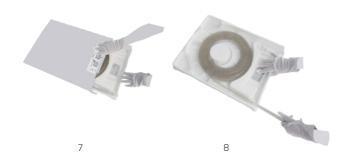


UNPACKING - White Box Packing









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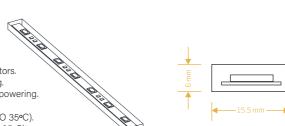






UNPACKING - White Box Packing

- Dimensions 15.5mm * 6mm.
- Min. bending diameter: 50mm.
- Protection rate: IP67 / IP40.
- The product IP rate is ultimately in line with properly applied IP rated connectors. Connector termination required after cutting to achieve appropriate IP Rating.
- Easy to use, with a range of accessories for joining, terminating, mounting & powering.
- Long lifetime: 5 Years.
- Environmental Working Temperature: -20°C TO 45°C (High Voltage: -20°C TO 35°C). Environmental Installation Temperature: 0°C TO 45°C (High Voltage: 0°C TO 35°C).



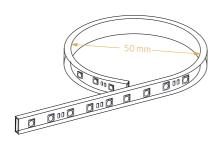
Note: Unless otherwise stated, the tolerance of the light is ± 0.3 mm.

Electrical	Power Consumption Operating Voltage Installation Temperature Operating Temperature Storage Temperature	15W per metre (fixed, standard configuration) 24V DC -40°C TO 50°C - (-40°F TO 122°F) -40°C TO 55°C - (-40°F TO 131°F) -40°C TO 60°C - (-40°F TO 140°F)					
Physical	Dimensions Bending Housing / Lens Weight/m IK Rating IP Rating Min. Cutting Unit Min. Cutting Length Min. Bending Diameter Unit/m (Pixel Qty/m) Connectors Mounting Profiles Mounting Brackets Data Maximum Run Length	L: 1000mm – H: 6mm – W: 15.5mm Vertical Bending Silicone 129g IK08 IP67 6LEDs(1unit) 125mm(1unit) 50mm 8 pixels Sleeve Connector, Snap Connector, Injection-moulded Connector, Silicone Injection-moulded Transparent Covered Aluminium (H20/H13), Milky Covered Aluminium (H20/H13), Suspension Kit, Surface-mounted Raceway Aluminium, Suspended Raceway Aluminium, Aluminium Profile, Bendable Anole Profile Pivot Mounting Bracket, Rotary Locking Bracket, Side Mounting Bracket, Joining Bracket 48m @ 8pixels/m – 6 universes					
	Beam Angle Colour Range LED Qty/m LED Type LED Distance Total Lumens	120° RGBW, RGB, RGBA White 56LEDs EPISTAR SMD LED 16.67mm >280lm/m					
Diming & Control	Control Protocols Dimming Resolution	X-Stream: SPI protocol with data redundancy Others – SPI, DMX					
Fixture Rating & Certifications	UL LISTED, CE RoHs COMPLIANT	C E ROHS UL					
Limited Warranty	5Years	Extendable Warranty Available					

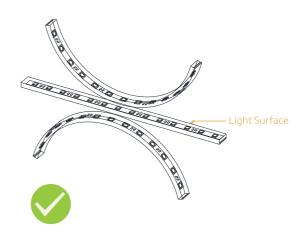


CAUTIONS

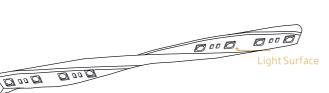
- 1. Before making any cuts, installation, maintenance or connection, be sure the main is disconnected.
- 2. Note all connectors should be properly installed to achieve the appropriate level of IP, IP Rating can NOT be achieved without connector termination.
- 3. Please operate this flex light by instructions, and confirm the work voltage, it must be matched with product requirements.
- 4. Plase 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 qualifies DC power supply.
- 7. Please correctly use and bend this flex ribbon light, see the figures below.
- 8. Do not operate light when ambient temperature exceeds the range of specified temperature in User Manual.
- 9. Do not energise the light over 30 minutes in coil packaging.
- 10. Do not mix the four colours (R, G, B, W) in full load simultaneously.



