Neon Flex
Specification

N015120BC3SC(N1515)

iPixel

IP65

c UL us LISTED E509505

CE

ROHS

CB Scheme

REACH NPS

Indoor

Outdoor

UV RESISTANT

FLAME RESISTANT

SALTWATER RESISTANT

SOLVENT RESISTANT

Product Parameter

·15X15 3D led neon flex strip, you can bend top and side.

· Light source: highlights LED chips;

· Craft material: high light transmission and environmental friendly silicone material, good flexibility of silicone material;

· Optical design: Unique optical light structure design, the surface is uniform, and the light is very soft;

· Exterior design: simple and fashionable, exquisite and unique brings better lighting performance to indoor/outside applications;

· Product certification: UL, CE, RoHS;

· Environmental characteristics: salt tolerance, corrosion resistance, flame retardant, UV resistance;

· Work / storage temperature: TA: -25 ~ 55 ℃ / 0 ℃ ~ 60 ℃;

· Product application: signature lighting, outdoor/interior decoration, architectural contour application;

· 3 years of quality insurance, working life ≥36000 hours.
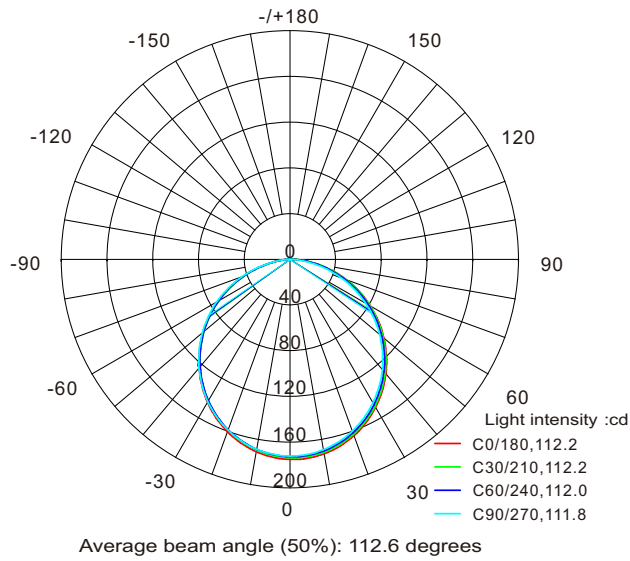
15mm

15mm
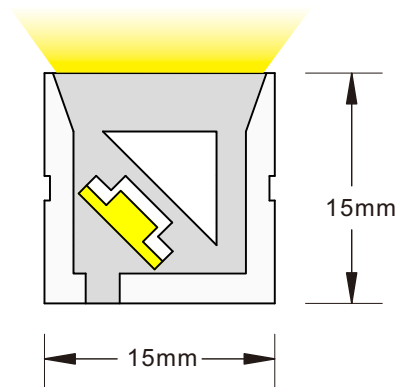
Photoelectric parameters

PN	Color	Wavelength	LEDs/m	Cutting Length	Pixel/M	Voltage	Power	Brightness (lm/M)	Standard Length	Max Length
N015120BC3SC (N1515)	RGB	R:620-630nm G:520-530nm B:460-470nm	SMD2835 120PCS/m	50mm	20Pixel/M FW1903	DC24V	20.5W/m	R:130lm G:501lm B:102lm	5025 ±15mm	5025 ±15mm

Remarks:

1. The above parameters are tested based on 1M standard products.

2. The luminous flux is allowed to have an error range of ±10%.

3. The above parameters are typical values.

4. When this neon led is longer than 5 meters, it needs power from both ends.

5. Subject to change without prior notice.

6.Length tolerance applies. Actual product dimensions may vary.

Product light distribution curve

Light intensity :cd
— C0/180,112.2
— C30/210,112.2
— C60/240,112.0
— C90/270,111.8

