

## **F21 Mono Color Neon Flex**

### **Specification**

## Dimension



Gross weight:  
0.52kg/m



Dimmable:  
DALI, 0-10V, DMX, Triac



Installation Temp.:  
0°C to +55°C



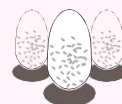
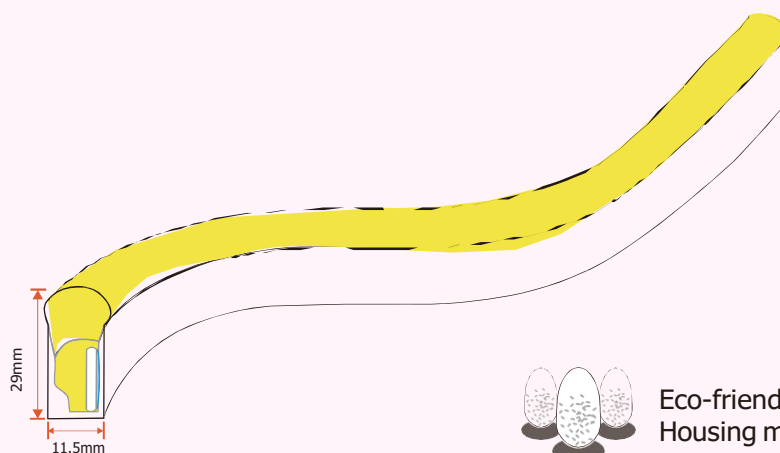
Ambient Temp.:  
-25°C to +55°C



Min. Bending :  
120mm



Beam Angle :  
270 degree



Eco-friendly PVC  
Housing material

## Features

Uniform and even light output

Dome surface with 270 degree beam angle

Constant Current IC built in optional

Dimmable with Dali, 0/1-10, DMX,PWM

High Lumen output, up to 320lm/m for 12W version

Full encapsulated with IP68 Level

High Reliability

3 or 5 Years warranty

## Applications

Building facade, outline

Cove lighting

Sign and advertising lighting

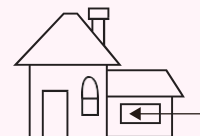
Linear lighting

Additional lighting

Decorative lighting



outdoor use



indoor use



67  
1SPUFDUFE



SMBTT III



3%  
3FTJTUBOU



CE



48%  
3FTJTUBOU



UL LISTED



3P%4



LM-80



\*K08



3P%3FTJTUBOU

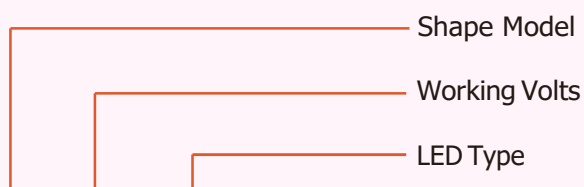


IP68



One Bin  
FBJO  
OONZ

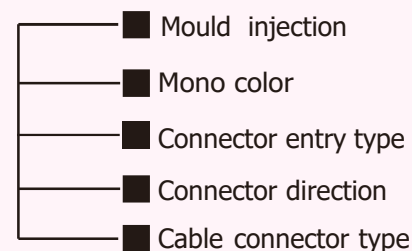
## Model Encoding



**F21-24V-5050-60-12W-3000K**



**MJ A S01SM**  
1 2 3 4 5



01 right  
02 left  
03 double

S-----Side entry  
D-----Direct entry  
B-----Bottom entry

SM-----male connector cable  
SF-----female connector cable  
SMF-----male & female connector cable  
Blank-----bare wire

## Technical Specification

Model	F21-24V-5050-72	F21-24V-5050-60	F21-24V-5050-60-U10	F21-36V-5050-60	F21-24V-3528-72	F21-12V-3528-72	F21-24V-2835-72-CC
Operating voltage	24V	24V	24V	36V	24V	12V	24V
Power consumption	15W/M	12W/M	7.2W/M	12W/M	5W/M	5W/M	10W/M
Working Mode	CV	CV	CV	CV	CV	CV	CC
LED type	SMD5050	SMD5050	SMD5050	SMD5050	SMD3528	SMD3528	SMD2835
LED Quantity	72 pcs/m	60 pcs/m	60 pcs/m	60 pcs/m	72 pcs/m	72 pcs/m	72 pcs/m
Available CCT	2200-6500K	2200-6500K	/	2200-6500K	2200-6500K	2200-6500K	2200-6500K
Available Color	G/B/LY/P	G/B/LY/P	R/A/O	G/B/LY/P	G/B/P/R/A/O	G/B/P/R/A/O	G/B/LY/P
Min. cutting Unit	6 LEDs	6 LEDs	10 LEDs	10 LEDs	12 LEDs	6 LEDs	6 LEDs
Min. cutting length	8.33cm	10cm	16.67cm	16.67cm	16.67cm	8.33cm	8.33cm
Max. length single feed	8m	10m	15m	15m	15m	7m	15m
Max. length double feed	16m	20m	30m	30m	30m	/	30m
Lumen maintenance	70 000 Hours L70 25°C , 50 000 Hours L70 50°C						
Housing material	Eco PVC or Silicone						
Installation temperature	0°C to -55°C						
Ambient temperature	-25°C to +55°C						
Ingress protection	IP68 wet location submersible* to 2m						
Warranty	3 years as standard, 5 years garuntee maximum						

