ISOLED KNOWLEDGE

LED FLEX STRIPS

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ISOLED® LED FLEX STRIPS: THE PROPAER AND SECUREWAY TO CONNECT.

Please observe several basic rules when mounting LED Flex strips We cover the main points to be observed for a professional and safe cutting, soldering and bonding of LED Flex strips.

Polarity in LED Flex strips.

ISOLED® Flex strips are operated with DC voltage (12 V DC or 24 V DC). Colour channels (red / green / blue- order may vary) or the white channel must be connected on the negative pole.

To determine the number of current feeds required for your ISOLED® LED Flex strip, calculate the current ampere (A) - see examples below. Depending on the version of your ISOLED® LED Flex strip and thus the robustness of the circuit board, the maximum amperage per feed may be approximately 3 amps. In operation, Flex strips require passive cooling, for which we recommend our aluminium profiles. Flex strips with high power rating and / or over-length with one-sided power supply and/or under poor cooling conditi ons may lead to high heat generation. In turn, this may reduce the service life of your LED Flex strip light- to just a few months in extreme cases!

One-sided (power) supply:

A 24 Volt LED Flex strip from ISOLED® with an output of 14.4 watts/meter and a one-side power supply can be operated over a maximum length of 5 meters.

CALCULATION: $\frac{14{,}4\ \text{W} \times 5\ \text{m}}{24\ \text{V}} = 3\ \text{A}$

Two-sided (power) supply:

The following example shows a 14.4 watts/meter Flex strip over a length of 8 meters with a two-sided power supply. In-this case, a one-sided power supply would yield a 4.8 amps of current flow, which exceeds the recommended 3 amps value.

CALCULATION: $\frac{14{,}4\ \text{W} \times 8\ \text{m}}{24\ \text{V}} = 4{,}8\ \text{A} : 2$

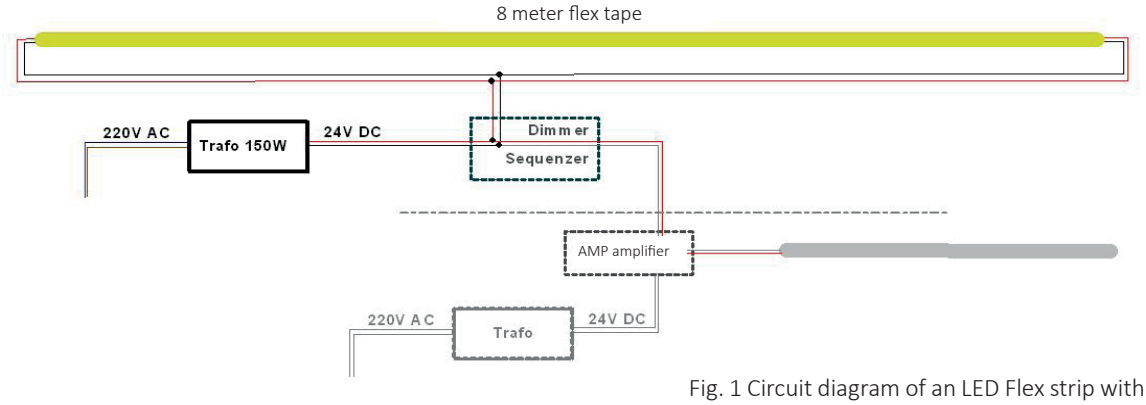


Fig. 1 Circuit diagram of an LED Flex strip with 14.4 W/m and a total length of 8 m

Separation (cutting) of LED Flex strips:

In principle, the separation marker (for cutting the LED Flex-strip) lies after 3 LEDs for the 12 Volt LED Flex strip and after 6LEDs for the 24 volt LED Flex strip. (see Fig. 2)

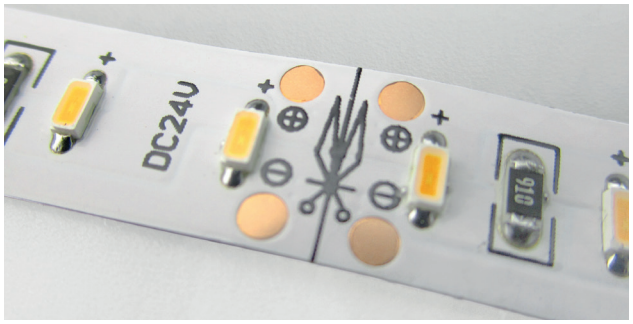


Fig 2. Scissors Icon- intended separation point of the Flex strip

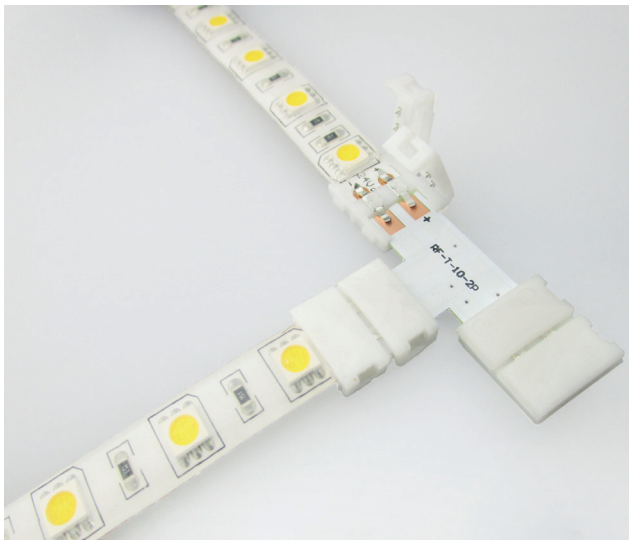
Please note the following when soldering or connecting Flex LED strips:

1. Before soldering, expose copper contact points if required (by gently scraping the protective layer).
2. Soldering temperature should not exceed 250 ° C- use extreme care and reduce soldering time to that deemed strictly necessary.
3. Finally, insulate solder joints properly- preferably withheat shrink tubing.

