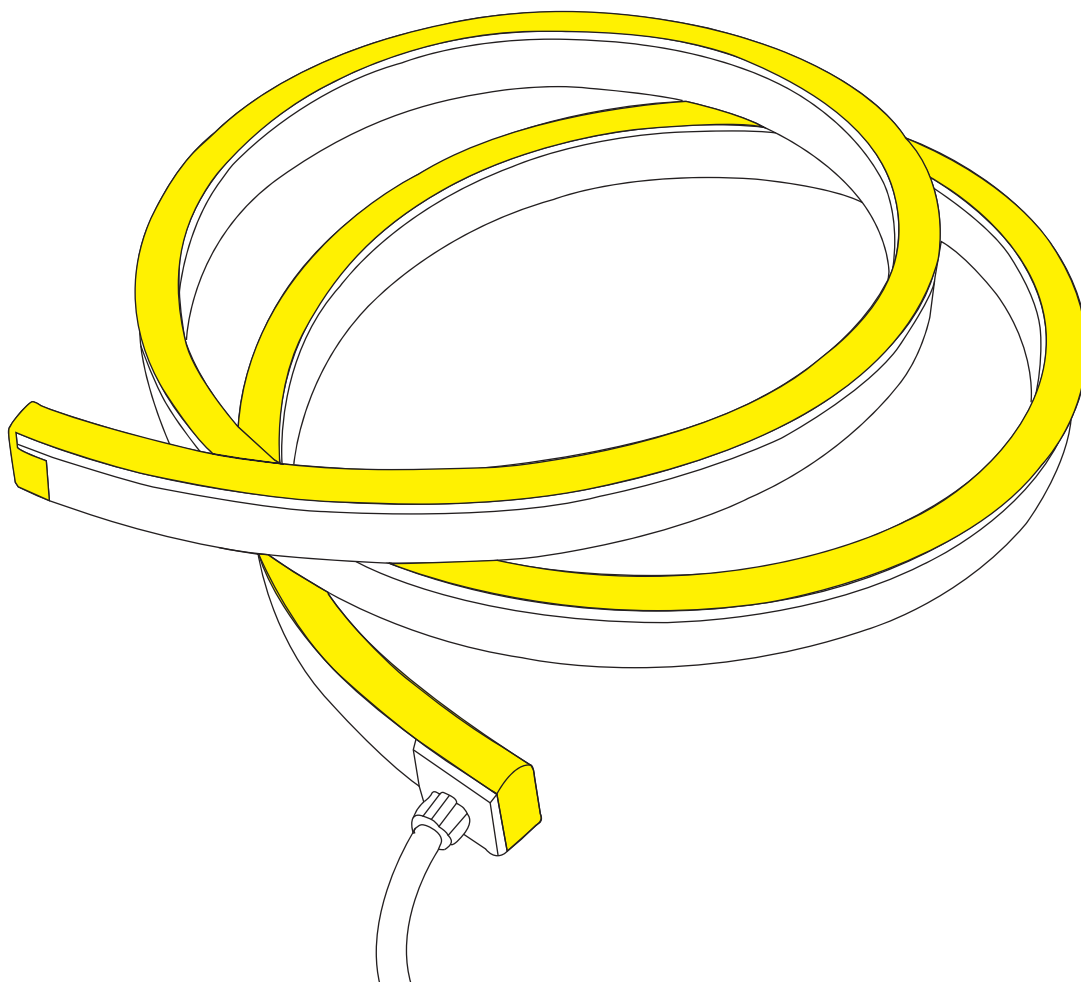


fluxxLED

Installation Instructions
Udon



NOV'11

Contents

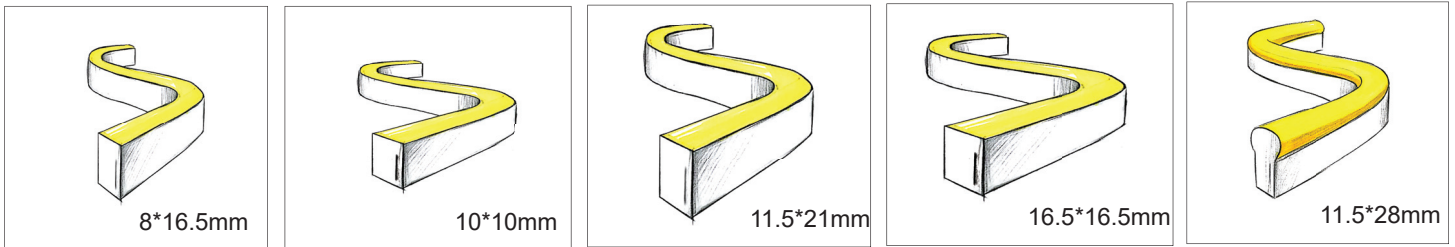
1) Introduction.....	1
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1.Introduction

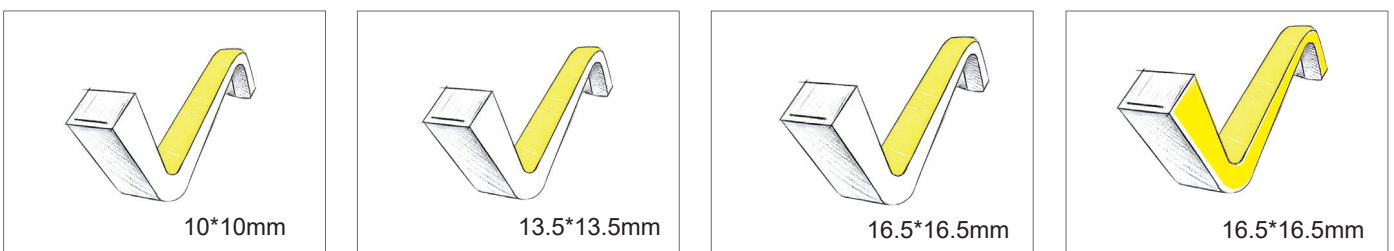
LED Linear Flex are bendable and highly durable linear LED solutions – suitable for both indoor and outdoor applications. To achieve a uniform and diffused light output, LED linear flex range encapsulates LED strips with high-quality LED chips inside a flexible 40Z FPC. The protective casing prevents UV, damage, is waterproof, as well as flame and solvent-resistant. We offer a range of dimensions and colour temperatures; depending on the environment our linear flex can be mounted, recessed and semi-recessed.

LED linear flex can be divided with different bending direction between horizontal & vertical, also the shape and emitting beam angle are not the same.

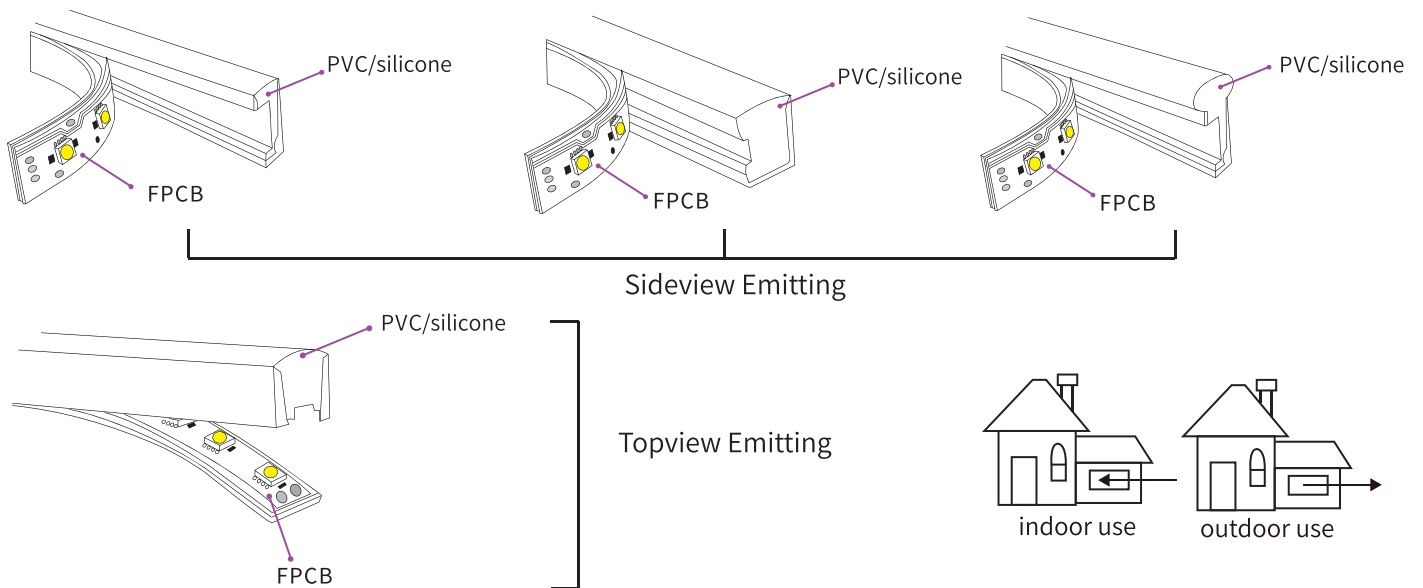
Horizontal Bending (Sideview emitting series)



Vertical Bending (Topview emitting series)



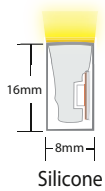
Construction



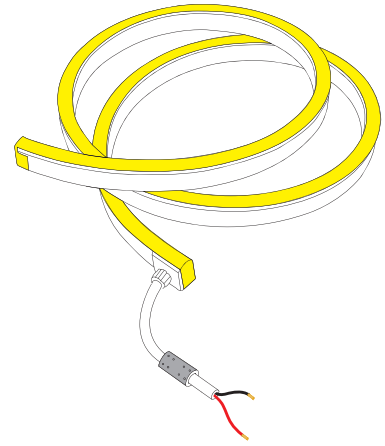
Mono Color	Tunable White	RGB	RGBW	Pixel RGB	Pixel RGBW	Ansi C78.377	SDCM<3	One Bin	Dimmable
DMX512	SPI	Submersible	Ambient Temp.	Class 3	LM-80	IK08	UV resistant	Flame Resistant	Saltwater Resistant
Solvents Resistant	Dirt Resistant	CE	RoHS	Warranty					

2. Product Overview

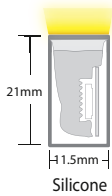
Side flat shape LED linear flex (8*16.5mm/8*16mm)



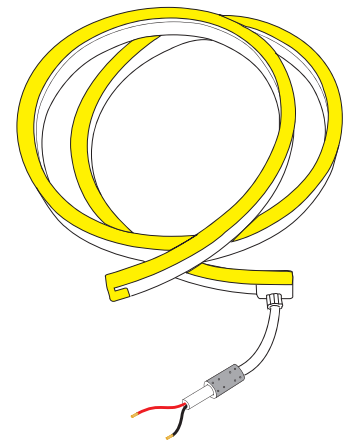
- Flat rectangular emission surface with 120-degree beam angle.
- The min bend diameter of 8cm, suitable for led neon sign application.
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datesheets specification for the exact color range)
- Color options include green, blue, red, pink, amber, orange.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.



