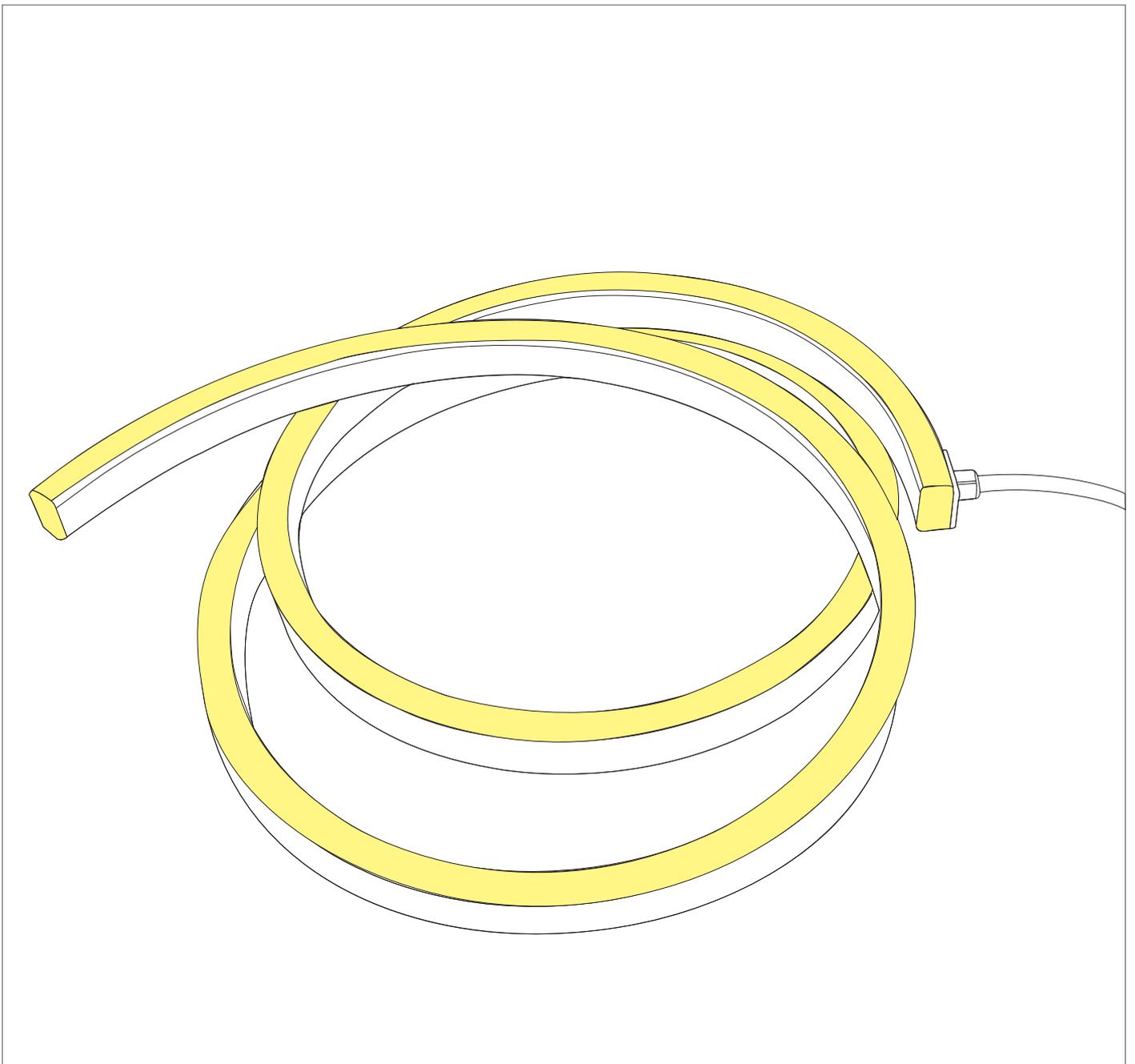


Neon-Flex Series 2

User Manual



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1) Introduction	P1
2) Product overview	P2
3) Installation Guide	P4
4) Mounting product	P6
5) DIY connector assembly instruction	P9
6) Electrical connections	P12

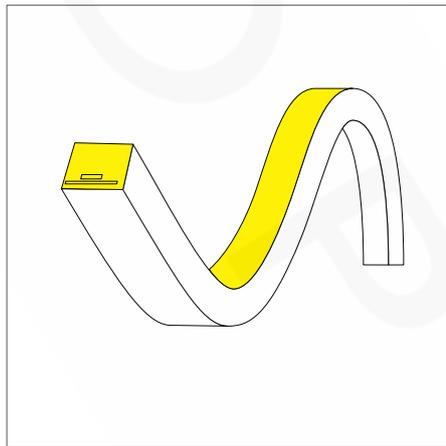
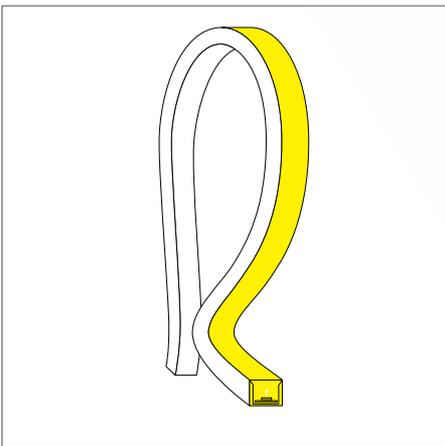
1. Introduction

Traditional glass neon has been the mainstay of commercial lighting for decades, providing a rich, vibrant source of light for commercial buildings and signs. Despite its attractive features it has numerous drawbacks, including the large amount of energy it requires, the extremely high voltage power supplies, and being hand drawn glass it is extremely fragile. Neon-Flex overcomes all of these drawbacks by combining the energy efficiency of high output SMD LEDs encased in a UV and chemical resistant PVC that acts to diffuse the light mimicking the effect of neon.

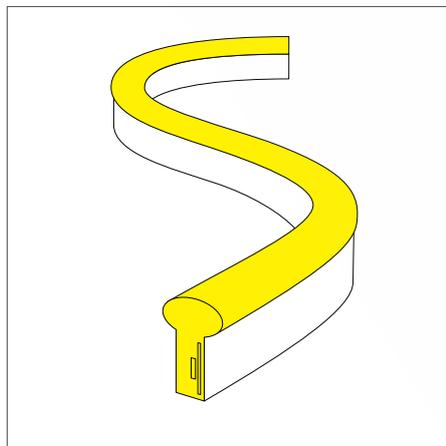
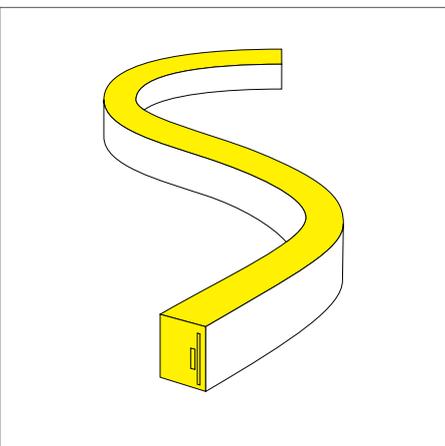
Unlike neon, however, Neon-Flex can be shaped and bent by anyone without the need for special tools or skills, the low voltage 24V DC alternative can be cut every 50 - 130mm (depending on model) and can operate of a plug in power supply. Unlike traditional neon - It is not just available in mono colors, with RGB Neon-Flex cable of producing up to 16 million color variations, the new Dynamic DMX version expands further on this and allows for exciting color chasing effects.

