

# LiteMagic Flex Neon– (BGC409)

**LiteMagic Flex Neon** is the excellent LED strips with professional design and high flexibility to enable the façade and cove lighting with infinity possibilities. Both side-view and Top view are available, those always can enable your design on façade into real lighting effect. Side view due to vertical layout of LED allow the strips to be bend along the PCB vertically to deliver uniform light and horizontal LED layout as top view delivers more lights through opal tube. Higher CRI, various dimension and lumen out are available. Neon LED strip is indispensable solution for architectural lighting, either indoor or indoor application, it makes the architect out of insipid and allow lighting designer conveniently make the constructions remarkable.

## Key Features (BGC409)

- IP67, sealed with anti-UV Silicone
- Various lumen output from 400lm to 1150lm per meter for different type;
- Optional CCT 2700K/3000K/3500K
- CRI90 for better vivid color rendering;
- SDCM≤ 4, better color consistency for visual comfort;
- 24VDC, Class III for safety use;
- Long lifespan 30K hrs. L70B50@35°C;
- Lead cable (50cm) for connection;
- Full range of accessory (\*quick reconnector(Acc. B&C) is for indoor application only)



## Ordering guide (On/Off ---support PWM dimming)

ex: BGC409 650LM 10W 2700K L5 1515 T G

BGC409	650LM	10W	2700K	L5	1515	T	G
Family	Lumen package	Wattage	CCT / Color	Length/Reel	Section Size(WxH)	View Type	Markting
BGC409 – Flex Neon	650LM – 650lm/M(5)	10W – 10W/M 6W – 6W/M(1) 14W – 14W/M(2)	2700K – 2700K 3000K – 3000K 3500K – 3500K 4000K – 4000K 5700K – 5700K RGB – RGB(3) tW – Tunable White(3) RGBWW – RGBW(3000K)(3) RGBNW – RGBW(4000K)(3) BL – Blue RD – Red GN – Green AM – Amber	L5 – 5000mm(4)	0612 – 6x12mm 1010 – 10x10mm 1515 – 15x15mm	T – top view S – side view	G – GC/GM

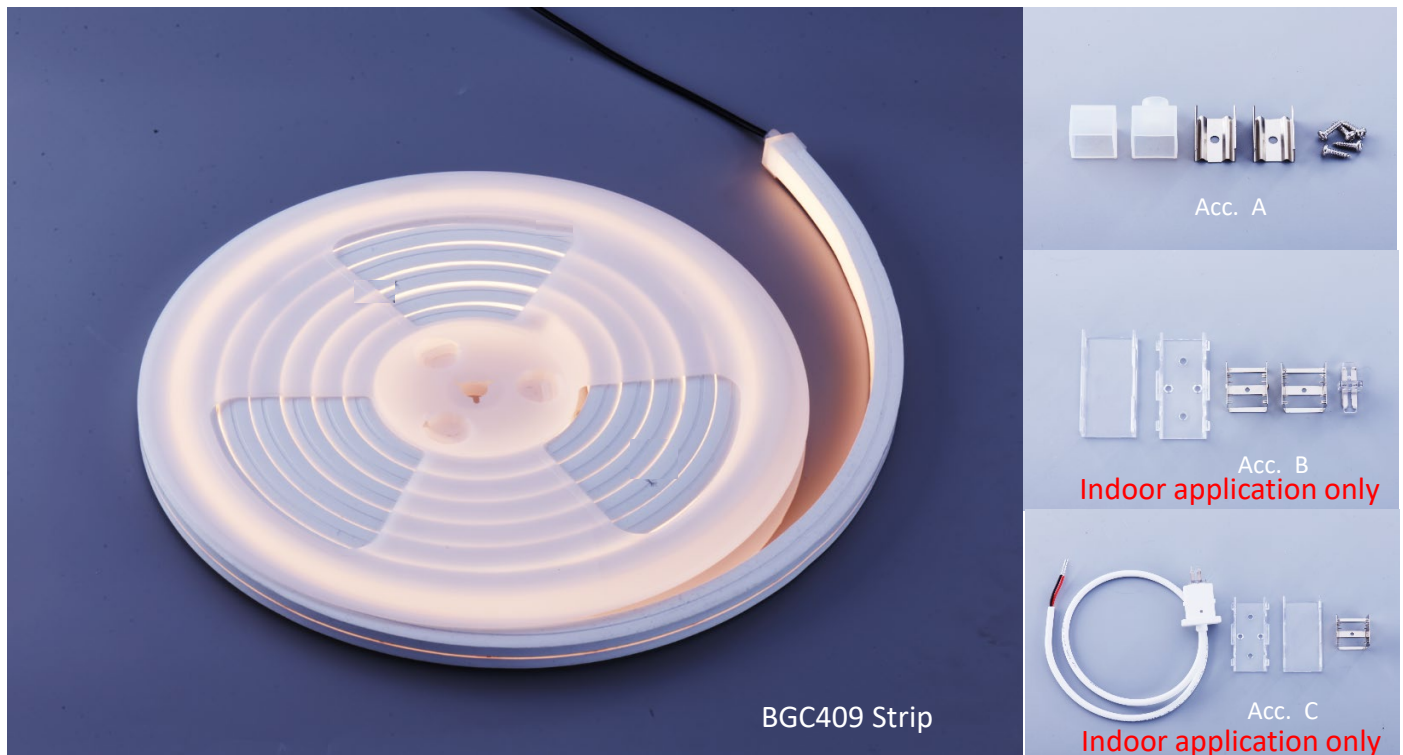
- (1) 6W is minimum wattage. If wattage is lower than 6W, the bright spot will be on top of the out-light surface.
- (2) 14W is maximum wattage.
- (3) RGB, RGBW and tW via ETO
- (4) Customized length via ETO
- (5) Lumen package data base on CCT & wattage & view type to calculate.