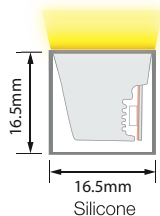
Side flat shape LED linear flex (11.5*21mm)



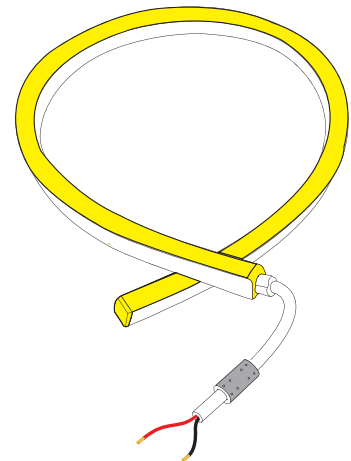
- Flat rectangular emission surface with 120-degree beam angle.
- 8cm minimum bending diameter
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datesheets specification for the exact color range)
- Color options include Mono, RGB, RGBW, DW and Pixel.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.



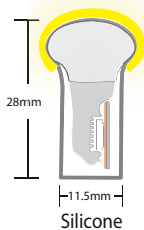
Side flat shape LED linear flex (16.5*16.5mm)



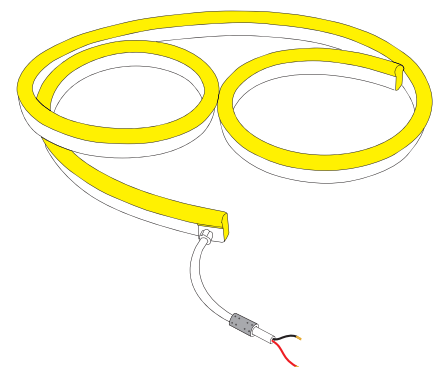
- Flat rectangular emission surface with 120-degree beam angle.
- The minimum bending diameter is 15cm
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datesheets specification for the exact color range)
- Color options include Mono, RGB, RGBW, DW and Pixel.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.



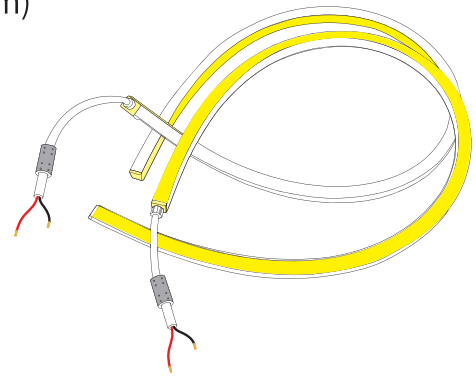
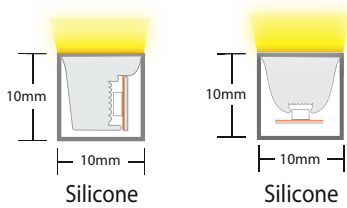
Side Dome shape LED linear flex (11.5*28mm)



- Dome rectangular emission surface with 270-degree beam angle.
- The minimum bending diameter is 8cm
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datesheets specification for the exact color range)
- Color options include Mono, RGB, RGBW, DW and Pixel.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.

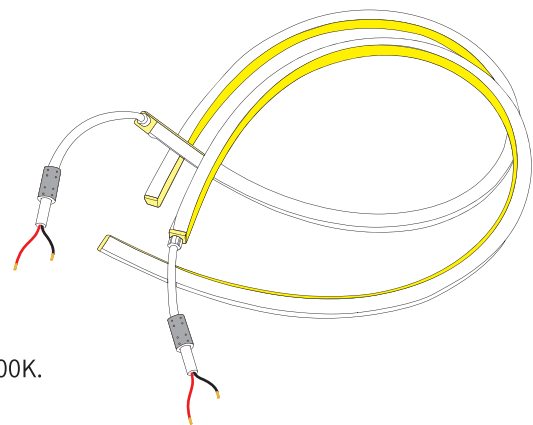
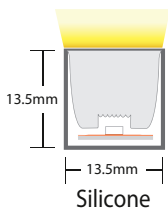


Side & Top flat mini shape LED linear flex (10.0*10.0mm)



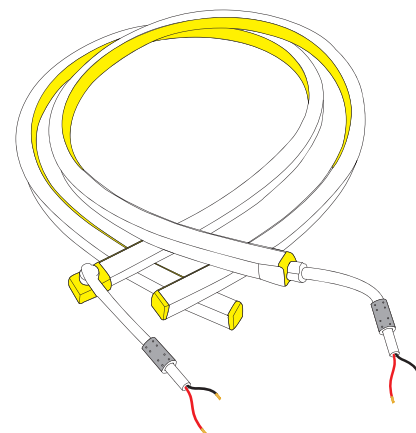
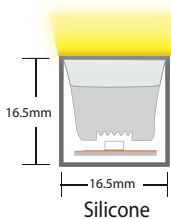
- Flat rectangular emission surface with 120-degree beam angle.
- 12cm minimum bending diameter
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datasheets specification for the exact color range)
- Color options include green, blue, red, pink, amber, orange.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.

Top flat mini shape LED linear flex (13.5*13.5mm)



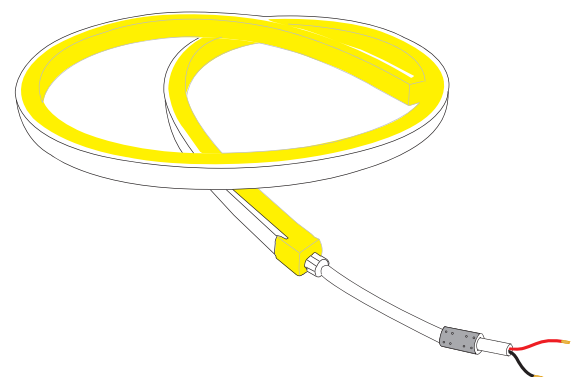
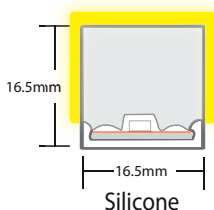
- Flat rectangular emission surface with 120-degree beam angle.
- 8cm minimum bending diameter
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datasheets specification for the exact color range)
- Color options include Mono, RGB.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.

Top flat mini shape LED linear flex (16.5*16.5mm)



- Flat rectangular emission surface with 120-degree beam angle.
- 12cm minimum bending diameter
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datasheets specification for the exact color range)
- Color options include Mono, RGB, RGBW, DW and Pixel.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.

Top flat shape LED linear flex (16.5*16.5mm)



- Flat rectangular emission surface with 210-degree beam angle.
- 12cm minimum bending diameter
- Available in static color including white in CCT ranging from 2200K-6500K. (Please refer to our datasheets specification for the exact color range)
- Color options include Mono, RGB, RGBW, DW and Pixel.
- Dimmable with DALI, 0-10V, DMX/RDM, Triac control options.

3. Installation Guide

This product left the place of manufacture in perfect condition. In order to maintain this condition and for safe operation, the user must always follow the instructions and safety warnings described in this user manual.

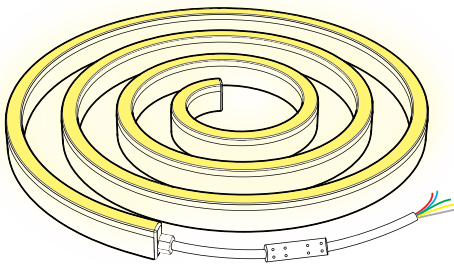
Safety Warning!

General

- This product must be installed by a qualified and competent professional.
- When working on the fixture, heat resistant gloves should be worn to provide adequate user protection.
- Do not work on the product with wet hands.
- Always disconnect the power supply before attempting to maintain or service the equipment.
- Always operate the equipment as described in this user manual.
- Do not stand close to the equipment and stare directly into the LED light source.
- Make sure that all parts of the equipment are kept clean and free of dust which should be carried out as part of a maintenance cycle that's appropriate for the installation location of the product.
- When transferring the product, it is advisable to use the original packaging in which the product left the factory.
- Shields, lenses, ultraviolet screens and pressure release valves should be changed if they have become damaged to such an extent that their effectiveness is impaired.
- LED linear Flex should be changed if it has become damaged or thermally deformed.
- The power supply (PSU) , DMX / RDM driver and LED drivers should be changed if they fail to operate.

Installation

- A minimum distance of 0.5m must be maintained between the equipment and any combustible surface. The mounting surface must not be combustible.
- Always ensure the supporting structure is a flat and solid surface and can support the weight of the product and any additional wind or shear force. The supporting structure must be capable for the installation of luminaires, and advice must be taken from an appropriately qualified and competent person to verify proposed mounting positions and surfaces.
- Always make sure that the equipment is installed securely and ensure all safety anchors are installed.
- The product must be installed within well-ventilated areas.
- The Earth wire MUST ALWAYS be connected.
- Local electrical and building regulations must be followed. If in doubt, please contact support distributor
- Avoid shaking or strong impacts to any part of the equipment.
- Always make sure that the power and data connections are connected correctly and securely. If there's any malfunction of the equipment, contact your local distributor immediately.
- This fixture should not be buried.



