



Groove Light (HCRI)

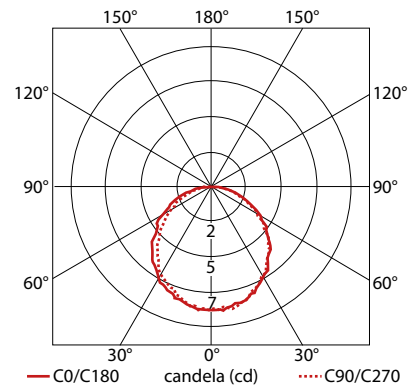
Specification sheet



24V DC	8 W/m	2.44 W/ft	5 lm/W	IP40/65	UL LISTED E356145	CE
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PRODUCT SPECIFICATION

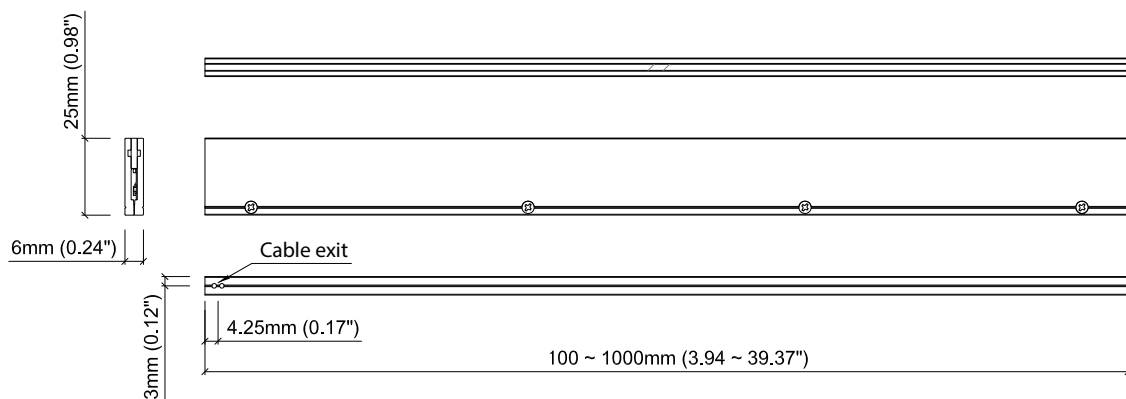
Dimension	H25/W6/L100-1000mm (H0.98/W0.24/L3.94-39.37in)
PCB increment	100mm increment/1000mm max (3.94in increment/39.37in max)
Chip	Toyoda Gosei
Beam angle	110°
Colours	White: 2700K/3000K
Bin/Step	3~3.5 Step MacAdam ellipse
CRI	90
Lifetime	30,000 hours @ 25°C (30,000 hours @ 77°F)
Operating temp	T _a = -25 to 50°C (T _c max = 60°C) T _a = -13 to 122°F (T _c max = 140°F)
IP rating	IP40/IP65
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)



PERFORMANCE DATA for 3000K

Power consumption	8W/m (2.44W/ft)
Supply voltage	24V DC
Supply current	0.33A/m (0.1A/ft)
Luminous flux	40lm/m (12lm/ft)

TECHNICAL DRAWING



Data derived from independent UKAS / IESNA LM-79-08 accredited testing of production samples.

See KKDC website for product document updates.

www.kkdc.lighting

GrooveLightHCRI-01EN-20170723



Groove Light (HCRI)

Photometric Test Report



PRODUCT DETAILS

Product name :	Groove light (HCRI)
Stated output :	38lm per metre
Description:	Linear LED detail, 3000K, 24V, 7.68W per metre
Quantity/length of product tested :	1 x 500mm
Bin tolerance/#. MacAdams ellipse of chip :	3 Step MacAdam ellipse

ELECTRICAL CHARACTERISTICS

Input Voltage (V DC) :	24.00
Input power (W DC) :	4.2
Input Current (mA DC) :	175

LIGHT OUTPUT

Total light output (Lumens) :	19
Luminaire efficacy (lm/W) :	5
Beam angle :	n/a

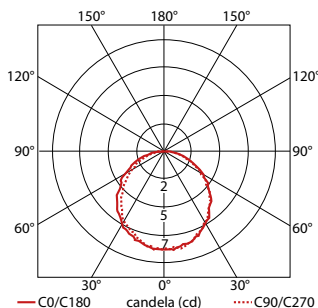
COLOUR CHARACTERISTICS

Correlated colour temperature (CCT) :	2786K
Colour rendering index (CRI Ra) :	97
Chromaticity coordinates (CIE 1931 - x,y) :	0.4479, 0.3997
Duv :	0.0031

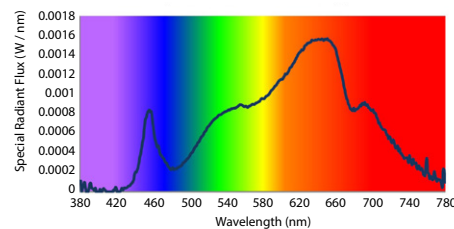
COLOUR RENDERING INDEX (CRI)

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14
97.5	98.9	92.1	96.5	99.3	96.6	98.3	98.3	98.2	94.7	94.5	79.8	97.8	94.1

POLAR CURVE



SPECTRAL RADIANT FLUX VERSUS WAVELENGTH



TEST SPECIFICATIONS

Test Lab :	LUX-TSI Ltd, Pencoed Technology Park, CF35 5HZ, UK
Test equipment :	40-inch (1metre) Integrating Sphere Spectroradiometer System. Fluke 289 True RMS Multimeter. Yokogawa TY720 Digital Multimeter.
Measurement uncertainty :	Total Luminous Flux +/-5.6%, CCT +/-100K, CRI +/-2





Groove Light Installation Guide



PRODUCT CARE AND HANDLING

- KKDC products are delivered in appropriate packaging. Any handling instructions on the packaging must be observed. Products should remain in packaging 'as delivered' until installation or for ongoing transportation and storage.
- Inspect products carefully before installation. Do not proceed to install any product that may have been damaged in transportation, storage or handling.
- Handle with care. Many KKDC products contain precision electrical components and are not designed to withstand excessive stresses from tension or compression.
- Please follow standard ESD (Electrostatic discharge) protection measures when handling and installing KKDC LED products.

SAFETY AND WARRANTY

- Installation is only to be carried out by suitably qualified persons in accordance with installation instructions and all applicable regulations or standards. (Improper installation can create an electrical hazard with risk of electric shock, fire or injury).
- KKDC will not be held responsible for any consequences arising from improper product handling, storage or installation.
- KKDC products must be installed as supplied. Disassembly, modification or attempted repair will invalidate warranty and may create an electrical hazard.
- The KKDC product warranty is available with this document or in the following link:
<http://www.kkdc.lighting/warranty-information.php> on our website – **www.kkdc.lighting**.

PREPARATION

- Install KKDC products in accordance with the Wiring and Mounting instructions supplied with the product, using the recommended accessories, tools and fixings where specified.
- Product specification and installation information is also available from the KKDC website **www.kkdc.lighting**.
- Products should only be installed in areas appropriate to their IP rating, operable temperature and humidity range.
- Carefully plan and check the physical layout and circuit structure of the installation before starting work. Note wiring methods, cable type and connection points along with positioning and rating of power supplies and any control gear. Refer to all product information – including that for power supplies/control gear – and confirm choice of power supply, control gear, cable thickness and cable length.
- For safe and reliable operation KKDC LED products must only be used with suitable KKDC supplied or recommended power supplies and control gear. Contact KKDC for further information.
(North America – Use only UL listed Class 2 power supplies with KKDC products – See also Installation Guide – Wiring)
- The KKDC LED products in this guide require **12V DC** or **24V DC** 'constant voltage' power supplies as indicated in product specifications.