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

Vertical Bending

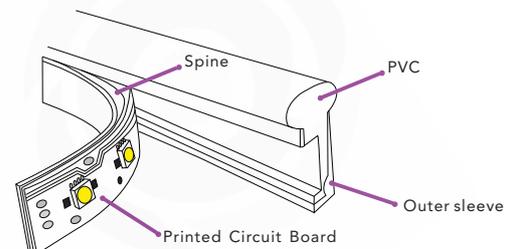
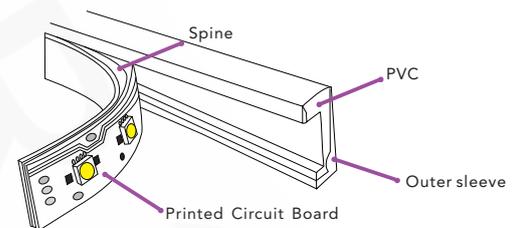
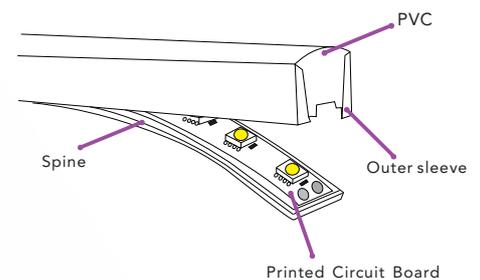


Horizontal Bending



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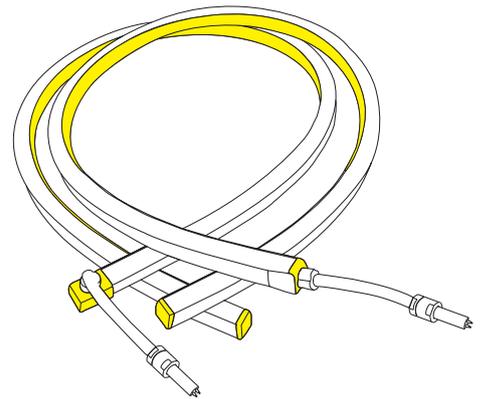
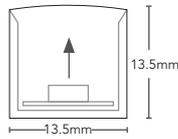
FAILURE TO COMPLY WITH THIS MANUAL AND LOCAL ELECTRICAL AND CONSTRUCTION REGULATIONS MAY RESULT IN SERIOUS INJURY OR EVEN DEATH - ALWAYS ISOLATE POWER BEFORE WORKING ON ELECTRICAL PRODUCTS AND ENSURE ADEQUATE MEASURES ARE TAKEN TO MECHANICALLY SUPPORT FIXTURES AT ALL TIMES.



2. Product Overview

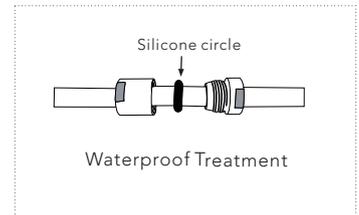
Top Flat Mini Shape

Bending lines of light in white or color, with light emissions from the top



Emission surface along the top

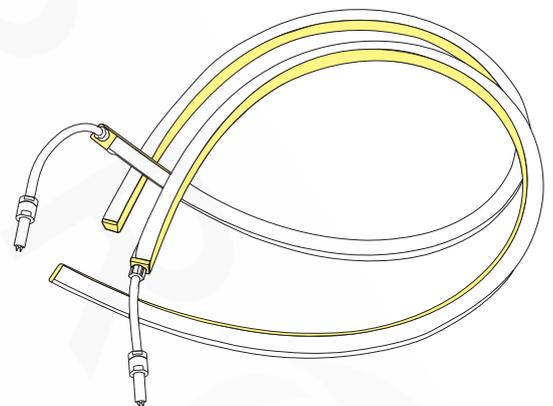
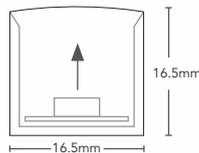
- Flat rectangular emission surface with 120-degree beam angle
- 8cm bend diameter
- Available in static colors including white in CCT ranging from 2200 - 6500K (please refer to our online data sheets for the exact color range)
- Color options include red, green, blue and lemon yellow
- DALI and 0-10V control dimmer options
- Mini version is available in mono only



BEAM ANGLE	POWER	COLOUR TEMP	LUMEN	LUMEN	COLOR RENDER	MIN. BENDING	MIN. LENGTH	MAX. LENGTH
120°	10W/m	2200K - 6500K	550 lm/m 6500K	480 lm/m 2200K	CRI>80	DIA 8cm	8.33cm	20m

Top Flat Shape

Bending lines of light in white or colour, with light emissions from the top

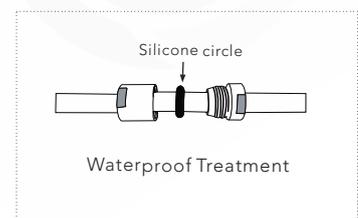
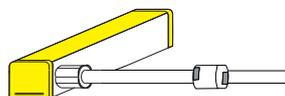


Emission surface along the top

- Flat rectangular emission surface with 120-degree beam angle
- 12cm bend diameter
- Available in static colours including white in CCT ranging from 2200 - 6500K (please refer to our online data sheets for the exact color range)
- Color options include RGB, RGBW, DW and Pixel
- DMX/RDM, DALI and 0-10V control options

BEAM ANGLE	POWER	COLOUR TEMP	LUMEN	LUMEN	COLOR RENDER	COLOUR OPTIONS
120°	10W/m	2200K - 6500K	450 lm/m 6500K	420 lm/m 2200K	CRI>80 (WHITE) RGB N/A	RGB RGBW DW PIXEL

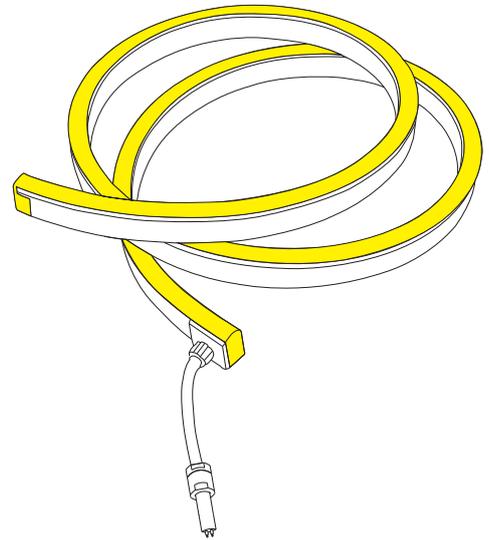
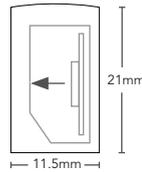
CONTROLS	MIN. BENDING	MIN. LENGTH	MAX. LENGTH
DMX/RDM	DIA 12cm	8.33cm	20m



