

NE-SQ-HB

# USER MANUAL

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



ARTIST OF LIGHT  
LED NEON FLEX RIBBON



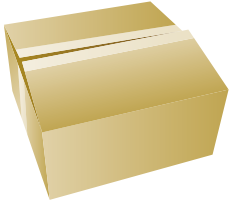
Version No. : V2.0

# Table Of Contents

Unpacking .....	03
Basic Parameters .....	04
Cautions .....	05
Instructions for Cutting Light .....	06
Snap Front Connector .....	07
Snap End Cap .....	11
Swivel Front Connector .....	15
Swivel End Cap .....	17
Diagram of Light Wiring .....	19
Mounting Profile Options .....	21
Troubleshooting .....	32
Limited Warranty .....	33
Appendix .....	34

## Unpacking

### White Box Packaging



1



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3



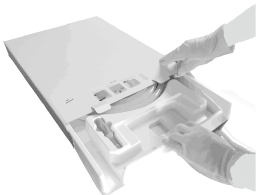
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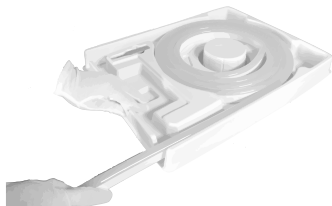
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6



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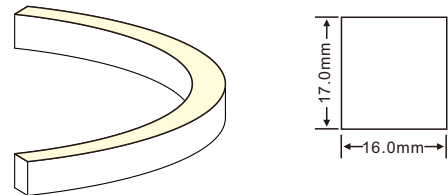


8



# Basic Parameters

1. Dimension: 16\*17mm
2. Min. bend diameter: 300mm
3. Protection rate: IP68/IP67/IP20
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.  
Connector termination required after cutting to achieve appropriate IP Rating.
6. Easy to use with a range of accessories for joining, terminating, mounting and powering.
7. Long lifespan: 5 years.
8. Environmental Working Temperature: -20°C~45°C
9. Environmental Installation Temperature: 0°C~45°C



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

Product Type: NE-SQ

	Light Colour	Appearance of Cover <sup>*</sup>	LED Qty/mtr	Working Voltage	Rated Power/m	LED Spacing	Min.Cutting Length	Max.Running Length <sup>*</sup>
B(T)	R/A	WM	108LEDs	D24CC	7.2W	9.26mm	83.3mm(9LEDs)	15m for single end feed
								30m for double ends feed
	G/B/W	WM	108LEDs	D24CC	12W	9.26mm	55.56mm(6LEDs)	10m for single end feed
								20m for double ends feed
D(T)	WW+W	WM	144LEDs	D24CV	12W	13.89mm	83.3mm(12LEDs)	10m for single end feed
								20m for double ends feed

## NOTE: Appearance of Cover<sup>\*</sup>

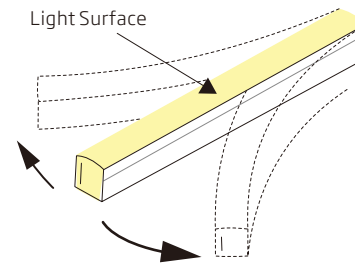
WM=White PVC Housing<sup>1</sup>+Milky Light-emitting Surface<sup>2</sup>

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

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

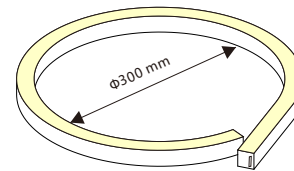
# Cautions

1. Before making any cuts, installation, maintenance or connection, be sure the mains is disconnected!
2. All connectors should be properly installed to achieve the appropriate level of IP, IP rating can NOT be achieved without connector termination.
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 inserting front connector and energizing the mains power.
5. Connect and cut this light correctly. Any wrong operation will damage this light.
6. Using qualified DC power supply.
7. Please correctly use and bend this flex ribbon light, see the figures on the right.
8. Do not operate light when ambient temperature exceeds the range of specified temperature in User Manual.
9. Do not energize the light over 30 minutes in coil packaging.
10. Do not mix the four colours (R,G,B,W) in full load simultaneously.

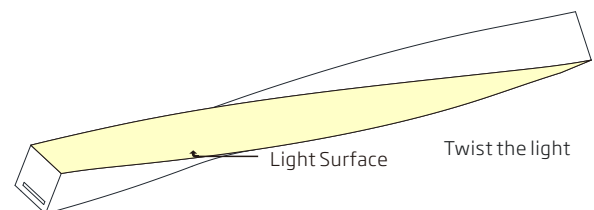


(HB)Horizontal Bending

Bend the light according to above illustration (same printing mark on the side of light)



Do not bend smaller than allowed minimum bend diameter 100mm.



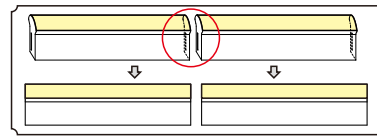
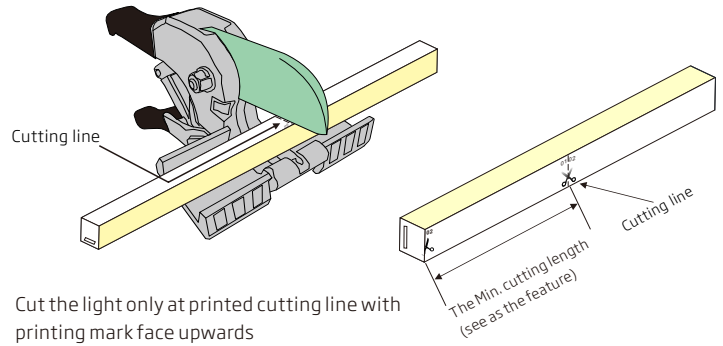
WARNING: The above wrong approaches will damage the light.



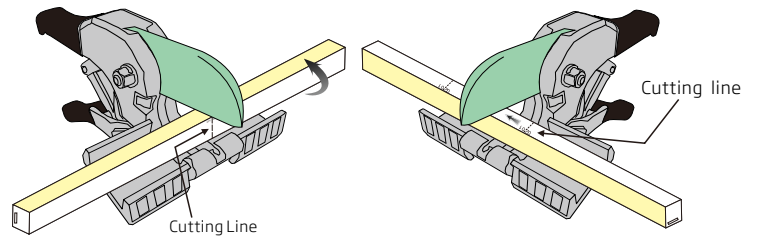
# Instructions for Light Cutting

## 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



The cutting surface must be flush and smooth.

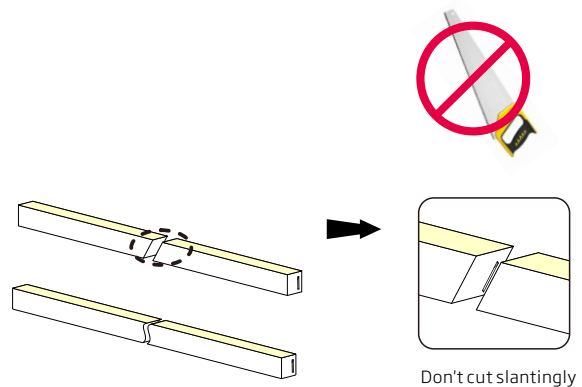


Printing mark should be faced upwards

Cutting can only be made at the printed cutting line

Please use a smooth and sharp cutter for cutting when the dedicated cutter is not available, any rusty or jagged cutter is prohibited.

**Note: Waterproof may not achieved with the following situations.**



# Snap Front Connector

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

Note:

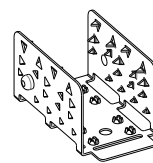
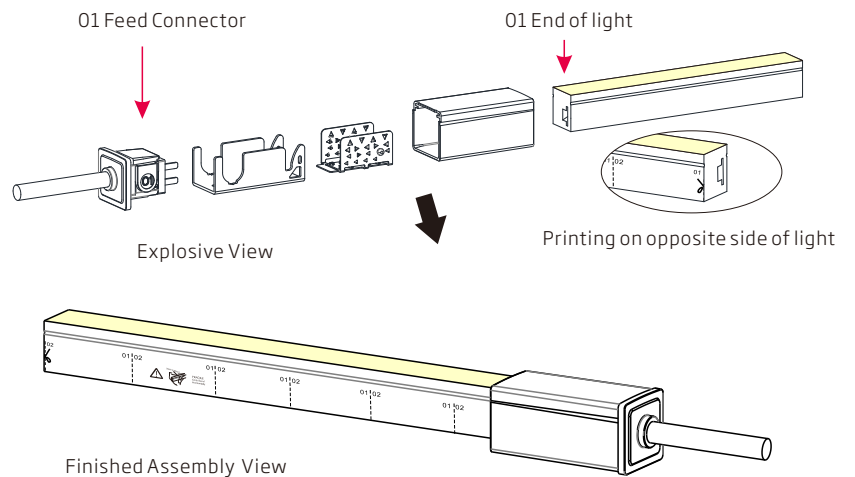
1. Repeated assembly or reuse of the connector may result in waterproof failure.

## 1. Components of Front Connector

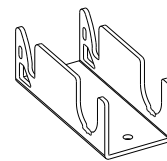
Note:

The light ends are marked with either an 01 or an 02. Always make sure to use an identically labeled connector for the appropriate direction.

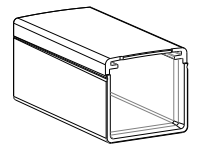
## 2. Tools



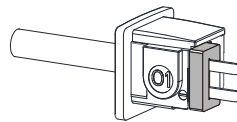
Anti-skidding Clip (1pcs)



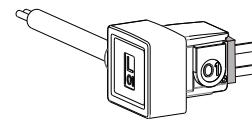
U Steel Plate (1pc)



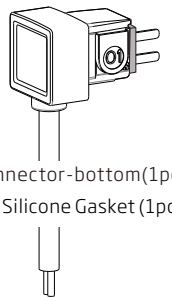
PC Cover (1pc)



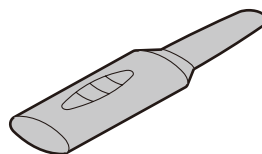
Feed Connector-top end(1pc)  
[Contain Silicone Gasket (1pc)]



Feed Connector-side(1pc)  
[Contain Silicone Gasket (1pc)]



Feed Connector-bottom(1pc)  
[Contain Silicone Gasket (1pc)]

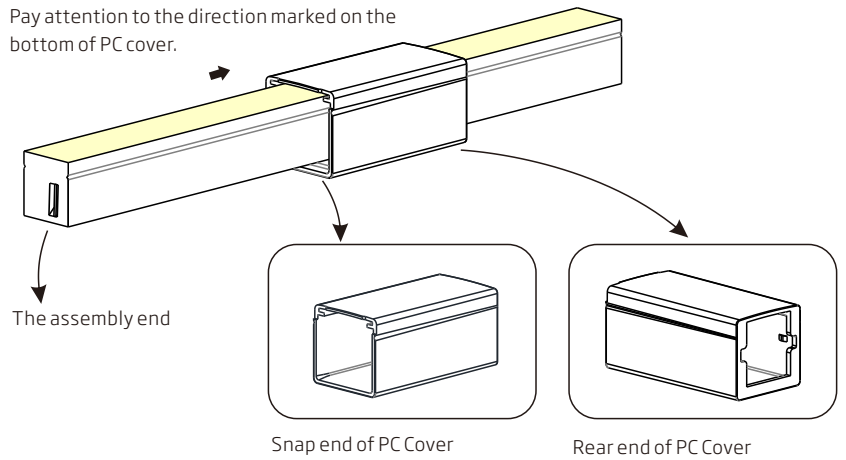


Inducer

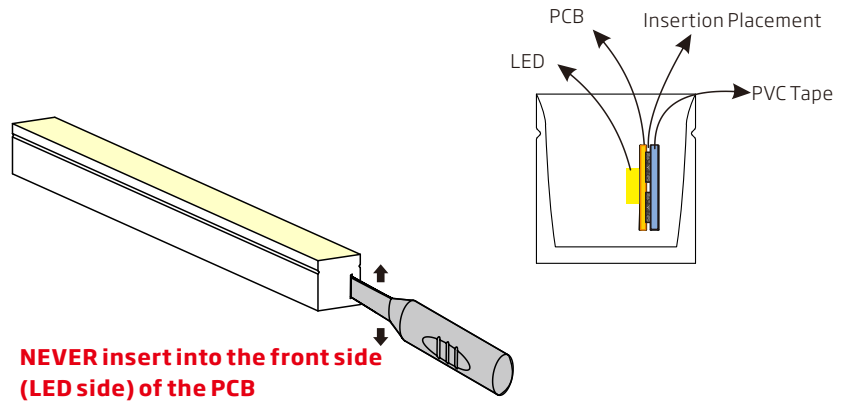
## 3. Installation steps

### 3.1 Placing PC Cover

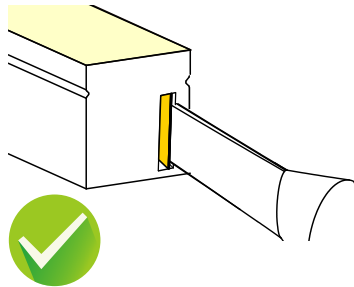
Pay attention to the direction marked on the bottom of PC cover.