Average beam angle (50%): 112.6 degrees

Light distribution curve

Note: the above data is based on monochrome 4000K color temperature

Luminous output:367.0Lm

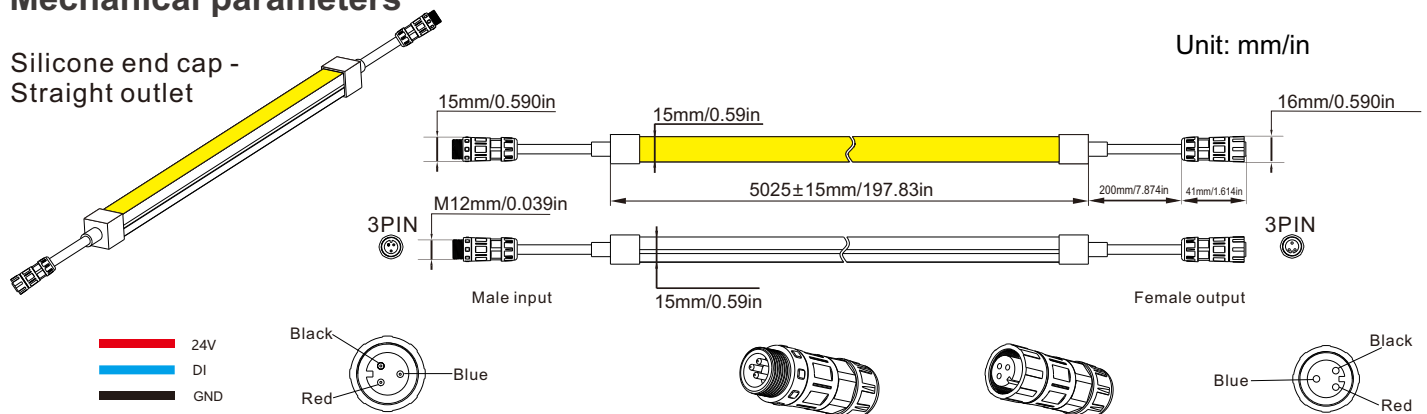| Height	Eavg,Emax	angle:110.72°	diameter
1m	51.55,174.9lx		289.50cm
2m	12.89,43.73lx		579.01cm
3m	5.728,19.43lx		868.51cm
4m	3.222,10.93lx		1158.01cm
5m	2.062,6.997lx		1447.52cm
6m	1.432,4.859lx		1737.02cm
7m	1.052,3.570lx		2026.52cm
8m	0.8055,2.733lx		2316.03cm
9m	0.6365,2.159lx		2605.53cm
10 m	0.5155,1.749lx		2895.03cm

Note: the curve is the illumination area and the average illumination within the area of the lamp under different projection distance
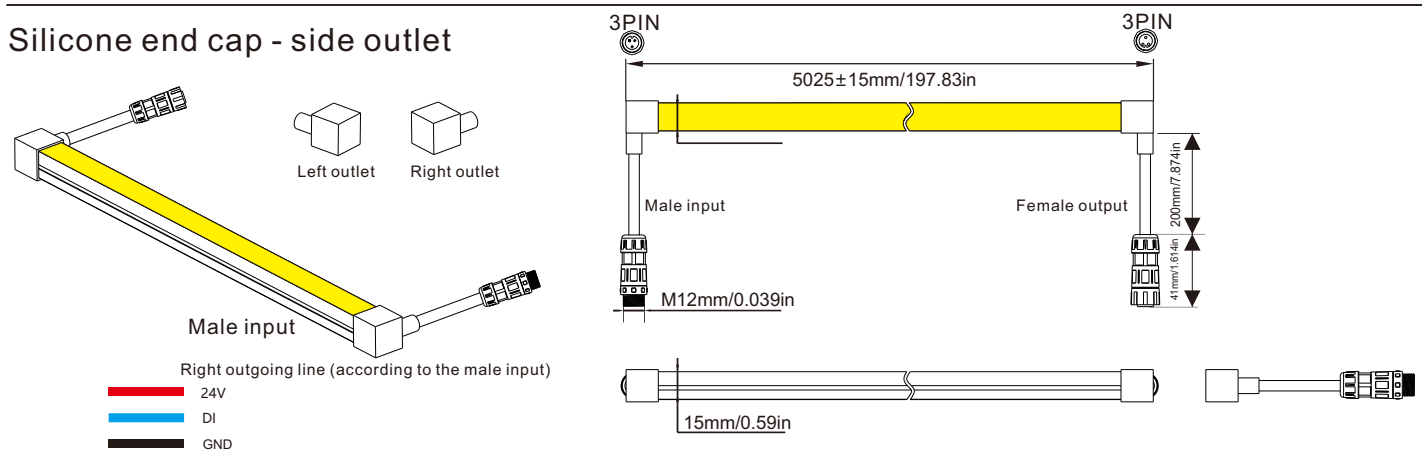
Effective average illumination