AFTER INSTALLATION

- KKDC products are designed to be maintenance free however accumulated dust may be removed from the emitting surface of luminaires with careful use of a soft dry cloth.
- Ensure that paints, organic solvents and caustic or corrosive cleaning chemicals do not come into contact with KKDC products.
For example **DO NOT USE** –
 - Benzene, Toluene, Xylene, Acetone, Carbon tetrachloride, Gasoline, Ether,
 - Sodium/Calcium hydroxide, Sodium Carbonate.
- For cleaning or sanitization – products in sealed IP rated housings may be wiped with a soft cloth dampened with an alcohol cleaner or with cool, soft water diluted (5% or less) bleach (Sodium Hypochlorite) solution.
- Please retain this information and pass to those responsible for installation/site maintenance.

Note: KKDC may change product specifications and installation guidance without prior notice.



Groove Light

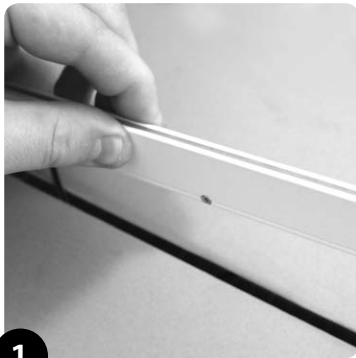
Installation Guide – Mounting



READ BEFORE INSTALLATION

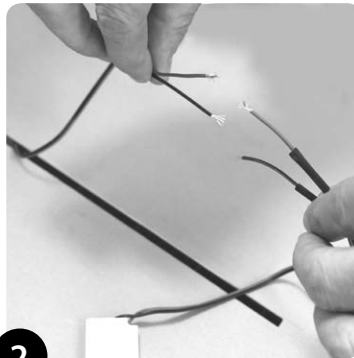
- The mounting surface to which any KKDC product is attached must not carry any electrical potential and metallic surfaces must be earthed. Avoid physical contact between adjacent LED products.
- Prepare, measure and mark the installation location and mounting surfaces before fixing. Any machining or drilling etc. should be completed before mounting. KKDC products and their immediate installation area should be kept clean, dry and free of paints and solvents during and after installation.
- Ensure that products are mounted with supplied, recommended or appropriate screws and fixings to suit the surface material.
- Mount products so that cables and connectors will not come under excessive stress and position accessories, wiring and connectors where they will not cast shadows.
- Groove Light can be installed in routed slots in wood or other materials making suitable provision for cable access.
 - Recommended minimum material thickness: 28mm (1.10")
 - Minimum slot dimension: 6mm (0.24") wide x 25mm (0.98") deep
- Groove Light can also be sandwiched between sheet materials – wood, metal, plasterboard etc.
- Adhesive fixing is recommended for permanent installation.
- WARNING – Do not put the product under physical stress or impact stress. Doing so may damage the LED's and reduce product life.

MOUNTING – SLOT RECESSED



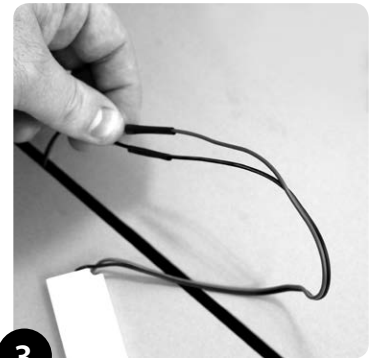
1

Make 6mm (0.24") slot to required length (25mm/0.98" minimum depth). Bring through power feed from one end of the slot base and solder connections.



2

Use heat shrink tube to cover solder joints.



3

Push into slot - use adhesive for permanent installation.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

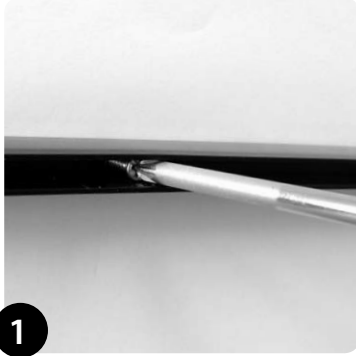


Groove Light

Installation Guide – Mounting

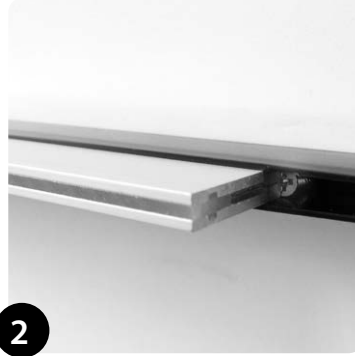


MOUNTING – PVC CHANNEL



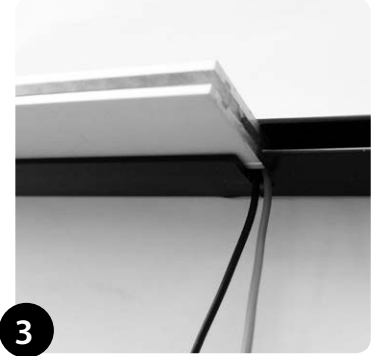
1

PVC Channel should be secured using suitable fixings for the mounting surface. The PVC Channel can be used to support the entire Groove Light length (Channel length = fitting length), or cut into smaller sections. Minimum 200mm (7.87") of PVC Channel recommended per 500mm (19.69") of Groove Light.



2

Screws can be used to set and control a specific depth of product into channel.



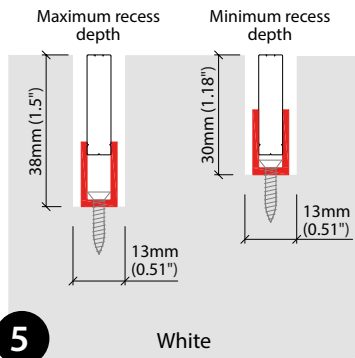
3

The PVC Channel can be notch cut to allow a cable exit.



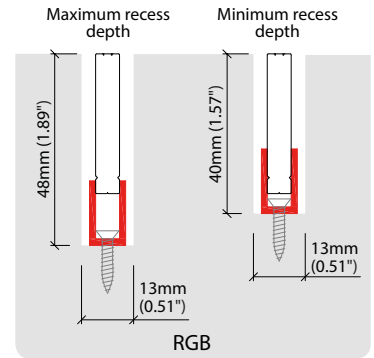
4

The PVC Channel can be used to align products when mounting end to end.



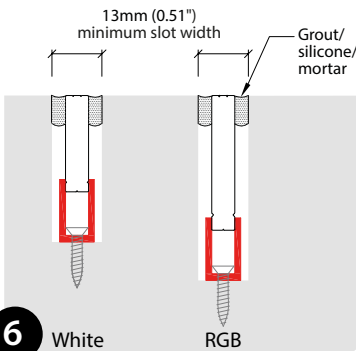
5

White



RGB

PVC channel accessory can be used to install Groove Light into a recessed channel at any orientation, 30mm (1.18") to 38mm (1.5") for white or 40mm (1.57") to 48mm (1.89") for RGB recess depth by 13mm (0.51") width.



6

White

RGB

Finish slots between product and channel material with suitable filling product, such as grout, silicone or mortar.