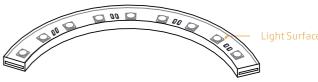
Do not bend smaller than allowed minimum bend diameter 50mm.







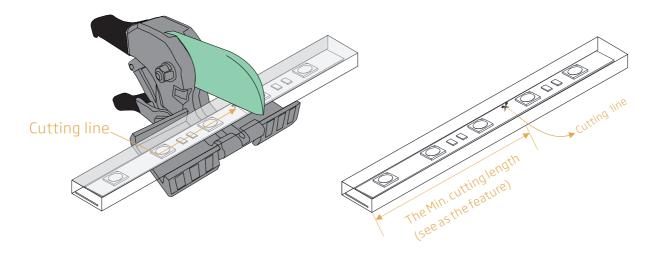








INSTRUCTIONS FOR THE LIGHT



Note:

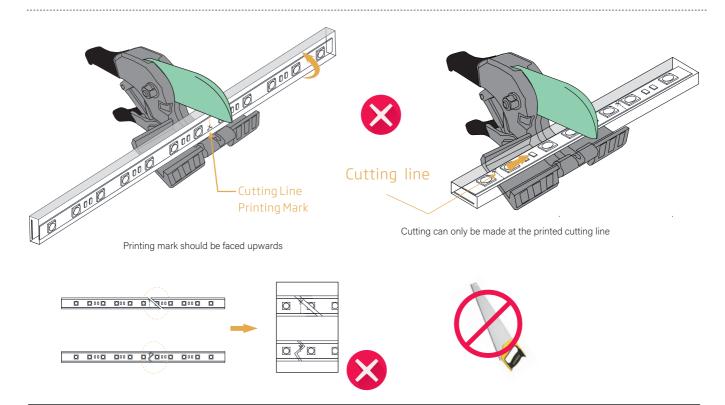
- Place the light horizontally when cutting it.
- Use only factory-recommended cutter.
- Cut the light accroding to the following instructions. Incorrect operation will damage the light. 3.

Cut the light only at printed cutting line with printing mark face upwards





The cutting surface must be flush and smooth





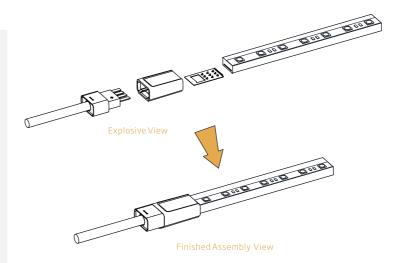


SLEEVE FRONT CONNECTOR

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



1. Components of Front Connector

Note

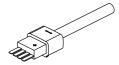
The light ends are marked with either an 01 or an 02. Always make sure to use an identically abeled connector for the appropriate direction.



Anti-skidding Clip (1pc)



PC Cover (1pc)



Feed Connector (1pc)

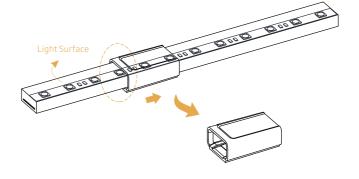
2. Tools

3. Installation Steps

3.1 Placing PC Cover



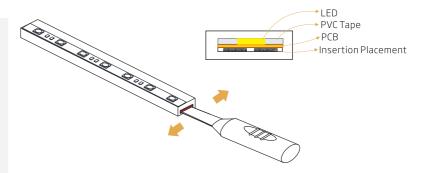
Inducer





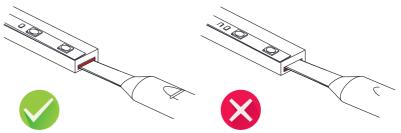
SLEEVE FRONT CONNECTOR

3.2 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 \approx 12, move the inducer right and left $3 \approx 5$ times gently to create a small cavity.

