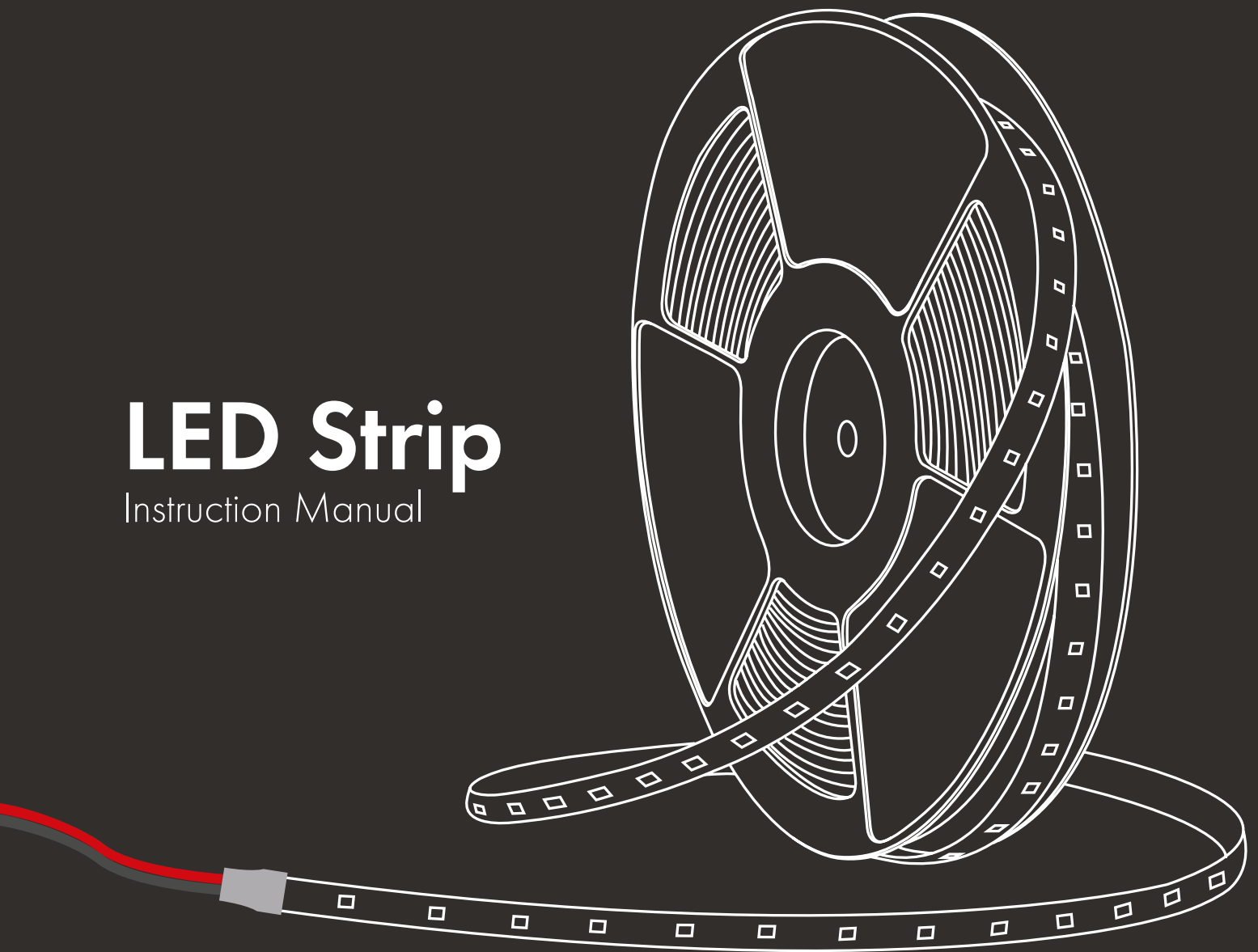




LED Strip

Instruction Manual





**design,
build &
deliver**

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PRECAUTIONS

This installation manual applies to fossLED Single colour, Dim to Warm, Tuneable White, RGB and RGBW LED Strips, please follow the same base guidelines but in correspondence to respective product terminals and polarities depending on Strip Type.

LED Strip Precautions

1. Installation is only to be carried out by qualified persons in accordance with installation instructions and applicable regulations and standards.
2. Always use a 24V constant voltage LED driver with fossLED Strip, **never** plug fossLED Strip directly into a mains supply.
3. Do not light up or test your LED Strip whilst it is still rolled up in its reel; unwind fully before installation and **avoid** folding, excessive twisting or external impact during handling or installation.
4. Ensure electricity is **switched off** at the mains (240V), before commencing installation or maintenance.
5. Only cut LED Strip to size on clearly marked PCB copper cut point intervals.
6. IP20 Non-waterproof LED Strip is for **indoor use only**.
7. IP65 LED strip is for indoor and outdoor use but solely splash proof and **non-submersible**.
8. When cutting or customising IP65 LED Strip intended for outdoor use please ensure to reseal adequately to retain its IP Rating.
9. Please ensure your application environment does not exceed a temperature range of -20°C to 50°C.

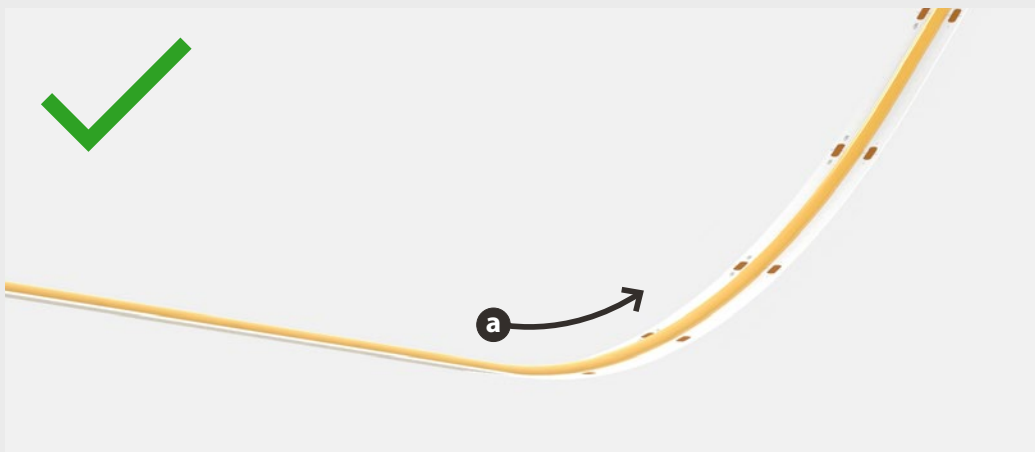
LED Strip Run Max Lengths

Different Strips can be run at different lengths depending on their model type and power output before being affected by voltage drop. Some LED Strips such as our Ultra run Series are designed to be run at extra long lengths at 25+ metres whereas some more powerful models have a max run of 6 metres. Please take note of your LED Strips MAX strip run to avoid an uneven light distribution throughout your installation and voltage drop. For further information please visit www.fossLED.com.

