.1.4 Resistance
- 2.1.5 Wattage
- 2.1.6 Circuit Watts
- 2.1.7 Direct Current (DC)
- 2.1.8 Alternating Current (AC)
- 2.1.9 Constant Current
- 2.1.10 Constant Voltage
- 2.1.11 Power Factor (PF)
- 2.1.12 Interference
- 2.1.13 Electromagnetic Interference (EMI)
- 2.1.14 Parasitic Capacitance
- 2.1.15 Inrush Current

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1. Lighting

1.1 General Lighting Terms

1.1.1 Luminaire

A term for 'light fittings' or 'fixtures', referring to a complete lighting product.

1.1.2 Glare

The result of excessive amounts of viewable contrast. Glare is often the cause of visual discomfort and can lead to sight being impaired or an individual being distracted, in the extreme it's called disability glare. Interior glare is often known as 'discomfort glare'; caused by sources of bright light such as windows or luminaires.

1.1.3 Optic

The method of controlling light, either by reflection or by refraction.

1.1.4 Lens

An optic device used to control the beam angle or output shape of a luminaire.

1.1.5 Diffusion/Diffuser

Where an optical element – often translucent glass or plastic – covers the light source within a housing. The light transmitted throughout the diffuser will be redirected and scattered with the optical properties and transmission efficiency of the material used.

1.1.6 Beam Angle

The angular dimension a light distributes from a fitting. The angle is measured from the point of maximum beam intensity out to the angle where the intensity is 50% of maximum. Beam angle is sometimes referred to as 'beam spread'.

1.1.7 Louvre

A method of reducing ambient glare from luminaires. This may be use of angled slats over a light source or deep slats from which the light source shines out of.

1.1.8 Baffle

Another ambient glare reduction tool which projects the light from deeper within the luminaire, meaning that ambient glare is greatly reduced.

1.1.9 Flicker

Undesired periodic variation in light levels. At higher speeds flicker becomes strobing.

1.1.10 Stroboscopic Effect

Is the visual phenomenon that causes the perception of motion to become obvious. This may be the spinning of a wheel appearing to spin backwards in strobing

light, or, a stuttering/flickering effect due to eye movement in an environment with flickering/strobing lighting.

1.2 Photometry

1.2.1 Photopic Vision

Explains vision of the human eye under well-lit conditions. Photopic vision allows colour perception by the use of cone cells within the eyes.

1.2.2 Scotopic Vision

Is the vision of the human eye in very low light levels. Reduced colour perception due to use of rod cells within the eyes.

1.2.3 Mesopic Vision

Is the function of both Rods and Cones working together to allow humans to see in light levels between photopic and scotopic levels of light.

1.2.4 Luminous Flux & Lumens

The total quantity of light emitted by a light source within the visible spectrum (380-780nm) as perceived by the human eye, luminous flux is measured in lumens (lm).

1.2.5 Radiant Flux

The total power of radiation produced through all spectrums, measured in Watts (W).

1.2.6 Illuminance & Lux

Illuminance is the number of lumens falling per square metre, measured in lux (lx).

1.2.7 Candela (cd)

Is the measurement of luminous intensity within a narrow cone, calculated by:

$\text{luminous flux} \div \text{unit solid angle}$.

This is often the quantitative figure used to describe the output of directional lamps.

1.2.8 Wavelength

Light is considered as a wave, and has measurable wavelengths, it is the wavelength of light that determines its type of electromagnetic radiation. The distance between the successive waves is defined as its wavelength. Within the visible spectrum, it is the combined visual power of light at every given wavelength that makes up a light source's apparent colour. LED dice producing light in the visible spectrum, emit light of wavelengths ranging from around 330 to 780 nanometres – a specified range of wavelengths indicating the colour of light produced. In most white LED's, phosphors absorb the shorter blue wavelengths and

re-emit light at a wider range of longer wavelengths.

1.2.9 Nanometer

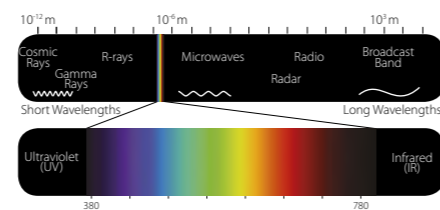
A unit of length equal to one billionth of a meter, 1/1,000,000,000 meters. This scale is used to describe the wavelength of electromagnetic radiation.

1.2.10 Electromagnetic Radiation

Refers to all electromagnetic radiant energy that propagates through all space. The radiation is made up of waves or rays of photons (while radiation can be measured as a particle ray or a wave of particles, with regards to the lighting industry it is best to think of radiation as waves with wavelengths/frequencies). The frequency of the waves of electromagnetic radiation dictates the properties of the radiation, including; radio waves, microwaves, infrared, ultraviolet, x and gamma radiation and visible light.

1.2.11 Visible Spectrum

The visible spectrum refers to the limited part of electromagnetic radiation that humans can see. On average this range is 380-780nm.

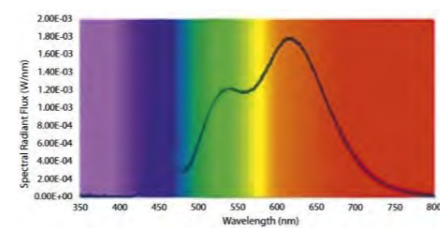


1.2.12 Full Spectrum Lighting

Describes light across the entire visual spectrum.

1.2.13 Spectral Power Distribution

Displayed in graph form, plotting emitted radiation power against wavelength. By integrating the graph/function you would get the wattage of light being emitted.



1.2.14 Ultraviolet (UV)

A range of non-visible radiation with wavelengths less than 380nm beyond the blue end of the visible spectrum. Protection

from the sun's UV radiation is required to prevent degradation of plastics and other materials used in exterior lighting products.

1.2.15 Infrared (IR)

Infrared radiation is non-visible electromagnetic radiation with a longer wavelength than visible light beyond the red end of the spectrum. Infrared radiation includes thermal radiation which is used for thermal imaging.

1.2.16 Luminous Efficacy

Defined as the number of lumens produced from a luminaire, divided by Wattage of power provided, lumens per Watt (lm/W).

1.2.17 Luminous Efficiency

Refers to the percentage of emitted radiation within the visible spectrum compared to the emitted radiation outside the visible spectrum, including UV, IR and heat. A light source that is 45% efficient would turn 45% of the input power into visible light and the remaining 55% would be emitted as non-visible radiation.

1.2.18 Photometric Testing

The science of measuring light intensity, colour and quality of light perceived by the human eye.

1.2.19 Absolute Photometry

The collected photometric data produced from testing a finished and complete solid state lighting system (as supplied to end users) under realistic conditions. Essential for accurate comparison and evaluation of LED lighting products. Data produced allows true specification of luminous flux, chromaticity, efficacy and electrical power. Absolute photometry is the basis of the IESNA LM79 testing standard.

1.2.20 Relative Photometry

Data set produced from comparative photometric testing using a reference light source or by separation of light source from other parts of the system. Some figures may be obtained by normalisation calculations. Provides at best only a partial description of LED product performance.

1.2.21 Integrating Sphere

Part of the testing system used for photometric measurements and is the most accurate way of measuring total luminous flux, colour temperature and colour properties.

1.2.22 Goniophotometer

The goniophotometer is a piece of photometric testing equipment that

measures light intensity at a given angle to the luminaire or light source. The data a goniophotometer records can be used to generate photometric files (e.g. ies, ldt, etc.) which digitally model the output of a luminaire and allows it to be loaded into lighting design software.

1.2.23 Polar Curve

A method of showing the 3d distribution of a luminaire with a 2d graphic. Normally 2 planes of distribution are detailed; C0/C180 which is the plane of distribution if you were to look down the length of the fitting (axial view), and C90/C270 which is the distribution shape looking at the face of the luminaire (transverse view).

1.3 Colourimetry

1.3.1 Colour Space (CIE colour space/ chromaticity diagrams)

A theoretical colour concept illustrated by a series of graphical projections mathematically representing all visible colours of light. The International Commission on Illumination (CIE) has defined several of these spaces – the CIE 1931 colour space and CIE 1976 CIELUV colour space being the most widely referenced in lighting. A three dimensional colour space is projected as a two-dimensional chromaticity diagram on which other colourimetric scales, such as CCT ranges and the Planckian locus, can be overlaid. Measured colourimetric data for LED sources can be plotted and compared to illustrate colour performance and consistency between products and relative to the colour specifications of lighting test standards.

1.3.2 Kelvin (Correlated Colour Temperature – CCT)

In lighting, Kelvin is the system adopted to define the colour of white light with a single-number. It compares the colour of a black body conductor emitting light when being heated to the given temperature in degrees Kelvin (K). It is important to note that CCT can only relate a light source to the closest Kelvin value of a black body conductor, and thus does not account for hue shift within the colour.

1.3.3 Planckian Locus/ Black Body Line

The plot of colour temperature that a black body conductor or tungsten filament produces as it is heated up through degrees Kelvin.