## Product Data

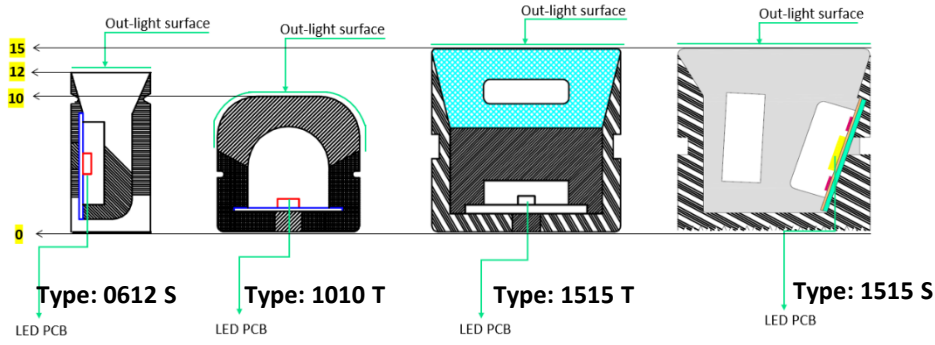
Neon LED Strip(On/Off version)						
System performance	Type No.	BGC409 0612 S	BGC409 1515 T	BGC409 1515 S	BGC409 1515 T	BGC409 1010 T
	lm/m & W*H	400LM-10W-(6x12mm)	650LM-10W-(15x15mm)	550LM-7W-(15x15mm)	900LM-14W-(15x15mm)	1150LM-14W-(10x10mm)
	PCB direction (LEDs vs luminous surface)	Side view	Top view	Side view	Top view	Top view
	Input voltage	24VDC ±10% Strip end to end voltage drop<10%				
	System wattage	10.5W/M±10%	10.5W/M±10%	7.5W/M±10%	14W/M±10%	14W/M±10%
	lumen output	Typical: 2700K: 390lm/M 3000K:400lm/M 4000k:420lm/M Range: 2700K:350~450lm/M 3000k:360~460lm/M 4000k:378~483lm/M	Typical: 2700K: 650lm/M 3000K:650lm/M 4000k:680lm/M Range: 2700K:580~750lm/M 3000k:580~750lm/M 4000K:585~747.5lm/M	Typical: 3500K:550lm/M Range: 3500K:495~632lm/M	Typical: 3500K:900lm/M Range: 3500K:810~1035lm/M	Typical: 2700K: 1100lm/M 3000K:1150lm/M 4000K:1200lm/M Range: 2700K:990~1265lm/M 3000k:1030~1350lm/M 4000k:1080~1380lm/M
	CCT	2700K(2620±125K ) (x=0.4642,y=0.4053) 3000K(2850±150K ) (x=0.4535,y=0.4168) 4000K(**±**K ) (x=**,y=**)	2700K(2720±125K ) (x=0.4533,y=0.4035) 3000K(3030±150K ) (x=0.4408,y=0.4154) 4000K(**±**K ) (x=**,y=**)	3500K(3650±175K ) (x=0.3939,y=0.3814)	3500K(3650±175K ) (x=0.3943,y=0.3845)	2700K(2750±125K ) (x=0.4523,y=0.4042) 3000K(3050±150K ) (x=0.4411,y=0.4070) 4000K(4100±250K ) (x=0.3716,y=0.3741)
	Efficiency (±10%)	40lm/W	65lm/W	73lm/W	64lm/W	82lm/W
	Lifetime	30K hrs ,L70B50@35°C				
	working temperature	-40 ~ 50°C				
Optical	Optical uniformity	no visible color difference and dark area in the illuminated wall , ≥10CM distance from the wall				
	SDCM	SDCM≤4 (between rolls in one production batch)				
	CRI	≥90				
electrical	electrical class	Class III				
	ESD protection	8KV Air discharge and 4KV contact discharge for input cable				
	Dimmable	Can be controlled by 24V constant voltage dimmable driver which the driver output PWM signal.				
	connection wrong Protection	DC wrong connection(survive when 24V+ 24- connection wrong), protection of opposite pole connection				
	controllable	on-off/PWM	on-off/PWM	on-off/PWM	on-off/PWM	on-off/PWM
Mechanical	IP	IP67				
	IK	IK04				
	PCB Width	8mm	10mm	10mm	10mm	8mm
	dimension(mm)W×H	6x12mm	15x15mm	15x15mm	15x15mm	10x10.5mm
	Product Length	Std 5m/reel				
	Min cut length	5cm				
	Max connecting length	Max. 5M (serial connection)				
	Color & material	1. Flexible PCB (FPCB) 2. silicon glue, white and opal				
	Cable	1. 500±30mm (side entry cable) ---std type 2. 500±30mm (direct entry cable) --- Via ETO 3. 500±30mm (bottom entry cable) ---Via ETO				
mounting clip	stainless steel clips					

