

## **24 Volt Single Color Super Flat LED Rope**

Part Numbers: SFR-XX-W-20, SFR-XX-B-20



LED Super Flat Rope from Environmental Lights is a unique and special product you probably won't find anywhere else. It is rugged and waterproof, like LED rope, but is more compact and brighter. The face of the LED rope has a mask that hides the circuitry, so all you see is the LEDs. This mask is either white or black and matches the color of the sidewalls and back. Select either white or black finish (mask and sidewalls.) Single Color Super Flat Rope uses 60 very bright 5050 (5.0 mm square) triplex LEDs. Best of all, Super Flat Rope is available in many colors and can be used in 20 meter (65.7 feet) lengths—just be sure to apply power to both ends.

It is easy to customize and create impressive large scale effects using Super Flat LED Rope. Easy to dim or control using any of our LED dimming drivers, controllers or pulse dimmers. Or use any DMX controller, in conjunction with any of our decoders. This is a fantastic product for commercial, studio, architectural and decorative purposes.

Based on the needs of the project, the length of Super Flat LED Rope can be customized. We provide all the tools, accessories, and instructions that are needed to customize your project. Channel for Single Color Super Flat LED 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	
Whites, Green, Blue, Pink:	12 watts per meter (3.7 watts per foot)
Red, Orange, Amber:	7.2 watts per meter (2.2 watts per foot)
Dimensions:	6mm x 13.5mm (0.22" x 0.52")
LED quantity:	60 LEDs per meter
Minimum cutting length:	
Whites, Green, Blue, Pink:	100mm (3.94")
Red, Orange, Amber:	167mm (6.57")
LEDs per cut segment:	
Whites, Green, Blue, Pink:	6
Red, Orange, Amber:	10
Maximum Run length:	
Whites, Green, Blue, Pink:	10m powered from one end, 20m powered from two ends.
Red, Orange, Amber:	15m powered from one end, 30m powered from two ends.
Minimum bending diameter:	30mm (1.97")
Waterproof rating:	None
Certifications:	UL, RoHS
Warranty:	3 years limited

## Warning

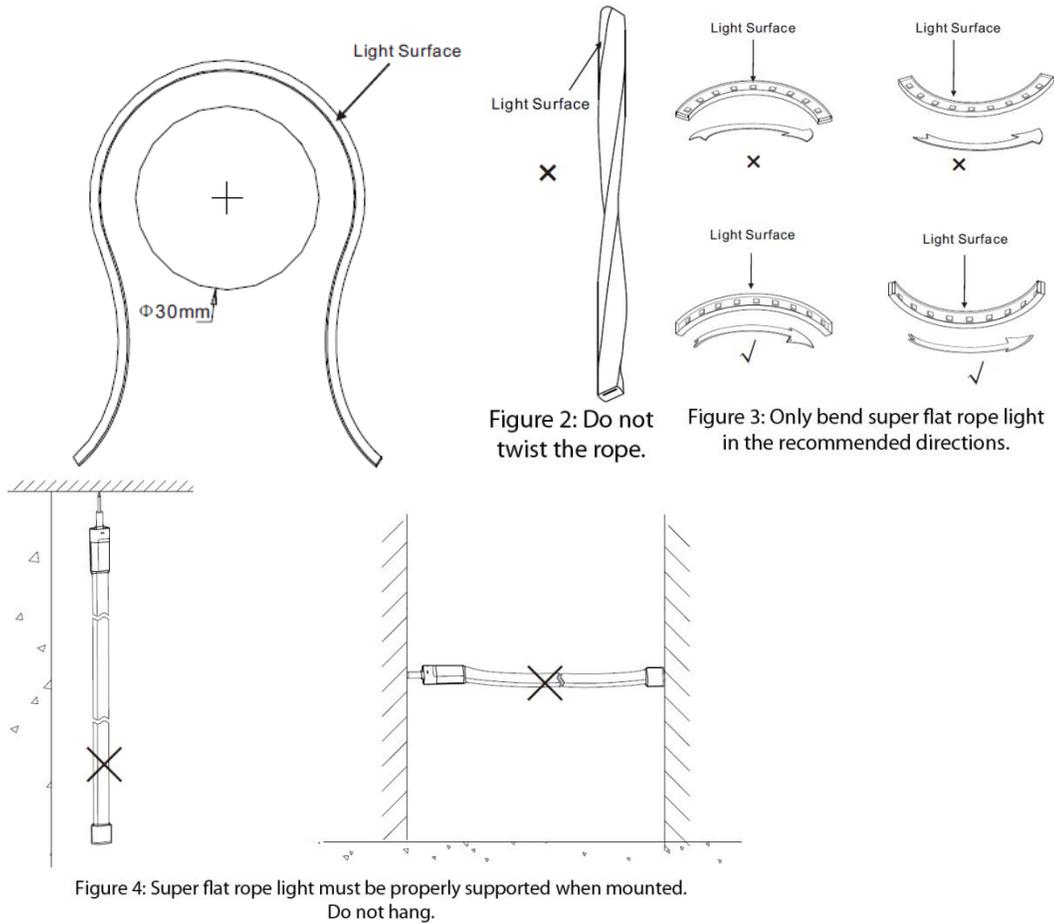
- Before making any cuts or performing installation/maintenance, be sure all electricity is disconnected.
- All connector joints must be connected correctly to properly power the lights.
- Operate super flat lighting according to instructions only.
- Confirm the polarity of connectors before inserting.
- Connect and cut this product correctly. Incorrect operation will damage the circuitry.
- Avoid long term direct pressure on the product as it may cause damage.
- Cut LED Super Flat Rope is not returnable.