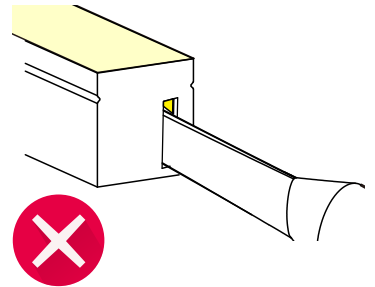
### 3.1 Inducing a Cavity for Feed Connector



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.



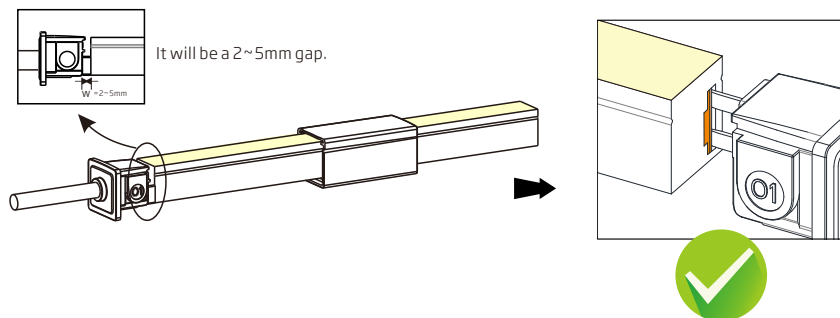
Insert the inducer into the backside of PCB



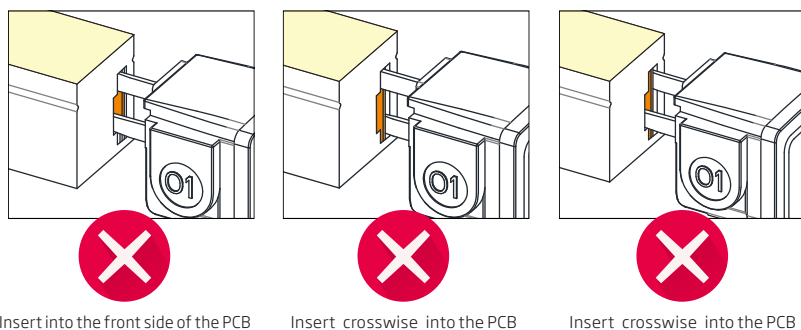
It will damage the light if insert into front side of PCB



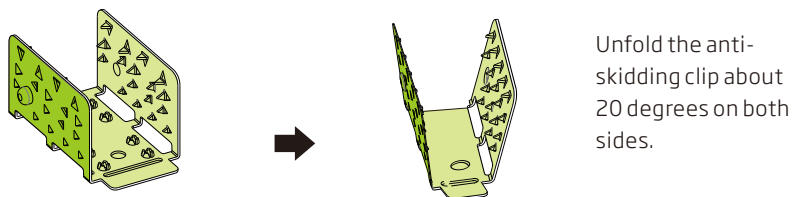
## 3.3 Inserting the Feed Connector



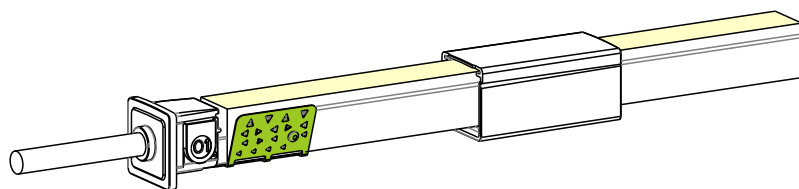
The following operations are prohibited:



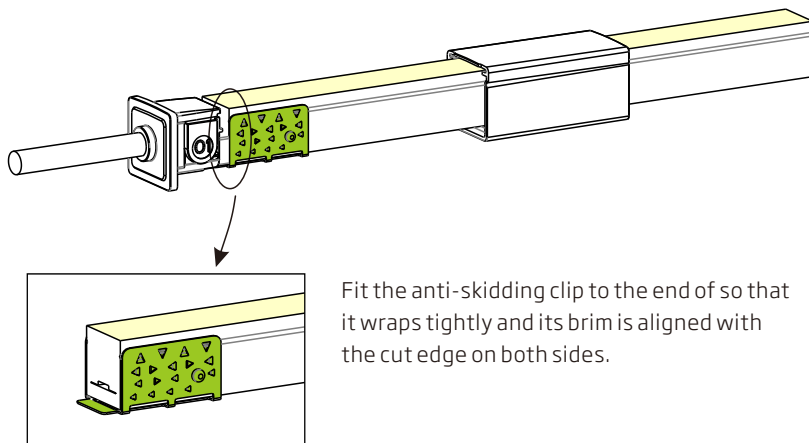
## 3.4 Treatment of Anti-skidding Clip



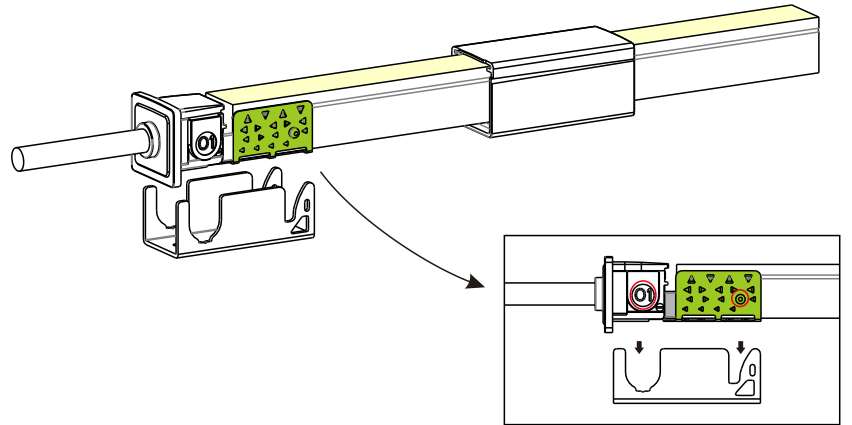
## 3.5 Installation of Anti-Skidding Clip



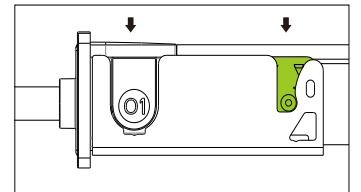
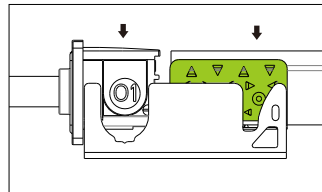
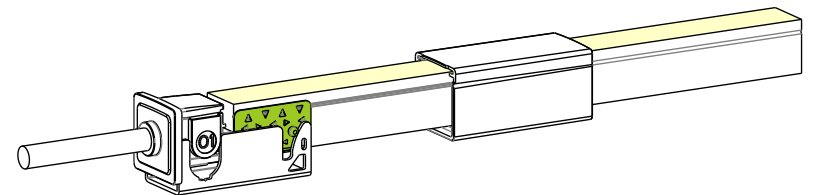
Place the anti-skidding clip onto the assembly end of the light.  
Pay attention to its direction



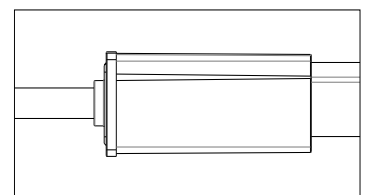
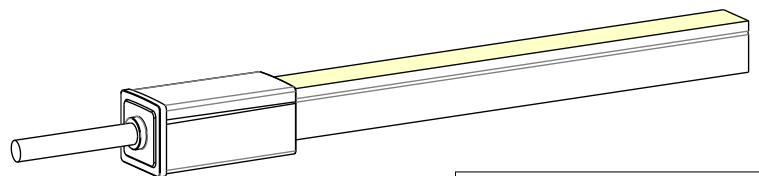
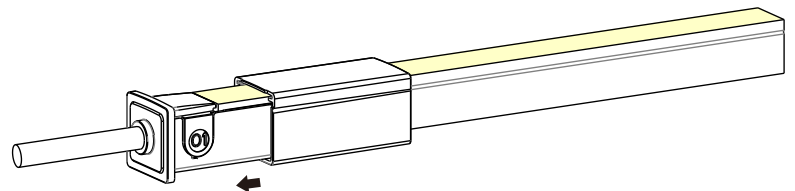
## 3.6 Installation of U Steel Plate and PC Cover



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.

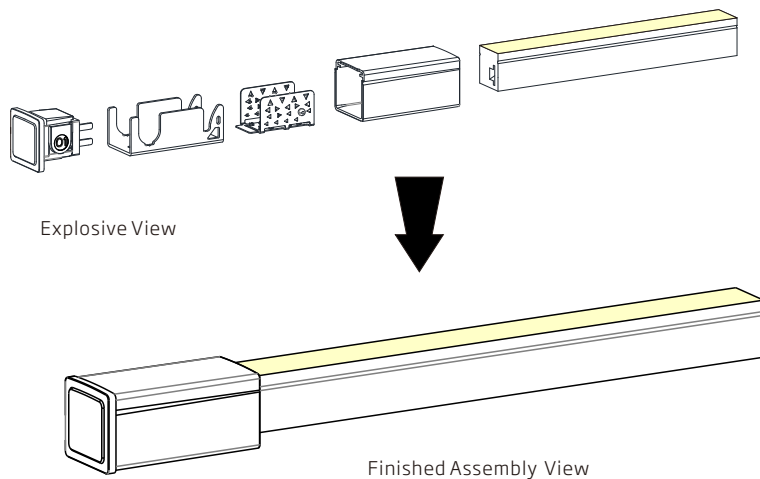
Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.

# Snap End Cap

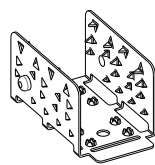
Please ignore these steps if the End Cap has been assembled before delivery.

Note:

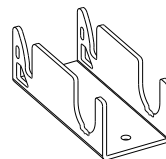
1. Repeated assembly or reuse of the connector may result in waterproof failure.



