# Ribbon Star, RGB 90 LED Strip Light - 12VDC
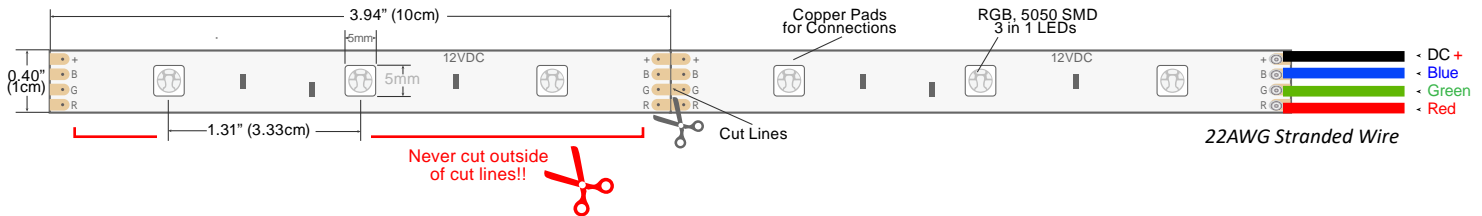## SKU: RL-SC-RS-RGB2-10

**ECOLOCITY**
LED LIGHTING SOLUTIONS

1092 Greg Street
Sparks, NV 89431
ECOLOCITYLED.COM
**775-636-6060**

## SPECIFICATIONS



3.94" (10cm)

5mm

12VDC

Copper Pads
for Connections

RGB, 5050 SMD
3 in 1 LEDs

12VDC

0.40"
(1cm)

5mm

1.31" (3.33cm)

Cut Lines

Never cut outside
of cut lines!!

DC +
Blue
Green
Red

22AWG Stranded Wire

Product SKU :  RL-SC-RS-RGB2-10
LED Size :  5050 SMD
LED Quantity :  3 LEDs per 3.94"
Input Power :  12VDC Constant Voltage
Watts :  2.20W per foot
Max Serial Connection :  30ft
Operating Temp :  -4° ~ 113°F
Beam Angle :  120°
Rating :  Dry
Warranty Period :  2 Years

**Input Power: 12VDC Constant Voltage**

Power supply equation

$$X * 2.20 = Y$$

$X$ = linear strip light footage
$Y$ = minimum transformer wattage

## PRECAUTIONS

**WARNING** – This product should be installed, cut and connected only by a qualified professional.

**12VDC** Use 12VDC Input Only!

**120VAC** DO NOT use AC Input!

This product is not designed to be installed in wet or damp environments.

NEVER cut, connect, or join wires while product is connected to a live power source.

DO NOT bend, fold or crease the strip in a manner that will damage the conductivity of the circuit board.

DO NOT use in direct sunlight.
DO NOT use in environments over 113°F.

DO NOT exceed 30ft serial connection! BE CERTAIN your 12VDC source and wire gauge is suffice for powered load.

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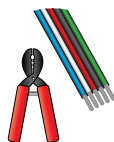**775-636-6060**

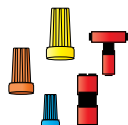# Ribbon Star, RGB 90 LED Strip Light - 12VDC

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### INSTALLATION

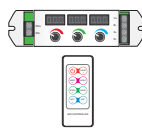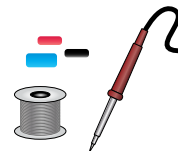| REQUIRED SUPPLIES | | | | | OPTIONAL SUPPLIES |
|---|---|---|---|---|---|
| Cleaning Supplies or Degreaser | Stranded Wire and Wire Strippers | Wire Nuts or Connectors | 12VDC Power Supply | RGB 3 Channel Color Controller | Solder, Solder Iron and Heat Shrink (Required to cut and re-connect) |

**1.) Clean Mounting Surface**

Use your cleaning supplies to clean your mounting surface. Please note that mounting surface must be smooth, clean and dry for the 3M tape to permanently adhere.

**2.) Connect Transformer**
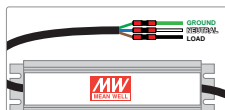
WARNING – This step should be done by a qualified professional. Always disable AC power before connecting! Use wire nuts or connectors to secure your AC input to your 12V transformer.
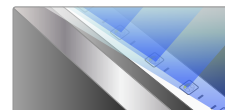
**3.) Connect Controller**
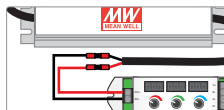
Always be certain power is disabled before connecting! Use a small screw driver to connect your 12VDC positive and negative wires to your 3 channel RGB controller input.

