

## **RGB 5050 PixelControl LED Super Flat Rope**

Part Numbers: PSFR-RGB-W-20



PixelControl LED Super Flat Rope combines the ability to produce millions of colors, with the technology needed to achieve individual pixel control. This unique and robust product is capable of producing impressive animated effects that were never before possible with traditional rope light. We are proud to announce that RGB PixelControl LED Super Flat Rope is also UL Listed and runs off low voltage 24VDC, so it is safe to use.

RGB PixelControl LED Super Flat Rope can produce animated lighting effects that were never possible with traditional rope light. PixelControl LED Super Flat Rope is easy to customize when paired with your favorite DMX controller and a DMX512 PixelControl Decoder. Each pixel (group of 7 LEDs) is digitally controllable and can be set to any color to animate your lights.

It is easy to customize and create impressive large scale effects using LED Super Flat Rope. This is a fantastic product for commercial, studio, architectural, and decorative purposes. We provide all the tools, accessories, and instructions that are needed to customize your project. Custom channel for Pixel Control LED Super Flat Rope is easy to install. Simply use screws to mount the channel and then insert the Super Flat LED Rope

## Specifications

Voltage:	24VDC
Power consumption:	12 watts per meter (3.7 watts per foot)
Dimensions:	6mm x 15.5mm (0.24" x 0.61")
LED quantity:	56 LEDs per meter (8 pixels per meter, 160 pixels per 20m)
LEDs per pixel:	7
LEDs per cut segment:	7
Minimum cutting length:	125mm (4.92")
Minimum bending diameter:	50mm (1.97")
Waterproof rating:	IP40
Certifications:	UL, RoHS
Warranty:	3 years limited
Maximum run length:	10m powered from one end, 20m from 2 ends (UL voided)
IC Chip:	<b>UCS2903</b>
LED Sequence:	<b>Red-Green-Blue</b>

## Warning

- Pixel Control LED Super Flat Rope is one directional, so be sure to pay close attention to the orientation of the string. **The input direction is always indicated by an arrow, shown below:**



- Before making any cuts or performing installation/maintenance, be sure all electricity is disconnected.
- All connector joints must be connected correctly.
- Operate LED Super Flat lighting according to instructions only.
- Confirm the polarity of connectors before inserting.
- Connect and cut this product correctly.
- Incorrect operation will damage the circuitry.

## Caution

- Use only factory-recommended connectors and accessories.
- Do not operate in more than 45°C (110°F) ambient temperature.
- Do not operate light when ambient temperature is below -20°C (-4°F).

## Assembly and Installation

1. Be sure to mount the LED Neon correctly, as illustrated by figures 1-4.

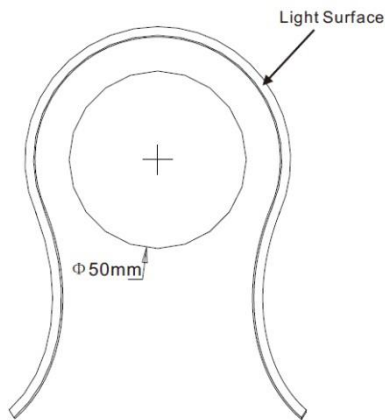


Figure 1: Minimum bending diameter is 50mm (1.97").



Figure 2: Do not twist the rope.

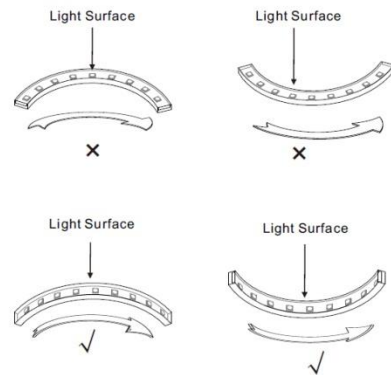


Figure 3: Only bend super flat rope light in the recommended directions.

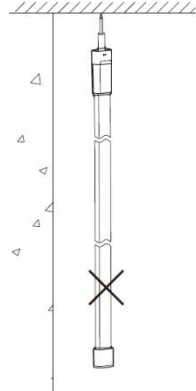
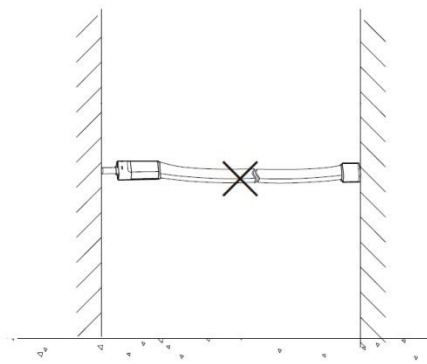
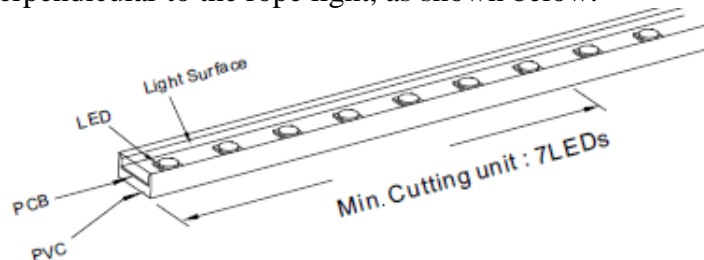


Figure 4: Super flat rope light must be properly supported when mounted. Do not hang.



2. Pixel Control LED Super Flat Rope Light can be cut every seven LEDs at specific cut points. Dotted lines on the bottom side of the rope indicate where cuts can be made. Be sure your cut is a straight line, perpendicular to the rope light, as shown below.