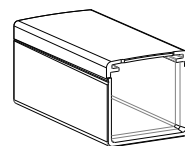
## 1. Components of End Cap



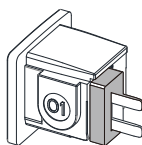
Anti-skidding Clip (1pc)



U Steel Plate (1pc)

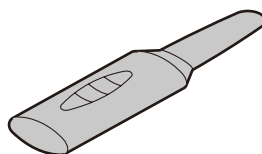


PC Cover (1pc)



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

## 2. Tools

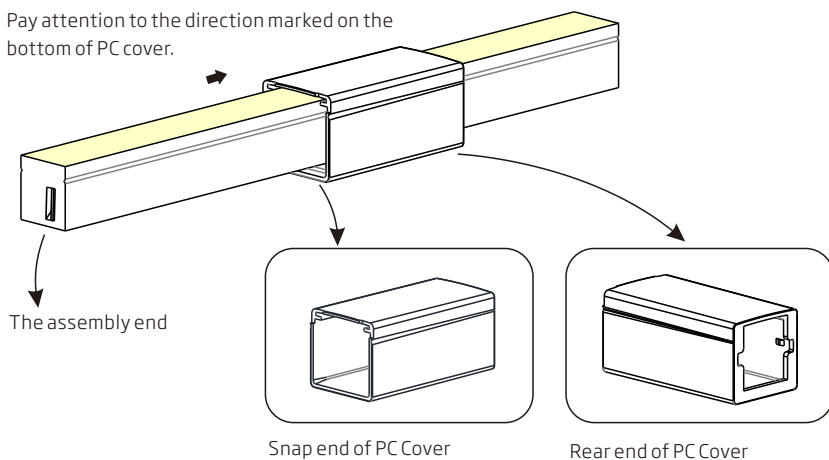


Inducer

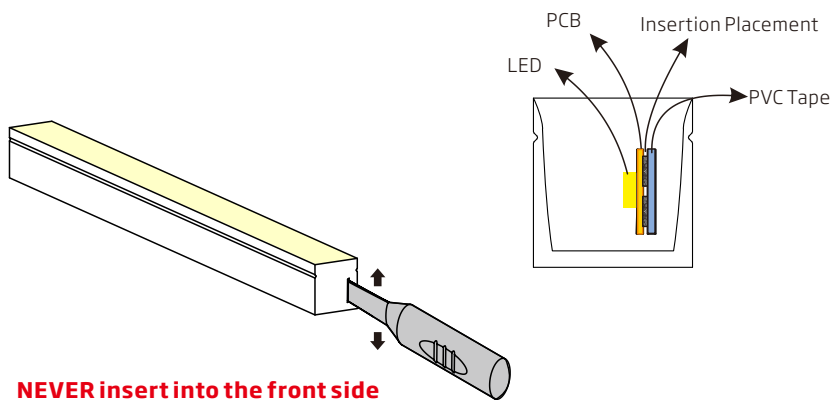
## 3. Installation steps

### 3.1 Placing PC Cover

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

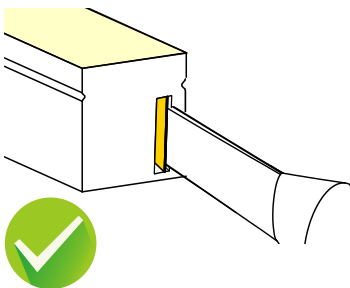


### 3.2 Inducing a Cavity for Tail Plug

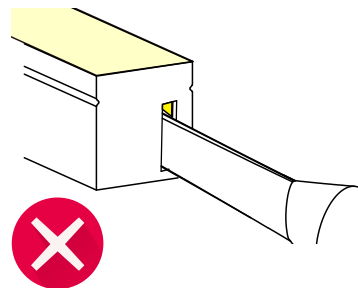


**NEVER insert into the front side (LED side) of the PCB**

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.

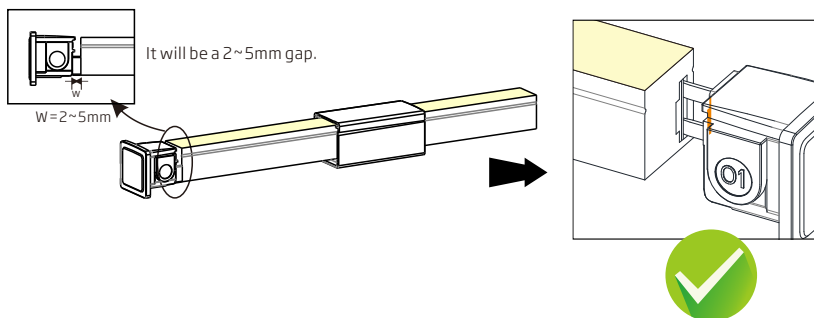


Insert the inducer into the backside of PCB

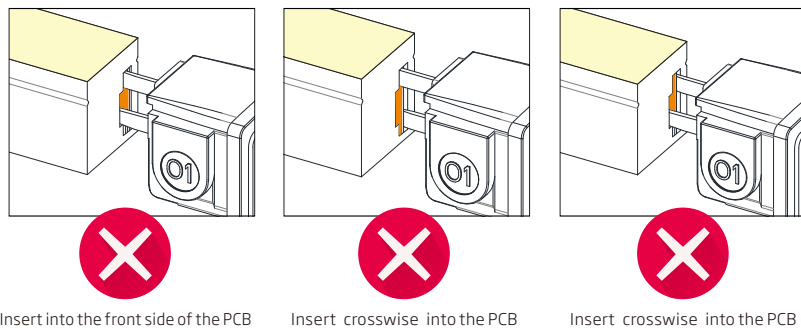


It will damage the light if insert into front side of PCB

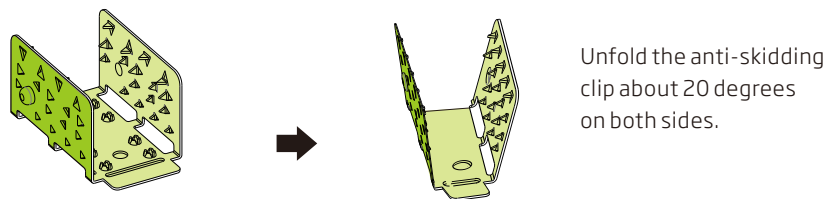
## 3.3 Inserting the Tail Plug



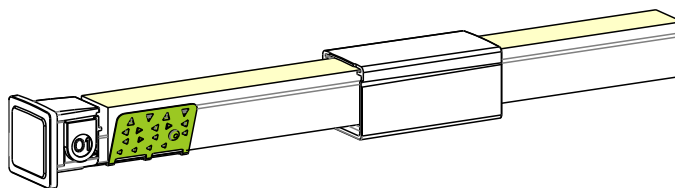
The following operations are prohibited:



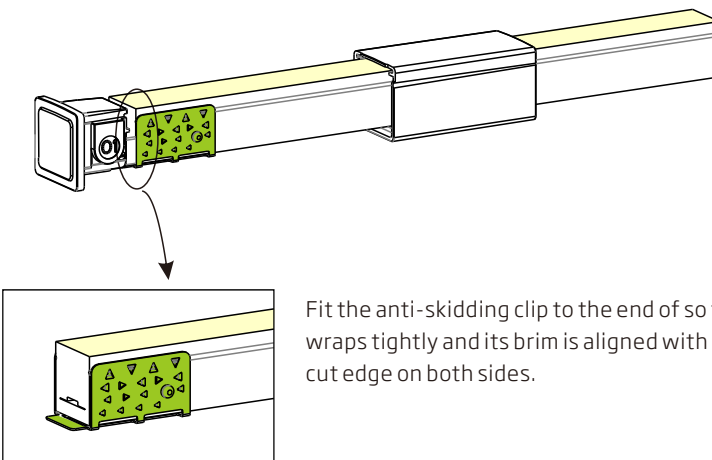
## 3.4 Treatment of Anti-skidding Clip



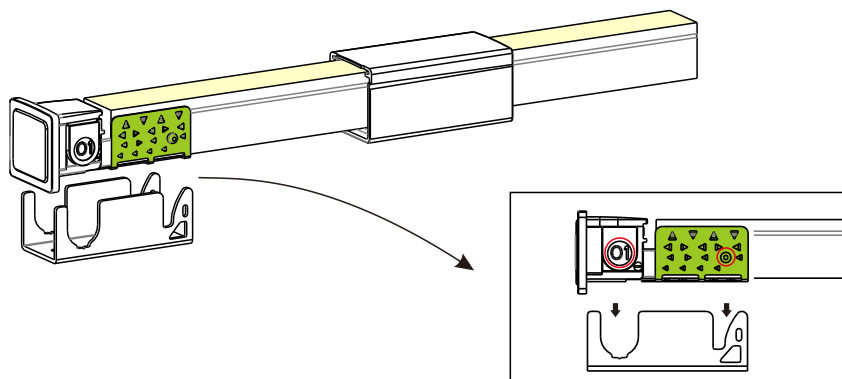
## 3.5 Installation of Anti-Skidding Clip



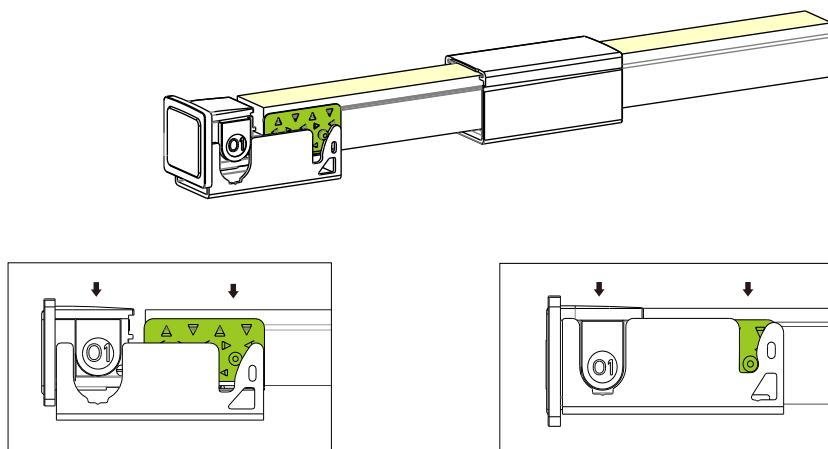
Place the anti-skidding clip onto the assembly end of the light.  
Pay attention to its direction



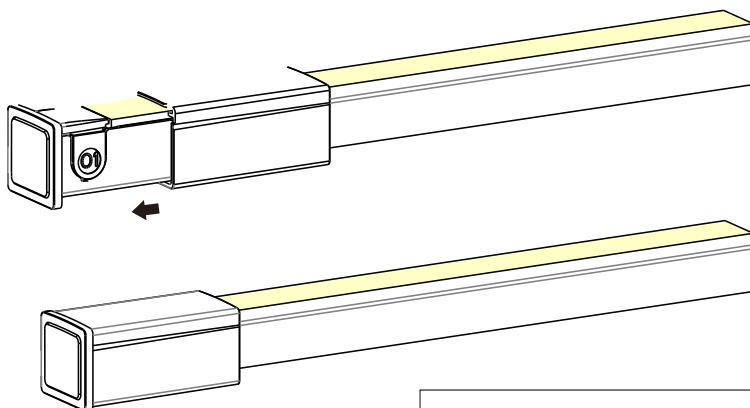
## 3.6 Installation of U Steel Plate and PC Cover



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.

