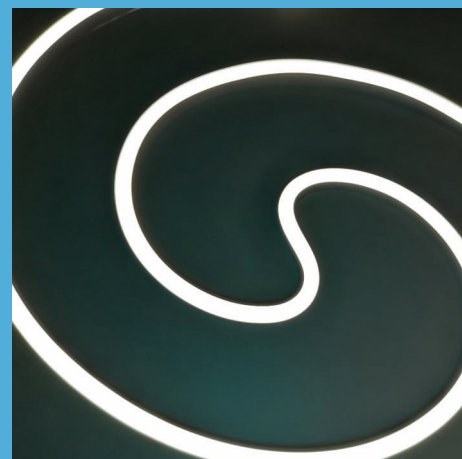
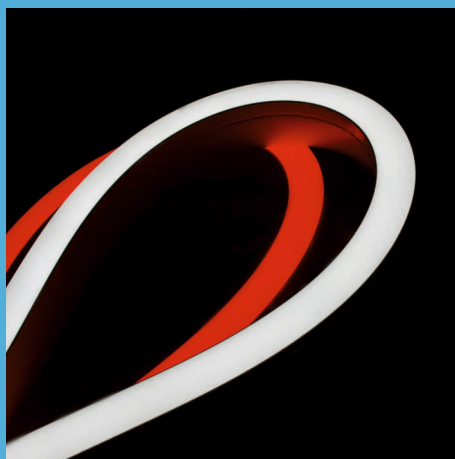
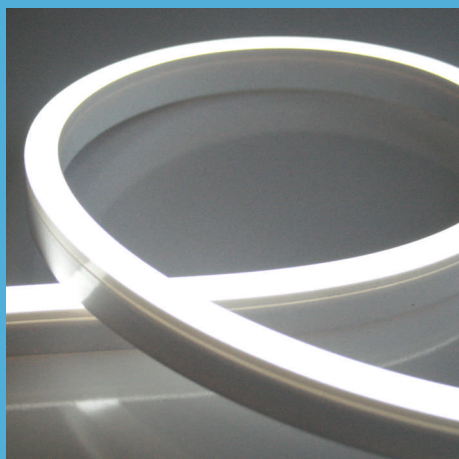


INSTRUCTIONS

Flexible LED NEON strips





THANK YOU FOR CHOOSING AKTO FLEXIBLE LED NEON STRIPS!

These instructions contain the most important information on how to cut, install and mount flexible LED NEON strips correctly.

PRODUCT DESCRIPTION

AKTO **flexible LED NEON strips** can be installed to be viewed directly as well as used for indirect lighting. This product is an ideal choice for various advertising, architectural and interior lighting projects and can be used both indoors and outdoors! Due to ultra-high flexibility and perfectly even light line, it can be also used for eye-catching LED signage projects. Moreover, it is available in a full range of colors!

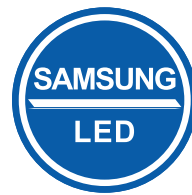
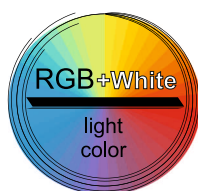


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PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION. INCORRECT INSTALLATION CAN VOID YOUR WARRANTY!

