

ARTIST OF LIGHT
LED NEON FLEX RIBBON

C-FR-F10

CLEAR Lighting®

USER MANUAL

PLEASE READ THESE INSTRUCTIONS CAREFULLY BEFORE
INSTALLATION. LEAVE A COPY FOR THE END USER/MAINTENANCE
ENGINEER FOR FUTURE REFERENCE.



Version No. : V2.0

Table Of Contents

Unpacking	03
Basic Parameters	06
Cautions	07
Instructions for Cutting Light	08
Clasp Front Connector	09
Clasp End Cap	13
Snap Front Connector	16
Snap End Cap	20
Diagram of Light Wiring	24
Mounting Profile Options	26
Troubleshooting	33
Limited Warranty	34
Appendix	35

Unpacking

White Box Packaging



1



2



3



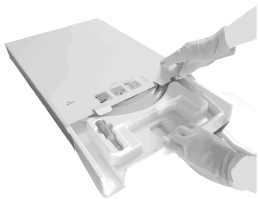
4



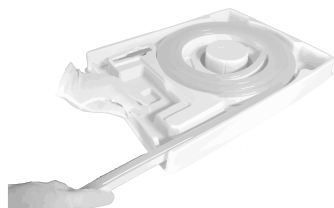
5



6



7



8



04

Unpacking

Reel Packaging

Note: Two people are needed to uncoil the light.



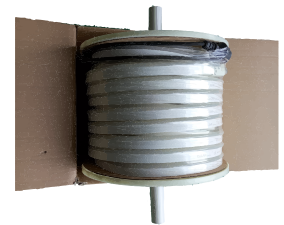
1



2



3



4



5

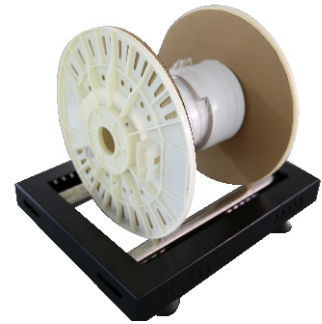


05

Unpacking



Uncoiling Roller



Put the light on the middle of uncoiling roller



Rotate the roller edge to uncoil the light with another hand



Use recommended cutter to cut the light vertically



Roll up the rest of the light



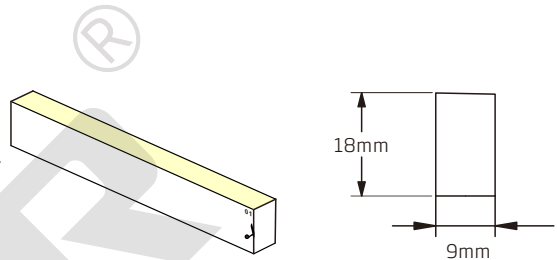
Protect the light end and fix it



Uncoiling Roller (Optional Device)

Basic Parameters

1. Dimension: 9*18mm
2. Min. bend diameter: 90mm
3. Protection rate: IP68/IP65
4. IP68 protection rate: Protected against dust and submersion in water (1 meter above).
5. The product IP rate is ultimately in line with properly applied IP rated connectors.
6. Easy to use, with a range of accessories for joining, terminating, mounting & powering.
7. Long lifetime: 5 years.
8. Working ambient temperature: -20°C~45°C (High Voltage: -20°C~25°C).
9. Ope rating(bending)ambient temperature: 0°C~45°C.



Note: Unless otherwise stated, the tolerance of the light is $\pm 0.3\text{mm}$.

Light Type: C-FR-F10

	Light Color	Appearance of Cover*	LED Qty/mtr	Working Voltage	Rated Power/m	LED Spacing	Min.Cutting Length	Max.Running Length
B	R/A	WM	72LEDs	D24CV	3.5W	13.89mm	125mm(9LEDs)	20m for single end feed 40m for double ends feed
	G/B/W	WM	72LEDs	D24CV	4.5W	13.89mm	83.3mm(6LEDs)	15m for single end feed 30m for double ends feed
	R/A/G/B/W	WM	72LEDs	D12CV	4.5W	13.89mm	4.17mm(3LEDs)	7.5m for single end feed 15m for double ends feed
	R/A/G/B/W	WM	72LEDs	Ac230	5W	13.89mm	1000mm(72LEDs)	80m for single end feed

NOTE: Appearance of Cover*

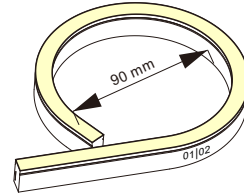
WM=White PVC Housing¹+Milky Light-emitting Surface²

Note 1: Housing color is the light color except from the light-emitting surface.

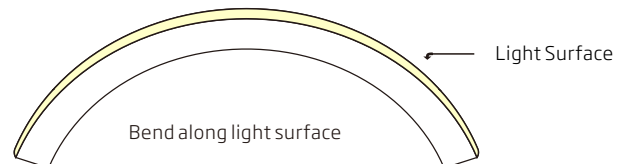
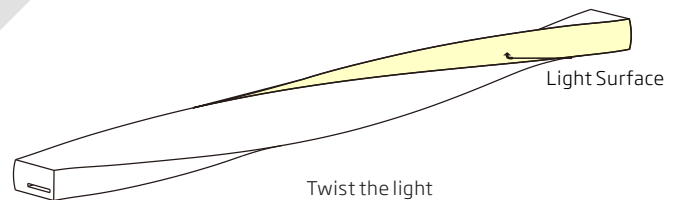
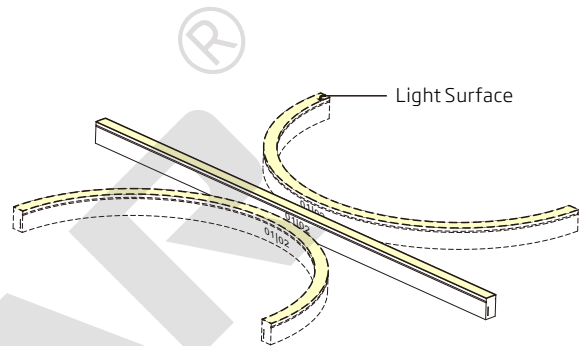
Note 2: Light-emitting surface color is the color without light up.

Cautions

1. Before making any cuts, installation, maintenance or connection, be sure the mains is disconnected!
2. Note: all connector joints must be connected correctly to achieve IP68 rating.
3. Please operate this flex light by instructions, and confirm the work voltage, it must be matched with product requirements.
4. Please confirm the polarity of connector before insertion front connection cable.
5. Connect and cut this product correctly. Any wrong operation will damage this product.
6. Using qualified DC power supply.
7. Please correctly use and bend this flex ribbon light, see the figures on the right.



Do not bend smaller than allowed minimum bend diameter 90mm.

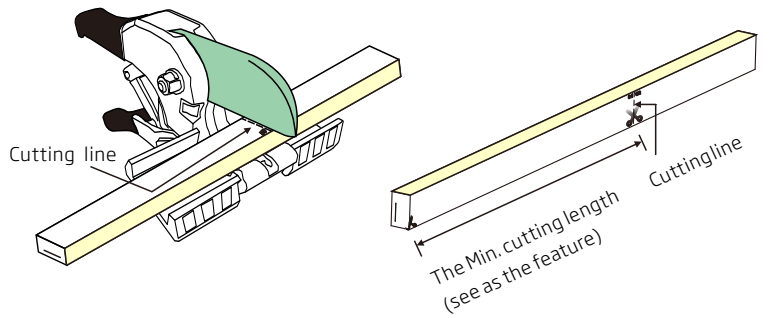


WARNING: The above wrong approaches will damage the light.

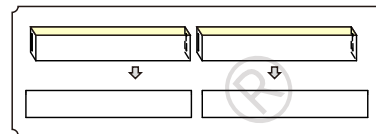


08

Instructions for light cutting

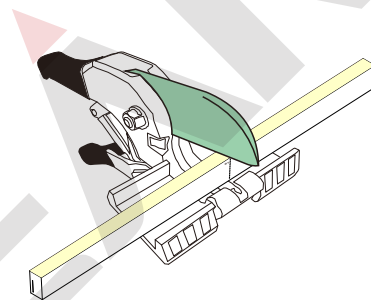


Note: The cutting surface should be flush and smooth.

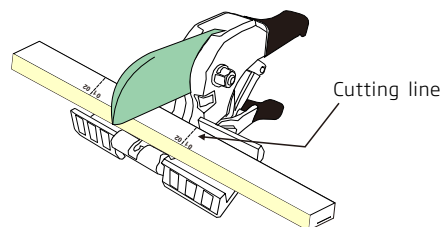


Note:

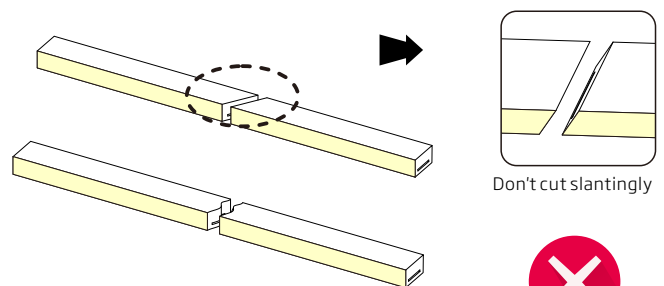
1. Place the light horizontally when cutting it.
2. Use only factory-recommended cutter.
3. Cut the light according to the following instructions.
Incorrect operation will damage the light



Please don't cut from light-emitting surface.



Don't allow to cut away from the cutting line.



Don't cut slantingly

The cutting surface must be flush and smooth.

WARNING: The above mishandling will damage the light.

09

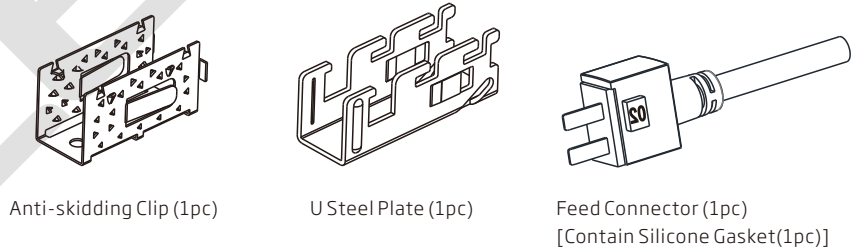
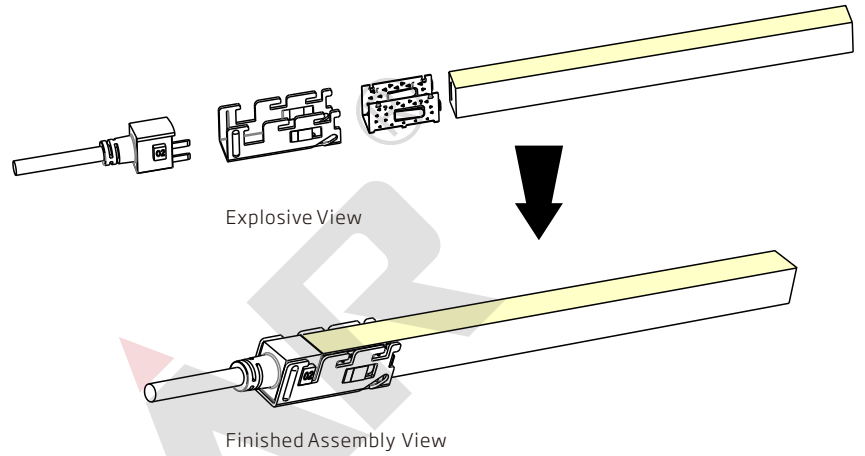
Clasp Front Connector

Please ignore these steps if the front connector has been assembled before delivery.

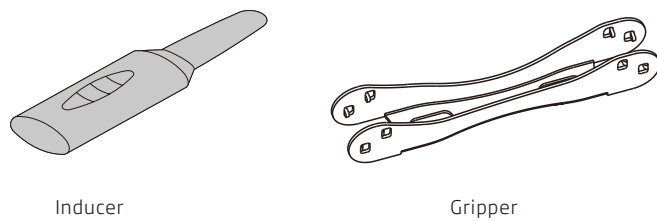
Note:

1. Never wet the assembly units or assemble with wet hands.
2. Please use the tools correctly.
3. Please pay attention to personal security when using tools.

1. Components of Front Connector

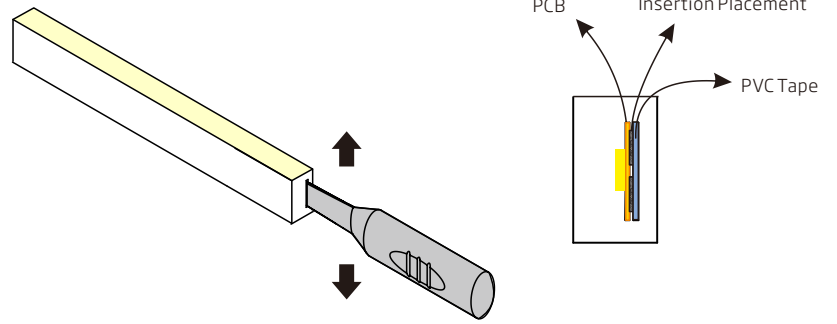


2. Tools



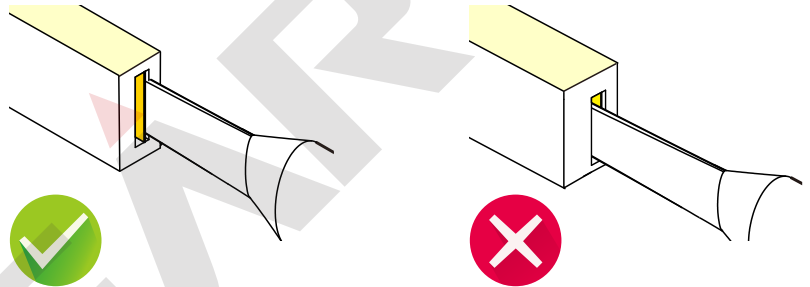
3. Installation Steps

3.1 Inducing a Cavity for Feed Connector



NEVER insert into the front side (LED side) of the PCB

Insert the inducer to the backside of PCB around 10~12mm, move the inducer up and down 3~5 times gently to create a small cavity.