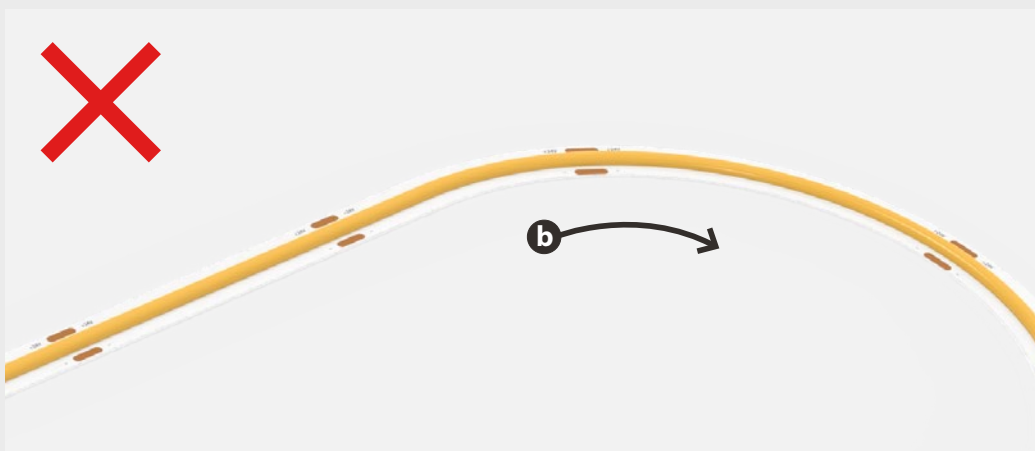
Installation & Handling

1. LED Strip with a wattage higher than 5w Per metre **must** be mounted onto an Aluminium profile or **heat sink** backing to ensure adequate heat dissipation and not invalidate its warranty. Laying LED Strip onto surfaces such as Wood, MDF or Plastic can result in rapid and terminal damage to your LED Strip installation.
2. Any machining or drilling etc should be completed before mounting. fossLED products and their immediate installation area should be kept clean, dry and free of paints and solvents.
3. Prepare, measure and mark the installation location and mounting surfaces before fixing. Unsticking and re-applying LED Strip to a surface will damage PCB components and compromise product longevity.
4. When laying your LED Strip to your chosen profile make sure to lay it carefully, press lightly to the left and right of your LED Strip PCB and do not press down firmly onto the LED Chips and components.
5. Mount products so that cables and connectors do not come under excessive stress and position accessories and connectors where they will not cast shadows.
6. Please note negative and positive polarities when connecting LED Strips to one another and corresponding power supplies.

- a** LED Strip is only designed to be installed and manipulated vertically.

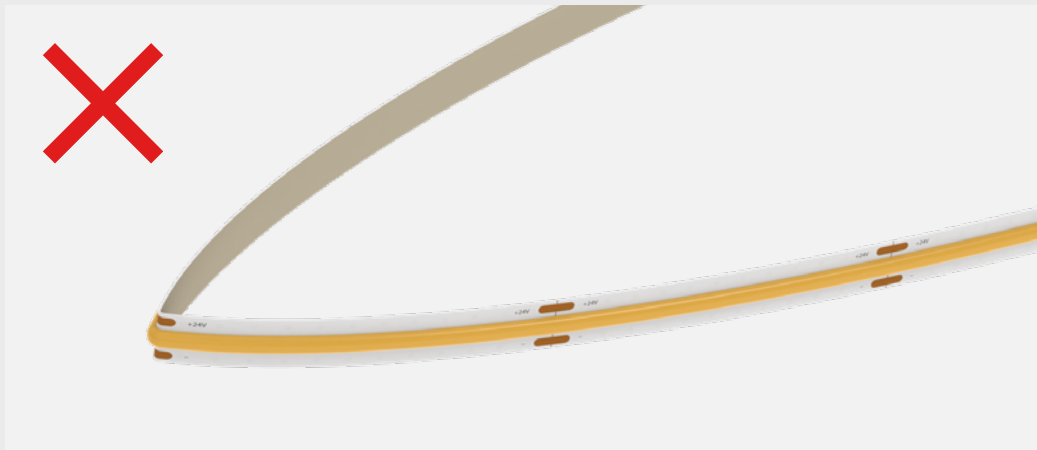


- b** Do **not** try and bend or curve your LED strip horizontally.