## Wave length

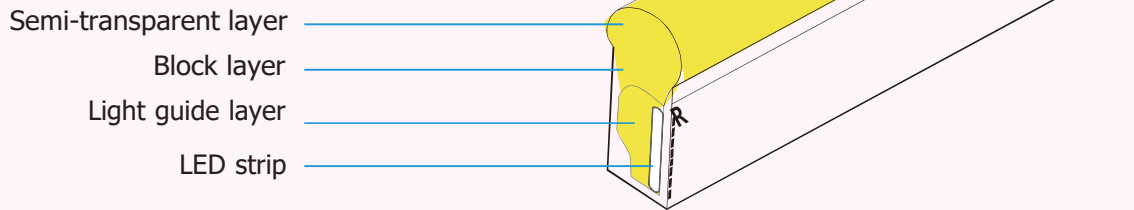
Red ( R )	620-630nm
Green ( G )	520-530nm
Blue ( B )	465-475nm
Amber ( A )	585-595nm
Orange ( O )	600-610nm
Lemon Yellow ( LY )	610-620nm
Pink ( P )	630-645nm
2200K	2238± 102K
2500K	2460± 120K
2700K ( WW )	2725± 145K
3000K	3045± 175K
3500K ( W )	3465± 245K
4000K	3985± 275K
4500K( CW )	4503± 243K
5000K	5029± 283K
5700K( DW )	5669± 355K
6500K	6532± 510K

## Lumen output

Model: F21-24V-5050-60

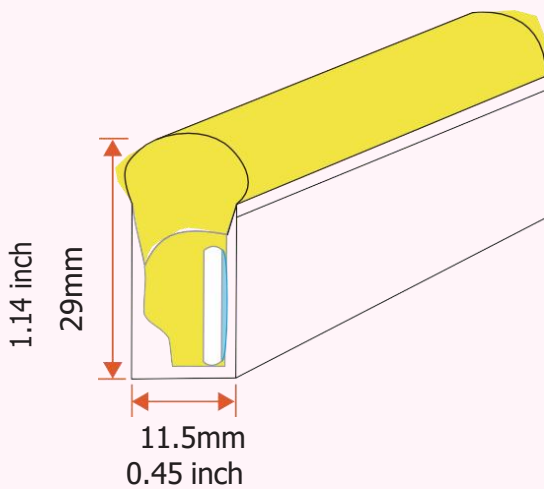
Color or CCT	Per foot	Per meter	Power consumption
Red	>30.48lm	>100lm	2.19W/ft (7.2W/M)
Green	>54.87lm	>180lm	3.66W/ft (12W/M)
Blue	>9.14lm	>30lm	3.66W/ft (12W/M)
Amber	>30.48lm	>100lm	2.19W/ft (7.2W/M)
Orange	>24.39lm	>80lm	2.19W/ft (7.2W/M)
Lemon Yellow	>67.07lm	>220lm	3.66W/ft (12W/M)
Pink	>39.63lm	>130lm	3.66W/ft (12W/M)
2200K	>76.21lm	>250lm	3.66W/ft (12W/M)
2500K	>76.21lm	>250lm	3.66W/ft (12W/M)
2700K	>76.21lm	>250lm	3.66W/ft (12W/M)
3000K	>76.21lm	>250lm	3.66W/ft (12W/M)
3500K	>91.46lm	>300lm	3.66W/ft (12W/M)
4000K	>91.46lm	>300lm	3.66W/ft (12W/M)
4500K	>97.56lm	>320lm	3.66W/ft (12W/M)
5000K	>97.56lm	>320lm	3.66W/ft (12W/M)
5700K	>97.56lm	>320lm	3.66W/ft (12W/M)
6500K	>97.56lm	>320lm	3.66W/ft (12W/M)

## Construction

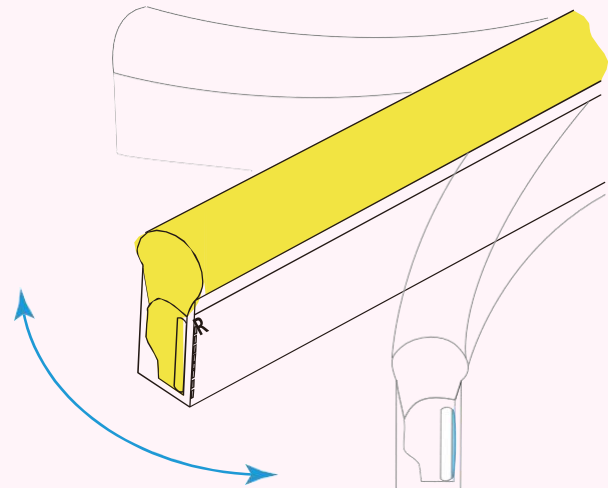


## Physical Specification

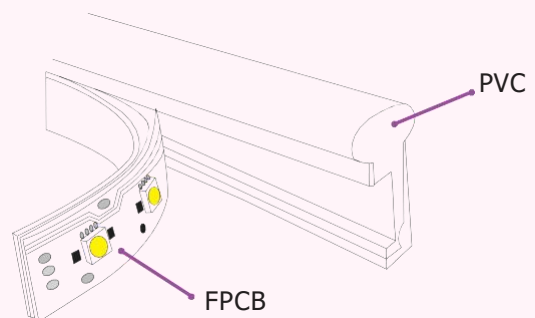
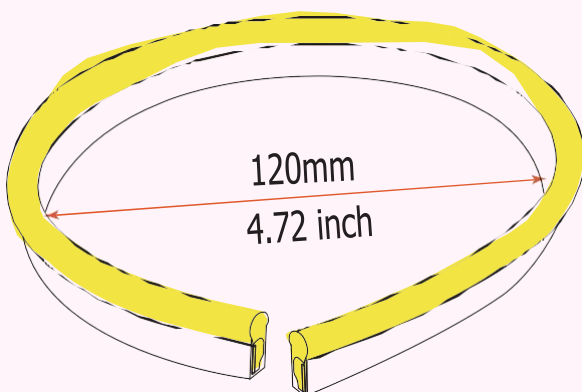
Light profile