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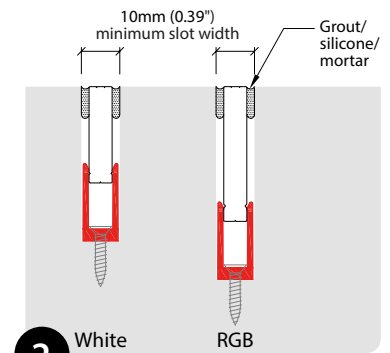
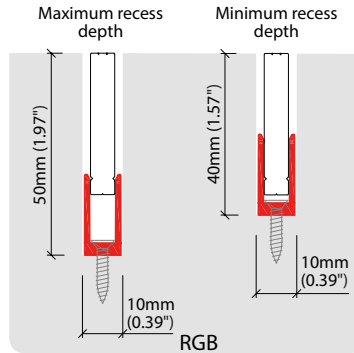
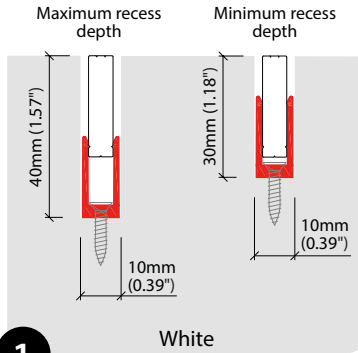


Groove Light

Installation Guide – Mounting



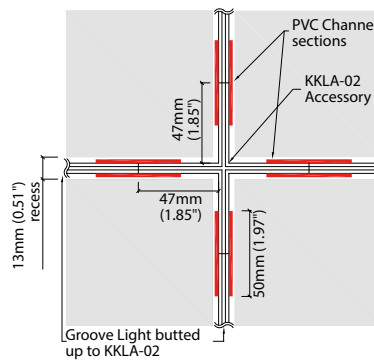
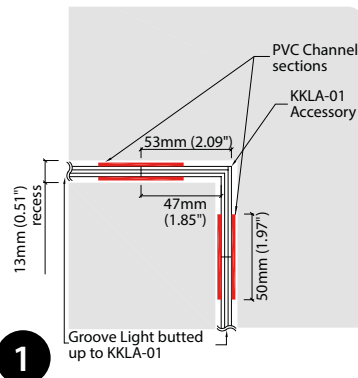
MOUNTING – GROOVE CLIP



Groove Mini Clip accessory can be used to install Groove Light into a recessed channel at any orientation, 30mm (1.18") to 40mm (1.57") for white or 40mm (1.57") to 50mm (1.97") for RGB recess depth by 10mm (0.39") width.

Finish slots between product and channel material with suitable filling product, such as grout, silicone or mortar.

MOUNTING – LIGHTING ACCESSORIES



The above diagrams show the recommended clip/channel mounting positions for KKLA-01 and KKLA-02 in plan view. The width of the recess will be dictated by the clip used, in this example the PVC channel is used for mounting. Please refer to clip details above for recess depth and width requirements based on mounting method.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

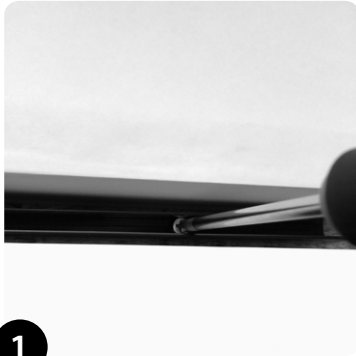


Groove Light

Installation Guide – Mounting



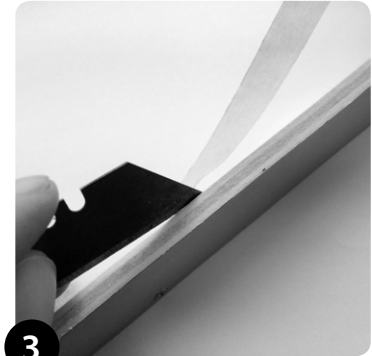
MOUNTING – CHANNEL INSTALLATION EXAMPLE



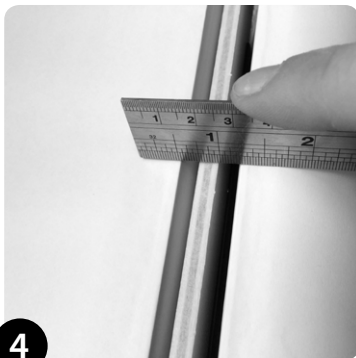
1
Mount channel or clip into recessed slot with appropriate fixing method based on materials.



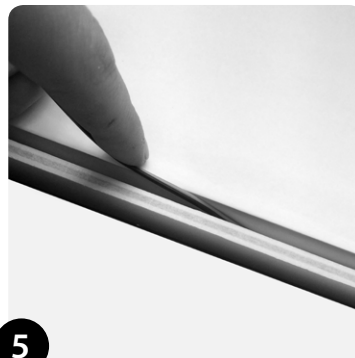
2
It is advised to mask the front edge of the Groove Light product to ensure that the face of the product is not marked during installation.



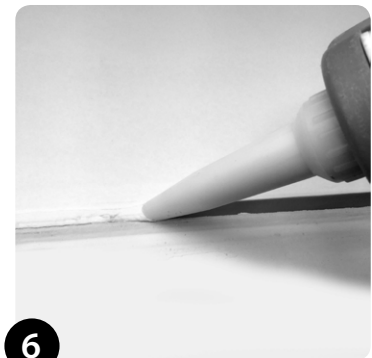
3
Trim masking to ensure its flush with Groove Light front face.



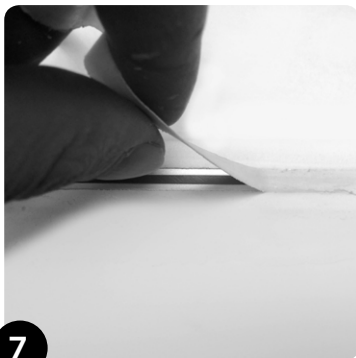
4
Fit the masked Groove Light into the channel taking care to set the product to the correct depth with relation to the channel.



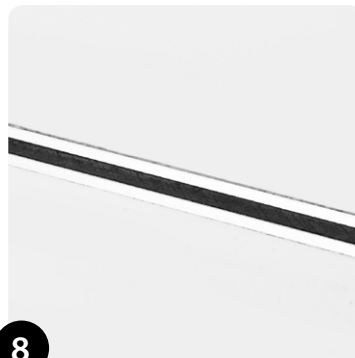
5
With the Groove Light pushed into the mounting channel, make wiring connections and conceal wiring into recessed channel as required.



6
Using appropriate filling material (grout, silicone or mortar) fill down the edges of the Groove Light product into the recessed channel. Ensure that a fair amount of filling material is pushed down the sides of the product and channel to ensure good adhesion.



7
Remove protection mask from the front of the Groove Light product after all sanding, painting and finishing is completed.



8

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



Groove + 60W PSU

Installation Guide – Wiring



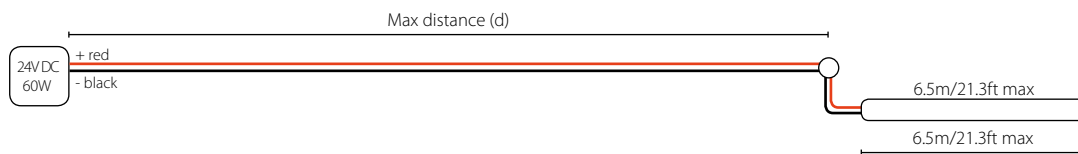
READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- The LED products in this guide require **24V DC** (constant voltage) Class 2 power supplies (UL listed – for North America).
- When connecting **Groove** products end to end – **Do not exceed 7.5m/24.6ft** (from any one parallel power feed – see wiring examples).