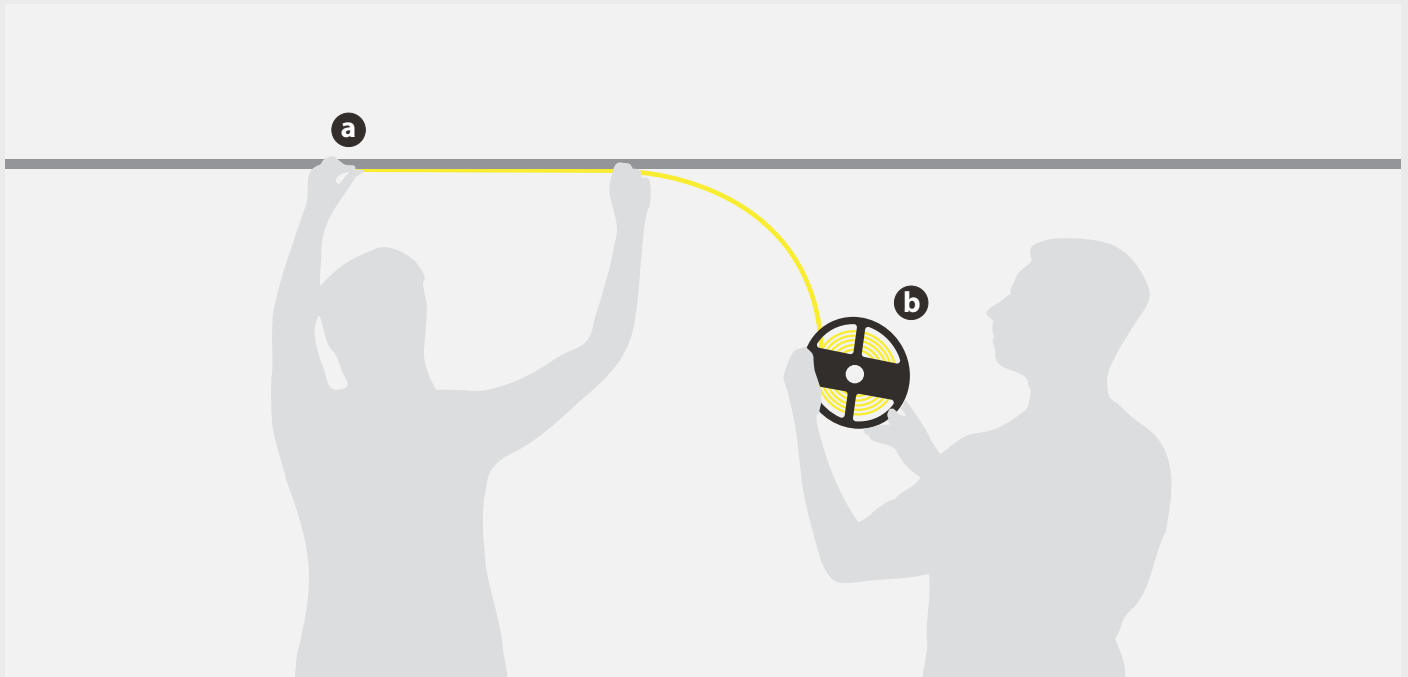


PRECAUTIONS continued

The LED strip can be manipulated vertically, but **not bent, distorted or twisted**:



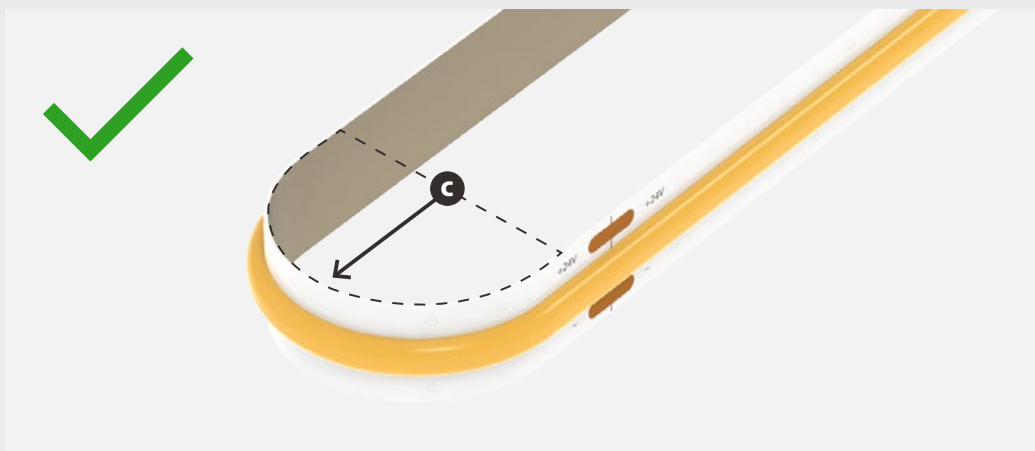
When installing LED Strip care must be taken so as not to inadvertently distort the Strip. If the length of the strip is more than 2 metres then two people must work together for a successful installation.



a The installer is to carefully lay the LED Strip into the chosen profile making sure it is lightly pressed into place, avoiding firm pressure onto LED Chips and components.

b The assistant is to hold the LED Strip reel and steadily supply Strip as required. This is important to avoid the reel being dropped or left to hang which can result in Strip failure due to distortion.

c LED strip has a Max Bend radius of $\geq 20\text{mm}$.

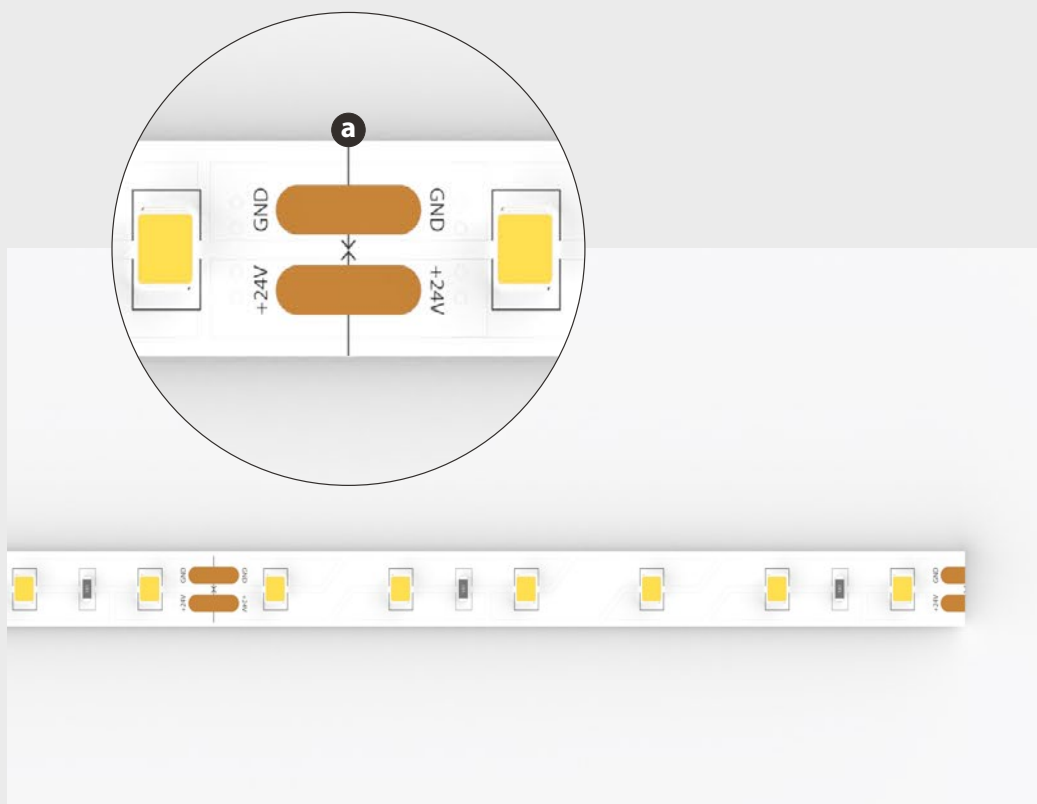


CUTTING & SEALING

Cutting your LED Strip to Size

LED Strip copper cutting intervals will vary from model to model, please refer to your LED Strip pack or datasheet for exact interval dimensions.