Move off waterproof treatment without warranty

Side Flat Shape

Bending lines of light in white or color, with light emissions from the Side

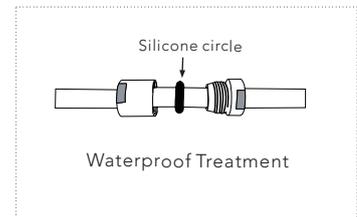
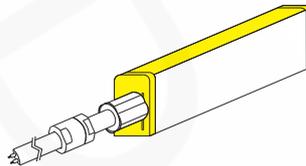


Flat rectangular emission surface with 120-degree beam angle

- 8/12cm bend diameter, dependant on variant
- Available in static colors including white in CCT ranging from 2200 - 6500K (please refer to our online data sheets for the exact colour range)
- Color options include RGB, RGBW, DW and Pixel
- DMX/RDM, DALI and 0-10V control options

BEAM ANGLE	POWER	COLOUR TEMP	LUMEN	COLOR RENDER	COLOR OPTIONS
120°	5W-15W Option	2200K - 6500K	380 lm/m 6500K	340 lm/m 2200K	CRI>80 (WHITE) RGB N/A
					RGB
					RGBW
					DW
					PIXEL

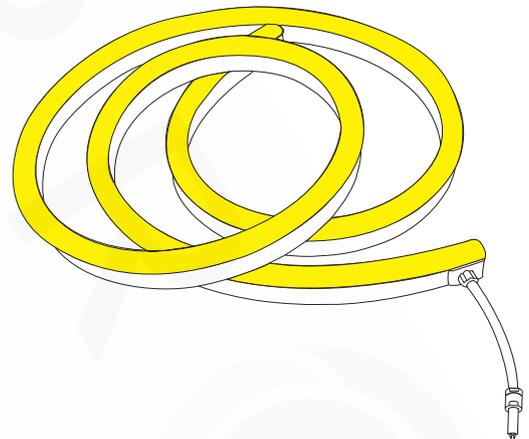
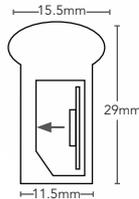
CONTROLS	MIN. BENDING	MIN. LENGTH	MAX. LENGTH
DMX/RDM	DIA 8cm (MONO) DIA 12cm (RGB)	8.33cm 10cm 12.5cm 16.67cm	10m 15m 20m



Move off waterproof treatment without warranty

Side Round Shape

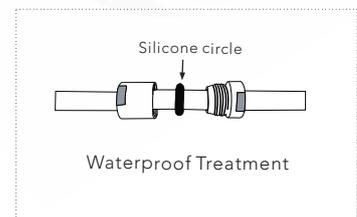
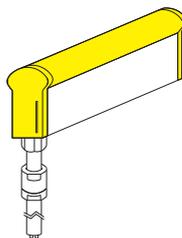
Visually dramatic effects with a wider beam angle light emission surface



- Emission surface to the side
- Rounded emission surface with 270-degree beam angle
- 8/12cm bend diameter, dependant on variant
- Available in static colors including white in CCT ranging from 2200 - 6500K (please refer to our online data sheets for the exact colour range)
- Color options include RGB, RGBW, DW and Pixel
- DMX/RDM, DALI and 0-10V control options

BEAM ANGLE	POWER	COLOUR TEMP	LUMEN	COLOR RENDER	COLOR OPTIONS
270°	5W-15W Option	2200K - 6500K	320 lm/m 6500K	280 lm/m 2200K	CRI>80 (WHITE) RGB N/A
					RGB
					RGBW
					DW
					PIXEL

CONTROLS	MIN. BENDING	MIN. LENGTH	MAX. LENGTH
DMX/RDM	DIA 8cm (MONO) DIA 12cm (RGB)	8.33cm 10cm 12.5cm 16.67cm	10m 15m 20m



Move off waterproof treatment without warranty

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.
- The lamp (LED) 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 distributor support.
- 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 is any malfunction of the equipment, contact your local distributor immediately.
- This fixture should not be buried.

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FAILURE TO COMPLY WITH THIS MANUAL AND LOCAL ELECTRICAL AND CONSTRUCTION REGULATIONS MAY RESULT IN SERIOUS INJURY OR EVEN DEATH - ALWAYS ISOLATE POWER BEFORE WORKING ON ELECTRICAL PRODUCTS AND ENSURE ADEQUATE MEASURES ARE TAKEN TO MECHANICALLY SUPPORT FIXTURES AT ALL TIMES.

Caution, risk of electric shock



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

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 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 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 45C or 113F.
- 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 flex IP rated cap 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.
- 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 treatment and connector.

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Caution, risk of electric shock



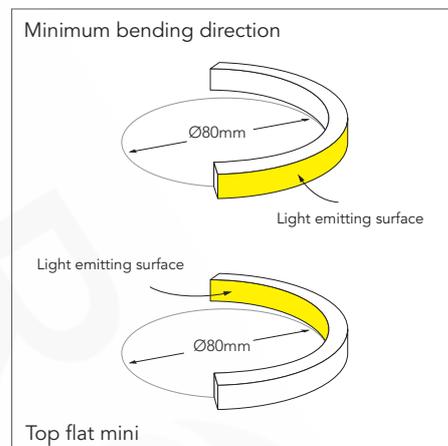
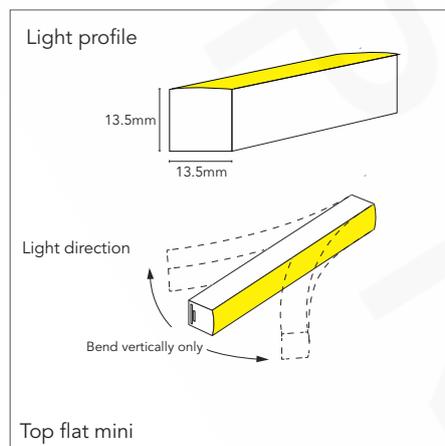
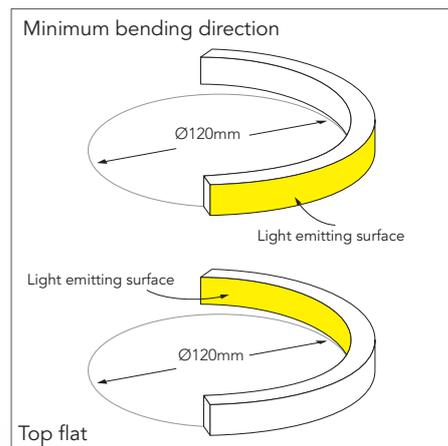
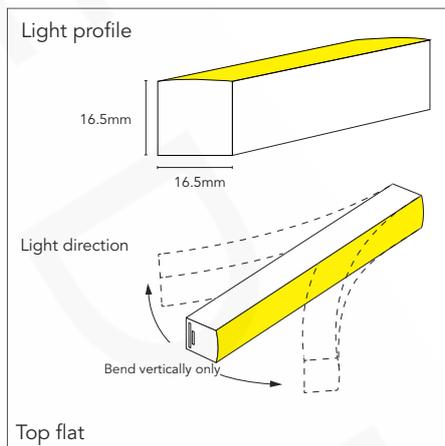
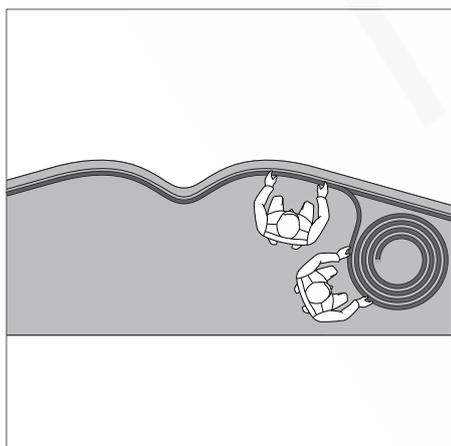
The light source and other electronic components contained in this luminaire shall only be replaced by your distributor or an approved service agent.