Bending direction

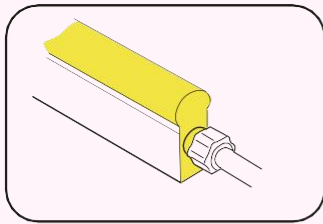


Min. bending diameter



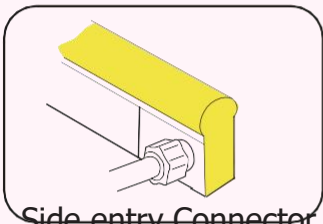
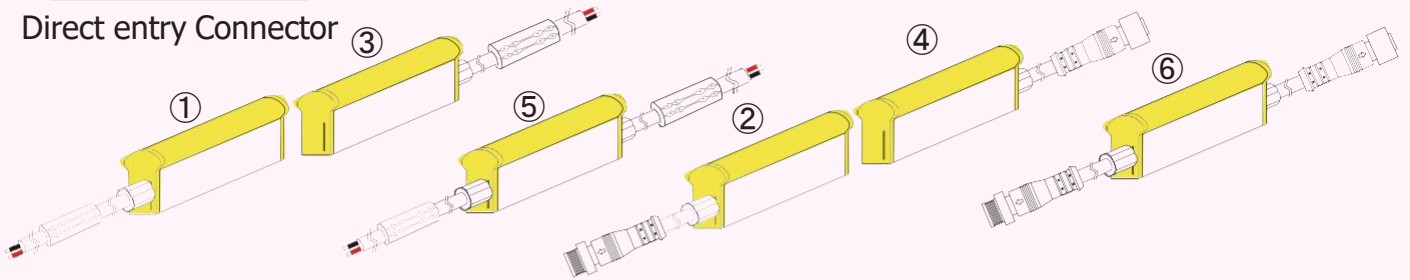
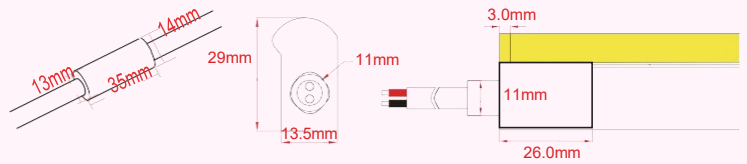
## Mold injection connector

(IP68 Factory Assembly only)



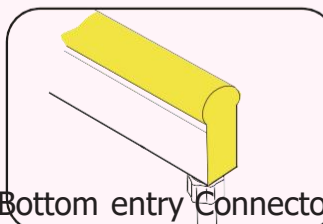
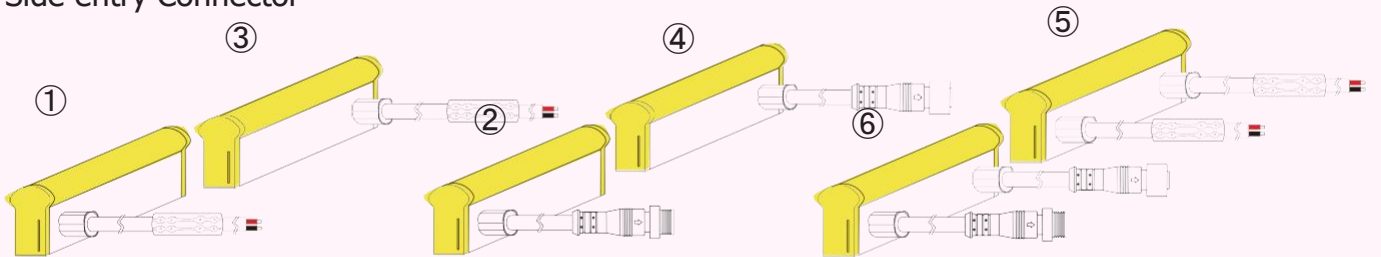
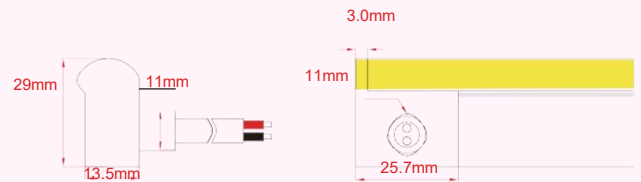
Direct entry Connector

- ① MJ-21-A-D01
- ② MJ-21-A-D01SM
- ③ MJ-21-A-D02
- ④ MJ-21-A-D02SF
- ⑤ MJ-21-A-D03
- ⑥ MJ-21-A-D03SFM



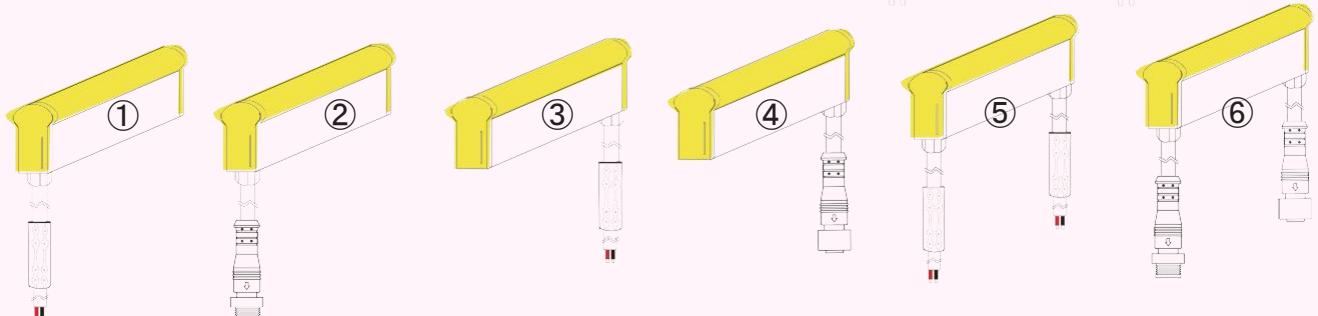
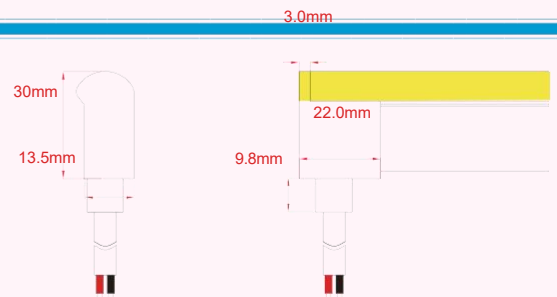
Side-entry Connector