## Caution

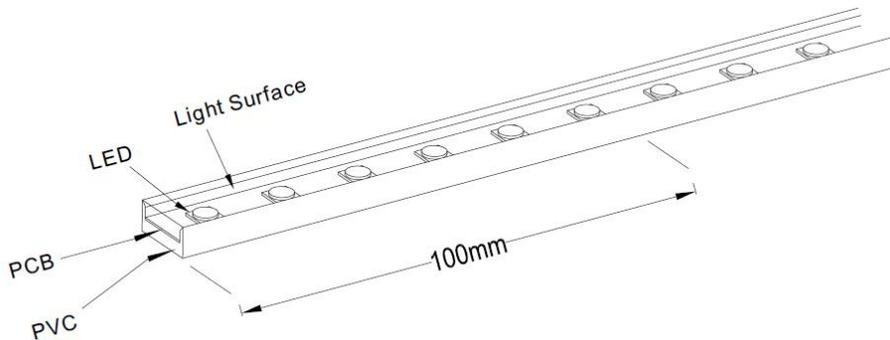
- Use only factory-recommended connectors and accessories.
- Do not operate in more than 45°C (110°F) ambient temperature.
- Do not operate light when ambient temperature is below 0°C (32°F).

# Assembly and Installation

1. Be sure to mount the Super Flat Rope Light correctly, as illustrated by figures 1-4.



2. Super Flat Rope Light can be cut every six or ten LEDs, depending on the color, at specific cut points. Dotted lines on the back 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.



Minimum Cut Length for Whites, Green, Blue, Pink: 100mm (3.94")  
 Red, Orange, Amber: 167mm (6.57")

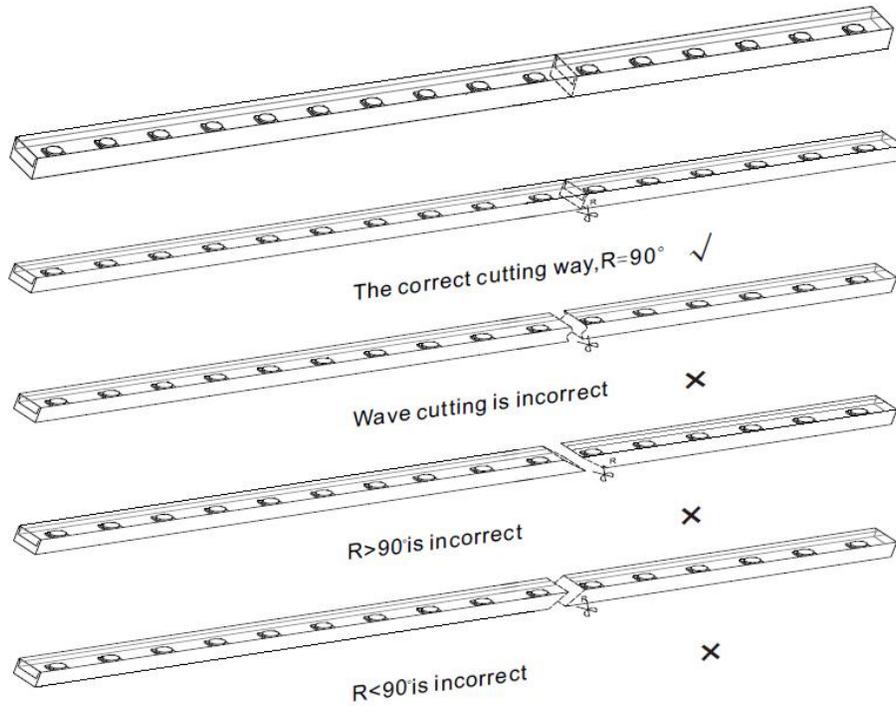
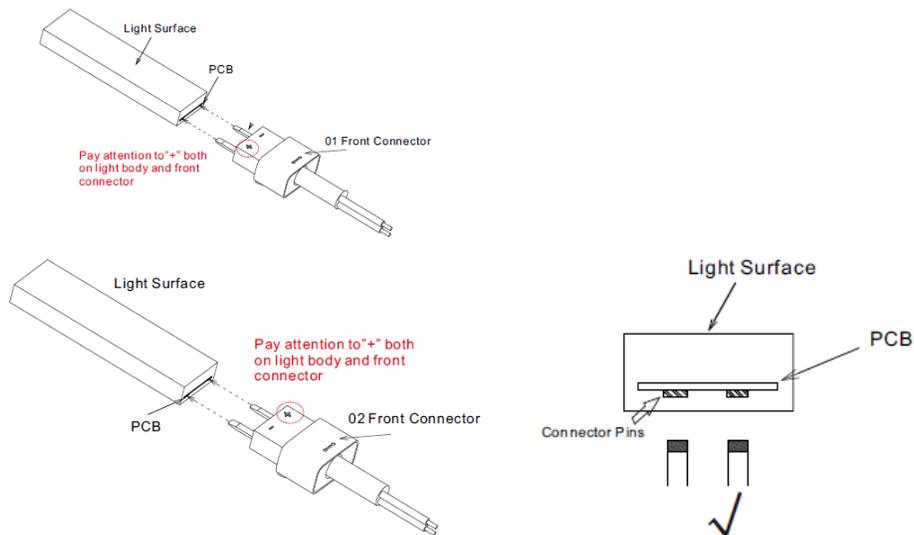
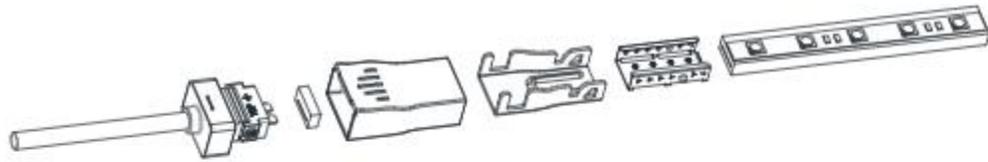