# Product Data

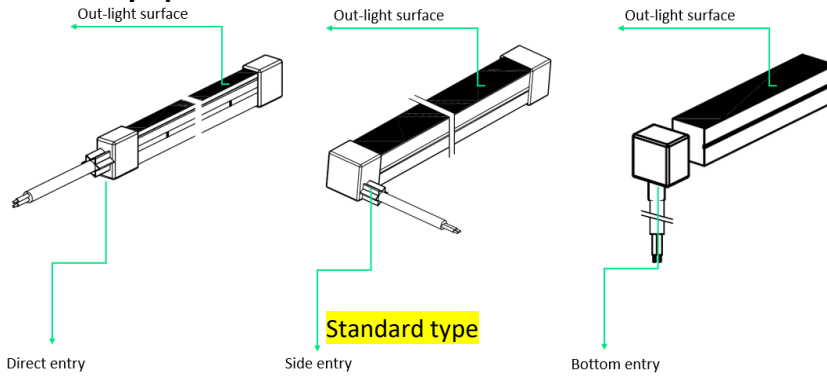
Neon LED Strip(On/Off version)						
	Type No.	BGC409 0612 S	BGC409 1515 T	BGC409 1515 S	BGC409 1515 T	BGC409 1010 T
Mechanical	Accessory	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs) Acc. B 1. soldering-free strips connector* 1pcs Acc. C 1. soldering-free connector with 50cm power cable* 1pcs	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs) Acc. B 1. soldering-free strips connector* 1pcs Acc. C 1. soldering-free connector with 50cm power cable* 1pcs	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs)	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs) Acc. B 1. soldering-free strips connector* 1pcs Acc. C 1. soldering-free connector with 50cm power cable* 1pcs	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs) Acc. B 1. soldering-free strips connector* 1pcs Acc. C 1. soldering-free connector with 50cm power cable* 1pcs
	Packaging	Outer box: industry package ,10 Bags/Caton, Inner box: LED strip *1 and MI *1 in PVC bag, accessories* package (Acc. A/B/C) in PE bag				
Approbation		CB/LVD/EMC/ IP test report				



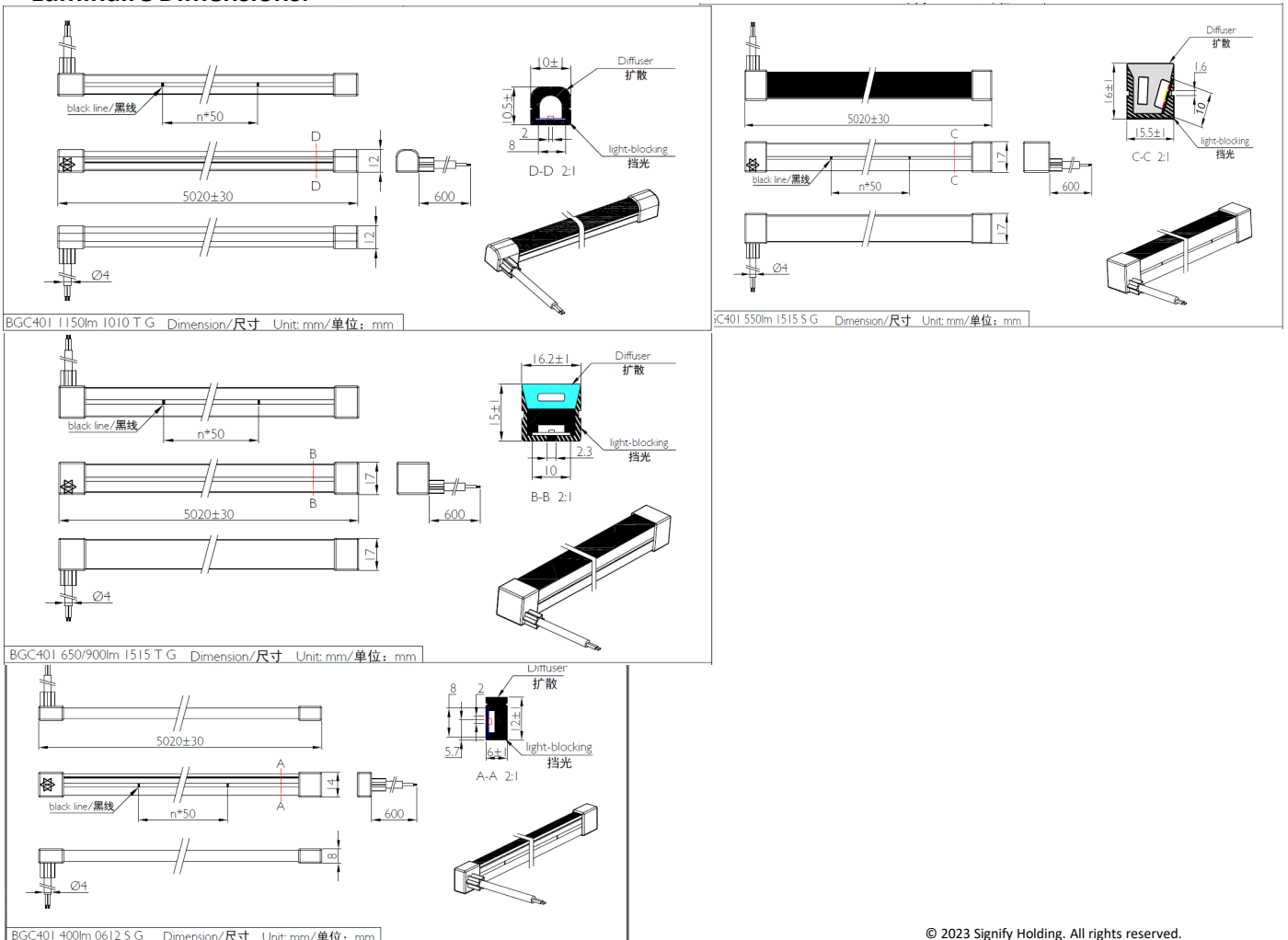
## View Type & Section Structure :



