# Connectors for Strip and Soldering Tips

## Instructions for Connecting Power or Control Signals
to 12 or 24 Volt DC LED Strip

Our LED Strip is an extremely versatile, energy-efficient light source that's wonderful for a wide variety of uses. It uses the highest quality, brightest LED's available.

Our convenient connectors eliminate the need to solder. Just click them on. It's easy. These instructions will get your project off to a quick start. Here are the connectors:
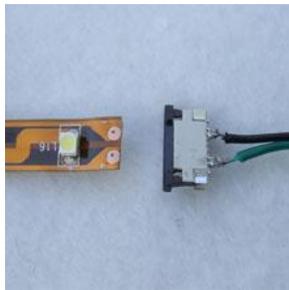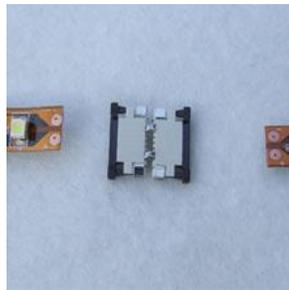
| rf2-to-cable | rf2-to-ribbon | rf4-to-cable | rf4-to-ribbon |

Instructions

1. We recommend testing your ribbon before installing it. That way you can be sure your power supply and strip work together and you understand exactly how it will work. Occasionally it happens that a customer inadvertently damages a reel of strip. In the very unlikely event your reel is defective when it arrives, you'll know.

2. You may cut the strip ONLY on the cut marks, which occur about every 2 inches for monochrome and 4 inches for red-green-blue. Use a sharp wire cutter or other blade so as to cut the ribbon cleanly without stretching or bending it.

3. Our strip can be 2-wire (monochrome) or 4-wire (red-green-blue.)

   On single color strip, there is a +12 Volt and a -12 Volt trace on the ribbon, clearly marked. Connect using proper polarity, or the diodes won't light.

   On red-green-blue ribbon, there is a common anode (+12 volts,) and 3 cathodes (red, green and blue.) They are also clearly marked on the ribbon. In the unlikely event you happen to have a very short ribbon where the markings don't appear, the common trace looks different from the other 3 in that it doesn't go directly to the LED.

4. Strip connectors can be ribbon-to-ribbon (shown just below) for splicing, or they can be ribbon-to-cable for connecting ribbon to your power supply or controller. Use the splice connector if you make a cutting mistake or want to join two reels. If you accidentally cut the strip between cutting marks instead of on the cutting marks, you've ruined that short segment and will need to cut on either side of your errant cut to restore functionality.

5. For the connectors to work, the solder bumps must be face up. It's hard to see in the picture below, but you can see easily when you examine a connector. If you can't figure out what we're talking about, just hook them up and if they don't work, turn them over. No harm.