WIRING EXAMPLES

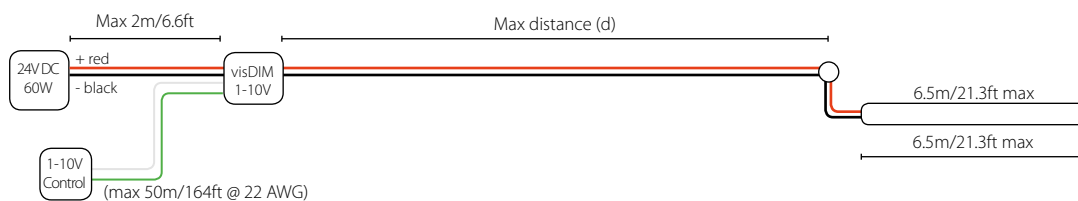
Switched

	Cable size / Max distance (d)				
	0.5mm ² / 20AWG	0.75mm ² / 18AWG	1.0mm ² / 17AWG	1.5mm ² / 15AWG	2.5mm ² / 13AWG
Groove (6.5m/21.3ft) + 60W PSU	25m/82.5ft	37.5m/123.5ft	50m/165ft	75.5m/247.5ft	125.5m/412.5ft



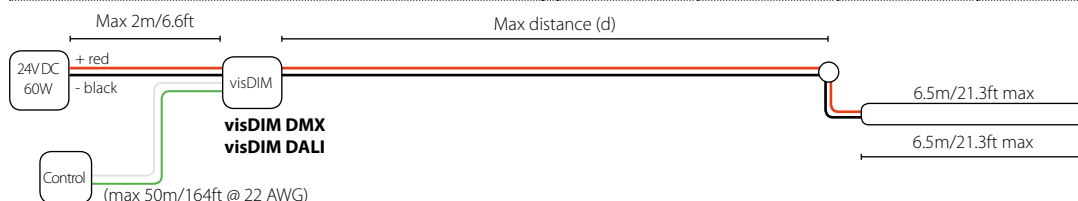
1-10V Dimming

	Cable size / Max distance (d)				
	0.5mm ² / 20AWG	0.75mm ² / 18AWG	1.0mm ² / 17AWG	1.5mm ² / 15AWG	2.5mm ² / 13AWG
Groove (6.5m/21.3ft) + 60W PSU + visDIM 1-10V	21.5m/71.5ft	33.5m/110.5ft	45.5m/150ft	69.5m/228ft	117m/384.5ft



DMX/DALI Dimming

	Cable size / Max distance (d)				
	0.5mm ² / 20AWG	0.75mm ² / 18AWG	1.0mm ² / 17AWG	1.5mm ² / 15AWG	2.5mm ² / 13AWG
Groove (6.5m/21.3ft) + 60W PSU + visDIM DMX/DALI	21m/69.5ft	32.5m/107.5ft	44m/145.5ft	67.5m/221.5ft	114m/374ft



Note: This guide is produced from testing with KKDC approved power supplies or control gear. Performance with other power or control products cannot be guaranteed. Contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



Groove + 100W PSU

Installation Guide – Wiring

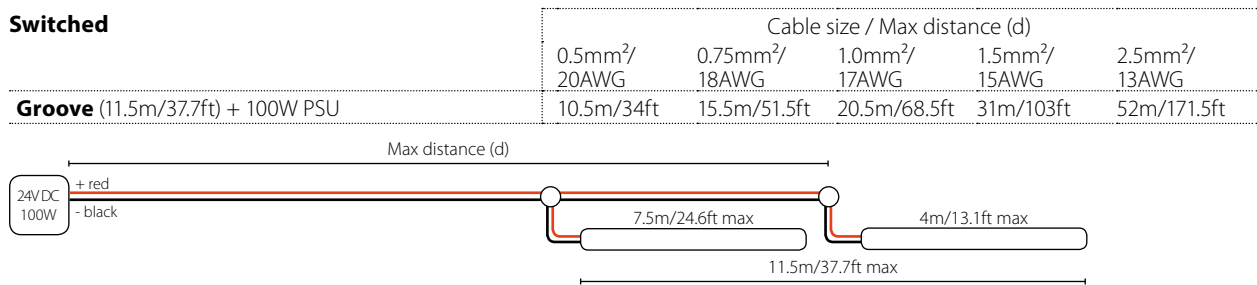


READ BEFORE INSTALLATION

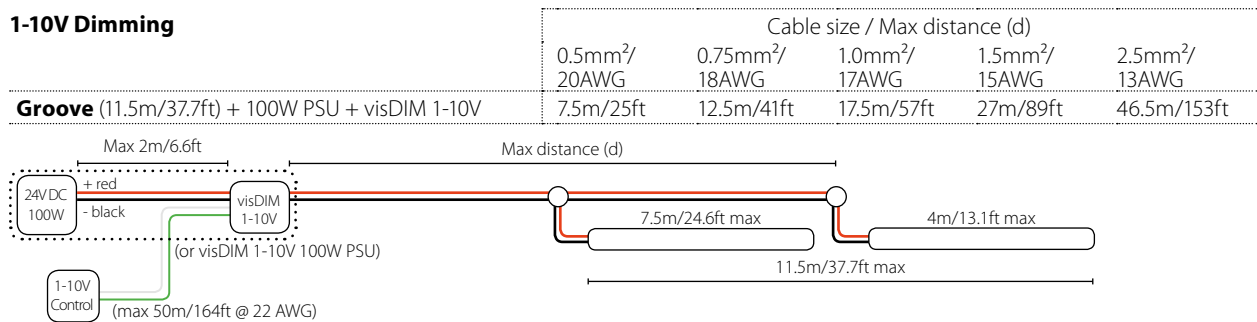
- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- The LED products in this guide require **24V DC** (constant voltage) Class 2 power supplies (UL listed – for North America).
- When connecting **Groove** products end to end – **Do not exceed 7.5m/24.6ft** (from any one parallel power feed – see wiring examples).

WIRING EMXAMPLES

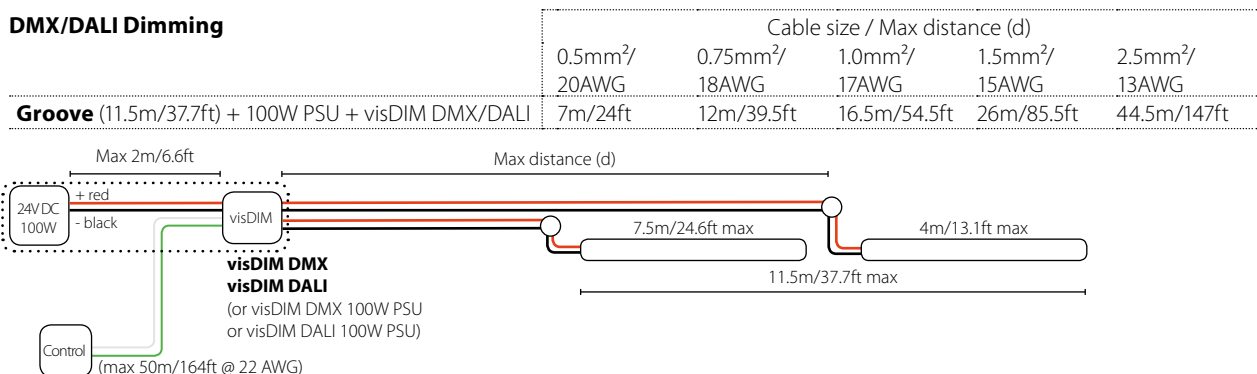
Switched



1-10V Dimming



DMX/DALI Dimming



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Product Warranty



In the unlikely event that purchasers should experience a product failure, this should in the first instance be dealt with by contacting the supplier or local authorised KKDC representative.

Our warranty is provided in addition to any statutory legal rights and details the terms under which claims can be made.

1. Duration of Warranty

This warranty applies to all KKDC manufactured products for 3 years from the date of installation (or date of manufacture if the installation date is not known or verifiable) An extended 5 year warranty may be offered at the discretion of KKDC if appropriate project registration criteria are met.

2. Repair or Replacement

Should a KKDC product fail to function within the warranty period, KKDC will on its sole discretion provide a replacement free of charge or repair defective components in accordance with the terms set out below. Purchasers shall bear the cost of removal and return of any product subject to a warranty claim and that of installing a replacement. Any other costs, including but not limited to replacement costs upon installation; costs caused from failures of the installation or other damages and/or consequential damages are not covered by this warranty.

Replacement products shall as far as possible match the specification of the original but may have superior performance characteristics in line with ongoing product development.

3. Return of a Defective Product

The purchaser making a warranty claim shall contact KKDC (or their authorised representative) at the earliest opportunity to be provided with an address for return of the product. On receipt of returned product/s the validity of the claim will be checked. Proof of purchase may be required.

