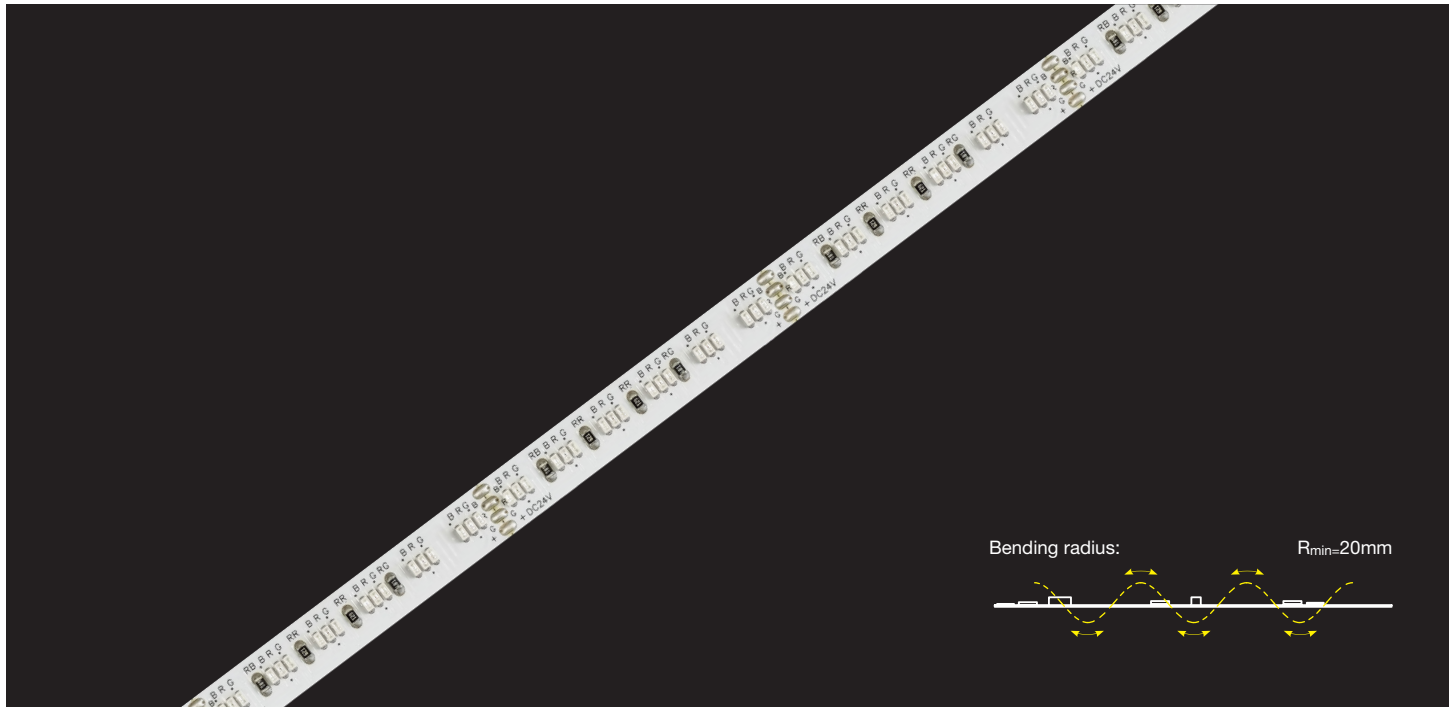


LED

STRIP LIGHT

TN-2110-396-24-RGB





Features

- Support PWM, 0~10V, DALI, DMX dimming
- External controller available for various lighting effects
- Good flexibility and cuttable, suitable for curved surface

Application

- Suitable for indoor decoration, hotels, 3D luminous letters, advertising lightbox, signs, etc

Installation

- Fix with 3M adhesive.