4. Mounting Product

LED neon 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 model.

Top Flat and Top Flat Mini

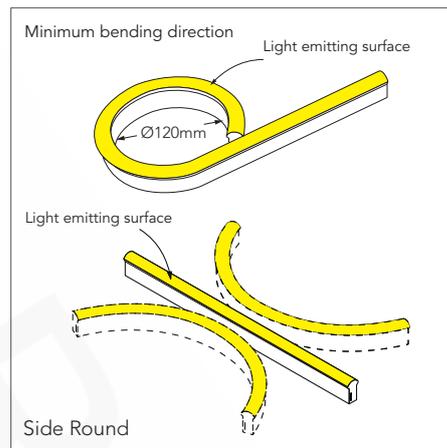
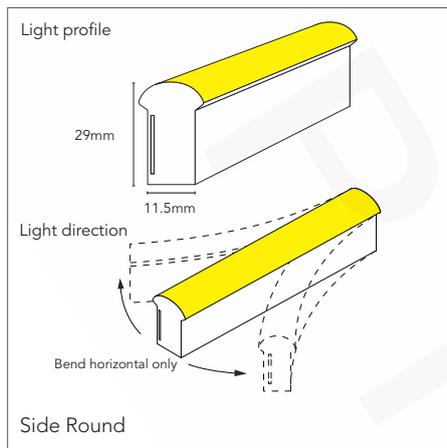
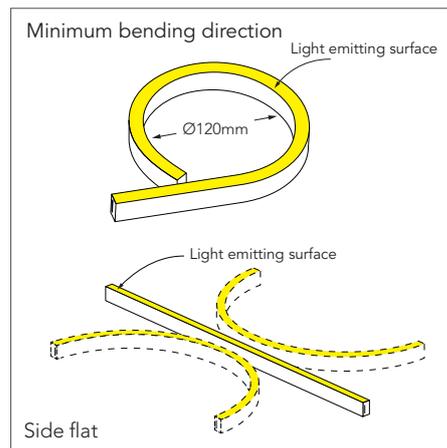
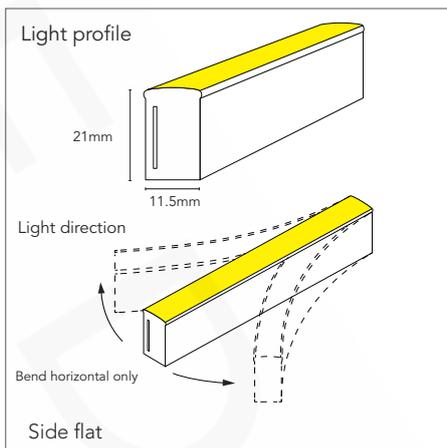
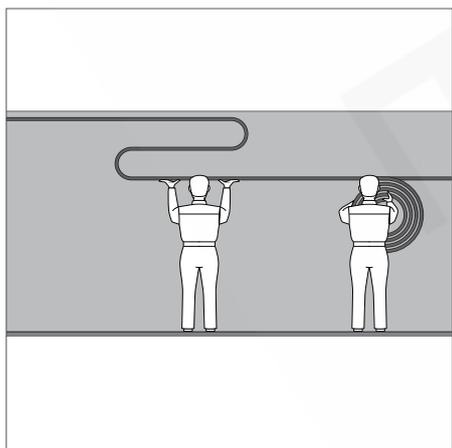
LED neon flex must be installed by at least 2 people, who can support the product in various locations as shown. During installation, care should be taken to ensure the bending radius of flex is not exceeded.



LED Neon 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 model

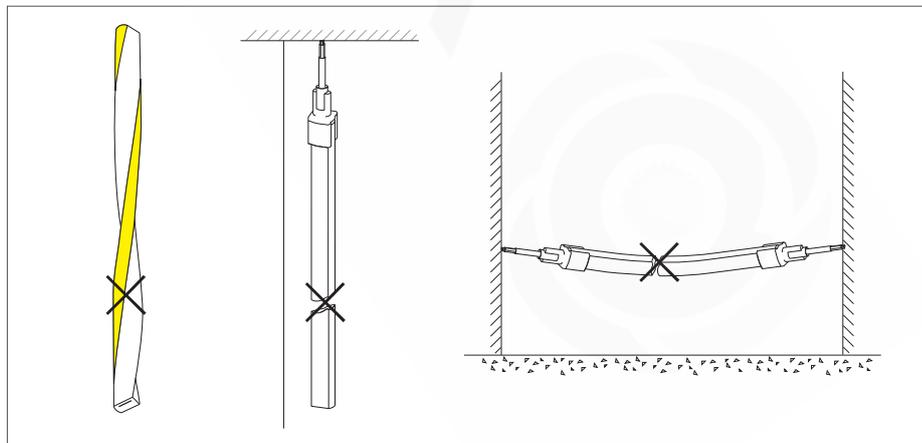
Side Flat and Side Round

LED neon 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 flex 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.



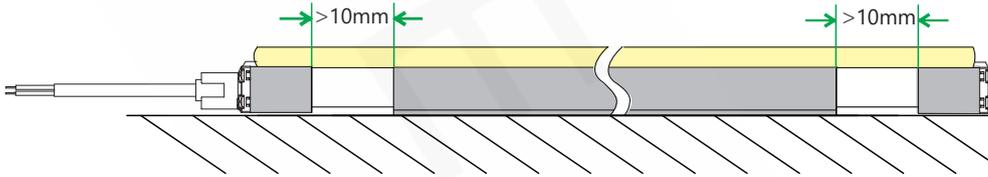
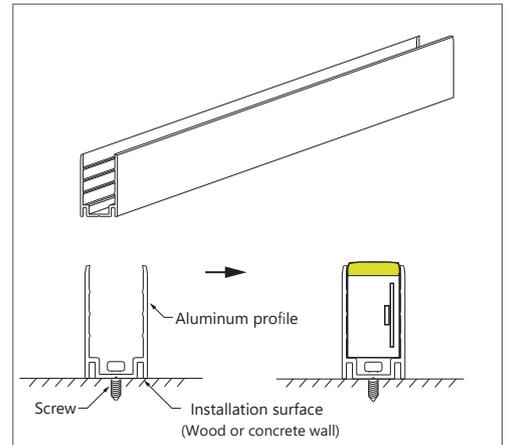
General Mounting

LED neon 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 its use is agreed in writing by distributor as part of a detailed project specification.