6. Gently pull the black slider unit away from the white. It will slide out only about a millimeter.
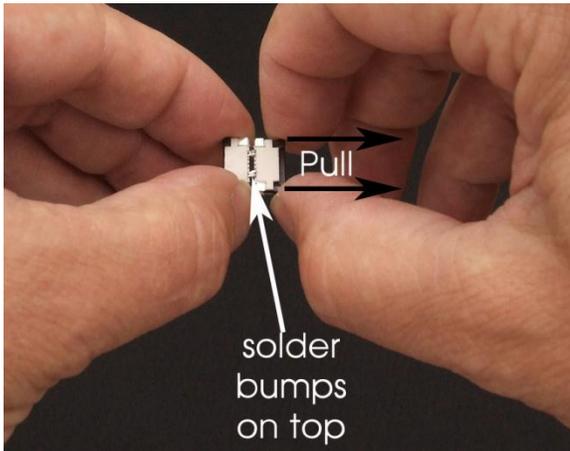
7. Gently slide the ribbon into the connector and then slide the black slider into the white connector body and you'll feel the connector grab the ribbon. It won't make an audible click, but it will feel like it clicks into place. Note that if the backing protecting the adhesive on the back of the ribbon has been removed, the ribbon will be a little thinner than usual, and the connector may not hold the ribbon. If that is the case, or if the connector won't grab the ribbon for any reason, just put a small piece of masking or other tape on the back of the ribbon to make it thicker so the connector can hold it. Do not put the tape on the top of the ribbon or the connector won't connect electrically.
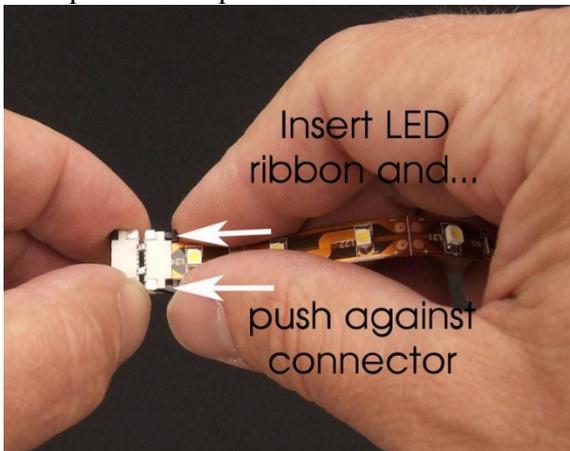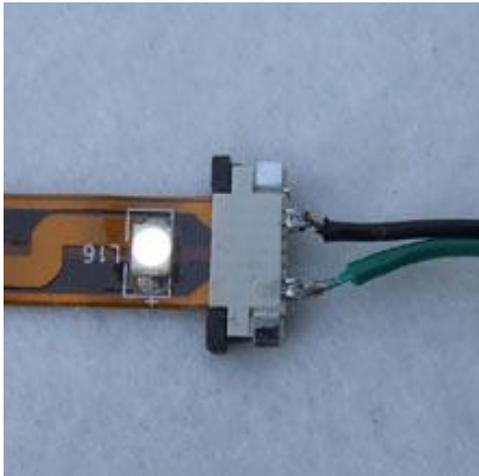
8. This connector will hold the ribbon and make a solid electrical connection as well. Note the position of the black slider, which has been pushed to the left into the white piece.

Black slider
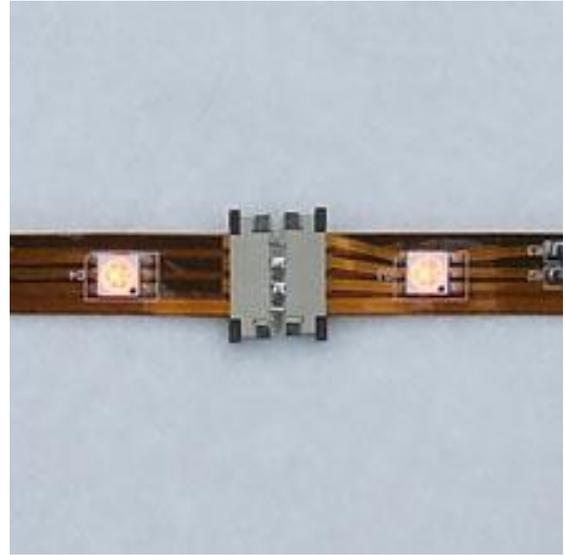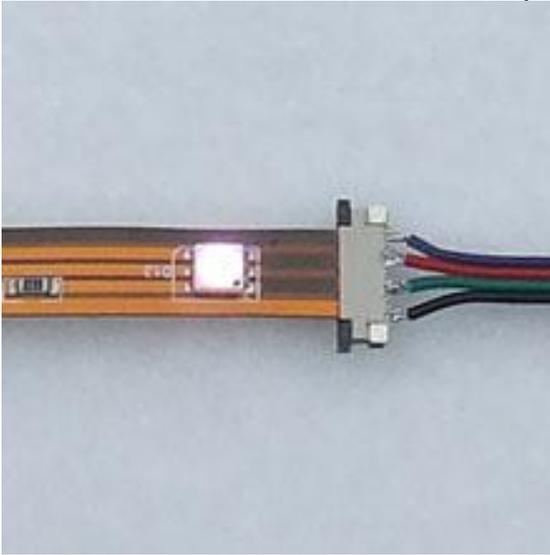is locked against
white body
for a snug fit

