

INSTALLATION WITH PVC ACCESSORIES

EQUIPMENT NEEDED



NT cutter



Vice grip

HANDLING & INSTALLING

- The PVC accessories should not be used where a waterproof seal is required.
- Lengths of Neon Flex longer than 5m typically require 2 people to avoid twisting or stretching the Neon Flex.
- Powering the Neon Flex whilst tightly coiled will cause a heat build-up and reduce its lifespan.
- Never expose the Neon Flex internals to moisture of any kind.
- Ensure the Neon Flex is installed by a qualified electrician.
- Ensure all wiring is in accordance with national and local electrical regulations.
- Ensure power is disconnected during installation.
- Never cut the Neon Flex whilst it is powered on.
- Never allow lengths of Neon Flex longer than 5m to hang freely (unsupported) to avoid damaging the internal FPC.
- Ensure you cut exactly on the cutting line otherwise you will damage the circuit you cut through.
- Correctly connect positive and negative to the power supply.
- Never exceed the stipulated maximum running lengths of Neon Flex lengths.
- Ensure you unroll the Neon Flex from the reel by rolling the reel on a smooth surface, or by mounting the reel over an axle to aid in unwinding the Neon Flex without twisting it.
- Never place the Neon Flex onto rough surfaces as the silicone jacket may scratch.
- Never bend the Neon Flex beyond the certified minimum bending diameter.
- Never bend the Neon Flex up or down if it has a vertical FPC.
- Never bend the Neon Flex left or right if it has a horizontal FPC.
- Never stretch the Neon Flex as this will cause the internal FPC to snap.
- Never strike, twist, puncture or pierce the Neon Flex or subject it to continuous flexing.
- Ensure you use at least an AWG 18 power cable to avoid voltage drop on the wire.
- You can compensate for voltage drop over long power cables by using a Mean Well ELG model 'A' power supply and increasing the output voltage.

OPERATING GUIDELINES

- Powering the Neon Flex for longer than 8 hours per day will reduce the lifespan of the product.
- Never exceed the published maximum input power.
- Ensure all wiring is in accordance with national and local electrical regulations.
- Do not operate the Neon Flex in temperatures below -20°C or exceeding 45°C.



INSTALLATION

CUTTING THE NEON FLEX

- LUMUL 24V Silicone Neon Flex is designed to be cut every 5cm. Cutting marks are visible on the side of the Neon Flex by a laser etched cutting mark, shown as a pair of scissors.
- Hold the 10x25 Neon Flex on its side on a stable cutting table. Push the utility knife through the silicone jacket exactly on the cutting mark until you experience resistance of the copper FPC. Be careful to cut straight and square.
- Locate the cutting mark on the copper FPC and being careful not to cut through any LED chip, cut through the FPC and remaining silicone jacket.
- **It is important to cut exactly on the internal cutting line on the FPC, avoiding all electronic components or you will damage the last circuit. This won't be covered under warranty.**
- **TIP: Cut 1 circuit bigger than you need, then cut back slowly**

POWER CONNECTION : PVC POWER CONNECTOR

- PVC power connectors are available for the 10x25 LUMUL Silicone Neon Flex in left, right, bottom or straight cable feeds.
- PVC power connectors are moulded with two flat copper pins and are supplied with a silicone seal and a PVC cover.
- Slide the PVC power connector copper pins between the back side of the FPC and the Neon Flex. The copper pins are designed to fit snugly against the positive and negative copper tracks on the back side of the FPC (the side not containing the LED chips).
- Connect the black and red wires to a 24V constant voltage power supply and test the connection.
- Open the PVC cover, align the copper pins with the appropriate slot in the PVC power connector and clip it into place over the PVC power connector – you will need to apply a fair amount of force to get the clips closed.
- **TIP: Use a pair of vice grips to assist in clipping the PVC power connector closed.**

FITTING A PVC END CAP

- PVC end caps are available for the 10x25 LUMUL Silicone Neon Flex.
- PVC end caps consist of a moulded PVC back stop and PVC cover.
- Open the PVC cover then clip it into place over the end of the Neon Flex with the PVC back stop inserted into the slot in the PVC cover.
- **TIP: Use a pair of vice grips to assist in clipping the PVC end cap closed.**