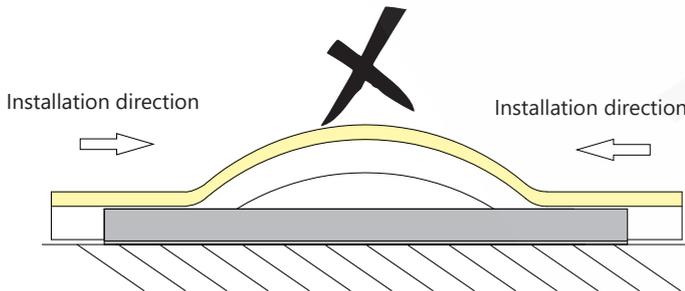
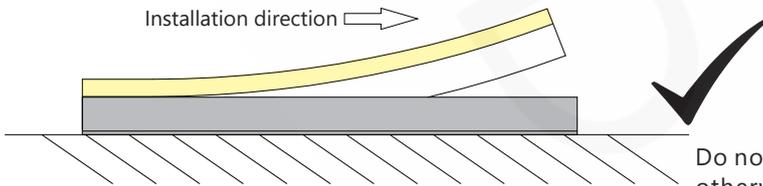
The images indicate one type of fixing available in the accessories range. The different fixings serve obvious purposes, however when in doubt technical support should be contacted.

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

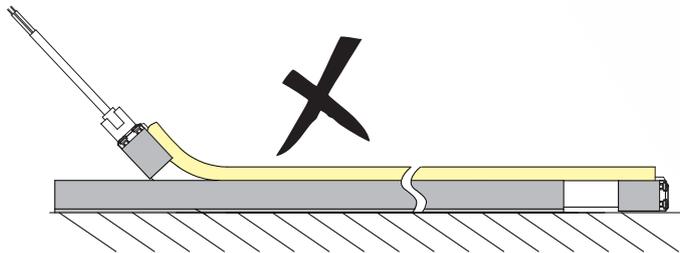
The aluminum mounting piece of IP67 front connector and end cap should keep at least 10mm space apart from aluminum channel when making installation.



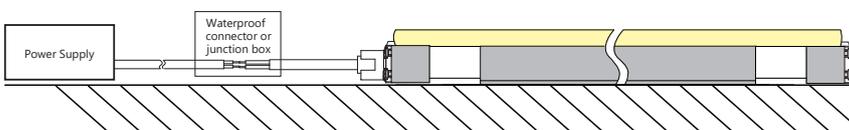
Press the Neon-Flex into mounted aluminum channel in one direction.



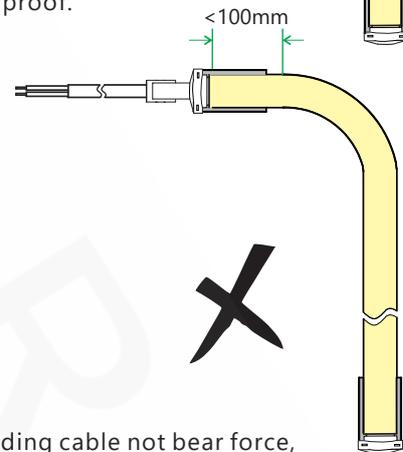
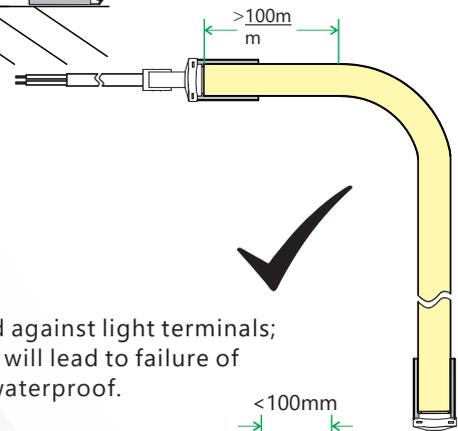
Incorrect installation like below picture could lead to light failure.



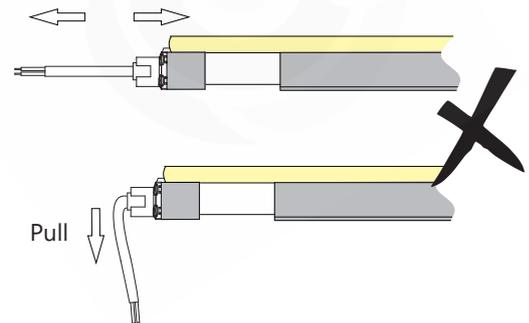
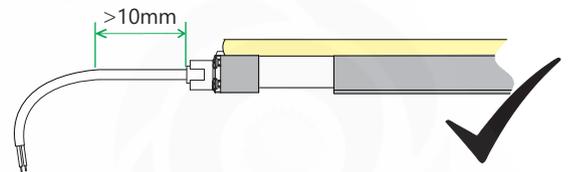
Mount the cable junction in hermetic enclosure like waterproof junction box in outdoor application.



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

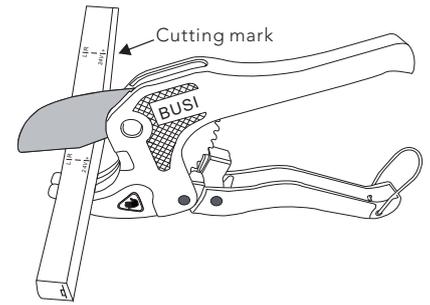


Ensure the feeding cable not bear force, keep the head 10mm in natural loose.

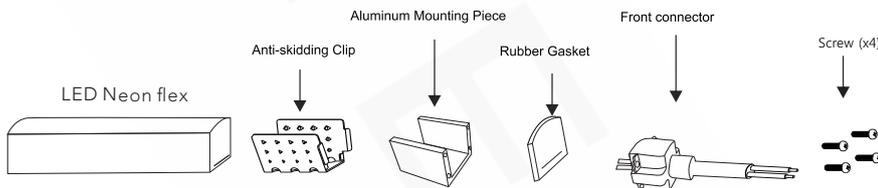


5. DIY connector assembly instruction

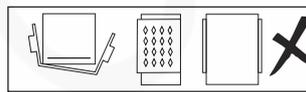
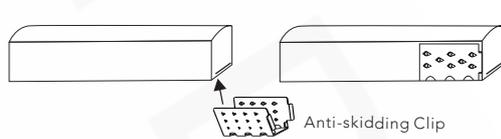
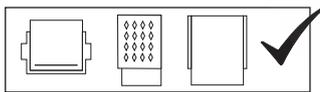
Locate the cutting mark on the side of the LED Neon Flex.
This will be designated by a vertical dashed line.
Using LED neon cutter, make an even cut through exactly on the mark.
If you are off the mark the product can be damaged.



