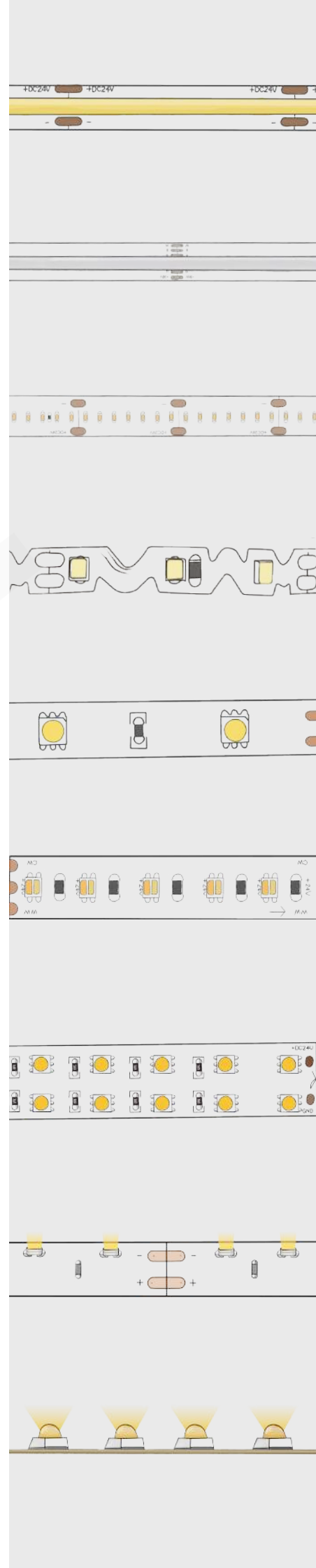


# Product Specification

## 12MM Nano Neon









## 12MM SMD2835 Nano Neon

- 1-IP65 waterproof rating, suitable for more applications
- 2- Ultra-thin design, no spot vision
- 3-130Lm/W Ultra-high light efficiency, energy saving
- 4-Adopt integrated extrusion process, environmentally friendly silicone material, select high-strength bracket, high-light efficiency LED lamp beads, through LM80 test certification reliability, bending resistance
- 5-Skin friendly surface treatment, comfortable to touch, good flexibility, simple shape
- 6-High light transmittance, corrosion resistance, UV resistance
- 7-5 years warranty, life > 50,000 hours



### STRUCTURE

Item Code	Input voltage	CCT/K	Watt/m	Color Rendering Index	Lm/m	Lm/ft	LM/w	Min cut	Max.run length
MF228W240Q90-D027A6A10104N-1205ZA	12V	● 2700k	10	80 90	1210 1150	369 351	121 115	16.66mm	3m
MF228W240Q90-D030A6A10104N-1205ZA	12V	● 3000k	10	80 90	1283 1200	391 366	128 120	16.66mm	3m
MF228W240Q90-D040A6A10104N-1205ZA	12V	● 4000k	10	80 90	1350 1300	412 396	135 130	16.66mm	3m
MF228W240Q90-D050A6A10104N-1205ZA	12V	● 5000k	10	80 90	1350 1300	412 396	135 130	16.66mm	3m
MF228W240Q90-D060A6A10104N-1205ZA	12V	● 6500k	10	80 90	1350 1300	412 396	135 130	16.66mm	3m
MN328V240Q90-D027A6A10108N-1205ZA	24V	● 2700k	12	80 90	1524 1404	465 428	127 115	33.33mm	5m
MN328V240Q90-D030A6A10108N-1205ZA	24V	● 3000k	12	80 90	1560 1440	476 439	130 120	33.33mm	5m
MN328V240Q90-D040A6A10108N-1205ZA	24V	● 4000k	12	80 90	1620 1560	494 476	135 130	33.33mm	5m
MN328V240Q90-D050A6A10108N-1205ZA	24V	● 5000k	12	80 90	1620 1560	494 476	135 130	33.33mm	5m
MN328V240Q90-D060A6A10108N-1205ZA	24V	● 6500k	12	80 90	1620 1560	494 476	135 130	33.33mm	5m