Optical & Electrical Parameters

Model No.	Voltage	Ra	Color	LM/m	LM/W	W/m
TN-2110-396-24-RGB	24V DC	\	Red	48	\	5
			Green	385	\	5
			Blue	90	\	5
			RGB	539	\	15

Other Parameters

Model No.	LED QTY	Max Run	Min. Cuttable Length	Working Temperature	Storage Temperature
TN-2110-396-24-RGB	396 pcs/m	1.0m	62.5mm	-20~+60 °C	-20~+70 °C

NOTE:

- The above data was measured under standard conditions and actual data may be different. We would update data without further notice.
- The luminous flux was tested while the corresponding-color products were lightened.
- UL max run refers to operating length at UL class II @100W.24V.
- Luminous flux values were measured accordance to IES LM-80-08. LED chips with tolerance range of +/- 10%.
- Each maximum-run requires a dedicated power feed from the driver. Do not exceed the recommended maximum run length. Max run may exceed Class 2 limits.
- Actual wattage may be different from the calculated wattage due to voltage drop while using.
- Actual efficacy value is determined by the specific LED driver (power supply). An estimated efficacy value can be calculated as follows: Luminous intensity divided by average power consumption.
- Do not install products in the conditions that exceed the listed ambient temperature. Exceeding the maximum ambient temperature may damage LED chips, reduce the total lamp life, luminous intensity output, and/or adversely impact color consistency.
- Operating temperature was measured under the minimum and maximum ambient temperature environment.
- Cutting segments are marked on the profiles below.
- If the product power is greater than 15W, auxiliary heat dissipation appliances must be added.

Performance

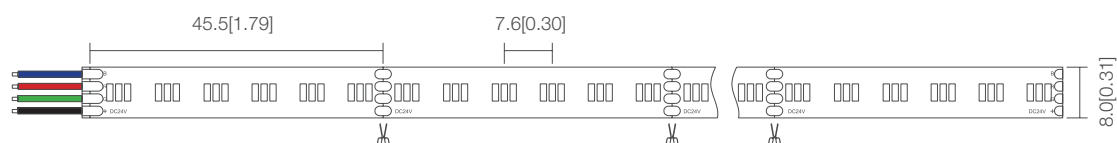
- LED chip data measured in accordance to IES LM-80-08.
- Photometric & Colorimetry data measured in accordance to IES LM-79-08, in Blueview 's TUV Innovation Lab.

Compliance & Regulatory Approvals

	CE LVD	Standard: EN 60598-2-21: 2015; EN 60598-1: 2015; EN 62471: 2008; EN 62493:2015; EN 62031: 2015+A1: 2013+A2: 2015
	CE EMC	Standard: EN IEC 55015: 2019; EN IEC 61000-3-2: 2019; EN 61000-3-3:2013+A1: 2019;EN 61547: 2009
	CB	Standard: IEC 62031:2018
	UL LISTED	Standard: UL 2108 E354137-Low-voltage Lighting Systems, Power Units, Luminaires and Fittings
	RoHS	Standard: IEC62321

Profile Drawings

Unit: mm [inch]

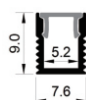


Note:

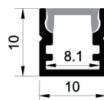
 Dimension tolerance: length $\pm 6\text{mm}$ [0.24inch]; width $\pm 0.2\text{mm}$ [0.008inch]; thickness $\pm 0.2\text{mm}$ [0.008inch]

For more info, please contact sales rep.