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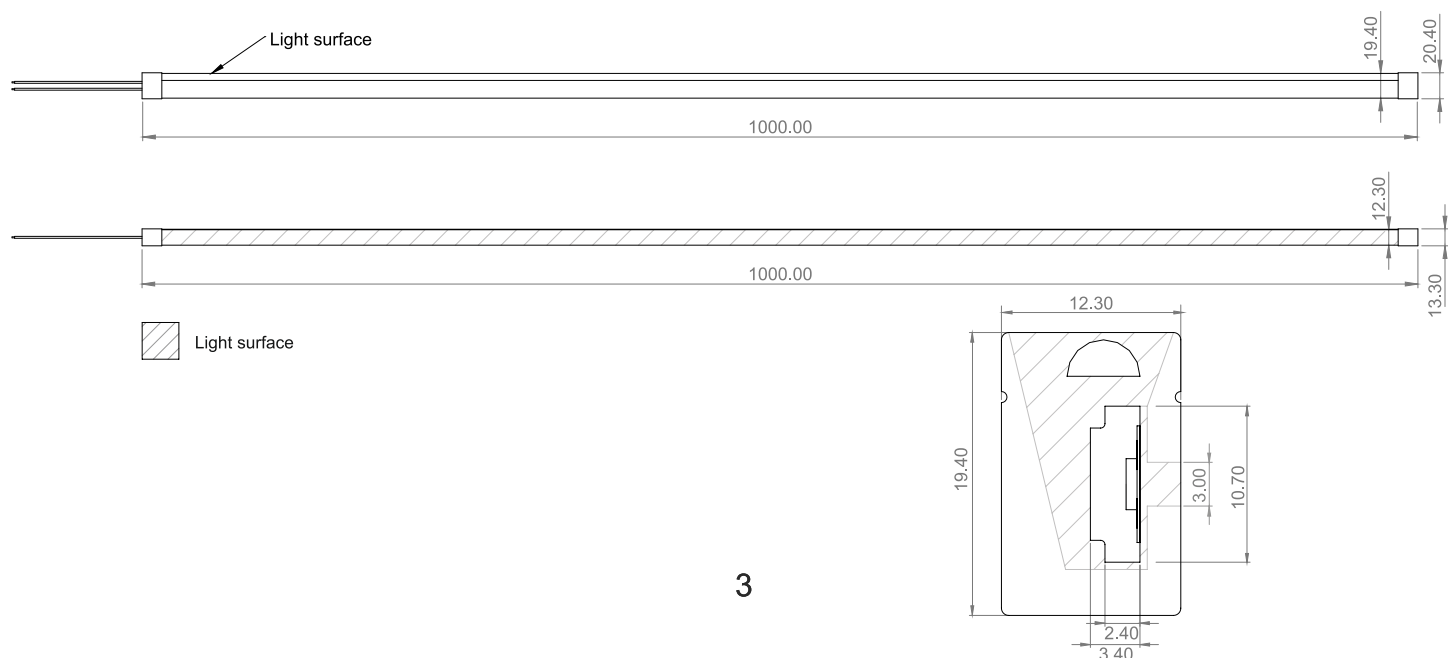
FLEXIBLE LED NEON LARGE STRIP

SPECIFICATION

MODEL	WHITE AFNP-120U9624MHS-XW	COLOR AFNP-120A9624HS-X	RGB AFN-60C14424HS-RGB	RGB + WHITE AFNP-60CU19224MHS-RGBXW
Dimensions, mm	1000x19.4x12.3	1000x19.4x12.3	1000x19.4x12.3	1000x19.4x12.3
Current, A	~0.4	~0.4	~0.6	~0.8
Voltage, V	24 DC	24 DC	24 DC	24 DC
Power, W/m	~9.6	~9.6	~14.4	~19.2
LED quantity, pcs	120	120	60	60
Color wavelength, nm/ CCT	—	blue 449-459; green 506-516; yellow 586-596; red 617-627	red 617-630; green 518-528; blue 464-474	red 617-630; green 518-523; blue 464-474; warm white 3000; cold white 6500
Luminous flux, lm	499 (6500K); 499 (4000K); 468 (3000K)	blue 46; green 225; yellow 165; red 130	red 27; green 112; blue 30	red 27; green 112; blue 30; warm white 237; cold white 252
Light intensity, mcd	—	blue 31200; green 152000; yellow 112000; red 88000	red 8482; green 35568; blue 9576	red 8482; green 35568; blue 9576; warm white 75300; cold white 80200
Working temperature (Tc point)	-25° – +65°	-25° – +65°	-25° – +65°	-25° – +65°
Ingress protection	IP67	IP67	IP67	IP67
Cutting step, mm	50	50	100	100

MECHANICAL DIMENSIONS:

NOTE: RGB+WHITE flexible LED NEON strips can be only operated at a maximum 14.4 W/m power at a time.