KKDC reserve the right to conduct diagnostic examination of any defective or failed product to determine patterns of usage and cause of failure and reserve the right to be the sole judge as to whether a returned product is defective within the terms of this warranty.

4. Notes / Conditions of Warranty

This warranty applies only to defects in materials and workmanship and only where KKDC Products are properly handled, stored, installed, wired and maintained in accordance with the most recent published KKDC product usage guides, installation instructions, specification sheets, and any applicable local electrical safety standards and wiring regulations.

(The most recent versions of KKDC product documentation are available from the website www.kkdc.co.uk)

This warranty does not constitute any inference as to the suitability of any product for any purpose. In no event shall KKDC be liable for any other costs or damages including lost profits, incidental, special or consequential damages.

Warranty claims will be invalid in the event of :

Product damage due to abuse, unauthorised alteration or modification, accident, fire, flood, lightning, rodents, insects, negligence or acts of God.

Product installation by unqualified persons.

Product modification, disassembly or attempted repair by non KKDC staff.

Product installation or storage in 'abnormal' conditions or locations, including but not limited to those where :

Ambient Temperatures are in excess of 60 Deg C.

Installation in areas of excessive humidity.

Any product subjected to excessive mechanical stress, or physical damage.

Inadequate heat sinking provision for any unhoused 'bare PCB' type LED product.

IP67 class luminaires installed without adequate local drainage, or becoming immersed in water.

Chemical contamination or damage from salt laden air.

Damage from use of pressure washers or other mechanical cleaners.

Improper use of 'sanitizing products' and maintenance using improper or unapproved chemical compounds/solvents.

Unauthorised use of parts or accessories not manufactured by KKDC in conjunction with KKDC Products.

'Constant Voltage' (CV) KKDC LED Products supplied with incorrect voltage.

'Constant Current' (CC) KKDC LED products supplied with incorrect current.

Incorrect layout, cutting and connection of wiring; intermittent or improper mains electrical supply.

Product/s having damaged serial number, cable or Certificate labels.

Product/s which have been installed more than once or have not been returned promptly and directly to KKDC for fault diagnosis and testing.

5. Warranty contacts

Warranty claims can be made only by the original purchaser by contacting KKDC or local KKDC authorised representative details of which can be found via the supplier or on the website – www.kkdc.lighting.

6. Implied Terms

6.1 Subject to sub-clause 6.2, any condition or warranty which would otherwise be implied is excluded.

6.2 Where legislation implies any condition or warranty, and that legislation avoids or prohibits provisions in a contract excluding or modifying the application of or exercise of or liability under such condition or warranty, the condition or warranty shall be deemed to be included in this warranty. However the liability of KKDC for any breach of such condition or warranty shall be limited, at the option of KKDC, to the following:

If the breach relates to any KKDC Product:

(i) the replacement or the supply of equivalent KKDC Product;

(ii) repair of product (excluding costs of removal and installation);

(iii) payment of the cost of replacement or of acquiring equivalent product; or

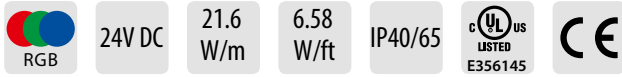
(iv) payment of the cost of repair of product (excluding costs of removal and installation).

Note: KKDC reserves the right to make changes to product specifications and installation guidance without prior notice.



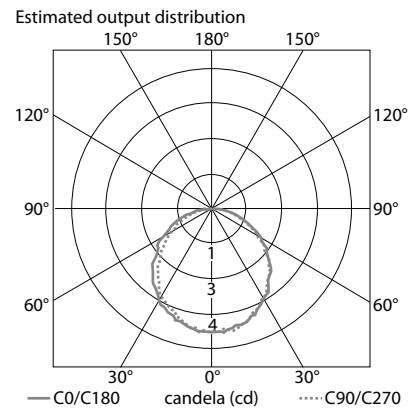
Groove Light RGB

Specification sheet



PRODUCT SPECIFICATION

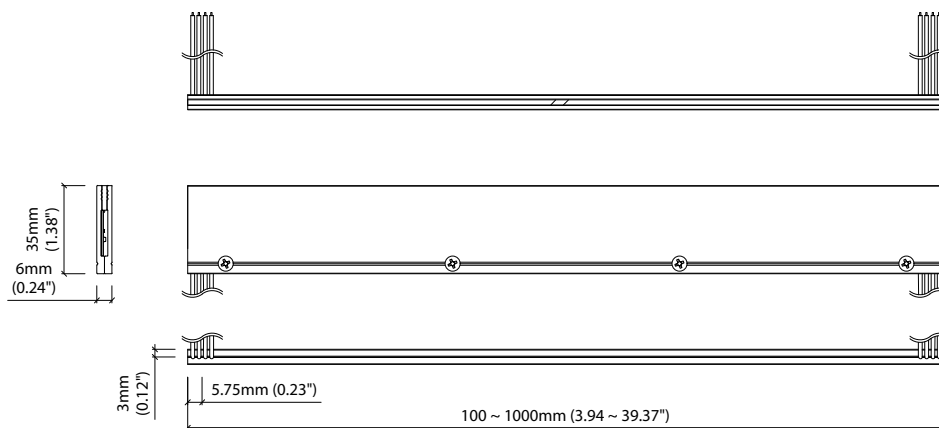
Dimension	H35/W6/L100-1000mm (H1.38/W0.24/L3.94-39.37in)
PCB increment	100mm increment/1000mm max (3.94in increment/39.37in max)
Chip	Everlight
Beam angle	110°
Colours	Red 621-633nm/Blue 465-475nm/Green 515-525nm
Bin/Step	12nm tolerance
CRI	N/A
Lifetime	20,000 hours @ 25°C (20,000 hours @ 77°F)
Operating temp	T _a = -25 to 35°C (T _c max = 66°C)
IP rating	IP40/IP65
Finish	Silver anodised
Cover/lens	Diffused
Mounting	Recessed mounting via clips or channel (no flange)
Connection	Hardwire tails
Control	DMX/DALI (see visDIM range)



PERFORMANCE DATA

Power consumption	21.6W/m (6.58W/ft)
Supply voltage	24V DC
Supply current	0.9A/m (0.274A/ft)
Luminous flux	Red: 2lm/m Green: 10lm/m Blue: 3lm/m White: 15lm/m (Red: 0.6lm/ft Green: 3lm/ft Blue: 1lm/ft White: 5lm/ft)

TECHNICAL DRAWING





Groove Light Installation Guide



PRODUCT CARE AND HANDLING

- KKDC products are delivered in appropriate packaging. Any handling instructions on the packaging must be observed. Products should remain in packaging 'as delivered' until installation or for ongoing transportation and storage.
- Inspect products carefully before installation. Do not proceed to install any product that may have been damaged in transportation, storage or handling.
- Handle with care. Many KKDC products contain precision electrical components and are not designed to withstand excessive stresses from tension or compression.
- Please follow standard ESD (Electrostatic discharge) protection measures when handling and installing KKDC LED products.

SAFETY AND WARRANTY

- Installation is only to be carried out by suitably qualified persons in accordance with installation instructions and all applicable regulations or standards. (Improper installation can create an electrical hazard with risk of electric shock, fire or injury).
- KKDC will not be held responsible for any consequences arising from improper product handling, storage or installation.
- KKDC products must be installed as supplied. Disassembly, modification or attempted repair will invalidate warranty and may create an electrical hazard.
- The KKDC product warranty is available with this document or in the following link:
<http://www.kkdc.lighting/warranty-information.php> on our website – **www.kkdc.lighting**.