Item Code	Input voltage	CCT/K	Watt/m	Color Rendering Index	Lm/m	Lm/ft	LM/w	Min cut	Max.run length
MN228U224Q80-D801I6A10303N-1205ZE	24V	 2700k	10	80	1100	335	110	31.25mm	5m
MN228U224Q80-D801I6A10303N-1205ZE	24V	 6500k	10	80	1030	314	103	31.25mm	5m
MN228U224Q80-D801I6A10303N-1205ZE	24V	 2700+6500K	10	80	2100	640	105	31.25mm	5m
MN304A672Q00-D000J6A10107N-1205ZA	24V	R	3.6	N/A	61	19	17	31.25mm	5m
MN304A672Q00-D000J6A10107N-1205ZA	24V	G	3.6	N/A	262	80	73	31.25mm	5m
MN304A672Q00-D000J6A10107N-1205ZA	24V	B	3.6	N/A	38	12	11	31.25mm	5m
MN304A672Q00-D000J6A10107N-1205ZA	24V	 RGB	11	N/A	352	107	32	31.25mm	5m

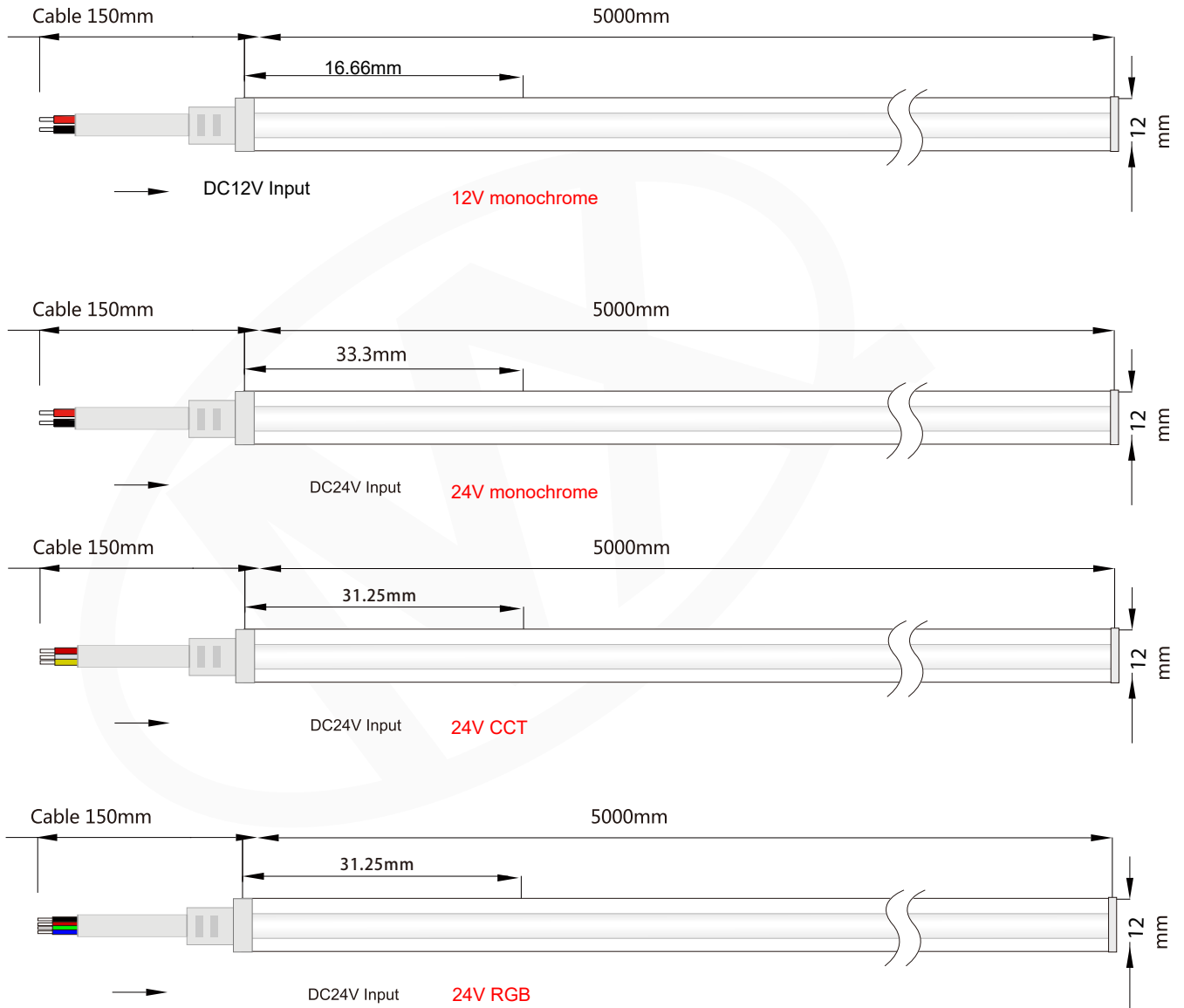
## Electric parameter

Input Current/m:	12V:0.84A/m 24V: 0.5A/m(monochrome) CCT:0.42A/m RGB: 0.46A/m
Input Voltage:	DC12/24V
Power/M:	12V monochrome: 10W/m 24V monochrome: 12W/m 24V CCT: 10W/m 24V RGB: 11W/m
Static Electricity:	1000V (ESD)
LEDs/Meter:	Monochrome: 240LEDs/m CCT: 224LEDs/m RGB: 672LEDs/m
Size of Section:	12V: 16.66mm 24V monochrome: 33.33mm CCT/RGB: 31.25mm
LEDs of Section	12V: 4 LEDs 24V monochrome: 8LEDs CCT/RGB: 7LEDs

## Optical parameter

LED Type:	SMD2835
Color Rendering Index:	80/90
CCT Range:	2700K~6500K/CCT/RGB
Irritation Angle:	120°