Figure 6: Be sure to cut perpendicular to the LED rope.

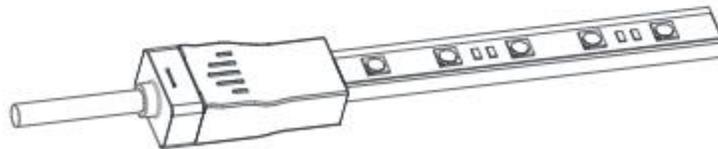
3. Wire colors: red and black wires correspond to the V+ and Ground lines.
4. Make sure to insert pins in the correct direction. The 01 and 02 Front Connectors are mirrored in terms of the direction of pins. Always check the functionality after inserting a connector and before sealing the connection to ensure that the proper directionality has been achieved.



5. 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.
6. Below are the instructions for assembling the snap connector series.

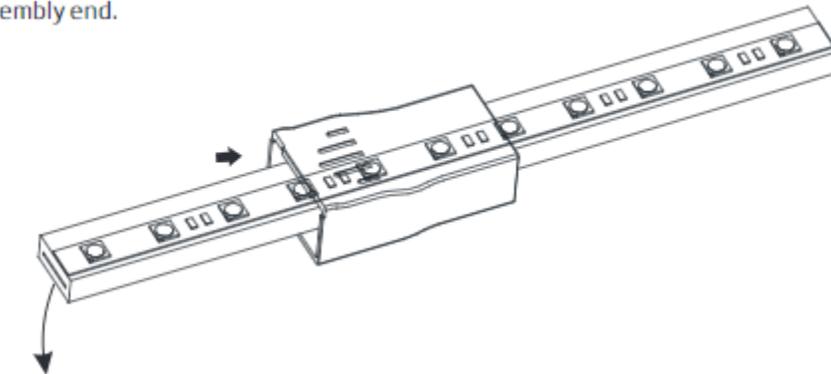


Explosive View

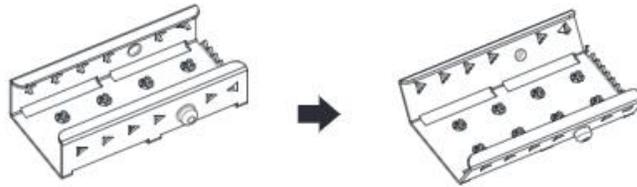


Finished Assembly View

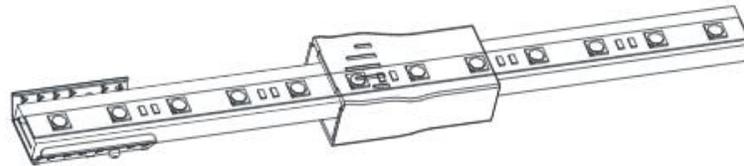
Pay attention to the direction marked on the bottom of PC cover. The wide open side faces towards the assembly end.