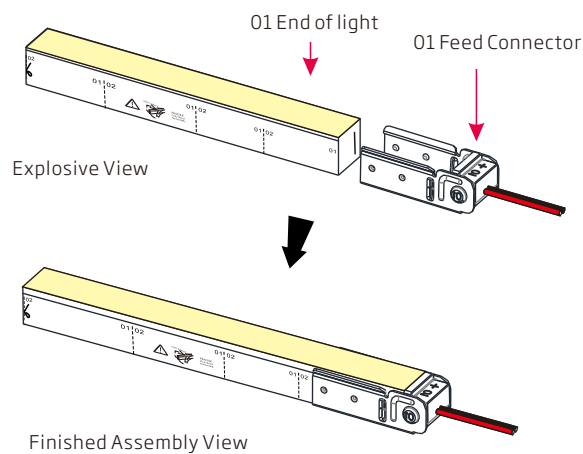
Please energize the light to check its functionality and do waterproof reliability testing (refer to "waterproof reliability testing instruction" video) after connector assembly.

# Swivel Front Connector

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

Note:

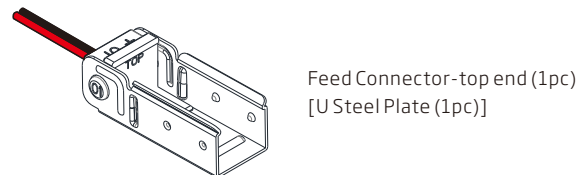
1. Never wet the assembly units or assemble with wet hands;
2. Please use the tools correctly;
3. Please pay attentions to personal security when using tools.
4. Failure to properly seal and assemble as instructed may void warranty.
5. Repeated assembly or reuse of the connector may result in waterproof failure.



## 1.Components of Front Connector

Note:

The light ends are marked with either an 01 or an 02. Always make sure to use an identically labeled connector for the appropriate direction.

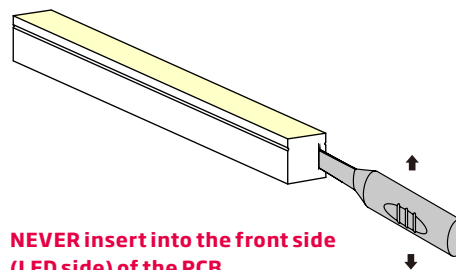


## 2.Installation Steps

Note:

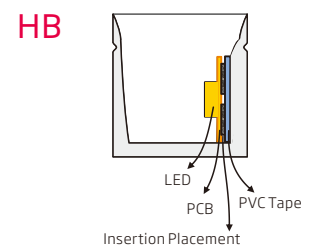
Installation steps are the same for Vertical Bending version and Horizontal Bending version, even though the PCB locations are different.

### 2.1 Inducing a Cavity for Feed Connector



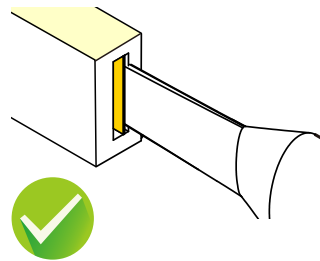
**NEVER insert into the front side (LED side) of the PCB**

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.

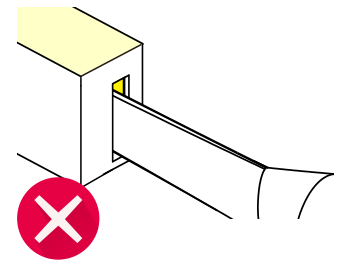


## 2.2 Inserting the Feed Connector

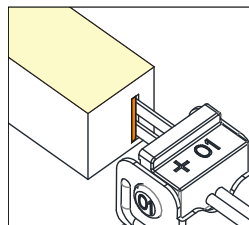
Rotate the feed connector pin to make its orientation vertical and insert it into the backside of PCB tightly.



Insert the inducer into the backside of PCB

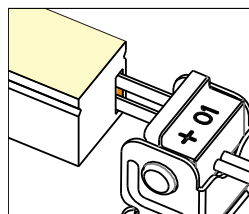


It will damage the light if insert into front side of PCB

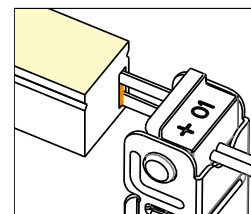


Insert the feed connector pins into the cavity that you created with the inducer (backside of PCB)

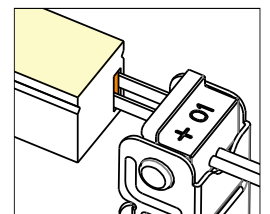
The following operations are prohibited:



Insert into the front side of the PCB



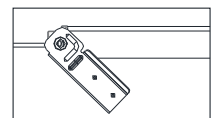
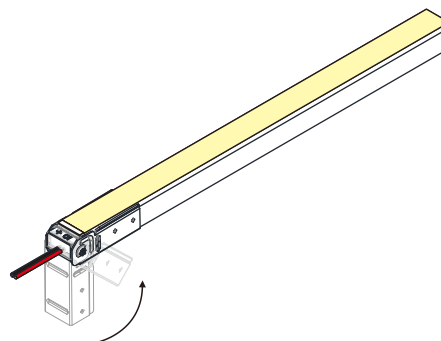
Insert crosswise into the PCB



Insert crosswise into the PCB

## 2.3 Rotate back till the light seat into the steel plate tightly

Apply power to test light after assembly



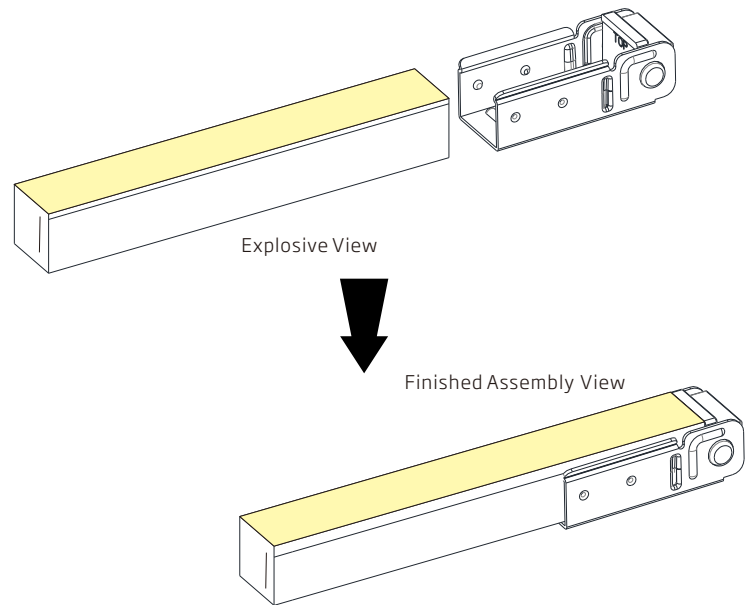


# Swivel End Cap

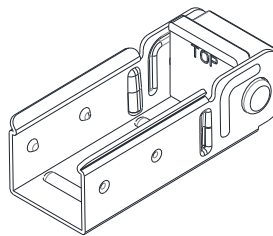
**Please ignore these steps if the end cap has been assembled before delivery.**

Note:

1. Never wet the assembly units or assemble with wet hands;
2. Please use the tools correctly;
3. Please pay attentions to personal security when using tools.
4. Failure to properly seal and assemble as instructed may void warranty.
5. Repeated assembly or reuse of the connector may result in waterproof failure.



## 1. Components of End Cap



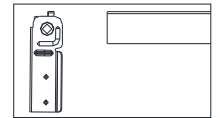
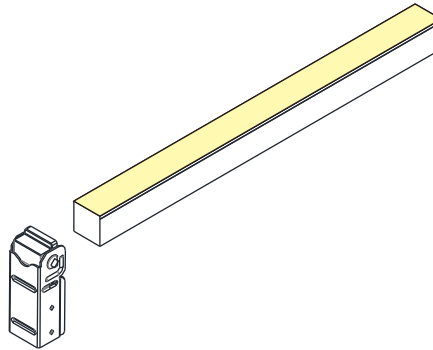
Tail Plug (1pc)  
[U Steel Plate (1pc)]

## 2. Installation Steps

### Note:

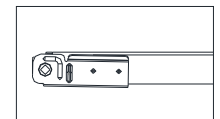
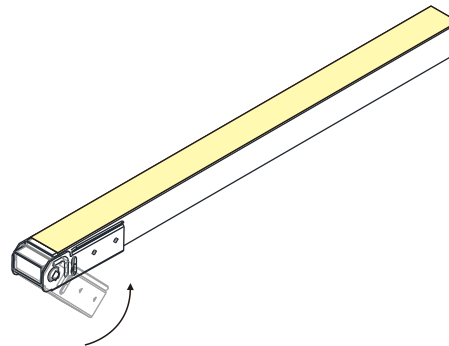
Installation steps are the same for Vertical Bending version and Horizontal Bending version, even though the PCB locations are different.

### 2.1 Rotate the end cap clockwise by 90 degrees.



### 2.2 Installation of Tail Plug

Put the light end and end cap together and rotate it to seat into the steel plate horizontally. Slide the light to the end cap and make sure they are attached tightly.

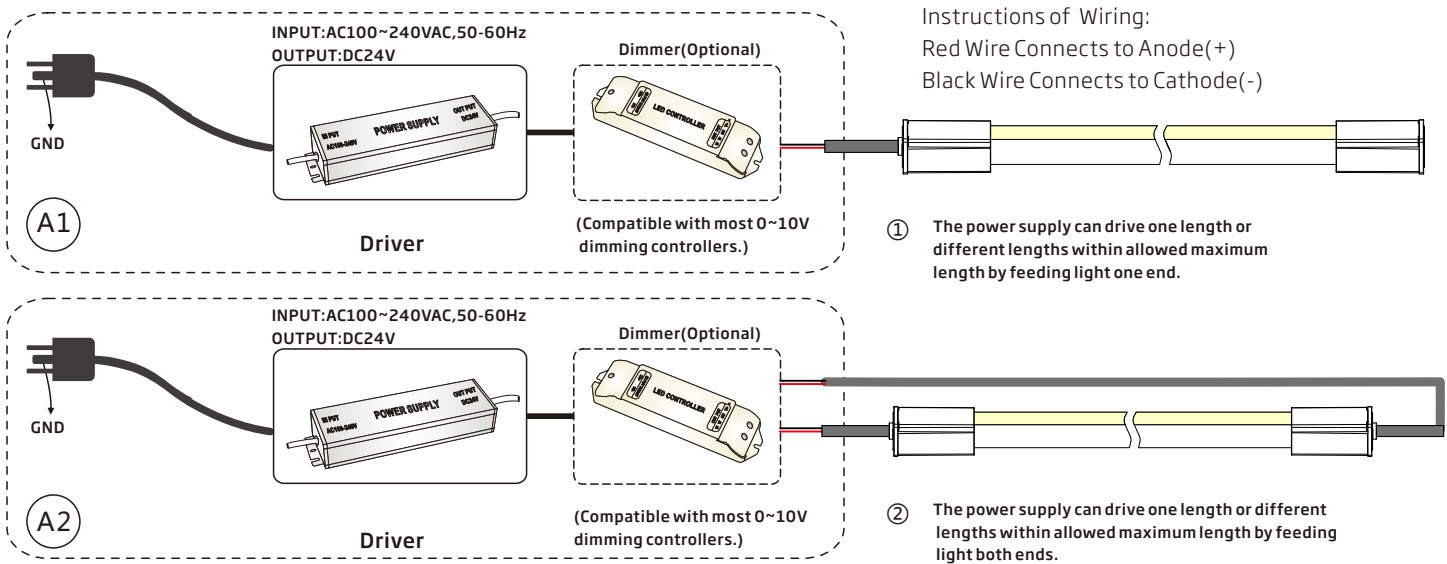


# Diagram of Light Wiring

## 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
	NE-SQ-CC	15m	10m	30m	20m
	NE-SQ-PRO	15m	10m	30m	20m

## 2. Dynamic Light Wiring

Note :