Pixel Control Super Flat LED Rope can be cut every 7 LEDs. Cut only along the cutting lines.

3. Be sure your cut is a straight line, perpendicular to the rope light, as shown below.

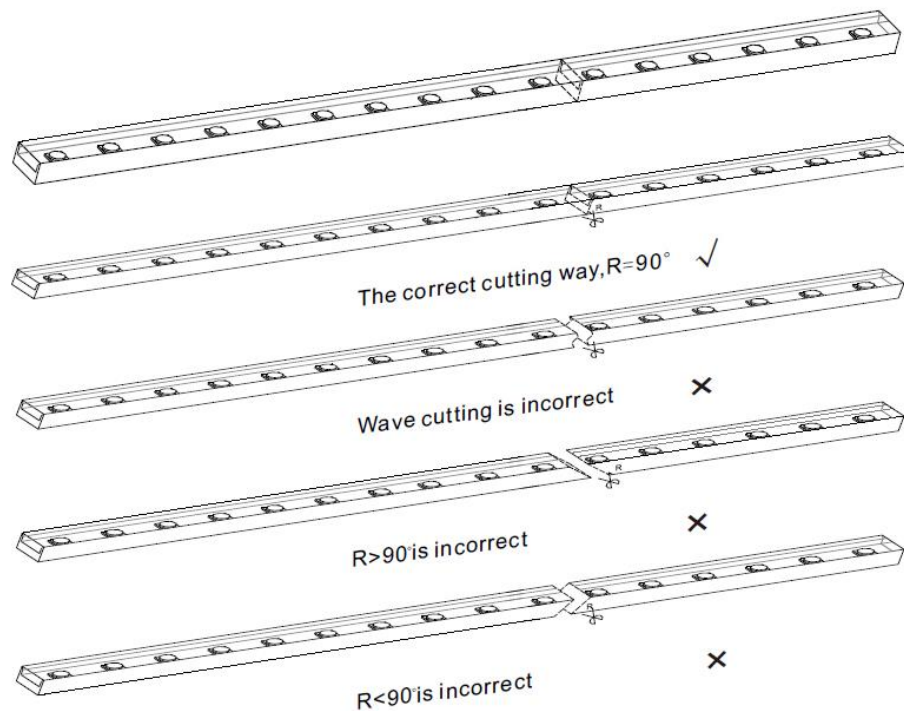
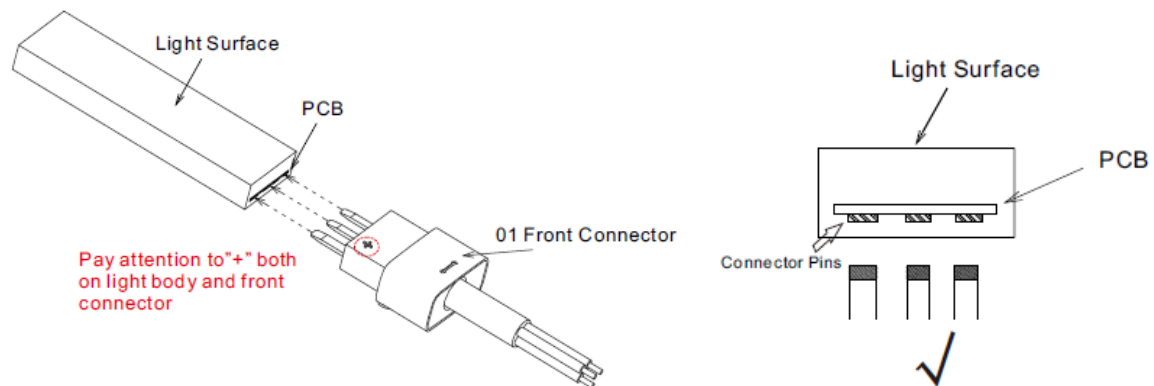
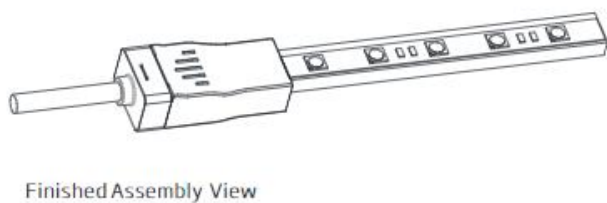
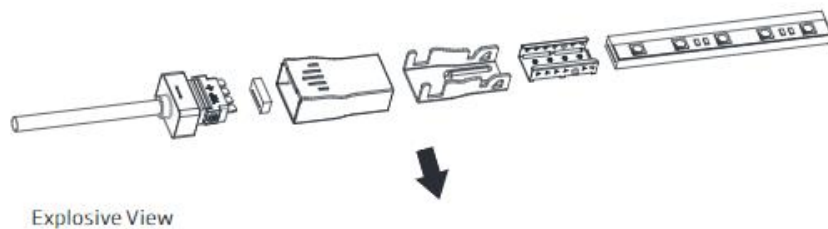


Figure 6: Be sure to cut perpendicular to the LED rope.