FITTING A PVC I-CONNECTOR

- PVC I-connectors are available for the 10x25 LUMUL Silicone Neon Flex.
- PVC I-connectors consist of a moulded PVC cover with an H-pin.
- Slide each end of the copper H-pin into each section of Silicone Neon Flex, so that the pins sit snugly against the back of the copper FPC, against the positive and negative copper tracks.
- Open the PVC cover, align the copper pins in the appropriate slot then clip it into place over each end of the Neon Flex sections, and the connecting H-pin.
- **TIP: Use a pair of vice grips to assist in clipping the PVC I connector closed.**

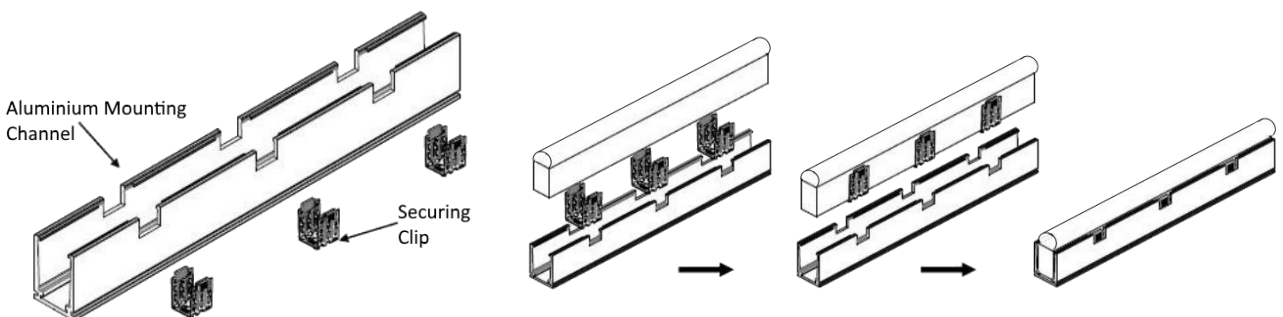
INSTALLATION

FITTING A PVC L-CONNECTOR

- PVC I-connectors are available for the 10x25 LUMUL Silicone Neon Flex.
- PVC I-connectors consist of a moulded PVC cover with an H-pin.
- Slide each end of the copper H-pin into each section of Silicone Neon Flex, so that the pins sit snugly against the back of the copper FPC, against the positive and negative copper tracks.
- Open the PVC cover, align the connecting H-pin in the appropriate slot then clip it into place over each end of the Neon Flex sections, and the connecting H-pin.
- **TIP: Use a pair of vice grips to assist in clipping the PVC L connector closed.**

MOUNTING THE SILICONE NEON FLEX

- LUMUL Silicone Neon Flex is designed to be mounted in the LUMUL aluminium mounting channel.
- The mounting channel contains removable stainless steel securing clips which clamp the Neon Flex securely with spiked teeth.
- LUMUL aluminium mounting channels are available in lengths of 3.5cm (with one securing clip), 1m (with 5 securing clips) and 2m (with 9 securing clips).
- Mount the aluminium channel on to the installation surface using the screws provided or suitable substitutes. Ensure the screw heads are not too large and sit flush against the channel bottom.
- Align the Silicone Neon Flex with the aluminium channel into which it will be mounted.
- **Tip:** To help place the securing clip accurately on the Neon Flex, with the securing clip in the aluminium channel, lightly press the Silicone Neon Flex into the channel at the next / first clip to be secured and holding both the Neon Flex and the clip, remove the clip ensuring it remains in contact with the Neon Flex.
- Clamp the securing clip around the Silicone Neon Flex before pressing it back into the aluminium channel. It will click into place.
- If your installation needs a firmer grip from the securing clips, using a small screw driver to press the securing clip teeth into a 90° angle.
- **Tip:** For an even more secure mounting spread liberal a silicone adhesive into the channel before placing the Silicone Neon Flex in the channel. This will make the Silicone Neon Flex much more difficult to remove, requiring careful removal to avoid pulling it on the vertical axis and damaging the internal flexible strip.