**3.) Connect Strip Lights**
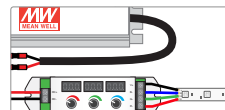
Always be certain power is disabled before connecting! Use a screw driver to connect the 4 wires from your RGB strip light to the proper output ports of your 3 channel RGB controller.
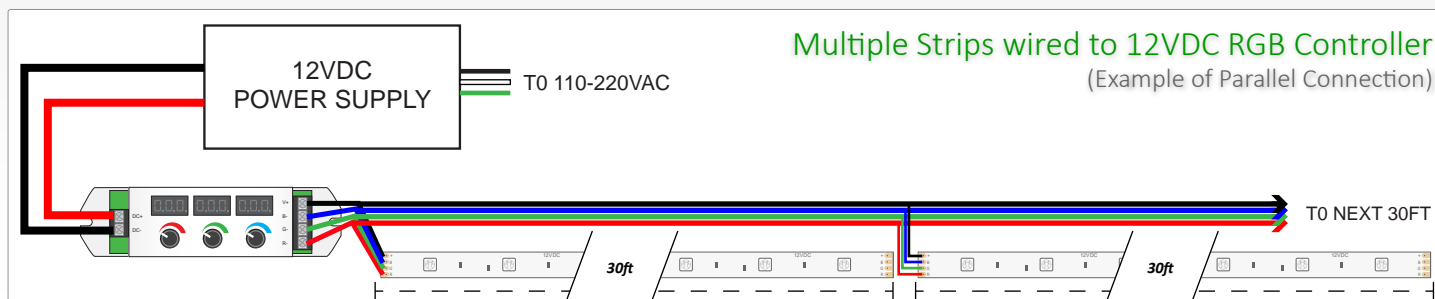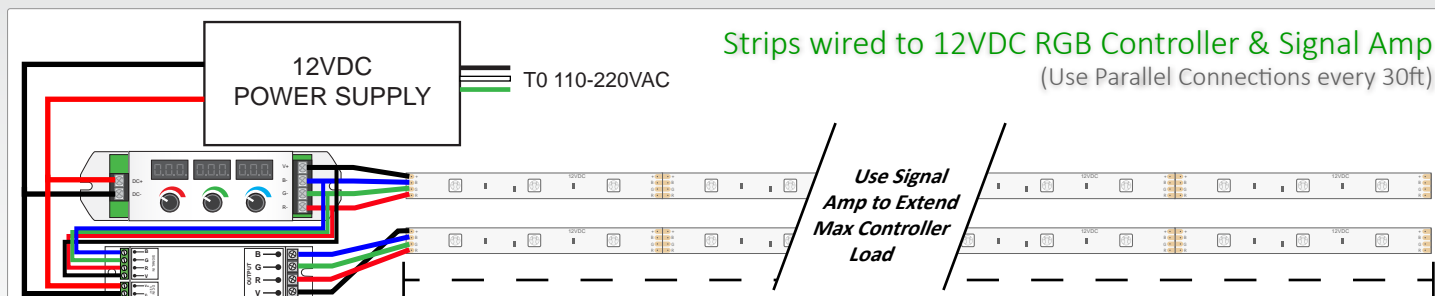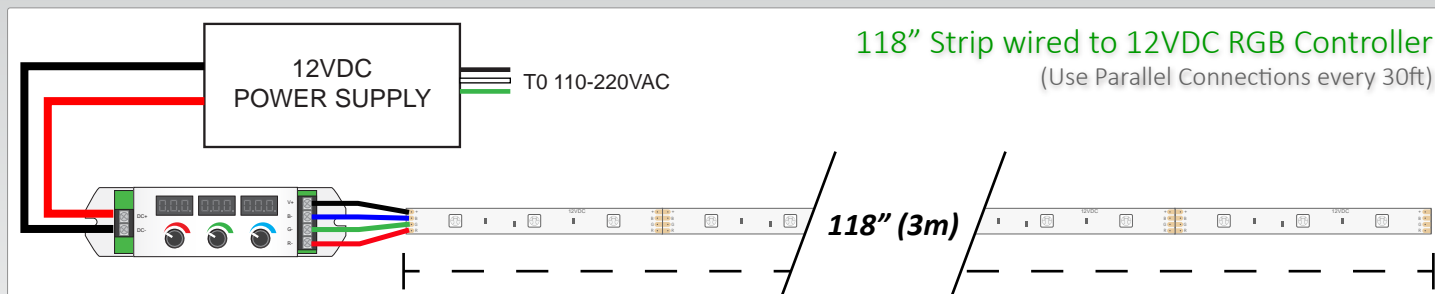
**4.) Test and Mount Strips**

Always test your strip lights before adhering the 3M double sided tape. Never test the strip light when rolled inside the plastic reel.

