Indoor Ribbons
Diffusion LED Strip

Important

- Use only with approved DIFFUSION low voltage 24V DC power supplies.
- Do not stare directly into the LED lights when illuminated.
- Do not power the LED ribbon on while it's coiled on a reel.
- Always check polarity for 24V connections, positive (+) to positive and negative (-) negative.
- Do not install indoor versions in areas that are exposed to the elements.
- Route and secure wires so they will not be pinched or damaged.
- Do not install class 2 low voltage wiring in the same runs as AC main power. If AC and low voltage wires cross, keep them at 90 degree angles, if they are running parallel to each other keep them at least six inches apart.
- Warning do not connect LED ribbon light directly to 120V AC power. Only connect to an approved low voltage 24V DC driver.

All wiring must be in accordance with national and local electrical codes, low voltage class 2 circuit. If you are unclear as to how to install and wire this product please contact a qualified professional.

Recommended Planning

- Decide where you are going to place the power supply
- How are you going to switch your LEDs, will you use a dimmer?
- Plan the best layout configuration for your particular installation.

Note: Temporarily mounting LED ribbon light using painters tape and or masking tape allows you to experiment with the light effect before permanent installation.

Power Supply

- Make sure if you are using a dimmer you use the appropriate dimmer rated for the power supply
- Make sure to use a power supply that's wattage is rated higher than your needs.

*** you cannot over power LED ribbon lights using a higher wattage driver***

- Due to voltage drop we do not recommend you exceeding 32ft lengths. Anything longer will require a new home feed .
- Excessive voltage drop can result in LEDs flickering or not lighting up at all.

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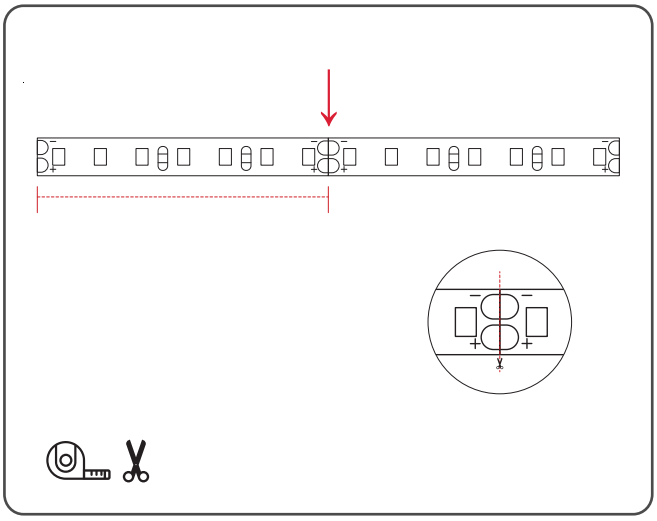
Step 1

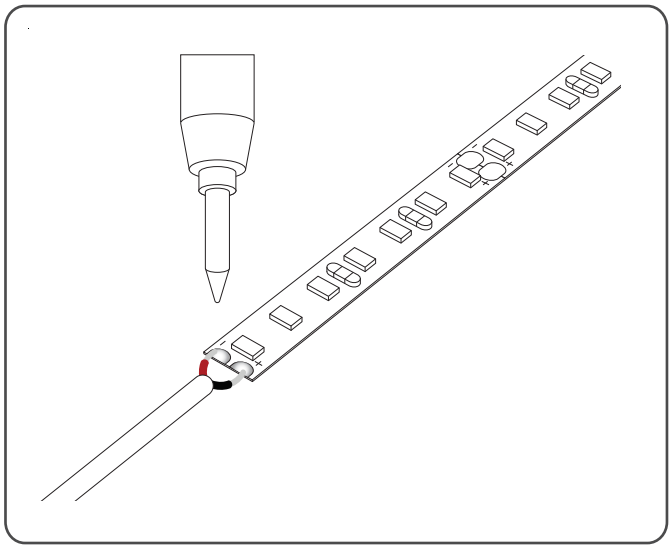
Measure LED and cut to desired length using a sharp pair of scissors.

Cut directly in the center of the cut marks on the LED ribbon. On the SL1 it's every 100mm (approx. 4") and SL3 every 50mm (approx. 2").