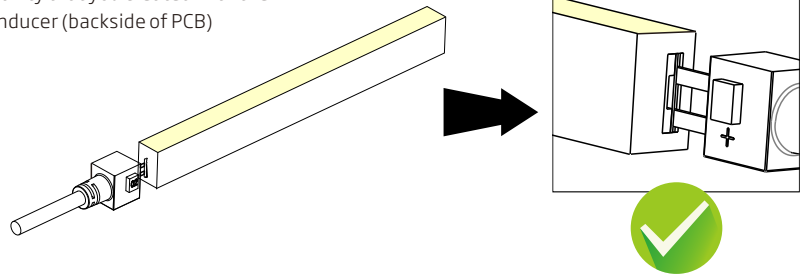


Insert the inducer into the backside of PCB

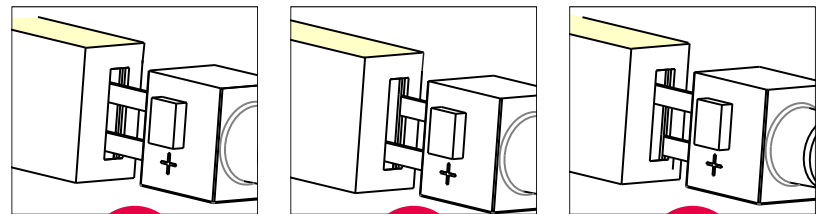
It will damage the light if insert into front side of PCB

3.2 Insert the Feed Connector

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



The following operations are prohibited:

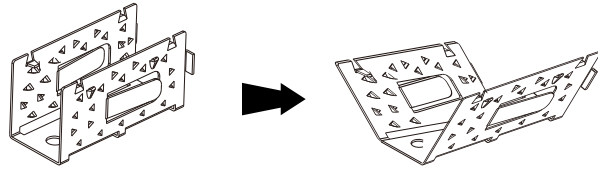


Insert into the front side of the PCB

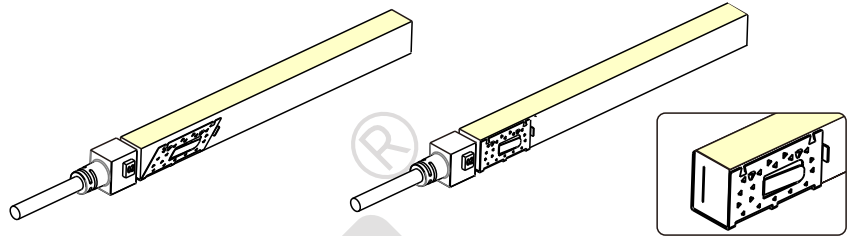
Insert crosswise into the PCB

Insert crosswise into the PCB

3.3 Treatment of Anti-skidding Clip



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

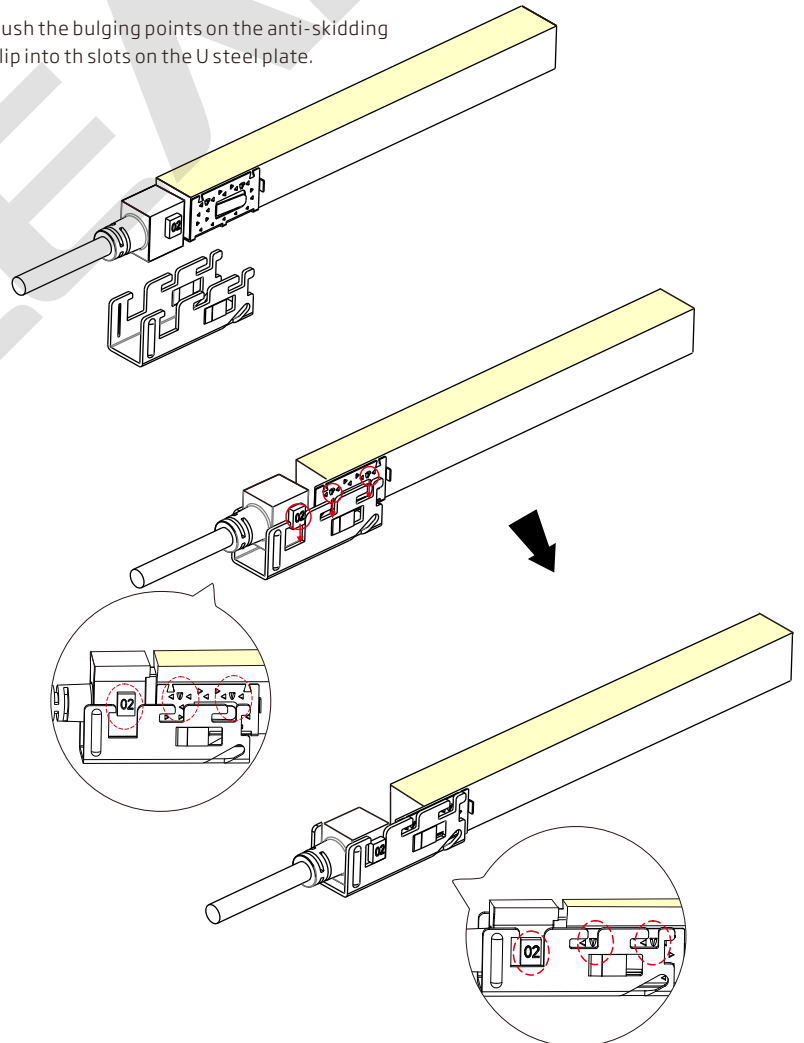


Place the anti-skidding clip onto the end of the light. Notice its installation direction.

Fit the anti-skidding clip to the end of the light tightly and align with the light end edge.

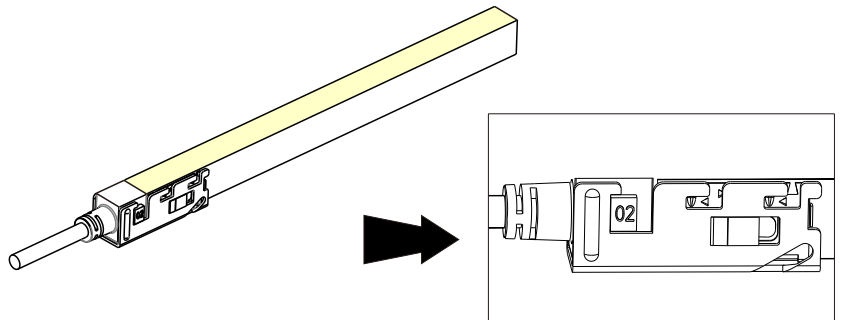
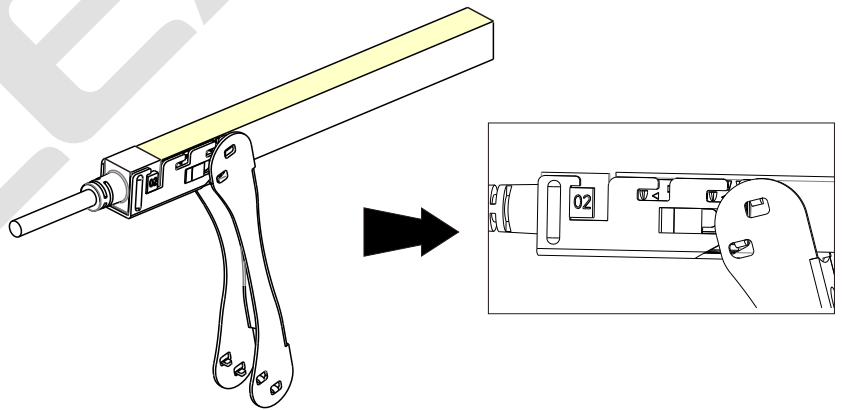
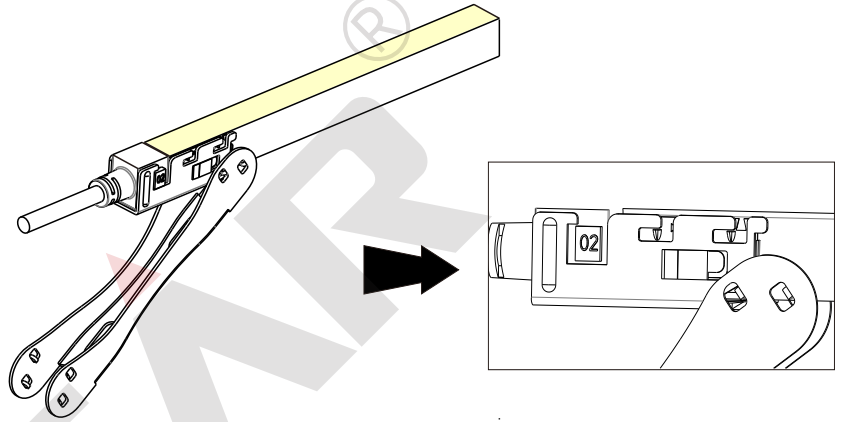
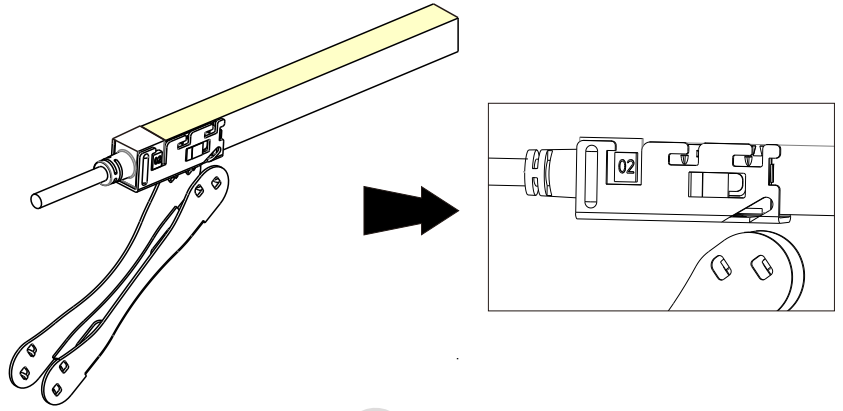
3.4 Installation fo U Steel Plate

Push the bulging points on the anti-skidding clip into th slots on the U steel plate.



12

3.5 Push the anti-skidding clip to the end until the two hook splinters on each side pop out to lock the U steel plate. Use the gripper to help tighten the piece.



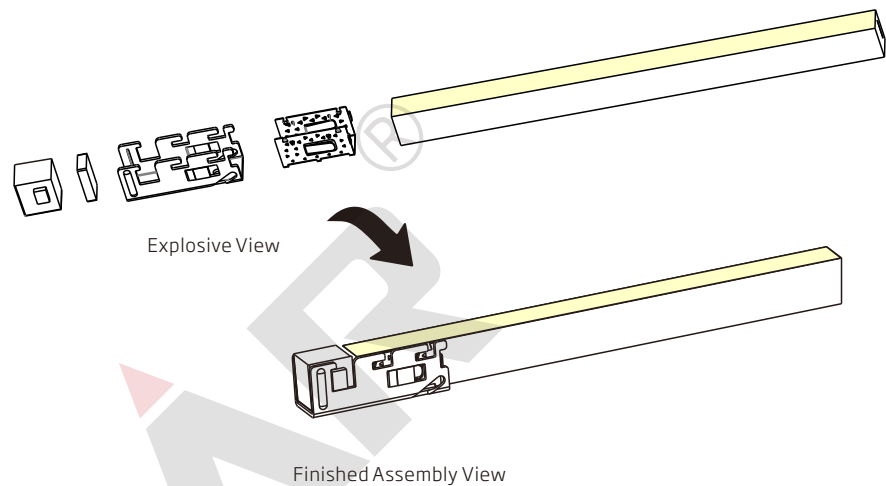
Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.

Clasp End Cap

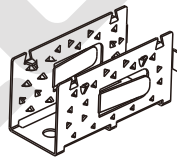
Please ignore these steps if the end cap has been assembled before delivery.

Note:

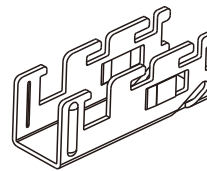
1. Never wet the assembly units or assemble with wet hands.
2. Please use the tools correctly.
3. Please pay attention to personal security when using tools.



1. Components of End Cap



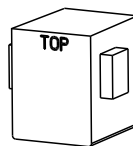
Anti-skidding Clip (1pc)



U Steel Plate (1pc)

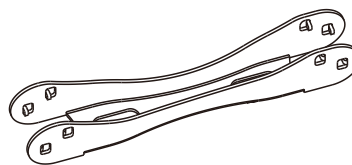


Silicone Gasket (1pc)



Tail Plug (1pc)

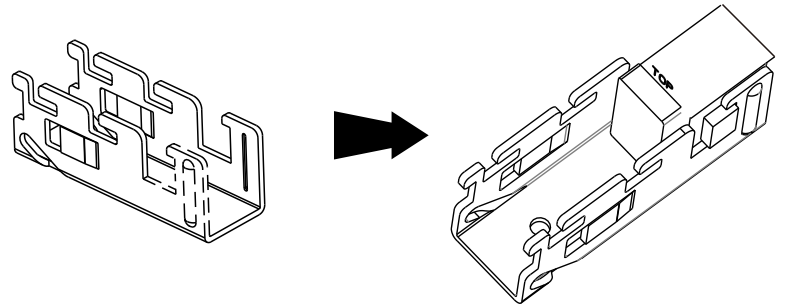
2. Tools



Gripper

3. Installation Steps

3.1 Place the tail plug into the U steel plate

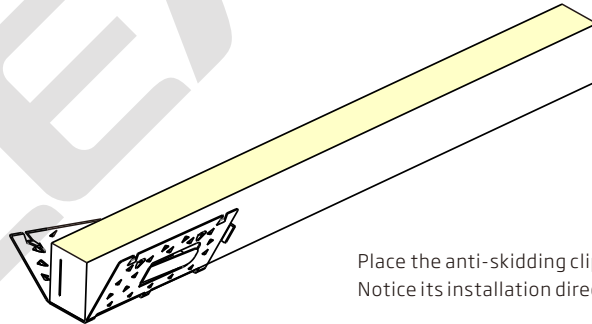


The silicone gasket is attached on the tail plug.