- ① MJ-21-A-S01
- ② MJ-21-A-S01SM
- ③ MJ-21-A-S02
- ④ MJ-21-A-S02SF
- ⑤ MJ-21-A-S03
- ⑥ MJ-21-A-S03SFM



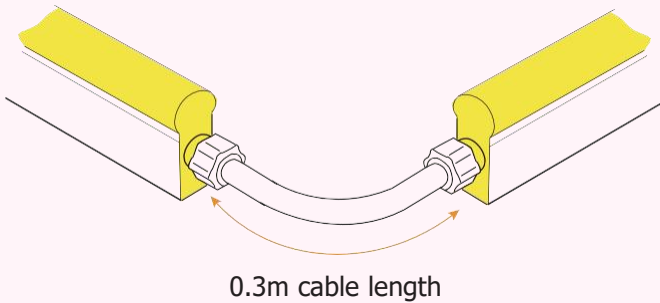
Bottom entry Connector

- ① MJ-21-A-B01
- ② MJ-21-A-B01SM
- ③ MJ-21-A-B02
- ④ MJ-21-A-B02SF
- ⑤ MJ-21-A-B03
- ⑥ MJ-21-A-B03SFM

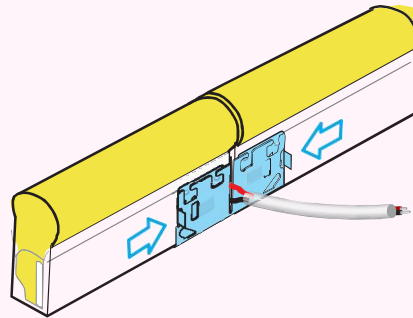


## F21 Mono color series led neon flex

Mold injection Jumper  
(IP68 Factory Assembly only)

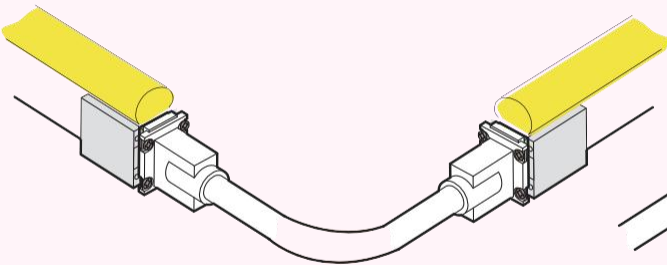


DIY snap splice connector (IP67 Only)

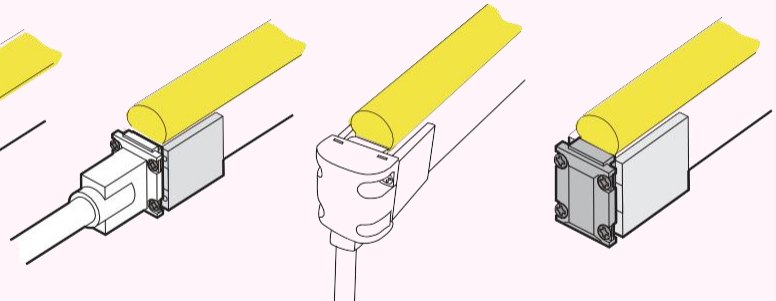


DIY Screw & Snap Connector Kit (IP67 Only)