PREPARATION

- Install KKDC products in accordance with the Wiring and Mounting instructions supplied with the product, using the recommended accessories, tools and fixings where specified.
- Product specification and installation information is also available from the KKDC website **www.kkdc.lighting**.
- Products should only be installed in areas appropriate to their IP rating, operable temperature and humidity range.
- Carefully plan and check the physical layout and circuit structure of the installation before starting work. Note wiring methods, cable type and connection points along with positioning and rating of power supplies and any control gear. Refer to all product information – including that for power supplies/control gear – and confirm choice of power supply, control gear, cable thickness and cable length.
- For safe and reliable operation KKDC LED products must only be used with suitable KKDC supplied or recommended power supplies and control gear. Contact KKDC for further information.
(North America – Use only UL listed Class 2 power supplies with KKDC products – See also Installation Guide – Wiring)
- The KKDC LED products in this guide require **12V DC** or **24V DC** 'constant voltage' power supplies as indicated in product specifications.

AFTER INSTALLATION

- KKDC products are designed to be maintenance free however accumulated dust may be removed from the emitting surface of luminaires with careful use of a soft dry cloth.
- Ensure that paints, organic solvents and caustic or corrosive cleaning chemicals do not come into contact with KKDC products.
For example **DO NOT USE** –
 - Benzene, Toluene, Xylene, Acetone, Carbon tetrachloride, Gasoline, Ether,
 - Sodium/Calcium hydroxide, Sodium Carbonate.
- For cleaning or sanitization – products in sealed IP rated housings may be wiped with a soft cloth dampened with an alcohol cleaner or with cool, soft water diluted (5% or less) bleach (Sodium Hypochlorite) solution.
- Please retain this information and pass to those responsible for installation/site maintenance.

Note: KKDC may change product specifications and installation guidance without prior notice.



Groove Light

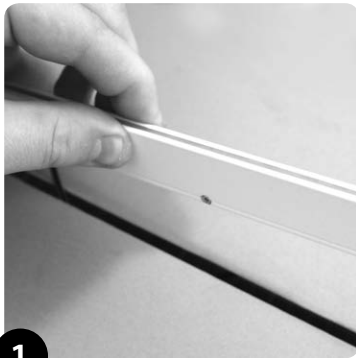
Installation Guide – Mounting



READ BEFORE INSTALLATION

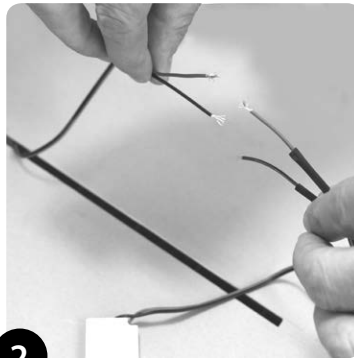
- The mounting surface to which any KKDC product is attached must not carry any electrical potential and metallic surfaces must be earthed. Avoid physical contact between adjacent LED products.
- Prepare, measure and mark the installation location and mounting surfaces before fixing. Any machining or drilling etc. should be completed before mounting. KKDC products and their immediate installation area should be kept clean, dry and free of paints and solvents during and after installation.
- Ensure that products are mounted with supplied, recommended or appropriate screws and fixings to suit the surface material.
- Mount products so that cables and connectors will not come under excessive stress and position accessories, wiring and connectors where they will not cast shadows.
- Groove Light can be installed in routed slots in wood or other materials making suitable provision for cable access.
 - Recommended minimum material thickness: 28mm (1.10")
 - Minimum slot dimension: 6mm (0.24") wide x 25mm (0.98") deep
- Groove Light can also be sandwiched between sheet materials – wood, metal, plasterboard etc.
- Adhesive fixing is recommended for permanent installation.
- WARNING – Do not put the product under physical stress or impact stress. Doing so may damage the LED's and reduce product life.

MOUNTING – SLOT RECESSED



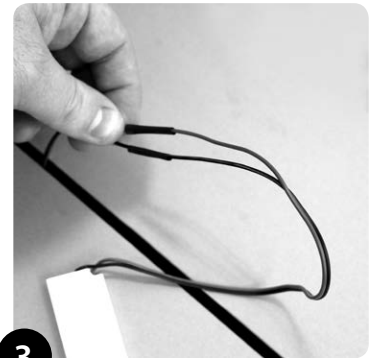
1

Make 6mm (0.24") slot to required length (25mm/0.98" minimum depth). Bring through power feed from one end of the slot base and solder connections.



2

Use heat shrink tube to cover solder joints.



3

Push into slot - use adhesive for permanent installation.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

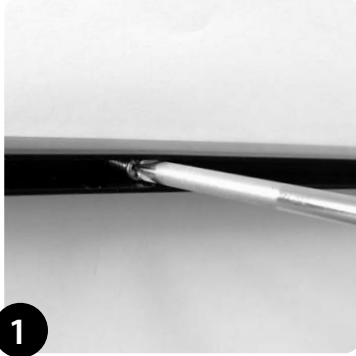


Groove Light

Installation Guide – Mounting

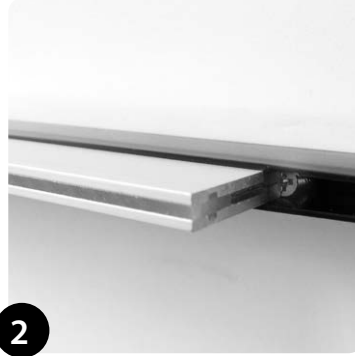


MOUNTING – PVC CHANNEL



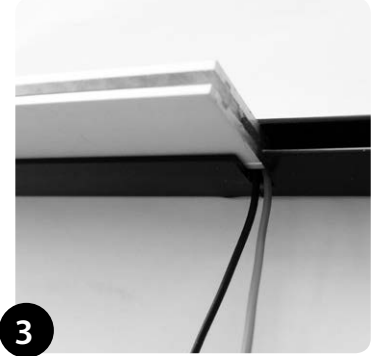
1

PVC Channel should be secured using suitable fixings for the mounting surface. The PVC Channel can be used to support the entire Groove Light length (Channel length = fitting length), or cut into smaller sections. Minimum 200mm (7.87") of PVC Channel recommended per 500mm (19.69") of Groove Light.



2

Screws can be used to set and control a specific depth of product into channel.



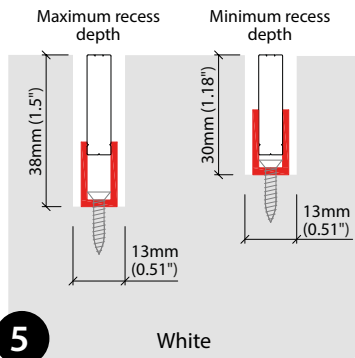
3

The PVC Channel can be notch cut to allow a cable exit.



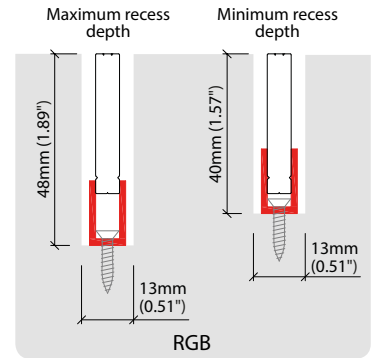
4

The PVC Channel can be used to align products when mounting end to end.



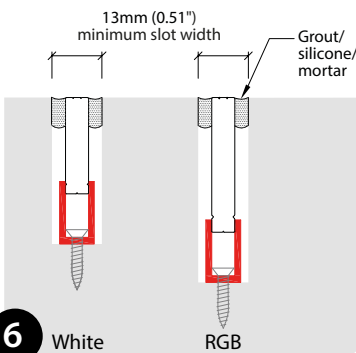
5

White



RGB

PVC channel accessory can be used to install Groove Light into a recessed channel at any orientation, 30mm (1.18") to 38mm (1.5") for white or 40mm (1.57") to 48mm (1.89") for RGB recess depth by 13mm (0.51") width.