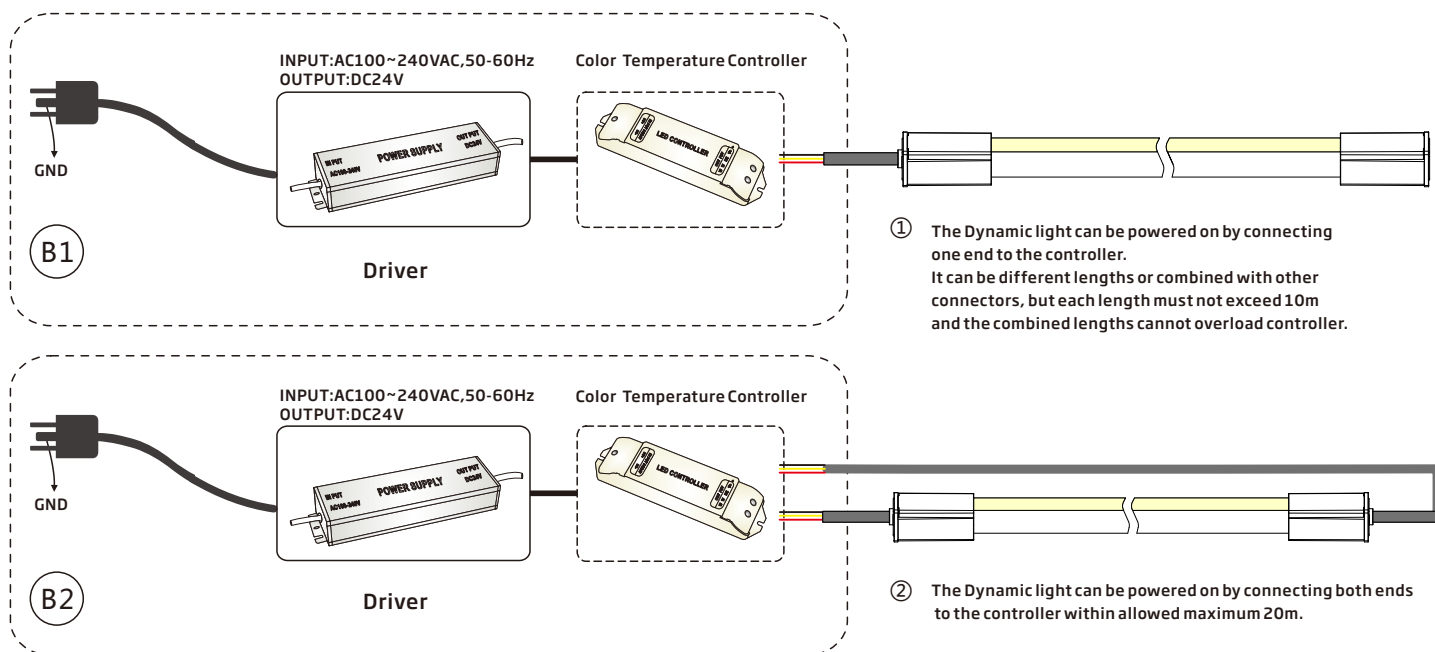
1. This LED Neon Flex Ribbon must be used in conjunction with DC24V power supply.
2. Always observe proper polarity. Polarity symbols should match on each component.
3. Ensure to add 20% buffer when sizing power supply.
4. Ensure that the power cable carried current is no greater than 80% of its capacity.
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.
6. Compatible with RGB controller and DMX control.

Instructions of Dynamic Light Wiring:

Red Wire Connects to Anode(+).

Yellow Wire Connects to Low Colour Temperature Connection, Cathode(-).

Black Wire Connects to High Colour Temperature Connection, Cathode(-).

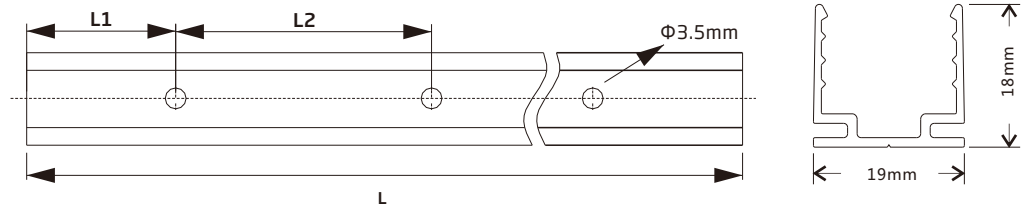
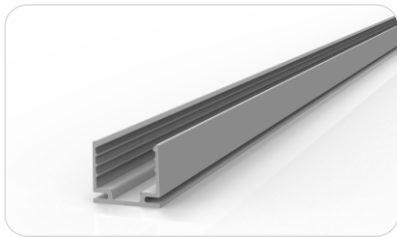


Max.Continuous Length	Article No.	Single End Feed	Double Ends Feed
	NE-SQ-CV 10m		20m

# 21

## Mounting Profile Options

### 1.1 Standard Aluminum Profile

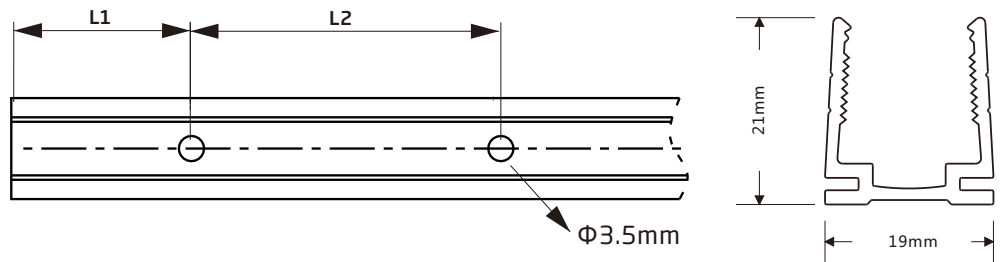


Note: Unless otherwise stated, the tolerance of the profile is  $\pm 0.5\text{mm}$ .

#### Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	Screw Hole(mm)	Hole Number	For Product
NE-SQ-CH	19*18	35	17.5	/	$\Phi 3.5$	1	SQ
		500	50	200	$\Phi 3.5$	3	SQ
		1000	100	200	$\Phi 3.5$	5	SQ
		2000	100	200	$\Phi 3.5$	10	SQ

### 1.2 Plastic Profile

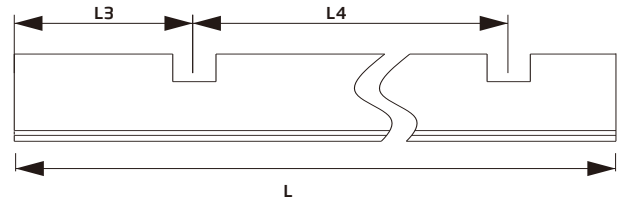
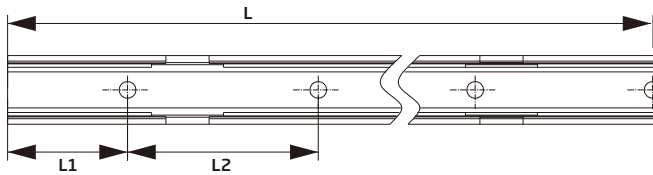
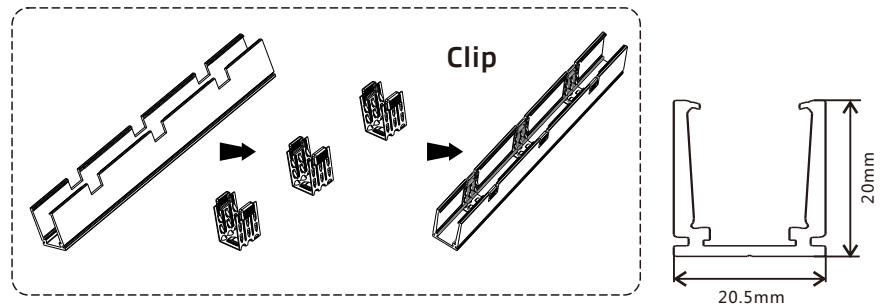
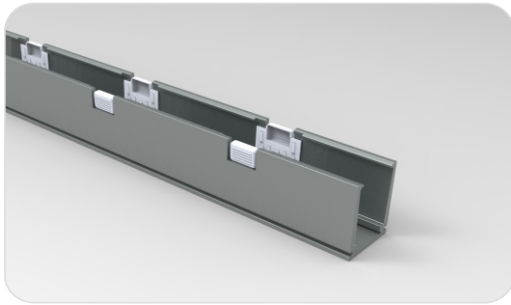


Note: Unless otherwise stated, the tolerance of the profile is  $\pm 0.5\text{mm}$ .

#### Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	Screw Hole(mm)	Hole Number	For Product
NE-SQ-CH	19*21	500	50	200	$\Phi 3.5$	3	SQ
		1000	100	200	$\Phi 3.5$	5	SQ
		2000	100	200	$\Phi 3.5$	10	SQ

## 1.3 Self-locking Aluminum Profile (Using with the clip)

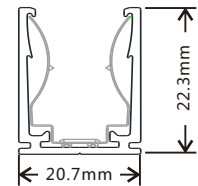
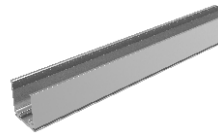


Note: Unless otherwise stated, the tolerance of the profile is  $\pm 0.5\text{mm}$ .

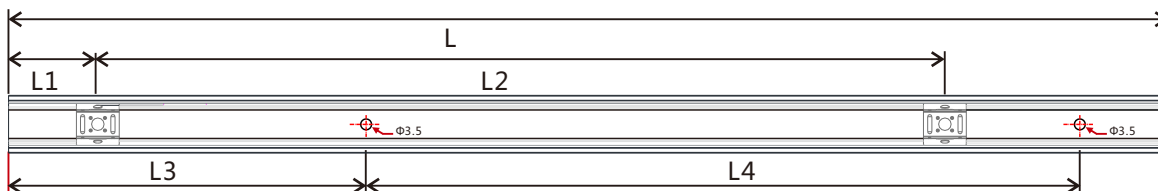
### Dimensions:

Model	W*H(mm)	Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Screw Hole(mm)	Hole Number	Clip Number	For Product
NE-SQ-CH	20.5*20	35	17.5	25	5	/	$\Phi 3.5$	2	1	SQ
		500	50	200	75	350	$\Phi 3.5$	3	2	SQ
		1000	100	200	150	350	$\Phi 3.5$	5	3	SQ
		2000	100	200	125	350	$\Phi 3.5$	10	6	SQ

## 1.4 Self-locking Aluminum Profile Ver 2.0 (Using with the Clip)

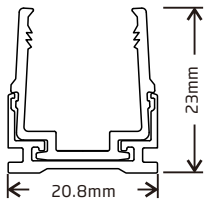
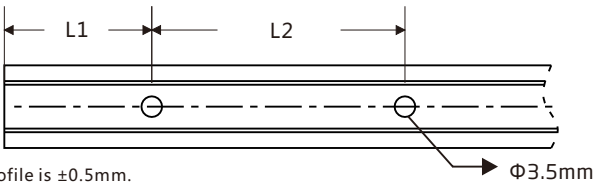
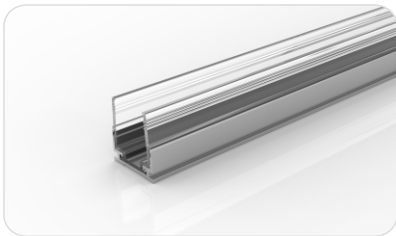


Note: Unless otherwise stated, the tolerance of the profile is  $\pm 0.5\text{mm}$ .



Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
NE-SQ-CH	20.7*22.3	35	17.5	/	5	25	$\Phi 3.5$	2	1
		500	25	150	50	200	$\Phi 3.5$	3	4
		1000	25	190	100	200	$\Phi 3.5$	5	6
		2000	25	195	100	200	$\Phi 3.5$	10	11

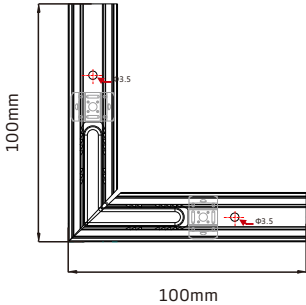
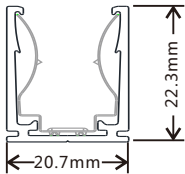
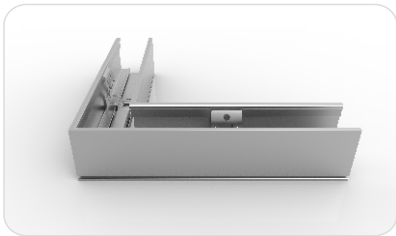
1.5 Plastic & Aluminum Combination Profile



Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number	For Product
NE-SQ-CH	20.8*23	35	17.5	/	Φ3.5	1	SQ
		500	50	200	Φ3.5	3	SQ
		1000	100	200	Φ3.5	5	SQ
		2000	100	200	Φ3.5	10	SQ

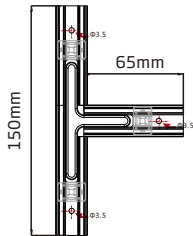
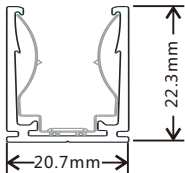
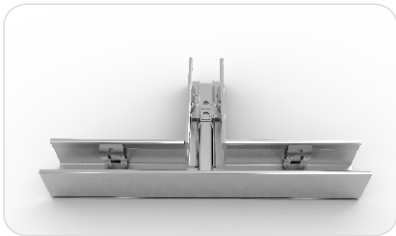
1.6 L Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)



Model: NE-SQ-CH

Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

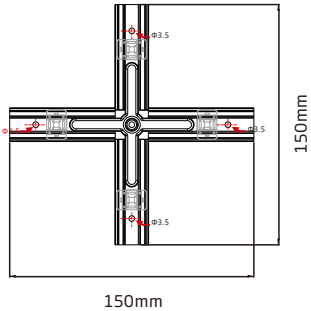
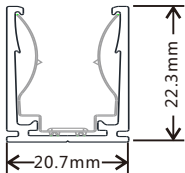
1.7 T Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)



Model: NE-SQ-CH

Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

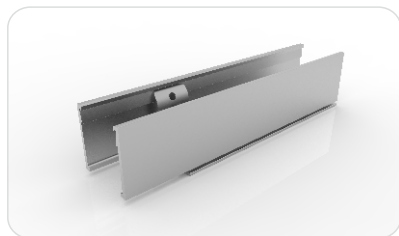
1.8 X Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)



Model: NE-SQ-CH

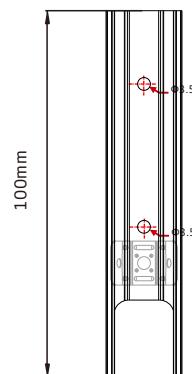
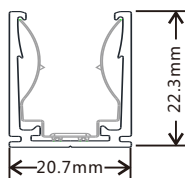
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

## 1.9 Self-locking Aluminum Profile Ver. 2, Bottom Feed (Using with the Clip)

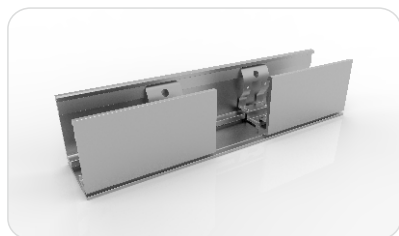


Model: NE-SQ-CH

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

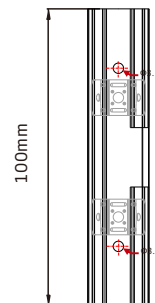
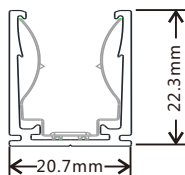


## 1.10 Self-locking Aluminum Profile Ver. 2, Middle Feed (Using with the Clip)

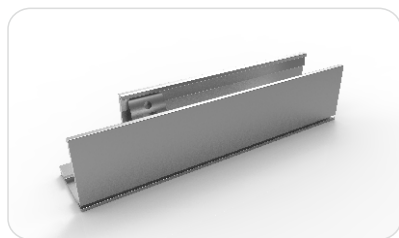


Model: NE-SQ-CH

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

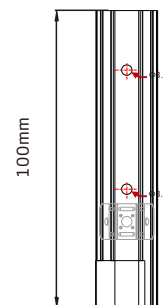
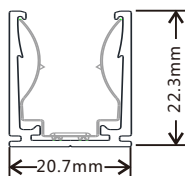


## 1.11 Self-locking Aluminum Profile Ver. 2, Side Feed From Left (Using with the Clip)

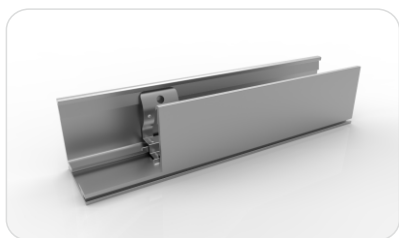


Model: NE-SQ-CH

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

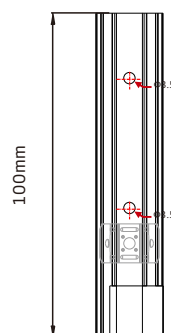
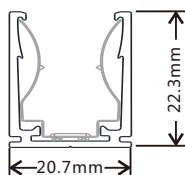


## 1.12 Self-locking Aluminum Profile Ver. 2, Side Feed From Right (Using with the Clip)



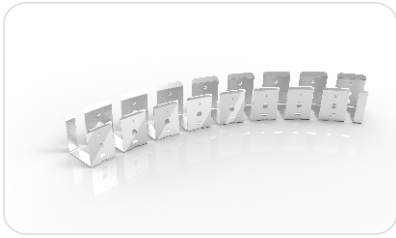
Model: NE-SQ-CH

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



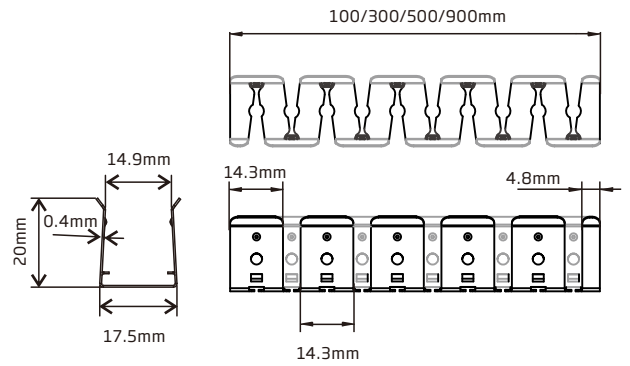


## 1.13 Curve Stainless Steel Profile



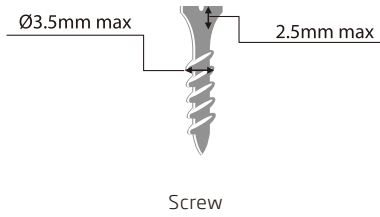
Model: NE-SQ-CH

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



## 2. Installation Guide

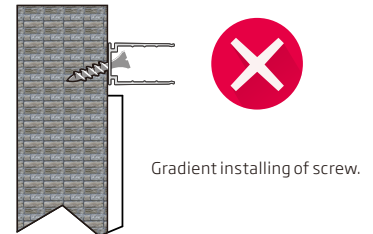
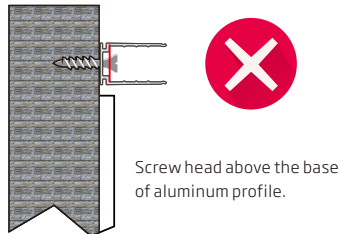
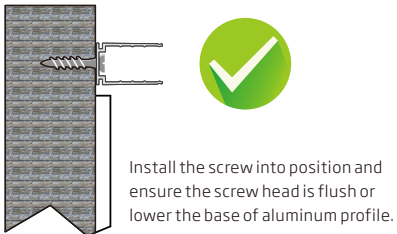
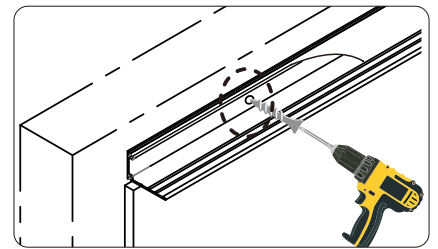
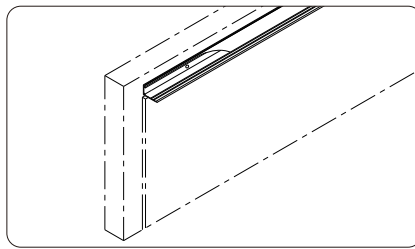
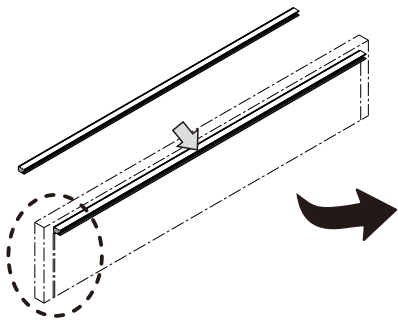
### 2.1 Prepare for Installation