## Cable entry options:



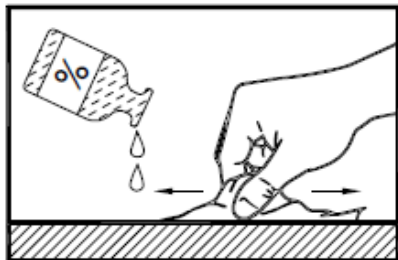
## Luminaire Dimensions:



# Installation:

Surface mounting/表面安装

- ① Using clean water to wipe the mounting surface.  
用清水擦拭安装表面。



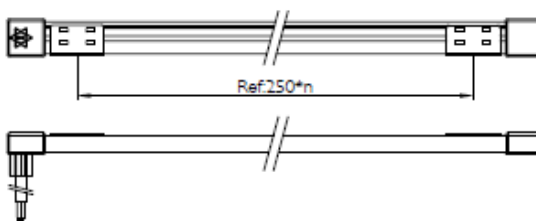
- ② Using mounting clip and self-tapping screw to fix strip.  
使用卡扣和自攻螺钉固定灯带。

Unit: mm  
单位: mm



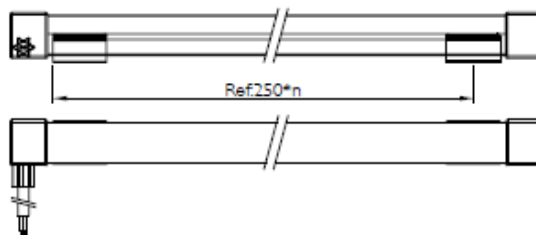
0612 Side View  
0612 侧发光

Outline size/外形尺寸: L20\*W6.8\*H11mm  
Bore diameter/孔径:  $\phi$  3.5mm



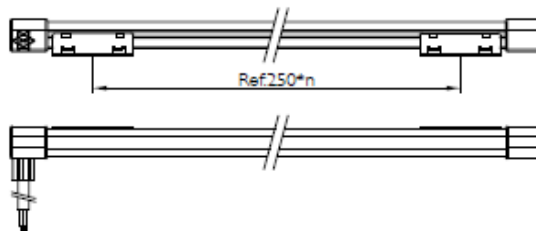
1515 Top View  
1515 正发光  
1515 Side View  
1515 侧发光

Outline size/外形尺寸: L20\*W16\*H10.5mm  
Bore diameter/孔径:  $\phi$  3.5mm

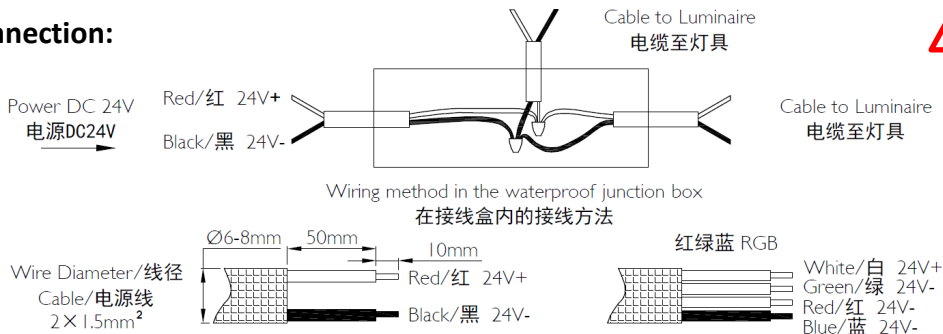


1010 Top View  
1010 正发光

Outline size/外形尺寸: L30\*W10.85\*H8.5mm  
Bore diameter/孔径:  $\phi$  3.5mm



## Cable connection:



There don't have IP connector.  
Need an IP junction box to  
connection the wire by  
yourselves when installation. 目  
前不提供IP防水接头, 安装接  
线时需要自备IP防水接线盒。