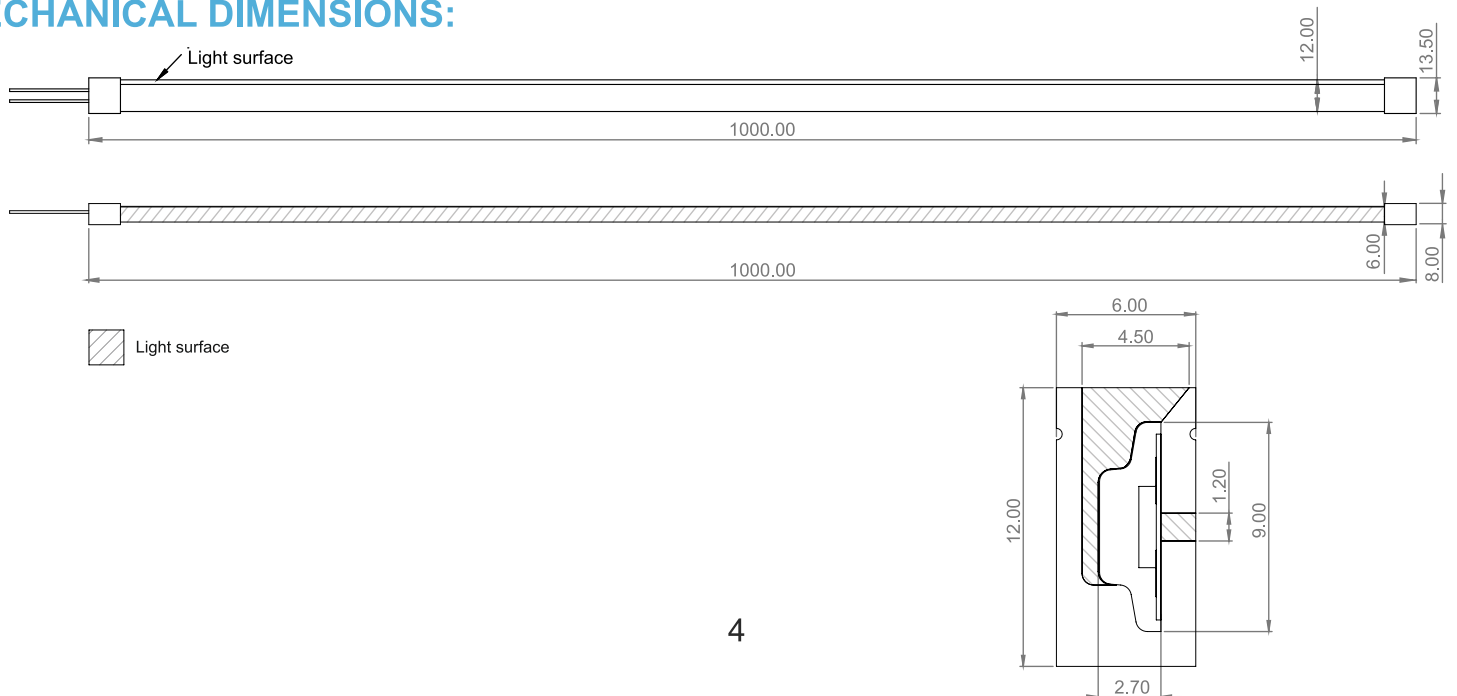


FLEXIBLE LED NEON MEDIUM STRIP

SPECIFICATION

MODEL	WHITE AFNP-120U9624MH612S-XW	COLOR AFNP-120A9624H612S-X
Dimensions, mm	1000x12x6	1000x12x6
Current, A	~0.4	~0.4
Voltage, V	24 DC	24 DC
Power, W/m	~9.6	~9.6
LED quantity, pcs	120	120
Color wavelength, nm	—	blue 449-459; green 506-516; yellow 586-596; red 617-627
Luminous flux, lm	255 (6500K); 255 (4000K); 239 (3000K)	blue 24; green 115; yellow 85; red 66
Light intensity, mcd	—	blue 31200; green 152000; yellow 112000; red 88000
Working temperature (Tc point)	-25° – +65°	-25° – +65°
Ingress protection	IP67	IP67
Cutting step, mm	50	50

MECHANICAL DIMENSIONS:

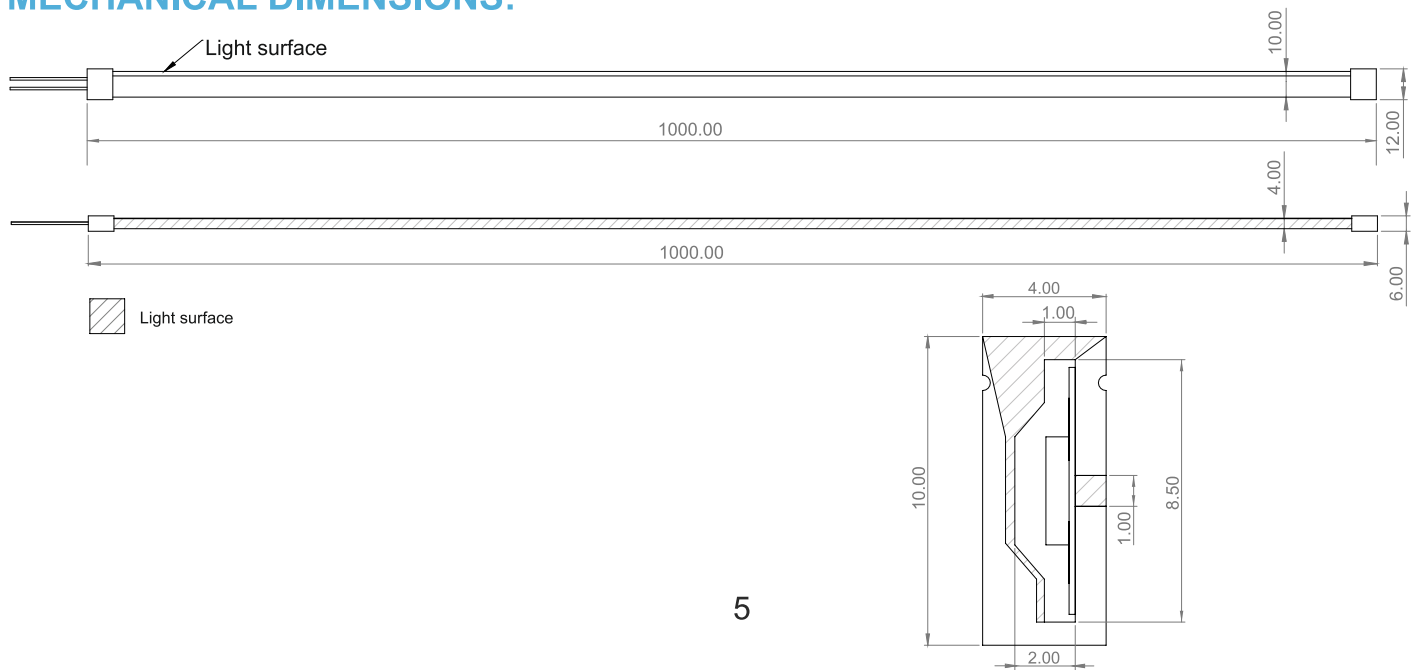


FLEXIBLE LED NEON SMALL STRIP

SPECIFICATION

MODEL	WHITE AFN-120U96245MH410S-XW	COLOR AFN-120A96245H410S-X
Dimensions, mm	1000x10x4	1000x10x4
Current, A	~0.4	~0.4
Voltage, V	24 DC	24 DC
Power, W/m	~9.6	~9.6
LED quantity, pcs	120	120
Color wavelength, nm	–	blue 449-459; green 506-516; yellow 586-596; red 617-627
Luminous flux, lm	266 (6500K); 266 (4000K); 249 (3000K)	blue 25; green 120; yellow 88; red 69
Light intensity, mcd	–	blue 31200; green 152000; yellow 112000; red 88000
Working temperature (Tc point)	-25° – +65°	-25° – +65°
Ingress protection	IP67	IP67
Cutting step, mm	50	50