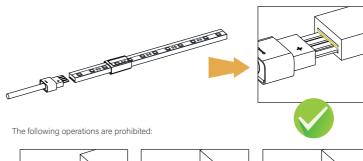


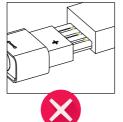
Insert the inducer into the backside of PCB $\,$

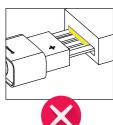
Insert the feed connector pins into the cavity that you created with the inducer (backside of PCB)

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

3.3 Insert the Feed Connector







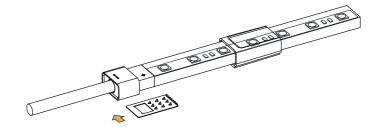
Insert crosswise into the PCB





SLEEVE FRONT CONNECTOR

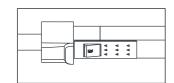
3.4 Installation of Anti-Skidding Clip

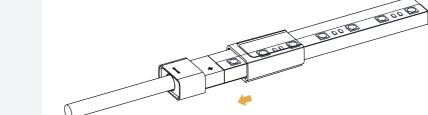


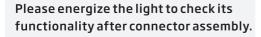


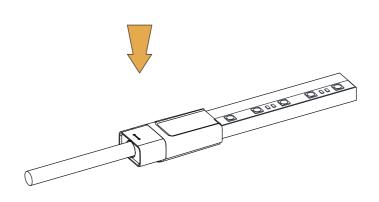
Place the anti-skidding clips to the feed connector with toothhead side towards light.













SLEEVE END CAP

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

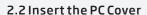
Note:

- $1. \, \text{Never wet the assembly units or assemble with} \\ \text{wet hands.}$
- $2.\,Please\,use\,the\,tools\,correctly.$
- 3. Please pay attention to personal security when using tools.
- $\label{eq:connectormay} 4. \\ \text{Repeated assembly or reuse of the connector may} \\ \text{result in waterproof failure}.$

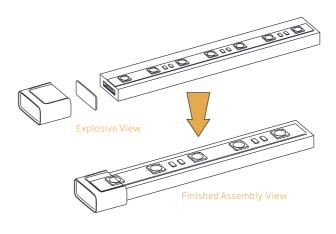
1. Components of End Cap

2. Installation Steps

2.1 Placing Shading Sheat

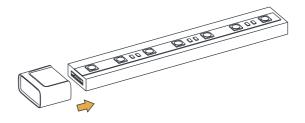


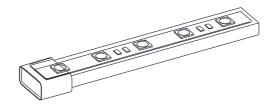
Please check its OK













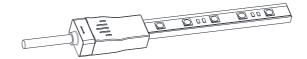
SNAP FRONT CONNECTOR

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





Finished Assembly View

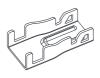
1. Components of Front Connector

Note:

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



Anti-skidding Clip (1pc)

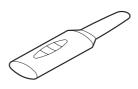


U Steel Plate (1pc



PC Cover (1pc)