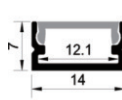
Recommended Profiles



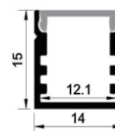
0809



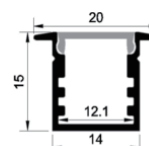
1010K



1407K



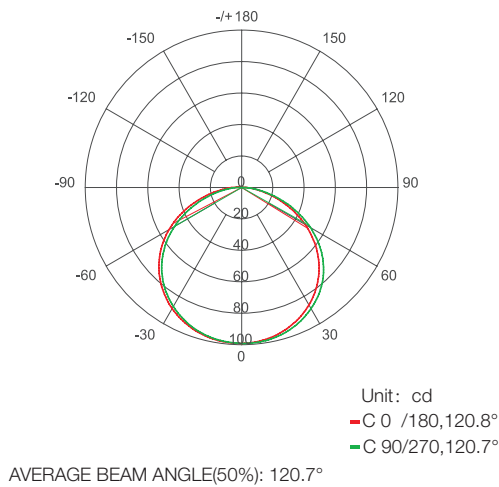
1415K



2014K

Luminous Intensity Distribution Diagram

Average Illumination

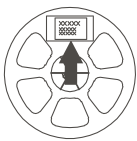


Flux Out: 245.3lm RGB

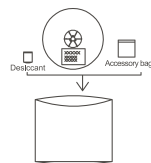
Height	Eavg, Emax	Beam Angle:125.6°	Diameter
0.3m	266.6,1105lx		105.15cm
0.6m	66.64,276.2lx		210.29cm
0.9m	29.62,122.8lx		315.44cm
1.2m	16.66,69.05lx		420.58cm
1.5m	10.66,44.19lx		523.73cm
1.8m	7.405,30.69lx		630.88cm
2.1m	5.440,22.55lx		736.02cm
2.4m	4.165,17.26lx		841.17cm
2.7m	3.291,13.64lx		946.31cm
3.0m	2.666,11.05lx		1051.46cm

Note: above data tested with TN-2110-396-RGB, For other data,please consult sales rep.

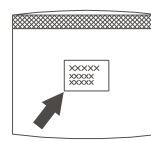
Packaging Information



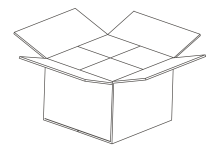
Label the reel;



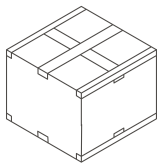
Put reel, accessory bag and desiccant together into static shielding bag;



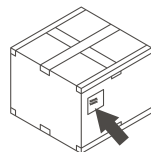
Seal and label the static shielding bag;



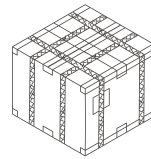
Put the packed static shielding bag into carton box;



Seal the carton box;



Label the box;



Use packing belt to pack. Add edge protectors if necessary.

Packaging information

Model No.	Product Size L*W	Carton Size	Meter/Reel	Reel/Carton	Net Weight (kg)	Gross Weight (kg)
TN-2110-396-24-RGB	5000*8mm	550*400*340mm	5	140	6.13(1±10%)	11.40(1±10%)

NOTE:

• The above quantity and weight are only for the illustrated packaging method. There will be differences in the quantity and weight with other packaging methods.