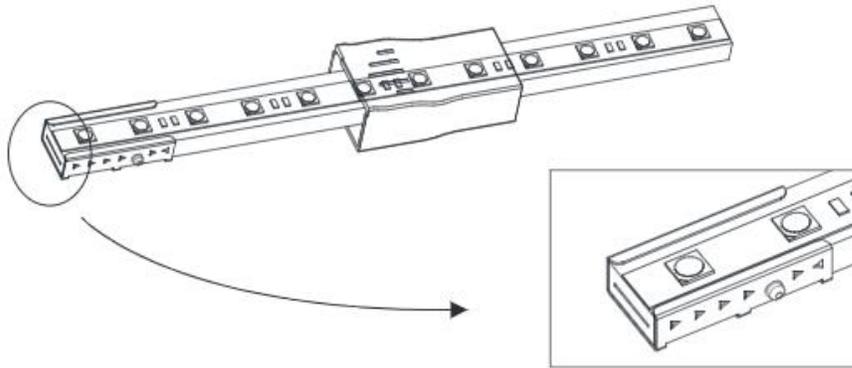
The assembly end



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

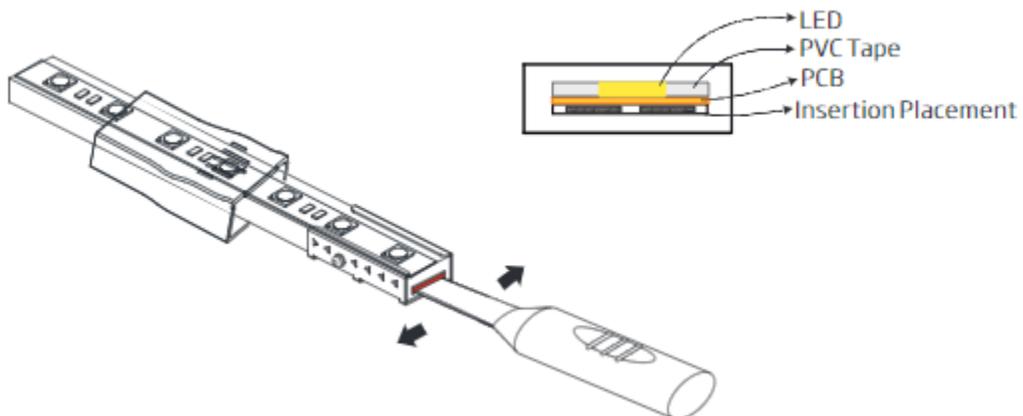


Place the anti-skidding clip onto the assembly end of the light.  
Pay attention to its direction

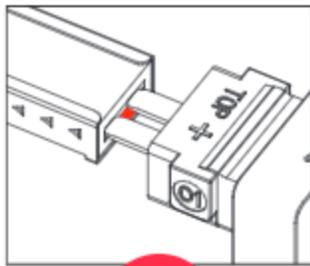
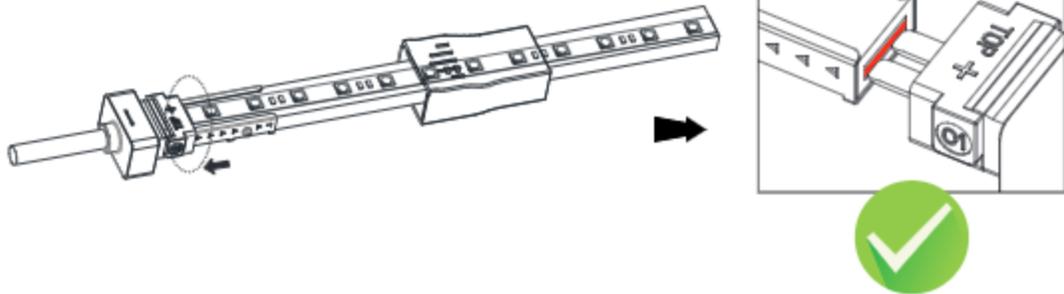


Fit the anti-skidding clip to the end of the light so that it wraps tightly and its brim is aligned with the cut edge on both sides.

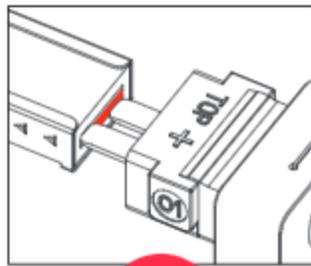
Insert the placement tool on the back side of the PCB and gently move the tool side to side to create enough space for the connector pins.



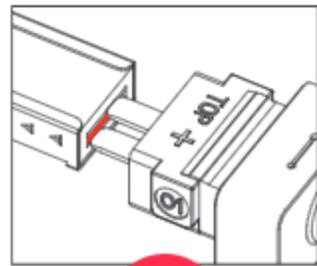
Insert the assembly end wrapped with anti-skidding clip into the cavity of the feed connector.