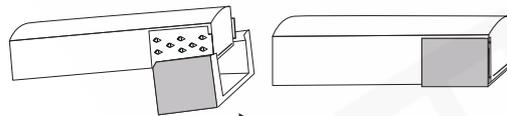
Top flat DIY screw front connector kit instructions



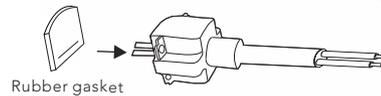
1. Place the anti-skidding clip on the very end of the tubing with the 2 tiny tabs that are pointing inwards still touching the end of the material and crimp in place.



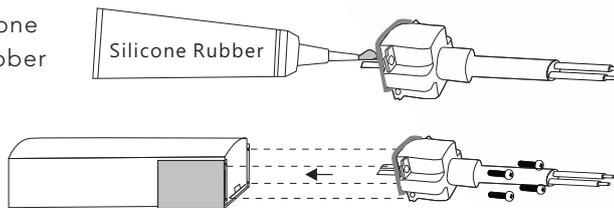
2. Line up the aluminum mounting piece so the screw holes face the plug and slide on over the anti-skidding clip.



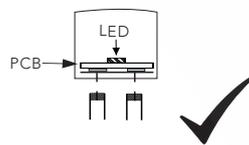
3. Insert the rubber gasket along the slit into the pin of the front connector



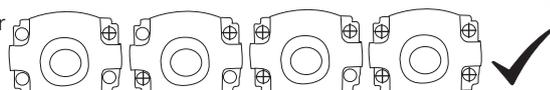
4. Put 100% clear silicone on the surface of rubber gasket



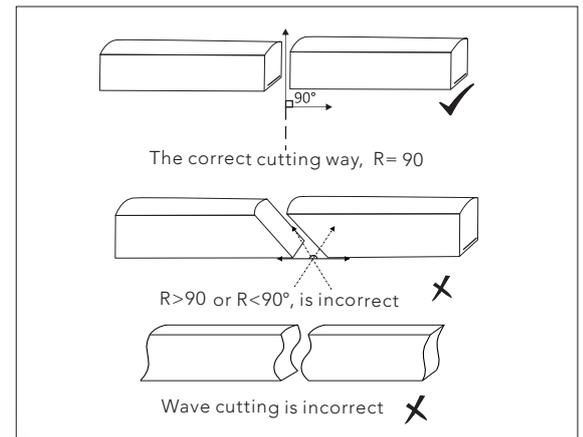
5. Carefully insert the pins of the front connector into the gap you created behind the PCB.



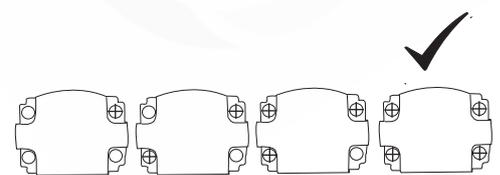
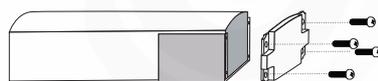
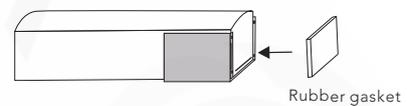
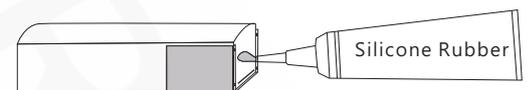
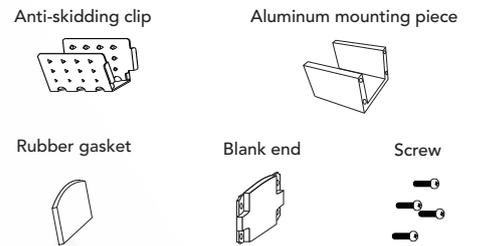
6. Screw the front connector to the aluminum mounting piece.



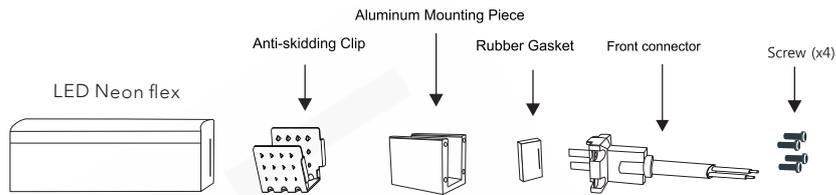
7. Check the connection to ensure it is tight and that there are no gaps between the Neon Flex tube and the front connector.



Top flat DIY screw End cap kit instruction



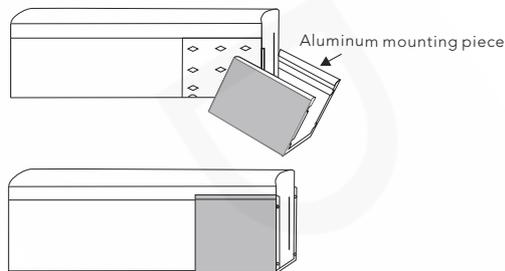
Side flat DIY screw front connector kit instructions



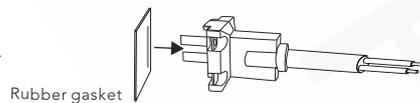
1. Place the anti-skidding clip on the very end of the tubing with the 2 tiny tabs that are pointing inwards still touching the end of the material and crimp in place.



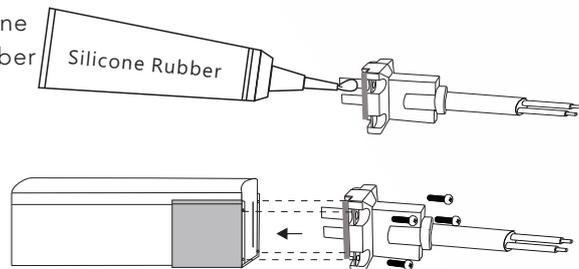
2. Line up the aluminum mounting piece so the screw holes face the plug and slide it over the anti-skidding clip.