Noted:

The product has been aging for eight hours before leaving the factory. When you get the product, you do not need to age the product

Caution, risk of electric shock

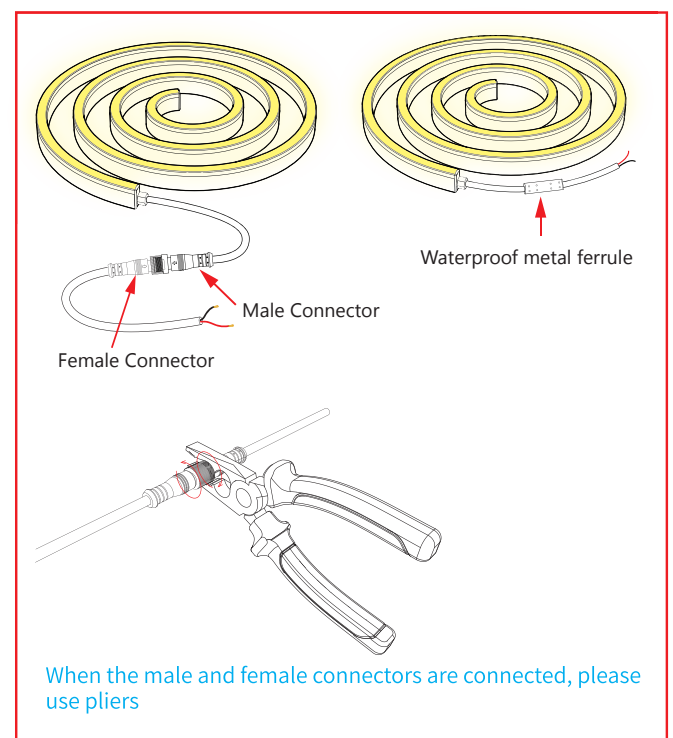


The light source and other electronic components contained in this luminaire shall only be replaced by your distributor service agent.

This user manual is intended to cover as much detail as possible for this product, and great care has been taken to ensure this and the accuracy of the information contained within, however should additional information or clarification be required that is not covered within this manual or associated data sheets, or if there are any uncertainties regarding the installation and operation of this product, Distributor MUST be contacted before any work is carried out on the fixture or associated products.

Specific Installation

- Although this product does not generate a great amount of heat, it is recommended that you do not cover or conceal it.
- Do not route the product through walls, doors, windows, or building structures.
- Do not roll out the product onto rough surfaces or over sharp corners. This will scratch the PVC /silicone optics and damage the finish of the product.
- Do not use the product if :
 - The outer PVC jacket is damaged
 - There are loose electrical connections
 - The wires are visible without insulation.
- Do not secure the product with staples, nails, or alike that might damage the insulation or PVC/silicone material.
- Do not install the product on/in places where it is subject to continuous flexing.
- Do not operate/run the product in temperatures exceeding 55°C.
- Do not operate the product over the specified voltage or LED life degradation will be greatly increased.
- Do not leave any part of the product unsecured.
- Constant movement over time from weather can cause damage.
- Do not reverse polarity when connecting from both ends. This will damage the internal PCB. Always test connections with a multi-meter before applying power.
- Do not energise the product whilst in packaging.
- The product can be cut only where marked. Look for the "Dotted Line" or "Scissor Mark". A cut section must have the appropriate IP rated cap flex accessory to maintain IP ratings.
- Cutting outside of the specified mark will damage the light.
- Do not cut while the LED flex neon is connected to power.
- Do not install in human inhabited pools.
- During installation, violent pulling and bending are prohibited.
- Must always be used with an electrical isolation transformer providing SELV (safety extra low voltage).
- **Do not cut off the cable wire between the waterproof metal ferrule and connector.**

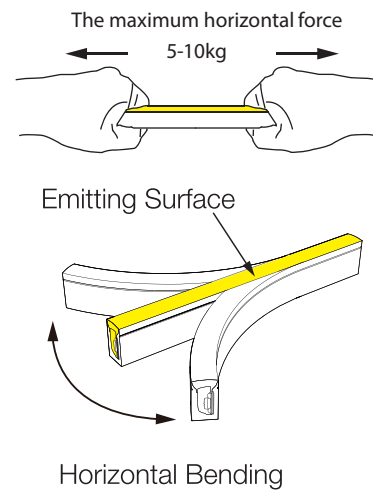
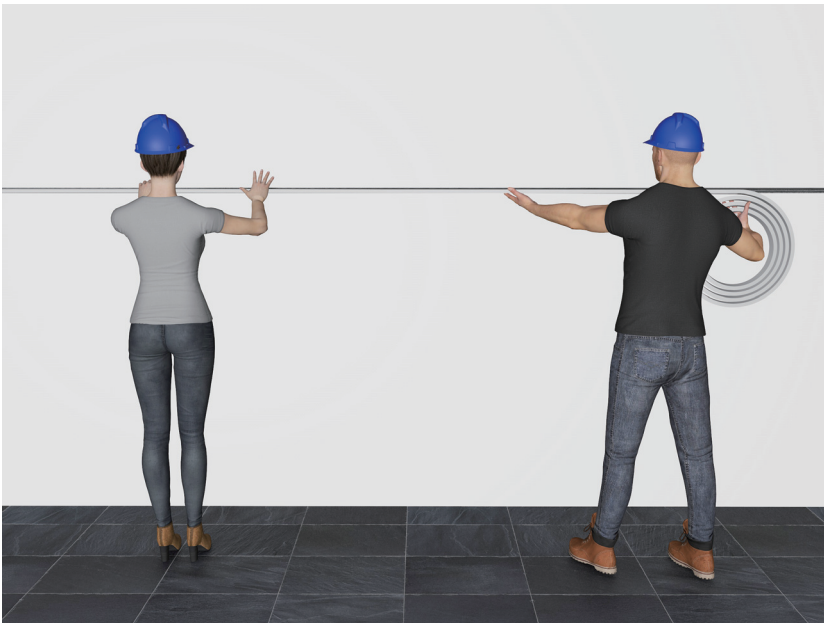


4. Mounting Product

LED linear flex is a highly durable product but must be installed in accordance to the pictures shown below, which indicate the minimum bending parameters as well as the correctly bending direction for each specific variant of models

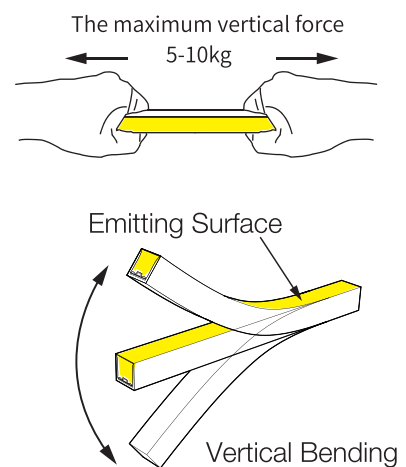
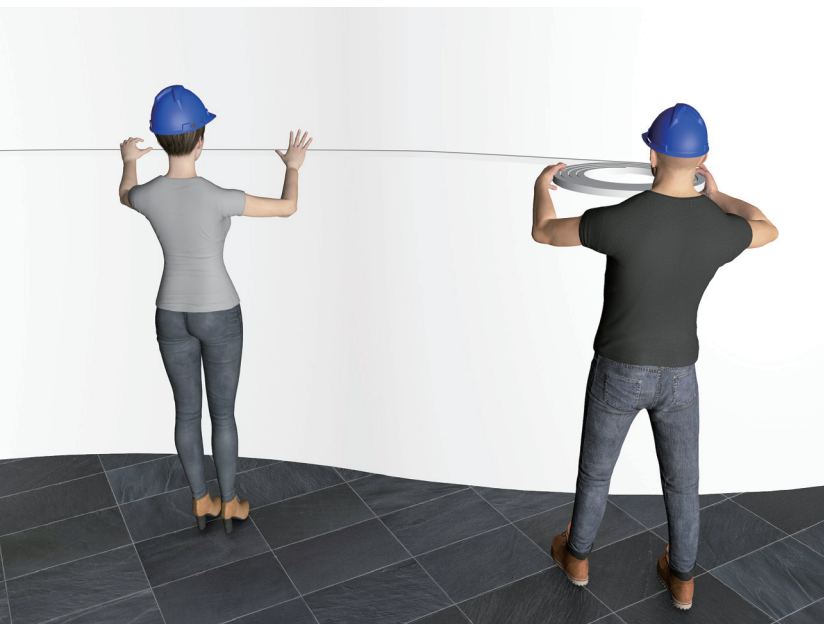
Side flat & side round shape LED linear flex

LED linear flex must be installed by at least 2 people, who can support the product in various locations as shown. During installation, care should be taken to ensure the bending radius of is not exceeded.



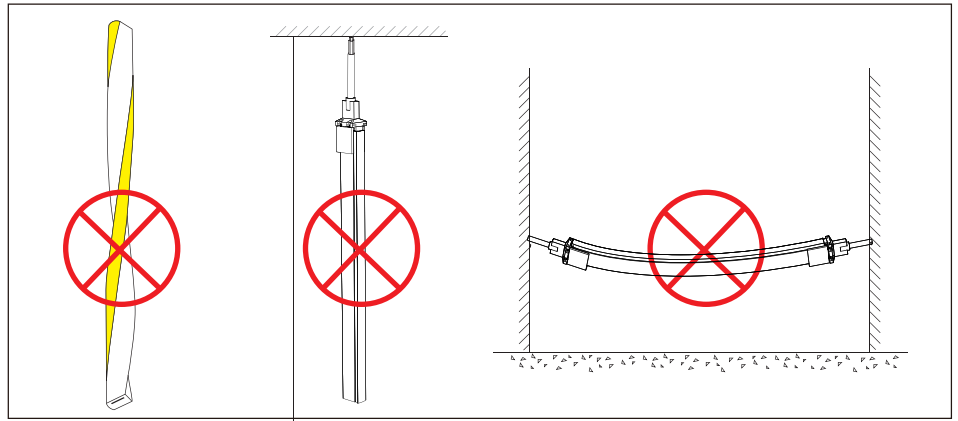
Top flat shape LED linear flex

LED linear flex must be installed by at least 2 people, who can support the product in various locations as shown. During installation, care should be taken to ensure the bending radius of is not exceeded.