Mechanical parameters

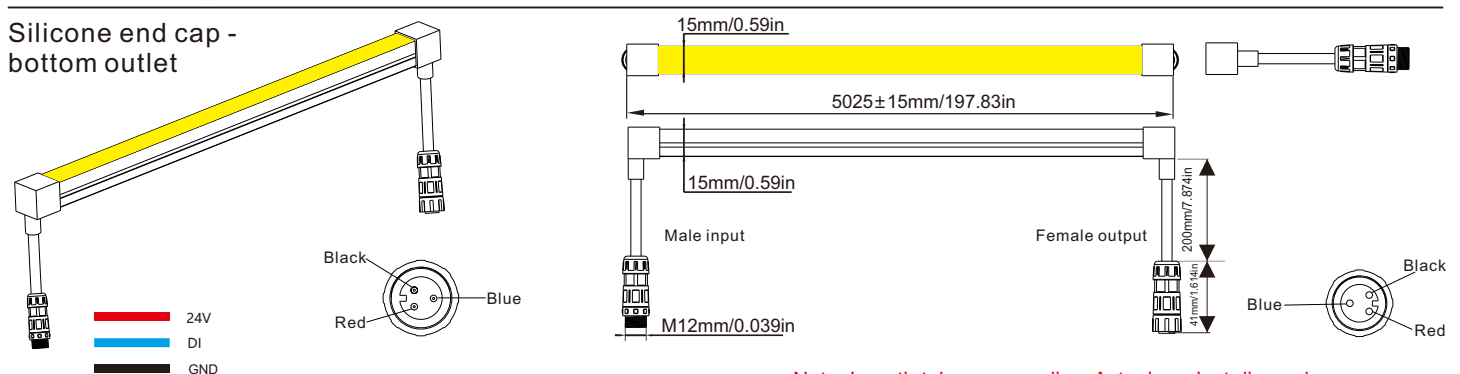Unit: mm/in

Silicone end cap - Straight outlet

15mm/0.590in
15mm/0.59in
16mm/0.590in
5025±15mm/197.83in
200mm/7.874in
41mm/1.614in
M12mm/0.039in
3PIN
Male input
15mm/0.59in
Female output
3PIN

24V
DI
GND

Black
Blue
Red

Black
Blue
Red

Silicone end cap - side outlet

Left outlet   Right outlet

Male input

Right outgoing line (according to the male input)
24V
DI
GND

3PIN
3PIN
5025±15mm/197.83in
Male input
Female output
200mm/7.874in
41mm/1.614in
M12mm/0.039in
15mm/0.59in

Silicone end cap - bottom outlet

15mm/0.59in
5025±15mm/197.83in
15mm/0.59in
Male input
Female output
200mm/7.874in
41mm/1.614in
M12mm/0.039in
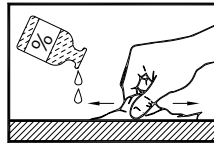
24V
DI
GND

Black
Blue
Red

Black
Blue
Red

Note: Length tolerance applies. Actual product dimensions may vary.
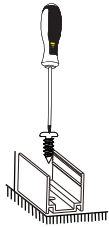
1515 Installation diagram

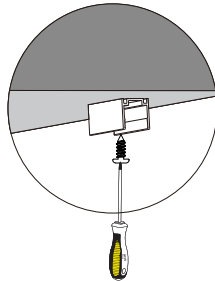Wipe the dust on the installation luminous surface with clean water.

First fix the buckle with screws, and then clip the neon light strip into the buckle. When the length of the neon light strip is greater than 2 meters, two people are required to install it together. (refer to the figure below)
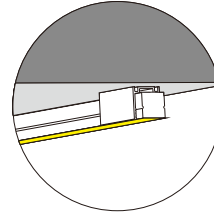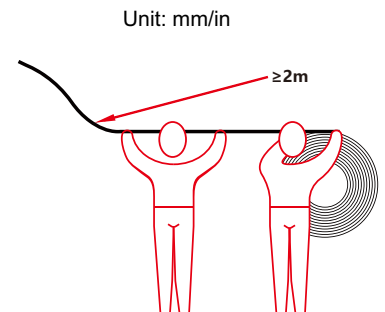
Unit: mm/in

≥2m

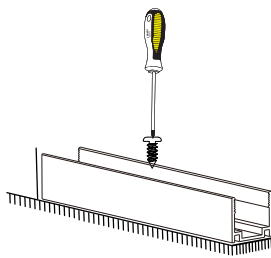Overall dimension of buckle： L30*W15*H10mm
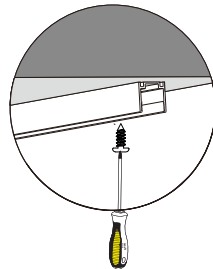
L1.181*W0.591*H0.394in

Surface

When the length of neon light strip is more than 2 meters, two people are required to install it together.