DIY screw splice connector kit



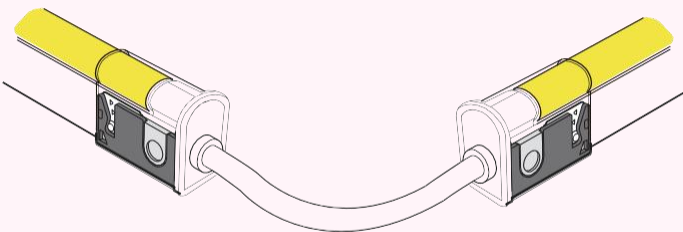
DIY screw connector kit



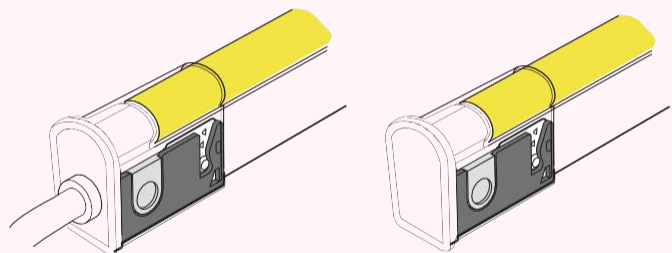
DIY screw front connector

DIY screw end cap

DIY snap splice connector kit



DIY snap connector kit



DIY snap front connector

DIY snap end cap

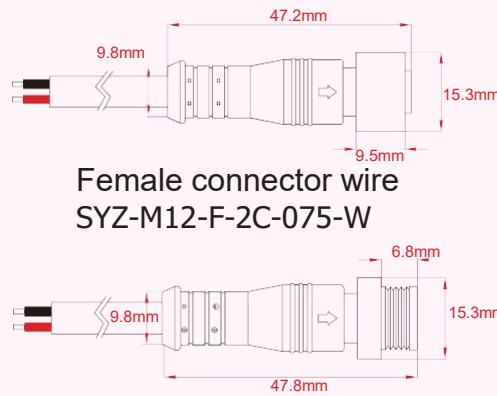
Type	Model
Middle injection Connector	MJ-21-A-M01-06
DIY snap splice connector	DIY-SC-Middle-15
DIY screw connector kit Jumper	DIY-SC-EXT-15-A
DIY screw front connector	DIY-SC-FR-15-D-01/02-A      DIY-SC-FR-15-B-01/02-A
DIY screw end cap kit	DIY-SC-END-15
DIY snap front connector	DIY-SN-FR-21-D-01/ 2-A
DIY screw end cap kit	DIY-SN-END-01/02-21

Noted:

01- Right direction  
02- Left direction

## Other Accessories

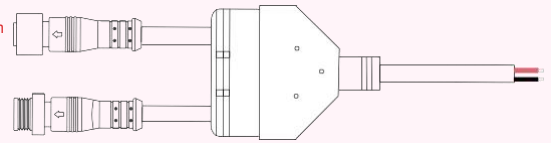
### Female & Male Connector



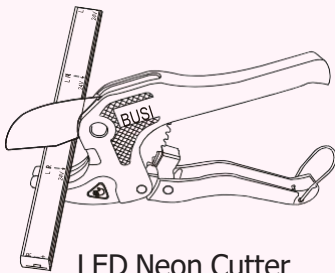
Female connector wire  
SYZ-M12-F-2C-075-W

Male connector wire  
SYZ-M12-M-2C-075-W

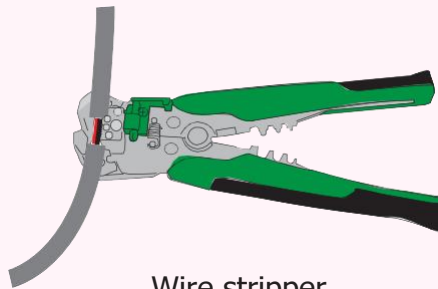
### Middle power connector



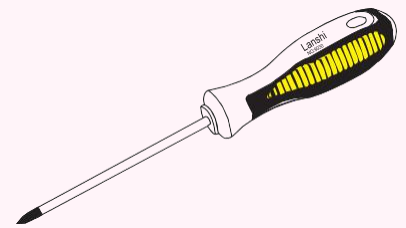
MID-CNR-A-1T2



LED Neon Cutter  
ACC-TOOL-C1



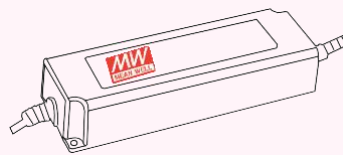
Wire stripper  
ACC-TOOL-WS01



Screwdriver  
ACC-TOOL-C2



Mean Well Transformer  
Non-waterproof Series



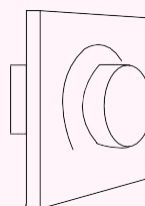
Mean Well Transformer  
Waterproof Series



Female& male wire connector  
KJ-M12-2P-F/ KJ-M12-2P-M



Silicone Glue  
K-5905



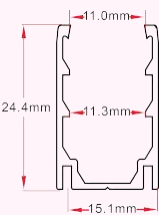
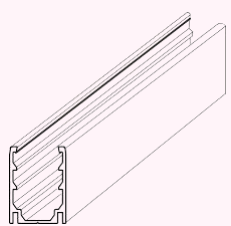
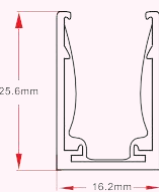
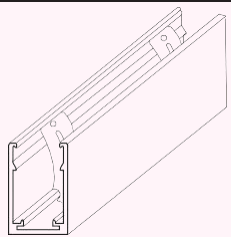
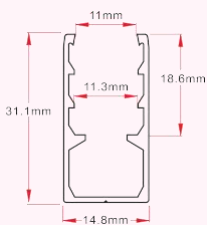
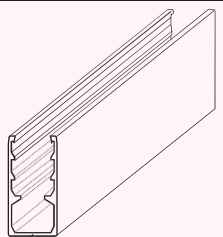
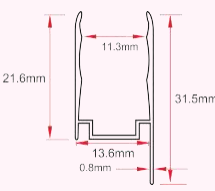
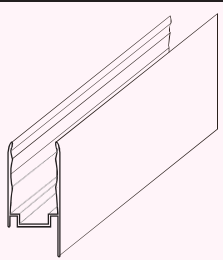
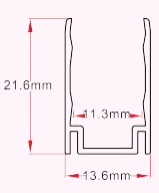
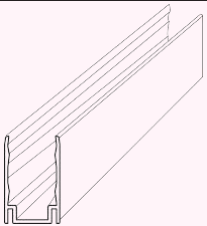
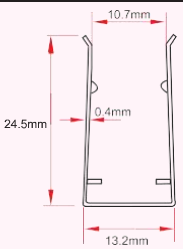
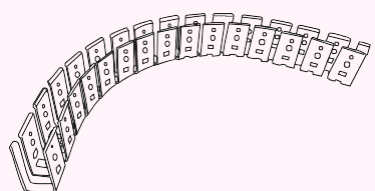
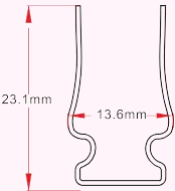
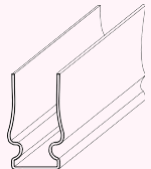
Dimmer