电源到单条灯带的铜导线最长连接长度建议  $\leq 35M(1.5mm^2)$ 、 $12M(0.5mm^2)$ 。

Maximum connection length of copper wire from power supply to the lighting strip  
is recommended  $\leq 35M(1.5mm^2)$ 、 $12M(0.5mm^2)$ 。

# Ordering guide (DMX512-Non RDM)---Via ETO

BGC409 400LM 14W 3000K 8PX L5 1220 S

BGC409	280LM	10W	3000K	8ID	L5	1220	S
Family	Lumen package	Wattage	CCT / Color	Pixel	Length/Reel	Section Size(WxH)	View Type
BGC409 – Flex Neon	400LM – 400lm/M(4)	9.6W – 9.6W/M(1) 14W – 14W/M(2)	2700K – 2700K 3000K – 3000K 3500K – 3500K 4000K – 4000K 5700K – 5700K RGB – RGB tW – Tunable White RGBWW – RGBW(3000K) RGBNW – RGBW(4000K) BL – Blue RD – Red GN – Green AM – Amber	8PX – 8 pixels per meter(5)	L5 – 5000mm(3)	1220 – 12x20mm(6) 1616 – 16x16mm(7)	T – top view S – side view

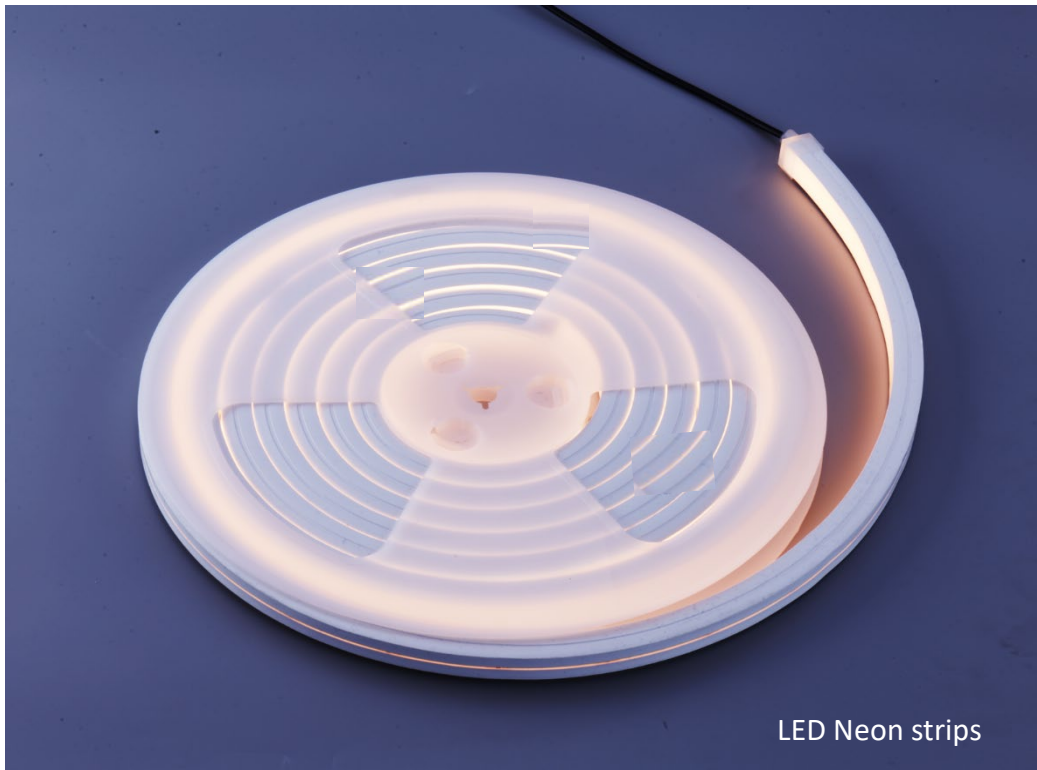
- (1) 9.6W only for RGB version.
- (2) 14W is maximum wattage.
- (3) Customized length via ETO
- (4) Lumen package data base on CCT & wattage & view type to calculate.
- (5) **Only provide 8PX per meter. There is no other pixel option.**
- (6) 1220 type is only for side view type.
- (7) 1616 type is both for top & side view.

