

LED Neon Flex Project and Installation Guide

Neon Flex is a high quality product that gives a continuous even smooth light output with no hot spots. It is relatively easy to install; but before doing so we recommend you read this entire document which will help you to choose all the correct items required. It will also guide you through the process of installation.

Different Types

1. Voltage

Currently we sell two voltage types; 24VDC and 240VAC

2. LED Type

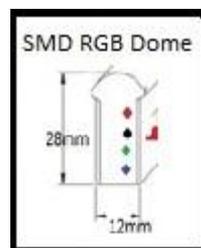
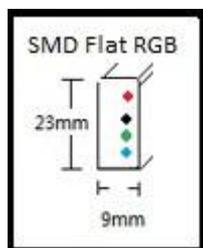
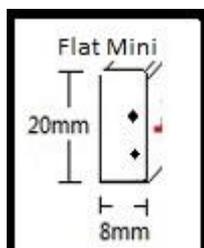
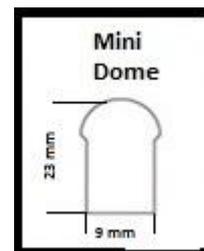
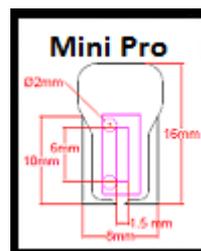
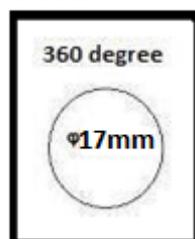
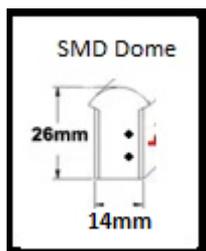
We use SMD (surface mount device).

3. Colour

1. Jacket refers to the outer PVC cover of Neon flex and manufactures will usually have two options white jacket or colour jacket. Colour Jacket will match the output colour of the LED for instance Blue Neon flex will have a blue dyed PVC cover. Our preference is colour jacket as it enhances the colour partially on Red, Orange and Yellow. RGB, Cold white and Warm white all have white jackets.
2. There are a total of 10 colour options, Cold white, Warm White, Red, Orange, Green, Blue, Yellow, Pink, Purple and RGB.
3. Batches; like paint are lightly to have small variations of shade colour from batch to batch. So if you project is large and requires a number of rolls (50 metre per roll) it is recommended that the neon is manufactured all at the same time which should result in the colour being consistent.
4. Colour Temperature; Manufactures will use words such as cold white but be aware cold white can range from 5500K to 8000K. So Cold white, Neutral white and Warm white can vary tremendously from manufacturer to manufacturer and product to product.
5. Specific shades of Colours are not available with Neon Flex. It is possible if you use RGB and a DMX controller that you might achieve a close match to what colour you are looking for.

4. Shape

There are a number of different shapes available, Standard Dome, Mini Pro, Mini Dome, 360 degree and Flat and RGB Profile and sizes are below:



Differences between each Type of Neon Flex

Obviously the shapes, colours and voltage are different but there is also one other differences to take into consideration, **the cutting unit**. This varies from colour, shape and voltage and the full details are listed in the **Neon Flex Specifications and Length Calculator** which can be downloaded here:

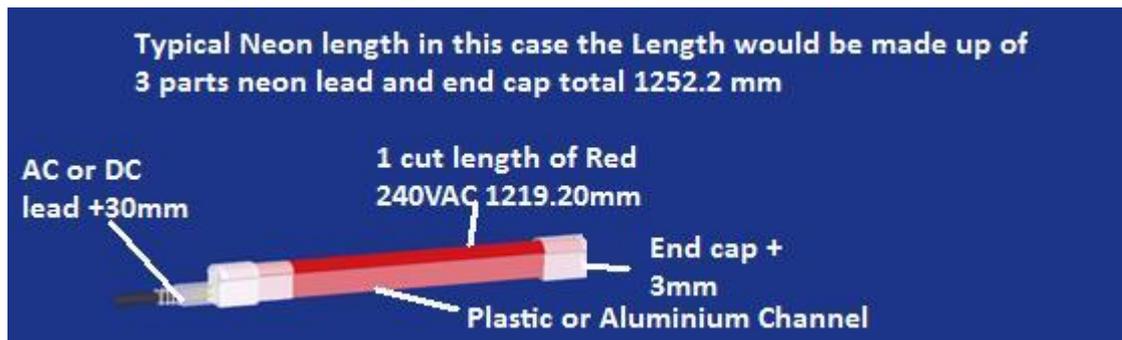
<https://www.ddsukltd.com/PDFgallery.htm> This file is very useful as you can work out the closet length to your preferred length as well as showing the bend radius of each neon flex type and Lumen per metre output.