1.3.4 MacAdam Ellipse (SDCM)

The results of a statistical study being plotted on to a colour space diagram.

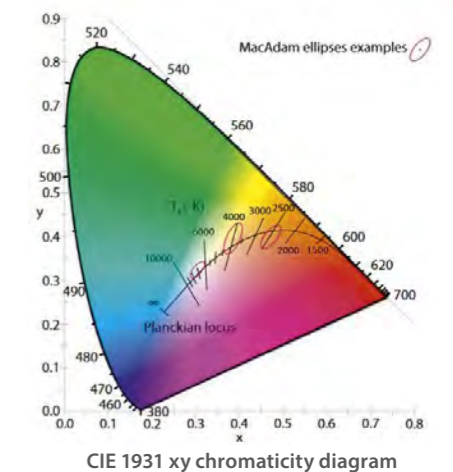
The spread of results is defined within an elliptical plot, the edges of which represent a set deviation in colour from that at its centre. The scale of the ellipse is determined by the number of standard deviations of colour matching or 'steps' used in plotting. The colour variation represented by a 1-step MacAdam ellipse is not visible but becomes progressively more discernible in ellipses with a greater number of steps and becomes apparent to most observers above 2 or 3 steps. MacAdam ellipses are sometimes quoted in the specifications of white LED products to quantify colour consistency. Standard Deviation Colour Matching or SDCM has the same meaning as MacAdam ellipse.

1.3.5 Saturation/Saturated

Describes the amount of colour compared to white within a colour. 0% saturated would be a black and white image, whereas fully saturated would be vivid colours (at the very edge of the CIE colour space diagrams).

1.3.6 Hue

Is the attribute based on classification of colour as reddish, yellowish, greenish, bluish or their intermediaries.

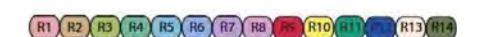


1.3.7 Chromaticity

The quality of colour, independent of brightness, derived from two separate factors, 'hue' and 'saturation'.

1.3.8 Colour Rendering Index (CRI)

Is the method of measuring how well a light source renders a specific set of colours. CRI is based on 14 colour samples, the first 8 in the set are pastel colours arranged around the hue circle. 9 to 14 are colours of special significance (skin tone, organic materials etc.). A blackbody radiator such as an incandescent lamp and natural midday sun (5000-6000K) will have a CRI of 100%.

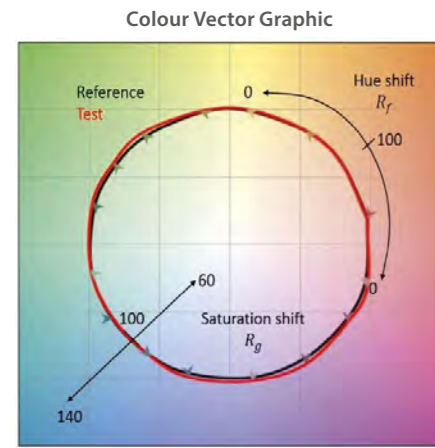


1.3.9 Rendering Average (R_a)

The average of the rendering values for the first 8 colour samples for a given light source.

1.3.10 TM-30-15

The new method to evaluate colour quality. Where CRI only produces 1 data point for fidelity, requiring extra detail such as R_a values. TM-30-15 provides 2 data points as standard; fidelity and gamut. TM-30-15 also provides a suit of graphical representations of the data. Below is an example of the Colour Vector Graphic.



R_g value range varies depending on R_r , when $R_r < 60$ R_g range is ~60-140

1.3.11 CQS (Colour Quality Scale)

Developed by NIST as a potential replacement for CRI. CQS is a colour rendering index very similar to CRI but the mathematics behind the calculation are focused on being more representative to humans.

2. Electrical

2.1 General Electrical

2.1.1 Voltage

Defined as the potential difference across a conductor, often referred to as the electrical force or pressure that drives a circuit. Unit of measurement is Volts (V).

2.1.2 RMS Voltage

When dimming LEDs with PWM DC power. The LED will be receiving 24V signal in PWM format. A standard voltmeter will read this as an RMS voltage, which is the averaged-out voltage over time. So, a product receiving a 50% PWM signal will read as 12V, although in reality it is a switched 24V signal.

2.1.3 Current

Measured in Amperes (Amps, A) is the flow of electric charge. Electric charge flows

when there is a voltage or electric potential difference between connected conductors.

2.1.4 Resistance

Measured in Ohms (Ω) defines the resistance against current flow when a voltage or electrical potential is present.

2.1.5 Wattage

Is the measure of work done, or energy consumed most commonly known as power. Unit of measurement is Watts (W). One Watt is defined as the work done when one ampere (A) of current flows through an electrical potential difference of one volt (V).

2.1.6 Circuit Watts

Is the total number of watts used by a circuit. This includes all losses such as PSU efficiencies, PSU power factory and the efficacy of the lighting product.

2.1.7 Direct Current (DC)

Is when the direction of current flow in a circuit remains constant, the type of supply you would expect from a battery.

2.1.8 Alternating Current (AC)

When the current flow in a circuit alternates or reverses direction at regular intervals. Used for transmission and distribution of industrial and household power.

2.1.9 Constant Current

Often referred to when describing circuits and products' power requirements. A constant current product or component would require a power source (driver) to vary voltage to maintain the desired current. Constant current products are most commonly wired in series circuits. The individual LED chips on the circuit boards of power LED products are supplied with a constant current power source for stable performance and control of thermal output. The voltage supplied varies to accommodate multiple chips. Almost all KKDC LED products employ on-board constant current conversion of an external constant voltage power supply.

2.1.10 Constant Voltage

Often referred to when describing circuits and products' power requirements. A constant voltage component or product would require a power source to vary current to maintain the desired voltage. Constant voltage products are most commonly wired in parallel circuits.

2.1.11 Power Factor (PF)

In AC circuits, power factor is the ratio of real power to apparent power in the circuit.

This power loss is caused by components in the circuit pushing the current flow out of phase with the voltage. A power factor of 1, is achieved when the current and voltage are in unity, whereby the real power and apparent are equal. A power of 0 is achieved when the current is 180° out of phase with the voltage, and no power can be delivered to the load. i.e. when power factor is less than 1, more power is required to produce the desired output.

Example of calculating power factor:

PSU has power factor of 0.85. If you want to power 100W then you will need to input: -

$$100 \div 0.85 = 117.6W$$

2.1.12 Interference

Unwanted distortions in a digital signal or analogue wave. Interference causes control inaccuracies and loss of data. In extreme cases, total loss of control.

2.1.13 Electromagnetic Interference (EMI)

Describes unintentional radio waves produced by electronic devices that can cause interference to receiver devices such as Radios and TVs.

2.1.14 Parasitic Capacitance

The effect of closely located conductors acting as capacitors which can cause unwanted electromagnetic effects, due to induced oscillations into circuits and components that are not intended to be there. This is quite often the major cause of interference within dimming controllers. High inrush currents can also be a result of poorly managed parasitic capacitance.

2.1.15 Inrush Current

Refers to the initial current draw when first switching on a component, circuit or electronic device. The inrush current is often a multiple of the normal operating current. When dealing with LED circuits, high inrush currents can cause chip fatigue due to heat leading to colour drift over time. In extreme cases can lead to premature chip failure.

2.2 Electrical & Electronic Components

2.2.1 Printed Circuit Board (PCB)

An assembly of single or multi-layered mounting surfaces with conductive tracks (and soldered components) found at the heart of most modern electronic devices. Most KKDC products use metal based PCB technologies which provide significant advantages in thermal management. As a result, KKDC's metal based flexible linear

products can be used without additional heat sinking.

2.2.2 Capacitor

A component that temporarily stores electrical charge, having many uses including signal filtering and stabilising voltage and power flow.

2.2.3 Resistor

A circuit component which has a specific resistance measured in Ohms (Ω). May have multiple applications including reducing voltages for component requirements or used as parameter settings for certain IC's.

2.2.4 Integrated Circuit (IC)

A circuit or collection of circuits mounted on a small plate of semiconductor material, most commonly silicon. IC's have a range of applications, for LED technology the most common uses for IC's are voltage and current control within circuits.

2.2.5 Diode

A circuit component with asymmetric conductance, meaning that current will only flow in one direction. Some diodes also emit light (LED's) in response to the passage of current in a phenomenon called electroluminescence.

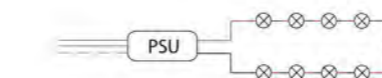
2.2.6 Bridge Rectifier

A combination of 4 diodes arranged in a way that converts AC supply to DC.

2.3 Installation

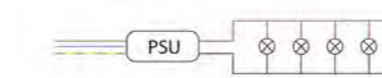
2.3.1 Series Circuit

When components, or products, are wired from positive to negative, or in series, throughout the circuit.



2.3.2 Parallel Circuit

When all components, or products, in the circuit share common positives and negatives.