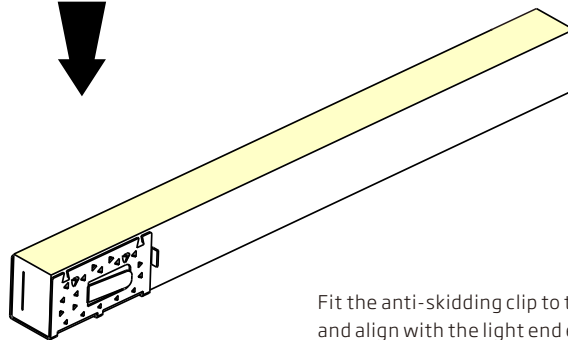
3.2 Treatment of Anti-Skidding Clip



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

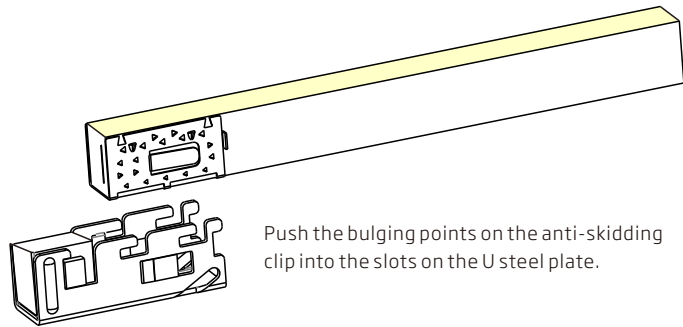


Place the anti-skidding clip onto the end of the light. Notice its installation direction.

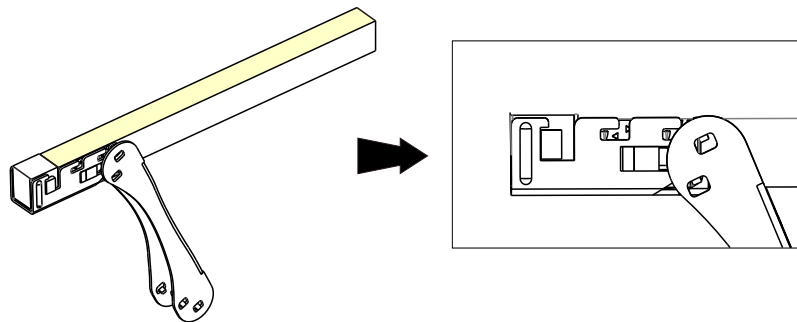
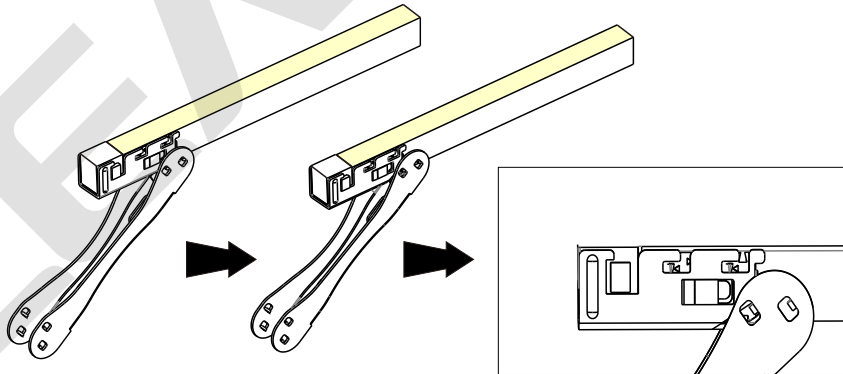
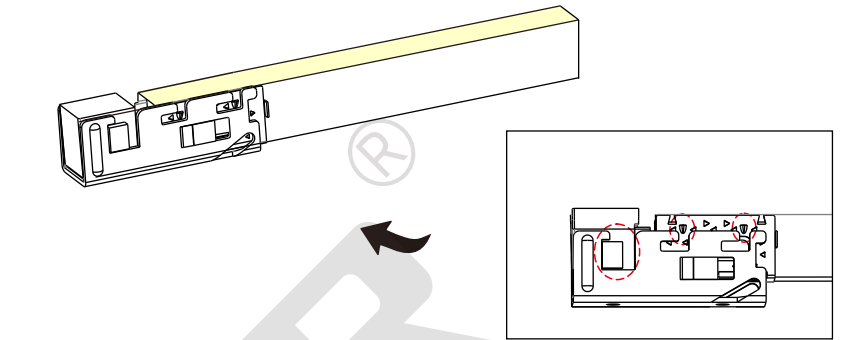


Fit the anti-skidding clip to the end of the light tightly and align with the light end edge.

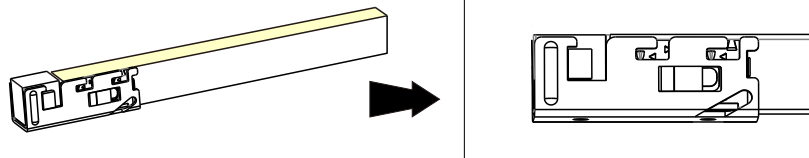
3.3. Installation of Tail Plug



3.4 Push the anti-skidding clip to the end until the two hook splinters on each side pop out to lock the U steel plate. Use the gripper to help tighten the piece.



Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.



16

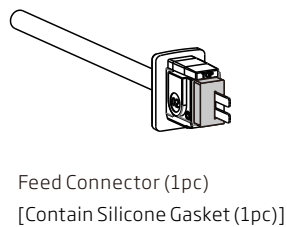
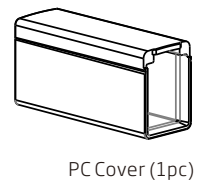
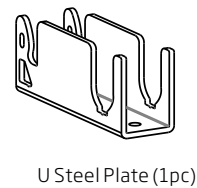
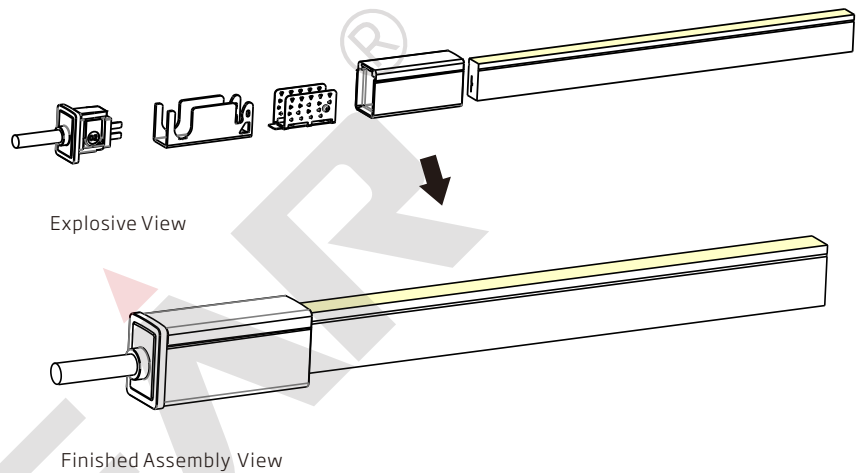
Snap Front Connector

Please ignore these steps if the front connector has been assembled before delivery.

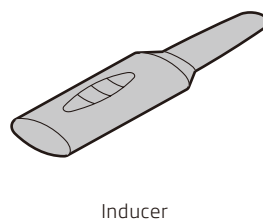
Note:

1. Never wet the assembly units or assemble with wet hands.
2. Please use the tools correctly.
3. Please pay attention to personal security when using tools.

1. Components of Front Connector



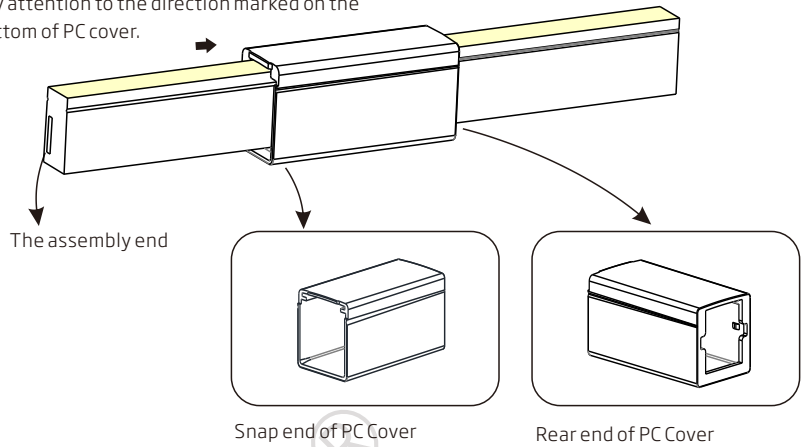
2. Tools



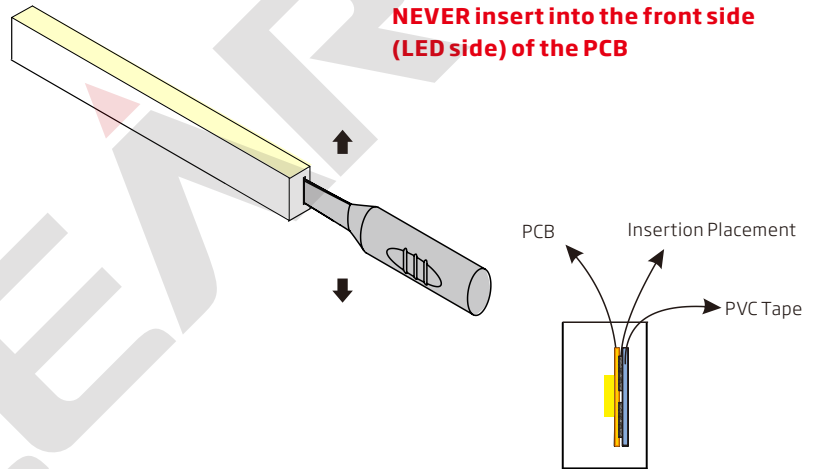
3. Installation Steps

3.1 Placing PC Cover

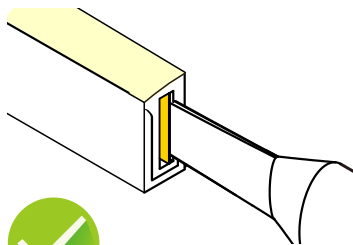
Pay attention to the direction marked on the bottom of PC cover.



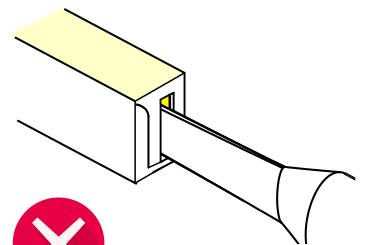
3.1 Inducing a Cavity for Feed Connector



Insert the inducer to the backside of PCB around 10~12mm, move the inducer up and down 3~5 times gently to create a small cavity.