2. Tools



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

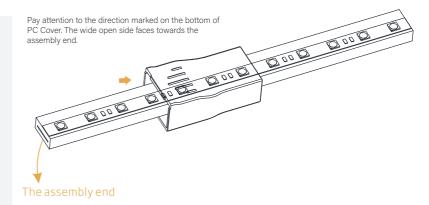
Inducer



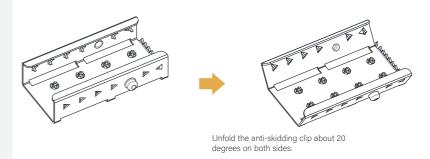
SNAP FRONT CONNECTOR

3. Installation Steps

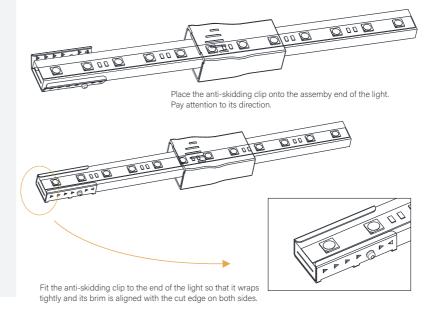
3.1 Placing PC Cover



3.2 Treatment of Anti-skidding Clip



3.3 Installation of Anti-Skidding Clip

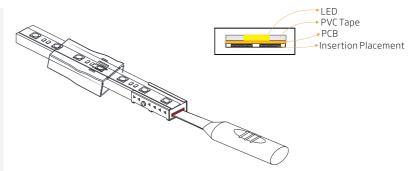






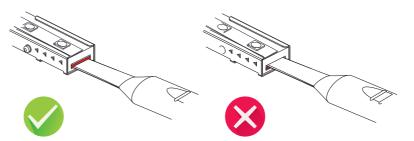
SNAP FRONT CONNECTOR

3.4 Inducing a Cavity for Feed Connector



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

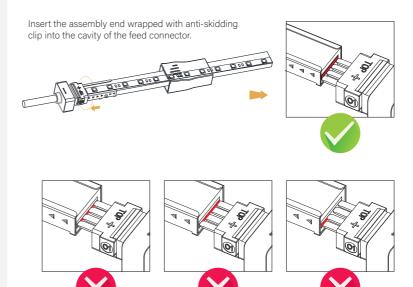
Insert the inducer to the backside of PCB around 10 \approx 12, move the inducer right and left 3 \approx 5 times gently to create a small cavity.



Insert the inducer into the backside of PCB

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

3.5 Inserting the Feed Connector







SNAP FRONT CONNECTOR

3.6 Installation of U Steel Plate and PC Cover

Align the feed connector and antiskidding clip with the U steel 6/_ Press the feed connector and light downwards at the same time till bottom. 0 000 000 000 Slide back the PC cover till it snaps

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



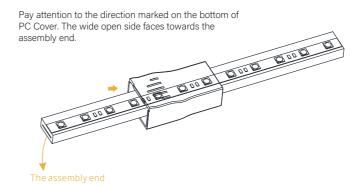
in the feed connector.



SNAP END CAP

3. Installation Steps

3.1 Placing PC Cover

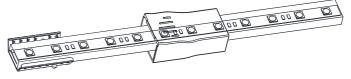


3.2 Treatment of Anti-skidding Clip

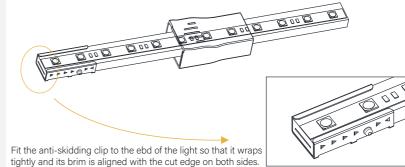


Unfold the anti-skidding clip about 20 degrees on both sides.

3.3 Installation of Anti-Skidding Clip



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



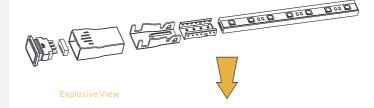


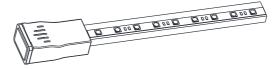
SNAP END CAP

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

Note

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





Finished Assembly View

1. Components of End Cap







U Steel Plate (1pc





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



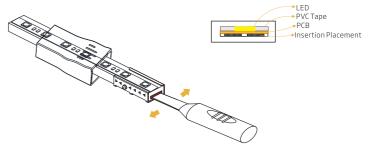
Induce

2. Tools



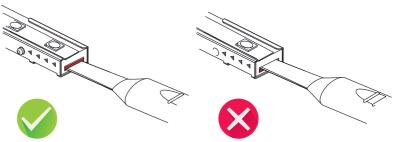
SNAP END CAP

3.4 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 \approx 12, move the inducer right and left $3 \approx 5$ times gently to create a small cavity.

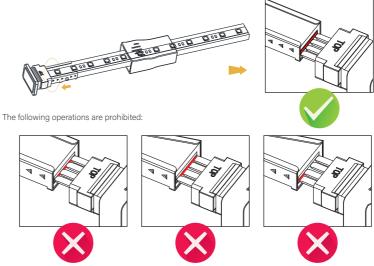


Insert the inducer into the backside of PCB.

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

Insert the assembly end wrapped with anti-skidding clip into the cavity of the tail plug.

3.5 Inserting the Tail Plug

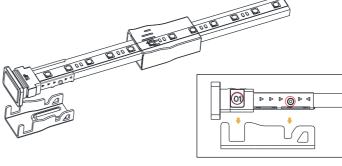




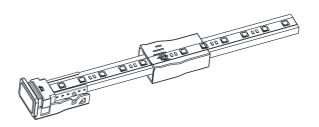


SNAP END CAP

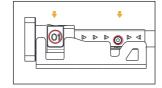
3.6 Installation of U Steel Plate and PC Cover

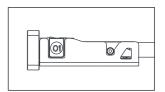


Align the tail plug and anti-skidding clip with the u steel plate.