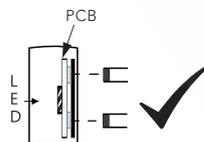
3. Insert the rubber gasket along the slit into the pin of the front connector



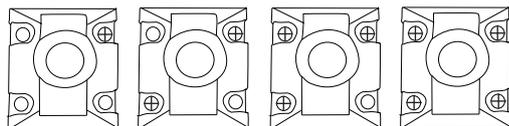
4. Put 100% clear silicone on the surface of rubber gasket



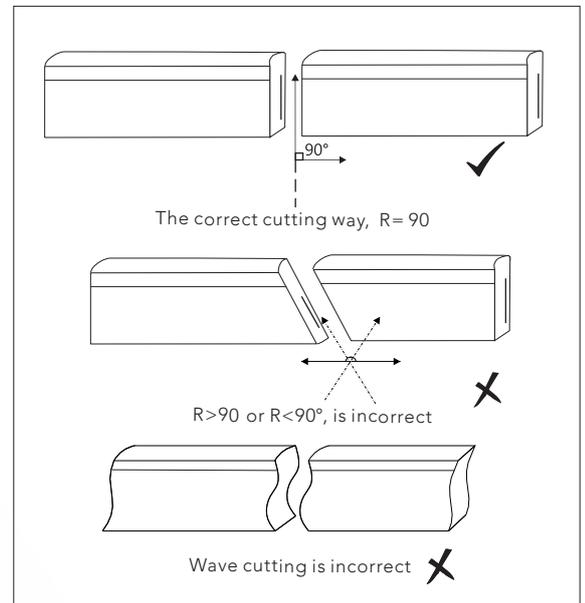
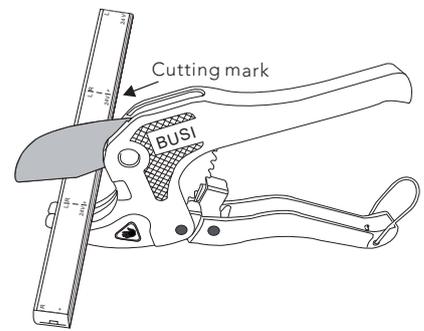
5. Carefully insert the pins of the front connector into the gap you created behind the PCB.



6. Screw the front connector to the aluminum mounting piece.



7. Check the connection to ensure it is tight and that there are no gaps between the Neon Flex tube and the front connector.



Side flat DIY screw end cap kit instruction

Anti-skidding clip Aluminum mounting piece



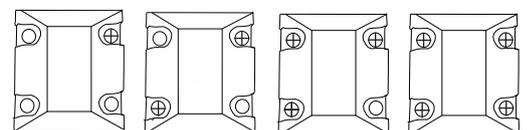
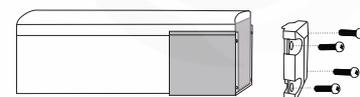
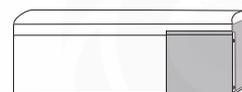
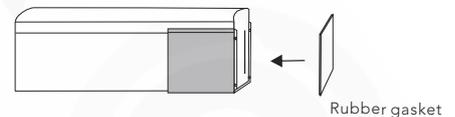
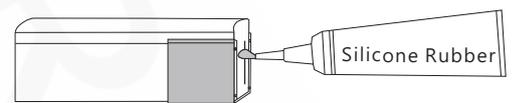
Rubber gasket



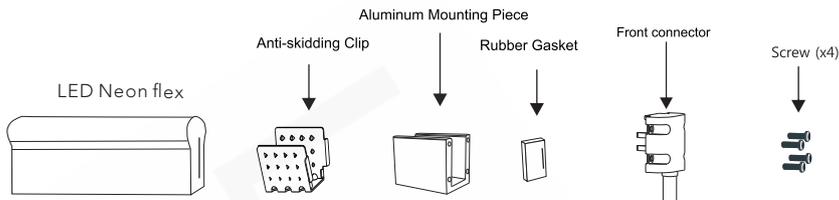
Blank end



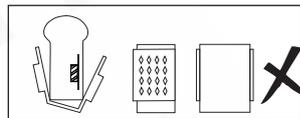
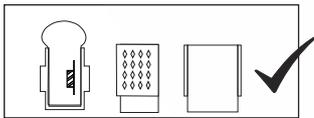
Screw



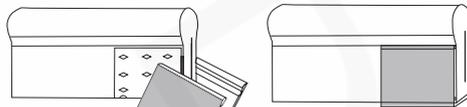
Side Round DIY screw front connector kit instructions



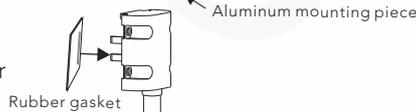
1. Place the anti-skidding clip on the very end of the tubing with the 2 tiny tabs that are pointing inwards still touching the end of the material and crimp in place.



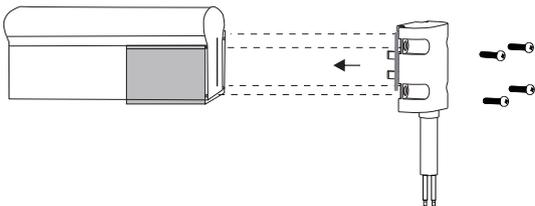
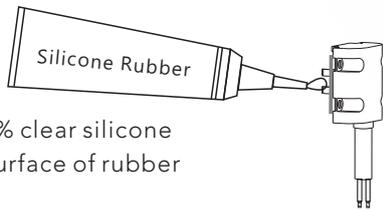
2. Line up the aluminum mounting piece so the screw holes face the plug and slide on over the anti-skidding clip.



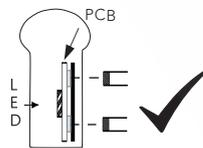
3. Insert the rubber gasket along the slit into the pin of the front connector



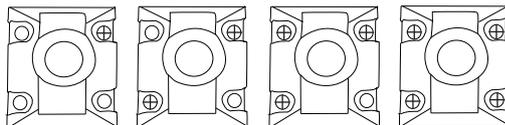
4. Put 100% clear silicone on the surface of rubber gasket



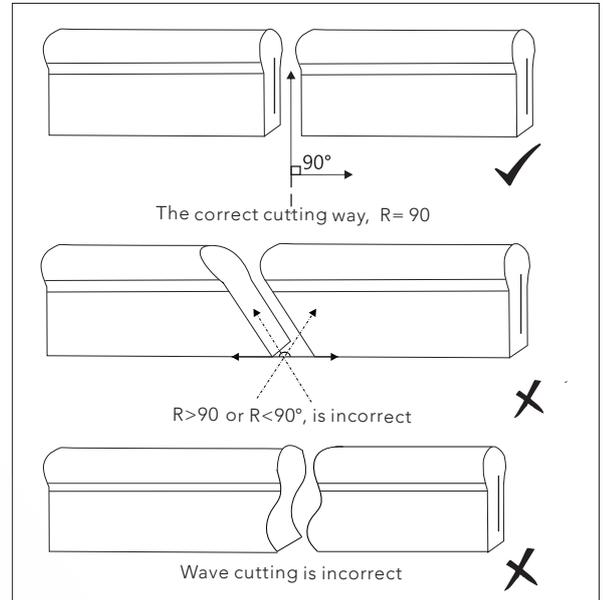
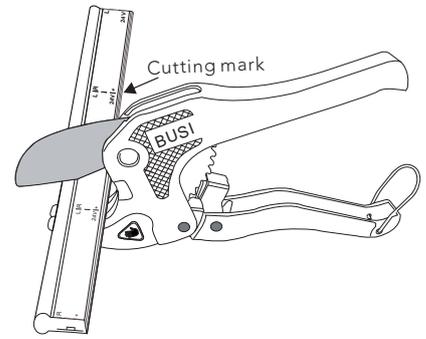
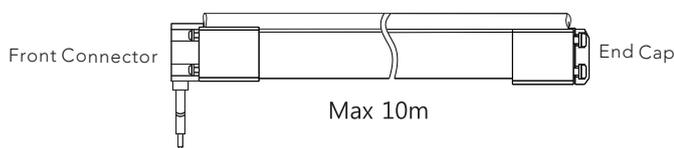
5. Carefully insert the pins of the front connector into the gap you created behind the PCB.