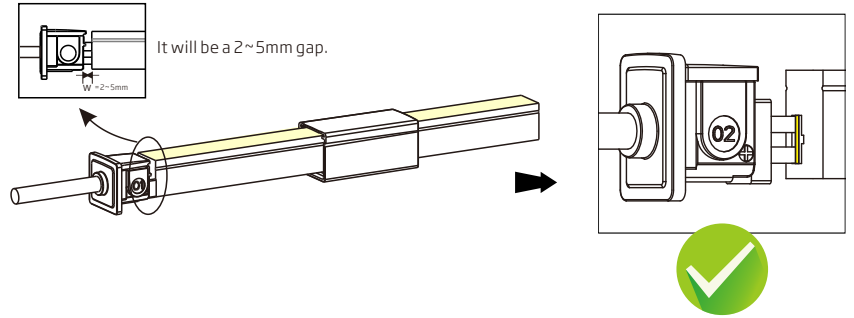


Insert the inducer into the backside of PCB

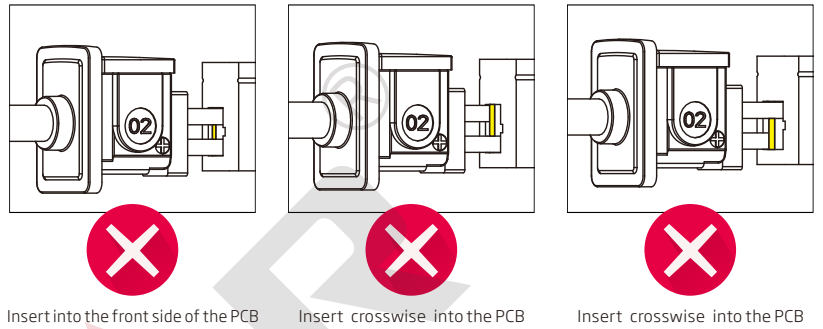


It will damage the light if insert into front side of PCB

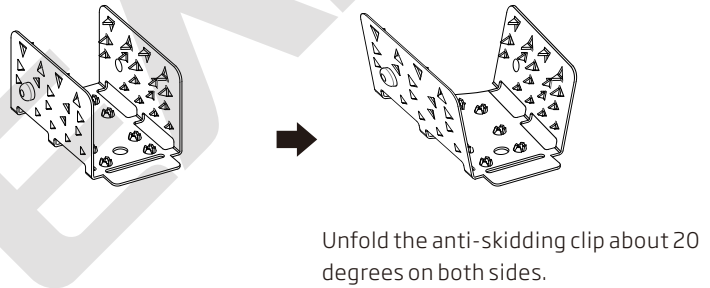
3.3 Inserting the Feed Connector



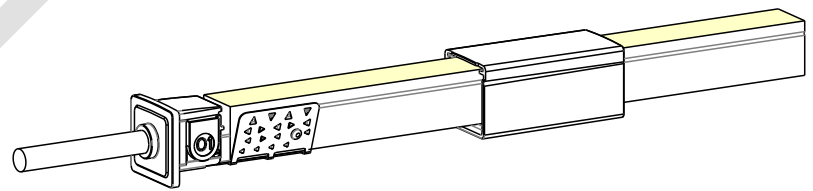
The following operations are prohibited:



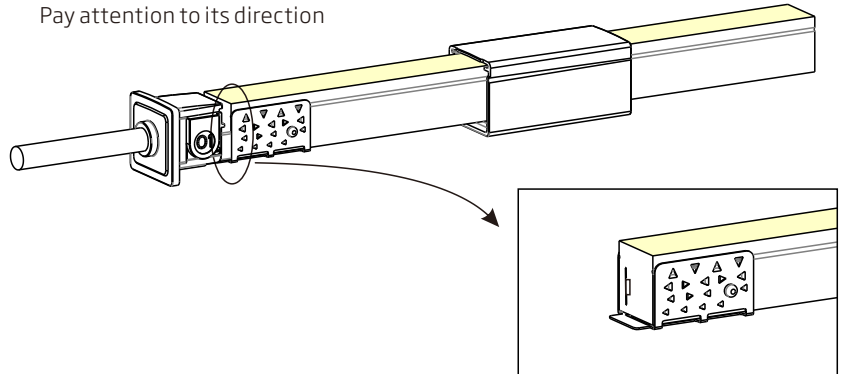
3.4 Treatment of Anti-skidding Clip



3.5 Installation of Anti-Skidding Clip

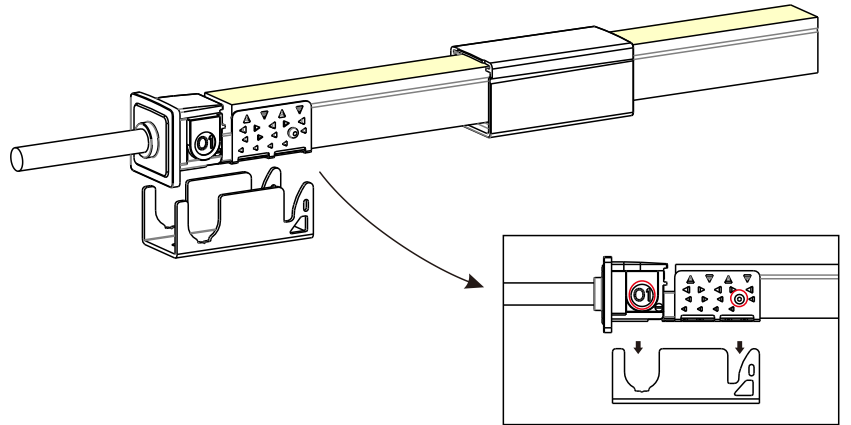


Place the anti-skidding clip onto the assembly end of the light.
Pay attention to its direction

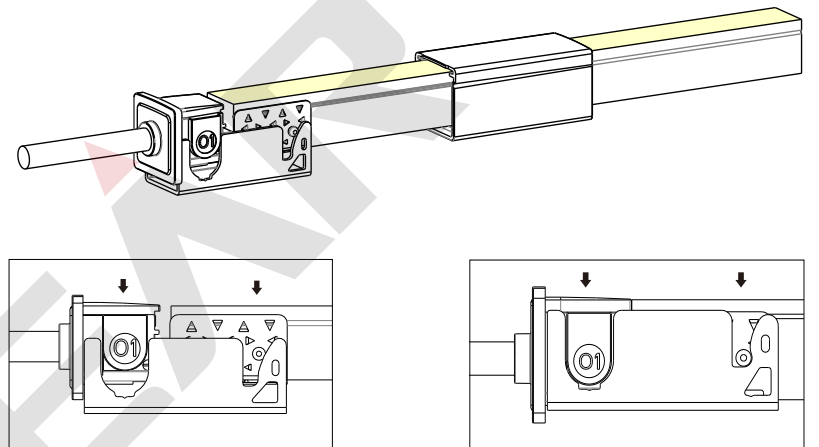


Fit the anti-skidding clip to the end of the light so that it wraps tightly and its brim is aligned with the cut edge on both sides.

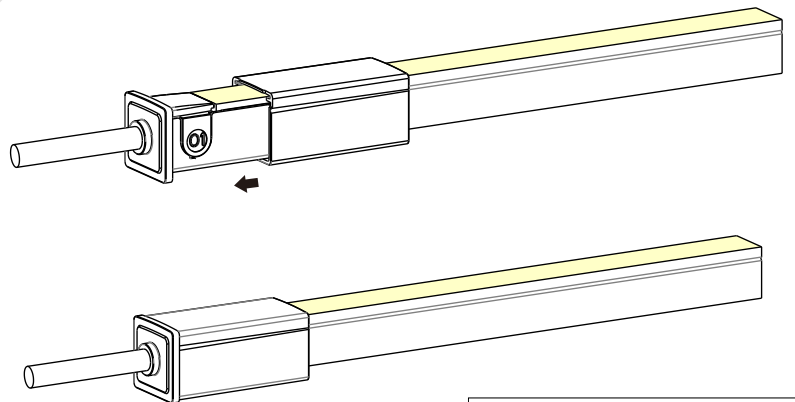
3.6 Installation of U Steel Plate and PC Cover



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.

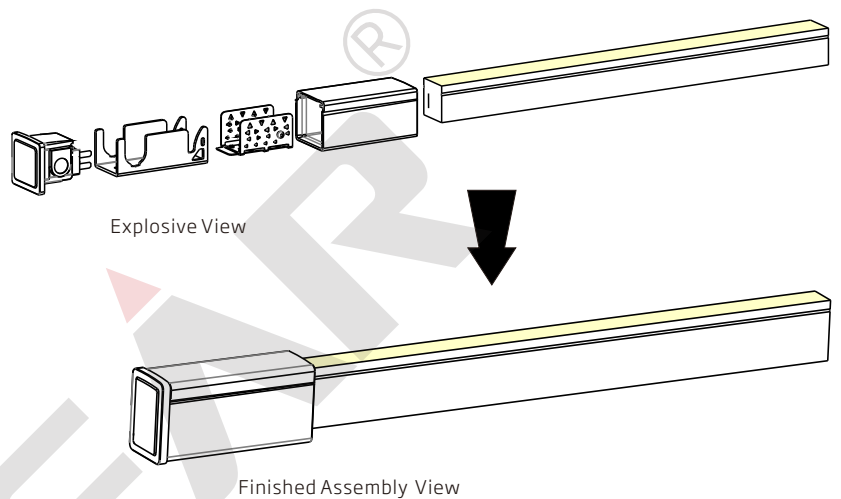


Slide back the PC cover till it snaps in the feed connector.

Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.

Snap End Cap

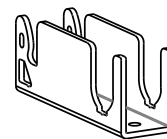
Please ignore these steps if the End Cap has been assembled before delivery.



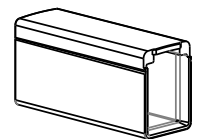
1. Components of End Cap



Anti-skidding Clip (1pc)



U Steel Plate (1pc)

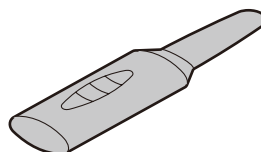


PC Cover (1pc)



Tail Plug (1pc)
[Contain Silicone Gasket (1pc)]

2. Tools

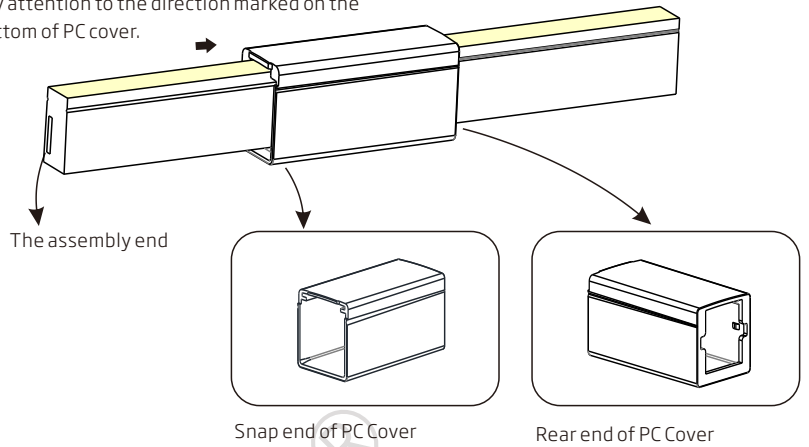


Inducer

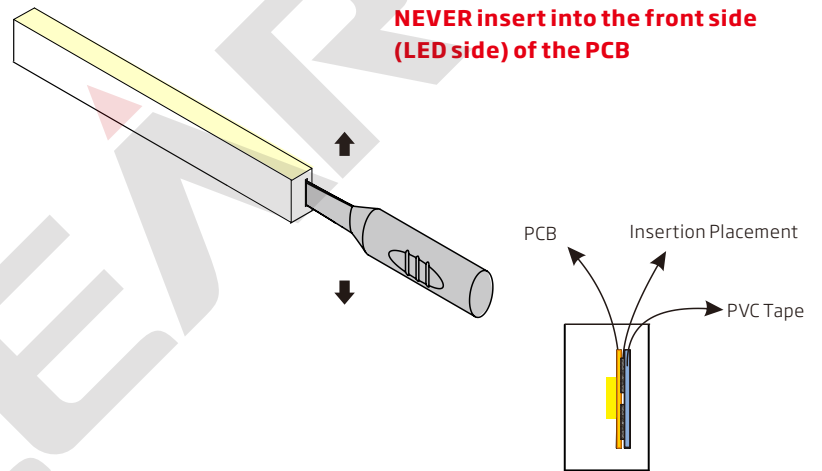
3. Installation Steps

3.1 Placing PC Cover

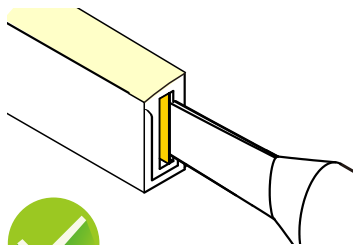
Pay attention to the direction marked on the bottom of PC cover.



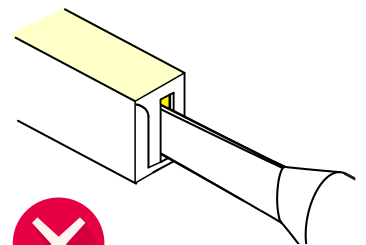
3.2 Inducing a Cavity for Tail Plug



Insert the inducer to the backside of PCB around 10~12mm, move the inducer up and down 3~5 times gently to create a small cavity.

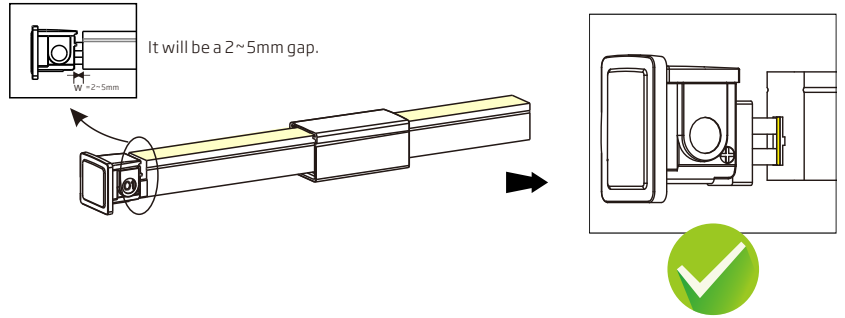


Insert the inducer into the backside of PCB

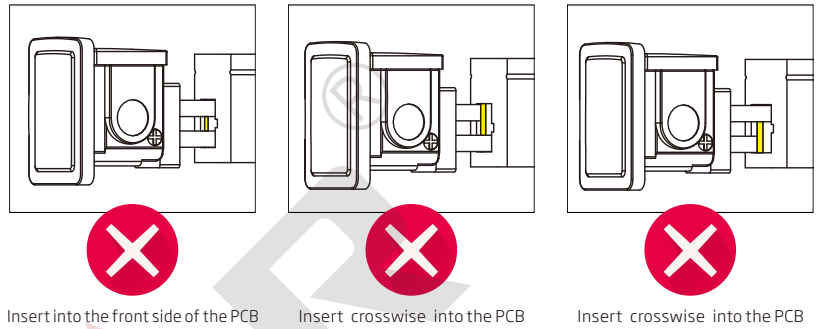


It will damage the light if insert into front side of PCB

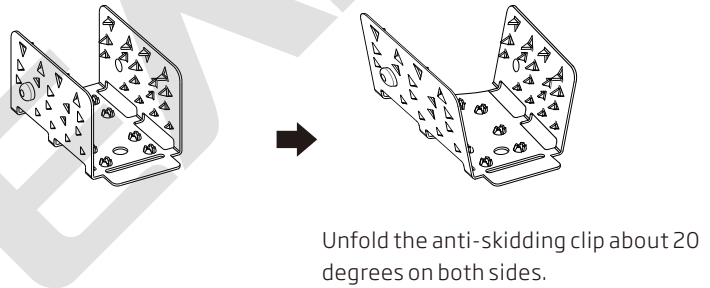
3.3 Inserting the Feed Connector



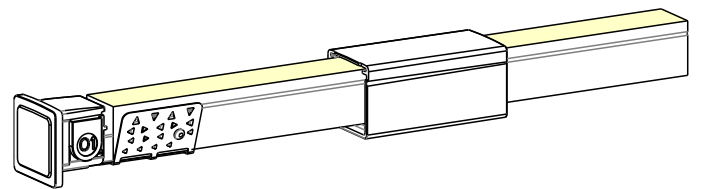
The following operations are prohibited:



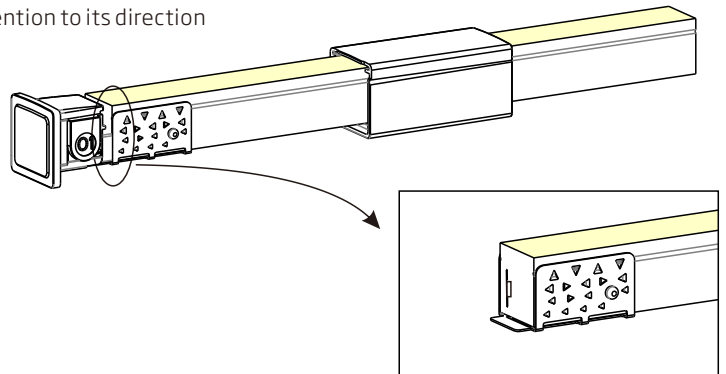
3.4 Treatment of Anti-skidding Clip



3.5 Installation of Anti-Skidding Clip

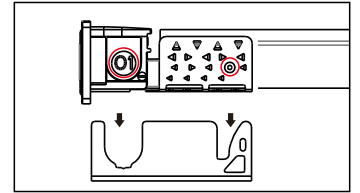
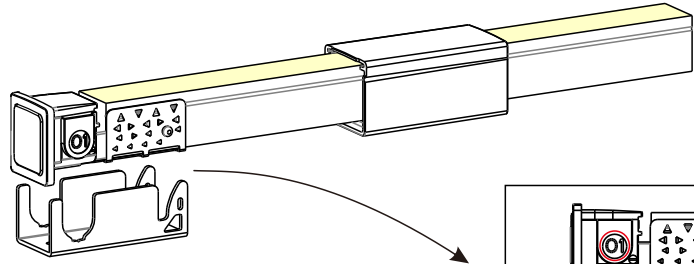


Place the anti-skidding clip onto the assembly end of the light.
Pay attention to its direction

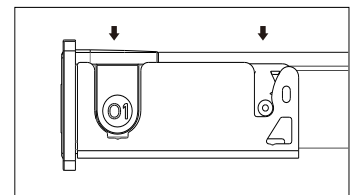
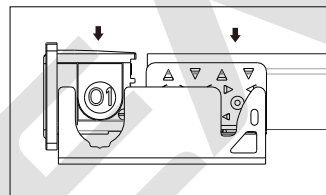
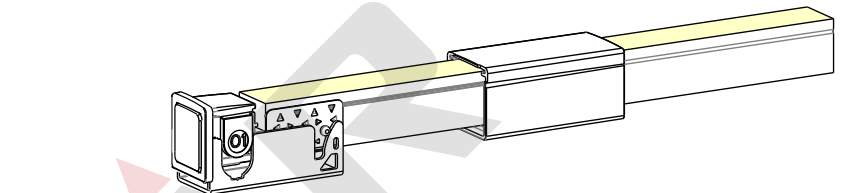


Fit the anti-skidding clip to the end of so that it wraps tightly and its brim is aligned with the cut edge on both sides.

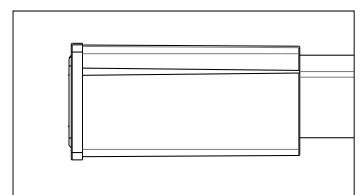
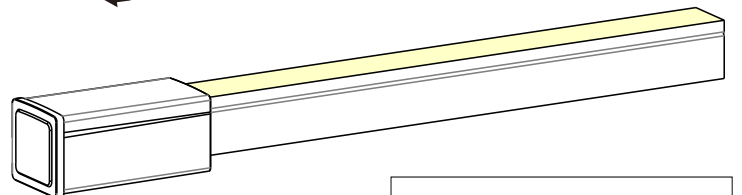
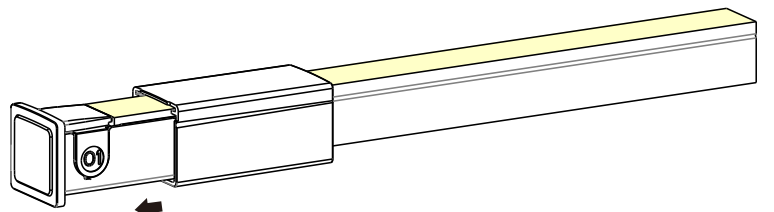
3.6 Installation of U Steel Plate and PC Cover



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.

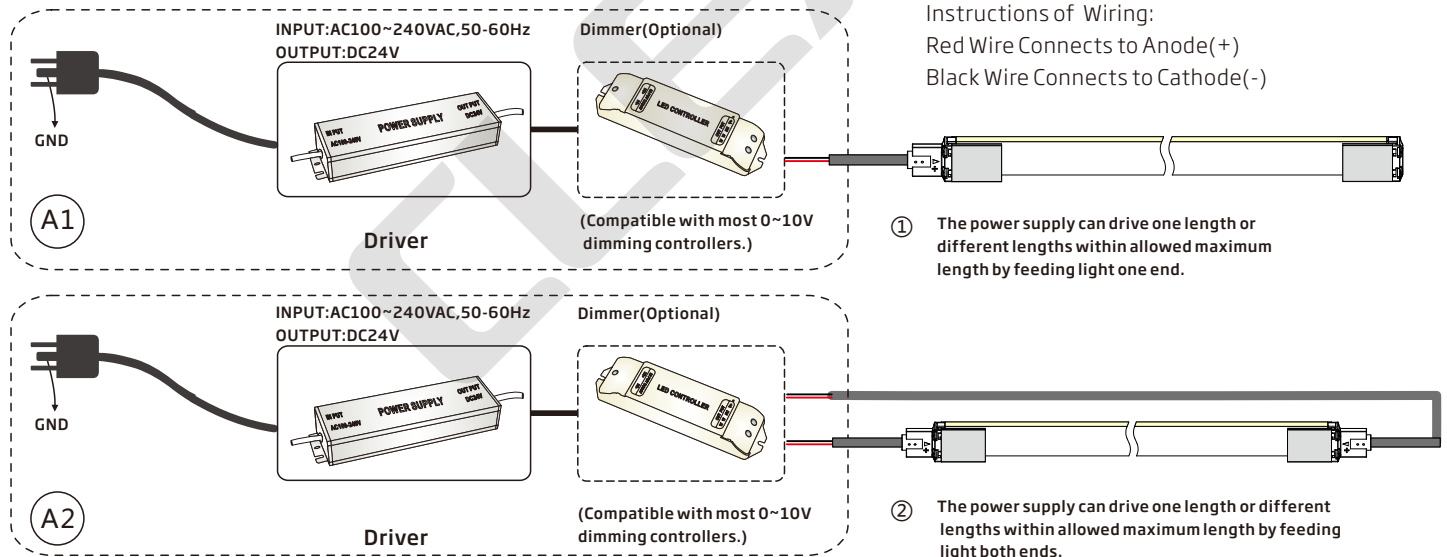
Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.

Diagram of Light Wiring

1. Monochrome Light Wiring

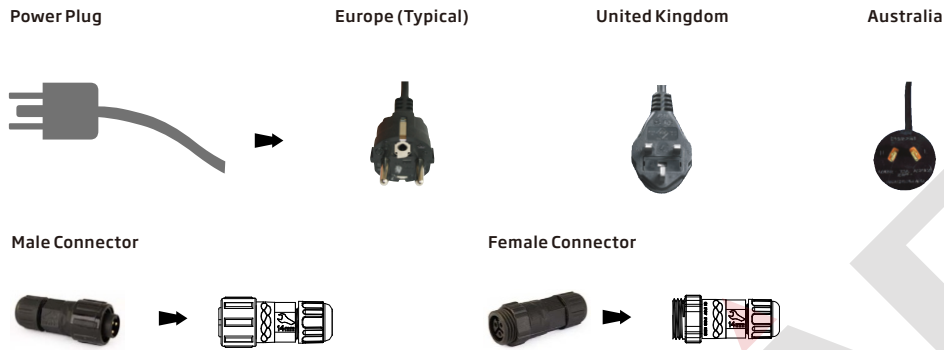
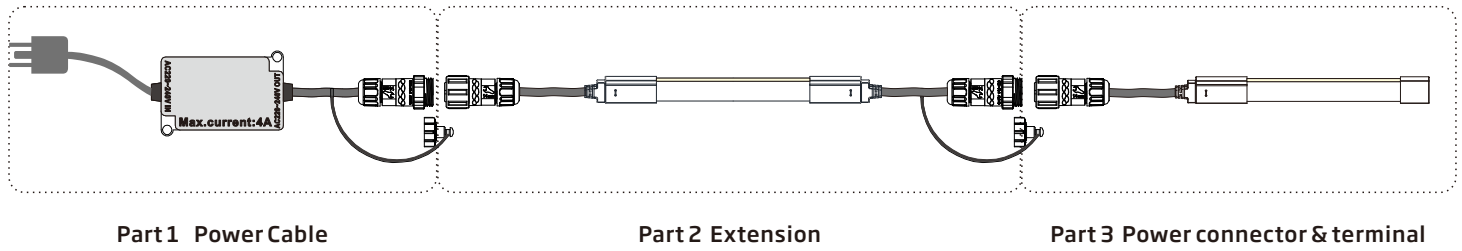
Note:

- 1.This LED Neon Flex Ribbon must be used in conjunction with DC24V power supply.
- 2.Always observe proper polarity.
- 3.Ensure to add 20% buffer when sizing power supply.
- 4.Ensure that the power cable carried current is no greater than 80% of its capacity.
- 5.To minimize the voltage drop and keep light consistency, position power supply nearest to the power feed end of LED Neon Flex Ribbon and keep the power line as short as possible.



Max.Continuous Length	Article No.	Single End Feed Red/Amber	Single End Feed Green/Blue/White	Double Ends Feed Red/Amber	Double Ends Feed Green/Blue/White
	C-FR-F10B-D24CV	20m	15m	40m	30m

2. High Voltage Light Wiring



Part 1: Power Cable

High voltage power supply with fuse box for not UL listed light
 Note : Please select the plug type based on your country electricity standard.
 Part 1 can power Part 2 or Part 3 directly.

Part 2: Extension

With injection-moulded connectors on both ends, Part 2 can be used for light extension.

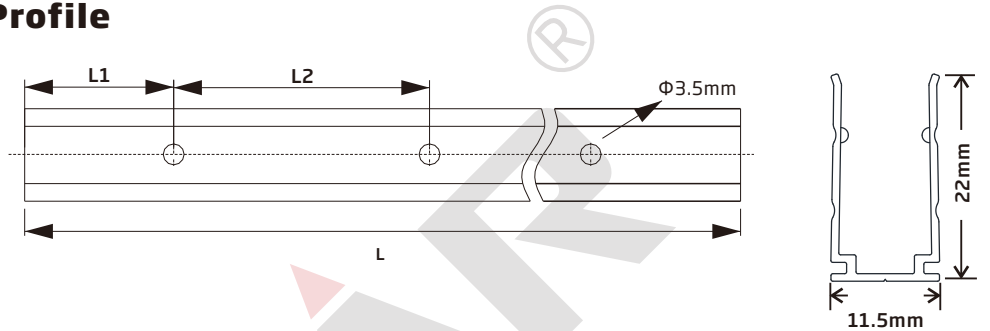
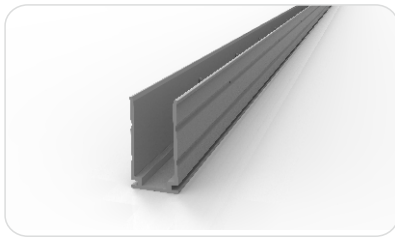
Part 3: Power connector & terminal

Connect with Part 1 directly.