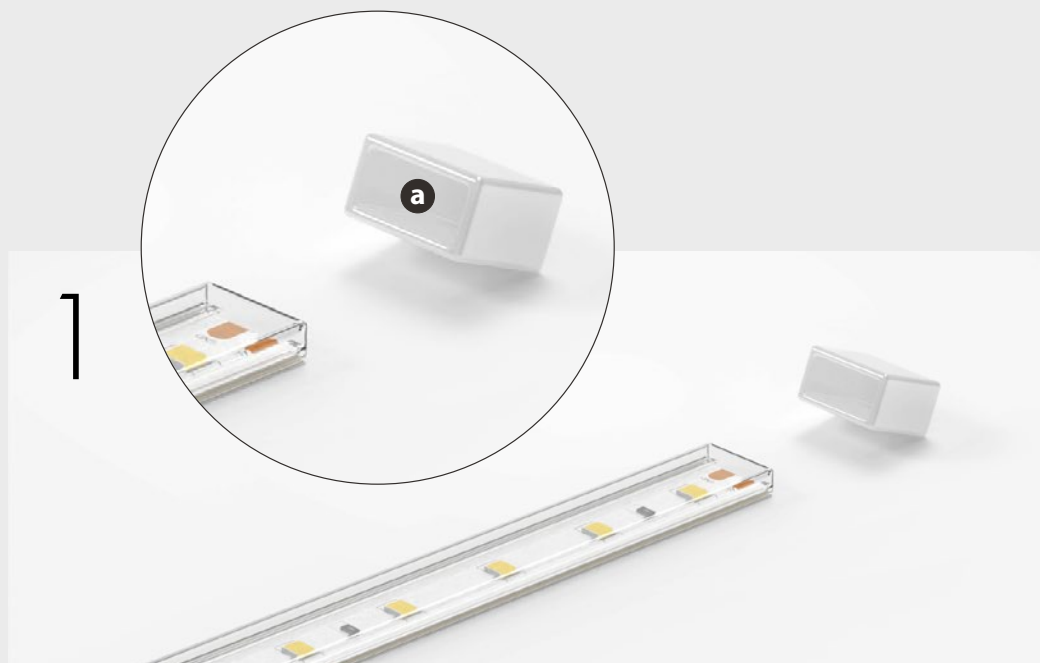
Once you have calculated and measured out the length of LED Strip you need you may then carefully lay out and cut your LED Strip.



a Please use sharp scissors and cut down the cut line, through the copper cut points.

IP65 LED Strip Cutting & Sealing

IP65 LED strip is designed to be used outdoors and is splash proof and non-submersible with its protective Silicone sleeving. Therefore, when cutting and manipulating a sealed reel of IP65 rated LED Strip it imperative that the Strip sleeving is re-sealed using Silicone end caps and silicone sealant to avoid permanent damage to your LED Strip.



a Once you have cut your LED Strip down to your chosen copper cut mark, then carefully fill an end cap with fossLED Strip Silicon sealant.



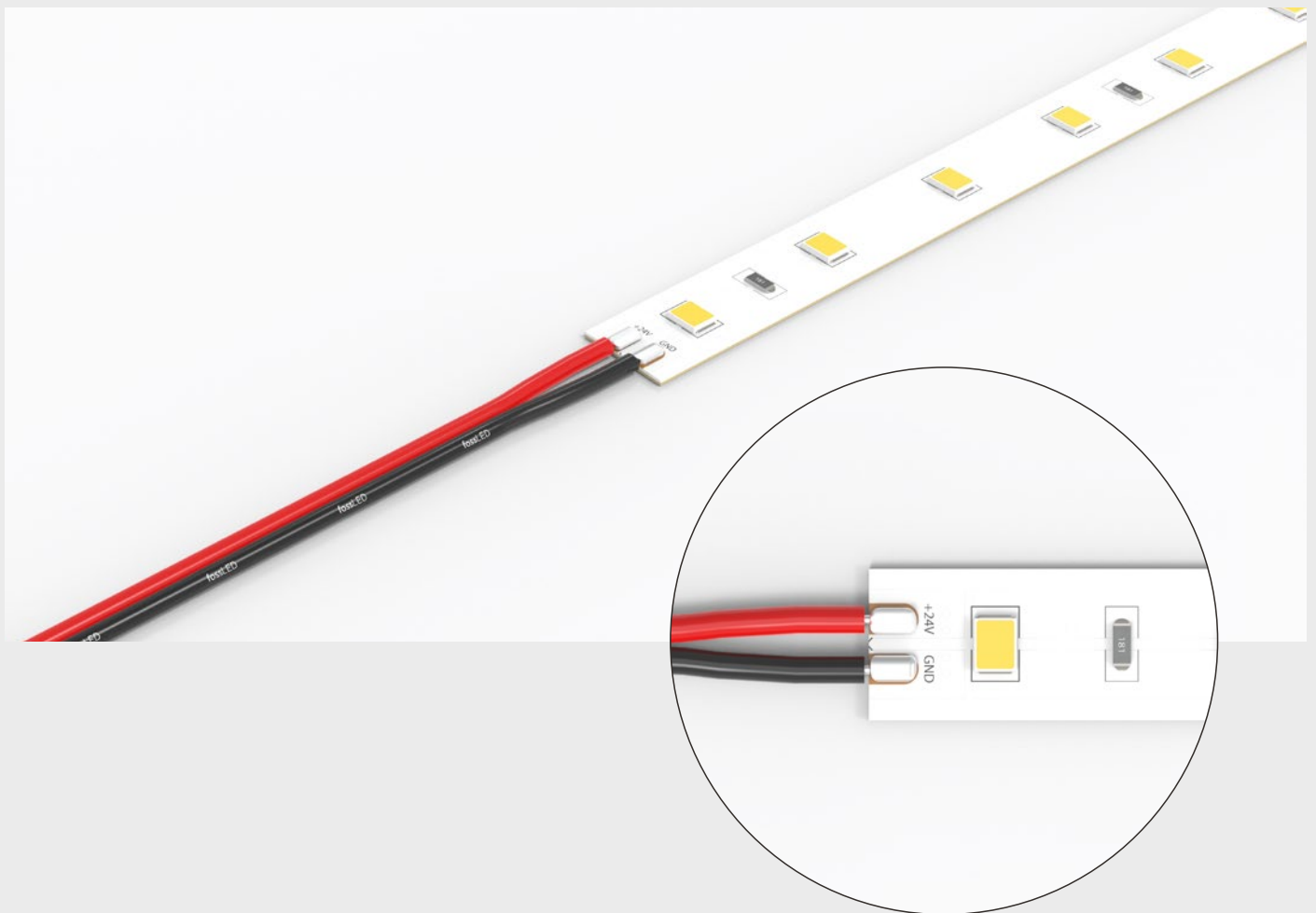
a Place the end cap over your LED Strip tubing ensuring it is sufficiently pressed down and covered, please now leave this to dry for approximately 24 hours to ensure a secure IP Rated finish.