6

White

RGB

Finish slots between product and channel material with suitable filling product, such as grout, silicone or mortar.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

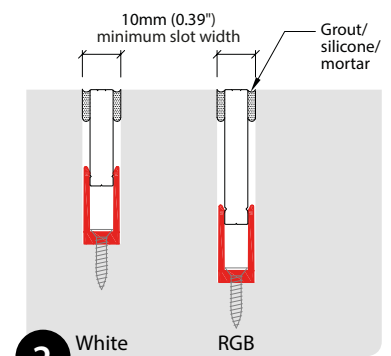
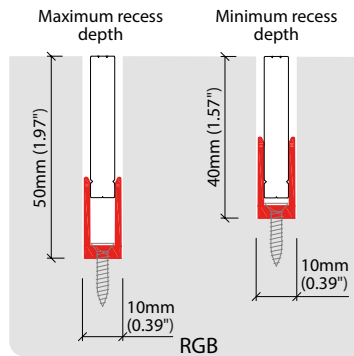
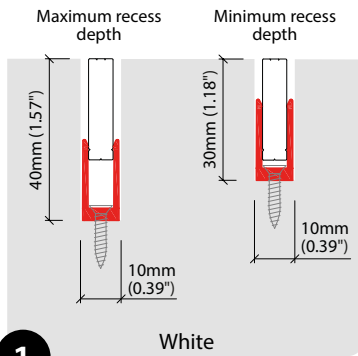


Groove Light

Installation Guide – Mounting



MOUNTING – GROOVE CLIP



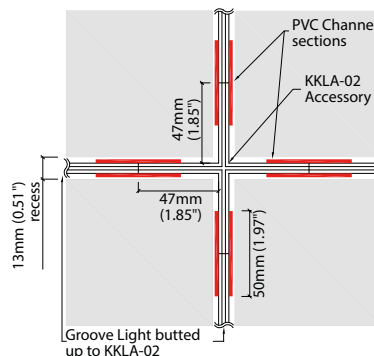
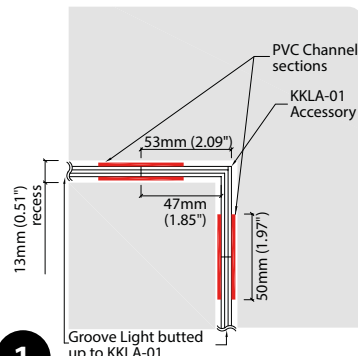
1

Groove Mini Clip accessory can be used to install Groove Light into a recessed channel at any orientation, 30mm (1.18") to 40mm (1.57") for white or 40mm (1.57") to 50mm (1.97") for RGB recess depth by 10mm (0.39") width.

2

Finish slots between product and channel material with suitable filling product, such as grout, silicone or mortar.

MOUNTING – LIGHTING ACCESSORIES



1

The above diagrams show the recommended clip/channel mounting positions for KKLA-01 and KKLA-02 in plan view. The width of the recess will be dictated by the clip used, in this example the PVC channel is used for mounting. Please refer to clip details above for recess depth and width requirements based on mounting method.

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

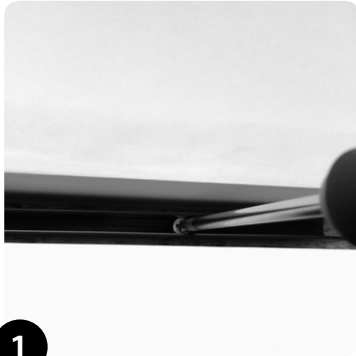


Groove Light

Installation Guide – Mounting



MOUNTING – CHANNEL INSTALLATION EXAMPLE



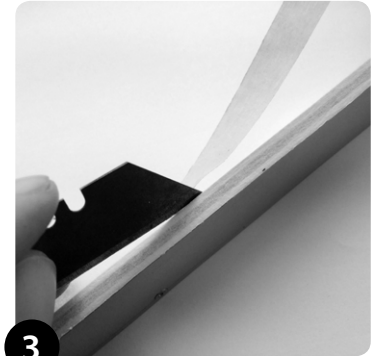
1

Mount channel or clip into recessed slot with appropriate fixing method based on materials.



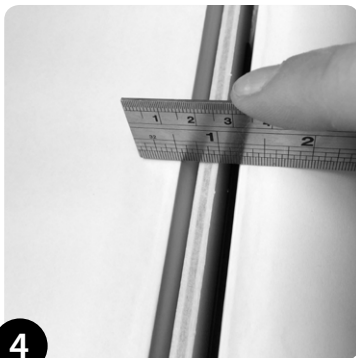
2

It is advised to mask the front edge of the Groove Light product to ensure that the face of the product is not marked during installation.



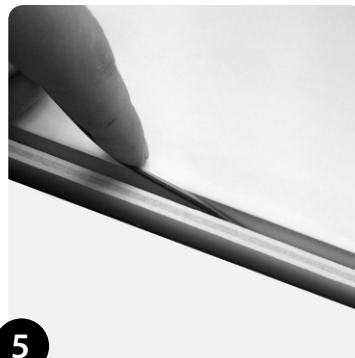
3

Trim masking to ensure its flush with Groove Light front face.



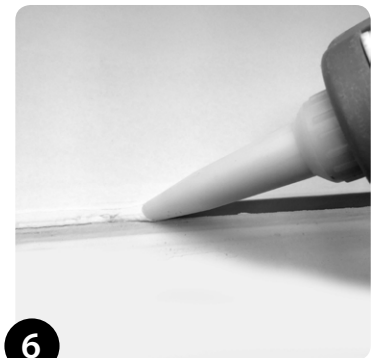
4

Fit the masked Groove Light into the channel taking care to set the product to the correct depth with relation to the channel.



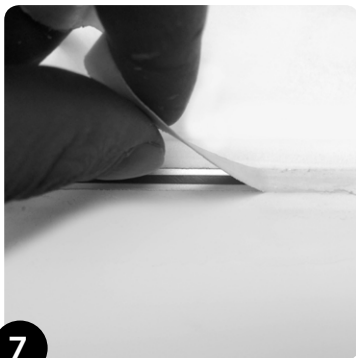
5

With the Groove Light pushed into the mounting channel, make wiring connections and conceal wiring into recessed channel as required.



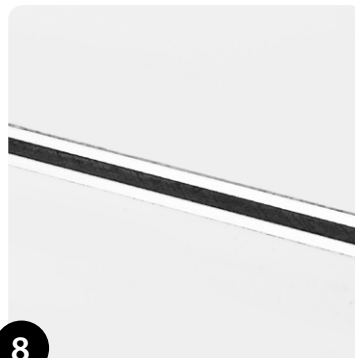
6

Using appropriate filling material (grout, silicone or mortar) fill down the edges of the Groove Light product into the recessed channel. Ensure that a fair amount of filling material is pushed down the sides of the product and channel to ensure good adhesion.



7

Remove protection mask from the front of the Groove Light product after all sanding, painting and finishing is completed.



8

Note: This guide is produced from testing under 'average' conditions and does not represent all possible applications or installation circumstances. Please contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



Groove RGB + 60W PSU

Installation Guide – Wiring



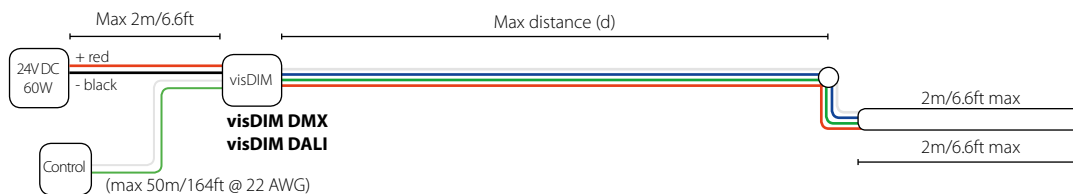
READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- The LED products in this guide require **24V DC** (constant voltage) Class 2 power supplies (UL listed – for North America).
- When connecting **Groove RGB** products end to end – **Do not exceed 2m/6.6ft** (from any one parallel power feed – see wiring examples).