### CONNECTION EXAMPLES: 2.2 Watts per foot

**POWER SUPPLY AND CONTROLLER AMP OUTPUT RATING MUST BE GREATER THAN THE LOAD OF THE STRIP LIGHT OUTPUT.**



**118" Strip wired to 12VDC RGB Controller**
(Use Parallel Connections every 30ft)

12VDC POWER SUPPLY
T0 110-220VAC
*118" (3m)*

**Strips wired to 12VDC RGB Controller & Signal Amp**
(Use Parallel Connections every 30ft)

12VDC POWER SUPPLY
T0 110-220VAC
*Use Signal Amp to Extend Max Controller Load*

**Multiple Strips wired to 12VDC RGB Controller**
(Example of Parallel Connection)

12VDC POWER SUPPLY
T0 110-220VAC
T0 NEXT 30FT
*30ft* *30ft*

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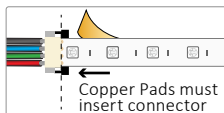## QUICK CONNECTOR INSTRUCTION

**1.) Gently Pull Tab**
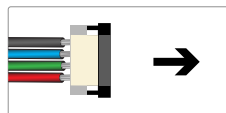
Gently pull out the black plastic tab about 1/16".

**2.) Insert Strip Light**
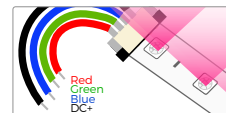
Copper Pads must insert connector

Slightly pull back 3M tape cover, Check the polarity of your strip then insert into the connector.

**3.) Push Back Tabs**
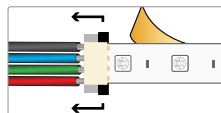
Push back the plastic tabs to pinch the strip light into place.

**4.) Test your Connection**

Red Green Blue DC+

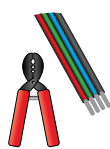Test your connection before installation.

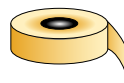## SOLDERING INSTRUCTION

### REQUIRED SUPPLIES

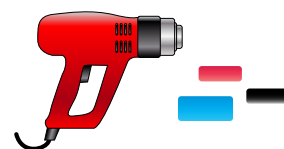| Rosin Core Electrical Solder | Electrical Soldering Iron (Preferably Temp Adjustable) | Stranded Wire and Wire Strippers | Masking Tape |

### OPTIONAL SUPPLIES

Heat Shrink and Heat Gun (Recommended but not required)

**1.) Strip and Tin Wire**

Heat your soldering iron to 500-600°F. Strip your 2 conductor stranded wire roughly 1/8". Tin the exposed wires with rosin core solder.

**2.) Tin Strip Light Pads**

Cut your strip light to length on cut line between copper pads. Tin each copper pad with rosin core solder. Do not bridge solder between copper pads.

**3.) Solder Wire to Strip**

Mate your tinned wire to the copper pad with respective polarity. Black wire to DC+. Be sure that no wires or solder are touching on another.

**4.) Test and Heat Shrink**

Test your soldered connection for continuity or any electrical arcing. Once tested you can cover exposed copper pads with heat shrink if desired.

## STRIP LIGHT ACCESSORIES:

*RGB Strip Light Quick Connectors*

*12VDC Power Supplies*

*RGB LED Controllers*

*Aluminum Extrusions and Covers*

## HELPFUL LINKS:

**12VDC Power Supplies** - *https://www.ecolocityled.com/category/led_power_supplies_12v*

**RGB LED Controllers** - *https://www.ecolocityled.com/category/rgb_led_lighting_controllers_only*

**RGB Connection Wire** - *https://www.ecolocityled.com/category/led_connection_wire_products*

**Aluminum Extrusions** - *https://www.ecolocityled.com/category/led_aluminum_extrusions*

**Strip Light Soldering Guide** - *https://www.ecolocityled.com/category/led_tutorials_rgb_solder*

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