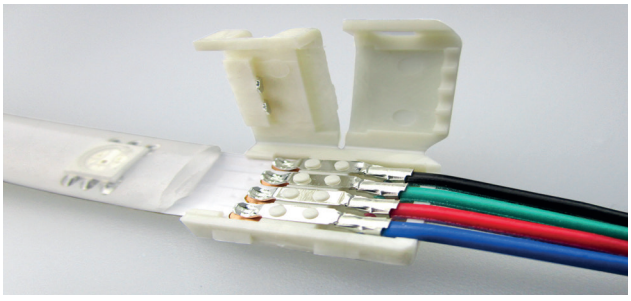
Fig.3 Isolation of solder joints: Preferably with heat shrink tubing Schrumpfschlauch

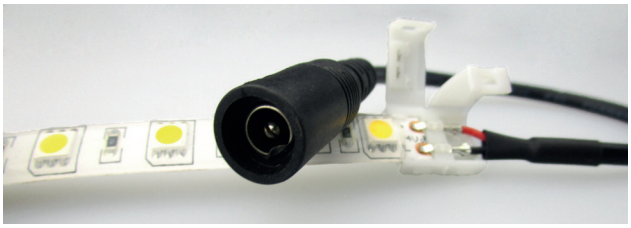
TIPS & TRICKS FOR PROPER AND SAFE CONNECTION OF LED FLEX STRIPS WITH ISOLED®CLIP-CONNECTORS:

The product-friendly connection of LED Flex strips requires using high-quality longitudinal, T or cross-clip connectors. With clip connectors of ISOLED®, you can install your long-lasting LED Flex strip lighting system in a professional, reliable manner, so that its value is preserved over time.

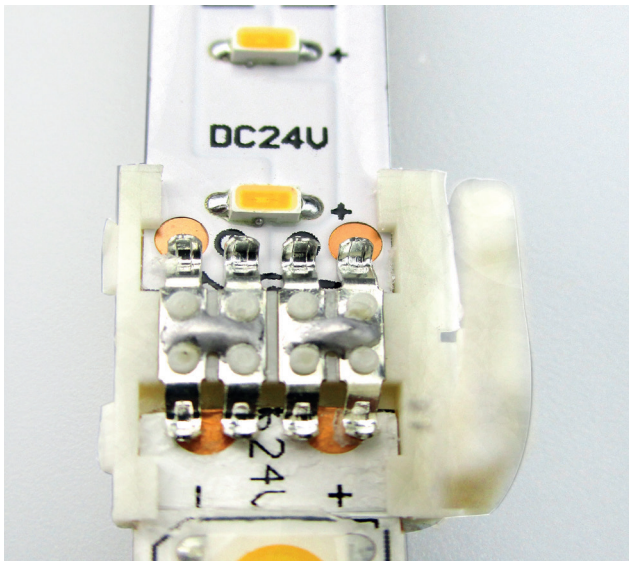


Example: The practical T-Clip connector by ISOLED®, whereby you can have the LED Flex strip adopt any shape without bending and illuminate any angle of your property.

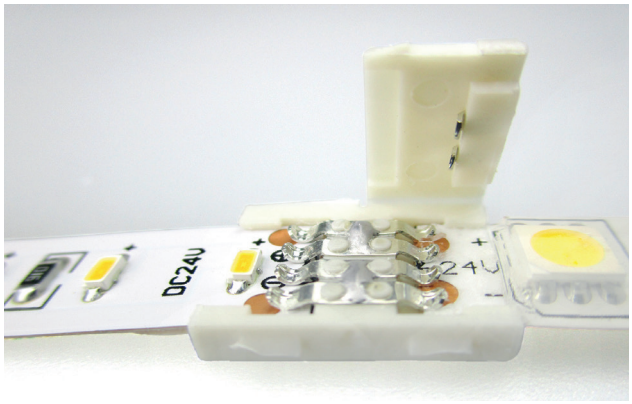




Example of the use of several connectors



Trick: Install the LED Flex strip pins far apart and use a four-pin clip connector, where we will solder two contacts together (see picture). Thus, clip connectors allow the safe connection of LED Flex strips under any circumstances.



Hint: In certain LED Flex strips, the first LED chip is very close to the contact point. To ensure a correct and safe connecti on, the cap on one side of the clip connector must be remo-ved. The removed cap is shown to the left of the picture. For encapsulated LED Flex strips, remove the casting first with a sharp knife. Otherwise, contacts cannot be connected. The removed casting is shown to the right of the picture.