2.3.3 AWG

Abbreviation for 'American Wire Gauge' – a numerical scale for wire size. The AWG number relates to the diameter, cross sectional area and thus the current carrying capacity of electrical wires. By contrast, in

the Metric system electrical conductors are described directly by cross sectional area in mm^2 or in stranded wires by the number and size of the strands.

2.3.4 IP Rating

Ingress protection rating refers to a specific set of numbers that refer to a products ability to prevent intrusion from solid objects (including fingers and dust) and water.

IPX-

The first digit of the IP code indicates the degree of protection against contact with internal components and the degree of protection against foreign bodies intruding into the product enclosure.

0 No special protection

- 1 Protection from large solid objects, greater than 50mm in diameter.
- 2 Protection against finger sized objects no greater than 80mm in length and 12mm in diameter.
- 3 Protection from entry by tools, wires, etc., with a diameter of thickness greater than 2.5mm.
- 4 Protection from entry by solid objects with a diameter or thickness greater than 1.0mm
- 5 Dust protected, limited ingress of dust permitted.
- 6 Dust tight.

IP-X

The second digit indicates the degree of protection the product has against various forms of moisture and liquid.

- 0 No special protection. Limited ingress permitted.
- 1 Protection from dripping water. Limited ingress permitted.
- 2 Protection from vertically dripping water when enclosure is tilted to 15° from vertical. Limited ingress permitted.
- 3 Protection from sprays of water at 60° from vertical. Limited ingress permitted.
- 4 Protection from low pressure water jets from all directions. Limited ingress permitted.
- 5 Protection from high pressure water jets from all directions. Limited ingress permitted.

- 6 Protection against heavy seas, or powerful jets of water. Limited ingress permitted.
 - 7 Protection against temporary immersion at a depth of 150~1000mm.
 - 8 Protection against complete, continuous submersion in water at a specified depth*.
- * Submersion depth must be specified by the manufacturer.

2.4 Lighting Control

2.4.1 Dynamic White

A multi-channelled white LED luminaire. Allowing customer to customise the mix of 2 (or more) CCTs from a luminaire.

2.4.2 Dim-to-Warm

KKDC have adopted this term to describe the control of LEDmix products to match Halogen output with a single 0-10V/1-10V control input.

2.4.3 Dimmable/Dimming

Whether or not the system has the ability to vary the light output via input control.

2.4.4 Analogue Dimming

Describes dimming systems that rely on analogue signals for control. Such as 1-10v, 0-10V, Leading and Trailing edge (Phase/Triac dimming). Interference benefits due to simplicity but lacks flexibility and customisation beyond what the initial wiring allows.

2.4.5 Digital Dimming

Describes a system that relies on a digital communication protocol, such as DALI or DMX. Can be complex to install and program but offer high levels of control and customisation. Digital systems are more susceptible to interference than analogue counter parts.

2.4.6 Control Gear

In general lighting, control gear is a term for any additional electronics that are required to power or control a luminaire, such as; a ballast for florescent, PSU or driver for LED or a dimming sub-controller.

2.4.7 DALI – Digitally Addressable Lighting Interface

A digital communication protocol originally developed for the centralised control of fluorescent lighting in buildings and now also used for control of LED installations.

2.4.8 DMX

A digital communication protocol for control of dimming, colour change and other control parameters. Used extensively in the theatre and entertainment industry and has become a commonly used method for digital control of architectural lighting.

2.4.9 Shield

All control cables should be shielded from external interference. This is done by means of producing a faraday cage; either metal foiling or twisted cables grounded at either transmission or reception ends of the communication chain.

2.4.10 1-10V

A standard convention for control of dimming used in LED lighting – originally developed for fluorescent lighting. An analogue control voltage is varied between 0 and 10 Volts by means of a variable resistor or other controller and produces a corresponding change in the pulse width modulated power supplied to an LED circuit and thus the brightness.

The following is helpful for quick 1-10V on-site testing:

Shorted (10V) = lowest output (0%)

Open (0V) = highest output (100%)

2.4.11 0-10V

Often referring to the same operation of 1-10V, 0-10V can mean that a sub-controller or dimmable fitting is set up to receive a control voltage generated by the master controller. A resistive dimmer may not work with a 0-10V system so it is worth checking the exact meaning from the manufacturer.

KKDC have adopted the following understanding:

- 1-10V – device will operate and respond to resistive control, and receiving supply control voltage.
- 0-10V – device will only operate when supplied with a control voltage.

2.4.12 Sink/Source input

If the control system generates a voltage that is fed into the control gear the control system is the source and control gear sinks. If the control system is a passive resistive system controlling a voltage generated at the control gear then the controller is a sink and the control gear source.

2.4.13 KNX

A standardised control protocol for intelligent building control. The standard is administered by the KNX Association,

where by a list of compliant manufacturers are listed on the KNX website. Its aim is to standardise control protocol to avoid compatibility issues through the systems used in building control.

2.4.14 Power Supply Unit (PSU)

Refers to the device that produces the, normally low voltage, DC signal for equipment and lighting products. PSUs have a wide range of power variations available with various constant current or constant voltage outputs. Dimmable PSUs are also available, which normally receive a control signal and output a PWM supply to the light source.

2.4.15 Driver

General term for a power supply unit or power supply circuit. KKDC have adopted the following understanding:

- PSU – for constant voltage power sources
- Driver – for devices performing constant current power conversion

2.4.16 Pulse Width Modulation (PWM)

An electronic method for varying the power supplied to LED light sources through rapid switching. Adjustment of pulse duration or duty cycle gives rise to variations in brightness for dimming and colour mixing.

2.4.17 visDIM

KKDC's term for the technology in our range of dimmable sub-controllers and dimmable PSUs, which utilise a high frequency PWM output of 3.3KHz. visDIM provides extremely stable dimming environments for a range of dimming protocols.

2.4.18 Integral

A popular term that describes the inclusion of certain aspects of control or power. For example, the KKDC SUMO product uses an integral PSU and 1-10V controller. This means that the PSU and 1-10V controller is supplied as a part of the overall luminaire; it is supplied by default internally.

2.4.19 Phase Dimming (leading edge, trailing edge, triac dimming)

An analogue dimming method that relies on the mains or line voltage AC signal to trigger a 'triac' switch. In simple terms the triac produces an AC PWM signal at the same frequency as the AC system.

2.5 LED

2.5.1 Bin/Binning

During manufacture, LED dice will have significant performance variations and can

be sorted or 'binned' in to smaller groups according to spectral distribution, luminous intensity and forward voltage for example. The application of phosphors during the packaging of white LEDs introduces further variations in colour and performance which may in turn be 'binned'. The scale and parameters of the bins used will often determine the colour consistency and cost of finished white LED products – (coordinates (x, y or u', v') of quadrangles on colour space plots are used to document colour consistency of binned white LEDs).

2.5.2 Phosphor

Absorbs a specific spectrum of wavelengths and re-emits light in a wider range of wavelengths. In most white LEDs, the die is emitting a small range of blue wavelengths and the phosphor is absorbing this and re-emitting light across the green and red spectrums.

2.5.3 Die

Term for the manufactured semiconductor junction component/s within an LED package. A 3 chip or tri-chip LED having 3 dice in a single LED package.

2.5.4 Package

Package or LED package is the outer component of an LED that contain and protects the LED chip.

2.5.5 LED Array

An assembly of LED packages on a printed circuit board or substrate.

2.5.6 Heat Sink

In LED lighting – a component or assembly to conduct and dissipate heat away from an LED package. KKDC products have heat sinking elements as integral parts of the product design and require no additional heat sink under all normal operating conditions.

2.5.7 LED Lifetime

The useful lifetime of an LED light source in hours.

L70 (lifetime to 70% of initial lumen output) has become a standard way of stating lifetime. The length of time an LED light source actually performs to an acceptable standard depends on most aspects of design and manufacture including quality of source components and thermal, electrical and environmental operating conditions.

Poor design, components, manufacture or operation can result in premature loss of light output, colour shifts and failure. The LM80 lumen maintenance test can provide

data that can be extrapolated to give more reliable L70 lifetime figures.

2.5.8 LED Package

An assembly or encapsulation of one or more LED dice that contains wire bond connections along with any phosphors, optical elements and thermal or mechanical structures.

The complete LED component for incorporation into arrays and finished products.

2.5.9 Temperature – $T_a/T_c/T_j$

T_a – Ambient temperature;

T_c – Reference point (Case) temperature;

T_j – Junction temperature.

Values for these are often quoted in the testing of LED components, specification of LED products and discussion of thermal design of LED products.

T_j is the temperature at the semiconductor junction within an LED die. Heat produced must be removed by efficient thermal design of LED package, PCB and housing in order that T_j does not exceed a specified maximum (T_j max) or degradation of performance and failure may occur.

T_a is the temperature of the surroundings. In KKDC specifications, T_a is given as a range of temperatures within which the product is designed to operate.

T_c in testing of products, may refer to any named reference point where temperature is measured. In KKDC products T_c is given as a maximum value which the outside of a product housing or mounting may reach in operation within the T_a range given.