Installation



LED power supply

Diagonal pliers

Screw

Insulation Tape

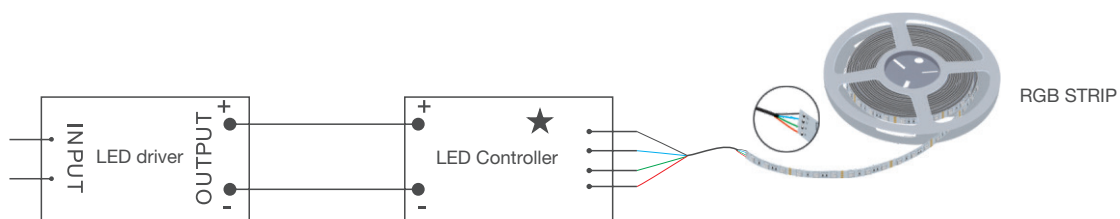
Clips

Electric drill

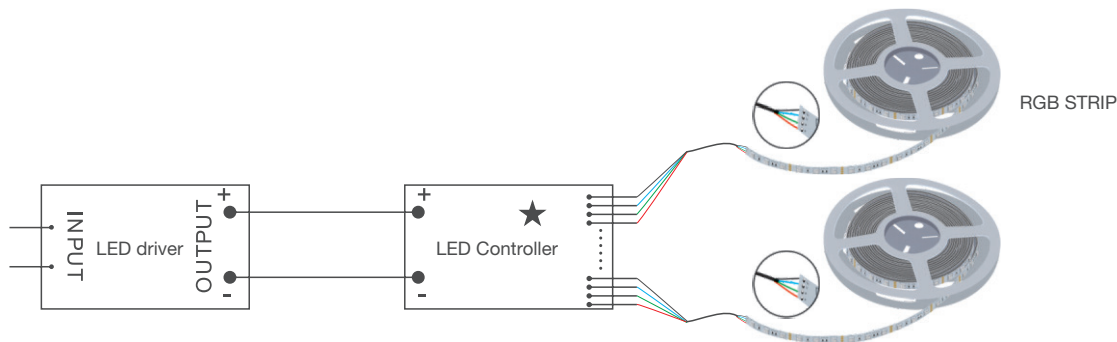
Electric iron

Wiring Diagram

The wiring of single strip

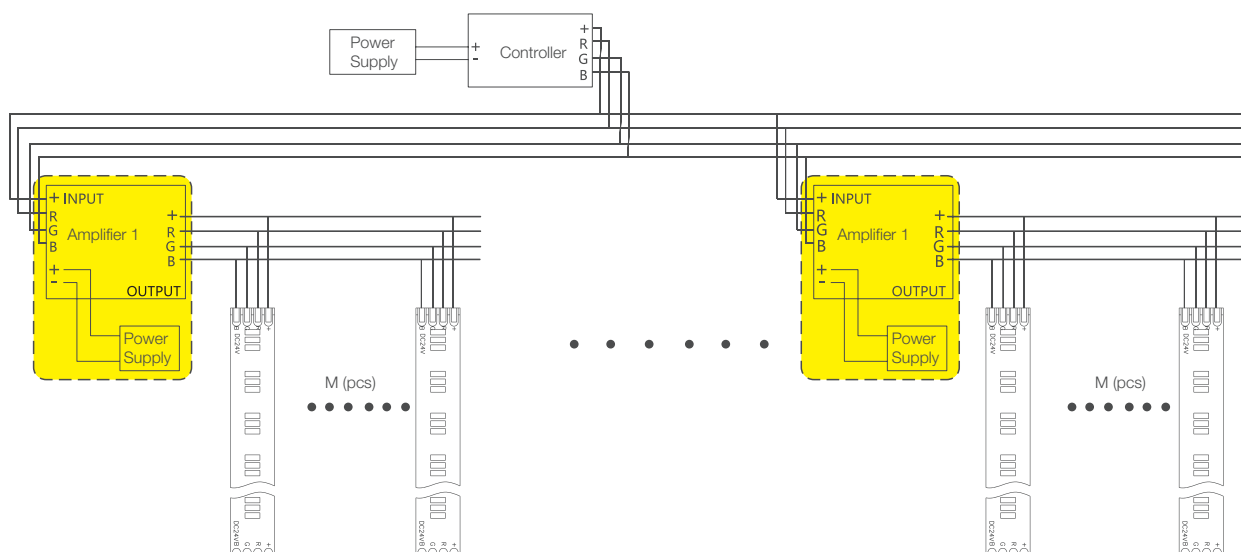


The wiring of multiple strips



Note: If you only require basic on/off functionality, a controller is not necessary.

Connection Diagram of Controller



Rated power of the amplifier's power supply (W): P
 Rated power of the strip (W): P(strip)
 Amplifier load: M(pcs)
 Max run length: MAX

$$M = \frac{P \cdot 0.8}{P_{\text{(strip)}} \cdot \text{MAX}}$$

For example: Take the TN-2110-396-24-RGB as an example, P(strip)=15W/m, power supply 400W, Max run length(single feed)=3m, so the amplifier load is.

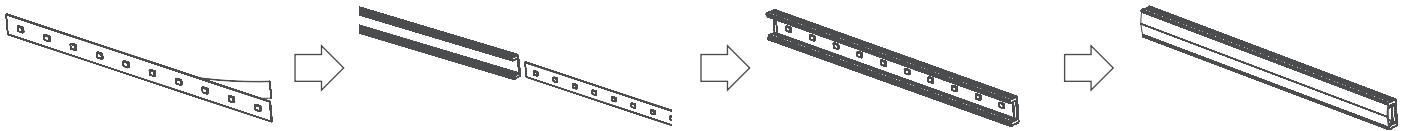
$$M = \frac{P \cdot 0.8}{P_{\text{(strip)}} \cdot 5} = \frac{400 \cdot 0.8}{15 \cdot 5} \approx 4(\text{pcs})$$

Note:

The power supply of the controller must match its power;
 If the distance between the controller and the product is more than 20 meters, an amplifier is needed. As shown above;
 The above example adopts single-end power supply;