Assistant Tool  
ACC-TOOL-C3



## Mounting Channel

Model	Description	Dimension	Drawing
ALC15S01	Use for : F15 & F21 Length option:1m,2m,35mm Material:Aluminum alloy Optional color:AS/AB/PW Type: Standard		
ALC15S02	Use for : F15 & F21 Length option:1m,2m,35mm Material:Aluminum alloy Optional color:AS/AB/PW Type: Anti-drop for upside down installation		
ALC15H01	Use for : F15 & F21 Length option:1m,2m,35mm Material:Aluminum alloy Optional color:AS/AB/PW Type: Cable hiding		
ALC15V01	Use for : F15 & F21 Length option:1m,2m,35mm Material:Aluminum alloy Optional color:AS/AB/PW Type: Vertical installation		
ALC21S01	Use for : F15 & F21 Length option:1m,2m,35mm Material:Aluminum alloy Optional color:AS/AB/PW Type: Standard		
SSC15FLX	Use for : F15 & F21 Length option:10cm,30cm,50cm,100cm Material: Stainless steel Optional color: Polished Type: Flexible		
SSC15S01	Use for : F15 & F21 Length option: 5cm Material: Stainless steel Optional color: Natural color Type: 316 stainless steel		



## Packing

Standard: Carton ( Paper reel inside)



Fixture Length

787.4in(20m)

Paper Reel

D12.99\*H6.18in(33\*15.7cm)

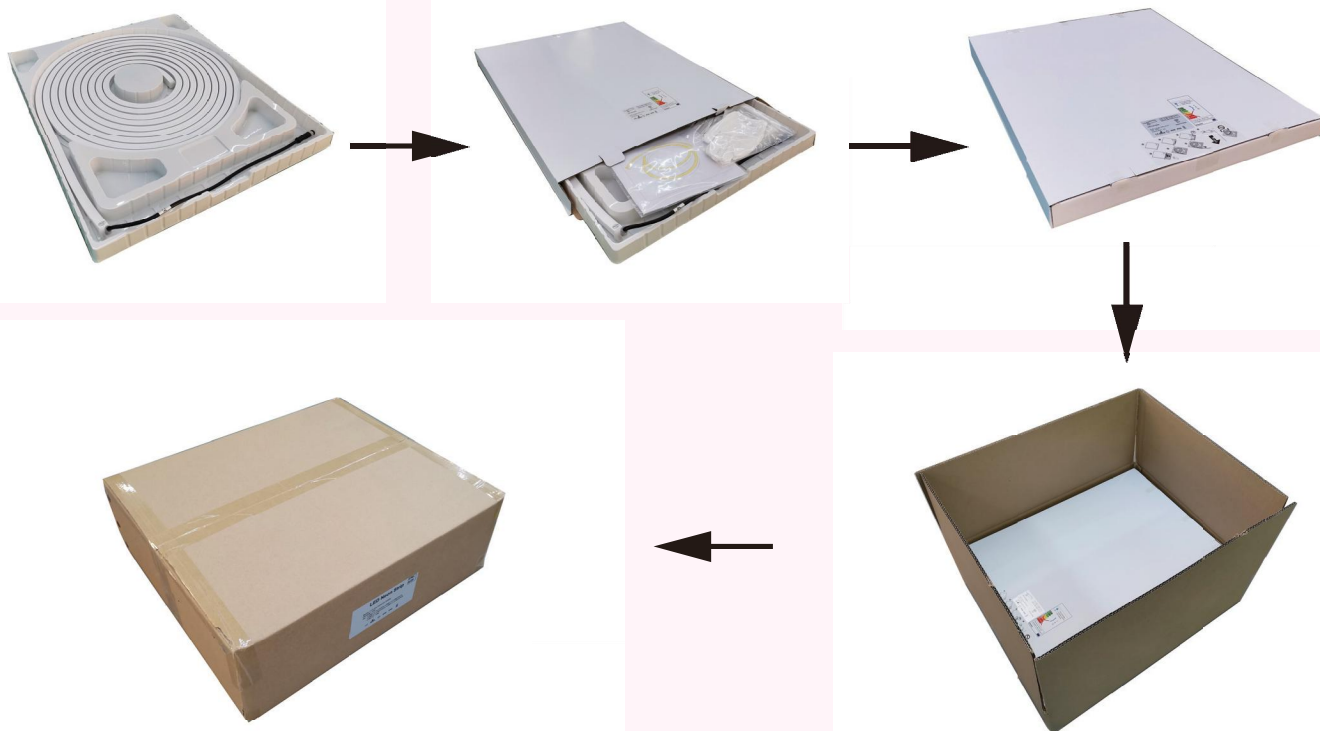
Carton Dimension

33\*33\*18cm

Gross Weight

17.63 lbs ( 10.4 kg )

Custom: Carton ( White box+plastic plate inside)



Fixture Length

393.7in(10m)

White box Dimension

21.6\*1.38\*18.9in(55\*3.5\*48cm)

Carton Dimension

57\*49\*19cm

White box Quantity

Max 5pcs

Gross Weight

57.32 lbs ( 26 kg )