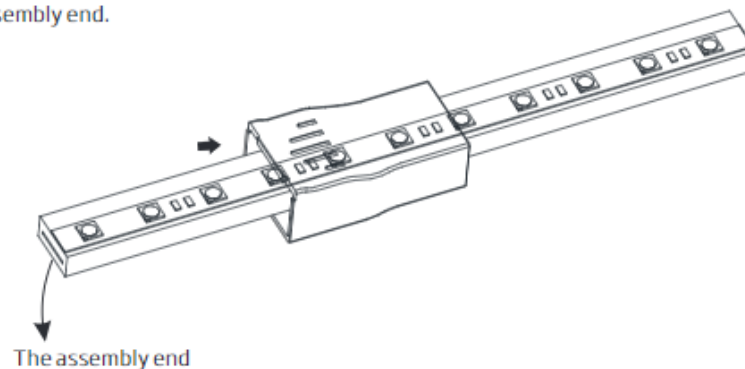
4. Wire colors: red, yellow, and black wires correspond to the V+, Data, and Ground lines. **Data should only be applied using a 01 Front Connector and never to the 02 Output end.**
5. Make sure to insert pins in the correct direction. The 01 and 02 Front and End Connectors are mirrored in terms of the direction of pins. Always check the functionality after inserting a connector and before sealing the connection to ensure that the proper directionality has been achieved.



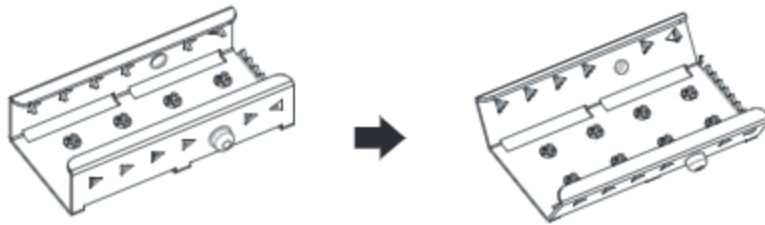
6. Connecting your accessories properly is key to maintaining the lifetime of the LED lights. 20 meter reels will be received with a front connector fully sealed onto each end.
7. Below are the instructions for assembling the snap connector series.



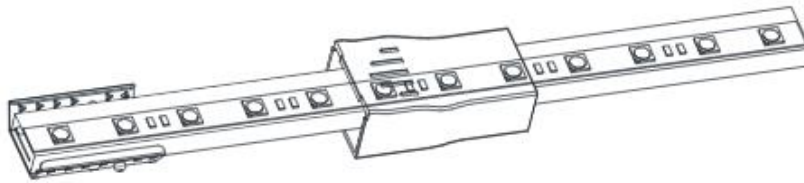
Pay attention to the direction marked on the bottom of PC cover. The wide open side faces towards the assembly end.



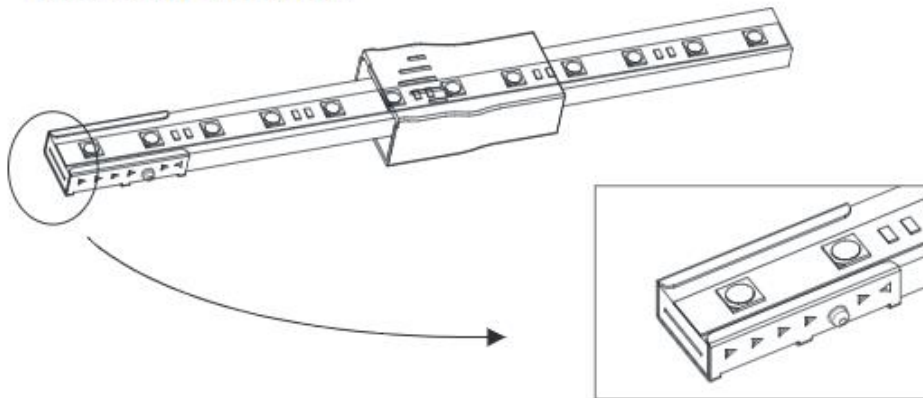
Installing the anti-skidding clip.



Unfold the anti-skidding clip about 20 degrees on both sides.

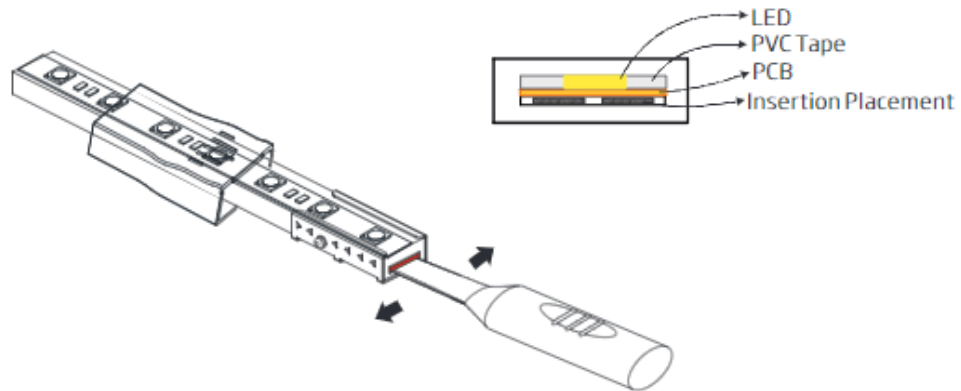


Place the anti-skidding clip onto the assembly end of the light.  
Pay attention to its direction

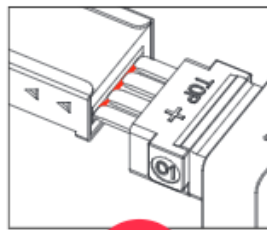
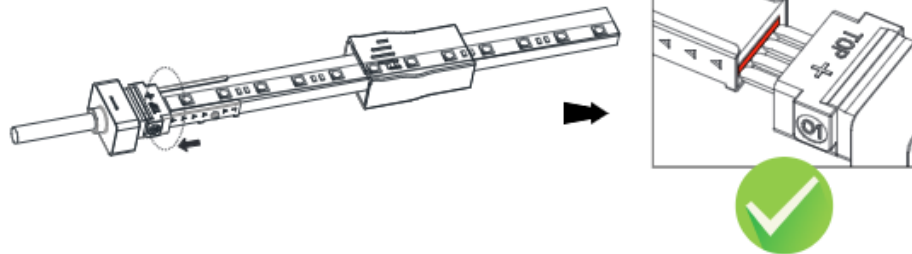


Fit the anti-skidding clip to the end of the light so that it wraps tightly and its brim is aligned with the cut edge on both sides.