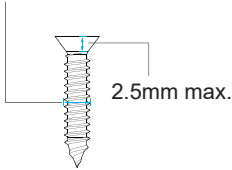
General DO NOTS

The images give indication as to what is not acceptable as an intended installation or during installation of other fixing methods

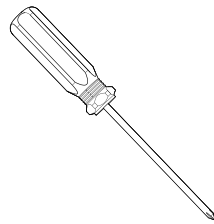


Prepare for mounting profile installation

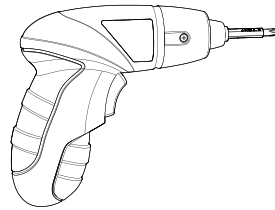
Ø3.5mm max.



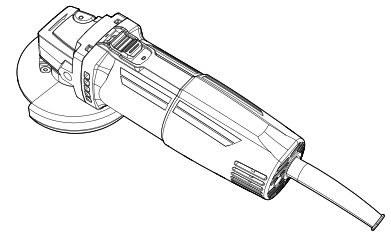
Screw



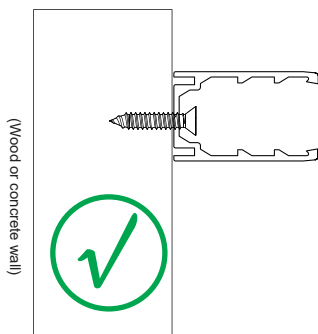
Screwdriver



Electric Screwdriver

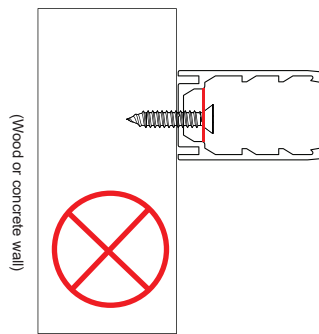


Angle Grinder



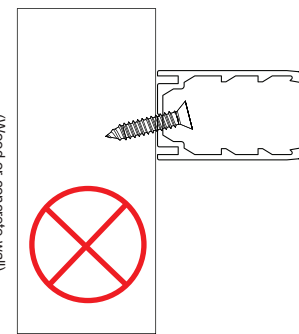
Install the screw into position and ensure the screw head flush or lower the base of aluminum profile.

Correct joint



Screw head above the base of aluminum profile.

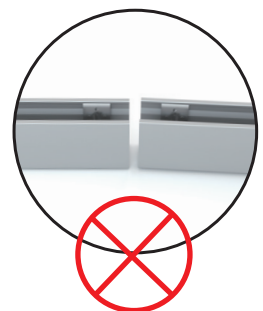
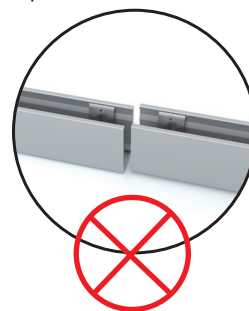
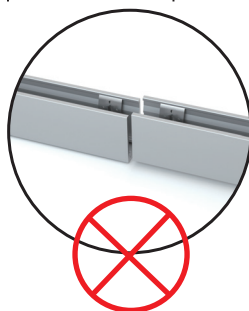
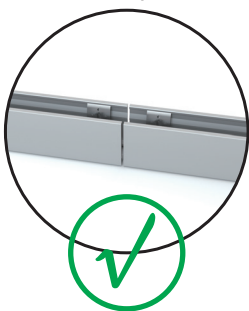
Displacement of up and down



Gradient installing of screw

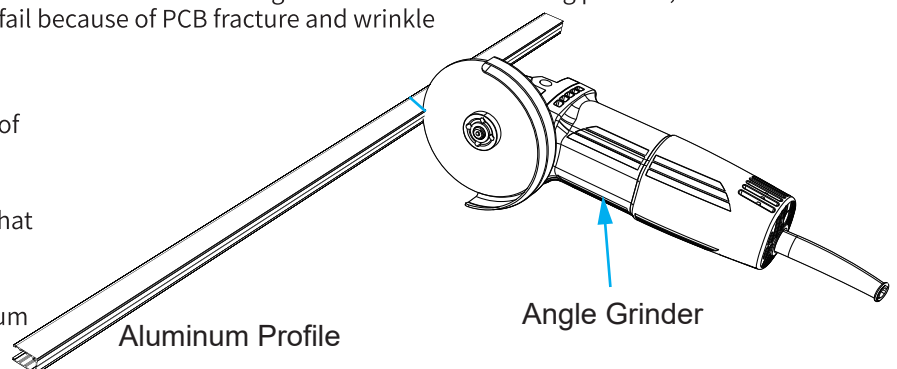
Displacement of left and right

Generate a curve



Displacement of profiles up and down leads to the incorrect bending on the horizontal bending product, after working for a period of time, the light may fail because of PCB fracture and wrinkle (caused by incorrect bending).

The mounting profile has standard lengths of 3.5cm, 1m, 2m. When you install the aluminum profile on the surface, another tool is required for cutting the aluminum profile, that is an angle grinder. Ensure that the cutting surface is flush and smooth, and pay attention to grinder and the burrs of the aluminum profile to avoid hurting your hands.



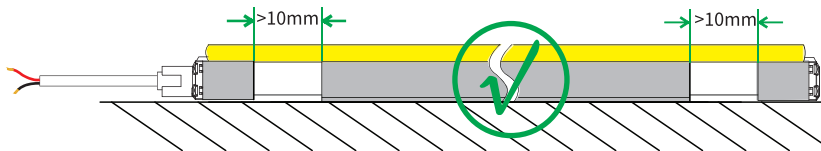
General mounting

LED linear flex can be fastened to surfaces using appropriate accessories available from distributor. Please refer to data sheets or contact technical support for a copy. The use of glues and resins as fixing agents should be avoided. Use of glues and resins may invalidate the warranty of the product, unless it's use is agreed in writing by distributor as part of a detailed project specification.

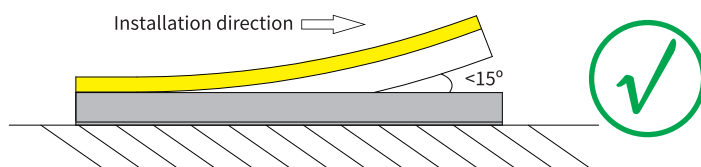
The images indicate one type of fixing available in the accessories range. The different fixings serve obvious purposes, however when in doubt technical support should be contacted.

Quantities of accessories and fixings are dependent on the type and its effect on the variant it's being used with. Care should be taken to ensure drooping is avoided, and to ensure that is fastened adequately to avoid stresses on itself.

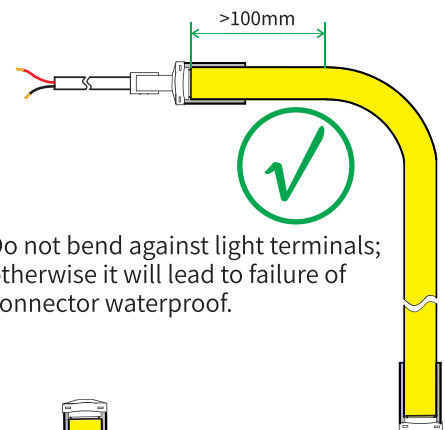
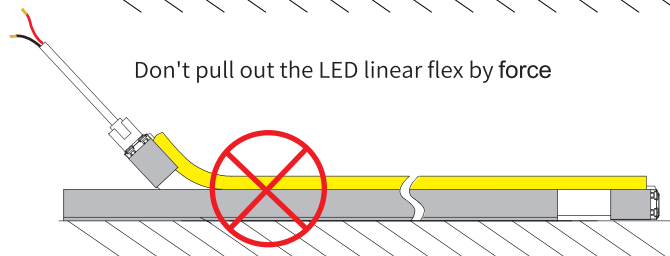
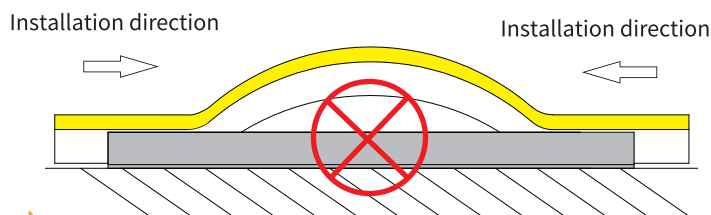
The aluminum mounting piece of IP67 front connector and end cap should keep at least 10mm space apart from aluminum channel when making installation.



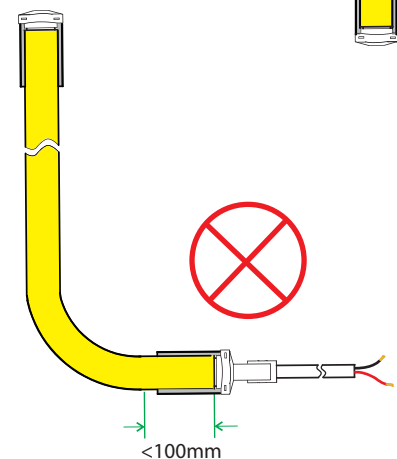
Press led linear flex into mounted aluminum channel in one direction.