## Product Data

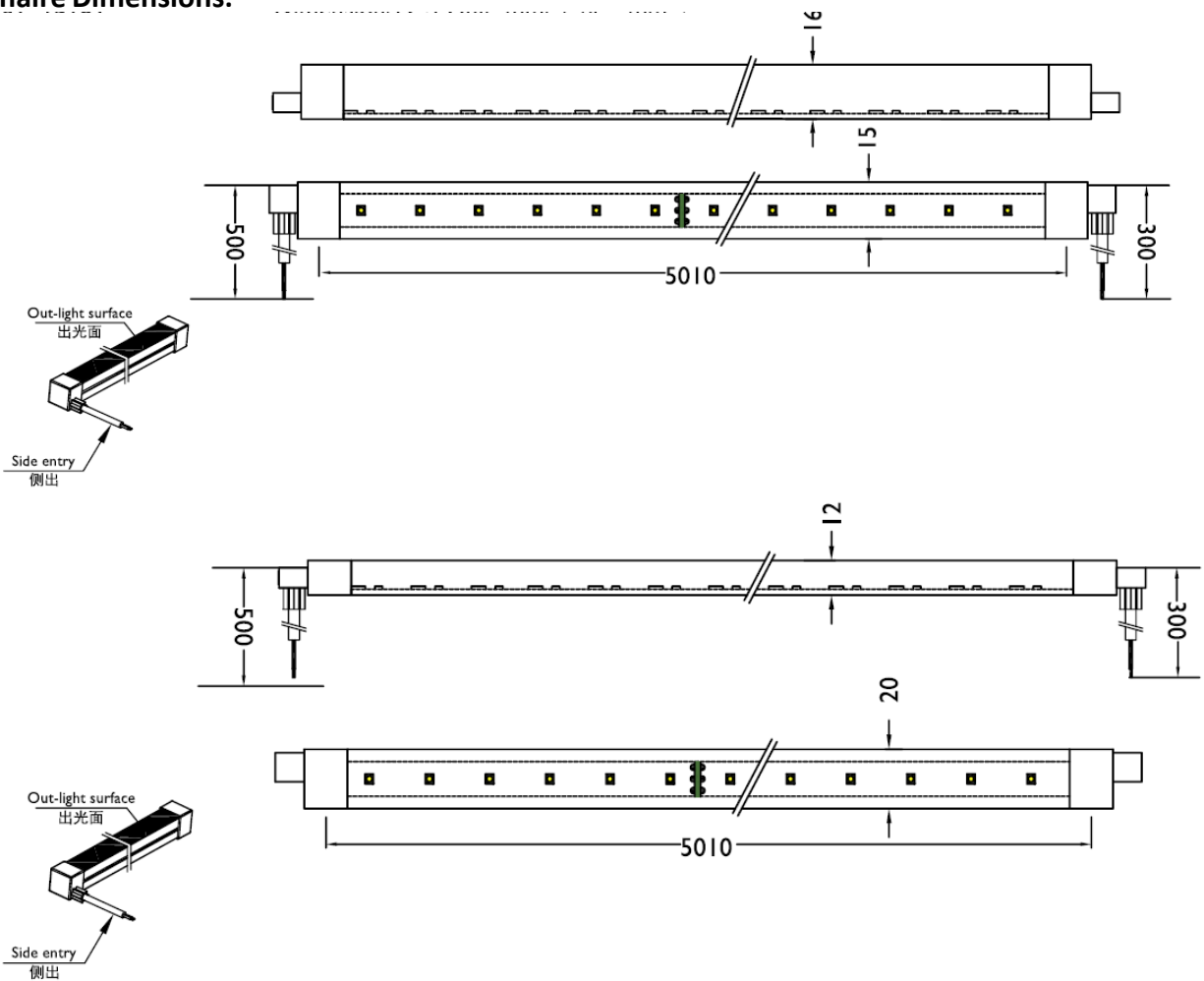
Neon LED Strip(DMX version)				
System performance	Type No.	BGC409 1220 S	BGC409 1616 T	BGC409 1616 S
	lm/m & W*H	380LM-14W-(12x20mm)	650LM-14W-(16x16mm)	450LM-14W-(16x16mm)
	PCB direction (LEDs vs luminous surface)	Side view	Top view	Side view
	Input voltage	24VDC ±10% Strip end to end voltage drop<10%		
	System wattage	Max. 14W/M±10%	Max. 14W/M±10%	Max. 14W/M±10%
	lumen output	Typical: 2700K: 360lm/M 3000K:380lm/M 4000k:400lm/M RGB: TBD RGBW: TBD Range: 2700K:320~400lm/M 3000k:340~420lm/M 4000k:360~440lm/M	Typical: 2700K: 630lm/M 3000K:650lm/M 4000K:680lm/M RGB: TBD RGBW: TBD Range: 2700K:570~690lm/M 3000k:580~715lm/M 4000K:610~748lm/M	Typical: 2700K: 430lm/M 3000K:450lm/M 4000K:470lm/M RGB: TBD RGBW: TBD Range: 2700K:385~470lm/M 3000k:400~495lm/M 4000K:420~520lm/M
	CCT	2700K(2620±125K ) (x=0.4642,y=0.4053) 3000K(2850±150K ) (x=0.4535,y=0.4168) RGB RGBW	2700K(2720±125K ) (x=0.4533,y=0.4035) 3000K(3030±150K ) (x=0.4408,y=0.4154) RGB RGBW	2700K(2720±125K ) (x=0.4533,y=0.4035) 3000K(3030±150K ) (x=0.4408,y=0.4154) RGB RGBW
	Efficiency ( ±10%)	white color: 27lm/W RGB: TBD RGBW: TBD	white color: 45lm/W RGB: TBD RGBW: TBD	white color: 30lm/W RGB: TBD RGBW: TBD
	Lifetime	30K hrs ,L70B50@35°C		
	working temperature	-40 ~ 50°C		