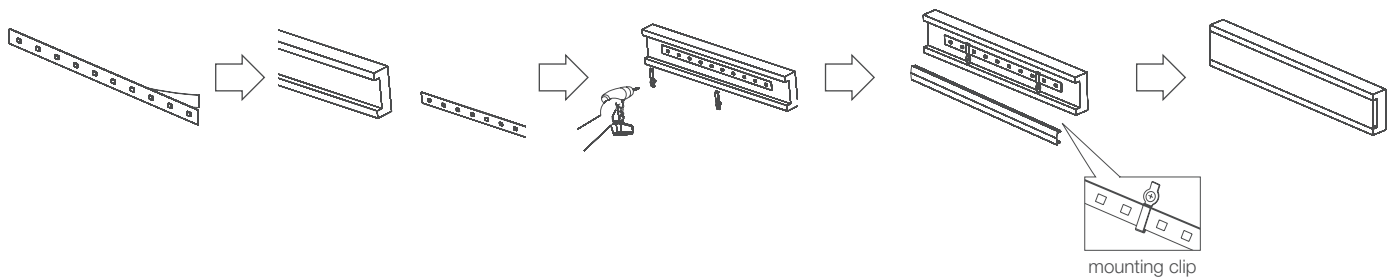
Installation Methods and Steps

Aluminum channel installation



1. Peel away the self adhesive tape on the back of strip.
2. Cut off the excess part based on the installation position.
3. Evenly arrange the strips with appropriate space in the track.
4. Install the cover and end cap.