## DRAWING



## Accessories



MX-02-002635  
PC profile



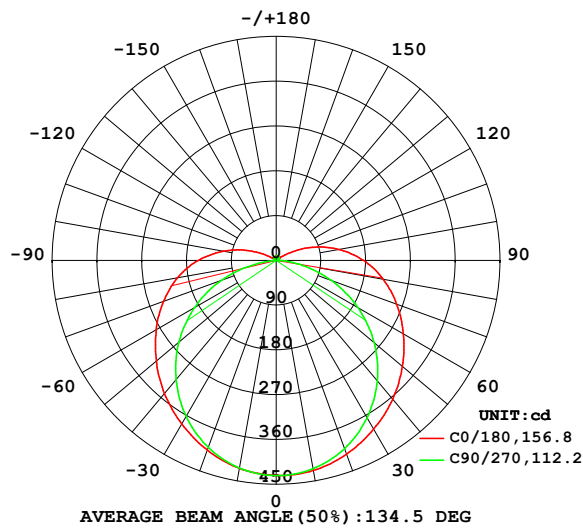
MX-02-002636  
Transparent clasp



MX-08-001820  
Straight out cap



MX-08-001821  
End cap



Photometric of 1M strip

※Max.length data is based on 10% voltage drop

※Warranty is based on indoor use

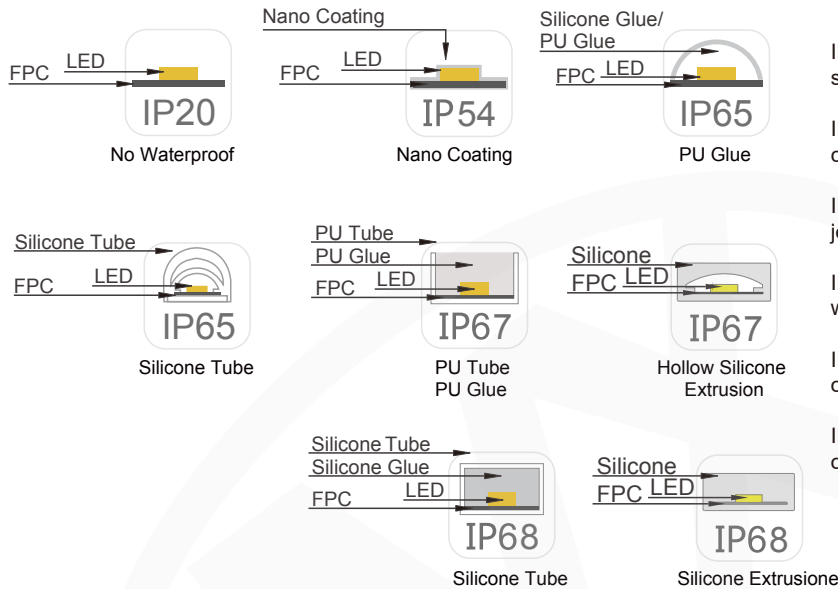
This IES report based on 24V  
monochrome Please contact sales  
for additional reports

Flux out:968.6 lm

Height	Eavg, Emax	Angle:112.17deg	Diameter
1m	130.0,432.6lx		297.48cm
2m	32.51,108.2lx		594.97cm
3m	14.45,48.07lx		892.45cm
4m	8.127,27.04lx		1189.94cm
5m	5.201,17.30lx		1487.42cm
6m	3.612,12.02lx		1784.91cm
7m	2.654,8.829lx		2082.39cm
8m	2.032,6.760lx		2379.88cm