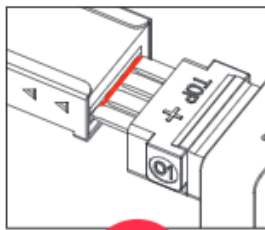
Insert the placement tool on the back side of the PCB and gently move the tool side to side to create enough space for the connector pins.



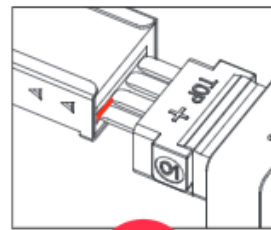
Insert the assembly end wrapped with anti-skidding clip into the cavity of the feed connector.



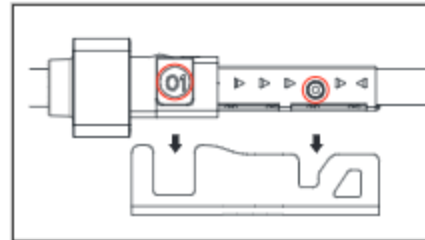
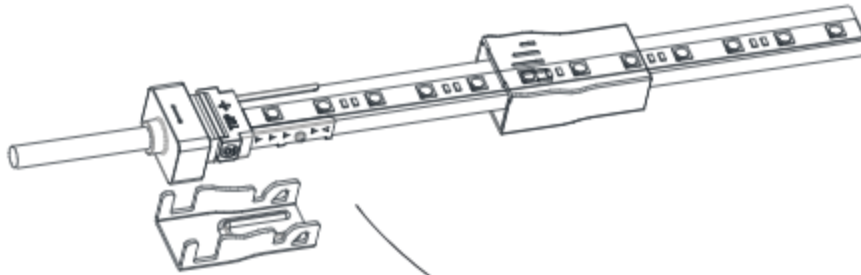
Insert into the front side of the PCB



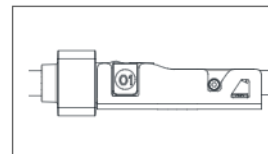
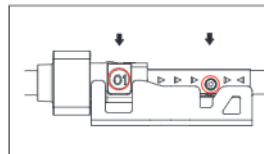
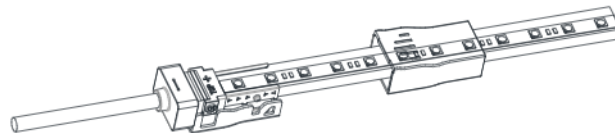
Insert crosswise into the PCB



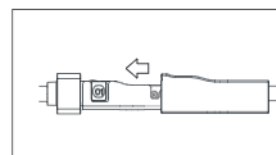
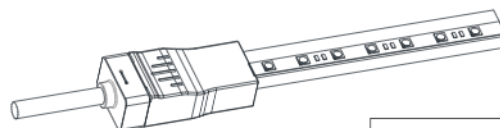
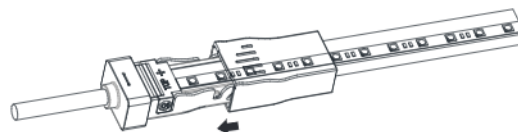
Insert crosswise into the PCB



Align the feed connector and anti-skidding clip with the U steel plate.



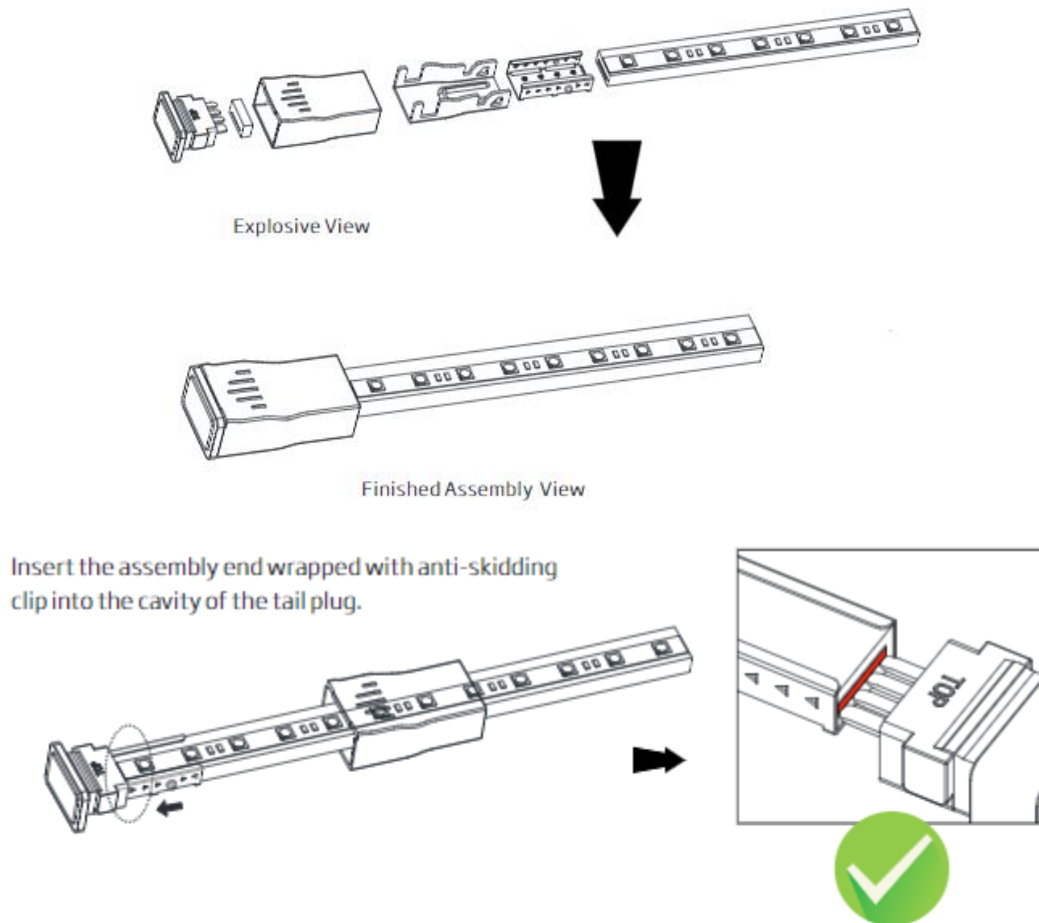
Press the feed connector and light downwards at the same time till bottom.