! We do not recommend customers attempt making LED Strip new feeds or joins whilst trying to maintain an IP65 rating due to the difficulty of the process, we would however be happy to assist if it is something you require, please contact sales@fossled.co.uk for further information.

NEW FEED CONNECTIONS

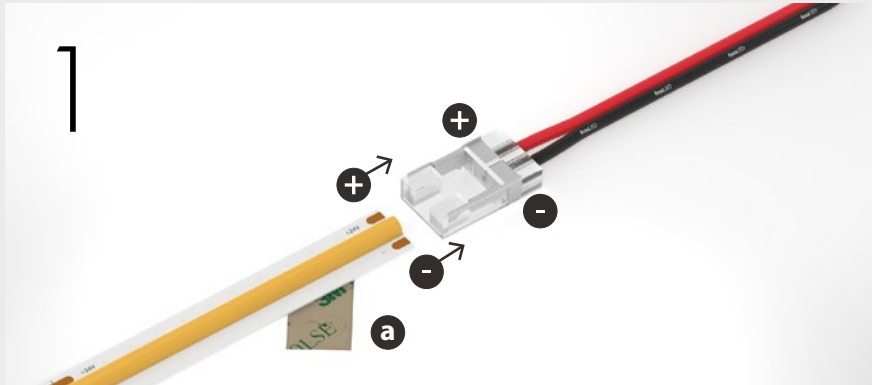
Soldering on a New Feed

When soldering it is important that the installer is trained to a basic level. Carefully solder suitably prepared cable to the copper solder pads ensuring sufficient spacing between each connection. Minimize contact time to avoid damaging the LED Strip from excessive heat and pay attention to the polarities to avoid a reverse connection.



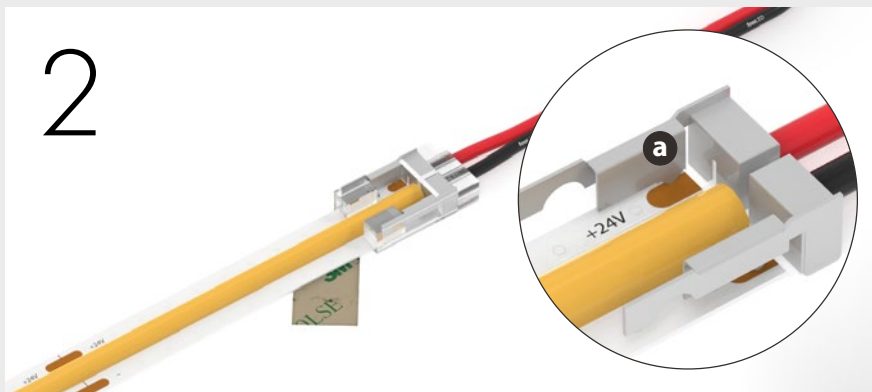
Using a New Feed Clip Connector

Our new feed connectors eliminate the need for soldering, please follow the steps explained below:

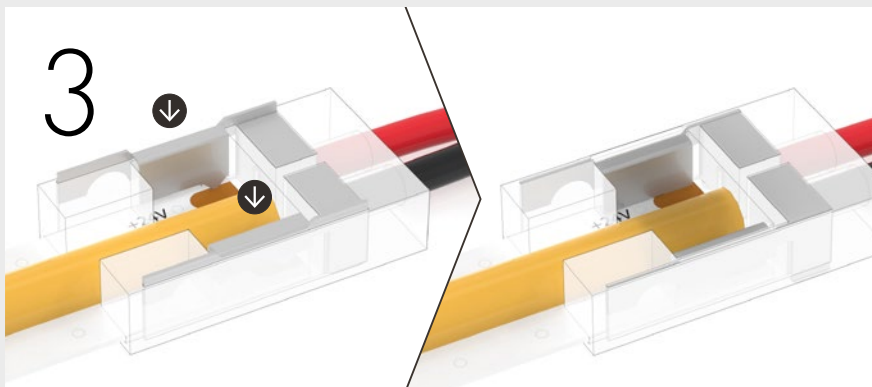


a Peel back the adhesive tape leaving a sufficient amount of bare strip to insert into the clip. Make sure you peel back the tape and accompanying adhesive layer leaving this to re-apply once the connection is complete.

+ - Align the LED Strip ensuring the polarities match with the feed cable.



a Insert the LED Strip into the corresponding terminals ensuring the strip is fitted correctly so that the copper pads line up with the clip connector teeth.



↓ Crimp down on the teeth prongs with pliers to pierce your LED Strip PCB leaving the prongs flush with the connector housing. Check the LED Strip is locked in and the connection is secure.

Re-apply the adhesive tape under the clip connector ready for installation.