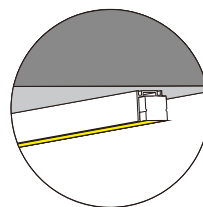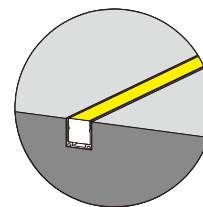Overall dimension of aluminum profile： L1000*W17*H17.9mm
L39.37*W0.669*H0.704in

Surface
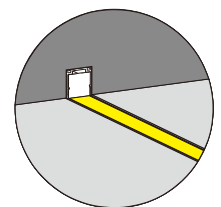
Mounted embedded   Mounted embedded

Correct installation method

TOP Bend

Side Bend

R>60mm   R>60mm
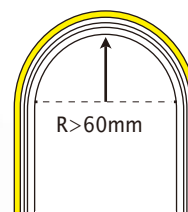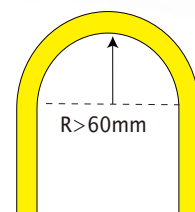
TOP bend   Side bend

Error installation method

No folding
in half

No stretching

No trampling
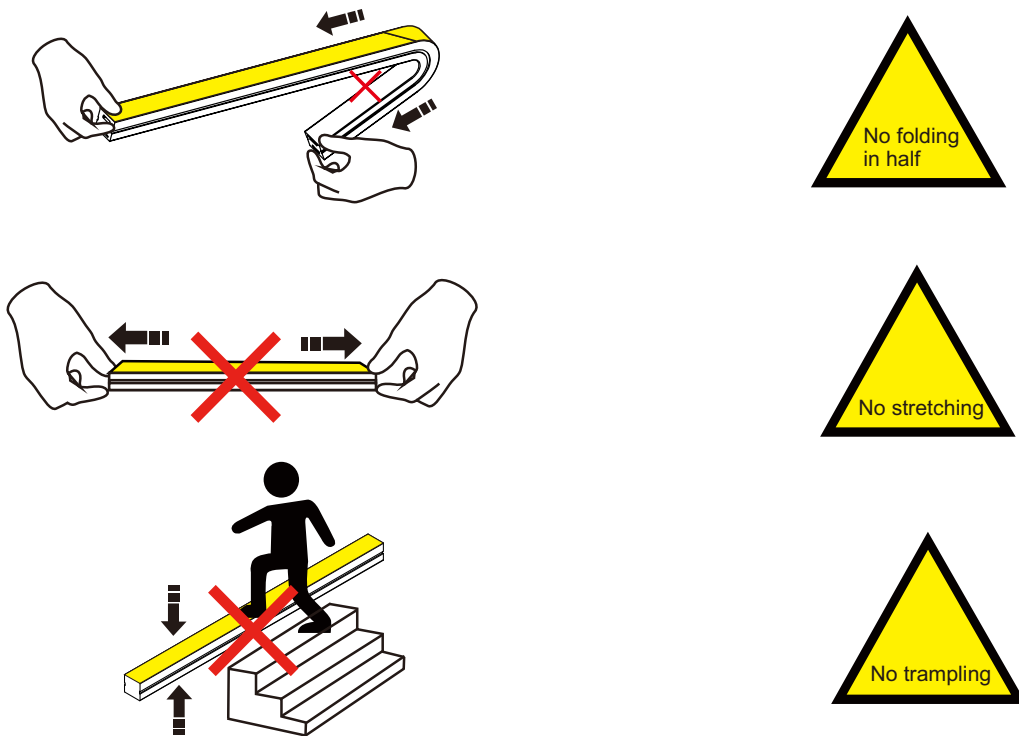
Cutting and the waterproof treatment of both ends

By default, our products will be shipped in regular lengths according to customer requirements.

If the customer has to cut and assemble on site, we can provide some end caps with holes and end caps without holes (all sections can be used). However, please note that in this case, the front and rear ends must be glued for waterproof treatment.