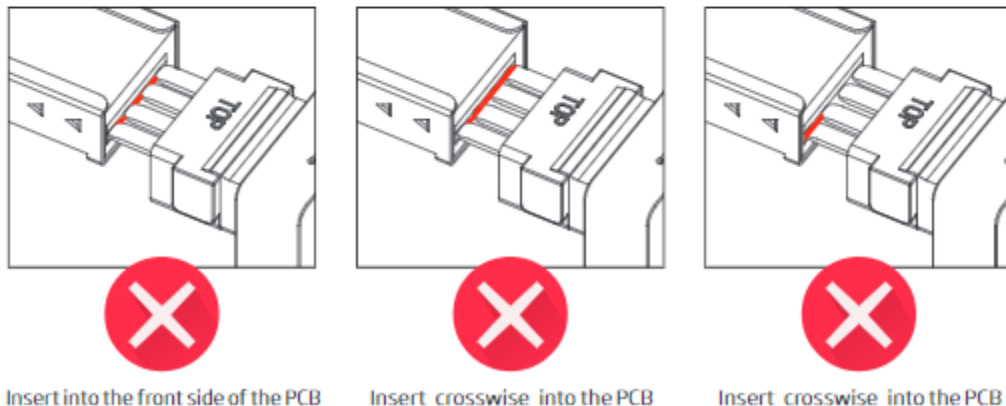
Slide back the PC cover till it snaps in the feed connector.



Snap end cap assembly:



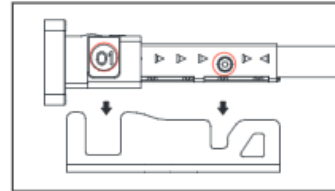
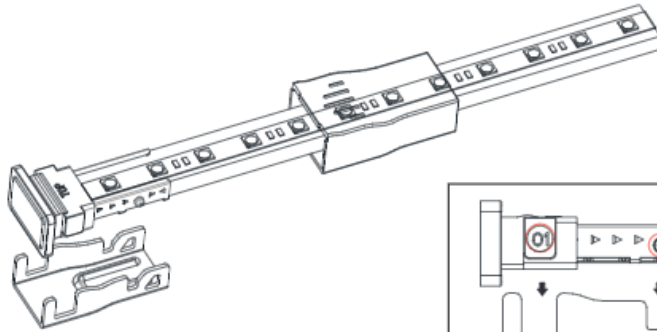
The following operations are prohibited:



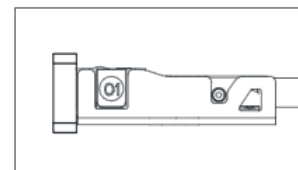
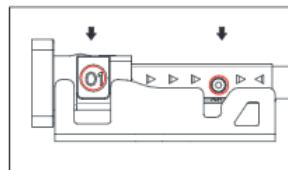
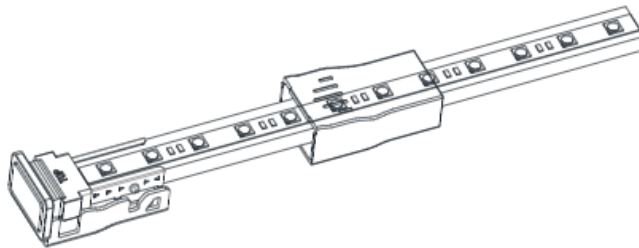
Insert into the front side of the PCB

Insert crosswise into the PCB

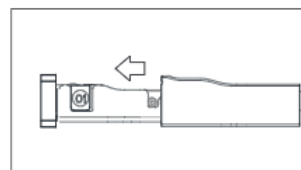
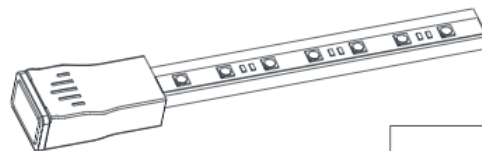
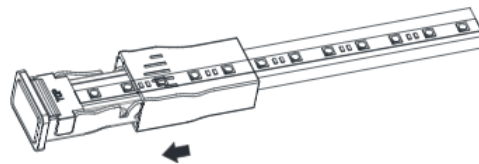
Insert crosswise into the PCB



Align the tail plug and anti-skidding clip with the U steel plate.