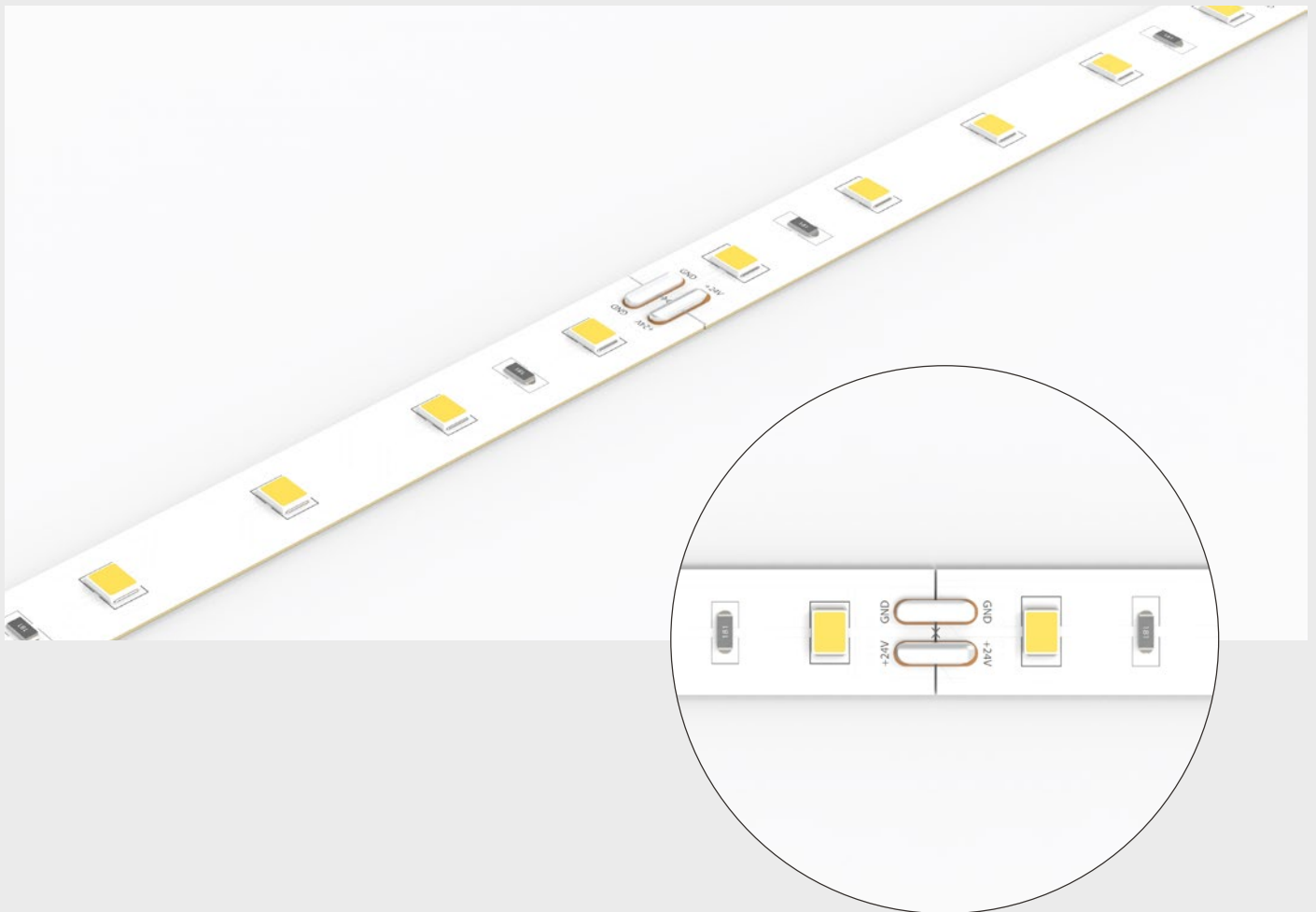
Note: Care must be taken when crimping so as not to crack the outer housing.

! The majority but not all of our LED Strip products have compatible clip connectors as depicted in this user manual, to find out more please visit www.fossLED.com

STRIP TO STRIP CONNECTIONS

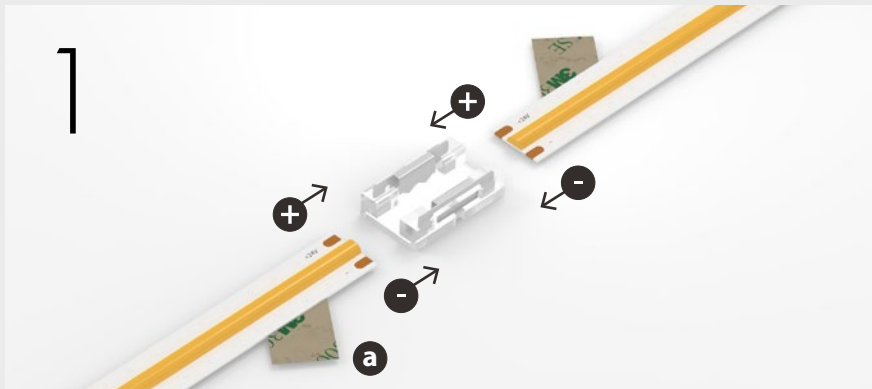
Soldering Two Strips Together

When soldering it is important that the installer is trained to a basic level. Lay your two pieces of LED Strip together so that the Copper Solder Pads are next to one another and ensure your polarities match. Then apply solder to each pair of copper pads and connect the strips together taking care to minimize contact time and avoid damaging your LED Strip.



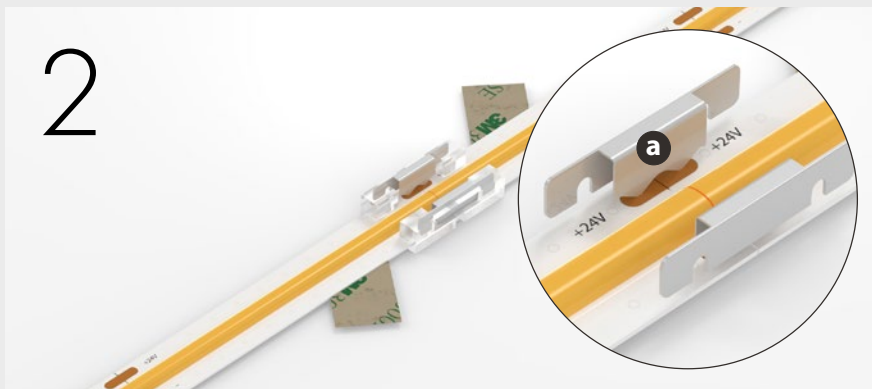
Using a Strip to Strip Clip Connector

Our Strip to Strip connectors eliminate the need for soldering, whilst achieving a gapless connection. Simply follow the steps explained below:

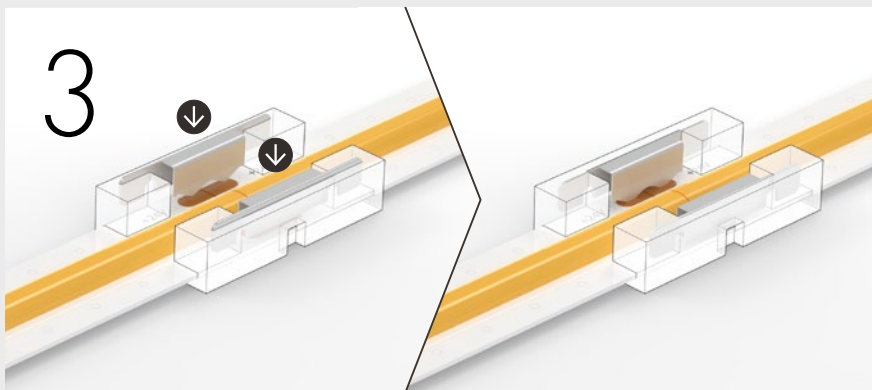


a Peel back the adhesive tape leaving a sufficient amount of bare strip to reach the centre of the clip. Make sure you peel back the tape and accompanying adhesive layer leaving this to re-apply once the connection is complete.

+ - Align the LED Strip ensuring the polarities match.



a Insert the LED Strips into the corresponding terminals ensuring both strips are fitted correctly so that the copper pads line up with the clip connector teeth.



↓ Crimp down on the teeth prongs with pliers to pierce your LED Strip PCB leaving the prongs flush with the connector housing. Check the LED Strips are locked in and the connection is secure.

Re-apply the adhesive tape under the clip connector ready for installation.

Note: Care must be taken when crimping so as not to crack the outer housing.

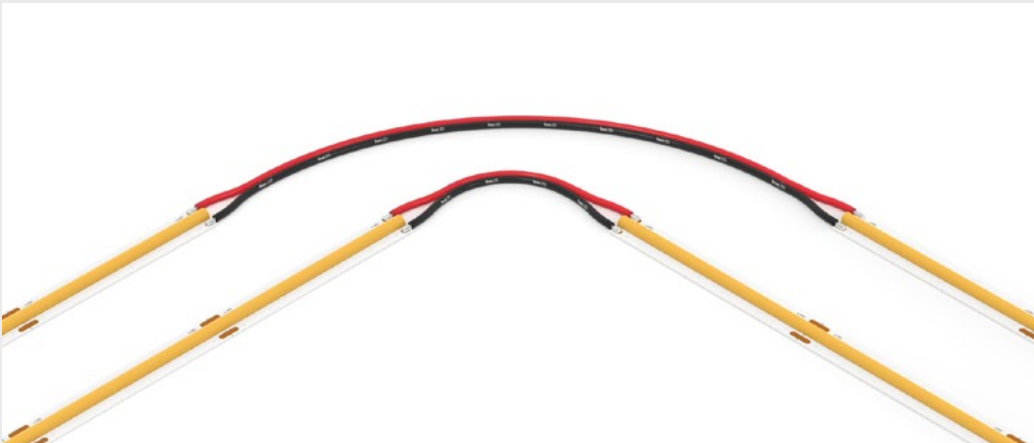
CORNER CONNECTIONS

Corner Soldering

Corner solders are important for connecting LED Strips around corners or continuing a connection at a distance or around obstacles.

When soldering it is important that the installer is trained to a basic level. When making a corner connection please prepare carefully by ensuring you have a suitable amount of wire between your LED strips ensuring you don't strain or put pressure on your connections. Once prepared please align your LED Strips so that your polarities match to avoid a reverse connection and then solder your wire onto each of the copper pads ensuring sufficient spacing between each connection and minimize contact time to avoid damaging your LED Strips from excessive heat.

Example 1 - 5cm and 15cm Wire with Gap



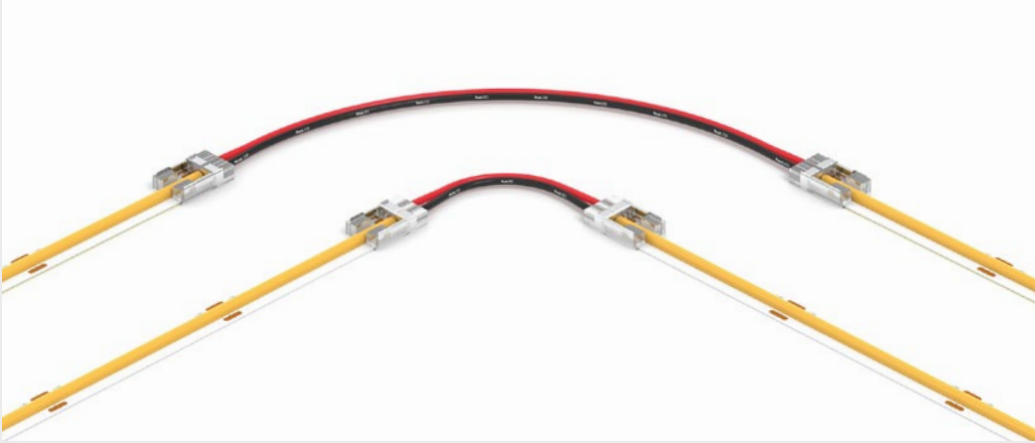
Example 2 - 15cm Butted up with Feed Wire Twisted



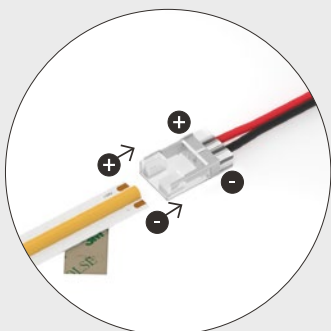
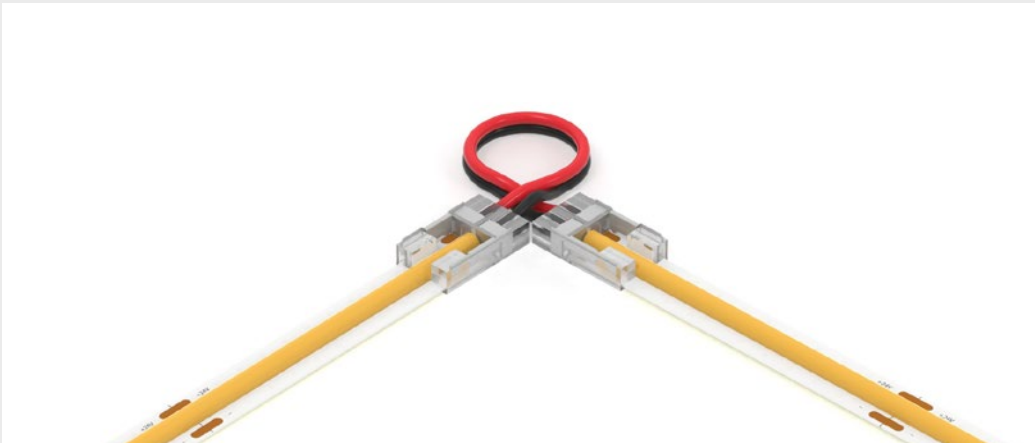
Corner Connectors

