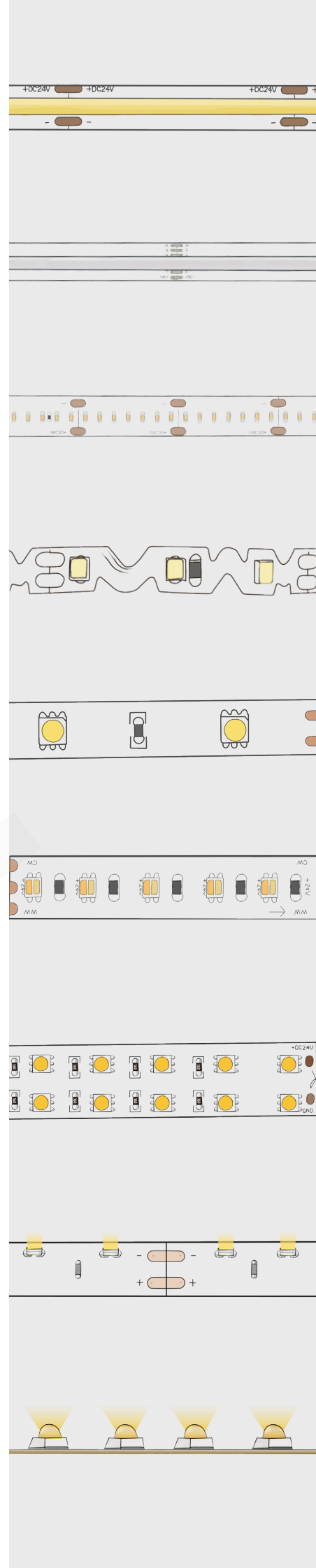
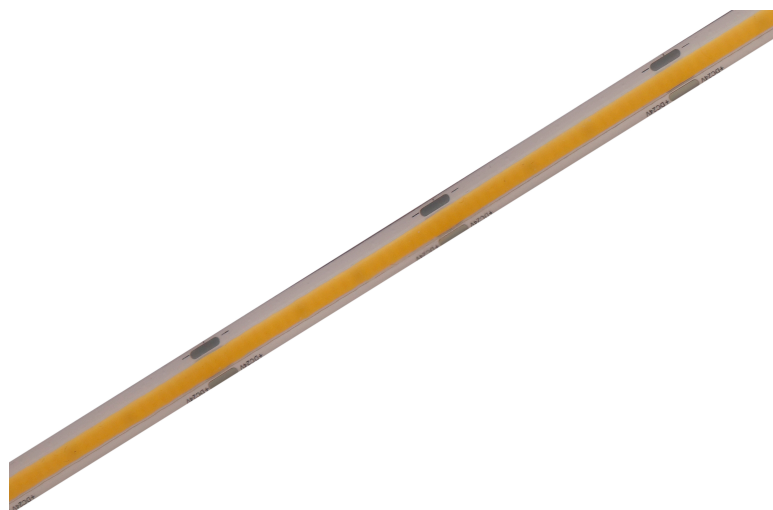


# Product Specification

## IP67 COB SAUNA Strip





## IP67 COB SAUNA STRIP

- 1- COB chips with no spot vision, IP67
- 2- 100Lm/W high light efficiency, energy saving
- 3- Heat and moisture resistant and suitable for use in saunas



## STRUCTURE

Item Code	Input voltage	CCT/K	Wattage	Color Rendering Index	Lm/m	Lm/ft	LM/w	Min cut	Max.run length
MF309V480Q90-D027A3A10308N	24V	2700k	10W/M (3.05W/FT)	>90	950	290	95	50mm (1.97')	5M (16.4ft)
MF309V480Q90-D030A3A10308N	24V	3000k	10W/M (3.05W/FT)	>90	950	290	95	50mm (1.97')	5M (16.4ft)
MF309V480Q90-D040A3A10308N	24V	4000k	10W/M (3.05W/FT)	>90	1000	305	100	50mm (1.97')	5M (16.4ft)
MF309V480Q90-D050A3A10308N	24V	5000k	10W/M (3.05W/FT)	>90	1000	305	100	50mm (1.97')	5M (16.4ft)
MF309V480Q90-D065A3A10308N	24V	6500k	10W/M (3.05W/FT)	>90	1000	305	100	50mm (1.97')	5M (16.4ft)