Cutting method

Surface silicone

FPC Cutting

Black mark

1   2   3   4

5
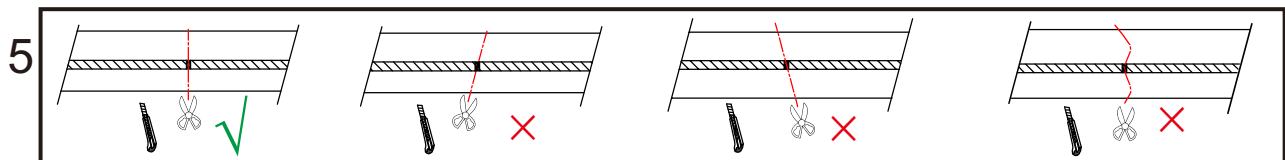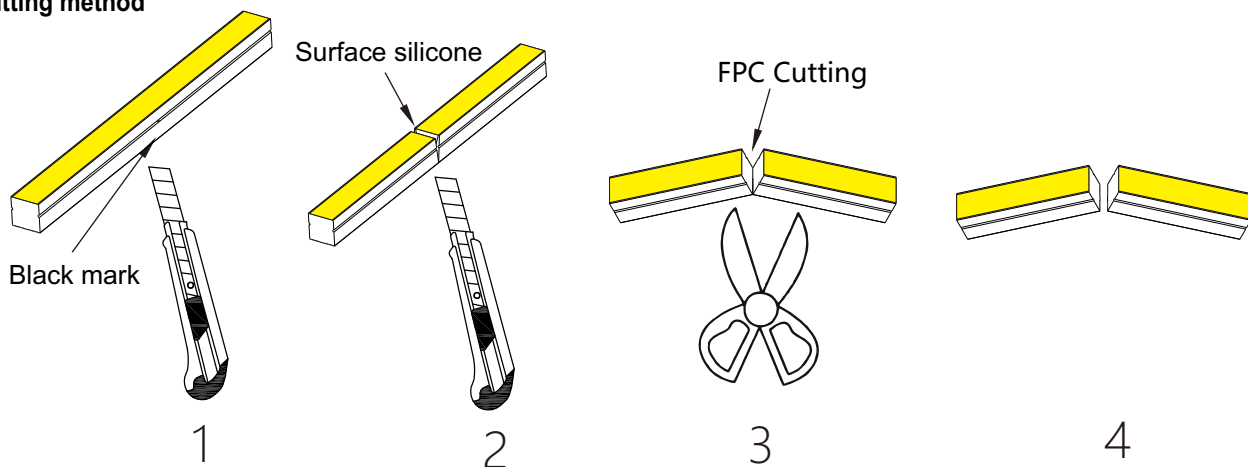
Cutting precautions

Waterproof treatment after cutting

1. The cut output end is glued and plugged with a non hole end cap (Fig. 1);
2. If there is no welding cable at the head and tail ends after cutting, first thread the male wire through the end cap, then weld it to the head end of the LED neon flex, and then apply glue for waterproof treatment (Fig. 2);
3. If there is no cable at the input end of cutting, and the male input cable must be welded (Fig. 3).