Step 2

Confirm wires are matched up correctly and solder power lead wire onto solder points. BLACK wire is typically negative and RED wire is typically positive.



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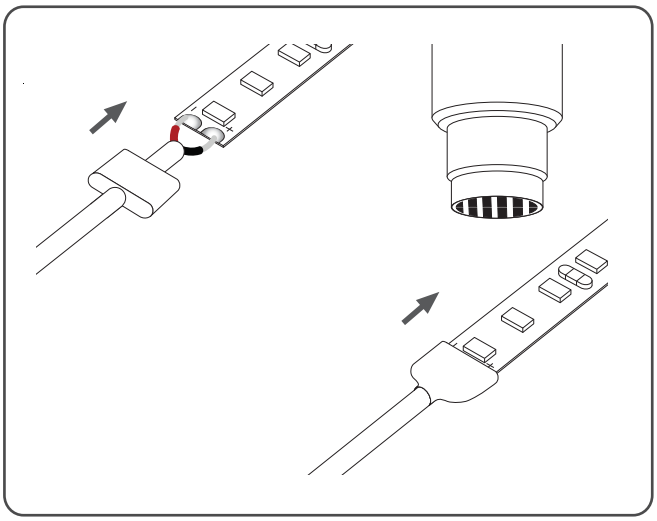
Step 3

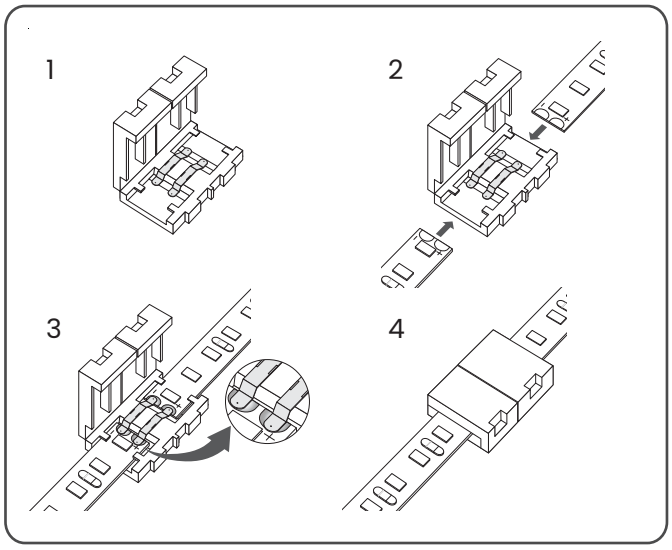
Insert LED wire into sleeve.

Shrink the tube with heat gun.



How to connect the wire lead clip connectors

- Wire lead clip connectors can be used to go around corners, putting multiple pieces together or to start new feeds.
  *Note: make sure polarity is correct when connecting these connectors.
- Pry open the clip connector.
- Using a side to side motion, carefully slide the LED ribbon into the connector until the contacts on the connector are over the contacts on the LED ribbon.
- Close and make sure you hear a click so you know the connector is fully closed.
- Make sure to test before final installation.
- If LEDs do not work and or flicker then repeat the steps above.