## Product Data

Neon LED Strip(DMX version)				
Optical	Optical uniformity	no visible color difference and dark area in the illuminated wall , ≥10CM distance from the wall		
	SDCM	SDCM≤ 4 (between rolls in one production batch)		
	CRI	≥90		
electrical	electrical class	Class III		
	ESD protection	8KV Air discharge and 4KV contact discharge for input cable		
	connection wrong Protection	DC wrong connection(survive when 24V+ 24- connection wrong), protection of opposite pole connection		
	IC Type	SM18512PS / (SM18522)	SM18512PS / (SM18522)	SM18512PS / (SM18522)
	controllable	DMX512	DMX512	DMX512
Mechanical	IP	IP67		
	IK	IK04		
	PCB Width	12mm	12mm	12mm
	dimension(mm)W×H	12x20mm	15x16mm	15x16mm
	Product Length	Std 5m/reel		
	Min cut length	125mm		
	Max connecting length	Max. 20M (serial connection)		
	Color & material	1. Flexible PCB (FPCB) 2. silicon glue, white and opal		
	Cable	1.Input side 500±30mm, Output side 300±30mm (side entry cable) ---std type 2.Input side 500±30mm, Output side 300±30mm (direct entry cable) --- Via ETO 3.Input side 500±30mm, Output side 300±30mm (bottom entry cable) ---Via ETO		
	mounting clip	stainless steel clips		
	Accessory	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs	Acc. A 1. stainless steel clips *16pcs 2. stainless steel screws *16pcs 3. silicon end caps (direct entry end cap* 1pcs, bottom entry end cap *1pcs, side entry end cap *1pcs, end cap *3pcs
	Packaging	outer box: industry package ,10 Bags/Caton,  Inner box: LED strip *1 and MI *1 in PVC bag, accessories* package (Acc. A) in PE bag.		
Approbation	CB/LVD/EMC/ IP test report			



**Luminaire Dimensions:**





## Control IC Chips Notice:

● IC通道电流必须按照以下说明进行电流设置，不可超过MAX值的范围。  
Current going through IC MUST be set accordingly to following instruction , it is forbidden to be over max ones

SM18512PS通道最高电流 The maximum current is in SM18512PS	一通道 MAX (18mA) channel 1 is 18mA	二通道 MAX (18mA) channel 2 is 18mA	三通道 MAX (18mA) channel 3 is 18mA	四通道 MAX (18mA) channel 4 is 18mA
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①. SM18512PS为四通道IC，单通道最高18mA电流，可调电流，按照灯珠最高承受的电流使用控制器调节IC输出电流，如BGC401 RGB W, 通过控制器调节IC的输出电流，R/G/B/W每通道最高为18mA，可调试降低电流，满足其他功率需求。

SM18512PS is named Channel 4 , maximum current is 18mA, adjustable, Clients can adjust the output current from IC accordingly to the highest current led can stand for, BGC401 RGB W , i.e . R/G/B/W each channel has 18mA current max, Able to adjust the current to meet different power consumption.

②. 如单色BGC401 W 最高电流为72mA, IC 4通道并联使用，所以每通道最高为18mA可调试降低电流，满足其他功率需求。

The max current of single color BGC401 W is 72mA, it is able to work together with 4 channels in parallel circuit , thus the max current each channel is 18mA, and it is able to adjust the current to meet different power consumption.

## Cable Connection:

注意 Note:

1. 控制器和灯带的信号和GND的连接请使用网线,不要使用电线。

there shall be NO any cable between controller and strips signal and GND parts, Must use reticle .

2. 灯带的IC型号是SM18512PS, Led strip's IC is SM18512PS.

接线操作: Instruction on connection

操作1: 电源连接灯带，电源正极连接灯带VCC正极，电源负极连接灯带GND负极。

Step 1 : Connect the strips with power supplier , positive to VCC on strips, negative to GND on strips.

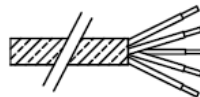
操作2: 控制器连接灯带，控制器GND必须用网线连接灯带GND和电源负极，控制器DA/DB必须用网线连接灯带DA/DB信号线。

Step 2 : Connect strips to controller , GND of controller to GND of Strips and positive of power supplier by reticle , DA/DB on strips to cable of DA/DB signal on strips by reticle.

操作3: 同一端口所有的电源供电输出24V负极，单独用一根线并起来。

Step 3 : All the power supplies on the same port power output 24V negative pole, with a separate wire and up.