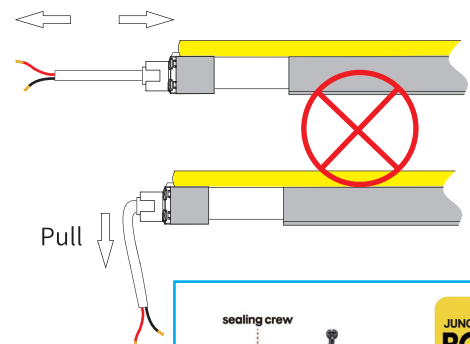
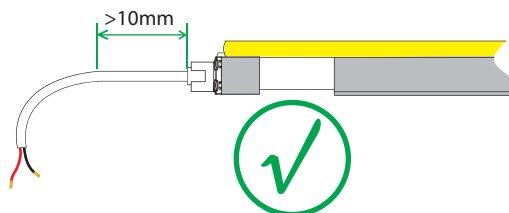
Incorrect installation like below picture could lead to light failure.



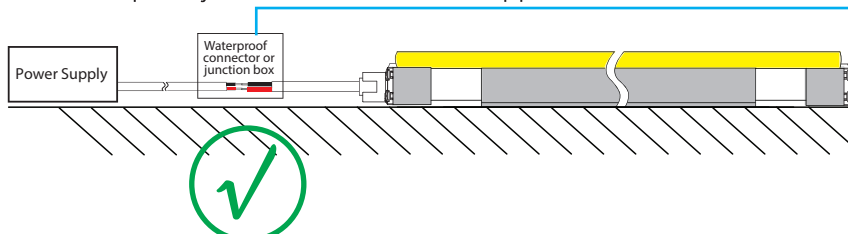
Do not bend against light terminals; otherwise it will lead to failure of connector waterproof.



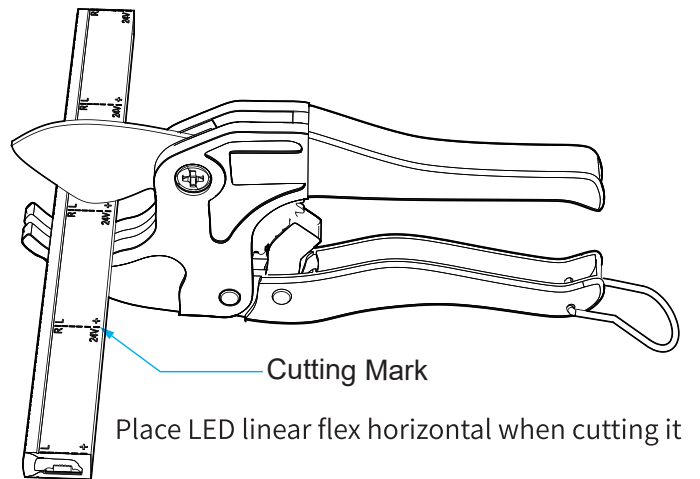
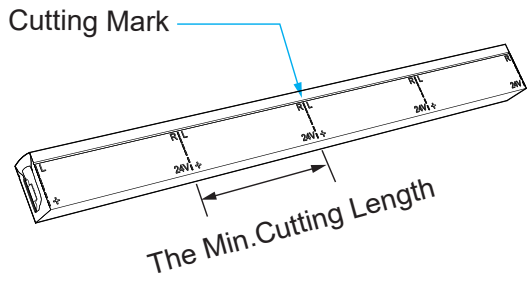
Ensure the feeding cable not bear force, keep the head 10mm in natural loose.



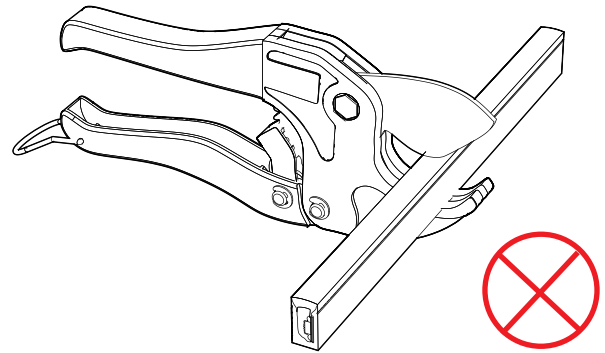
Mount the cable junction in hermetic enclosure like waterproof junction box in outdoor application.



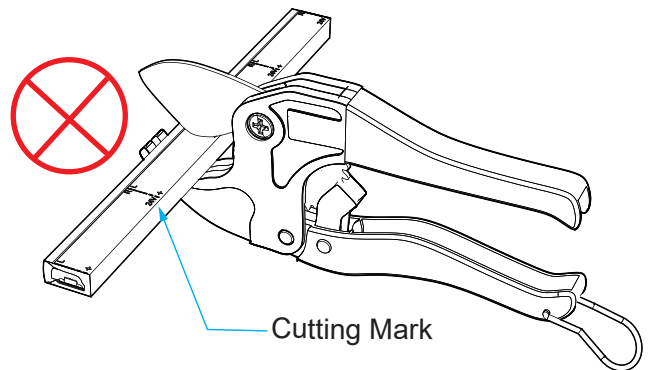
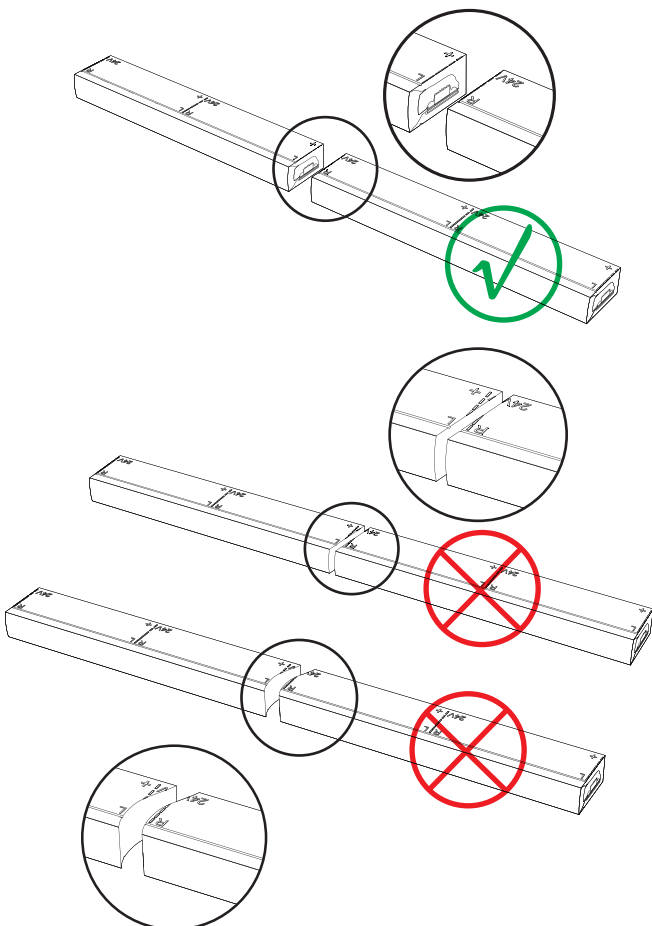
5. Instructions for LED linear flex cutting



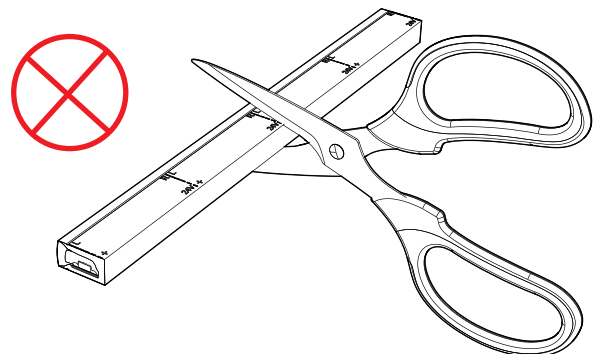
1. Use only factory-recommended cutter, usual scissors are not suitable for cutting led linear flex.
2. Place led linear flex horizontally when cutting it.
3. Cutting led linear flex according to the following instructions. Incorrect operation will damage the light.
4. The cutting surface should be flush and Smooth



Please don't cut led linear flex from emitting surface



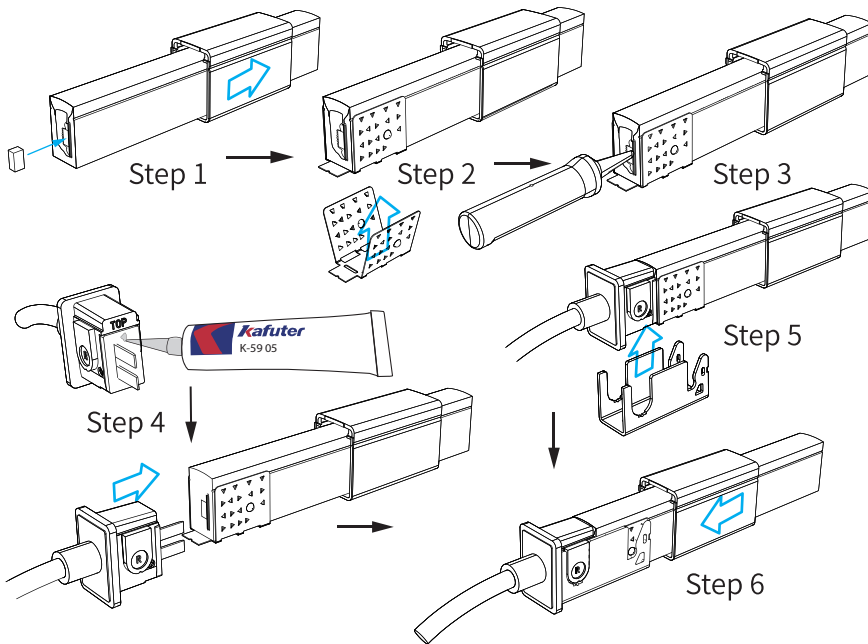
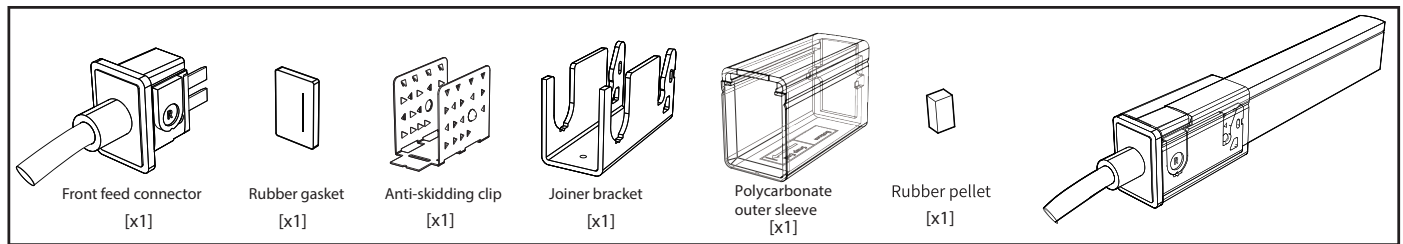
Do Not cut away from the cutting mark.