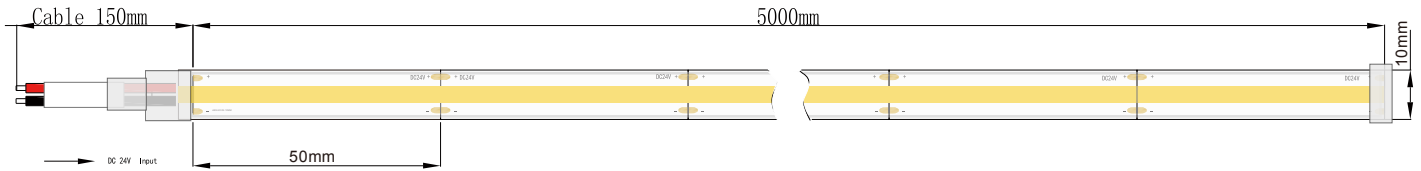
## Optical

LED type:	COB
Color rendering index:	Ra>90
CCT Range:	2700K, 3000K, 4000K, 5000K, 6500K.
Irritation angle:	140°
Light Efficiency:	95-100Lm/w
Lumen output:	950-1000Lm/m(290-305Lm/ft)

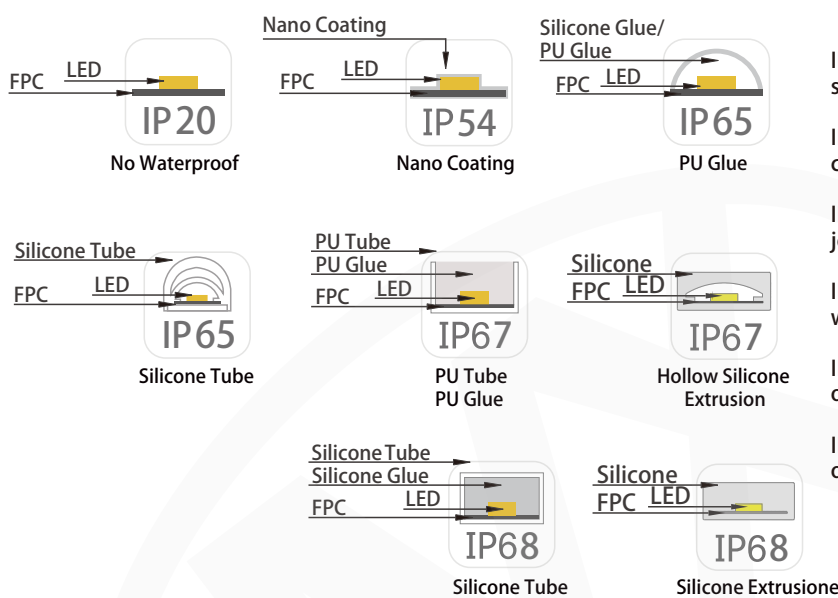
## Electric (24V)

Input current:	0.42A/m(0.13A/ft)
Input Voltage:	DC24V
Voltage Power:	10W/M(3.05W/ft)
Static Electricity:	2000V(ESD)
LEDs/meter:	480LEDs/m
Size of section:	50mm(1.97')
LEDs of section:	24LEDs