2.5.10 Thermal Management

Referring to the practical steps taken by the designers of LED packages and LED lighting products, to ensure that heat is conducted and dissipated away from the light producing junction within an LED package. In general, higher LED light output requires more electrical power which, in turn, generates more heat. Failure to address this adequately leads to degradation of output power, colour quality and ultimately premature LED failure.

2.5.11 Thermal Resistance

Describes the heat conducting or transferring properties of a material, component or assembly. Expressed in degrees Celsius per Watt ($^{\circ}\text{C}/\text{W}$). Thermal resistance is minimised in the design of high quality LED lighting products.

3. Standards

3.1 Standards

3.1.1 LM79-08

LM79-08 defines the "Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products" developed by the IES. It provides absolute photometric, colourimetric and electrical data for luminous flux, chromaticity, CCT and CRI for complete LED products. LM79 allows fair comparison of LED lighting products and evaluation for use in particular environments.

KKDC products have been independently tested by an accredited UK laboratory and testing facility to the LM79 standards.

3.1.2 LM80

Developed by the IES it is the standard for "Approved method for measuring lumen depreciation of LED light sources." It is important to note that LM80 covers light sources (LED chips, arrays and modules) not lamps and luminaires. It provides guidance for measuring lumen maintenance by testing for at least 6000 hours at 3 different case temperatures: 55 $^{\circ}\text{C}$, 85 $^{\circ}\text{C}$ and another manufacturer specified.

3.1.3 TM-21

TM-21 provides the extrapolation method for LM-80 measurements. This provides lumen maintenance predictions for either 5.5 or 6 times the measured data, dependent on sample size tested.

3.1.4 1789-2015

IEEE 1789-2015 Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers

3.1.5 CE

Mandatory conformity marking for products sold in the European Economic Area (EEA). The marking is the manufacturer's declaration that the product meets the specific requirements applicable to that product.

3.1.6 60598

BS EN '60598-1:2008 - Luminaires. General requirements and tests' sets out the general requirements for safety with regards to classification, marking, mechanical and electrical design and thermal management. This standard should be considered for all lighting prior to CE marking.

3.1.7 55015

BS EN 55015:2006+A2:2009 Limits and methods of measurement of radio

disturbance characteristics of electrical lighting and similar equipment

3.1.8 61547

BS EN 61547:2009 Equipment for general lighting purposes. EMC immunity requirements

3.1.9 62471

BS EN 62471:2008 Photobiological safety of lamps and lamp systems. Specifically looks at the levels of Blue and UV light and produces a scale of use/exposure/safety.

3.1.10 RoHS Directive 2002/95/ECN

The Restriction of Hazardous Substances Directive (RoHS), is a European directive that has become law in EC member countries that restricts the use of several hazardous materials in the manufacture of electronics.

3.1.11 WEEE

The Waste Electrical and Electronic Equipment Directive is the European Community directive 2002/96/EC developed to reduce the amount of 'Waste Electrical and Electronic Equipment' being scrapped into landfills by promoting recycling.

3.2 Organisations

3.2.1 UL (Underwrites Laboratories)

A private organisation which tests and lists electrical and other equipment for electrical and fire safety according to recognised and other safety standards.

The KKDC file numbers for luminaires is E356145, for controllers is E474410

3.2.2 Intertek

Intertek is a multinational testing laboratory that provides certification and listing services.

3.2.3 UKAS

The United Kingdom Accreditation Service, quoted from the UKAS website, about UKAS section; 'The United Kingdom Accreditation Service is the sole national accreditation body recognised by government to assess, against internationally agreed standards, organisations that provide certification, testing, inspection and calibration services.' UKAS also provide an online accreditation Test Schedule, which anybody can use to see what companies are accredited and what measurements the organisation can perform under the accredited conditions.

3.2.4 IEC

International Electrotechnical Commission, quoted from IEC website, about IEC; 'Millions of devices that contain electronics,

and use or produce electricity, rely on IEC International Standards and Conformity Assessment Systems to perform, fit and work safely together.' It is the IEC for instance, who produced IEC 60598-1 for Luminaires – Part 1: General requirements and tests

3.2.5 IEEE

The Institute of Electrical and Electronics Engineers is the largest professional association. Its objectives are the education and technical advancements in the disciplines of Electrical, electronic engineering, telecommunications and computer engineering.

3.2.6 BSI

British Standards Institution. A business standards company providing manufacturers and service providers with assessment, certification and specification of British, European and international standards and quality marks.

3.2.7 IESNA

Illuminating Engineering Society of North America (IES or IESNA) are a non-profit organisation whose mission statement is: 'The IES seeks to improve the lighted environment by bringing together those with lighting knowledge and by translating that knowledge into actions that benefit the public.'

The IES have developed some of the now commonplace global standards for measuring light such as LM79, and LM80. The IES constantly updates standards to reflect the evolving industry.

3.2.8 ANSI

The American National Standards Institute co-ordinates and accredits national and international standards meeting the needs of American organisations and companies. Lighting performance is one area in which

their standards have reached international prominence.

3.2.9 OSHA

Occupational Safety and Health Administration is the main federal agency in the U.S. that is charged with the enforcement of safety and health legislation. Their Nationally Recognised Testing Laboratory (NRTL) Program recognises independent or private sector laboratories or organisations and signifies that qualifications specified in the regulations are met and maintained.

3.2.10 ISO

Comprised of representatives from various national standards organisations, the International Organisation for Standardisation produces international standards.

3.2.11 NIST

National Institute of Standards and Technology, a measurement and standards laboratory.

4. Manufacturing Terms

4.1 Machining

4.1.1 Extruding

Extruding or extrusion is a process of manufacturing an object with a fixed cross section. The process involves a material being pushed or drawn through a mould or die of the desired cross section. KKDC uses this process for housing and diffused and clear cover production.

4.1.2 CNC Machining

An automated machining process in manufacturing; drilling, milling or cutting material as per a digital program or drawing. KKDC utilises in-house CNC machining for manufacture of end caps and SIL end caps for example.

4.1.3 Ultrasonic Welding

A low heat method for joining suitable plastics, utilised in KKDC's Luna range.

4.1.4 SMT

SMT stands for surface-mount technology. Replacing through-hole techniques in the production of electronic circuit boards, SMT allows more compact products and more automation in their manufacture. KKDC has SMT machine processes in the manufacture of all our linear LED light sources.

4.2 Surface Treatment

4.2.1 Anodising

An electrolytic process producing a very hard oxide layer on the surface of aluminium parts. Anodising can protect against corrosion in harsh chlorinated or marine environments and can also incorporate coloured dyes for decorative effect.

4.2.2 Powder Coating

Is a painting method where the coating is applied as a free-flowing, dry powder via electrostatic and cured under heat. This method of coating forms a 'skin' finish.

4.2.3 Silicone

Any one of a class of largely inert, synthetic polymer compounds used for sealing and encapsulation in some KKDC products. Thermal, optical and environmental factors govern the choice of compound for a particular application.

4.2.4 VP – Vacuum Plating

A protective conformal coating produced by vacuum deposition polymerisation techniques on circuit boards and assemblies to prevent dust and moisture ingress. KKDC use this process with some products to enhance waterproofing and protection of components.

1. THESE TERMS AND CONDITIONS OF SALE ESTABLISH THE RIGHTS, OBLIGATIONS AND REMEDIES OF KKDC AND THE CUSTOMER WHICH APPLY TO ANY CONTRACT FOR THE PURCHASE OF KKDC'S GOODS. NO ADDITIONAL OR DIFFERENT TERMS OR CONDITIONS, WHETHER CONTAINED IN THE CUSTOMER'S ORDER FORM OR ANY OTHER DOCUMENT OR COMMUNICATION PERTAINING TO THE CUSTOMER'S ORDER, WILL BE BINDING UPON KKDC UNLESS ACCEPTED IN WRITING, AND KKDC HEREBY EXPRESSLY OBJECTS TO ANY SUCH TERMS AND CONDITIONS WHICH SHALL BE DEEMED INEFFECTIVE AND ARE REJECTED.