Do not use Scissors

6. DIY Snap Connector Kit Assembly Instruction

The snap kit can be easily installed than screw kit without any tool, it also has the same waterproof fuction of IP67.



Step 1

Insert one piece of rubber pellet into the gap of led linear flex. Let linear flex threads through polycarbonate outer sleeve, printed instruction aligns with the 'Snap End' arrow points in the direction of the feed connector.

Step 2

Place the anti-skidding clip on the very end of the neon with the 2 tiny tabs pointing inwards touching the end of material and crimp in place.

Step 3

Place the tip of the assistant tool against the outer side of the internal circuit board within the neon flex. Carefully push the tool into led linear flex (max. depth of 12.5mm) and creates a small cavity in the flexible material on the outer side of the circuit board.

Step 4

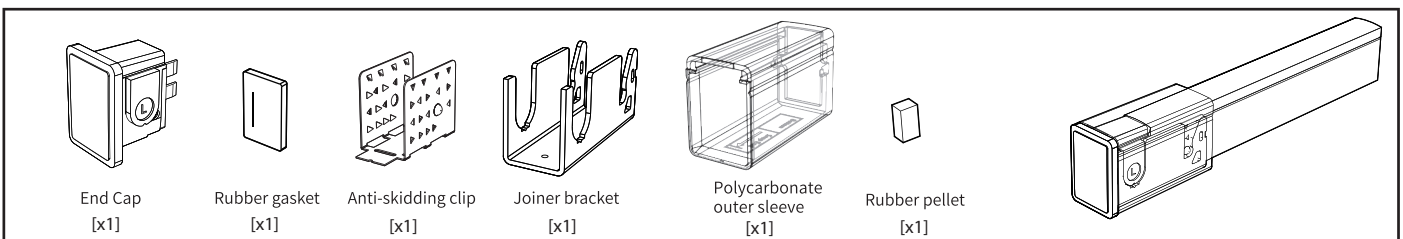
Insert rubber gasket into the pins and apply 100% clear silicone on the surface of it. Align the front feed connector with the cut end part and carefully push its pins into the gaps.

Step 5

Gently yet firmly push the joiner bracket onto the front connector assembly. The two parts close together and eventually lock them into place.

Step 6

Slide the polycarbonate outer sleeve up to the flange of the front connector.



Step 1

Insert one piece of rubber pellet into the gap of led linear flex. Let linear flex threads through polycarbonate outer sleeve, printed instruction aligns with the 'Snap End' arrow points in the direction of the feed connector.

Step 2

Place the anti-skidding clip on the very end of the neon with the 2 tiny tabs pointing inwards touching the end of material and crimp in place.

Step 3

Place the tip of the assistant tool against the outer side of the internal circuit board within the neon flex. Carefully push the tool into led linear flex (max. depth of 12.5mm) and creates a small cavity in the flexible material on the outer side of the circuit board.

Step 4

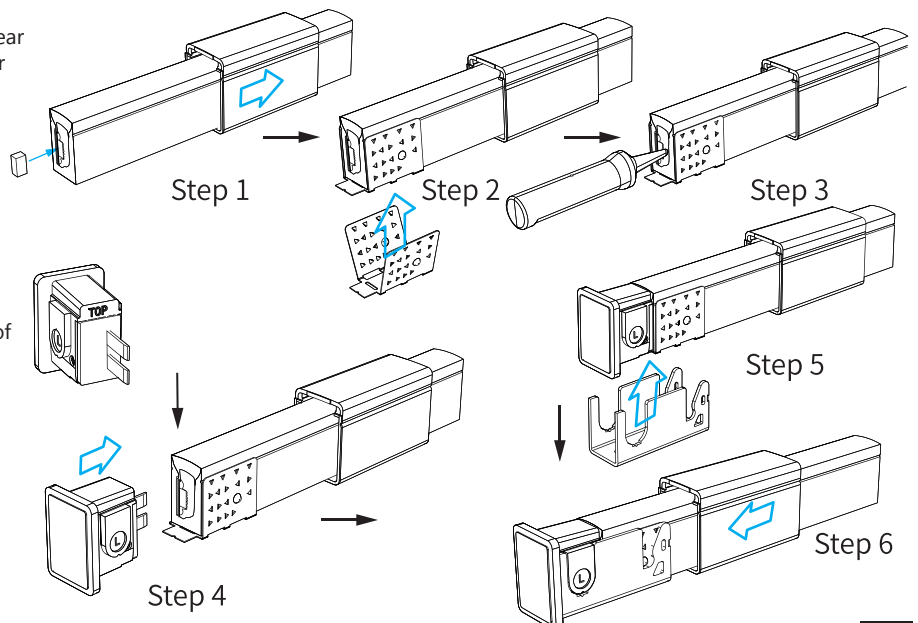
Insert rubber gasket into the pins and apply 100% clear silicone on the surface of it. Align endcap and carefully push into place.

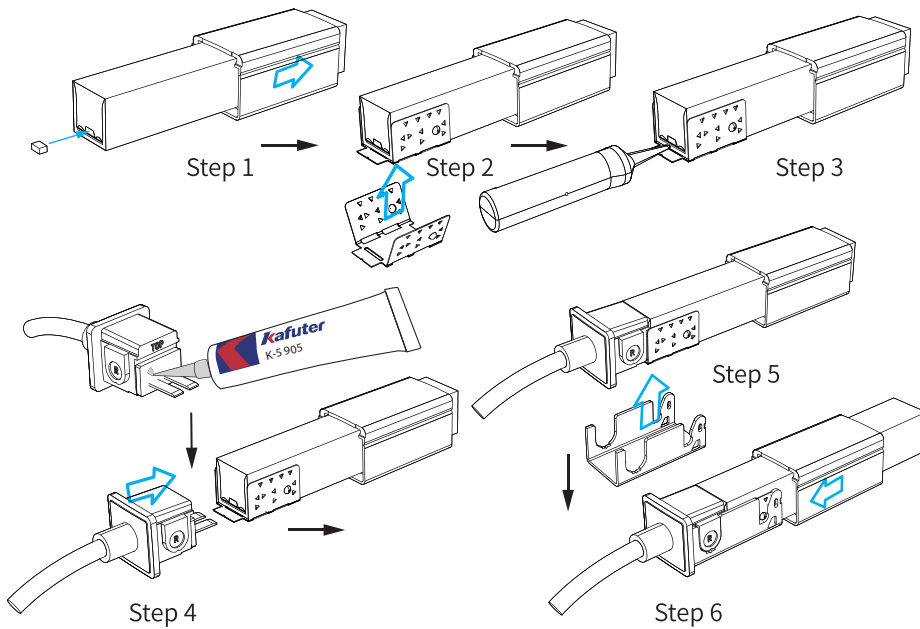
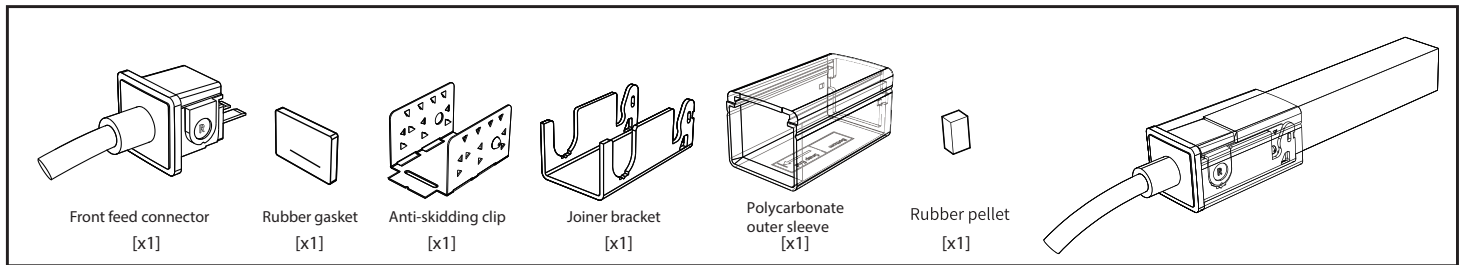
Step 5

Gently yet firmly push the joiner bracket onto the front connector assembly. The two parts close together and eventually lock them into place.

Step 6

Slide the polycarbonate outer sleeve up to the flange of the front connector.





Step 1

Insert one piece of rubber pellet into the gap of led linear flex. Let linear flex threads through polycarbonate outer sleeve, printed instruction aligns with the 'Snap End' arrow points in the direction of the feed connector.

Step 2

Place the anti-skidding clip on the very end of the neon with the 2 tiny tabs pointing inwards still touching the end of material and crimp in place.

Step 3

Place the tip of the assistant tool against the outer side of the internal circuit board within the neon flex. Carefully push the tool into led linear flex (max. depth of 12.5mm) and creates a small cavity in the flexible material on the outer side of the circuit board.