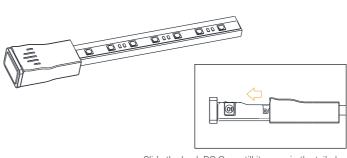
000 000 000 000





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

Please energize the light to check its functionality and do waterproof reliablity testing (refer to "waterproof reliability testing instruction" video)



Slide the back PC Cover till it snaps in the tail plug

after connector assembly.



DIAGRAM OF LIGHT WIRING

1. RGB Light Wiring

Note:

- . 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 minimise 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 lines as short as possible.
- 6. Compatible with RGB controller and DMX control.

Instructions of RGB Light Wiring:
Yellow Wire Connects to Anode (+).
Red Wire Connects to the "R" Terminal, Cathode (-).
Green Wire Connects to the "G" Terminal, Cathode (-).
Blue Wire Connects to the "B" Terminal, Cathode (-).

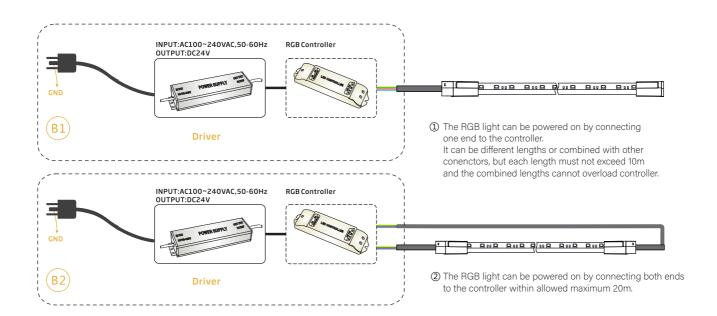




DIAGRAM OF LIGHT WIRING

2. RGBW 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.
- 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 minimise 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 lines as short as possible.
- 6. Compatible with RGB controller and DMX control.

Instructions of RGBW Light Wiring:
Yellow Wire Connects to Anode (+).
Red Wire Connectrs to the "R" Terminal, Cathode (-).
Green Wire Connects to the "G" Terminal, Cathode (-).
Blue Wire Connects to the "B" Terminal, Cathode (-).
White Wire Connects to the "W" Terminal, Cathode (-).

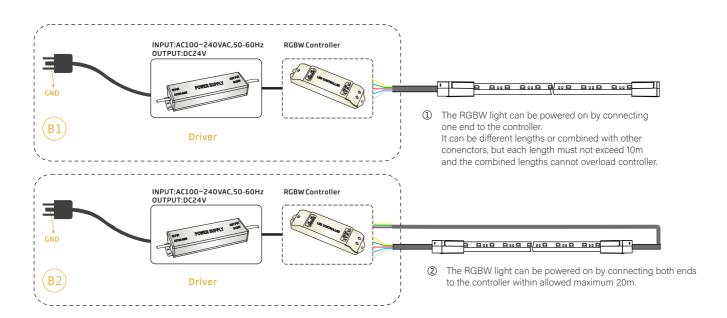




DIAGRAM OF LIGHT WIRING

3. Chasing Light WIring

- This LED Neon Flex Ribbon must be used in conjunction with a DC24V power supply and IC-UC2903 compatible controller or decoder
- Polarity symbols, GND, signal line connection should match on each component properly.
- Ensure to add 20% buffer when sizing power supply. 3.
- Ensure that the power cable carried current is no greater than 80% of its capacity.
- To minimise 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.

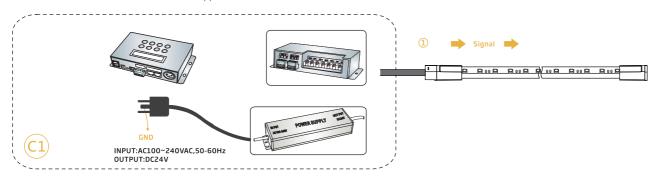
 This Chasing Ribbon Light is one directional. The signal input direction is always indicated by an arrow marked on the side of light. 6.