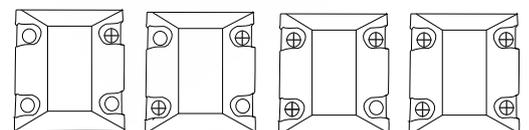
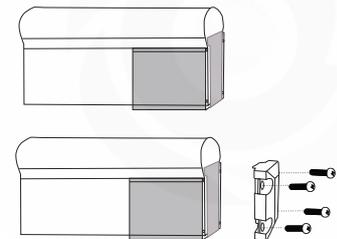
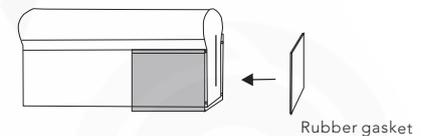
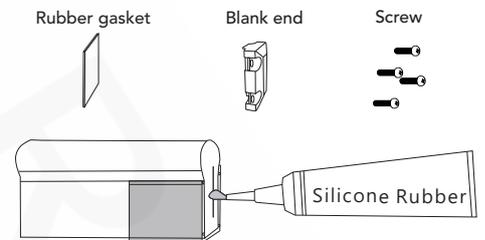
6. Screw the front connector to the aluminum mounting piece.



7. Check the connection to ensure it is tight and that there are no gaps between the Neon Flex tube and the front connector.



Side Round DIY screw end cap kit instruction



6. Electrical Connections

LED neon 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.

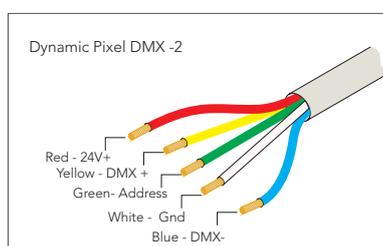
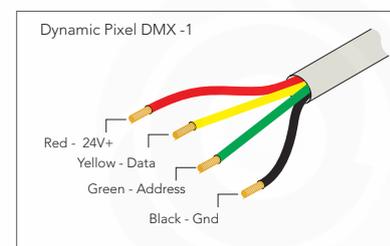
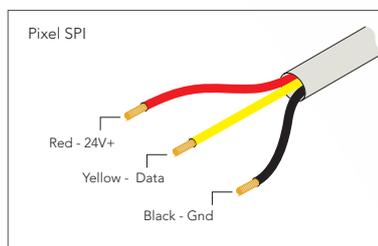
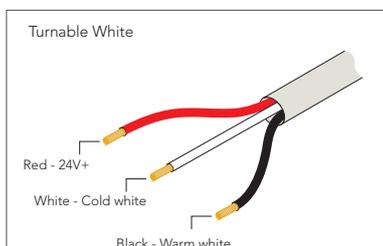
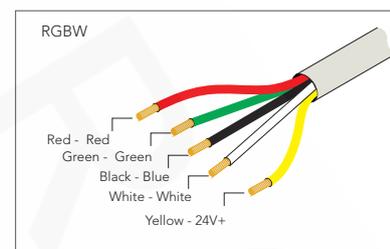
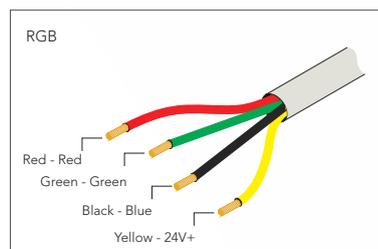
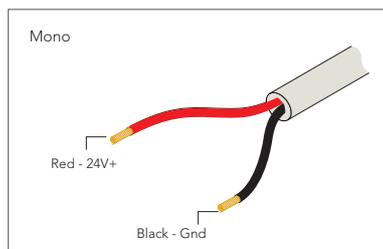
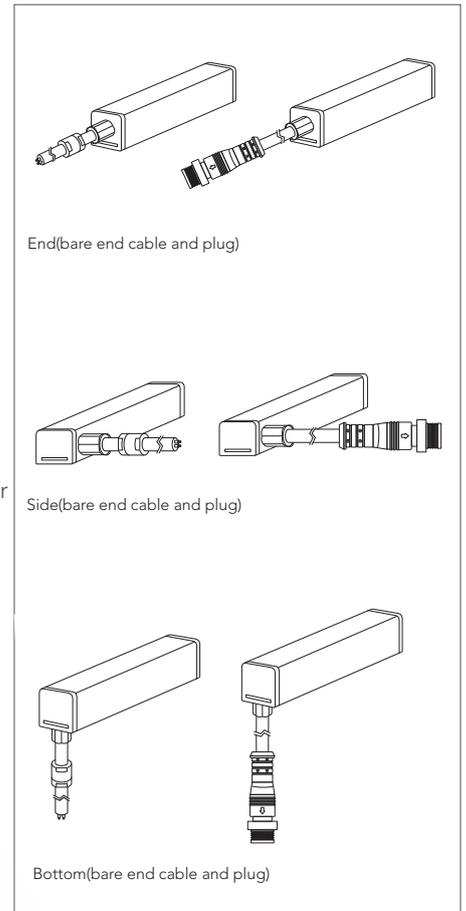
Plugs are designed for "plug-and-play" type installations, whereas the installer would ensure female sockets are available at each flex start location, with the male type connector then plugging into this female type socket. Female sockets are available as separate items.

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

LED neon 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.

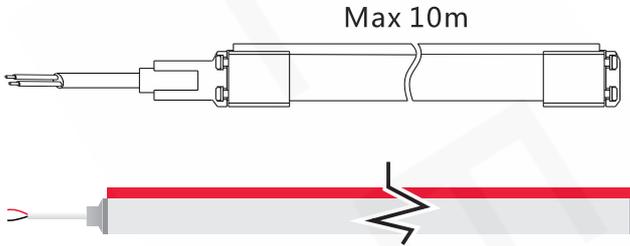


Connection Length

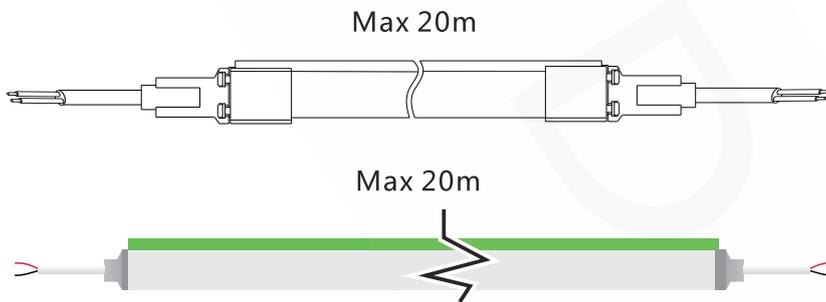
Each model of neon flex has the max. length in the connection with power supply.

When it approach to the max. length, that means it need to be power both ends. The details for connection please check as follow.

Maximum individual length with one power end feed : 10m



Maximum individual length with both power end feed : 20m



Customized Length