Step 4

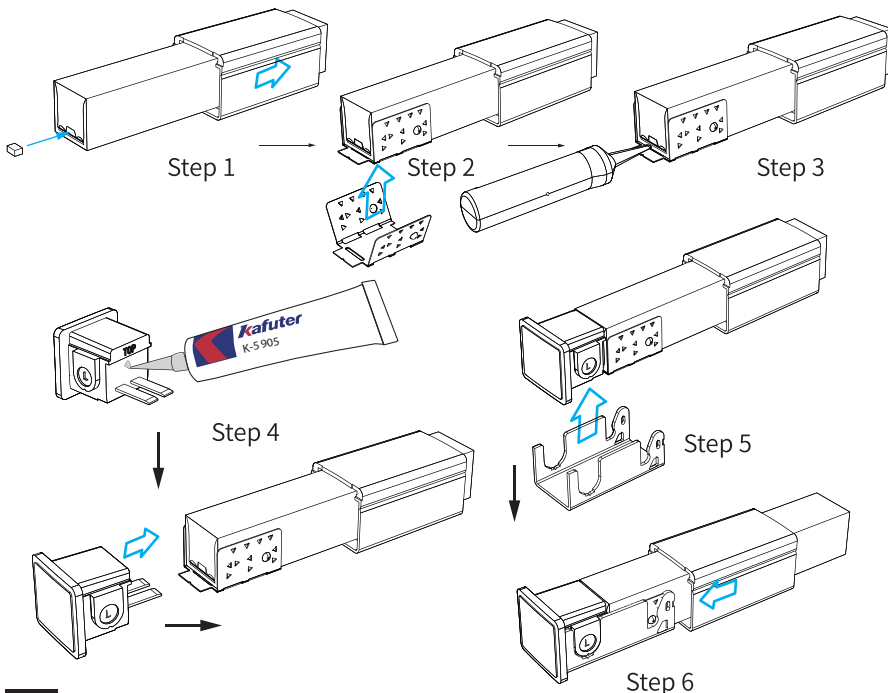
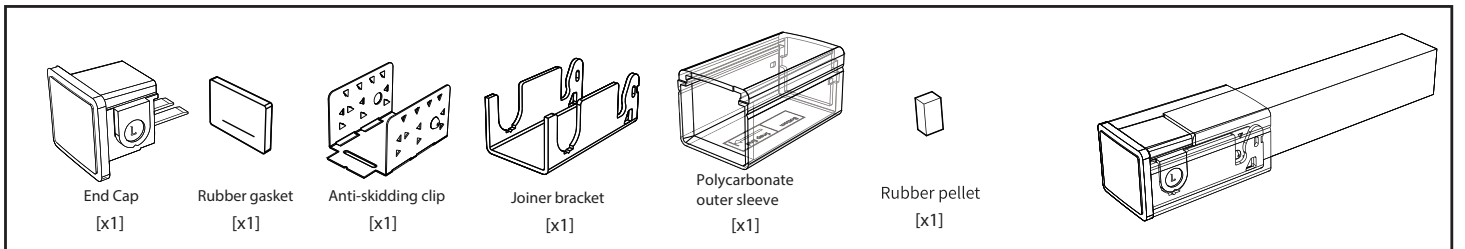
Insert rubber gasket into the pins and apply 100% clear silicone on the surface of it. Align the front feed connector with the cut end part and carefully push its pins into the gaps.

Step 5

Gently yet firmly push the joiner bracket onto the front connector assembly. The two parts close together and eventually lock them into place.

Step 6

Slide the polycarbonate outer sleeve up to the flange of the front connector.



Step 1

Insert one piece of rubber pellet into the gap of led linear flex. Let linear flex threads through polycarbonate outer sleeve, printed instruction aligns with the 'Snap End' arrow points in the direction of the feed connector.

Step 2

Place the anti-skidding clip on the very end of the neon with the 2 tiny tabs pointing inwards still touching the end of material and crimp in place.

Step 3

Place the tip of the assistant tool against the outer side of the internal circuit board within the neon flex. Carefully push the tool into led linear flex (max. depth of 12.5mm) so that it creates a small cavity in the flexible material on the outer side of the circuit board.

Step 4

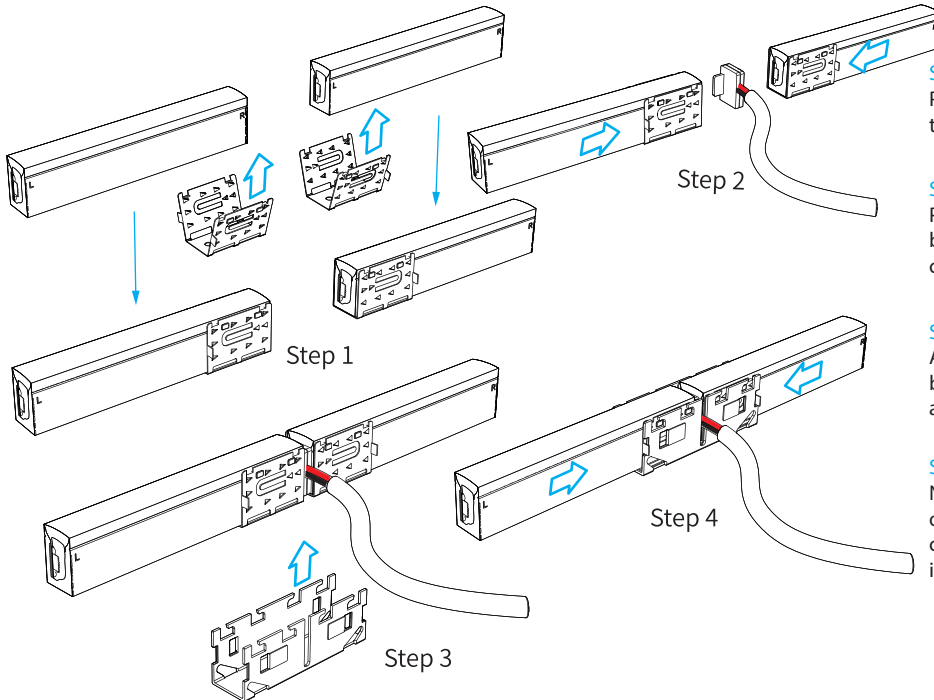
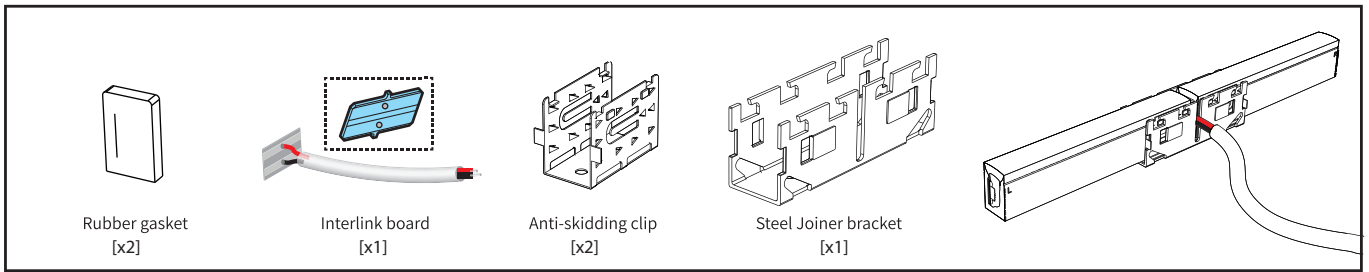
Insert rubber gasket into the pins and apply 100% clear silicone on the surface of it. Align end cap with the cut end part and carefully push its pins into the gaps.

Step 5

Gently yet firmly push the joiner bracket onto the end cap assembly. The two parts close together and eventually lock them into place.

-Step 6

Slide the polycarbonate outer sleeve up to the flange of the front connector.

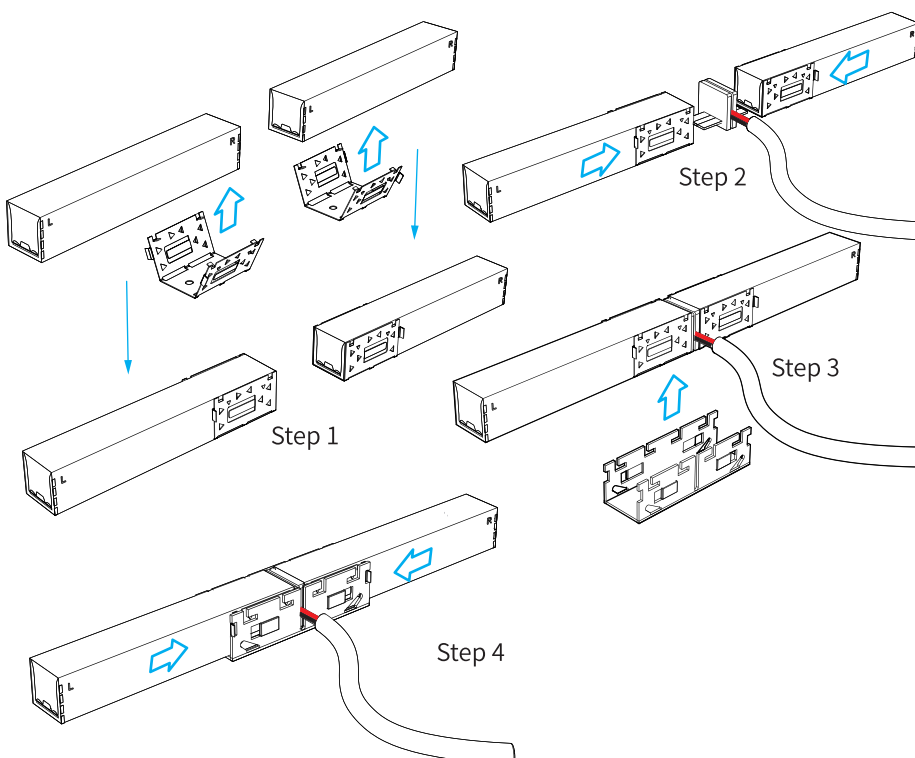
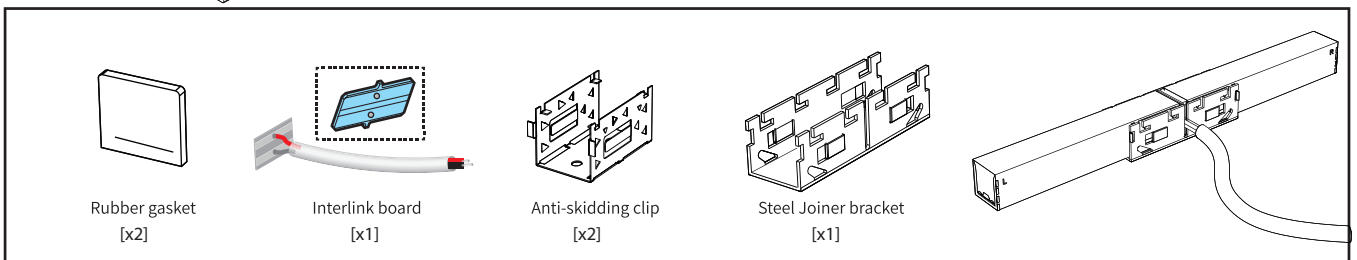


Step 1
Place anti-skidding clip onto both end of the neon flex, pay attention to its direction.