It can be cut but only at the points marked with  or a dark line found on the bottom of the neon. The distance between each cut mark (cut length) is an individual circuit and if you cut between the cut marks that circuit will not work. Generally the cut length on the 240VAC is much longer than the 24VDC so as a rule of thumb if your project is long and straight; use 240VAC. If it is complex and requires cuts and more accurate lengths; use 24VDC.

Components Required

Below is a diagram of a typical length of neon flex.



Here is a list of the minimum requirement for both AC and DC types

24VDCV

DC Front Connector

Pins

End cap

Heat shrink

Fixing, either Mounting Clips or Channel.

24VDC Power supply (constant Voltage only). To work out what power supply is required times the length of the Neon Flex by the power per metre (found in the **Neon Flex Specifications and Length Calculator**).

There is a maximum single run length of up to 20 metres for 24VDC.

It is recommended that you do not exceed 90% of the power supplies output.

240VAC

AC Front Connector

Pins

End cap

Heat shrink

Fixing, either Mounting Clips or Channel.

The maximum run length for 240VAC is 120 metres.

For a full list (including photos) of all the different shaped accessories can be found in the Neon Flex Price list which can be downloaded here <https://www.ddsukltd.com/PDFgallery.htm>

Each Shape Neon Flex has its own web page for all of its accessories:

Standard shape 26 x 14mm, 24VDC and 240VAC

<https://www.ddsukltd.com/smdneonflexaccessories.htm>

360 Degree 24VDC and 240VAC

<https://www.ddsukltd.com/360neonflexaccessories.htm>

Mini Flat

<https://www.ddsukltd.com/miniflatneonflexaccessories.htm>

Mini Dome

<https://www.ddsukltd.com/minidomeneonflexaccessories.htm>

Colour Temperature Changing

<https://www.ddsukltd.com/rgbneonflexaccessories.htm>

Mini Pro

<https://www.ddsukltd.com/miniproneonflexaccessories.htm>

How to carry out a project:

1. Measure the entire length of the area that you require the neon for.
2. Decide which profile, colour which voltage is the most suitable for your project; 240VAC for long continuous runs up to 120 metres, 24VDC for shorter runs that may require cutting and joining, maximum length 20 metres. The output of both 24VDC and 24VAC is the same.

Not to scale.



3. If you need accurate lengths divide your measurement by the cut length unit of the colour you have chosen (see <https://www.ddsukltd.com/PDFgallery.htm> and download Neon Flex Specifications and length calculator file). Example Mini Pro Blue neon has a cut length of 50mm for 24VDC and

Standard Blue 240VAC is 1000mm, if I needed to fit two sides of a room that had 3.6 metre per side Blue 240VAC would have its closest size at either 3 metres or 4 metres (as the cutting length is every 1000mm) where as the 24VDC Mini Pro blue would have the closest lengths at 3.6 so in this example using the 24VDC Mini Pro would give the best fit.

4. Add your accessories to your order, either a 240VAC front connector or 24VDC Power Supply/Driver is required, you will also need a Front connector, pins, cap and het shrink. Also consider how to fix the Neon. The easiest way is to use the aluminium/Plastic channel, (page 4) sold by the metre or using mounting clips if you wish to shape the neon. If you want to cut the neon you can do so at any cutting mark and you can use either a fixed L connector or an extension join; (page 4) to cut and join two separate lengths together.

5. If you require a driver for the 24VDC, times the length of your neon rope light by the watts per metre.

7. Note if your fitting is outside you must use waterproof silicone or super glue (not supplied) to seal all joins. A waterproof cable connector must also be used between the 24VDC driver and neon.

8. Install step by step, start with the first length test install, join and move on to the next length until the entire project is completed.

Tools Required:

A heat gun to shrink the PVC tube

Hack saw or sharp Knife to cut (only at the cut marks) the Neon

A flat blade screwdriver, to help push in the connector pins (make sure you do not push them in at an angle or you could break them).

Assembly the neon in the area that you wish to install cut and add all accessories and test if all is OK then use the heat shrink and glue if required and fit firmly into place into the channel or mounting clips.

Notes

- Do not plug it into power source when the neon is still wrapped in a roll or in a spool to avoid over heating.
- Do not plug it into power source before installation is fully completed
- Make sure the power source and LED NEON has the compatible voltage.
- The LED lamps cannot be replaced and can not be repaired. To avoid fire and shock hazard, do not use if the outer insulation is damaged.
- The power connection cannot be replaced and can not be repaired. If power cord is damaged, replace with a new one from supplier.
- LED NEON can ONLY be cut at the indicated cut mark.

- Do not cover LED NEON by any object or material when it is in use.
- The end of LED NEON must be fully inserted into the End Cap and fixed tight.
- For outdoor use, add silicon glue on the connectors and end cap for waterproof. And, add additional PVC tube for sealed use
- Shading colours can vary slightly from batch to batch.