WIRING EXAMPLES

DMX/DALI Control

	Cable size / Max distance (d)				
	0.5mm ² / 20AWG	0.75mm ² / 18AWG	1.0mm ² / 17AWG	1.5mm ² / 15AWG	2.5mm ² / 13AWG
Groove RGB (2m/6.6ft) + 60W PSU + visDIM DMX/DALI	15m/49.5ft	23.5m/77.5ft	32m/105.5ft	49m/161.5ft	83m/273.5ft



Note: This guide is produced from testing with KKDC approved power supplies or control gear. Performance with other power or control products cannot be guaranteed. Contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.



Groove RGB + 100W PSU

Installation Guide – Wiring



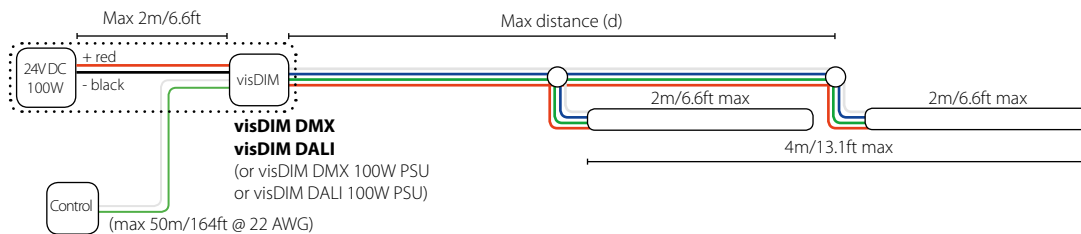
READ BEFORE INSTALLATION

- Cables used for connecting KKDC products must be of a suitable type and recommended gauge. Cable insulation must remain undamaged and conductors free from dirt and corrosion.
- Control cables should be of a suitable shielded type and not fixed in proximity to high voltage power cables or other sources of electromagnetic interference.
- When connecting KKDC products always observe the correct polarity (+/-). Failure to do so may destroy the product.
- Electrical circuits should be wired with power off and all wiring and connections should be complete and checked thoroughly before power is switched on. Take particular care not to confuse any control and power wiring. Do not remove any supplied product cable labels.
- Power supplies should not be made 'live' without the correct load attached and the low voltage output must not be switched. Do not exceed the recommended load.
- Remove only the minimum of cable insulation necessary to make wiring connections to eliminate the possibility of short circuit.
- Cables should be joined with terminal blocks and adequately protected against water immersion or moisture ingress with suitable tapes and sealants, potting compounds and IP rated junction boxes as appropriate to the installation and operating environment.
- The LED products in this guide require **24V DC** (constant voltage) Class 2 power supplies (UL listed – for North America).
- When connecting **Groove RGB** products end to end – **Do not exceed 2m/6.6ft** (from any one parallel power feed – see wiring examples).

WIRING EXAMPLES

DMX/DALI Control

	Cable size / Max distance (d)				
	0.5mm ² / 20AWG	0.75mm ² / 18AWG	1.0mm ² / 17AWG	1.5mm ² / 15AWG	2.5mm ² / 13AWG
Groove RGB (4m/13.1ft) + 100W PSU + visDIM DMX/DALI	6.5m/21ft	10.5m/35ft	15m/49.5ft	23.5m/77.5ft	40.5m/133.5ft



Note: This guide is produced from testing with KKDC approved power supplies or control gear. Performance with other power or control products cannot be guaranteed. Contact KKDC for further information. KKDC may change product specifications and installation guidance without prior notice.

Product Warranty



In the unlikely event that purchasers should experience a product failure, this should in the first instance be dealt with by contacting the supplier or local authorised KKDC representative.

Our warranty is provided in addition to any statutory legal rights and details the terms under which claims can be made.

1. Duration of Warranty

This warranty applies to all KKDC manufactured products for 3 years from the date of installation (or date of manufacture if the installation date is not known or verifiable) An extended 5 year warranty may be offered at the discretion of KKDC if appropriate project registration criteria are met.

2. Repair or Replacement

Should a KKDC product fail to function within the warranty period, KKDC will on its sole discretion provide a replacement free of charge or repair defective components in accordance with the terms set out below. Purchasers shall bear the cost of removal and return of any product subject to a warranty claim and that of installing a replacement. Any other costs, including but not limited to replacement costs upon installation; costs caused from failures of the installation or other damages and/or consequential damages are not covered by this warranty.

Replacement products shall as far as possible match the specification of the original but may have superior performance characteristics in line with ongoing product development.

3. Return of a Defective Product

The purchaser making a warranty claim shall contact KKDC (or their authorised representative) at the earliest opportunity to be provided with an address for return of the product. On receipt of returned product/s the validity of the claim will be checked. Proof of purchase may be required.

KKDC reserve the right to conduct diagnostic examination of any defective or failed product to determine patterns of usage and cause of failure and reserve the right to be the sole judge as to whether a returned product is defective within the terms of this warranty.

4. Notes / Conditions of Warranty

This warranty applies only to defects in materials and workmanship and only where KKDC Products are properly handled, stored, installed, wired and maintained in accordance with the most recent published KKDC product usage guides, installation instructions, specification sheets, and any applicable local electrical safety standards and wiring regulations.

(The most recent versions of KKDC product documentation are available from the website www.kkdc.co.uk)

This warranty does not constitute any inference as to the suitability of any product for any purpose. In no event shall KKDC be liable for any other costs or damages including lost profits, incidental, special or consequential damages.

Warranty claims will be invalid in the event of :

Product damage due to abuse, unauthorised alteration or modification, accident, fire, flood, lightning, rodents, insects, negligence or acts of God.

Product installation by unqualified persons.

Product modification, disassembly or attempted repair by non KKDC staff.

Product installation or storage in 'abnormal' conditions or locations, including but not limited to those where :

Ambient Temperatures are in excess of 60 Deg C.

Installation in areas of excessive humidity.

Any product subjected to excessive mechanical stress, or physical damage.

Inadequate heat sinking provision for any unhoused 'bare PCB' type LED product.

IP67 class luminaires installed without adequate local drainage, or becoming immersed in water.

Chemical contamination or damage from salt laden air.

Damage from use of pressure washers or other mechanical cleaners.

Improper use of 'sanitizing products' and maintenance using improper or unapproved chemical compounds/solvents.

Unauthorised use of parts or accessories not manufactured by KKDC in conjunction with KKDC Products.

'Constant Voltage' (CV) KKDC LED Products supplied with incorrect voltage.

'Constant Current' (CC) KKDC LED products supplied with incorrect current.

Incorrect layout, cutting and connection of wiring; intermittent or improper mains electrical supply.

Product/s having damaged serial number, cable or Certificate labels.

Product/s which have been installed more than once or have not been returned promptly and directly to KKDC for fault diagnosis and testing.

5. Warranty contacts

Warranty claims can be made only by the original purchaser by contacting KKDC or local KKDC authorised representative details of which can be found via the supplier or on the website – www.kkdc.lighting.

6. Implied Terms

6.1 Subject to sub-clause 6.2, any condition or warranty which would otherwise be implied is excluded.

6.2 Where legislation implies any condition or warranty, and that legislation avoids or prohibits provisions in a contract excluding or modifying the application of or exercise of or liability under such condition or warranty, the condition or warranty shall be deemed to be included in this warranty. However the liability of KKDC for any breach of such condition or warranty shall be limited, at the option of KKDC, to the following:

If the breach relates to any KKDC Product:

(i) the replacement or the supply of equivalent KKDC Product;

(ii) repair of product (excluding costs of removal and installation);

(iii) payment of the cost of replacement or of acquiring equivalent product; or

(iv) payment of the cost of repair of product (excluding costs of removal and installation).

Note: KKDC reserves the right to make changes to product specifications and installation guidance without prior notice.



Groove Light

Code Table



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
					RGB	d101	3000K	30K									
Groove Light RGB, Silver anodised	GQSA			RGB	d101	RGB	RGB	Groove Light 101	M	100-1000mm 100mm increments	IP65	65	300mm Double tail	c2			

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