Max.Continuous Length	Article No.	Single End Feed
	C-FR-F10B-AC230	80m

Mounting Profile Options

1. Standard Aluminum Profile

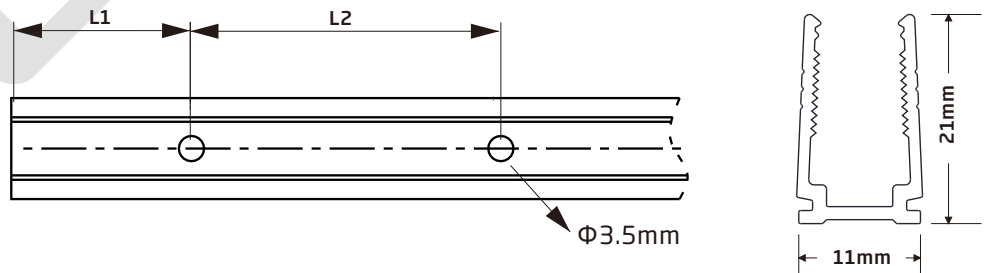
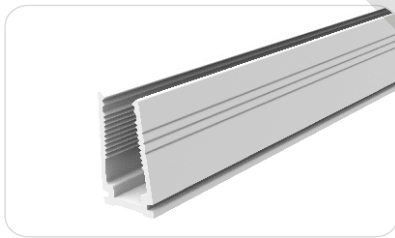


Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	Screw Hole(mm)	Hole Number	For Product
FR010	11.5*22	30	15	/	$\Phi 3.5$	2	F10
		50	25	/	$\Phi 3.5$	3	F10
		1000	100	200	$\Phi 3.5$	5	F10
		2000	100	200	$\Phi 3.5$	10	F10

2. Plastic Profile

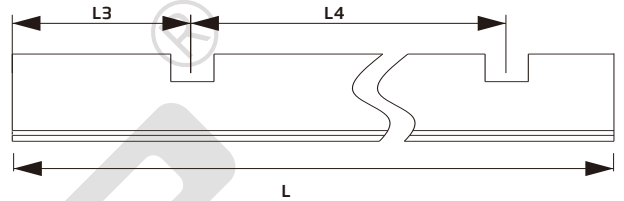
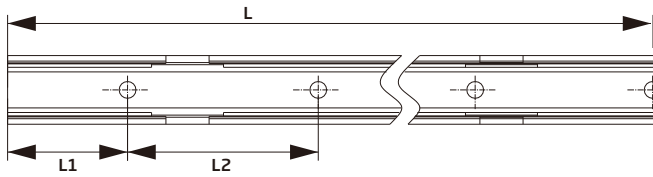
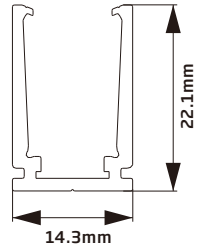
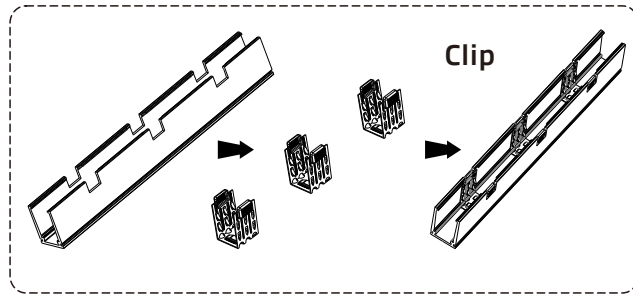
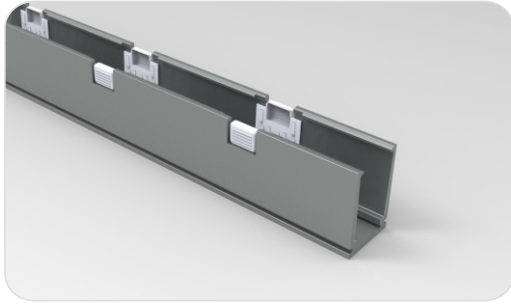


Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	Screw Hole(mm)	Hole Number	For Product
FR013	11*21	300	50	200	$\Phi 3.5$	2	F10
		500	50	200	$\Phi 3.5$	3	F10
		1000	100	200	$\Phi 3.5$	5	F10
		2000	100	200	$\Phi 3.5$	10	F10

3. Self-locking Aluminum Profile (Using with the clip)



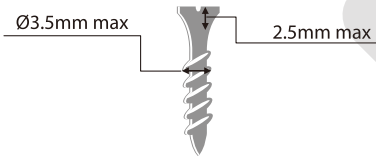
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Screw Hole(mm)	Hole Number	Clip Number	For Product
FR005	14.3*22.1	35	17.5	/	17.5	/	$\Phi 3.5$	1	1	F10
		50	25	/	25	/	$\Phi 3.5$	1	1	F10
		500	50	300	150	200	$\Phi 3.5$	2	2	F10
		1000	100	200	150	350	$\Phi 3.5$	5	3	F10
		2000	100	200	125	350	$\Phi 3.5$	10	6	F10

4. Installation Guide

4.1 Prepare for Installation



Screw



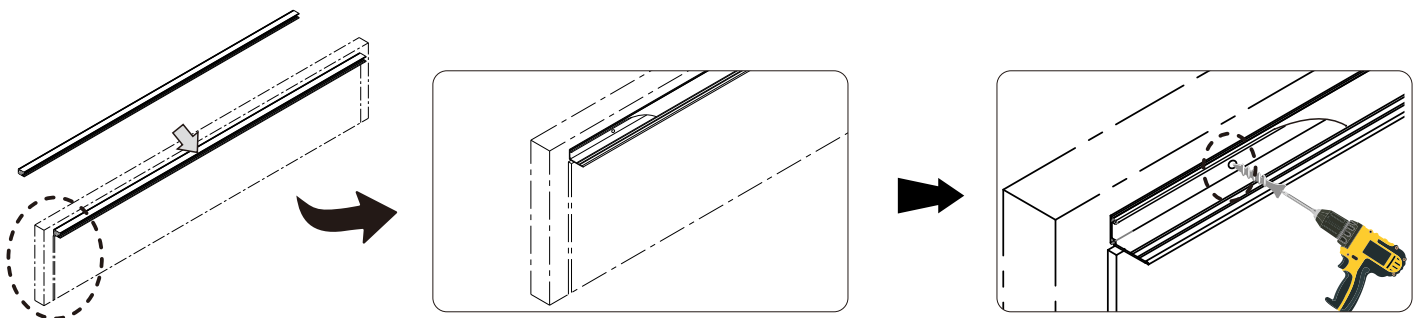
Screwdriver

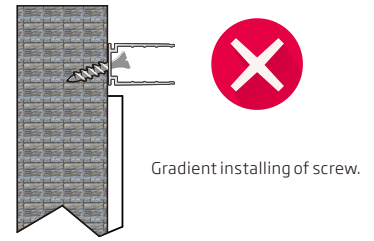
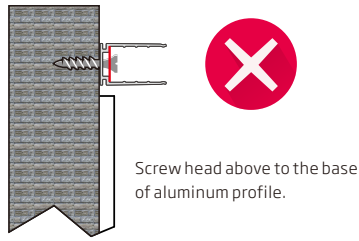
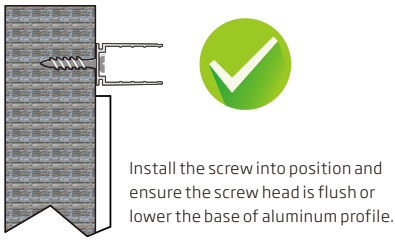
or



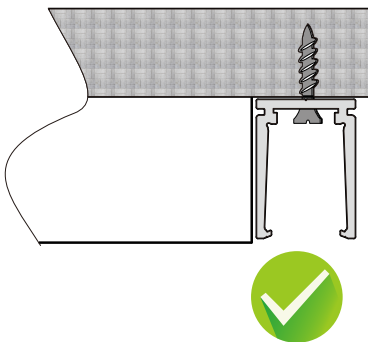
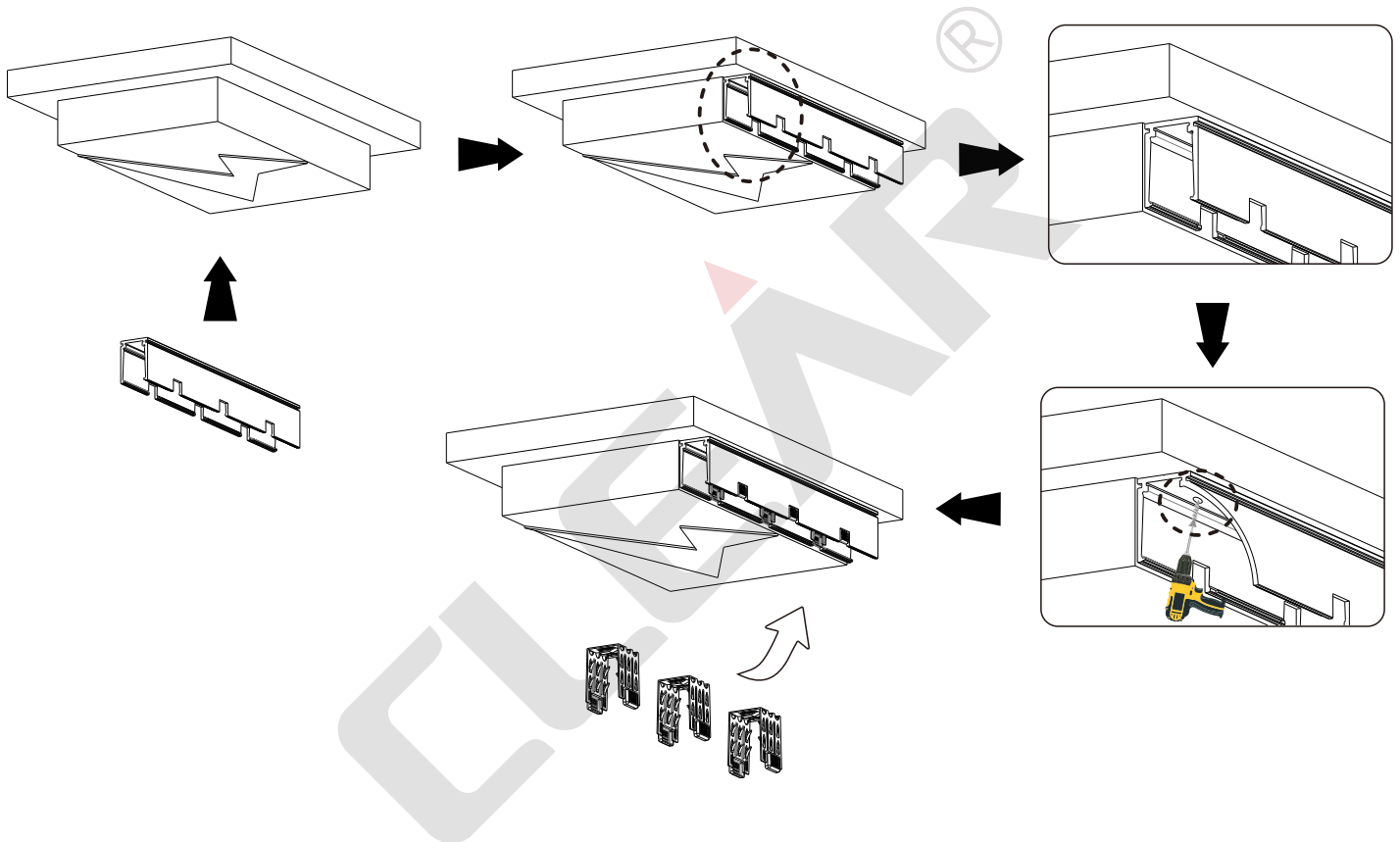
Electric Screwdriver

4.2 Correct Installation of Standard Aluminum Profile

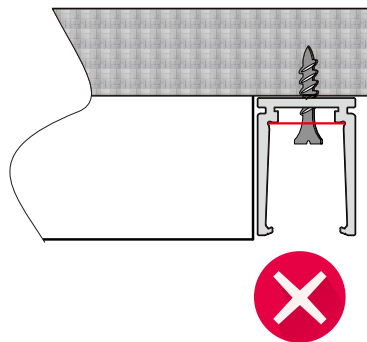




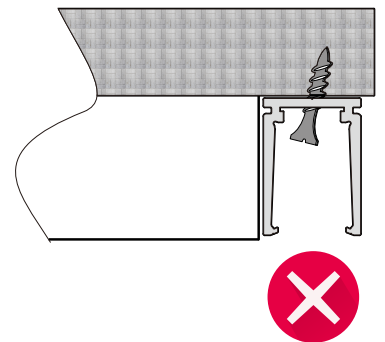
4.3 Correct Installation of Self-locking Aluminum Profile



Install the screw into position and ensure the screw head is flush or lower the base of aluminum profile.



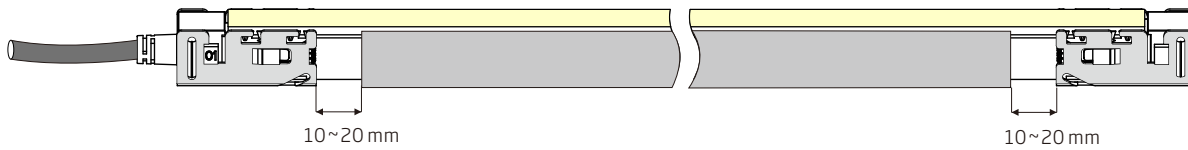
Screw head above to the base of aluminum profile.



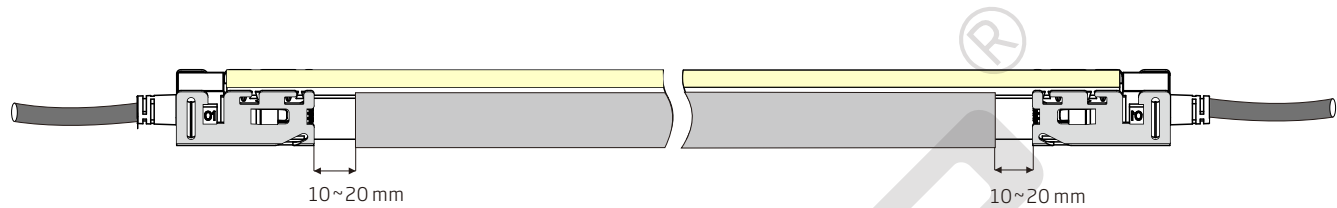
Gradient installing of screw.