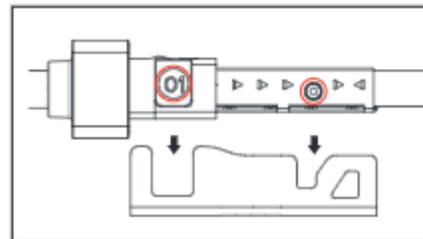
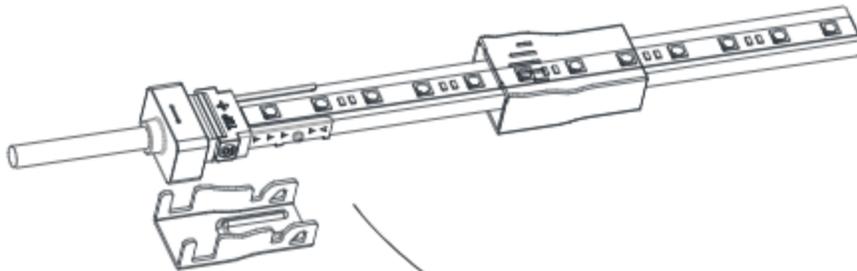
Insert into the front side of the PCB



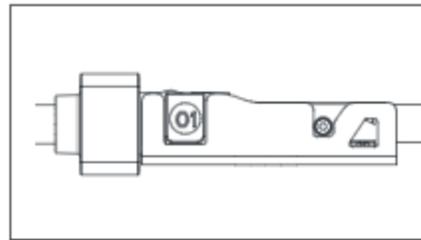
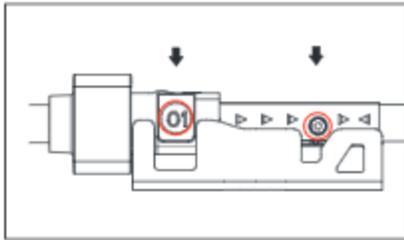
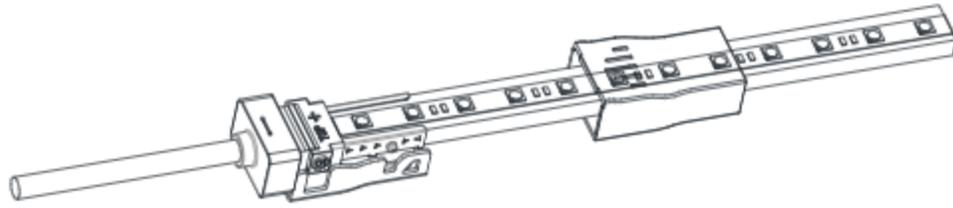
Insert crosswise into the PCB



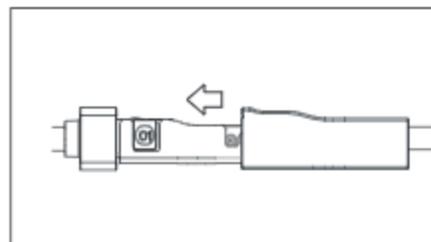
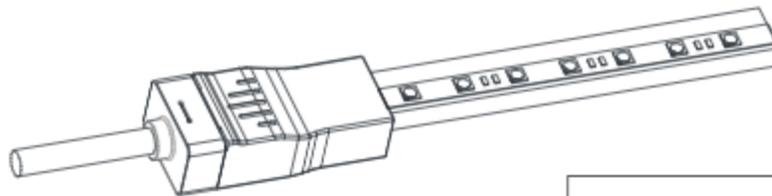
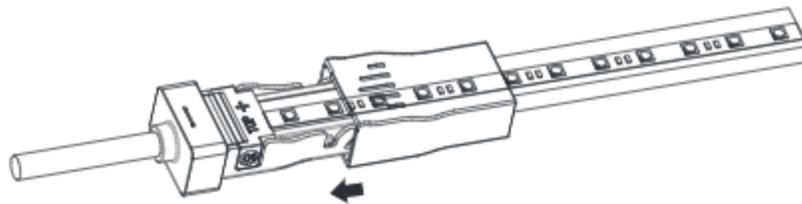
Insert crosswise into the PCB



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

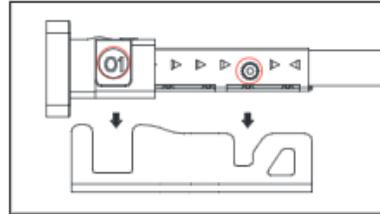
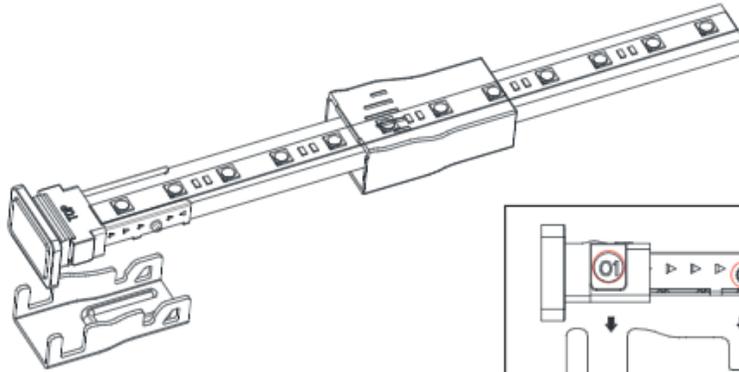


Press the feed connector and light downwards at the same time till bottom.