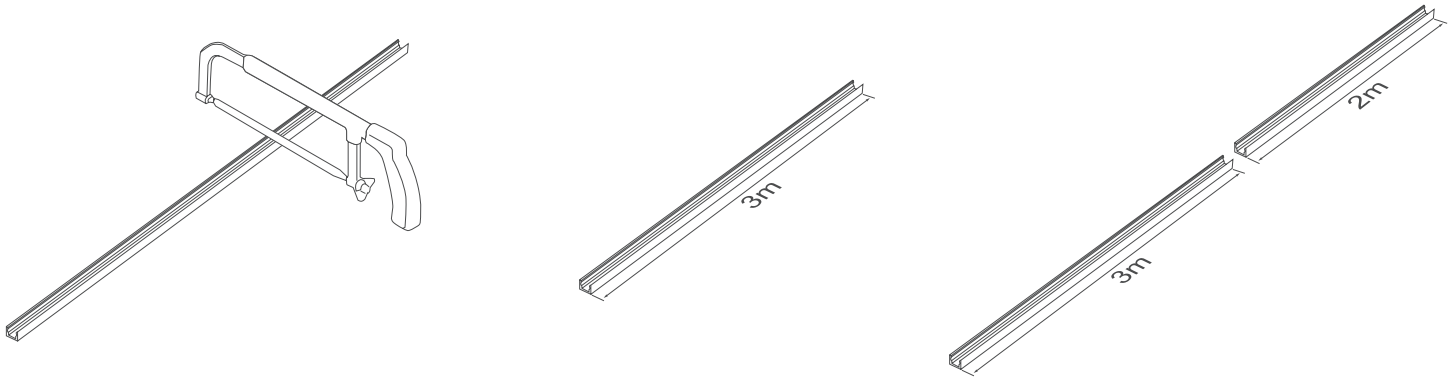
Covered channel installation



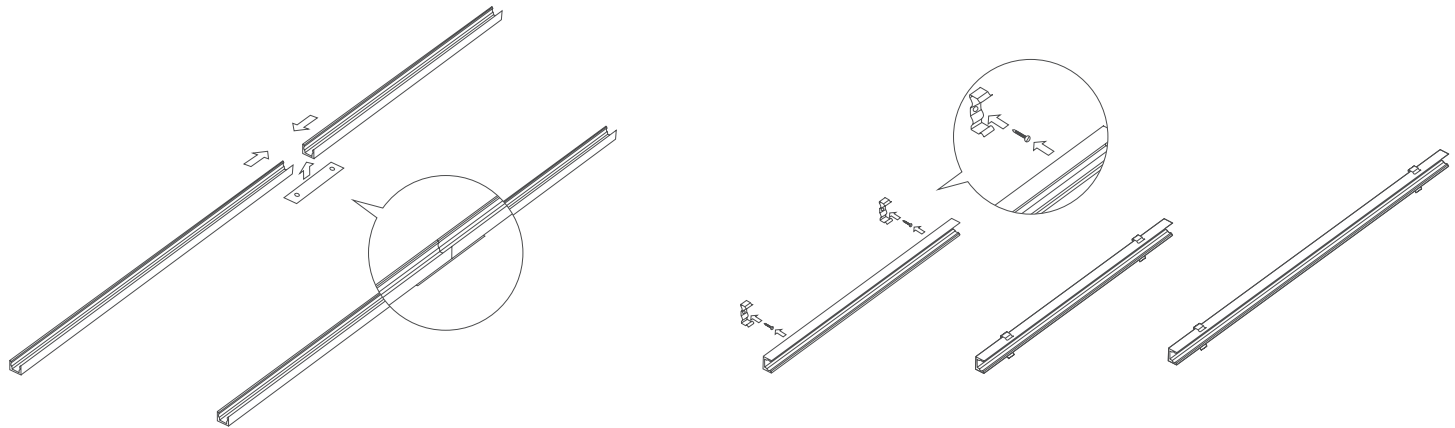
1. Peel away the self adhesive tape on the back of strip.
2. Cut off the excess part based on the installation position.
3. Evenly arrange the strips with appropriate space in the track and fix them with clips.
4. Install the cover and end cap.
5. Finished

Aluminum Profile and LED Strip Cutting

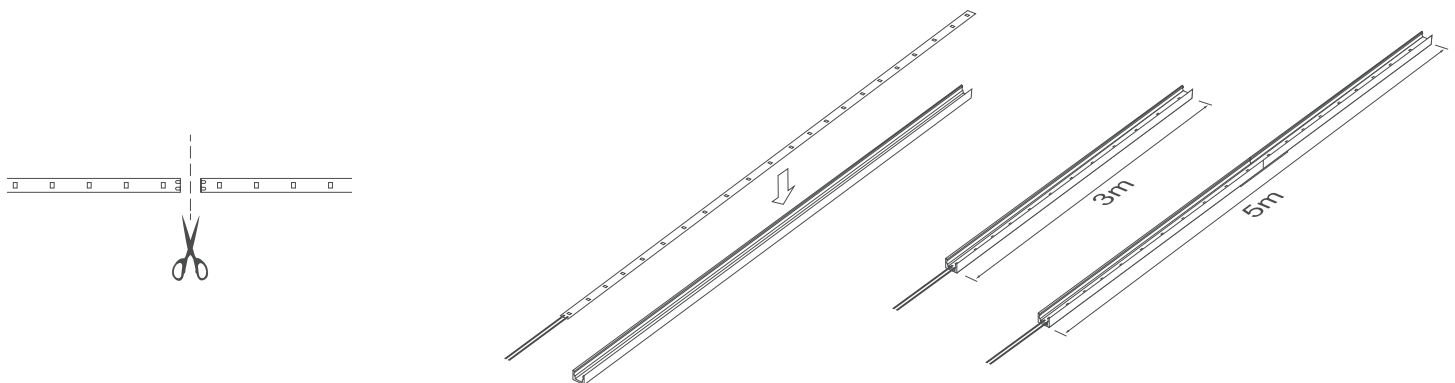
Cut the profile to proper length



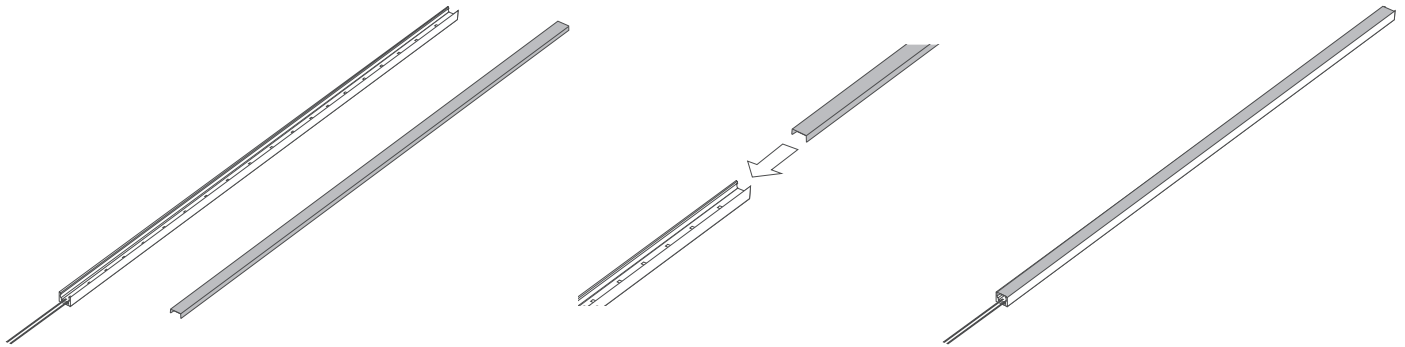
Measure and cut the LED strip to the length of the profile, peel off the protective backing of the adhesive tape and firmly attach the LED strip to the profile. Pay attention to the auxiliary heat dissipation, fixing and power feeding.