Step 2
Put rubber gasket on both side of interlink board, then insert interlink board into the gap created behind the FPCB.

Step 3
Align the anti-skidding clip with the joiner bracket and press the neon flex downwards at the same time till bottom,

Step 4
Now push each neon flex in towards the center of joiner bracket, locking tabs on both grip clips click into place within their respective openings in the steel joiner bracket



Step 1
Place anti-skidding clip onto both end of the neon flex, pay attention to its direction.

Step 2
Put rubber gasket on both side of interlink board, then insert interlink board into the gap created behind the FPCB.

Step 3
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Step 4
Now push each neon flex in towards the center of joiner bracket, locking tabs on both grip clips click into place within their respective openings in the steel joiner bracket

7. Electrical Connections

LED linear flex is manufactured to order, meaning that the appropriate power feeds are moulded. There are two options available for all versions, these are bare end cables or plugs.

Bare end cables come with a standard length which can vary pending the manufacturing process, therefore it is recommended to ensure the feeder cable is long enough to reach the cable entry point of flex, where connections can be made.

Plugs are designed for “plug-and-play” type installations, whereas the installer would ensure female sockets are available at each flex start location, with the male type connector then plugging into this female type socket. Female sockets are available as separate items.

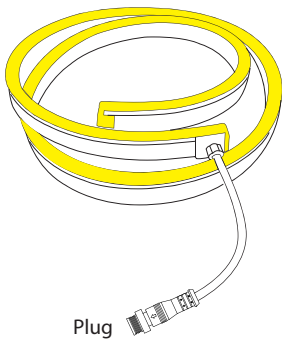
Note that custom feed cable lengths are available upon special request.

LED linear flex is a high-powered product, which requires a detailed electrical design to ensure equal balancing of loads across drivers and power supplies. Reference can be made to the various data sheets for specific variants, that indicate the operating voltage and the wattage per metre. Technical support is on hand to assist with control and power design. Product operates at 24Vdc unless otherwise stated in specific data sheets or product labels. Care should be taken to ensure the operating voltage is constant (constant voltage). A maximum volt drop of 5% is allowed (for example at 24Vdc, the maximum voltage drop would be 1.2V meaning a delivered voltage of 22.8V to the fixture).

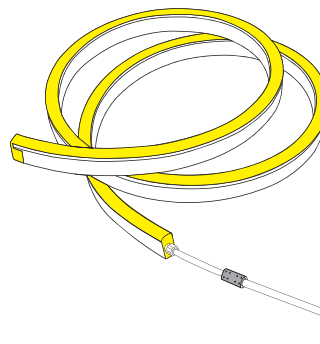
Providing with an extensive range of power supplies, LED Drivers, SPI pixel gateways and various DC-DC transformers which allow installers to overcome volt drop issues, as well as various control options such as stand-alone DMX interfaces to multi-universe video matrix type products. We also has an in-house design and engineering team that can deliver such systems, please contact support for more information.

Below is a guide which indicates the number of cores and the connections they relate to. Each manufactured length of flex will have a factory fitted label which indicates the correct cores to use, as well as the colour of each specific core and its associated connection. The below guide is in black and white for clarity, and reference should always be made to the label on the product itself as sometimes, the cable colours may vary pending manufacturing processes or for custom orders. If in doubt, or if the label is missing, contact support for assistance before connecting to power.

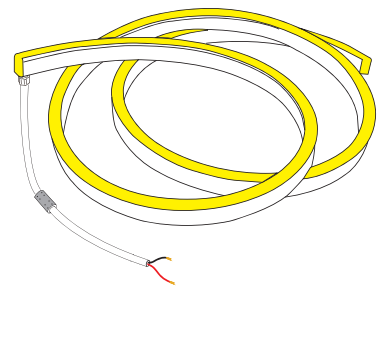
Side Entry Connector



Direct Entry Connector

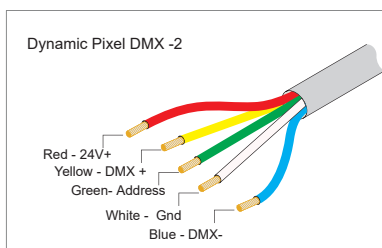
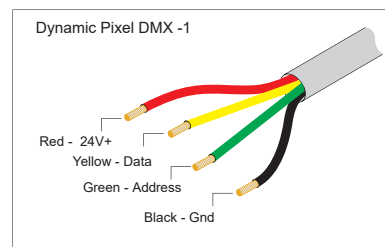
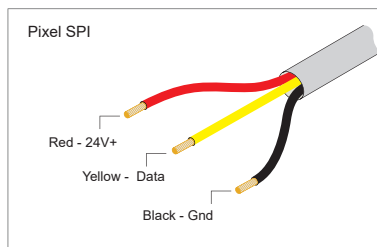
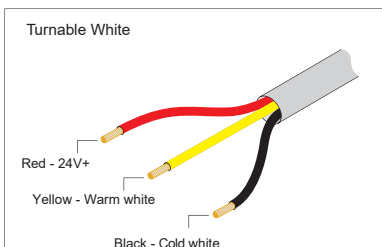
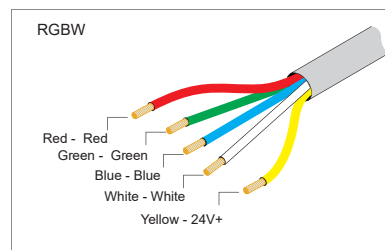
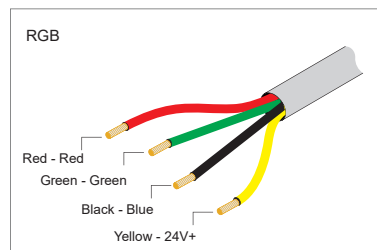
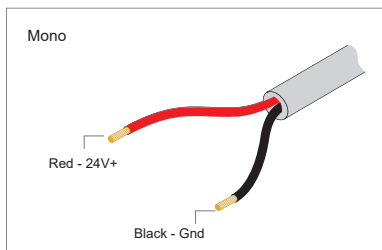


Bottom Entry Connector



Plug

Bare Wire



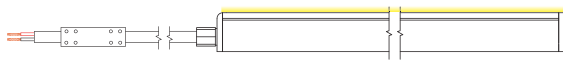
Loading Chart

Power supply

Rated Power	40W	60W	80W	100W	120W	150W	185W	240W	320W	480W
5W	6m	9m	12.5m	16m	18m	24m	29.5m	38m	50m	70m
7.2W	5m	6m	8.5m	11m	13m	16.5m	20.5m	26.5m	30m	53m
8W	4m	6m	8m	10m	12m	14m	18m	23m	32m	45m
9W	3.5m	5m	7m	8.5m	10.5m	12.5m	16m	21m	28m	41m
10W	3m	4.5m	7m	8m	9.5m	12m	14.5m	19m	24m	35m
12W	2.5m	4m	6m	7.5m	8m	10m	12.3m	16m	21.3m	28m
13W	2.4m	3.5m	4.8m	6m	7m	9m	11m	14.5m	19.5m	25.5m
15W	2m	3m	4.2m	5m	6m	8m	9.8m	12.5m	17m	25m
16W	2m	3m	4m	4.5m	6m	7.5m	9m	12m	16m	24m
17W	1.8m	2.8m	3.7m	4.5m	5.5m	7m	8.4m	11m	15m	22.5m
18W	1.7m	2.6m	3.5m	4.4m	5.3m	6.8m	8m	10.5m	14m	21m

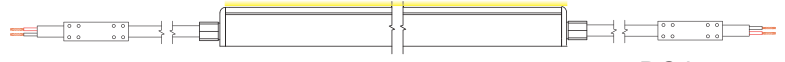
Lead Type

Single Feed



DC input

Double Feed



DC input

DC input

Note: These are the max recommended run lengths based on power supply

For example: It is recommended to use one 80W power supply for a single-feed run of 8.5m at 7.2W/m.

Recommendation of extension wire

Maximum extension wire length according to Light power

Watts of light	22AWG 0.34mm ²	20AWG 0.53mm ²	18AWG 0.82mm ²	17AWG 1.04mm ²	16AWG 1.38mm ²	14AWG 2.07mm ²	12AWG 3.29mm ²	10AWG 5.62mm ²
10W	36m	60m	100m	120m	140m	240m	400m	600m
20W	18m	30m	50m	60m	70m	120m	200m	300m
30W	12m	20m	30m	38m	45m	80m	130m	200m
40W	8m	15m	22m	28m	35m	60m	95m	140m
50W	6m	12m	18m	22m	28m	48m	75m	105m
60W	5m	10m	15m	18m	22m	36m	60m	88m
70W	/	8m	12m	14m	18m	30m	50m	72m
80W	/	6m	10m	11m	14m	24m	40m	58m
90W	/	4m	7m	8m	10m	18m	30m	45m
100W	/	/	5m	6m	7m	12m	22m	32m
110W	/	/	3m	4m	5m	8m	15m	22m
120W	/	/	2m	2.5m	3m	6m	8m	12m

Note:

1. The values doesn't include the 0.6m cable connected to the front connector.

2. To ensure the reliability of wire connection and avoid problem of voltage drop, the extension wire length should be smaller than the above recommended values