## Testing

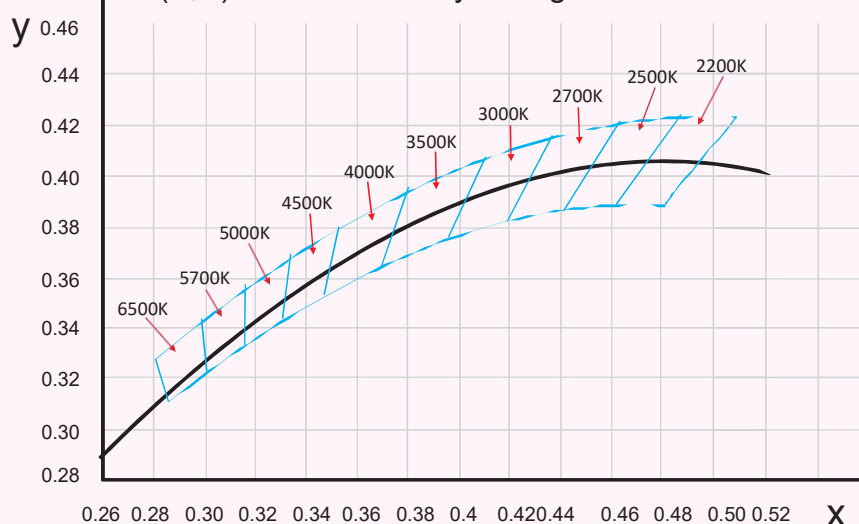
### ANSI Standard

#### Nominal CCT Categories (2200-6500K)

Nominal CCT	Target CCT & tolerance(K)	Target $D_{uv}$	$D_{uv}$ Tolerance Range
2200K	2238±102	0.0000	Tx: CCT of the source for $T_x < 2870K$ $0.000 \pm 0.0060$ For $T_x \geq 2870K$ $D_{uv}(Tx) \pm 0.0000$ where $D_{uv}(Tx) = 57700x(1/Tx)^2$ $-44.0x(1/Tx)$ $+0.00854$
2500K	2460±120	0.0000	
2700K	2725±145	0.0000	
3000K	3045±175	0.0001	
3500K	3465±245	0.0005	
4000K	3985±275	0.0010	
4500K	4503±243	0.0015	Remark: 1) $I_F$ is chosen to be at 100K steps (2300,2400..... 6400K) the ten nominal CCTs listed in table 1. 2) $\Delta T = 1.1900 \times 10^8 \times T^{-3}$ $1.5434 \times 10^4 \times T^{-2} + 0.71648 \times T - 902.55$ 3) Same as in the DUV tolerance range
5000K	5029±283	0.0020	
5700K	5667±355	0.0025	
6500K	6532±510	0.0031	
Flexible CCT	$T_F^{(1)} \pm \Delta T^{(2)}$	$D_{uv} T_F^{(3)}$	

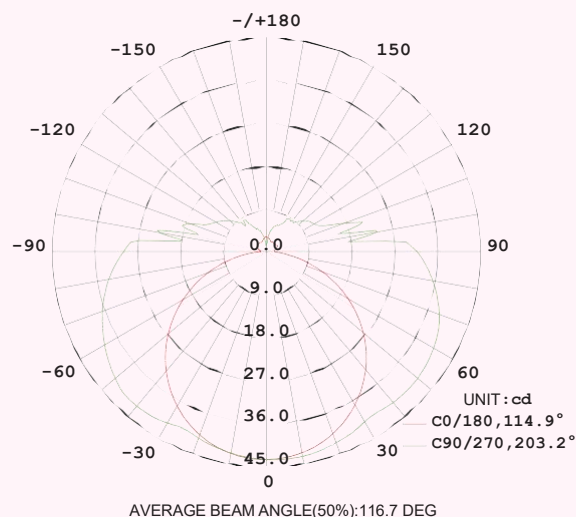
## White Color Charts

(X,Y) Chromaticity Diagram



## Photometric

F21-24V-5050-60-12W-3000K



- Please note it is under normal range if there is 20-30% yellowing of PVC housing material when the product will be used under direct sunlight or long-term high temperature & wet environment in 3 years.
- The tolerance range of optical parameters (luminance, CCT, Watt, RA) for all products is within  $\pm 10\%$  referring to IEC Standard.
- Because of different production technology, environmental temperature and installation, It should be considered as normal and accepted when the total length of LED neon with tolerance range within these values:  $\pm 7mm$  ( for 0.1~5M),  $\pm 15mm$  (for 5.1~10M), or  $\pm 30mm$  (for 10.1~20M).

## Loading Chart

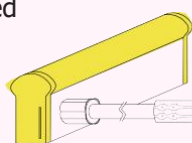
### Power supply

Rated power	35W	60W	75W	80W	100W	120W	150W	185W	240W	320W
5W	5m	9m	12m	12.5m	16m	18m	24m	29.5m	30m	/
7.2W	3m	6m	7.5m	8.5m	11m	13m	16.5m	20.5m	26.5m	30m
10W	3m	4.5m	6m	7m	8m	9.5m	12m	14.5m	19m	25.6m
12W	2m	4m	5m	6m	7.5m	8m	10m	12.3m	16m	21.3m
15W	1.5m	3m	4m	4.2m	5m	6m	8m	9.8m	12.5m	17m

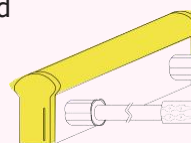
### Single Feed

### Double Feed

### Lead Type



DC input



DC input

DC input

Note: These are the max recommended run lengths based on power supply. **The principle is: the total actual power of LED neon must be less 20% at least than max output power of the power supply.**