Instructions for Chasing Light Wiring:

Red Wire Connects to the "VCC" or Anode (+) Terminal.

Yellow Wire Connects to the "Signal" Terminal

Black Wire Connects to the "GND" or Cathode (-) Terminal.



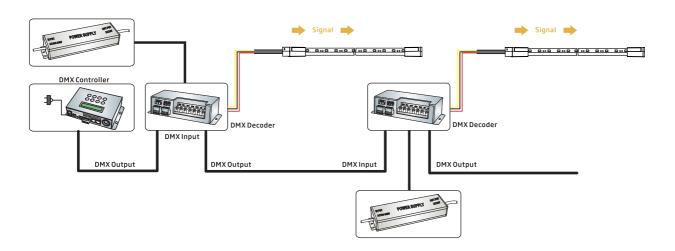
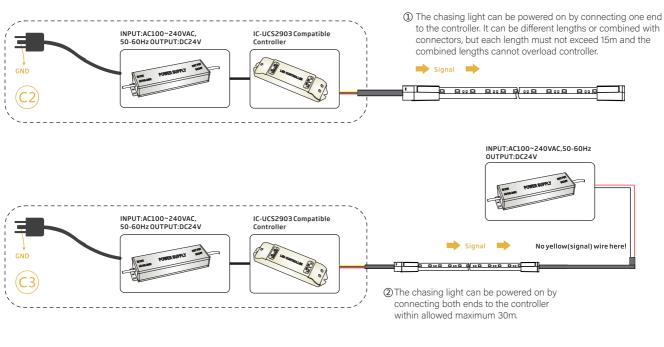
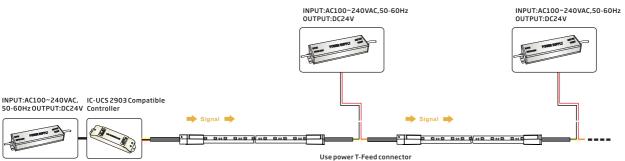




DIAGRAM OF LIGHT WIRING





3 The chasing light can be powered on by series connecting to the controller within allowed maximum length.

Note:

The Pixel Addressable Light series allows precise control of every cutting increment. To ensure IC chips receive strong control signals, please adhere to the parameters listed below.

- 1) To ensure strong signal the 3-wire signal cable should not exceed 10m.
- 2) For cable lengths longer than 10m, a signal amplifier must be used for strong signal transmission. Please ask our technical team for more details.

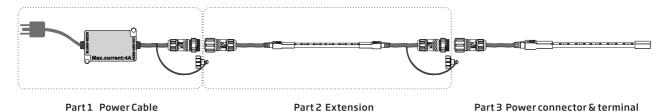
Part 3 Power connector & terminal



FXN 156 FLEXIBLE NEON

DIAGRAM OF LIGHT WIRING

4. High Voltage Light Wiring



Part 2 Extension



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



TROUBLESHOOTING

The whole light doesn't work.

Check power supply is plugged, 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 24VDC

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 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 casued 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 aluminium 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 and 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

LEDCTRL® hereby warrants, to the original purchaser, LEDCTRL® finished products to be free of manufacturing defects in material and workmanship for a standard period of 5 year 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 LEDCTRL. Druing the warranty period, you are entitled to have the products repaired or replaced if the products fail to be of acceptable quality and damage occurred under normal use. It is the owner's responsibility to establish the date and warranty as acceptable evidence, at the time service is sought.

Warranty is applied by LEDCTRL®, LEDCTRL® retains the right to review the justification of the claim. The limited warranty is subjected to the following additional conditions:

- The product is properly handled, installed and maintained according to official latest instructions or manual of LEDCTRL® and applicable regulations and standards.