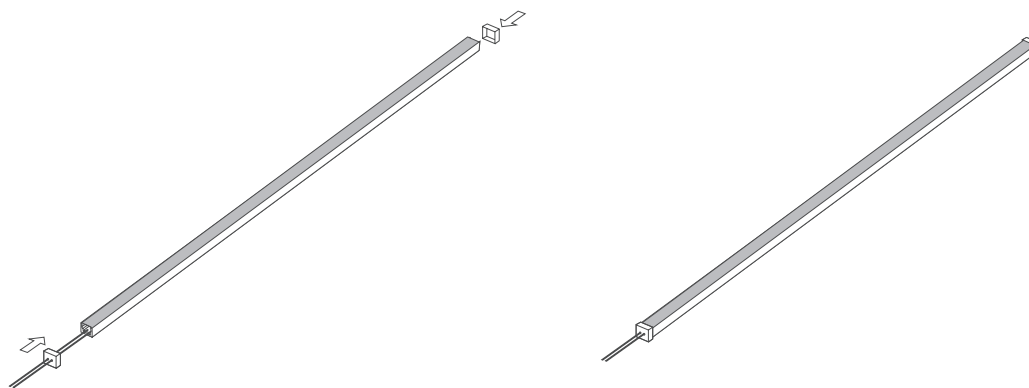
Cut the strip based on the profile length, then install the strip on the profile. Pay attention to heat dissipation, fixing and power feeding