2. Interpretation

- 2.1 In these conditions, unless the contrary intention appears:
- 2.1.1 **Confidential Information** has the meaning as set out in clause 15.1;
 - 2.1.2 **contract** means any contract or agreement whatsoever made by KKDC to supply any goods to the customer, whether resulting from the acceptance by KKDC of an order given by a customer, the acceptance by a customer of a quote from KKDC or otherwise;
 - 2.1.3 **contract price** means the total of the prices specified for the Supply by KKDC to a customer;
 - 2.1.4 **KKDC** means KKDC Pty Ltd ACN 117 624 370 being a company duly incorporated under the laws of Australia and having its registered office at Suite 305, 160 Rowe Street, Eastwood in the State of New South Wales;
 - 2.1.5 **customer** means a customer of KKDC who buys goods from KKDC;
 - 2.1.6 **goods** means any or all of the products the subject of Supply by KKDC to a customer;
 - 2.1.7 **order** means any offer to purchase the goods from KKDC made by a customer;
 - 2.1.8 **parties** means both KKDC and the customer;
 - 2.1.9 **party** means KKDC and the customer;
 - 2.1.10 **price** means, in relation to any goods, the price of those goods;
 - 2.1.11 **Supply** means the supply of any goods the subject of any contract; and
 - 2.1.12 **Tax** means sales tax, GST, value added tax, retail tax or any other tax or duty that may be imposed on or in relation to any Supply made by KKDC;
 - 2.1.13 a reference to a clause is a reference to a clause of these conditions;
 - 2.1.14 where any word or phrase is given a definite meaning in these conditions, any part of speech or other grammatical form of that word or phrase has a corresponding meaning;
 - 2.1.15 a reference to a statute, statutory provision or regulation includes all amendments, consolidations or replacements thereof;
 - 2.1.16 headings and captions are for convenience or reference only and do not alter the meaning or interpretation of these conditions;

3. Orders & Specifications

- 3.1 The customer shall be responsible for ensuring the accuracy of the terms of any order (including any applicable specification) submitted by the customer, and for giving KKDC any necessary information relating to the Supply within a sufficient time to enable KKDC to perform the contract in accordance with its terms.
- 3.2 The quantity, quality and description of and any specification for the Supply shall be those set out in the quotation (if accepted by the customer) or the customer's order (if accepted by KKDC).
- 3.3 If the goods are to be manufactured or any process is to be applied to the goods by KKDC in accordance with a specification submitted by the customer, the customer shall indemnify

KKDC against all loss, damages, cost and expenses awarded against or incurred by KKDC in connection with or paid or agreed to be paid by KKDC in settlement of any claim for infringement of any patent, copyright, design, trade mark or other industrial or intellectual property rights of any other person which results from KKDC's use of the customer's specification.

- 3.4 KKDC reserves the right to make any changes in the specification of the goods which are required to conform to any applicable statutory requirements or, where the goods are to be supplied to the customer's specification, which do not materially affect their quality or performance.
- 3.5 No order which has been accepted by KKDC may be cancelled by the customer except with the written consent of KKDC and on terms that the customer shall indemnify KKDC in full against all loss (including loss of profit), costs (including the cost of all labour and material used), damages, charges and expenses incurred by KKDC as a result of cancellation.
- 3.6 The customer may issue a written change order to request changes within the scope of the contract. Such requests are subject to acceptance by KKDC.
- 3.7 KKDC will inform the customer if the change will cause an increase in KKDC's costs or time required to perform the contract. The change will become effective, and KKDC will commence performance, only upon execution of a written amendment to the contract.
- 3.8 Unless otherwise agreed in writing, upon performance of the change order KKDC will be entitled to invoice the customer and the customer shall be obligated to pay for the costs of the change, even if KKDC agreed to proceed with the change prior to execution of an amendment.
- 3.9 KKDC reserves the right to establish minimum order sizes or to reject purchase orders if KKDC does not have sufficient capacity to fulfil such orders.
- 3.10 KKDC reserves the right to change its prices if series production ends, or if, from the time of quotation:
 - 3.10.1 raw material prices have changed; or
 - 3.10.2 actual volume is less than forecast volume; or
 - 3.10.3 there is any significant change in economic circumstances.

4. Terms of Payment

- 4.1 Time for payment of the price for any Supply is of the essence in any contract.
- 4.2 Payment must be made in the applicable currency quoted.
- 4.3 If KKDC:
 - 4.3.1 accepts an order, and KKDC has not agreed in writing to extend credit to the customer, the customer must pay the contract price to KKDC in full on delivery of the goods; or
 - 4.3.2 has agreed in writing to extend credit to the customer, the customer must pay the contract price to KKDC in full prior to the end of the month following the date of the invoice sent by KKDC in relation to that Supply.
- 4.4 If the customer is delinquent in its payment obligation to KKDC, KKDC may upon written notice to the customer stop work and withhold future shipments until all delinquent amounts and late interest, if any, are paid. Additionally, KKDC may at its option:
 - 4.4.1 repossess goods for which payment has not been made;
 - 4.4.2 charge interest on delinquent amounts at the maximum rate permitted by law for each full or partial month;
 - 4.4.3 recover all costs of collection, including but not limited to reasonable legal fees;
 - 4.4.4 combine any of the above rights and remedies as may be permitted by applicable law.

- 4.5 These remedies are in addition to all other remedies available at law or in equity.
- 4.6 KKDC may re-evaluate the customer's credit standing at all times.
- 4.7 If KKDC reasonably determines in its sole discretion that the customer fails to qualify for the above payment terms at any time, then KKDC may without notice to Buyer modify or withdraw credit terms, including but not limited to requiring advance payment, guarantees, or other security.

5. Setoff

- 5.1 The customer will not set off or recoup invoiced amounts or any portion thereof against sums that are due or may become due from KKDC.

6. Taxes

- 6.1 All prices are in the applicable currency of the contract.
- 6.2 If, notwithstanding the provisions hereof, the customer's terms and conditions of purchase are deemed to apply by a court of competent jurisdiction, then KKDC reserves the right to either:
 - 6.2.1 modify the prices (including retroactively) according to the additional level of risk and responsibility that the customer's terms and conditions require KKDC to undertake; or
 - 6.2.2 cancel the contract any time after such determination without liability for such termination other than for the goods already delivered on the terms set out herein;
- 6.3 Unless otherwise expressly agreed by, or shown on an invoice issued by KKDC, the prices specified do not include any charges for services such as packaging; insurance; or brokerage fees. KKDC's pricing excludes all taxes (including but not limited to, sales, use, excise, value-added, and other similar taxes), duties and charges.
- 6.4 The customer is responsible for all such taxes, duties and charges resulting from a contract or as a result of KKDC's performance hereunder, whether now or hereafter imposed, levied, collected, withheld, or assessed.
- 6.5 If KKDC is required to impose, levy, collect, withhold or assess any such taxes, duties or charges on any transaction under these terms, then in addition to the price, KKDC will invoice the customer for such taxes, duties, and charges unless at the time of order placement the customer furnishes KKDC with an exemption certificate or other documentation sufficient to verify exemption from such taxes, duties or charges.

7. Delivery and Costs

- 7.1 KKDC will not be liable for any delays or increased costs caused by a failure of the customer, such as delays in providing necessary information.
- 7.2 KKDC may, but is not obliged to, deliver the goods to the customer's premises, in accordance with KKDC's usual practices, but if:
 - 7.2.1 the customer requests another method of delivery; or
 - 7.2.2 KKDC elects to use an independent courier to deliver the goods; KKDC may arrange another form of transport with that independent courier by a separate contract, and the customer must pay to KKDC on demand any costs of that courier incurred by KKDC.
- 7.3 KKDC reserves the right to quote additional charges for any special routing, packing, labelling, handling or insurance required by the customer.
- 7.4 Where the goods are to be delivered in instalments, each delivery shall constitute a separate contract and failure by KKDC to deliver any one or more of the instalments in accordance with these conditions or any claim by the customer in respect of any one or more instalments shall not entitle the customer to treat the contract as a whole as repudiated.

7.5 If KKDC fails to deliver the goods (or any instalment) for any reason other than any cause beyond KKDC's reasonable control or the customer's fault, and KKDC is accordingly liable to the customer, KKDC's liability is limited to the excess (if any) of the cost of the customer (in the cheapest available market) of similar goods to replace those not delivered over the price of the goods.

7.6 If delivery of the goods fail (otherwise than by reason of any cause beyond the customer's reasonable control or by reason of KKDC's fault) then, without prejudice to any other right or remedy available to KKDC, KKDC may:

7.7 Store the goods at the customer's risk and expense and, may invoice the customer just as if there had been no delay in delivery and charge the customer for the reasonable costs (including insurance) or storage; or

7.7.1 Sell the goods at the best readily obtainable and (after deducting all reasonable storage and selling expenses) account to the customer for the excess over the price under the contract or charge the customer for any shortfall below the price under the contract

8. Export and Import Compliance

8.1 The customer is responsible for compliance with all import and export control laws and regulations. The customer will obtain import, export, and re-export approvals and licenses required for goods delivered and will retain documentation evidencing compliance with those laws and regulations.

8.2 KKDC will not be liable to the customer for any failure to provide goods as a result of government actions that impact KKDC's ability to perform, including:

8.2.1 The failure to provide or the cancellation of export or re-export licenses;

8.2.2 Any subsequent interpretation of applicable import, transfer, export or re-export law or regulation after the date of any order or commitment that has a material adverse effect on KKDC's performance; or

8.2.3 Delays due to the customer's failure to follow applicable import, export, transfer, or re-export laws and regulations.

8.3 If the customer designates the freight forwarder/independent courier for export shipments from Australia, then the customer's forwarder/independent courier will export on the customer's behalf and the customer will be responsible for any failure of the customer's forwarder/independent courier to comply with all applicable export requirements. KKDC will provide the customer's designated freight forwarder/independent courier with required commodity information.