9. Repeat for the left side, and you have a splice:
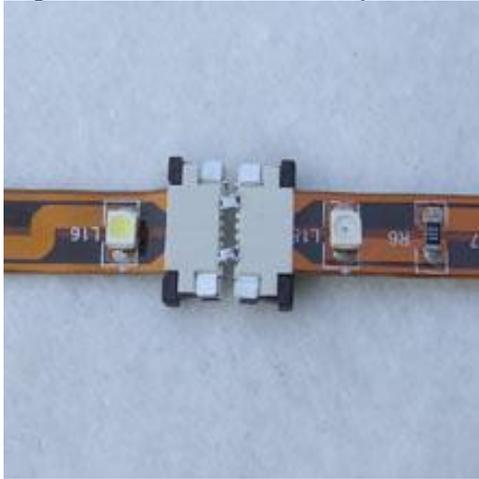
10. Here's the connected 2-wire ribbon-to-cable connector:

11. The 4-wire connectors work the same way:

Instructions if You Don't Have our Connectors or Want to Solder Instead

1. Soldering pads are on either side of the cut. For single-color ribbons, there are only 2 wires, 12 volt (+/-.) For Red-Green-Blue ribbons, there is a common anode (plus 12 volts) and 3 different cathodes (ground,) one for each primary color, red, green and blue. Take a safety pin and carefully poke a small hole in the center of each pad:
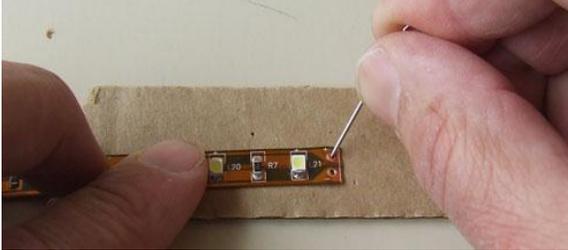

2. Push a single-strand wire through the hole to ensure a mechanically secure solder joint. Use a low-wattage solder pen to flow the solder into the joint, taking care not to leave a "cold-solder" joint that looks good but isn't a good electrical connection. Also, <u>DO NOT subject the ribbon to excess heat by using a large solder gun or heating the solder joint excessively</u>. Creating excellent connections only takes a second or two.
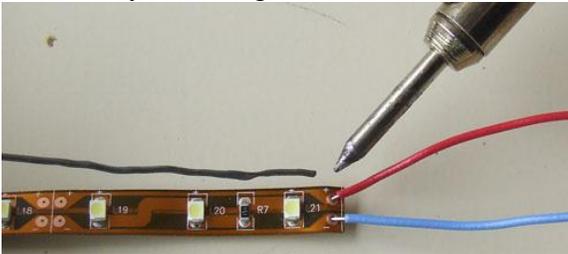
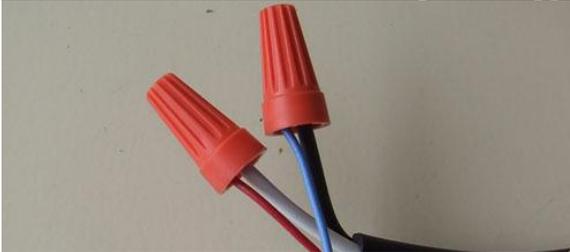3. Well-done solder connections have just a small amount of solder:

4. Carefully clip excess wire away from the back of the ribbon to ensure no short circuits.
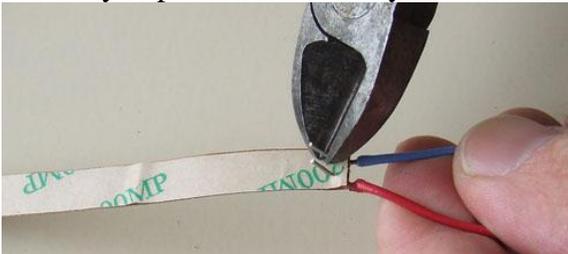
5. Attach the wires to your 12 volt power supply, or, for 3-color systems, your controller, taking care to put positive with positive, negative with negative.

6. Ribbon connected to 12 volt DC power supply:

7. Plug it in!