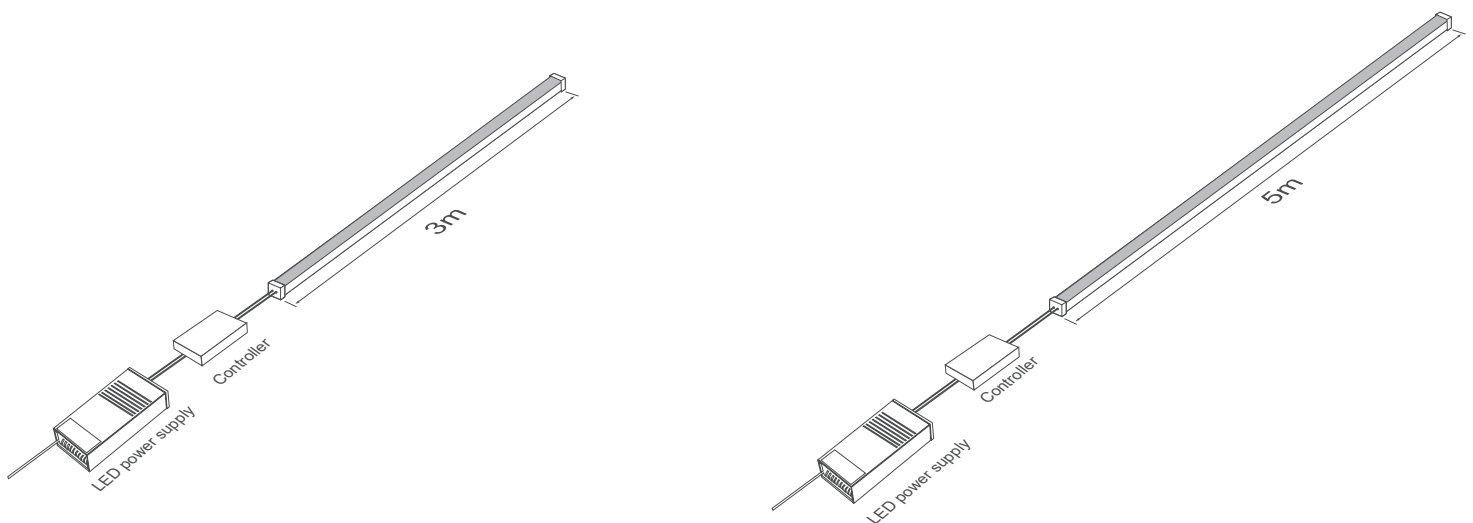
Install the PC cover



Install the end -caps to the both ends of the aluminum profile



Once you have connected the matching power supply and controller, turn on the product to test whether it lights up properly



Attentions before installation

- Check whether the power line is screwed into the terminal firmly, and it is better not to pull it out by hand.
- Before installation, check that the product parameters are consistent with the requirements (Seeing product specifications or product labels)
- Load voltage, current, power and power supply should be matched with the product.
- Follow the instructions of wiring diagram (first connect the load and then the power supply) to avoid short circuit.
- Make sure the correct connection of positive and negative poles between products and power supply. Otherwise, the light will not be on.
- The wiring terminal must be provided with effective waterproof and anti-corrosion treatment.
- **For non-waterproof or S-type strips, if the installation length exceeds the max run, more power feed is needed.**
- **For non-waterproof or S-type strips, auxiliary heat dissipation appliances must be added when the current of single LED exceeds regular value.**

Common Faults and Troubleshoot

Quick Guide		
Problems	Reasons	Solutions
All LEDs can not light on.	No electric supply.	Fix the short circuit problem.
	Automatic power protection from the open or short circuit in output of the power supply.	
	Wrong connection of power supply.	
LEDs can not light on partly.	Some switching mode power supplies are not powered.	Correctly connection.
	Power supply line error.	
	Mistaken wire connection of some of products	
Brightness of LED is inconsistent tor insufficient.	Power overloaded.	Replace with more powerful power.
	Power supply circuit excessive consumption.	Make sure the working voltage of the product within $\pm 5\%$ of standard voltage, or keep balance by circuit power consumption.
	Excessive quantities in series connection of the product	Reduce the quantities of the product in series connection to meet requirement.
LED flicker.	Connection point fault.	Remove bad connection point.
	Switching power supply failure.	Replace a new power supply.
	Wrong Installation or use of products	Please follow the instructions

Warning

- Do not disassemble or retrofit the light. Do not touch the surface of the light with a sharp object.
- Do not do live-line working during installation, especially for high voltage product.
- Do not use any organic chemical solvents.
- Use neutral glass adhesive to fix this product and it needs to be dried 4 hours in the open environment after operation.
- Treat the ends and the circuit connection points that are not connected to the main line with insulation, waterproof, and anti-corrosion in the installation.
- Use 18AWG (0.75mm² cross-sectional area) or thicker core wire to avoid adverse consequences caused by overheating, if the power cable need to lengthen.
- Make sure the input voltage meets the requirements and lines are connected correctly before lighting on.
- This product is for signage, and do not use as general lighting.
- Series connection within the max run.
- The length of the power cable between the power supply and the led strip should not exceed 2 meters. Otherwise, large circuit loss will lead to inconsistent brightness.
- Installation, maintenance and repair should be operated by a qualified technician.

Statements and Recycling

Statements:

- Repair should be operated by a qualified technician, if the external circuit or main line of this product is damaged.
- The parameters given in this manual are typical values and for reference only.
- All illustrations and drawings in this manual are for reference.
- This product is subject to change without notice.

Recycling:

- LED lighting products belongs to electronic products, please do recycling treatment according to the relevant WEEE directives.

Energy efficiency classes of light sources

Energy efficiency class	Total mains efficacy η_{TM} (lm/W)
A	$210 \leq \eta_{TM}$
B	$185 \leq \eta_{TM} < 210$
C	$160 \leq \eta_{TM} < 185$
D	$135 \leq \eta_{TM} < 160$
E	$110 \leq \eta_{TM} < 135$
F	$85 \leq \eta_{TM} < 110$
G	$\eta_{TM} < 85$

Note: The above table is sourced from "ERP:EU2019/2020 & Energy Label: EU2019/2015"