9. Hardship

9.1 If for any reason KKDC's production or purchase costs for the goods (including without limitation costs of energy, equipment, labour, regulation, transportation, raw material, or goods) increases over KKDC's production or purchase costs for the goods on the date of entering into a contract, then KKDC may, by written notice to the customer of such increased costs, request a renegotiation of the price of the goods under a contract. In the event the parties are not able to agree on a revised price within 10 days after a request for renegotiation is given, then KKDC may terminate the contract on 10 days written notice to the customer.

10. Acceptance

10.1 Unless other acceptance criteria have been expressly agreed to by the parties under a contract the customer will inspect goods within a reasonable period after delivery not to exceed 30 calendar days.

10.2 Goods are presumed accepted unless KKDC receives written notice of rejection explaining the basis for proper rejection within the same timeframe.

10.3 KKDC will have a reasonable opportunity to repair or replace rejected goods, at its option.

10.4 Following initial delivery, the party initiating shipment will bear the risk of loss or damage to goods in transit.

10.5 If KKDC reasonably determines that rejection was improper, the customer will be responsible for all expenses caused by the improper rejection.

10.6 Subject to clause 10.5, KKDC assumes shipping costs in an amount not to exceed normal surface shipping charges to KKDC's designated facility for the return of properly rejected goods.

11. Title and Property

11.1 The title to and property in the goods will not pass from KKDC to the customer until the customer has paid the contract price in full (other than the costs of any independent courier referred to in clause 7.2) to KKDC in accordance with these conditions. Until then, the customer:

11.1.1 holds the goods in a fiduciary relationship with KKDC as bailee only;

11.1.2 must keep the goods separate from other items it holds and must not resell or transfer possession of the goods;

11.2 If the customer:

11.2.1 fails to pay the contract price in full when due;

11.2.2 pays for the goods by cheque (in whole or in part) and that cheque is not met on presentation;

11.2.3 commits any act of bankruptcy, becomes bankrupt, or is insolvent under administration, as defined in section 9 of the Corporations Act;

11.2.4 is or becomes insolvent within the meaning as given by any of section 9 and subsection 95A (2) of the Corporations Act or regulation 7.5.02 of the Corporations Regulations; or

11.2.5 has a controller appointed, as defined in section 9 of the Corporations Act, in respect of any of the customer's property;

11.3 KKDC may:

11.3.1 enter onto the premises where the goods are situated; and

11.3.2 repossess the goods, notwithstanding that the goods may have been affixed to any structure by KKDC or the customer, and if necessary for that purpose, may sever the goods from any structure to which they may have been affixed.

11.4 If KKDC repossesses the goods, it reserves the right to resell them.

11.5 The customer must also indemnify and keep KKDC indemnified against, and pay to KKDC, all expenses, losses and damages incurred or sustained by KKDC as a result of, or in relation, to KKDC exercising its rights under:

11.5.1 this clause;

11.5.2 under any other term, express or implied, of these conditions; or

11.5.3 otherwise at law or in equity, and

11.5.4 any bank or other costs, charges or expenses incurred by KKDC resulting from any customer's cheque not being met on presentation

12. Risk and Insurance

12.1 Notwithstanding clauses 7 and 11, the goods will be at the customer's risk after they leave KKDC's premises.

12.2 If the customer requests it in writing, KKDC may, at the customer's expense, insure the goods.

13. Compliance with Laws

13.1 The customer shall comply with all local laws and regulations applicable to the installation, use or

import of all goods delivered under a contract. As a condition of purchase the customer shall comply with all applicable export control laws and regulations of Australia, the United States, the European Union and any other country having proper jurisdiction and shall obtain all necessary export licenses in connection with any subsequent export, re-export, transfer and use of all goods delivered under a contract.

14. LIMITED WARRANTY

14.1 KKDC DISCLAIMS ALL WARRANTIES, WHETHER WRITTEN, EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.

14.2 No provision of these conditions purports to exclude, restrict or modify or have the effect of excluding, restricting or modifying:

14.2.1 the application in relation to the supply of the goods of any provision of the Trade Practices Act 1974 or of any similar State or Federal legislation that may not be excluded, restricted or modified;

14.2.2 the exercise of a right conferred by such provision; or

14.2.3 subject to clauses 14.2.3.1, 14.2.3.2, 14.2.3.3 and 14.2.3.4 any liability of KKDC for breach of a condition or warranty implied by such a provision of Division 2 of Part V of the Trade Practices Act 1974, or of any similar State or Federal legislation where KKDC may similarly limit its liability, will be limited to any one of the following:

14.2.3.1 the replacement of the relevant goods or the supply of equivalent goods;

14.2.3.2 the repair of the relevant goods (excluding costs of removal and installation)

14.2.3.3 the payment of the costs of replacing the relevant goods, or of acquiring equivalent goods; or

14.2.3.4 the payment of the costs of having the relevant goods repaired; and KKDC may in its sole discretion determine which of the foregoing limits will apply in any case.

15. Confidentiality

15.1 'Confidential Information' means:

15.1.1 any information, technical data or know-how in whatever form, including, but not limited to, documented information, machine readable or interpreted information, information contained in physical components, mask works and artwork, that is clearly identified as being confidential, proprietary or a trade secret;

15.1.2 business related information including but not limited to pricing, manufacturing, or marketing;

15.1.3 the terms and conditions of any proposed or actual contract between the parties;

15.1.4 either party's business policies, or practices; and

15.1.5 the information of others that is received by either party under an obligation of confidentiality.

15.2 The receiving party will keep all Confidential Information disclosed hereunder confidential for a period of 5 years following the expiration or termination of a contract.

15.3 Each party will retain ownership of its Confidential Information including, without limitation, all rights in patents, copyrights, trademarks and trade secrets.

15.4 No right or license is granted hereby to a party or its customers, employees or agents, expressly or by implication, with respect to the Confidential Information or any patent, patent application or other Confidential right of the

other party, notwithstanding the expiration of the confidentiality obligations stated herein.

15.5 KKDC agrees to use the Confidential Information of the customer only to provide goods for the customer. The customer agrees that it will not use or disclose KKDC's Confidential Information for any purpose besides the purchase or use of goods under these terms.

15.6 The customer will not use KKDC's Confidential Information for the manufacture or procurement of parts that are the subject of these conditions or any similar parts or to cause such goods to be manufactured or procured from any other source.

15.7 The receiving party has no duty to protect information that is proven by written records to be:

15.7.1 publicly known at the time of disclosure or becomes publicly known through no fault of recipient;

15.7.2 known to recipient at the time of disclosure through no wrongful act of recipient;

15.7.3 received by recipient from a third party without restrictions similar to those in this section; or

15.7.4 independently developed by recipient

16. Intellectual Property

16.1 Any design, source code, drawing, description, model, documentation, sample and/or the like, created by KKDC, shall remain the intellectual property of KKDC

16.2 Intellectual property may only be used under license from KKDC

16.3 The customer agrees not to remove or alter any indicia of manufacturing contained on or within the goods, including without limitation trademarks on nameplates or cast or machined components.

17. LIMITATION OF LIABILITY

17.1 IN NO EVENT WILL KKDC BE LIABLE TO COMPENSATE OR INDEMNIFY THE CUSTOMER FOR ANY LOSS OR DAMAGE SUFFERED OR INCURRED BY THE CUSTOMER IN RELATION TO THE ORDER, THE GOODS, OR THEIR DELIVERY, MIS-DELIVERY OR NON-DELIVERY FOR ANY INCIDENTAL DAMAGES, CONSEQUENTIAL DAMAGES, SPECIAL DAMAGES, PUNITIVE DAMAGES, STATUTORY DAMAGES, INDIRECT DAMAGES, LOSS OF PROFITS, LOSS OF REVENUES, OR LOSS OF USE, EVEN IF INFORMED OF THE POSSIBILITY OF SUCH DAMAGES.

17.2 KKDC'S LIABILITY FOR DAMAGES ARISING OUT OF OR RELATED TO THESE CONDITIONS SHALL IN NO CASE EXCEED THE AMOUNT ACTUALLY PAID TO KKDC FOR THE GOODS FROM WHICH THE CLAIM AROSE. TO THE EXTENT PERMITTED BY APPLICABLE LAW, THESE LIMITATIONS AND EXCLUSIONS WILL APPLY REGARDLESS OF WHETHER LIABILITY ARISES FROM BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE), BY OPERATION OF LAW, OR OTHERWISE. NOTHING HEREIN, HOWEVER, IS INTENDED TO DISCLAIM KKDC'S LIABILITY FOR PERSONAL INJURY OR DEATH CAUSED BY DEFECTIVE GOODS TO THE EXTENT SUCH LIABILITY IS MANDATED BY APPLICABLE LAW.

17.3 The customer's sole remedy for any defective goods will be the repair or replacement of the defective goods.

18. Governing Law

18.1 Any Supply by KKDC to the customer, and the construction and interpretation of these conditions, shall be governed by the laws of New South Wales including the United Nations Convention on the International Sale of Goods of 1980 (and any amendments or successors thereto) and any dispute not resolved by the parties shall be subject to the exclusive jurisdiction of the Courts of New South Wales.