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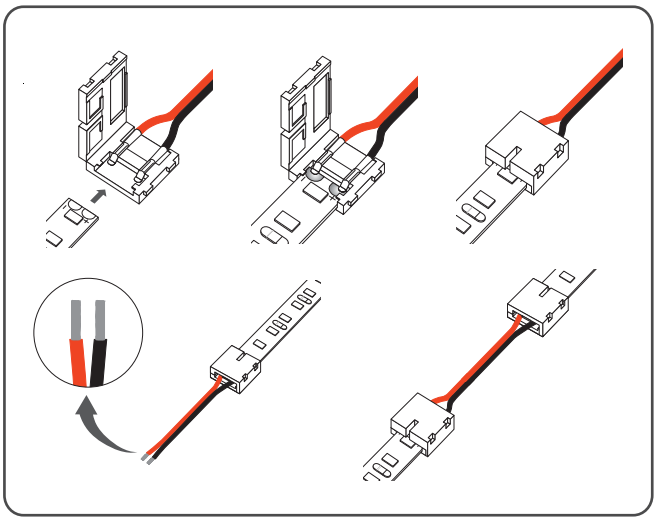
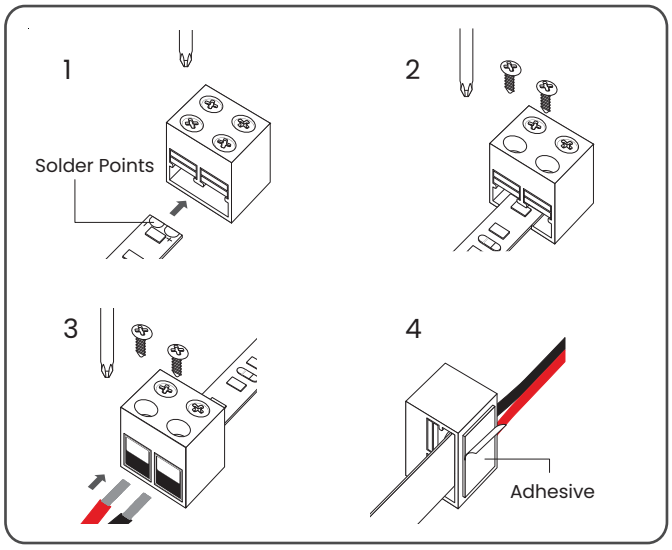
Joining two separate sections together

- Use a power feed on both ends of the LED ribbons you want to join together, (see instructions for clip connectors.)
- Run the appropriate size wire between the two ribbons.
- Create a splice on the end of the power feed and 18AWG (or low voltage wire used). Make sure to keep the polarity throughout.
- Test the ribbon to make sure your connections are correct and it works.



SC Connectors

- Using the small screwdriver to open up the two screws on the either of the connector.
- Gently slide the LED ribbon into the connector through the groove on the side.
- Make sure to line up the LED Ribbon and connector. Also, make sure the screws on the connector are lined up with the soldering points. Then hold the two together and slowly screw down the screws onto the soldering points of the LED ribbon.
- Remove the adhesive 3M tape on the rear side of the connector and attach to the desired surface.



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Wiring Power Supply

- You need to run a 120V AC main feed to the one of the knockouts on the driver and use an appropriate connector to enter into the driver enclosure.
- Then go out the other knockout to your low voltage feed (make sure you use the appropriate size wire for voltage drop).
- Then connect the other side of the low voltage cable you used to a started feed on the LED ribbon.

Surface preparation and Installing peel and stick LED Ribbon light

- Before sticking the LED ribbon to your final product, it is important to test the LED ribbon and make sure it's going to work the way you hope. Once the LED ribbon is stuck and the light is installed you cannot reposition or move the LED ribbon, this will result in it not sticking properly. It is also recommended to use an aluminum channel to make sure you get it exactly where you want and to help make it straight.
- When you have determined your preferred position, clean and prep the surface area to ensure the 3M self-adhesive backing will adhere properly. Alcohol wipes work best for cleaning the surface area. It's important that it's dry, dust free before installation.
- When you are adhering the LED ribbon in place make sure to firmly press the ribbon down the entire length of the strip.

Troubleshooting

LED Ribbon light does not light

- ✓ Make sure your power supply is receiving power.
- ✓ Confirm you have the correct polarity throughout the LED ribbon.
- ✓ Make sure all connections are done correctly (ie: polairty) and are not lose.
- ✓ Make sure your runs do not exceed recommended lengths and consider testing the voltage output and input on the LED driver.

LED Ribbon light blinks on, then goes off

- ✓ Your power supply is too small, check your lengths and wattages and upgrade your power supply or shorten your length of LED ribbon.
- ✓ One or all of your connection points are loose or polarity was incorrect.
- ✓ LED's farthest from the power supply are noticeably dimmer. This is usually the cause of voltage drop, check your runs and feeder AWG to make sure they are adequate for the distance.
- ✓ Make sure you don't have more than the recommended length of continuous runs of LED ribbon.

LEDs flicker when dimming

- ✓ Check to make sure you are using a dimmable approved LED driver for the LED ribbon.
- ✓ Make sure you are using the correct dimmer for the driver.
- ✓ Make sure you adjust the trim settings on the dimmer and or for lighting systems.

Questions or Concerns email **info@rjcross.com**