Our corner connectors are available with 5cm and 15cm wire feeds to suit different applications.

Example 1 - 5cm and 15cm Connection Clip



Example 2 - 15cm Connection Clip Butted up with Feed Wire Twisted

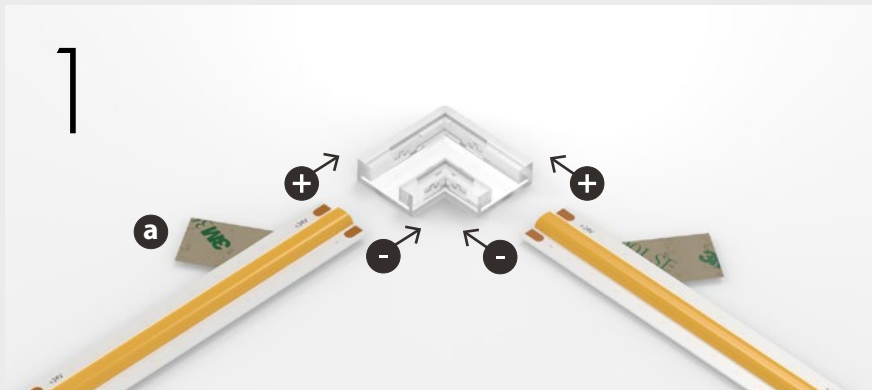


For a detailed description of the connection process see Page 9, "Using a New Feed Clip Connector".

CORNER CONNECTIONS *continued*

Using a L Clip Connector

L connectors are ideal for when corner connections are on show and you have no room to hide corner connector wires.



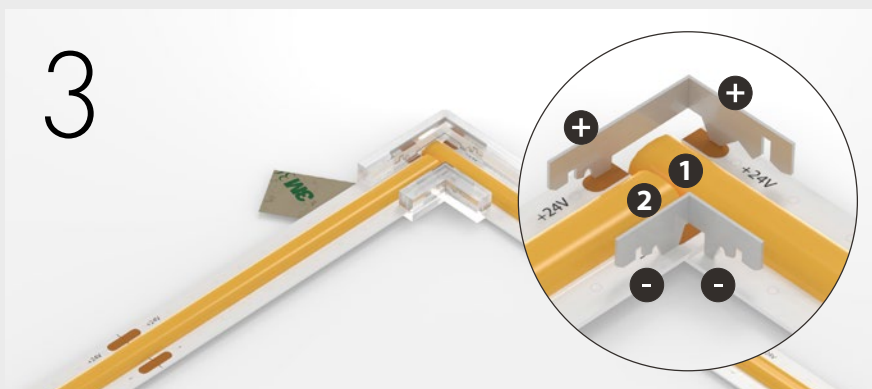
a Peel back the adhesive tape leaving a sufficient amount of bare strip to fill the clip. Make sure you peel back the tape and accompanying adhesive layer leaving this to re-apply once the connection is complete.

+ **-** Align the LED Strip ensuring the polarities match.



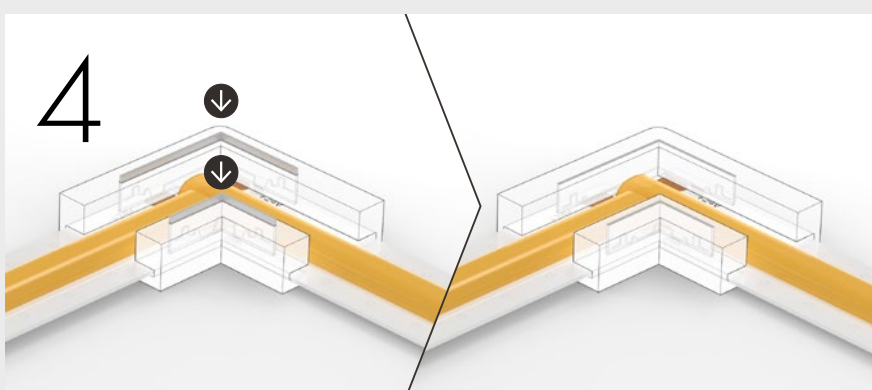
The cutouts within the clip are formed to allow LED Strip **1** all the way into the clip and LED Strip **2** to the position shown.

Insert LED Strip **1** all the way into the clip. Then insert LED Strip **2** sufficiently so that the strip sits above Strip **1** as shown.



Once LED Strips **1** and **2** are fitted correctly check that the positive **+** copper terminals align with the corresponding clip connector teeth as shown.

Note that the negative **-** terminals will also align as shown.



↓ Crimp down on the teeth prongs with pliers to pierce your LED Strip PCB leaving the prongs flush with the connector housing. Check the LED Strips are locked in and the connection is secure.

Re-apply the adhesive tape under the clip connector ready for installation.

Note: Care must be taken when crimping so as not to crack the outer housing.

POST INSTALLATION

1. fossLED products are designed to be maintenance free however accumulated dust may be removed from the emitting surface with careful use of a soft dry cloth.

2. Ensure that paints, organic solvents and caustic or corrosive cleaning chemicals do not come into contact with fossLED products.

For example, DO NOT USE:

- Benzene, Toluene, Xylene, Acetone, Carbon tetrachloride, Gasoline, Ether.
- Sodium/Calcium hydroxide, Sodium Carbonate.

3. For cleaning or sanitization – products in sealed IP65 rated silicone housings may be wiped with a soft cloth dampened with water.

4. Please retain this information and pass to those responsible for installation and maintenance.