19. Dispute Resolution

19.1 If a dispute arises out of or relates to these conditions, or the breach, termination, validity or subject matter thereof, or as to any claim in

tort, in equity or pursuant to any domestic or international statute or law, the parties to the contract and to the dispute expressly agree to endeavour in good faith to settle the dispute by mediation administered by the Australian Commercial Disputes Centre (ACDC) before having recourse to arbitration.

19.1.1 A party claiming that a dispute has arisen, must give written notice to the other party to the dispute specifying the nature of the dispute.

19.1.2 On receipt of the notice specified in clause 19.1.1, the parties to the dispute must within 7 days of receipt of the notice seek to resolve the dispute.

19.1.3 If the dispute is not resolved within 7 days or within such further period as the parties agree then the dispute is to be referred to ACDC.

19.1.4 The mediation is to be conducted in accordance with ACDC Mediation Guidelines which set out the procedures to be adopted, the process of selection of the mediator and the costs involved and which terms are deemed incorporated.

19.2 In the event that the dispute has not settled within 28 days or such other period as agreed to in writing between the parties after the appointment of the mediator, the dispute is to be submitted to arbitration (administered by ACDC) and conducted in accordance with ACDC's Arbitration Guidelines available at <https://www.acdcld.com.au>. The arbitrator is not to be the same person as the mediator.

19.2.1 Any such arbitration is to be administered by ACDC.

19.2.2 The appointing authority is to be ACDC.

19.2.3 The number of arbitrators is to be one.

19.2.4 The place of arbitration is to be New South Wales, Australia.

19.2.5 The language to be used in the arbitral proceedings is to be English.

20. General

20.1 Any notice required or permitted to be given by either party to the other under these conditions shall be in writing addressed to that other party at its registered office or principal place of business or such other address as may at the relevant time have been notified pursuant to this provision to the party given the notice.

20.2 No waiver by KKDC of any breach of these conditions by the customer shall be considered as a waiver of any subsequent breach of the same or any other provision nor shall any such waiver prejudice the right of KKDC to take any action in the future to enforce any provisions of a contract.

20.3 If any provision of these conditions is held by any competent authority to be illegal, invalid or unenforceable in whole or in part the validity of the other provisions of these conditions and the remainder of the provision in question shall not be affected and, in lieu of such illegal, invalid or unenforceable provision, there will be added, as part of these conditions, one or more provisions as similar in terms as may be legal, valid and enforceable under applicable law.

20.4 All provisions of these conditions which by their nature should apply beyond the term of a contract will remain in force after acceptance and complete performance of a contract, including but not limited to, the Payment, Confidentiality, Limitation of Liability and Dispute Resolution clauses.

20.5 The customer will not assign any rights or obligations under these conditions without the prior written consent of KKDC. KKDC may assign any rights or obligations under these conditions without the prior written consent of the customer.

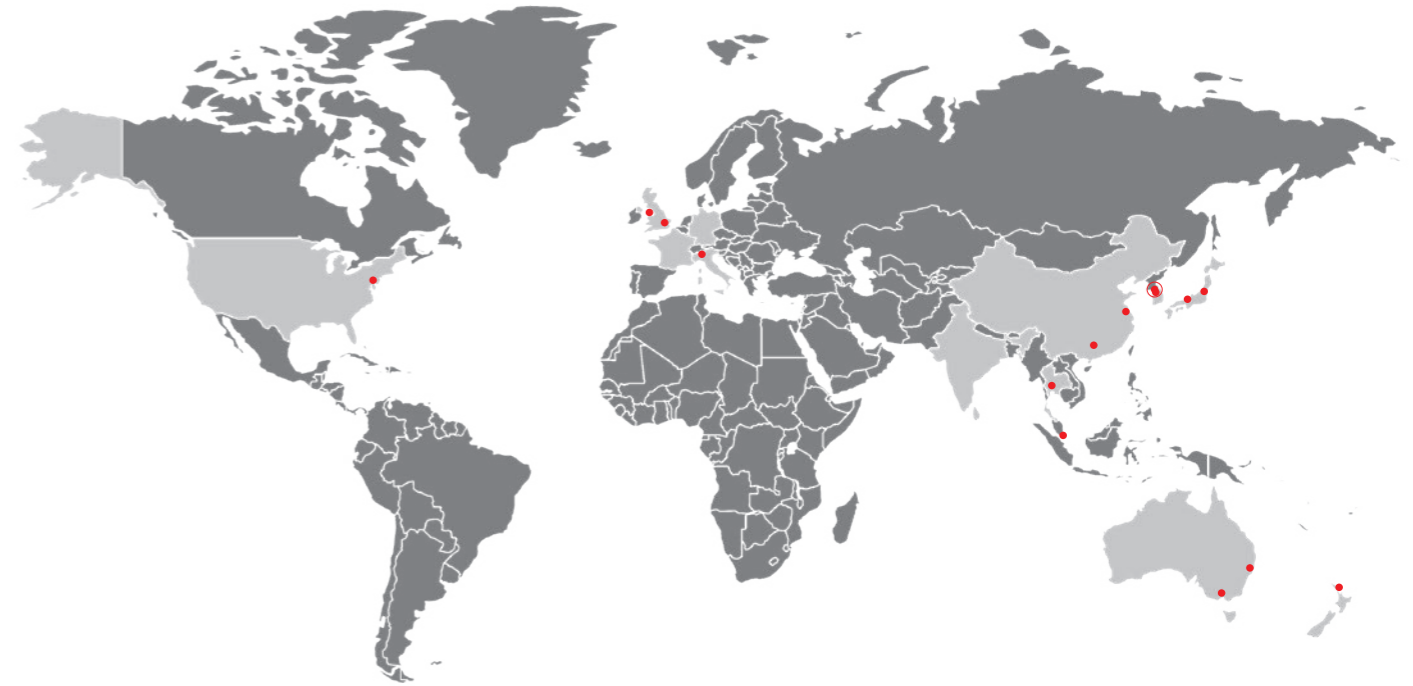
20.6 For the avoidance of doubt nothing in these conditions shall confer on any third party any benefit or the right to enforce any term of these conditions.

KKDC is constantly developing and improving its products, therefore, KKDC reserves the right to discontinue any products from its ranges at any time whatsoever and without prior notice. KKDC also reserves the right to make technical and photometric modifications in addition to the change of any parts, details or finishes deemed suitable for improvement purposes and meeting statutory requirements.

For installation purposes, refer exclusively to the conditions described in the instruction sheet supplied with the product package and/or download from the website www.kkdc.lighting.

Whilst every effort has been made to accurately depict KKDC product in context with use of genuine project photography, some images may have been used for illustrative purposes only.