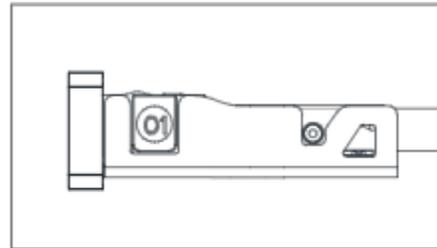
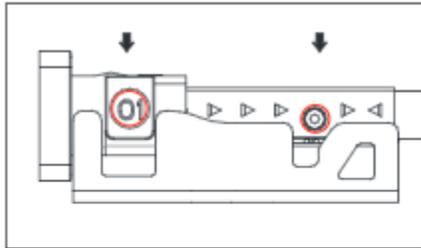
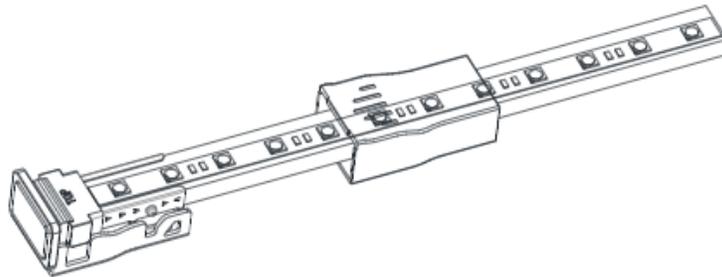


Slide back the PC cover till it snaps in the feed connector.

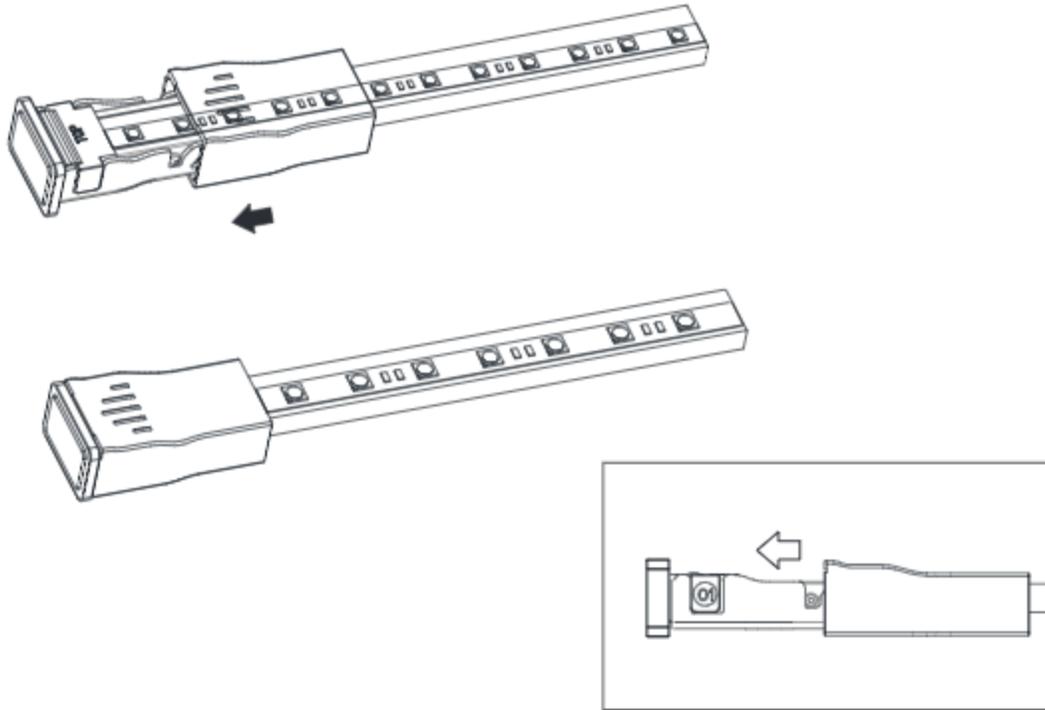
Follow the same steps for assembling a snap end cap:



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

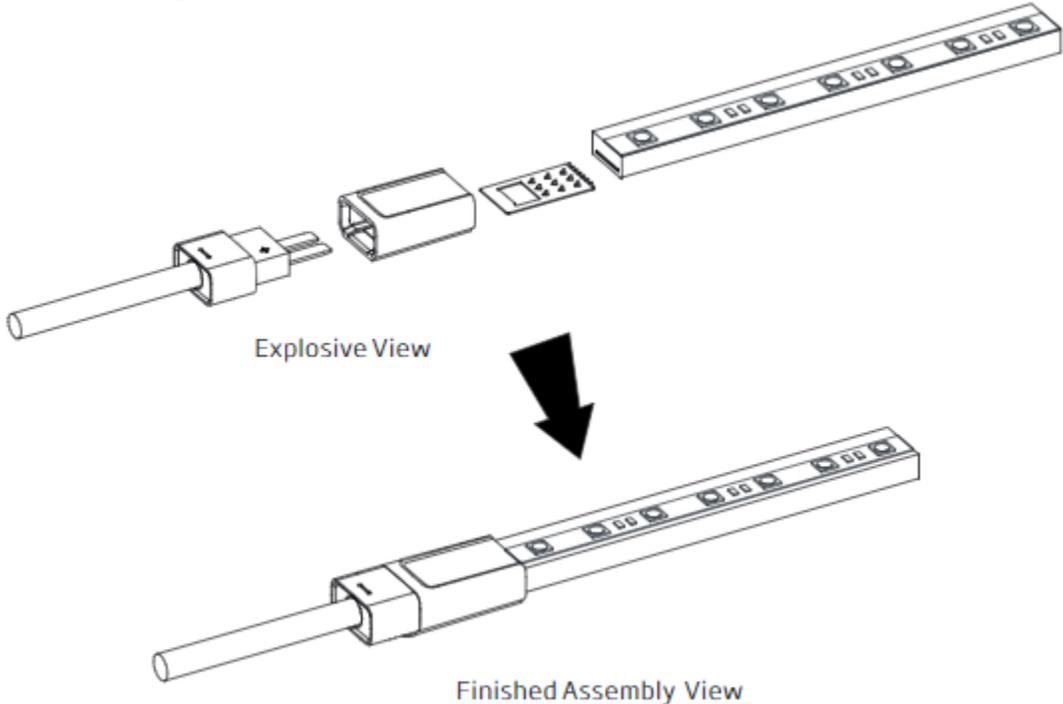


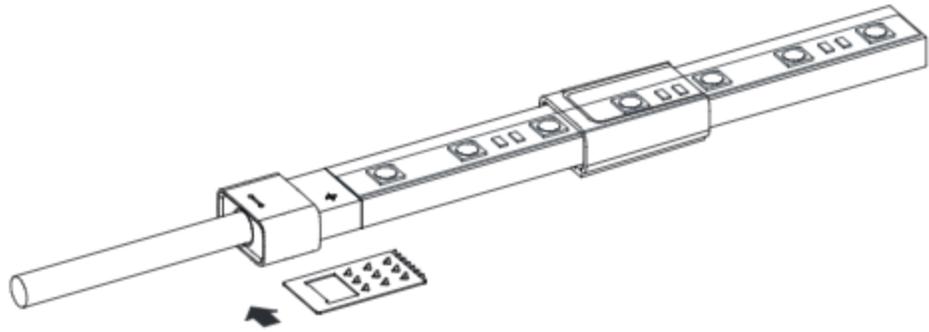
Press the tail plug and light downwards at the same time till bottom.



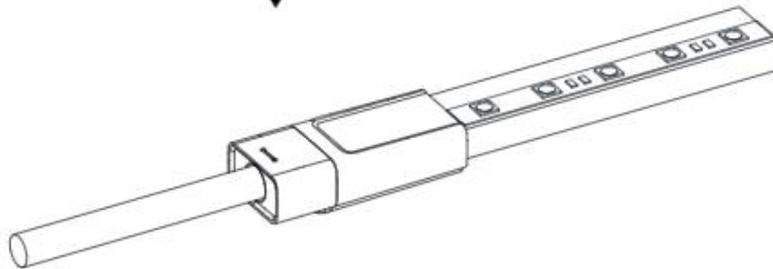
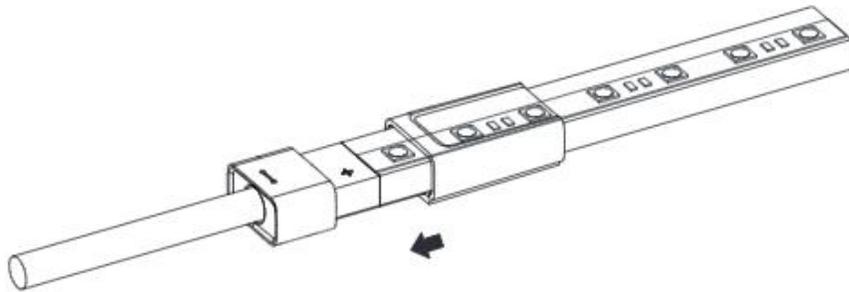
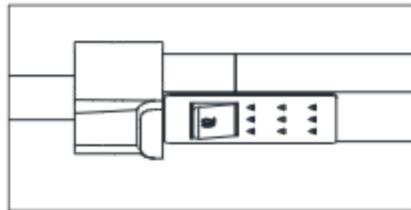
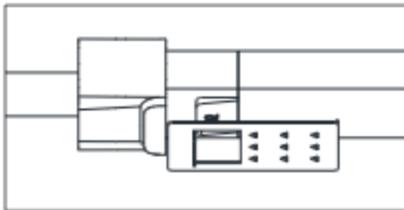
Slide back the PC cover till it snaps in the tail plug.