Male input   Female output

End cap gluing   End cap gluing

Output   Output

End cap gluing   End cap gluing

Male input   Male input
Welding male wire   Welding male wire

Figure 1   Figure 2   Figure 3

matters needing attention

·Please use DC24V isolation power supply according to the actual LED Neon strip, and the ripple of the constant voltage sou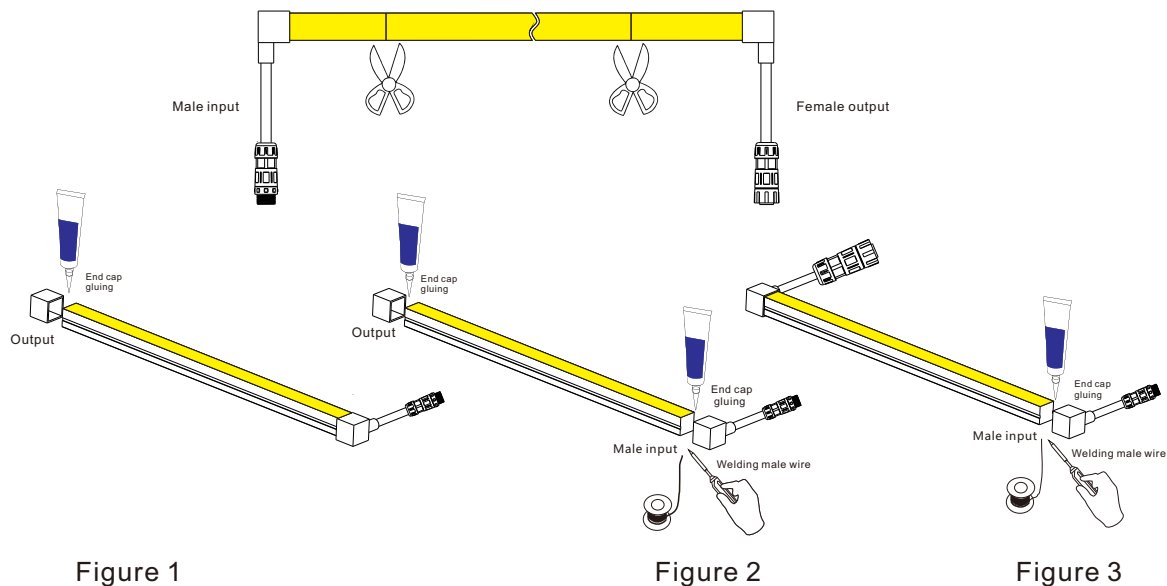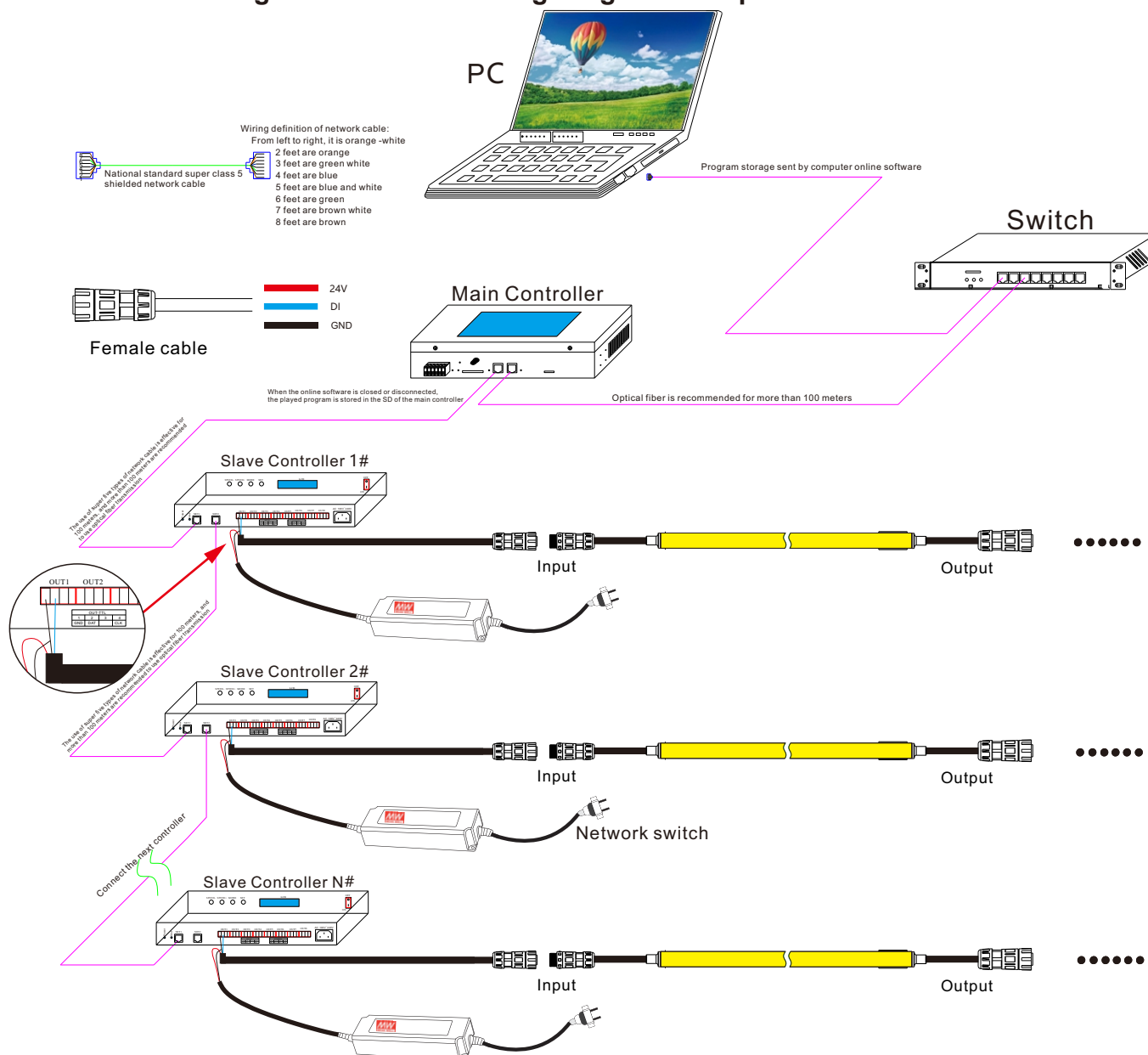rce is less than 5%. The LED light bar can not be used to use the resistance to lower voltage pressure, non -isolation and other types of power supply.