9m	1.605,5.341lx		2677.36cm
10m	1.300,4.326lx		2974.85cm

Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

## WATERPROOF RATE



### IP Rate Description :

**IP20:** Protected against a solid object greater than 12.5mm, such as a finger.

**IP54 Nano:** Dust Protected Prevents ingress of dust sufficient to cause harm, Protected against water splashing from any angle.

**IP65 PU:** Dust tight. No ingress of dust, Protected against water jets from any angle

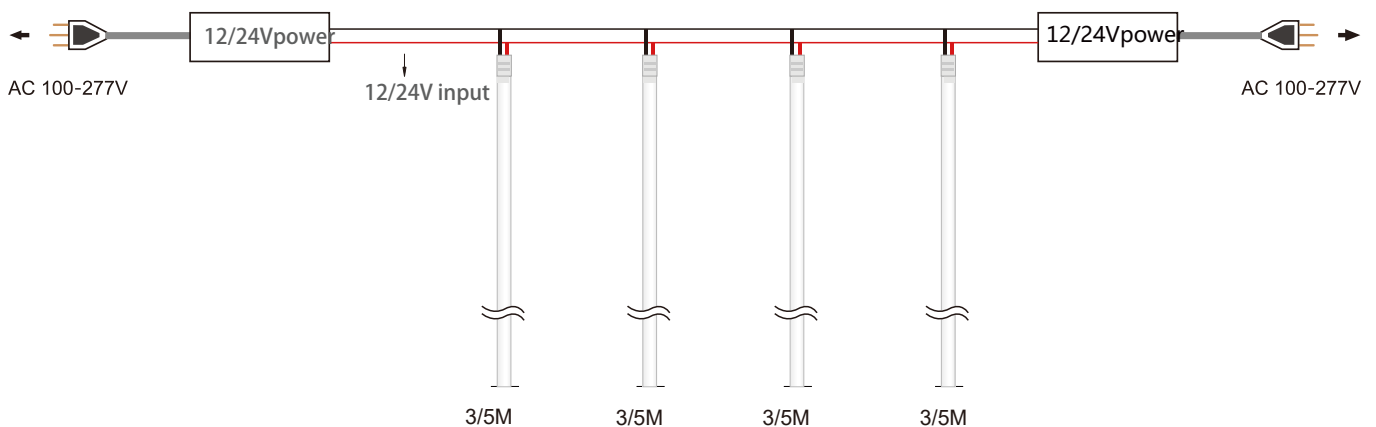
**IP65 silicone:** Dust tight. No ingress of dust, Protected against water jets from any angle

**IP67:** Dust tight. No ingress of dust, Protected against the effects of temporary submersion in water (30 minutes at 3 feet!)