7. Proper assembly of the 40 series accessories.

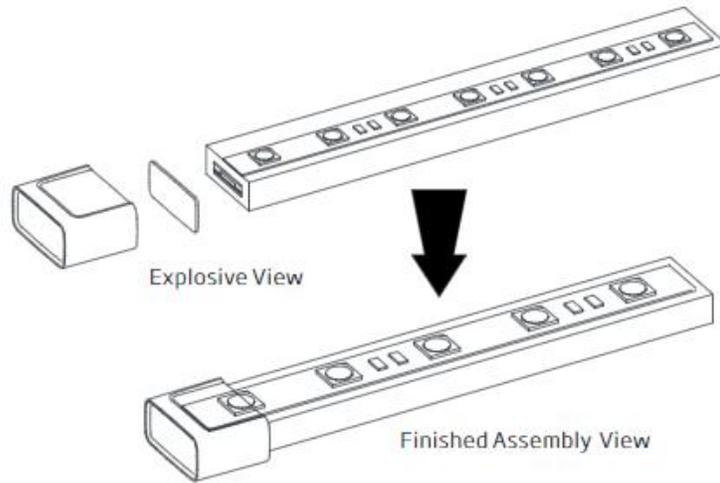




Place the anti-skidding clips to the feed connector with toothed side towards light.



8. Proper assembly of 40 series end cap.



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

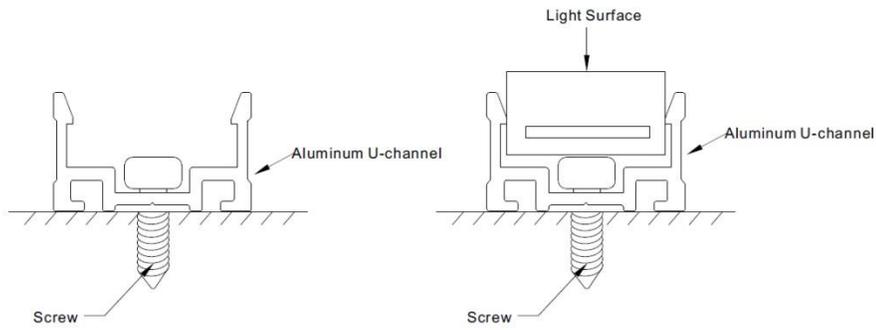
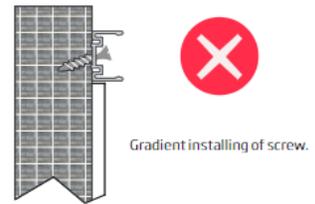
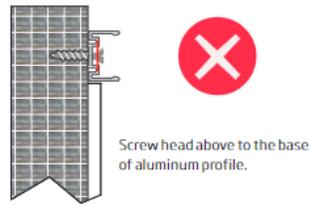
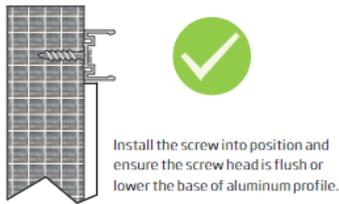
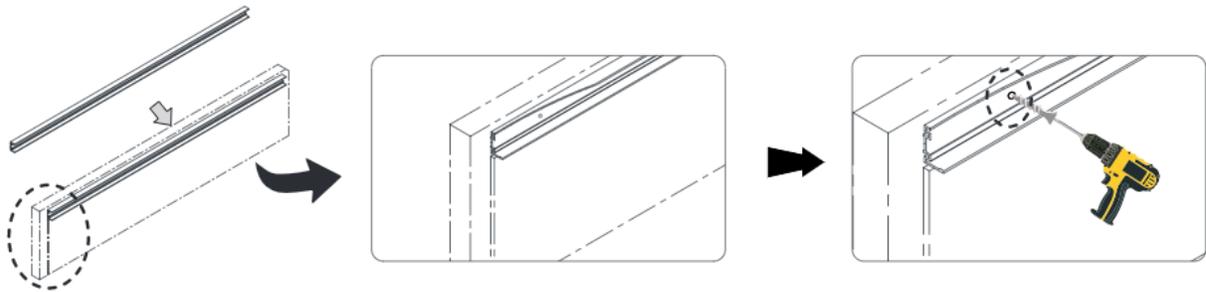


Figure 12: Proper installation of LEDs into U-channel.



## Instructions

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.