·In practical application, the power supply should reserve 20% margin (it is recommended to use only 80% power) to ensure sufficient voltage to drive products.

·Please operate carefully. When the power is connected, do not touch the AC power terminal to prevent electric shock.

·Pay attention to the positive and negative poles of the power line. Do not connect them incorrectly. Check whether the voltage of the power supply is consistent with that of the product to avoid product damage.

·Please avoid scratching, twisting and irregular bending of the product during installation, otherwise it may cause irreparable damage to the product.

·In order to ensure the service life and reliability of the led neon flex, please do not bend in the arc with a radius of less than 80 mm. Too small bending radius will damage the product itself.

·If the actual application length exceeds the specified length, it will lead to overload, heating, uneven brightness and other phenomena.

·In order to protect your eyes from injury, try to avoid staring at the luminous surface of the led neon flex for a long time.

·Non professional personnel are forbidden to install, disassemble and repair the product.

·It is strictly prohibited to use any acidic or alkaline adhesive to fix the product (including but not limited to glass adhesive, etc.).

·The use scenarios of different I P grades of products are different, and IP67 is not suitable for immersion environment.

·Due to structural differences of products with different sizes and specifications under the same color temperature value, the final color of the product is slightly deviated, which shall be confirmed before use.

·Please use professional cutting tools when cutting.

Main control - integrated control wiring diagram computer

PC

Wiring definition of network cable:
From left to right, it is orange -white
2 feet are orange
3 feet are green white
4 feet are blue
5 feet are blue and white
6 feet are green
7 feet are brown white
8 feet are brown

National standard super class 5
shielded network cable

Program storage sent by computer online software

Switch

24V
DI
GND

Female cable

Main Controller

When the online software is closed or disconnected,
the played program is stored in the SD of the main controller

Optical fiber is recommended for more than 100 meters

The set of super five types of network cable is effective for
100 meters and more than 100 meters are recommended
to use optical fiber transmission

Slave Controller 1#

OUT1   OUT2

OUT CTL
GND   DAT   CLK

Input

Output

The set of super five types of network cable is effective for 100 meters and
more than 100 meters are recommended to use optical fiber transmission

Slave Controller 2#

Input

Network switch

Output

Connect the next controller

Slave Controller N#

Input

Output

Product control system solution

Product picture	Name	PN	Product specifications	Applicable products
	Main controller	XS-809-A	Power supply: ac110-240v Power: 10 W Data interface: network interface Memory card type: SDHC card Operating temperature: -10 - 60 Size: 260mm * 160mm * 52mm(L*W*H) Weight: 2.0kg	SPI Neon flex DMX512Neon flex
	Slave controller	T-790	Power supply: ac110-240v Power: 5 W Output type: 4Pin connector Operating temperature: -20 - 85 Size: 310mm * 152mm * 42mm(L*W*H) Weight: 2.0kg	SPI Neon flex DMX512Neon flex
	Offline controller	K-1000C	power supply: DC 5V or DC 12-24V input Power consumption: 2 W Output type: 3pin terminal block Operating temperature: -30 - 85 Size: 159mm * 89mm * 24mm(L*W*H) Weight: 0.35kg	SPI Neon flex DMX512Neon flex