5. Requirements and Cautions for Installation of Mounting Profile

5.1 For Light with Clasp Connector Fittings (Snap Connector also refer to the following cautions)

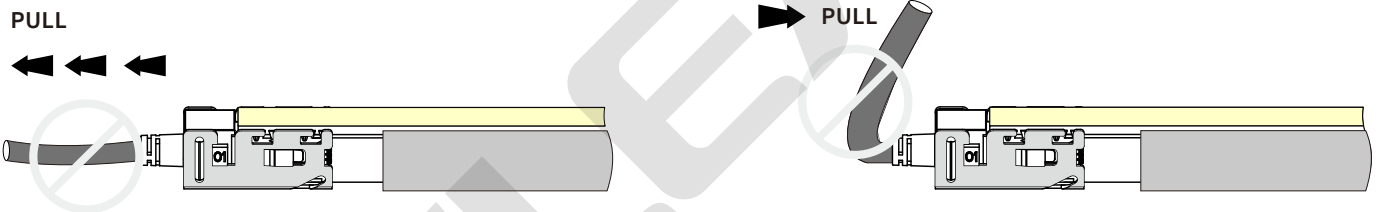


Ensure the supply cord is not subject to mechanical stress.
Keep 10-20mm distance between the end of aluminum profile and that of aluminum mounting piece.



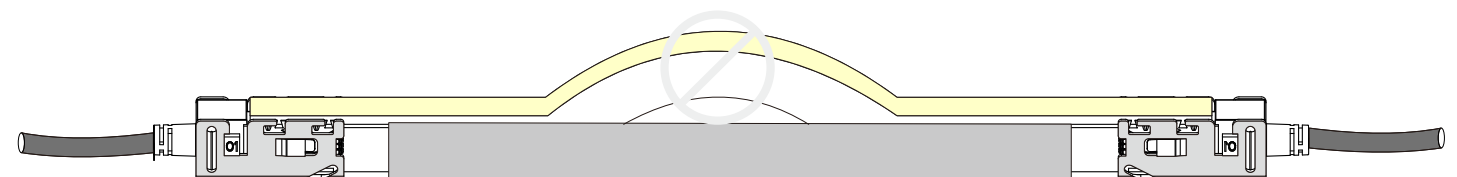
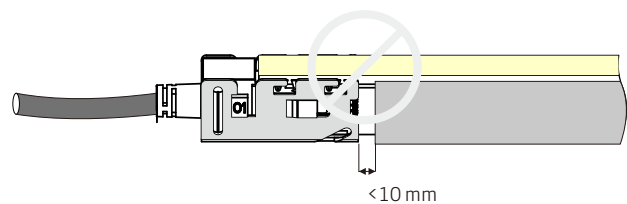
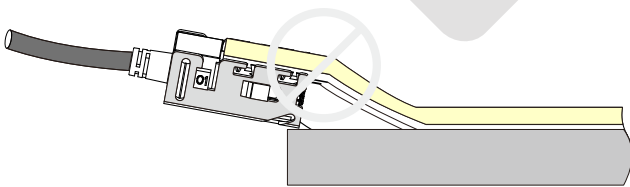
Mechanical stress on front connector cable shall be avoided.

It is forbidden to curl or pull the front connector cable with excessive force.



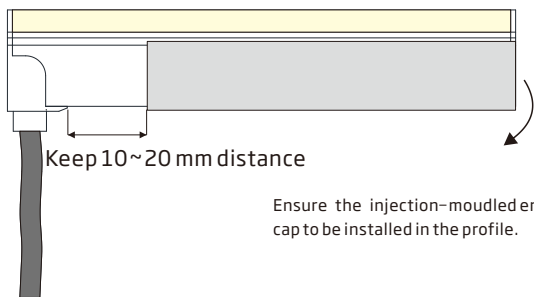
It is forbidden to let any connector aluminum mounting piece on the aluminum profile and make light deformation.

The space between aluminum profile and aluminum mounting piece less than 10mm is forbidden.



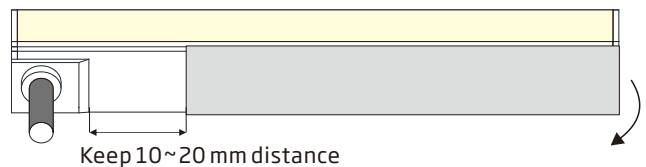
Install light in one direction. Don't let it choke in middle.

5.2 For Light with Injection-molded Connector Fittings



Keep 10~20 mm distance

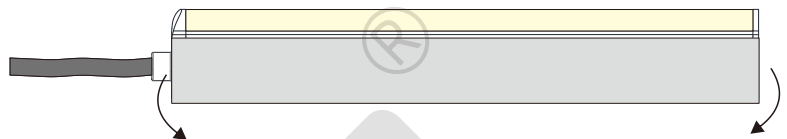
Ensure the injection-moulded end cap to be installed in the profile.



Keep 10~20 mm distance

Ensure the injection-moulded end cap to be installed in the profile.

Ensure the power cable is not subject to mechanical stress at the beginning.

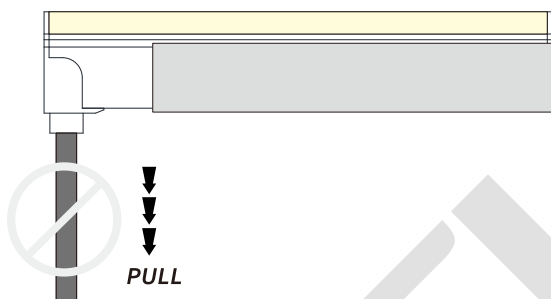


Ensure the injection-moulded front connector (top end) and end cap to be installed in the profile.

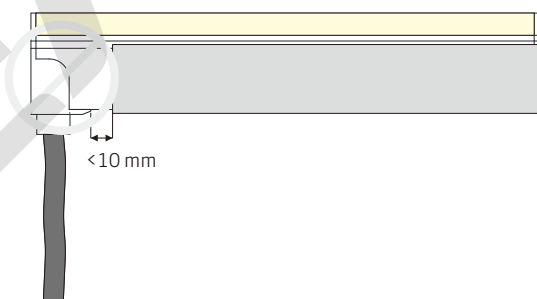


Mechanical stress on front connector cable shall be avoided.

The space between connector and mounting profile less than 10mm is forbidden.



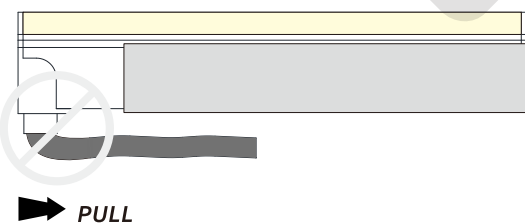
PULL



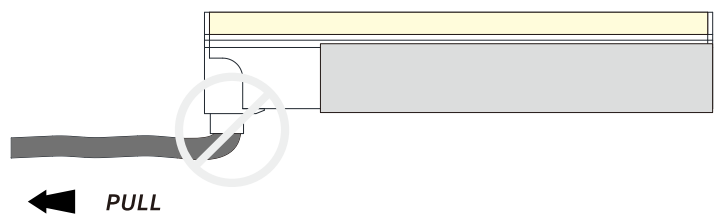
<10 mm

It is forbidden to curl or pull the front connector cable with excessive force.

It is forbidden to curl or pull the front connector cable with excessive force.

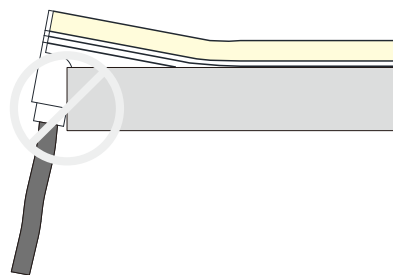
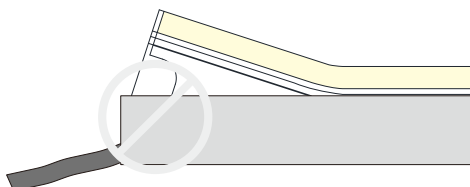


PULL



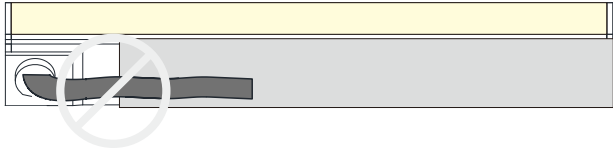
PULL

It is forbidden to force the injection-moulded end to fit into the mounting profile and make light deformation.



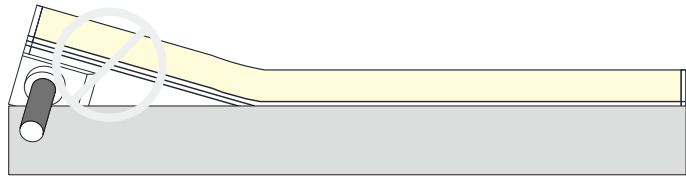
31

It is forbidden to curl or pull the front connector cable with excessive force.

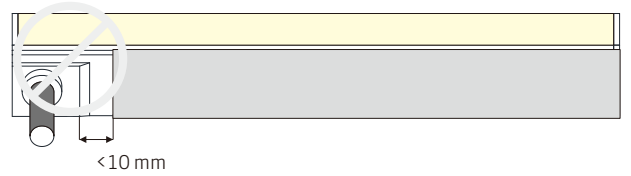


PULL

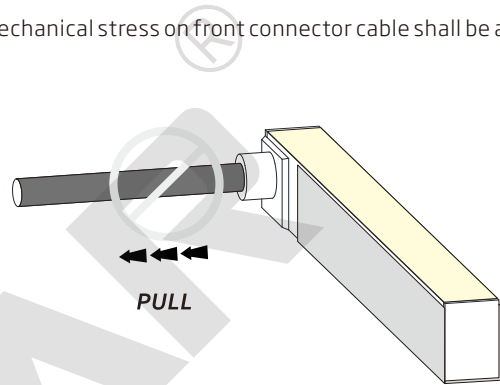
It is forbidden to force the injection-moulded end to fit into the mounting profile and make light deformation.



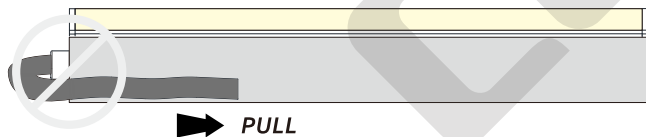
The space between connector and mounting profile less than 10mm is forbidden.



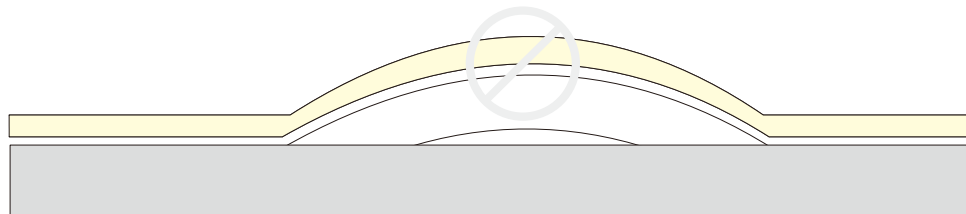
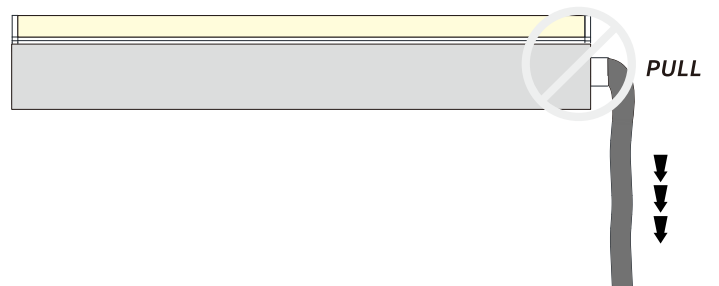
Mechanical stress on front connector cable shall be avoided.



It is forbidden to curl or pull the front connector cable with excessive force.



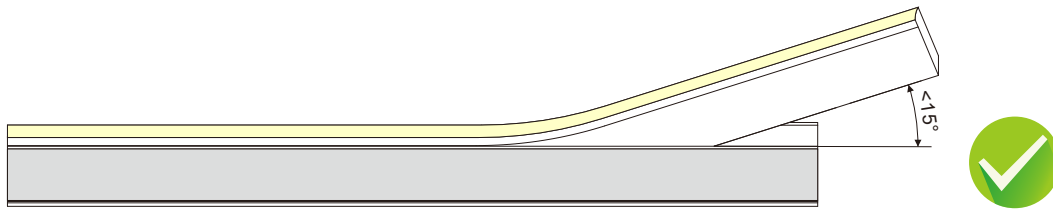
Mechanical stress on front connector cable shall be avoided.



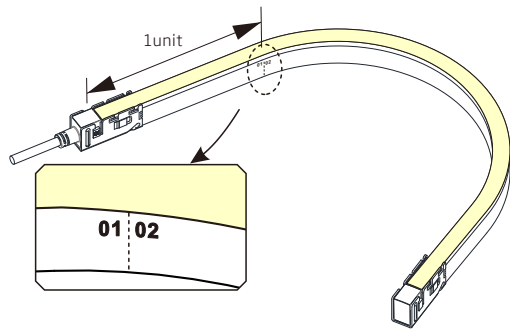
Install the light in one direction, no matter what kind of connector used. Don't let it choke in middle.