线序  
Line sequence

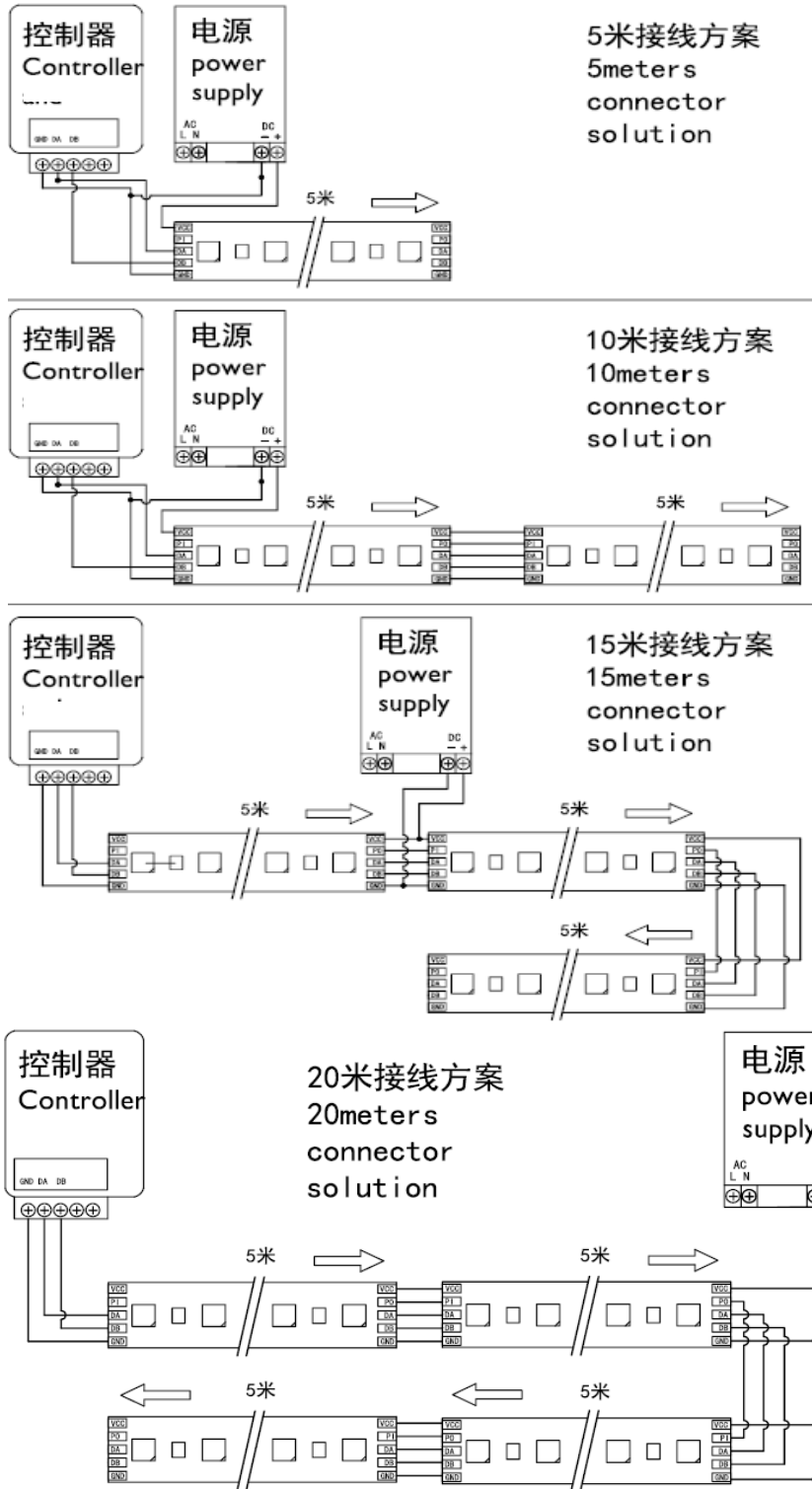


There don't have IP connector. Need an IP junction box to connection the wire by yourselves when installation. 目前不提供IP防水接头，安装接线时需要自备IP防水接线盒。

红线	红线=VCC正极	Red-VCC positive
蓝线	蓝色=地址PI (P0) 线	Blue- address of PI (P0)
绿线	绿线=信号DA线	Green- Signal DA
黄线	黄线=信号DB线	Yellow- Signal DB
黑线	黑线=GND负极	Black- GND negative

控制系统任何参数设定均可导致该LED产品的工作模式及视觉效果变化；一旦完成设定，表明接受该产品的工作模式。Any data setting in configuration of control system shall change the LED strips working mode and visual effect consequently. While completing commissioning, it means the working mode is admissible.

## System Connection:



Suggest maximum length is 20M for power and DMX wire connection! 建议电源和DMX线连接的最大长度为20米!

注：1. 其中灯带地址线PI (ADI) 与控制器PI 端口之间可以不连接。

Step 1. Clients Can not connect PA(ADI) on strips with PI channel of controller

2. 灯带PI (ADI) 与控制器PI 端口相接时，控制器PI 要一直为高电平。

2. When PI(ADI) on strips connect with PI on controller, the controller must be working with high frequency

3. 本灯带最长供电串联长度为10米，如果超过10米灯带使用，请并联供电。

3. The strip light max length 10m if in series circuit by power supply, please use multiple circuit by power supply if over 10m strips.

4. 鉴于控制器及施工条件不同，每个控制器建议连接灯带最大长度为20米，实际有效可控灯带长度根据控制器和现场施工线缆等条件决定。

4. Given the diversity of controller and installation wiring, maximum length of LED strips connected to each controller is 20m, the actual controllable strips length is depending on controller and wiring cable, site conditions, etc.

5. 同一端口所有的电源供电输出24V负极，单独用一根线并起来。

5. All the power supplies on the same port power output 24V negative pole, with a separate wire and up.