 Purchaser must notify LEDCTRL® in writing of a **BD CORRECTIVE ACTION REPORT** to specify the defect in question no later than 15 days after they were detected. Acceptance b. of the product shall not be denied on the grounds of insignificant defects. Claims for defects notified belatedly are excluded.
- A copy of the purchase invoice of the concerned products must be attached to submit to LEDCTRL®.
- The concerned products sample shall be returned back as required quantity to LEDCTRL® for inspection upon request and sent to the following address:

LEDCTRL® Warehouse 3/482 Balmain Rd Lilyfield, Sydney NSW, 2040 Australia

This is not a serive 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 manufactured by LEDCTRL®, accessories. During the period specified above, if any product covered by this limited warranty, LEDCTRL® determines to its satisfaction that such product failed to satisfy this warranty, LEDCTRL® will, at its own discretion, repair or replace the product or the defective part thereof.

For purpose of clarity, "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 expenses, shipping costs to return non-conforming products or any damages that may occur during the return of product to LEDCTRL®. 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 LEDCTRL® chooses to replace the product and is not able to do so because it has been discontinued or is not available, LEDCTRL® may replace it with a comparable product. LEDCTRL® 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 Please note that lighting properties of replacement products may differ from original product due to technical advancements and usage-related changes in the light flux and light colour.

The warranty period is neither extended nor renewed if the product is repaired or replaced by LEDCTRL®

LEDCTRL® reserves the right to make changes in design and/or improvements upon its products without any obligation to include these changes in any products heretofore 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 freight claims; LEDCTRL* 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 LEDCTRL® and led to the damage.
- g. The products not used for the purpose for which designed or if any repairs, alterations or maintenance are made by any person not authorized by LEDCTRL®.
- h. Product silk printed serial numbers, crimped waterproof ring of strip lamps 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, warface, acts of terrorism, riots, fire, explosion, etc.).

Freiaht

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, LEDCTRL® will reimburse the freight cost by deducting it from future order and bear the cost of replacement or repaired product delivery. If the product was found not to be defective or exclusion of warranty, the claimant shall bear all the return expenses, and may be required to re-purchase the product if it requires replacement.

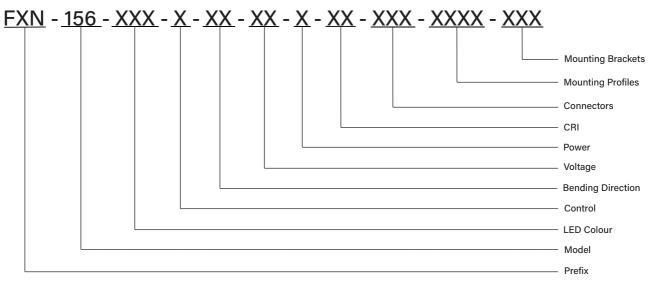
All products covered by this warranty were manufactured after January 1, 2025 and bear identifying code on the product itself. This warranty is the only written warranty applicable to LEDCTRL® Lighting Products supersedes all prior warranties and written descriptions of warranty terms and conditions heretofore published.





APPENDIX

1. Part Number Configuration



2. Correlated Colour Temperatue (CCT)

For Example - FXN - 156 - RGBW(27K) - X - VB - 24 - 6 - 80 - SLC - AP - PV

ANSI STANDARD

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)	$T^{2)}+\DeltaT^{3)}$	DUVT ⁴⁾ ±0.006

Remark:

- 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 ΔT = 0.0000108 $\times T^2$ +0.0262 $\times T$ +8.
- 4). Duv is given by Duv=57700×(1/T)2-44.6×(1/T)+0.0085

3. 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 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	
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.
- Feed cable length over 10m is NOT recommended unless special circumstance, especially for pixel addressable lights.





APPENDIX

Loading Chart

Туре.	Rated Power /mtr	Power Supply												
		35w	60w	75w	80w	100w	120w	150w	100w	120w	150w	185w	240w	320w
FXN 156	4w	7m	12m	15m	16m				20m	24m	30m	36m		
	6w	4.5m	8m	10m	10.5m	13m				16m	20m	24.5m	30m	
	7.2w/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	1.5m	3m	4m	4m	5m				6m	7m	10m		
Energising Way			DC in	put — 1)2				DC input	01	1		02	DC input

- These are the light maximum recommended running length subject to selected power supply.

 For example: It is recommended to use on 80W power supply loading maximum 5m light (12w/m) by energising the light one end.

 The above parameters apply only to low voltage series product, not apply to high voltage (like AC120V) products.