Catalogue Produced by KKDC Design House Ltd



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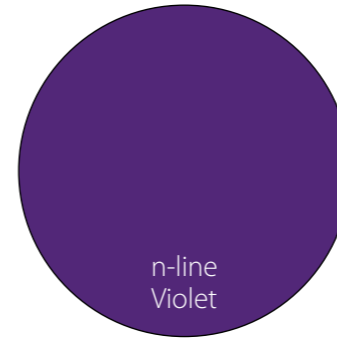
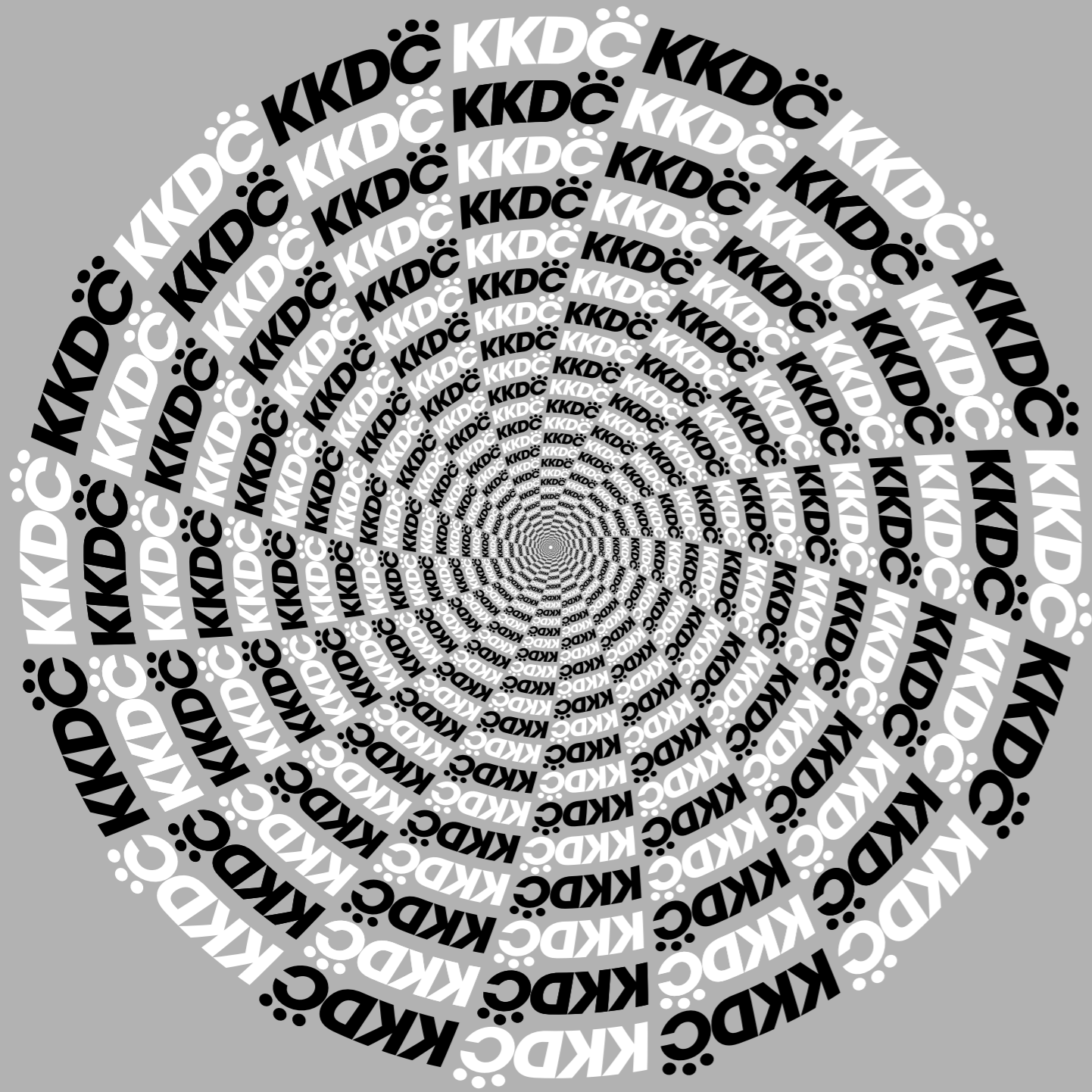
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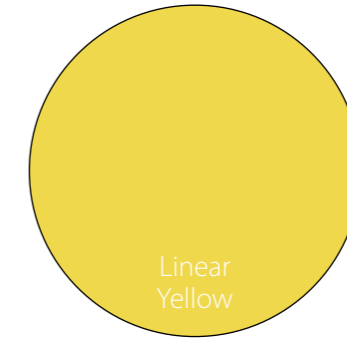
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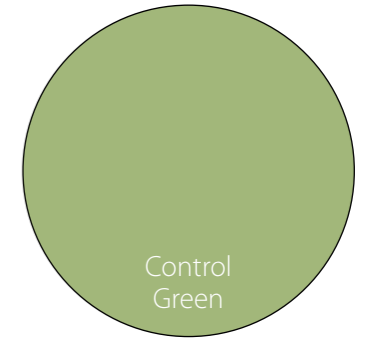
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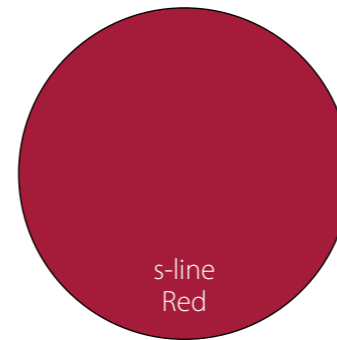
n-line
Violet



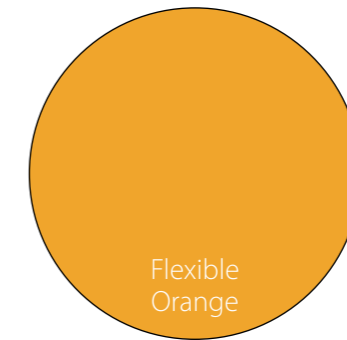
Linear
Yellow



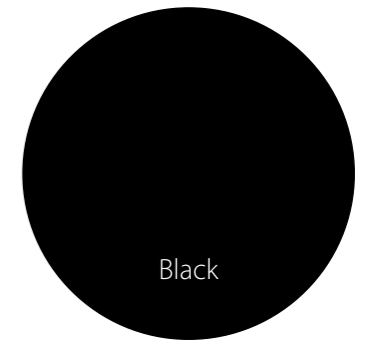
Control
Green



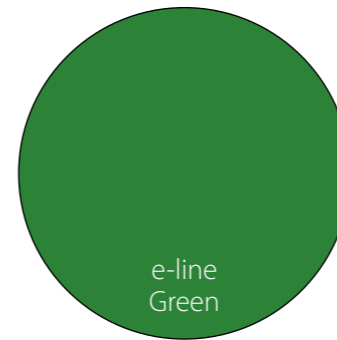
s-line
Red



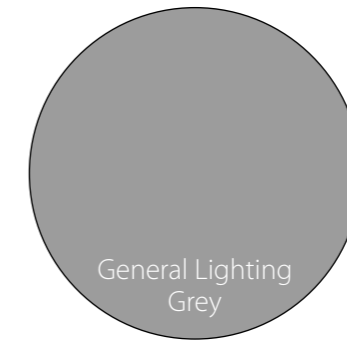
Flexible
Orange



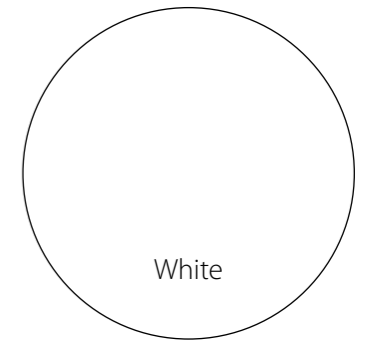
Black



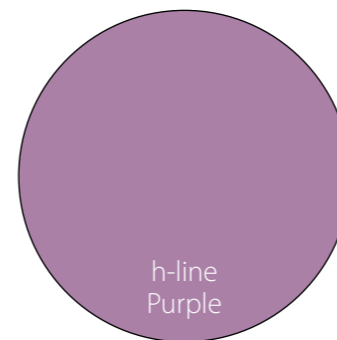
e-line
Green



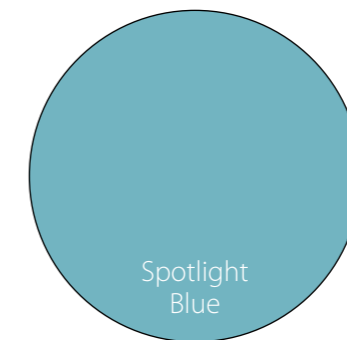
General Lighting
Grey



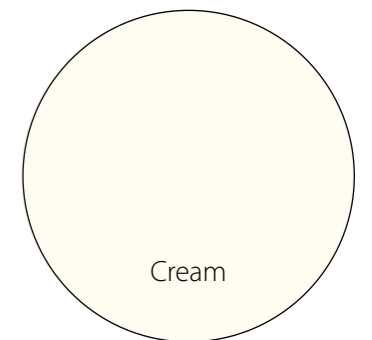
White



h-line
Purple



Spotlight
Blue



Cream

KKDC LED Housing & Homogenous Guide

	TiMi	TiMi-C	LiNi BLADE-S	LiNi-S	LiNi-S XL	LiNi Glow	LiNi Glow XL	LiNi-M XL	LiNi-R	LiNi-R XL	Power Cove	TANA	TANA Micro	TANA SP	PICO	MiMi	KKSL	POKI	MoMo	MoMo-L	MoMo-F	MoMo-BLOC	SUMO	
 352	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Homogenous diffusion	n/a	Homogenous diffusion	Homogenous diffusion	n/a	Spotting on diffuser	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	n/a	
 007	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	n/a	Homogenous diffusion	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Homogenous diffusion	Spotting on diffuser	Spotting on diffuser	n/a	n/a	n/a	n/a	n/a	n/a	Homogenous diffusion	n/a
 504	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Homogenous diffusion	n/a	Homogenous diffusion	Homogenous diffusion	n/a	Spotting on diffuser	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion
 508	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Homogenous diffusion	Homogenous diffusion	n/a	Spotting on diffuser	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	n/a
 512	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	Spotting on diffuser	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
 207	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Homogenous diffusion	n/a	Homogenous diffusion	Homogenous diffusion	n/a	Spotting on diffuser	Spotting on diffuser	n/a	n/a	Spotting on diffuser	n/a	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	n/a	n/a	n/a	
 208	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	n/a	n/a	Spotting on diffuser	n/a	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	n/a	n/a	n/a	
 RGBW	n/a	Spotting on diffuser	n/a	n/a	n/a	n/a	n/a	Homogenous diffusion	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
 RGB	Spotting on diffuser	n/a	Homogenous diffusion	Spotting on diffuser	Homogenous diffusion	n/a	Homogenous diffusion	n/a	Homogenous diffusion	Homogenous diffusion	n/a	Spotting on diffuser	n/a	n/a	n/a	Spotting on diffuser	Spotting on diffuser	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	Homogenous diffusion	n/a

 Spotting on diffuser
  Homogenous diffusion

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