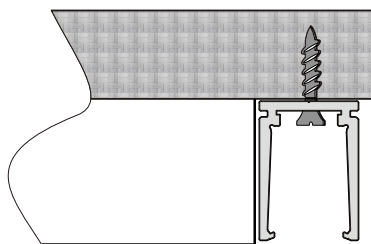
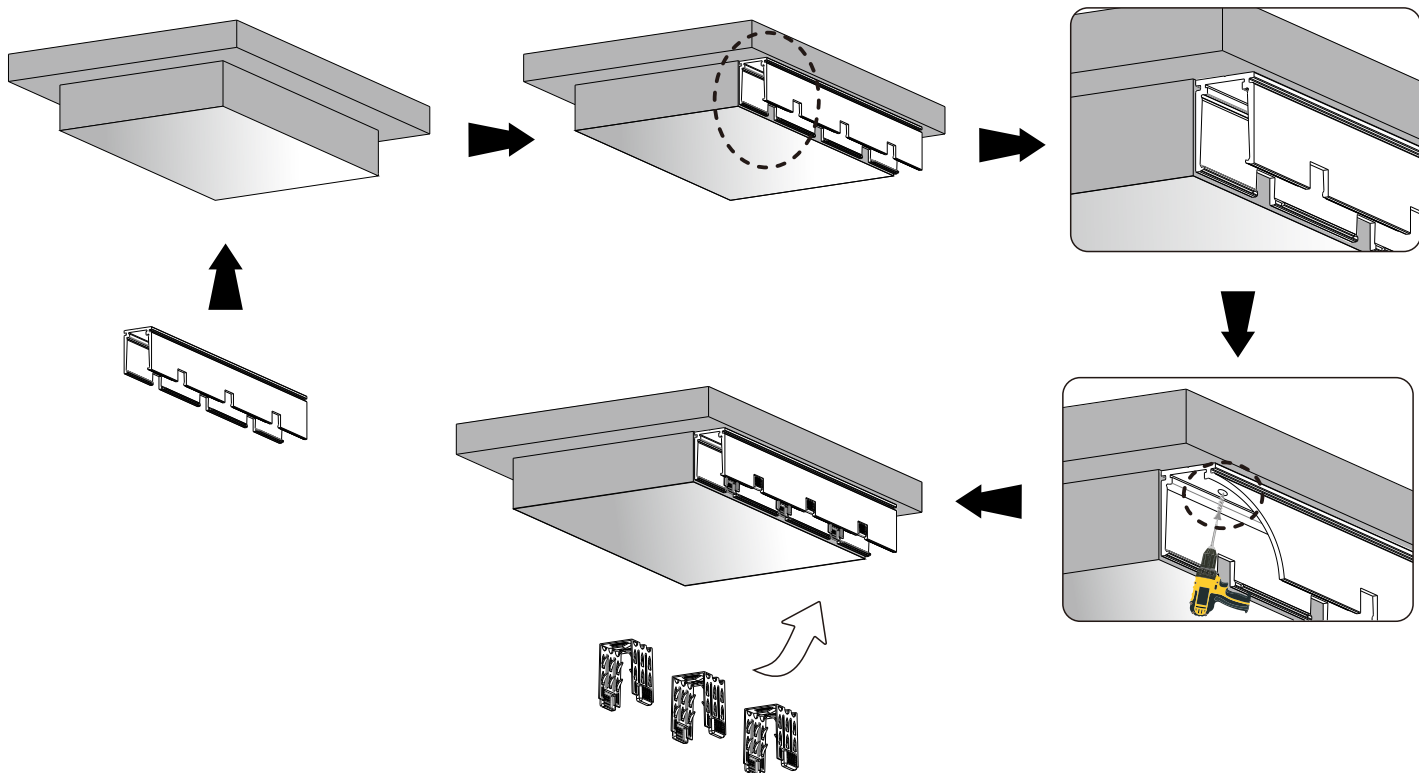
or



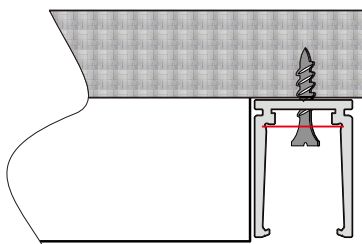
### 2.2 Correct Installation of Standard Aluminum Profile



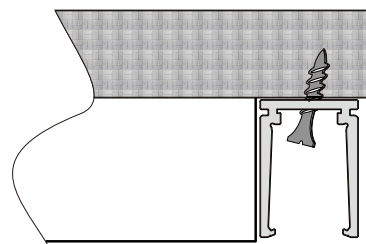
## 2.3 Correct Installation of Self-locking Aluminum Profile



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



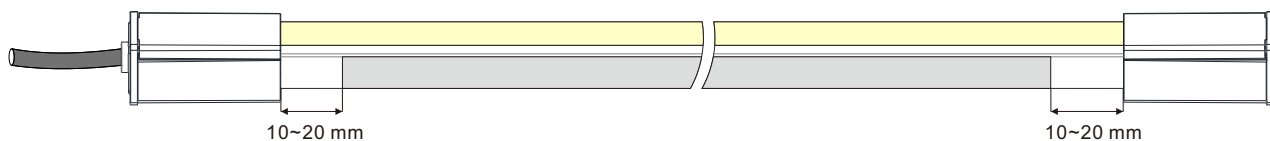
Screw head above to the base of aluminum profile.



Gradient installing of screw.

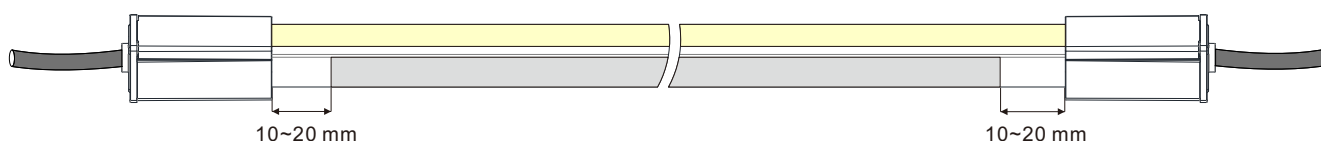
## 3. Requirements and Cautions for Installation of Mounting Profile

### 3.1 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.

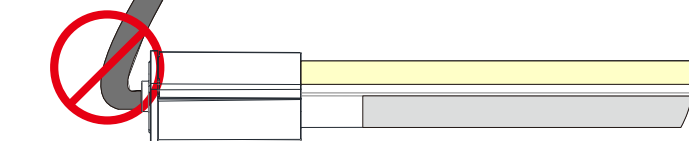
PULL



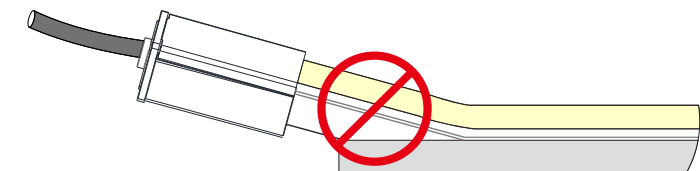
It is forbidden to curl or pull the front connector cable with excessive force.



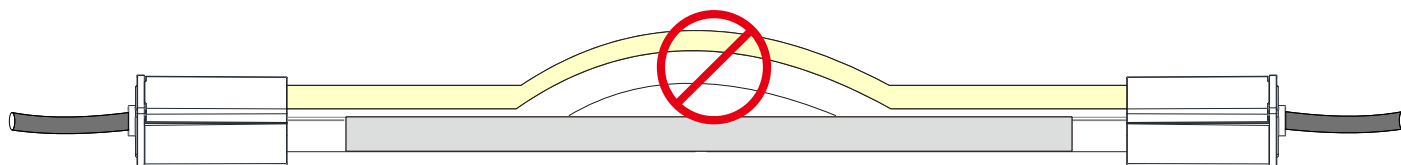
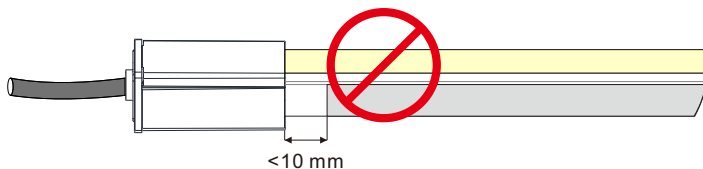
PULL



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



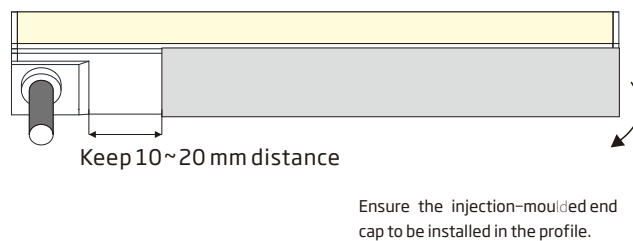
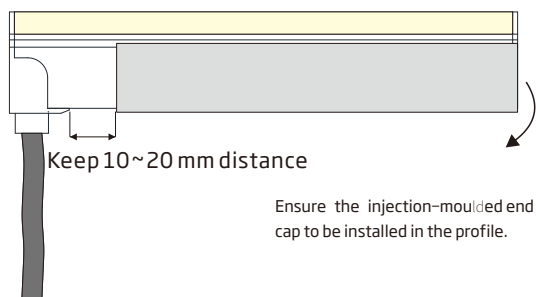
The space between aluminum profile and aluminum mounting piece less than 10mm is forbidden.



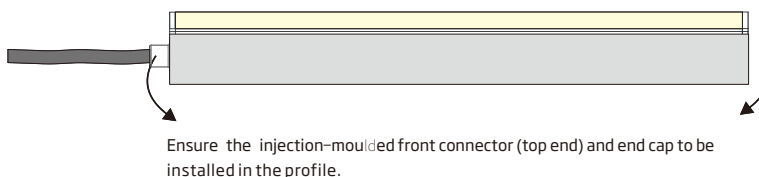
Install light in one direction. Don't let it choke in middle.



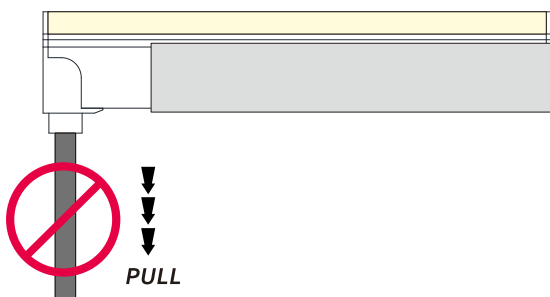
## 3.2 For Light with Injection-moulded Connector Fittings



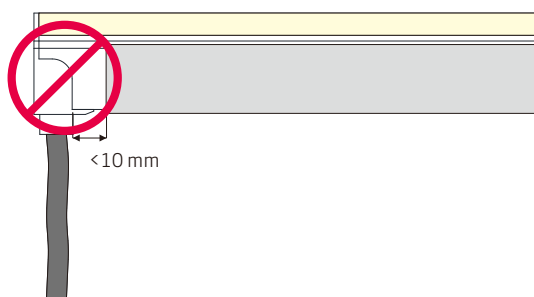
**Ensure the power cable is not subject to mechanical stress at the beginning.**



Mechanical stress on front connector cable shall be avoided.

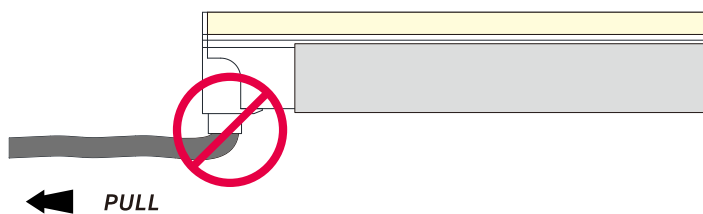
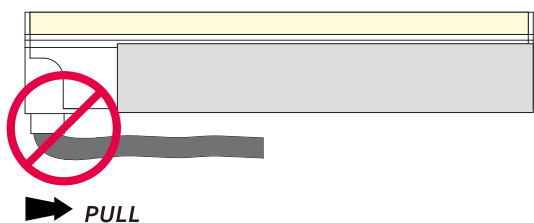


The space between connector and mounting profile less than 10mm is forbidden.

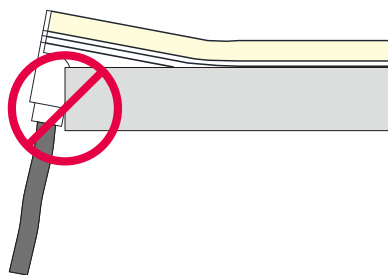
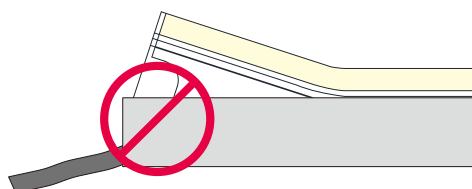


It is forbidden to curl or pull the front connector cable with excessive force.

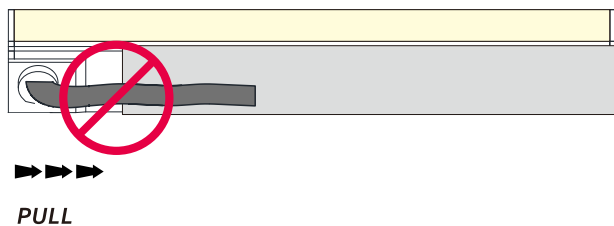
It is forbidden to curl or pull the front connector cable with excessive force.