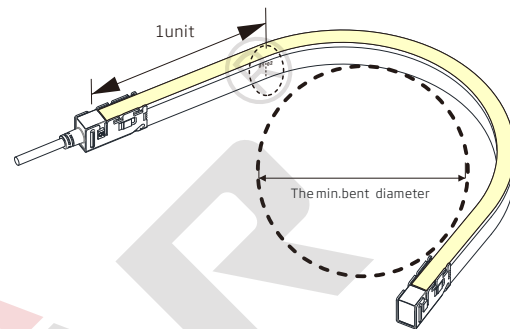
5.3 Bending in the Process of Installation



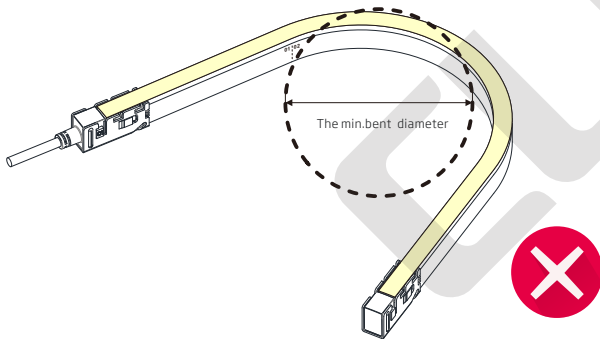
Installing angle should be less than 15 degree when pressing the light to the aluminum profile by hand.



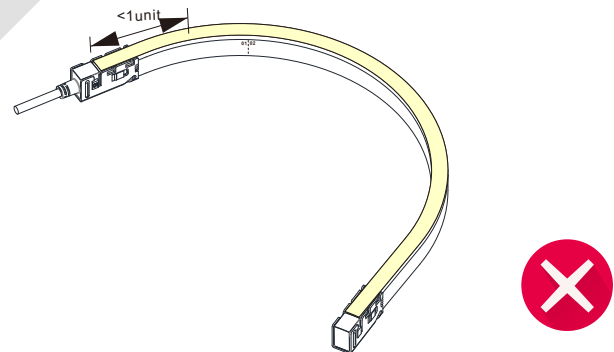
Please avoid bending at the first unit of the light.



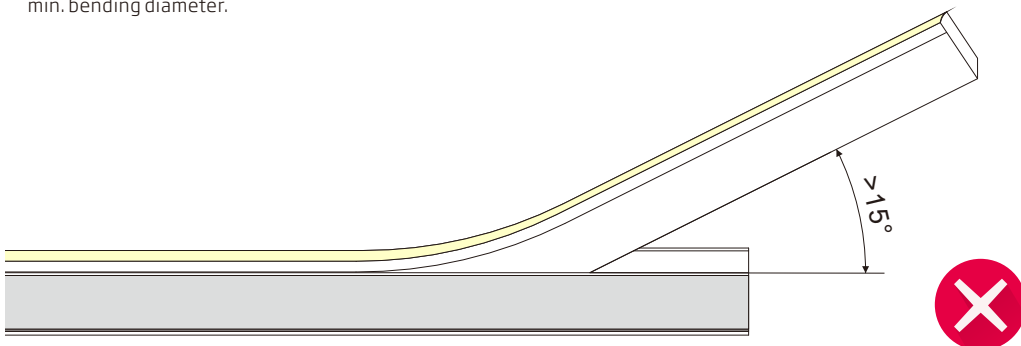
The light can bend in defined min. bending diameter or larger.



The circuit board and LEDs could be damaged if bending diameter is tighter than defined min. bending diameter.



Do not bend against the first or last unit of the light, otherwise it will lead to failure of connector waterproof.



The circuit board could be damaged if installing angle larger than 15 degree.

Troubleshooting

The whole light doesn't work.

Check power supply is plugged in, switched on and receiving power.

Check all light, dimmer or controller connections connection from the power supply to LED Neon Flex Ribbon.

Check polarity of all wire connections.

Make sure power supply output voltage is 24V DC.

Check front connector is inserted into backside of PCB and properly assembled.

Light emitting appear dim or dull at one end.

Check whether the output voltage of the power supply is lower than that of light.

Adjust the dimming level to the maximum.

Power from both ends or shorten lighting length to prevent voltage drop.

Light emitting appear excessive brightness.

Check whether the output voltage of power supply is higher than that of light.

Check whether the power grid is stable.

If the first segment doesn't work.

Cut not in indicated cutting line or not in a straight line. Cut out and remove the first segment.

Damage caused to the first LED when inserting the front connector to the right side of PCB. Cut out the first segment and properly assemble connector.

Water ingress due to poor connector assembly could cause a short circuit of first segment. Replace length with a new one.

External impact damage inside LEDs. Only use your hands to install LED Neon Flex Ribbon into aluminum profile.

LED Neon Flex Ribbon is flashing on and off.

Check the power supply to ensure it supports the length you are using. Select the appropriate strength or install an additional power supply to support your installation.

Check power supply output voltage is stable.

Check front connector is properly installed with good contact with the copper PCB.

Check proper controller is connected for light working.

Limited Warranty

Clear Lighting® hereby warrants, to the original purchaser, Clear Lighting® finished products to be free of manufacturing defects in material and workmanship for a standard period of 3 Years unless otherwise stated from the date of purchase, with an extended warranty available upon request. This warranty shall be valid only if the product is purchased from Clear Lighting®. During the warranty period, you are entitled to have the products repaired or replaced if the products fail to be of acceptable quality and damage under normal use. It is the owner's responsibility to establish the date and warranty terms by acceptable evidence, at the time service is sought.

Warranty is applied by the Clear Lighting® in China. Clear Lighting® retains the right to review the justification of the claim. The limited warranty is subjected to the following additional conditions:

- a. The product is properly handled, installed and maintained according to official latest instructions or manual of Clear Lighting® and applicable regulations and standards.
- b. Purchaser must notify Clear Lighting® in writing of 8D CORRECTIVE ACTION REPORT to specially state the defect in question no later than 15 days after they were detected. Acceptance of the product shall not be denied on the grounds of insignificant defects. Claims for defects notified belatedly are excluded.
- c. A copy of the purchase invoice of the concerned products must be attached to submit to Clear Lighting®.
- d. The concerned products sample shall be returned back as required quantity to Clear Lighting® for inspection upon request, and sent to the following address:

Clear Lighting Co., LTD
Tiantou village, Shatian Town,
Huiyang District, Huizhou,
Guangdong Province,
China
516269

This is not a service contract, and this warranty does not include maintenance, cleaning or periodic check-up. Parts not covered by this warranty include: fuses, external power supplies, third party items not manufactures by Clear Lighting®. During the period specified above, if any product covered by this limited warranty, Clear Lighting® determines to its satisfaction that such product failed to satisfy this warranty, Clear Lighting® will, at its own discretion, repair or replace the product or the defective part thereof. For purpose of clarify, "repair or replace the product or the defective part thereof" does not include any removal or reinstallation costs or expenses, including, without limitation, any labor costs or expense, shipping costs to return non-confirming products or any damages that may occur during the return of product to Clear Lighting®. A refund will not be provided for any warranty claim, but the purchaser may, at its discretion, require deducting the original purchase price of defective product or part from future purchase orders.

If Clear Lighting® chooses to replace the product and is not able to do so because it has been discontinued or is not available, Clear Lighting® may replace it with a comparable product. Clear Lighting® reserves the right to use new, reconditioned, refurbished, repaired, or remanufactured products or parts in the repair or replacement of any product covered by this limited warranty. All products covered by this warranty were manufactured after January 1, 2012, and bear identifying code to that effect.

Clear Lighting® reserves the right to make changes in design and/or improvements upon its products and accessories without any obligation to include these changes in any products theretofore manufactured.

Exclusion of Warranty:

- a. Warranty period has expired.
- b. Legal proof-of-purchase invoice or PO numbers are not provided, or are reasonably believed to have been forged or tampered with.
- c. Damage caused by improper installation, wiring, storage, transportation, incorrect use, bending or operation not in accordance with the official latest instructions or manual.
- d. Damage caused by unauthorized modification, dissection, soldering, or any deliberate damage or losses.
- e. Damaged caused by the carrier in-transit, which will be handled under separate terms (Purchaser's designated consignee is responsible for all eight claims; Clear Lighting® will be available to assist in such matters if proving forward service).
- f. Accessories or attachments to the product that are not supplied or approved by Clear Lighting® and led to the damage.
- g. The product is not used for the purpose for which designed or if any repairs, alterations or maintenances are made by any person not authorized by Clear Lighting®.
- h. Product silk printed serial numbers, crimped waterproof ring show signs of tampering or removal.
- i. Conditions demonstrating misapplication, under/over voltage situations, extreme environmental conditions beyond those defined in the product specification.
- j. Abrasions and natural appearance variations (i.e. dusty, fouling, etc.) that do not affect the function of the product.
- k. Direct or indirect losses caused by force majeure (i.e. vandalism, natural disaster, warfare, acts of terrorism, riots, fire, explosion, etc.).

Freight

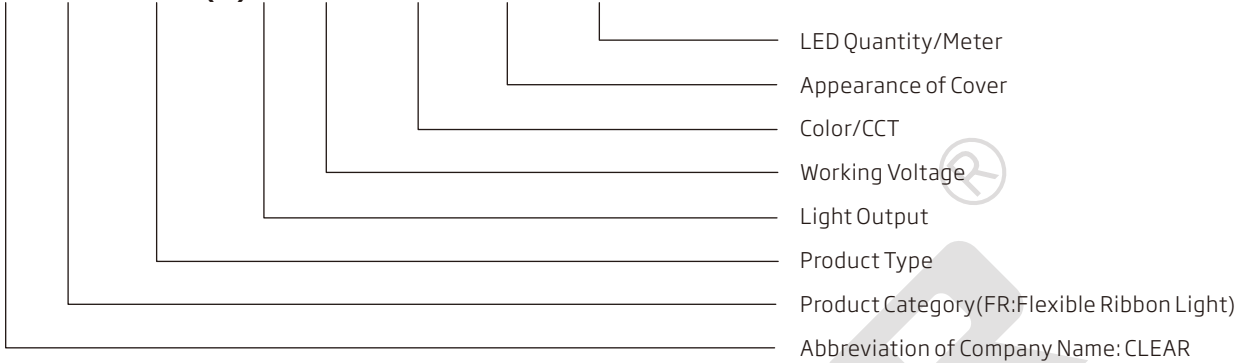
Transportation cost for return product will be carriage paid (at the cost of the claimant). If the product was found to be defective after inspection, Clear Lighting® will reimburse the freight cost by deducting it from future order and bear the cost of replacement or repaired product delivery (Clear Lighting® will, at its own dissection, select the shipping way); if the product was found not to be defective or exclusion of warranty, the claimant shall bear all the return expenditures and need to re-purchase the product if requires replacement.

This warranty is the only written warranty applicable to Clear Lighting® Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

Appendix

1. Product Naming Convention

C-FR-XXX(-)X-XX-XXX-XX-XXX



For Example: C-FR-F10B-D24CV-2700-WM-72

2. Correlated Color Temperature (CCT)

ANSI STANDARD

Nominal CCT Categories

Nominal CCT	Target CCT and tolerance(K)	Target Duv and tolerance
2700K	2725 ± 145	0.000 ± 0.006
3000K	3045 ± 175	0.000 ± 0.006
3500K	3465 ± 245	0.000 ± 0.006
4000K	3985 ± 275	0.001 ± 0.006
4500K	4503 ± 243	0.001 ± 0.006
5000K	5028 ± 283	0.002 ± 0.006
5700K	5665 ± 355	0.002 ± 0.006
6500K	6530 ± 510	0.003 ± 0.006
Flexible CCT (2700-6500K)	T²+ΔT³	DUVT⁴±0.006

Remark:

- 1). Six of the nominal CCTs correspond to those in the fluorescent lamp specification 2700K,3000K(Warm White),3500K(White),4100K(Cool White),5000K and 6500K(Daylight), respectively.
- 2). T is chosen to be at 100K steps (2800,2900,...,6400K), excluding, hose eight nominal CCTs listed in Table 1.
- 3). ΔT is given by $\Delta T = 0.0000108 \times T^2 + 0.0262 \times T + 8$.
- 4). Duv is given by $Duv = 57700 \times (1/T) - 44.6 \times (1/T) + 0.0085$

3. Recommendation of Maximum Extension Wire Length According to Light Power



Note: You can adjust the wire length under the real circumstances.

Recommendation of Maximum Extension Wire Length According to Light Power

WattS of Light	22AWG/0.34mm ²	20AWG/0.53mm ²	18AWG/0.82mm ²	17AWG/1.04mm ²	16AWG/1.38mm ²	14AWG/2.07mm ²	12AWG/3.29mm ²	10AWG/5.62mm ²
10W	36m	60m	100m	120m	140m	240m	400m	600m
20W	18m	30m	50m	60m	70m	120m	200m	300m
30W	12m	20m	30m	38m	45m	80m	130m	200m
40W	8m	15m	22m	28m	35m	60m	95m	140m
50W	6m	12m	18m	22m	28m	48m	75m	105m
60W	5m	10m	15m	18m	22m	36m	60m	88m
70W	/	8m	12m	14m	18m	30m	50m	72m
80W	/	6m	10m	11m	14m	24m	40m	58m
90W	/	4m	7m	8m	10m	18m	30m	45m
100W	/	/	5m	6m	7m	12m	22m	32m
110W	/	/	3m	4m	5m	8m	15m	22m
120W	/	/	2m	2.5m	3m	0m	8m	12m

Note: The extension wire length should be smaller than the recommended values, and the value doesn't include the 0.3m cable connected to the front connector. Ensure the reliability of wire connection and avoid wire connection if possible.

4. Loading Chart

Type.	Rated Power /mtr	Power Supply							
		35w	60w	75w	80w	100w	120w	150w	185w
F10	3.5W	8m	14m	17m	18m	23m	27m	34m	42m
	5W	6m	10m	12m	13m	16m	19m	24m	30m
Energizing Way		DC input 				DC input  DC input			
		01/02				01 02			

Note: 1. These are the light maximum recommended running length subject to selected power supply.

2. For example: it is recommended to use one 80W power supply loading maximum 18m light (3.5w/m) or maximum 13m light (5w/m) by energizing the light one end.