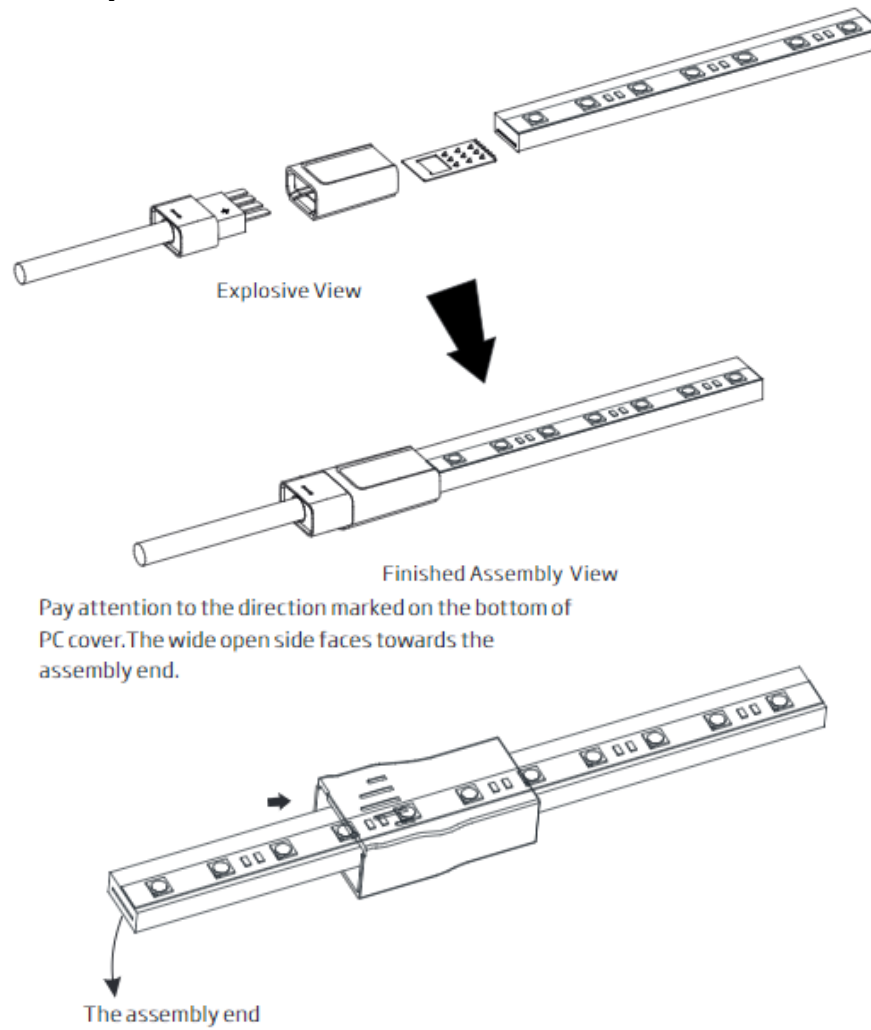


Press the tail plug and light downwards at the same time till bottom.

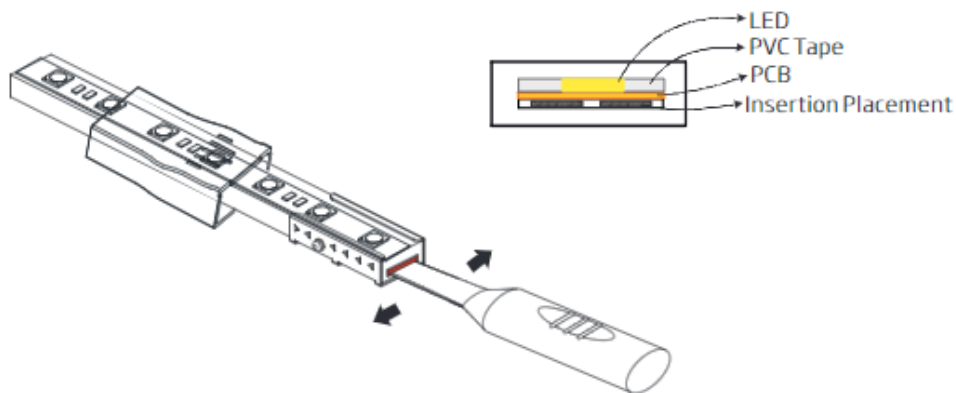


Slide back the PC cover till it snaps in the tail plug.

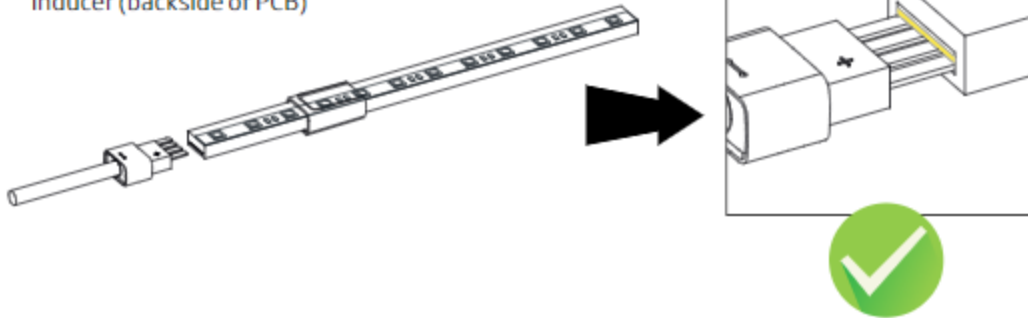
8. Proper assembly of 40 series accessories.