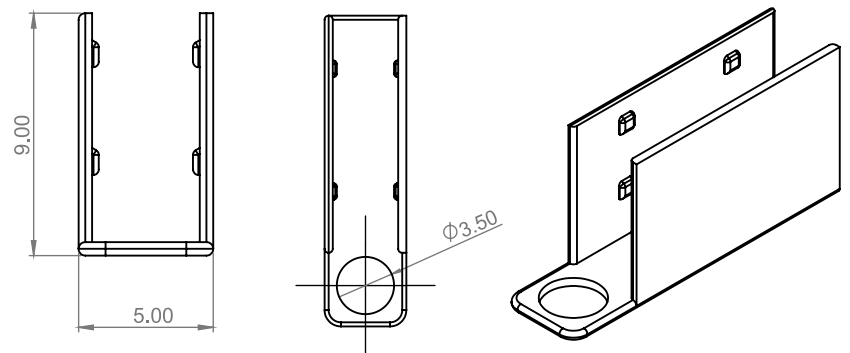
MECHANICAL DIMENSIONS:



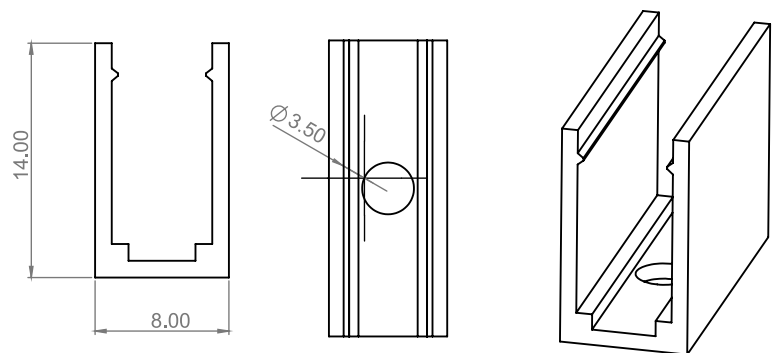
MOUNTING CLIPS FOR FLEXIBLE LED NEON

The mounting process usually requires installing aluminum clips as the first step. Depending on the size every clip has either one or two screw holes:

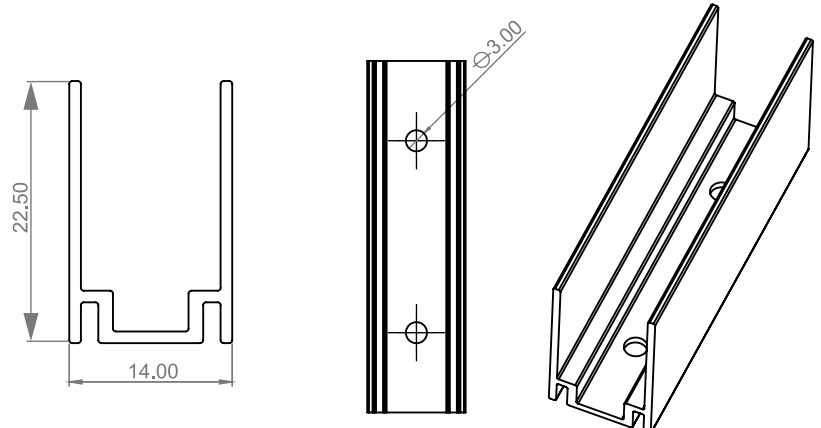
**CLIP FOR
LED NEON SMALL
1 hole (3.5 mm diameter)**