## DRAWING



## WATERPROOF RATE

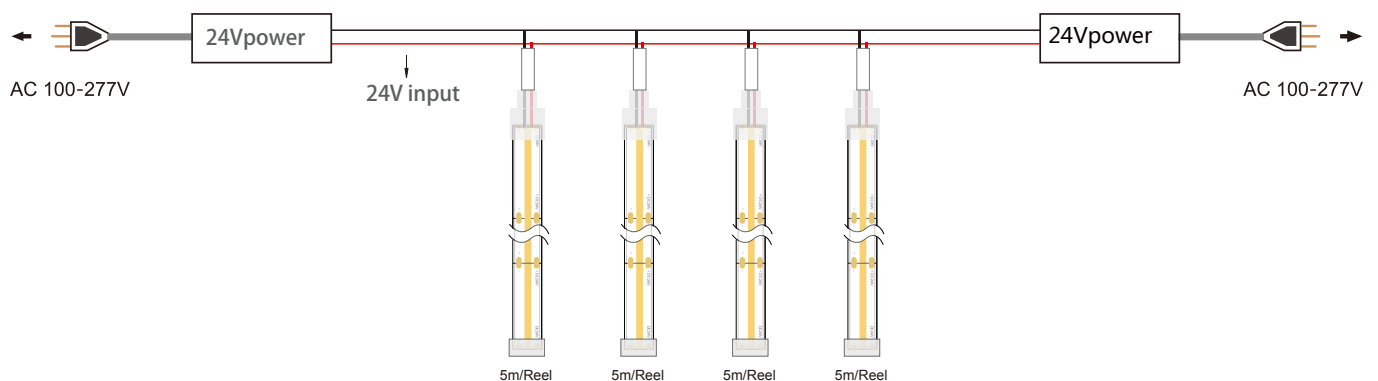


### IP Rate Description :



- 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 5 meters



## 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

## ELECTRICAL WIRING COLOR CODES

○ MONOCOLOR

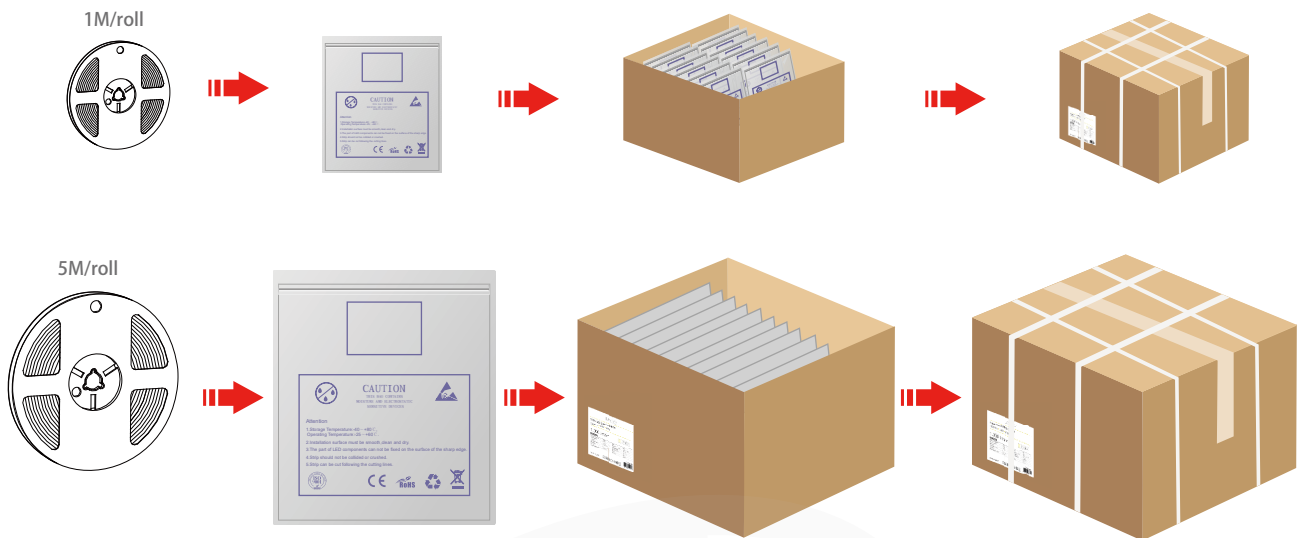
Red: V+  
Black: GND



## Reliability test of light

TESTING ITEM	PERFORMANCE	STAND ARD/REFERENCE VALUE/DESCRIPTION	
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 4429P 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"/>
	Heating test	Sample to be tested under normal installation Under 1.06 times Rating Voltage After 30 minutes.	<input checked="" type="checkbox"/>
ENVIRONMENT TESTING	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 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:  $-20 \sim +120^{\circ}\text{C}$ , Storage temperature:  $0 \sim +60^{\circ}\text{C}$ , not waterproof lights band indoor use, relative humidity not higher than 85%.
- 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.)