Controllers for RGB and Dimmers

Please contact sales@ddsukltd.com for prices and user guides for all controllers and dimmers.

Below is a brief description of the Controllers and Dimmers.

1. 24VDC Dimmer LT-3200-6A suitable for dimming 24VDC single colour Neon Flex
2. 240VAC Dimmer suitable for dimming 240VAC single colour Neon Flex
3. DMX Decoder for connecting RGB neon Flex to a DMX controller.
4. Stand alone RGB controller with Remote.

Accessories Available

How to Install

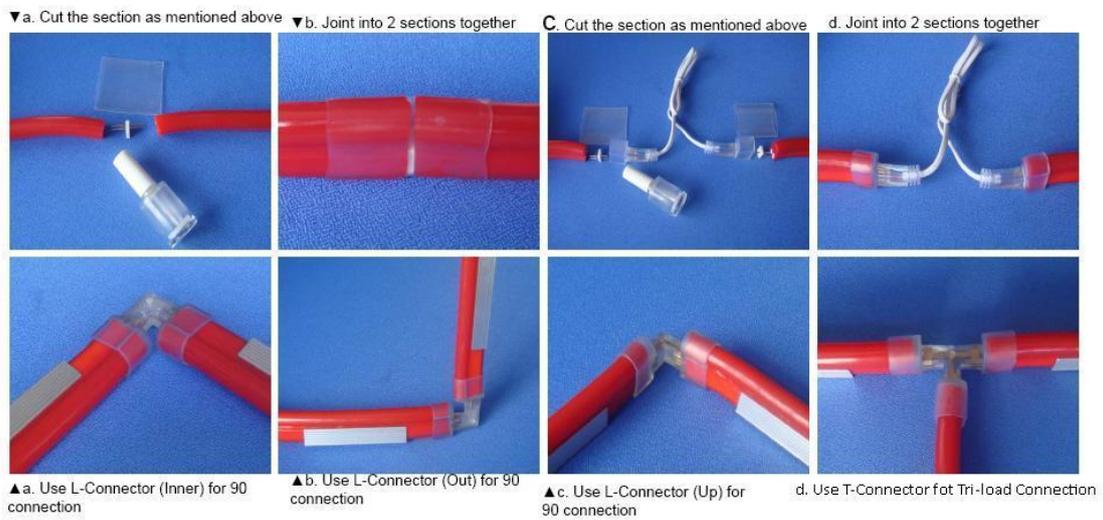
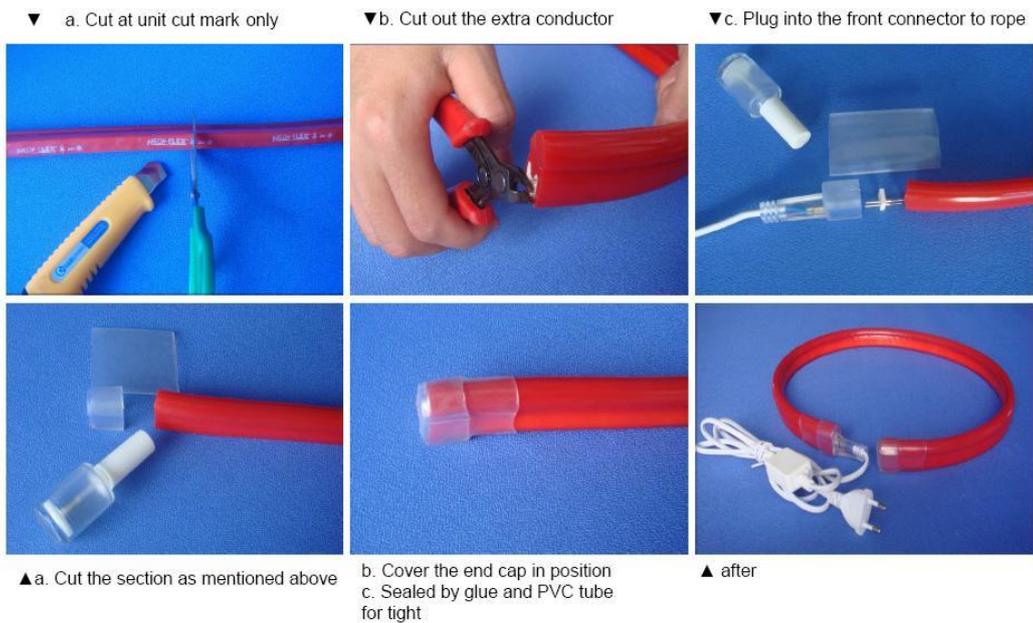


Photo Gallery