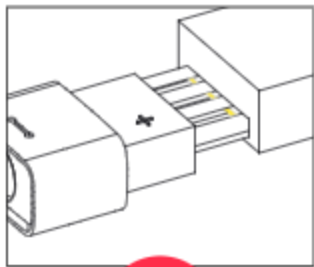
Insert the placement tool on the back side of the PCB and gently move the tool side to side to create enough space for the connector pins.



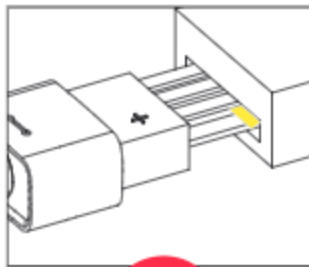
Insert the feed connector pins into the cavity that you created with the inducer (backside of PCB)



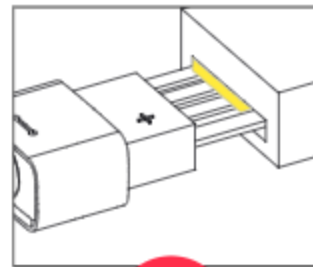
The following operations are prohibited:



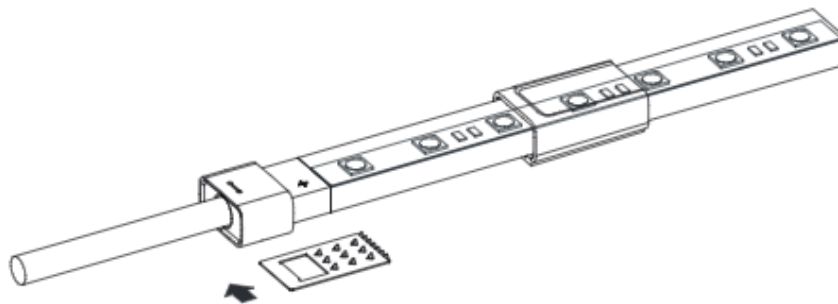
Insert into the front side of the PCB



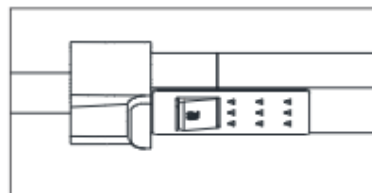
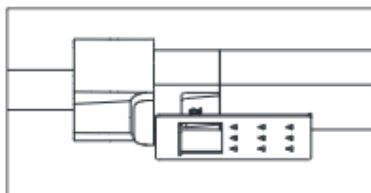
Insert crosswise into the PCB

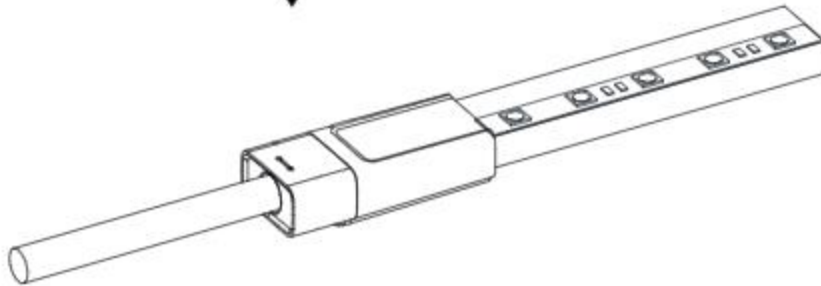
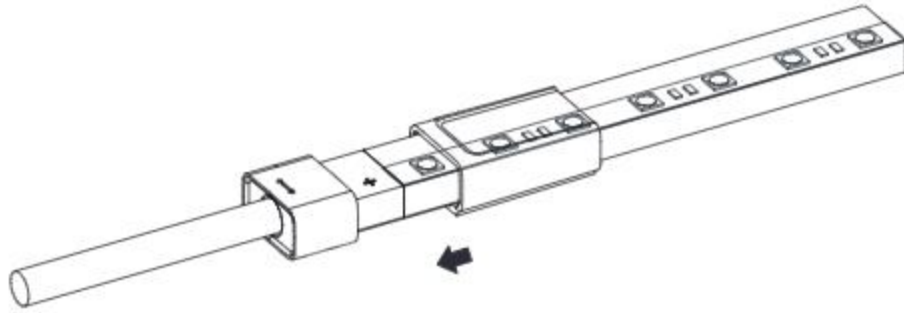