POWER SUPPLY SIZING & SELECTION : 10*25MM

- LUMUL 24V Silicone Neon Flex requires a **constant voltage** power supply.
- LUMUL recommends using Mean Well power supplies due to their market-leading quality, reliability and price.
- Always ensure the power supply is sized correctly or you risk damaging the power supply. Size the power supply 20% larger than required so as never to overload or overwork the power supply.
- LUMUL 24V Silicone Neon Flex is polarity sensitive. Ensure the positive and negative wires on the Neon Flex are properly connected to the positive and negative terminals of the power supply.
- Each meter of LUMUL 24V 10x25 Silicone Neon Flex is rated at 10W.
- Power can be supplied to each end of the Neon Flex to enable longer lengths of Neon Flex to be run:
 - 0-15m of LUMUL 24V Silicone Neon Flex : power from one end.
 - 15m-30m of LUMUL 24V Silicone Neon Flex : power from both ends.
- When powering from both ends ensure sufficient power is available at each end to supply enough voltage to the middle of the length of Neon Flex to avoid voltage drop and overloading one of the drivers.
- Never** install power supplies in parallel to double the available power unless they are designed to support this.
- If mounting your power supply more than 5m from your LUMUL 24V Silicone Neon Flex, consider purchasing the IP65 Mean Well ELG-A range. Using the potentiometer increase the output voltage to compensate for the **voltage drop** on the wire.
- If you require **dimming** of your single colour LUMUL 24V Silicone Neon Flex consider the IP67 Mean Well ELG-B range which supports 0-10V, 10V PWM and resistance dimming input with a PWM output.
- To calculate the minimum wattage of power supply required: **Wattage = (Neon flex meters) * 13**

Power supplied from one end only					Power supplied from both ends				
Neon Length	Min Driver	Mean Well Drivers			Neon Length	Min Driver	Mean Well Drivers		
		IP20 LRS	IP67 HLG	IP67 ELG			IP20 LRS	IP67 HLG	IP67 ELG
1m	13W	LRS-35-24	HLG-40H-24	ELG-75-24	16m	208W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
2m	26W	LRS-35-24	HLG-40H-24	ELG-75-24	17m	221W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
3m	39W	LRS-50-24	HLG-60H-24	ELG-75-24	18m	234W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
4m	52W	LRS-75-24	HLG-80H-24	ELG-75-24	19m	247W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
5m	65W	LRS-75-24	HLG-80H-24	ELG-75-24	20m	260W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
6m	78W	LRS-100-24	HLG-80H-24	ELG-100-24	21m	273W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
7m	91W	LRS-100-24	HLG-120H-24	ELG-100-24	22m	286W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
8m	104W	LRS-100-24	HLG-120H-24	ELG-100-24	23m	299W	2 x LRS-150-24	2 x HLG-150H-24	2 x ELG-150-24
9m	117W	LRS-150-24	HLG-120H-24	ELG-150-24	24m	312W	2 x LRS-200-24	2 x HLG-185H-24	2 x ELG-200-24
10m	130W	LRS-150-24	HLG-150H-24	ELG-150-24	25m	325W	2 x LRS-200-24	2 x HLG-185H-24	2 x ELG-200-24
11m	143W	LRS-150-24	HLG-150H-24	ELG-150-24	26m	338W	2 x LRS-200-24	2 x HLG-185H-24	2 x ELG-200-24
12m	156W	LRS-200-24	HLG-185H-24	ELG-200-24	27m	351W	2 x LRS-200-24	2 x HLG-185H-24	2 x ELG-200-24
13m	169W	LRS-200-24	HLG-185H-24	ELG-200-24	28m	364W	2 x LRS-200-24	2 x HLG-185H-24	2 x ELG-200-24
14m	182W	LRS-200-24	HLG-185H-24	ELG-200-24	29m	377W	2 x LRS-200-24	2 x HLG-240H-24	2 x ELG-200-24
15m	195W	LRS-200-24	HLG-240H-24	ELG-200-24	30m	390W	2 x LRS-200-24	2 x HLG-240H-24	2 x ELG-200-24