**IP68:** Dust tight. No ingress of dust, Protected against the effects of permanent submersion in water (up to 13 feet)

## WIRING DIAGRAM APPLICATION

◇ Single end power input for 3/5meters



## Controller

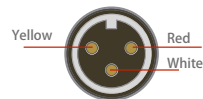
Picture	Item	Model	Spec	Match
	Monochrome remote	MX-03-030472	Output signal:RF(2.4GHz) Working voltage:3VDC(CR2032) Remote control distance:30m Working temperature:Ta:-30°C~+55°C	Use with Monochrome light strip
	Monotone light controller	MX-03-030322	Input voltage:12-48VDC Output current:15A@12/24V-10A@36/48V Output Power:180W@12V-360W@24V 360W@36V-480W@48V Working temperature:Ta:-30°C~+55°C	Use with Monochrome light strip
	CCT remote	MX-03-030466	Output signal:RF(2.4GHz) Working voltage:3VDC(CR2032) Remote control distance:30m Working temperature:Ta:-30°C~+55°C	Use with CCT light
	Color temperature controller	MX-03-030437	Input voltage :12-24VDC Output current :2CH,5A/CH Output Power :2x(120-240)W Working temperature:Ta:-30°C~+55°C	Use with CCT light
	RGB remote	MX-03-030469	Output signal :RF(2.4GHz) Working voltage :3VDC(CR2032) Remote control distance:30m Working temperature:Ta:-30°C~+55°C	Use with RGB light
	RGB Controller	MX-03-030467	Input voltage :12-24VDC Output current :3CH,4A/CH Output Power :144-288W Working temperature:Ta:-30°C~+55°C	Use with RGB light