**CLIP FOR
LED NEON MEDIUM
1 hole (3.5 mm diameter)**



**CLIP FOR
LED NEON LARGE
2 holes (2x3.00 mm diameter)**

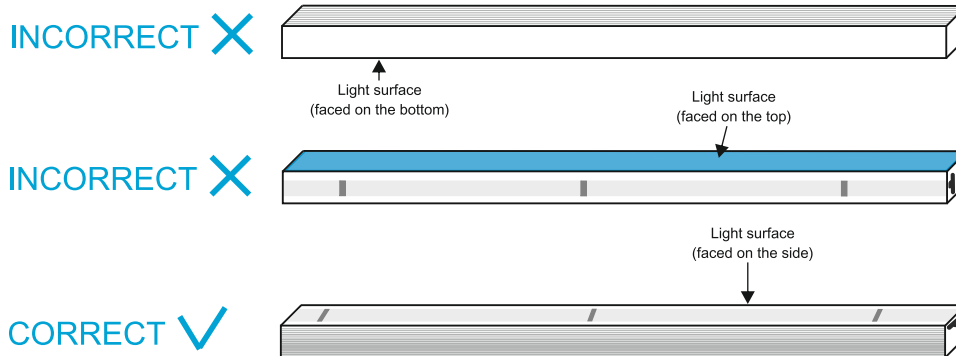


SAFETY REQUIREMENTS & PRECAUTIONS

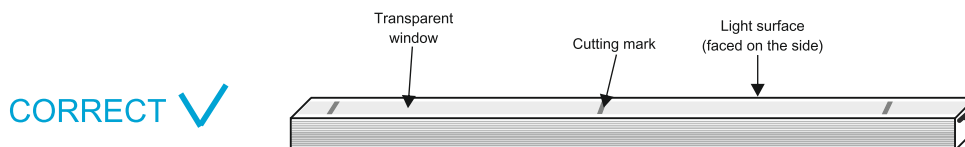
CUTTING

NOTE: YOU CAN ALSO ALWAYS ORDER FLEXIBLE LED NEON STRIPS TO A SPECIFIC AVAILABLE LENGTHS AS WELL AS WIRE LENGTHS OF YOUR CHOICE AND WE WILL ARRANGE IT FOR YOU ALREADY FULLY PREPARED TO INSTALL!

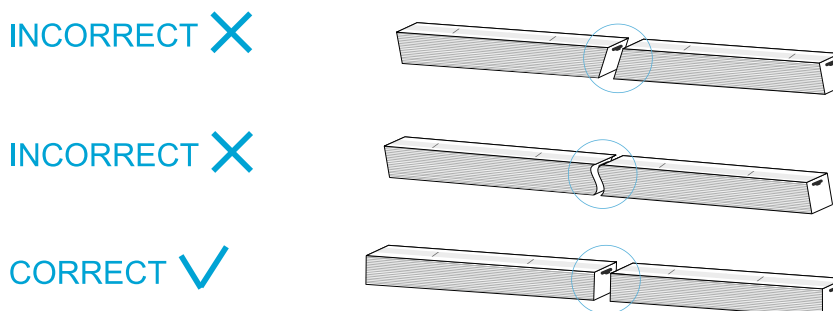
- Place the strip so it lies horizontally (the light surface must be faced on the side). See in the example below.



- Flexible LED NEON strips must be only cut where marked, look for the black line inside the transparent window. Cutting outside the specified mark will damage the internal components. To see each product exact cutting steps, please check the product specification.



- Take heavy-duty scissors or shears and line it up perpendicularly. Cut it straight, exactly at the cutting mark. Do not cut on an angle. See in the example below.



- Do not cut while the flexible LED NEON is connected with the power!
- After the cut is made make sure to solder the wires and make it waterproof once again (*read more in page 8*).

SAFETY REQUIREMENTS & PRECAUTIONS

WIRE SOLDERING

NOTE: YOU CAN ALSO ALWAYS ORDER FLEXIBLE LED NEON STRIPS TO A SPECIFIC AVAILABLE LENGTHS AS WELL AS WIRE LENGTHS OF YOUR CHOICE AND WE WILL ARRANGE IT FOR YOU ALREADY FULLY PREPARED TO INSTALL!

- Before starting to solder the wires, make sure that the silicone coating exposes the copper connection pads on the led strip that is inside the silicone tube. The plates for soldering are shown in the example below.



- In the process of soldering, it is important to spread the solder precisely on the alloys intended for that purpose and to cover them completely.
- Also, the cable tilt angle is important. The wires must be soldered along the flexible LED strip, with an angle of 180° with it. The correct and incorrect ways of soldering the wires are provided in the example below.