Product Accessories

Name	Describe	Picture	Net weight	Product size (㎜)	Remarks
Alum LED Profile	Pre installation slot		205g	L1000xW17.8xH18.2	Aluminum
Alum LED Profile	Pre installation slot		1.9g	L20xW15xH10	Aluminum
Modeling carrier	Shapable mounting slot		370g	L5000xW15.3xH9.5	Stainless steel
Straight outlet end cap	Silicone front outlet end cap		10g	L24xW17xH16.6	Silicone
Side outlet end cap	Silicone side outlet end cap		8.6g	L25xW17XH16.6	Silicone
Seal the end cap	Silicone sealing end cap		8.1g	L14xW17xH16.6	Silicone
Filling glue	300h mono molecular silica gel		125g	L32xW46xH17	Liquid glue
Female Connector	3PIN connector		23g	φ15xL200	PVC
Male Connector	3PIN Connector		18g	φ15xL200	PVC
Connector	3PIN IP65 Connector		/	/	PVC
Power supply	240W waterproof power supply		1.38Kg	L244.2xW68xH38.8	/
Power supply	350W Non-waterproof power supply		0.82Kg	L215xW115xH30	/
Power supply	400W rainproof power supply		1.23Kg	L220.4xW130xH48	/

Product packaging

· Standard packaging

1.For carton packaging, the line label is pasted 80mm away from the end of the line, the information label is pasted on the product, and the product information label and box number label are pasted on the side of the carton,QC inspection stamp.
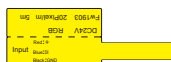

Voltage & input line identification
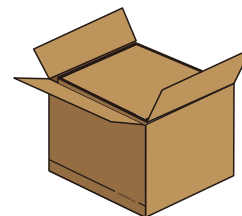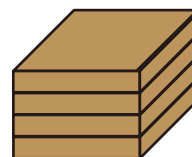
Product information label

2.For single carton packaging, the line label is pasted 80mm away from the end of the line, the information label is pasted on the product, and the product information label and box number label are pasted on the side of the carton,QC inspection stamp.

Voltage & input line identification

Product information label

3. For wooden case packaging, the line label is pasted 80mm away from the line end, the information label is pasted on the product, and the product information label and box number label are pasted on the side of the carton,QC inspection stamp.

Voltage & input line identification

Product information label

Name	Size	Quantity / box	Quantity / carton	Net weight of single product (kg)	Net weight of each carton (kg)	Gross weight (kg)	Outer carton size (mm)
Carton	L5000*15*15mm	5m*3	10m	1.28	3.78	4.07	360*360*60
Carton	L5000*15*15mm	5m*12	40m	1.28	15.12	16.85	380*380*265
Wooden case	Customized to order	/	/	1.31	/	/	/

Reliability testing

Test item	Test requirement	Test standard	Test method or condition
Safety regulation test	Mechanical strength	GB-7000.1	Impact hammer 0.7 J
	Dust and water proof test	GB-7000.1	IP67
	Winding test	GB-7000.1	φ150mm wooden disc, 60N tension, 10 times at room temperature, 10 times after cold treatment (-15℃±2℃, 16h)
	Low temperature winding test	GB-7000.1	Winding the winding shaft, low temperature box -c, after 16h,15 ℃± 2 ℃ winding the winding shaft for 2 turns
	Low temperature impact test	GB-7000.1	Winding the winding shaft, low temperature box -15℃±5℃, after 16h, winding the winding shaft for 2 turns
	Insulation resistance	GB-7000.1	≦ 2MΩ
	Electrical strength	GB-7000.1	500V
Mechanical reliability test	Neon flex bending test up and down	Internal standards	With an interval of 200mm (including welding points), the up and down neon flex are respectively 100 times
	Distortion test	Internal standards	Twist clockwise for 5 turns and then relax. Repeat for 100 times
	Falling test	Internal standards	100 times of wrestling
Environmental reliability test	High temperature storage	GB/T 2423.2	60℃，168 hours
	Low temperature storage	GB/T 2423.1	-30℃, 168 hours
	High temperature and humidity operation	GB/T 2423.3	60℃，85%RH
	Salt spray Test	GB/T 2423.17	5% salt solution concentration, 24h
	IK Test	GB/T 20138	Each exposed surface bears 5 impacts
	Normal temperature aging	Internal standards	25℃，6000 hours
	UV Weathering Test	Internal standards	96 hours
	Switching impulse	Internal standards	10s on, 10s off, 10000 times