## ELECTRICAL WIRING COLOR CODES

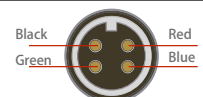
○ MONOCOLOR



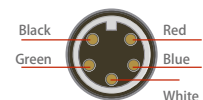
○ CCT



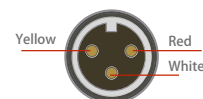
○ RGB



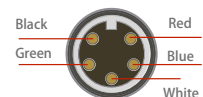
○ RGBW



○ SPI



○ DMX



○ RGBCCT

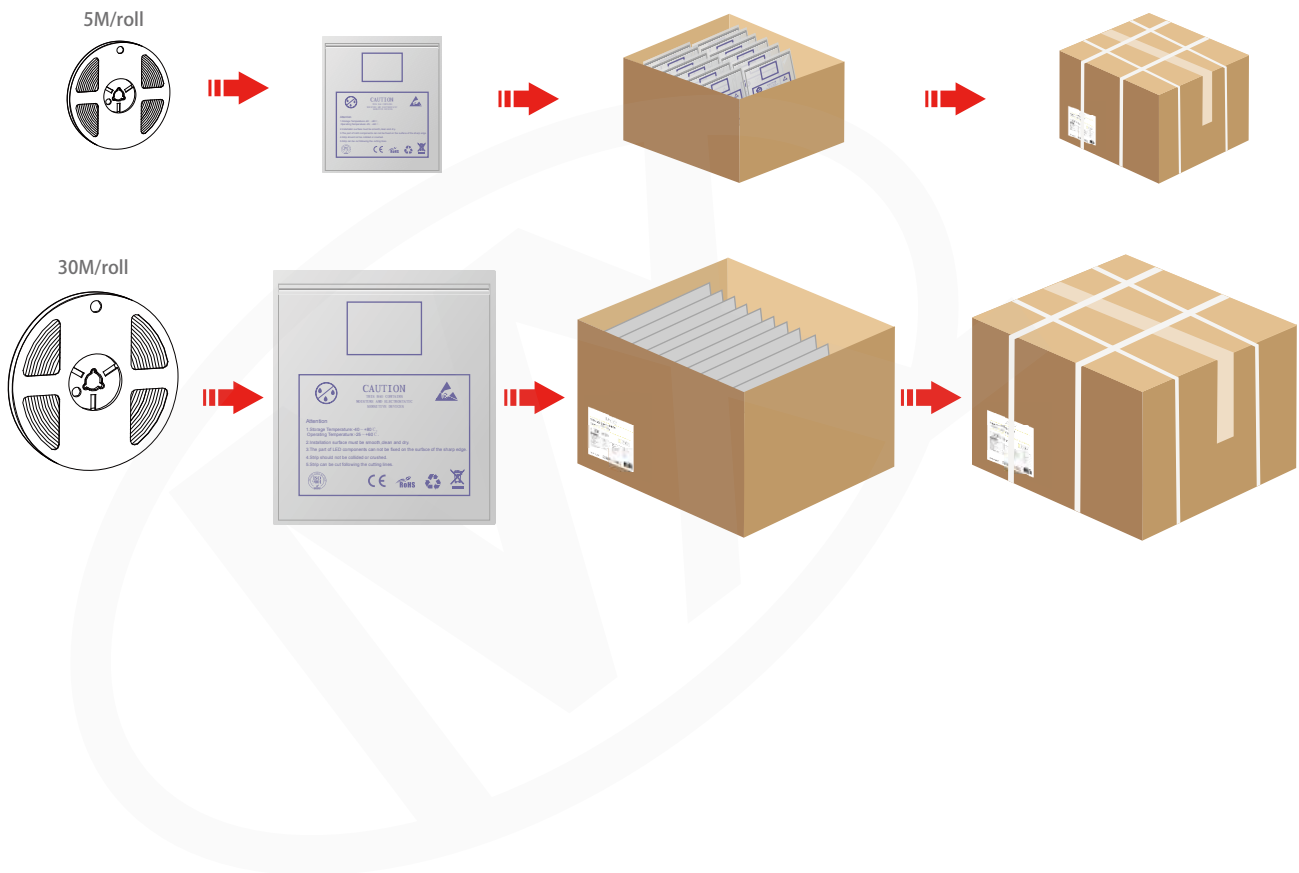


## Reliability test of light

TESTING ITEM	PERFORMANCE	STAND ARD/REFERENCE VALUE/DES CRIP TION	
1-FIND REPEATED TEST 2-RE ARRAGE ORDER 3-CONFIRM STANDARD * 4-REQUIRED EQUIPMENT FOR TEST ** 5-CONFIRM ALREADY AVAILABLE EQUIPMENT WITH LIAO *** 6-CONFIRM ETA FOR MISSING EQUIPMENTS ****	ITEM	DESCRIPTION	REQUIRED EQUIPMENT FOR TEST **
PHOTOMETRIC TEST	Spectrum Analysis	LM 79(lumen,CCT,CRI,XY,SDCM,wave length)	<input checked="" type="checkbox"/>
	Photometric Distribution	LM 79(lumen intensity distribution&Lux diagram)	<input checked="" type="checkbox"/>
ELECTRICAL TEST	ESD test	IEC61000-4-2/ANSI-ESDSTM5.1.2	
	EMC Test	IEC 61547/GBT 18595 IEC 61000-3-2/GB 17625.1	<input checked="" type="checkbox"/>
MECHANICS & PHYSICE TESTING	Bending Test Vertical	Manufacturer-defined,500 cycles 3 times bending with 0.5m/s pulling speed	
	Bending Test Horizontal	Manufacturer-defined,500 cycles 3 times bending with 0.5m/s pulling speed	
	Swing Tes	UL2388,>750 cycles	
	Tensile Test	Manufacture-defined,>the weight of light in maximum connection length wiht both ends feed With 30Nm if total cross section <0.75 or 60Nm force, pull wire 25 timesduring 1 sec. Mark displacement ≤ 2mm.	<input checked="" type="checkbox"/>
	Twist Test	Manufacturer-defined,>200 cycles in 720°	<input checked="" type="checkbox"/>
	Adhesion test	3M 4229P hung on 2kg loads >7 hrs	<input checked="" type="checkbox"/>
	drop test	IEC68-2-6,GB/T2423/10/95	<input checked="" type="checkbox"/>
	Vibration tes	I bear up to 25,4mm amplitude in 14200 cycles	
	Insulation Resistanc	≅ 2MΩ	<input checked="" type="checkbox"/>
	Electrical strength	500V	<input checked="" type="checkbox"/>
ENVIRONMENT TESTING	Heating test	Sample to be tested under normal installation Under 1.06 times Rating Voltage After 30 minutes.	<input checked="" type="checkbox"/>
	Salt Spray Test	5% salt solution concentration, 48h 5%,48H 35, 5% salt water,35+/-2C for 48hrs	<input checked="" type="checkbox"/>
	High temperature and Humidity impact	65+/-2° C for 500 hrs 60°C, 85%RH 60度, 85%RH	<input checked="" type="checkbox"/>
	Temperature Shock Test	Manufacturer-defined,-40°C-85°C (typical temperature ange)	<input checked="" type="checkbox"/>
	switch test	30s On, 30s Off, 15000 times on/off every 30S, > 15000 cycles	<input checked="" type="checkbox"/>
	Lifetime aging test	35°C, 6000h	<input checked="" type="checkbox"/>