CORRECT ✓ 

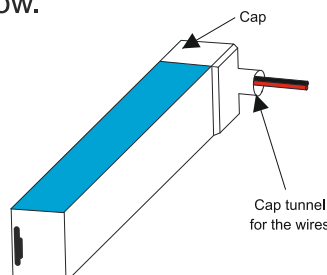
INCORRECT ✗ 

WATERPROOFING

NOTE: TO OBTAIN IP67 RATING, ALL FLEXIBLE LED NEON STRIPS MUST BE ASSEMBLED PROPERLY ACCORDING TO THE INSTRUCTIONS!

IP67 flexible LED NEON strip protection:

- Protection against any dust impact.
- Protection against the immersion in water to a depth of 1 meter. Testing time: 30 minutes.
- In order to make it waterproof once again, you need to apply non-acidic silicone adhesive into the inside and outside of the connected area. Gently press out any bubbles and make sure to wipe out the excess adhesive. Once that is done put on a cap and let it dry for at least 3 hours.
- If the end of the flexible LED NEON strip supposed to have wires, put them through the cap tunnel intended for this purpose. See in the example below.

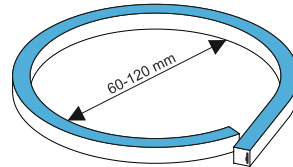


SAFETY REQUIREMENTS & PRECAUTIONS

INSTALLATION

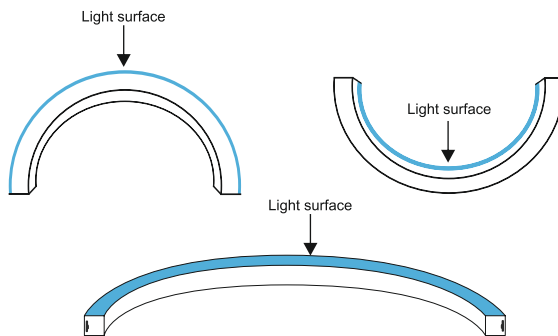
- Do not over extend the minimum bending diameter:

LED NEON **SMALL** strip – 60 mm;
 LED NEON **MEDIUM** strip – 80 mm;
 LED NEON **LARGE** strip – 120 mm.



- When installing light surface must be always faced upwards. Do not install it in opposite directions.

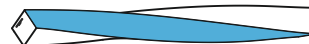
INCORRECT ✗



CORRECT ✓

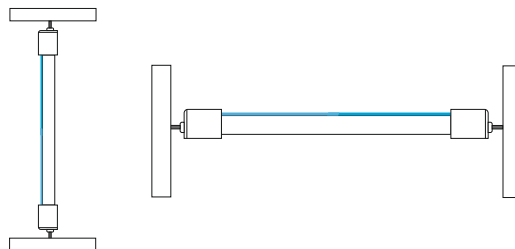
- Do not install it twisted. Doing so will damage the internal components.

INCORRECT ✗



- Do not install it hanging vertically or horizontally without the support.

INCORRECT ✗



- Do not roll out flexible LED NEON strips on rough surfaces or rollover on sharp corners. This will scratch the silicone tubes optic.
- Do not secure it with staples, nails, or other materials that might damage the insulation or the tube itself.
- Do not install flexible LED NEON strips in spaces colder than 0°C or hotter than 40°C.

SAFETY REQUIREMENTS & PRECAUTIONS

SELECTING POWER SUPPLY

- It is important to pay attention that flexible LED NEON strips cannot be connected directly to the 220V AC network - it is necessary to use the power supply sources.
- The simple formula is used in order to calculate the power source capacity - the capacity of a flexible LED NEON strip in one meter (W/m) is multiplied by the flexible LED NEON strip length (m) and added by 20%. The formula is provided below.

$$\boxed{\text{Power(W/m)}} \times \boxed{\text{Length (m)}} \times 1.2 = \boxed{\text{The minimal power supply resource capacity (W)}}$$

- When calculating the capacity of the power supply source, the flexible LED NEON strip voltage (V) must be also estimated. Our flexible LED NEON strips are 12V DC or 24V DC. This information can be found on the packaging or in the product specifications.

GENERAL USE

- Although flexible LED NEON strips do not generate a great amount of heat, it is recommended that you do not cover or conceal it.
- It is also not recommended to use flexible LED NEON strips in enclosed, non-ventilated, hot (> 50°C) spaces.

CONTACTS

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