Insert crosswise into the PCB

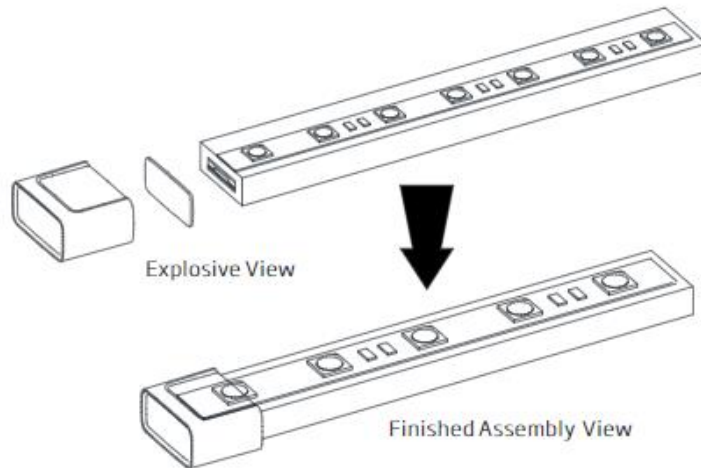


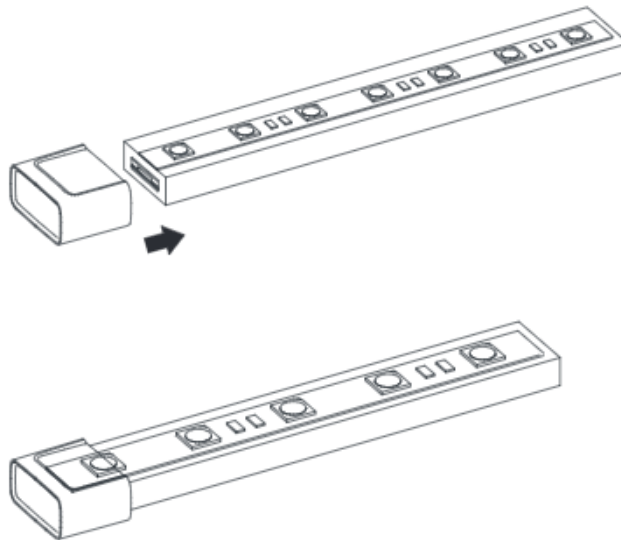
Place the anti-skidding clips to the feed connector with toothed side towards light.





9. Proper assembly of 40 series end cap.





10. When using the aluminum U-channel, use screws to mount the U-channel, then install the super flat rope into the channel.

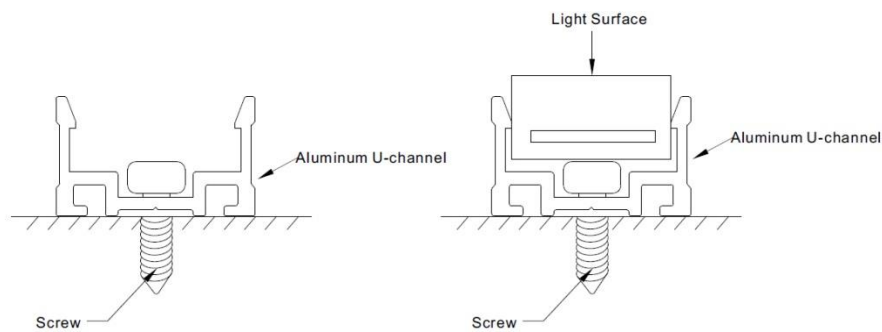
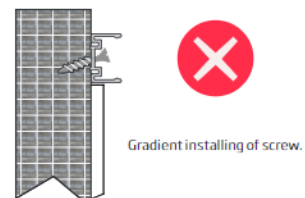
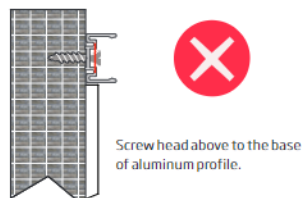
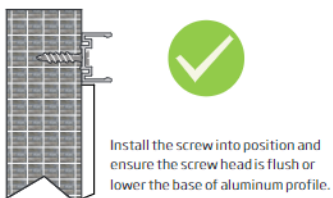
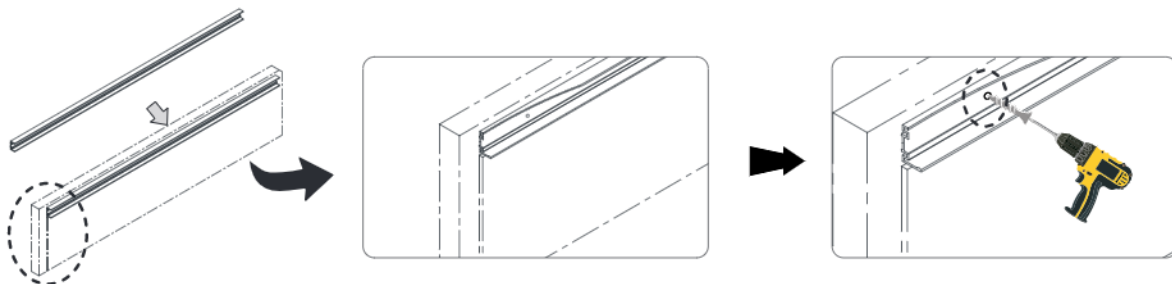


Figure 12: Proper installation of LEDs into U-channel.



## Safety Precautions

Please take the following precautions:

1. This equipment, like all electrical equipment, should be installed by a qualified person.
2. Do not expose these LEDs, dimmers or power supplies to intense electro-magnetic fields, including lightning.
3. The controllers and power supplies are not waterproof. Keep them dry.
4. Always observe proper polarity.

When installing LED lighting, it is a good idea to follow this “dry-run” procedure:

1. Be sure you have everything you need before you start.
2. Lay out your lights and power supply on the floor or table.
3. There is some resistance in the LED lighting. If you see any color fading or dimming at the end of a long run, you may have too many LEDs for your power supply and you might need a bigger supply or shorter runs. Use a bus structure as described in [rgb\\_manual.pdf](#). Call if you need assistance with larger projects.
4. Connect everything and test it to be sure it works and you have it connected properly. It is unlikely, but possible, that some part of your system is defective or was damaged during shipment. If that is the case, it will be very helpful to you to know that before you do all the work involved in installing custom LED lighting systems. You will also know if you damage anything during installation, which is really helpful in trouble-shooting because manufacturing defects and installation damage typically have very different solutions.

Once you have tested the system successfully, you are ready to install it. We recommend you install LEDs, electronic controls and dimmers in such a way that you have access to them in case they fail. All electrical components can fail.