	Constant Temperature Test	Manufacturer-defined,60°C to -40° ( typical temperature )	<input checked="" type="checkbox"/>
	Winding Test	φ 150mm cylinder, 60N pull, winding 10 times at ( -25°C ±2°C ) , and 10 times after(-15°C±2°C, 16h)	<input checked="" type="checkbox"/>
	Cold Bend Test	wound on mandrel,low-temperature (-15°C±2°C, 16h), around the mandrel for two turns	<input checked="" type="checkbox"/>
	Cold Impact test	Low-temperature (-15°C±5°C, 16h), hammer falls from a height of 100mm.	<input checked="" type="checkbox"/>
	UV Exposure Test	ASTMG 154,ISO 4892-3, UVA@340nm ASTMG154-06, UVA-340 0.68W/m2 for 300 hrs	<input checked="" type="checkbox"/>
	IPX5 IPX6 IPX7 IPX	IEC60529 IP65 -IP67	<input checked="" type="checkbox"/>
	Flame Resistant Test	UL94	



## Packing



## Safety Information

### Application notes for led flexiable strip

In order to drive LED flexible strip lights safely, it is absolutely necessary to operate them with an electronically stabilised power supply protecting against short circuits, overload and overheating.

To also ease the luminaire/installation approval, electronic control gear, power supply and all electronic accessories for LED or LED modules should carry "CE, or UL" mark and meet the latest safety standard.

- Please use 12/24VDC isolated power supply to drive the led strip, and the constant voltage source ripple less than 5%. Can't step-down the power by resistance-capacitance and non-isolated power supply driver led strip, etc.
- To ensure the longevity and reliability of the strips, please do not bend the arc diameter 60mm or less, do not fold to avoid damaging the lamp beads or broken.
- To ensure the life and environment of lights, in the use of force can not pull the power cord to avoid damage to prohibit collision LED lights.
- During the installation of positive and negative attention to the power cord, do not pick the wrong voltage power supply and the product are the same, so as to avoid damage to the product.
- LED lights should be stored in dry sealed environment, the proposed storage period should not be too long before using unpacking, the working temperature:  $-20 \sim +45^{\circ}\text{C}$ , Storage temperature:  $-40 \sim +60^{\circ}\text{C}$ , not waterproof lights band indoor use, relative humidity not higher than 70%.
- In practical applications, the power supply should leave 20% margin (recommend using only 80% of the power) in order to ensure a sufficient amount of voltage drive products
- Do not use any acidic, alkaline adhesive securement products (including not limited to glass, plastic, etc.)