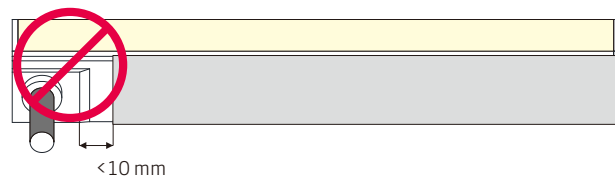
It is forbidden to force the injection-moulded end to fit into the mounting profile and make light deformation.



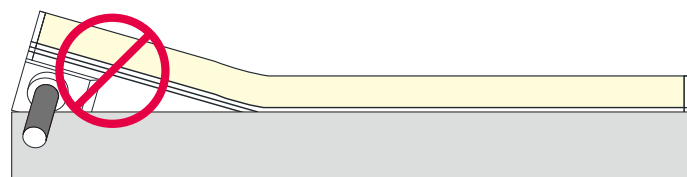
It is forbidden to curl or pull the front connector cable with excessive force.



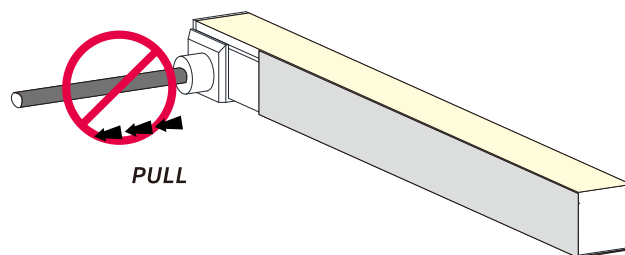
The space between connector and mounting profile less than 10mm is forbidden.



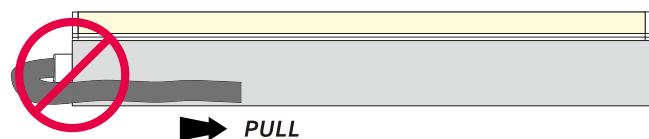
It is forbidden to force the injection-moulded end to fit into the mounting profile and make light deformation.



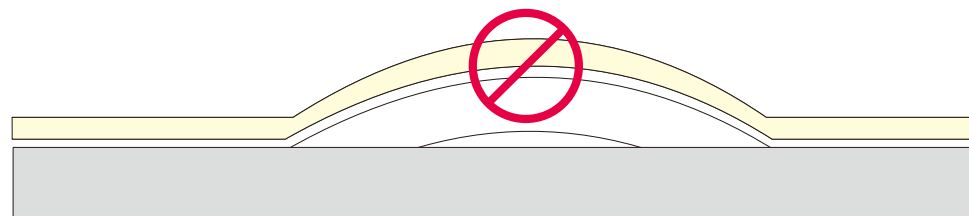
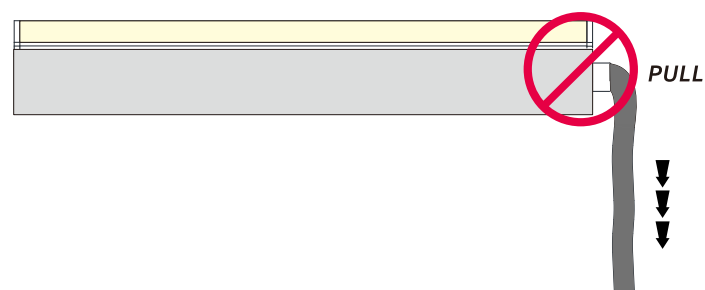
Mechanical stress on front connector cable shall be avoided.



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



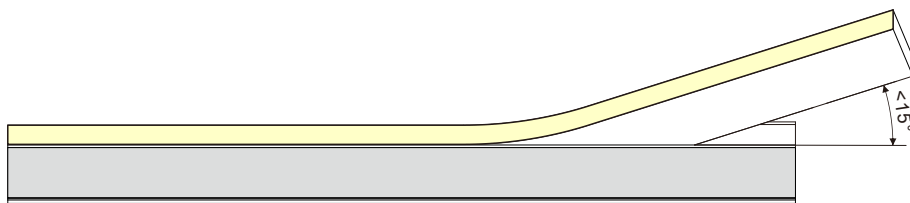
Mechanical stress on front connector cable shall be avoided.



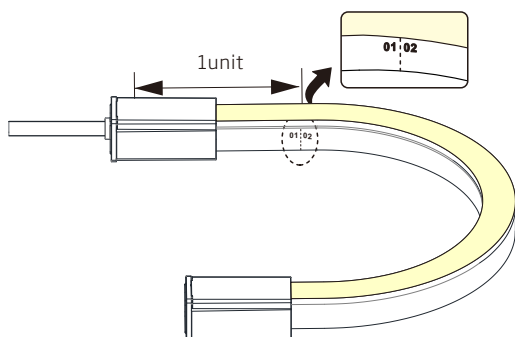
Install the light in one direction, no matter what kind of connector used. Don't let it choke in middle.



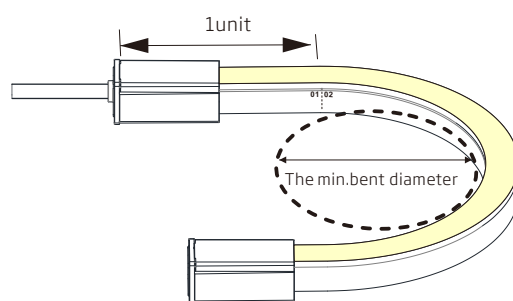
## 3.3 Bending in the Process of Installation



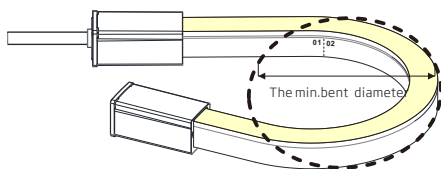
Installing angle should be less than 15 degree when pressing the light to the aluminum profile by hand.



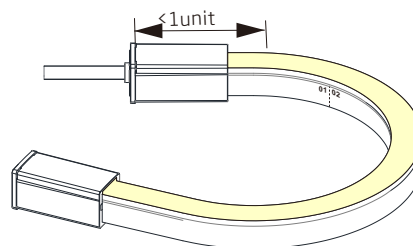
Please avoid bending at the first unit of the light.



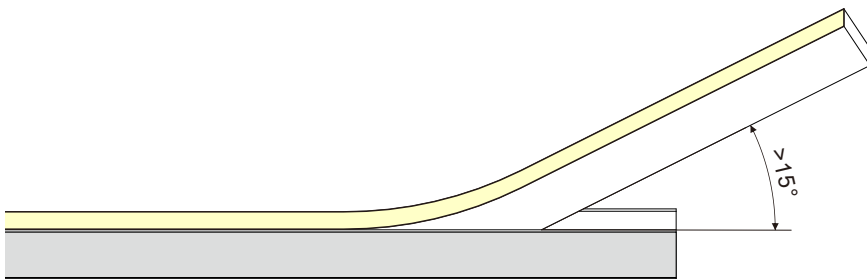
The light can bend in defined min. bending diameter or larger.



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.

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# 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 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 the light 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

Surelight Ltd hereby warrants, to the original purchaser, Surelight Ltd 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 Surelight Ltd. 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 Surelight Ltd in England. Surelight Ltd 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 Surelight Ltd and applicable regulations and standards.
- b. Purchaser must notify Surelight Ltd 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 Surelight Ltd.
- d. The concerned products sample shall be returned back as required quantity to Surelight Ltd for inspection upon request, and sent to the following address:

Surelight Ltd  
Unit 37  
Venture One Business Park  
Long Acre Close  
Holbrook Industrial Estate  
Sheffield  
S20 3FR

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 Surelight Ltd. During the period specified above, if any product covered by this limited warranty, Surelight Ltd determines to its satisfaction that such product failed to satisfy this warranty, Surelight Ltd 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 Surelight Ltd. 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 Surelight Ltd chooses to replace the product and is not able to do so because it has been discontinued or is not available, Surelight Ltd may replace it with a comparable product. Surelight Ltd 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.

Surelight Ltd 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; Surelight Ltd 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 Surelight Ltd 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 Surelight Ltd.
- 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, Surelight Ltd will reimburse the freight cost by deducting it from future order and bear the cost of replacement or repaired product delivery (Surelight Ltd 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 Surelight Ltd Products and supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.

# Appendix

## 1. Correlated Color Temperature (CCT)

### ANSI STANDARD

#### Nominal CCT Categories

Nominal CCT	Target CCT and tolerance(K)	Target $D_{uv}$	$D_{uv}$ Tolerance Range
2200K	2238 ±102	0.0000	Tx:CCT of the source
2500K	2460±120	0.0000	For Tx < 2870K
2700K	2725 ±145	0.0000	0.000±0.0060
3000K	3045±175	0.0001	For Tx ≥ 2870K
3500K	3465±245	0.0005	$D_{uv}(Tx) \pm 0.0060$
4000K	3985±275	0.0010	where
4500K	4503±243	0.0015	$D_{uv}(Tx) = 57700 \times (1/Tx)^2$
5000K	5029±283	0.0020	$-44.6 \times (1/Tx)$
5700K	5667±355	0.0025	$+0.00854$
6500K	6532±510	0.0031	

Flexible CCT  
(2200-6500K)

$$T_F^{1)} \pm \Delta T^{2)}$$

$$D_{uv} T_F^{3)}$$

Remark:

- 1)  $T_F$  is chosen to be at 100K steps  
(2300,2400,.....,6400K), excluding  
the ten nominal CCTs listed in Table 1.
- 2)  $\Delta T = 1.1900 \times 10^8 \times T^3 -$   
 $1.5434 \times 10^4 \times T^2 + 0.7168 \times T - 902.55$
- 3) Same as in the  $D_{uv}$  Tolerance Range.

## 2. Chart of Recommended Feed Cable Length According to Power Consumption

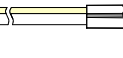
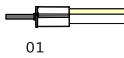
This chart only applicable to input voltage of 24V DC

WattS of Light	22AWG/0.34mm <sup>2</sup>	20AWG/0.53mm <sup>2</sup>	18AWG/0.82mm <sup>2</sup>	17AWG/1.04mm <sup>2</sup>	16AWG/1.38mm <sup>2</sup>	14AWG/2.07mm <sup>2</sup>	12AWG/3.29mm <sup>2</sup>	10AWG/5.62mm <sup>2</sup>
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:

1. Please adhere to parameters in below chart, feed cable length longer than what specified here will create voltage drop and eventually affect the lumen output of light.
2. The 0.3m feed cable length attached to front connector is not included in this chart.
3. Feed cable length over 10m is NOT recommended unless special circumstances, especially for pixel addressable lights.

3. Loading Chart

Type.	Rated Power /m	Power Supply													
		35w	60w	75w	80w	100w	120w	150w	120w	150w	185w	240w	320w		
F22	8w	3.5m	6m	7.5m	8m	10m	12m	15m	18.5m					24m	30m
	12w	2m	4m	5m	5m	6.5m	8m	10m	12m					16m	20m
	15w/16.5w	1.5m	3m	3.5m	4m	4.5m			5.5m	7m	9m	10m			
	22w	1m	2m	2m	3m	3.5m	4m	5m	6.5m					8.5m	10m
Energizing Way		DC input  01/02							DC input  01 02 DC input						

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 8m light (8w/m) or maximum 5m light (12w/m) by energizing the light one end.