## Recommendation of extension wire

Maximum extension wire length according to Light power

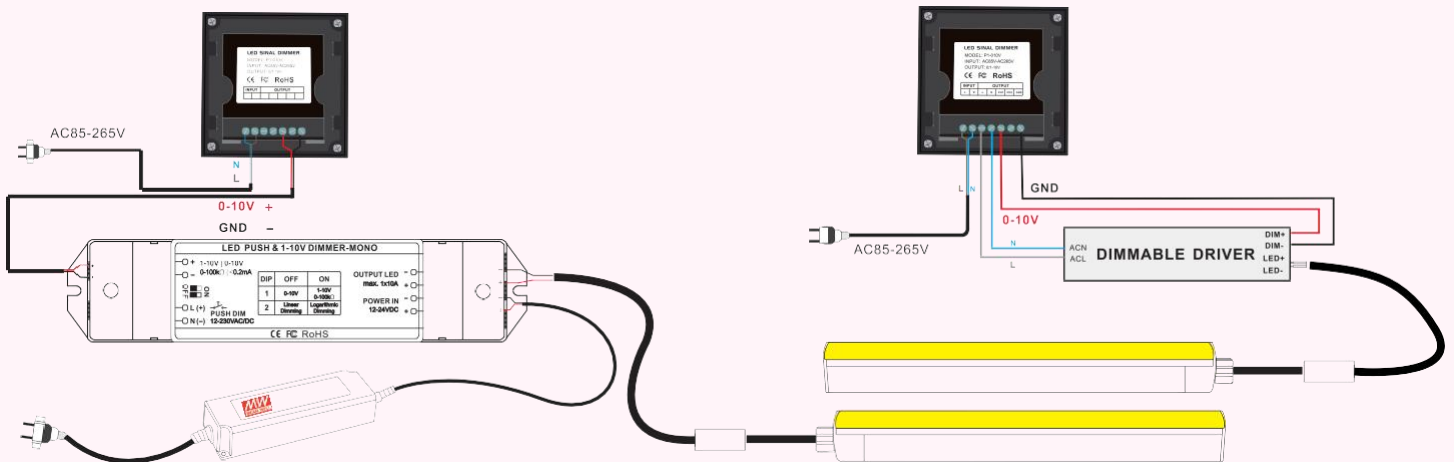
Watts of light	22AWG 0.34mm <sup>2</sup>	20AWG 0.53mm <sup>2</sup>	18AWG 0.82mm <sup>2</sup>	17AWG 1.04mm <sup>2</sup>	16AWG 1.38mm <sup>2</sup>	14AWG 2.07mm <sup>2</sup>	12AWG 3.29mm <sup>2</sup>	10AWG 5.62mm <sup>2</sup>
10W	36m	60m	100m	120m	140m	240m	400m	600m
20W	18m	30m	50m	60m	70m	120m	200m	300m
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

### Notes:

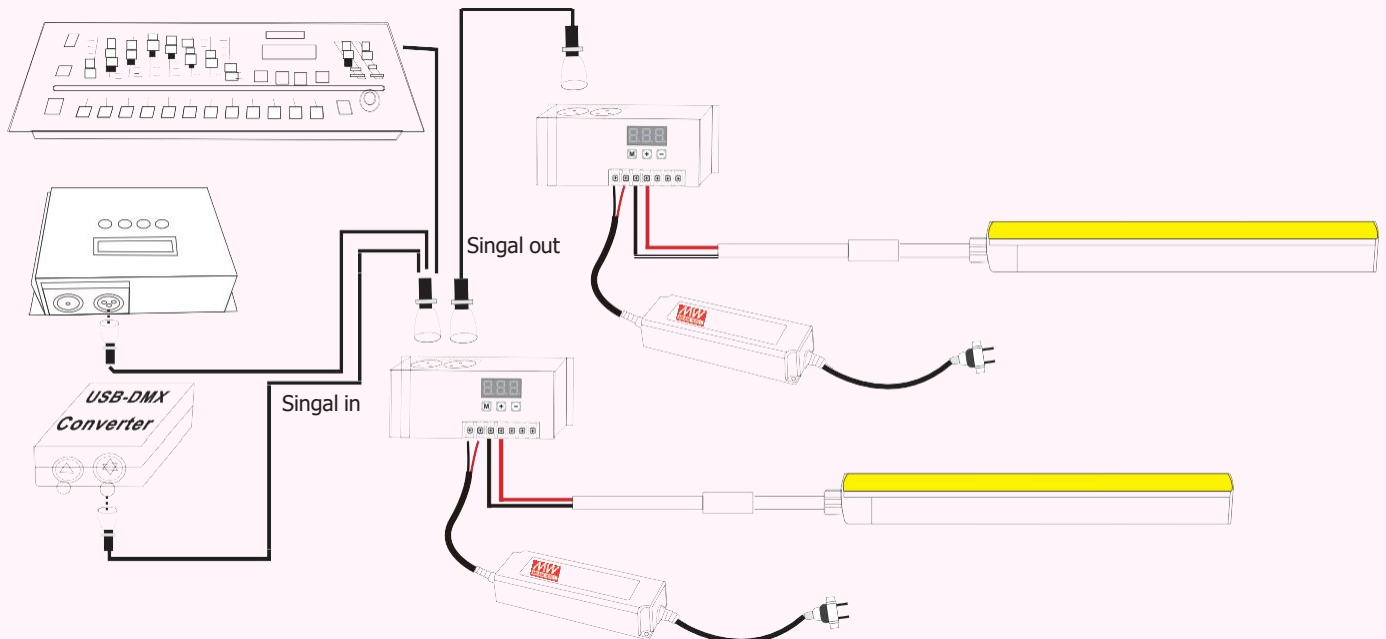
1. The values of length above doesn't include the 0.3m or 0.6m cable connected to the front connector.
2. To ensure the reliability of wire connection and avoid problem of voltage drop, the length of extension wire should be smaller than the above recommended values.

## Dimming system Connection

### 0-10V dimming system



### DMX512 dimming system



### DALI dimming system

