



Simply **brighter.**

SPECIFICATION

LedNEON LF15D-HB (2200-5700K)



Ver. 3.1

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Introduction

LF15D-HB (2200-5700K) is a new member of the LedNEON series coupled with intelligent LEDs for dynamic white, which enable you to implement a lighting design consistently and efficiently that responds to your undefined and specific needs.

LF15D-HB (2200-5700K) is UL/cUL, CE i TUV and RoHS compliant for European Union and North American markets. Moreover, LF15D-HB (2200-5700K) has passed environmental resistance, optical, mechanical and electrical tests in our lab under the support of advanced experimental equipments and technology to ensure meets the requirements of harsh environments.

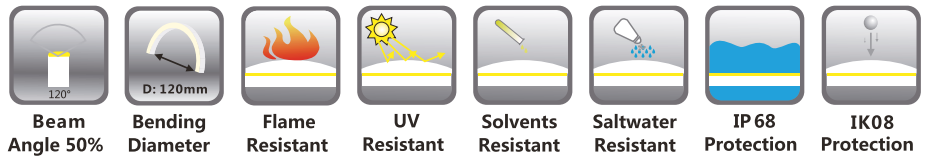
Fully encapsulated in the flexible PCV chamber, assembled with multiple patented connectors to achieve IP68 protection, easy for installation and applicable for various circumstances.

LF15D-HB (2200-5700K) can vary color temperature from 2200K to 5700K with smooth illumination and small bend diameter in curve bending shape.

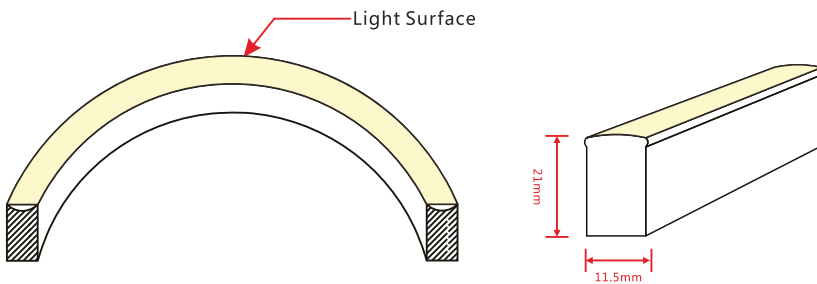
Application:

1. Outdoor or Indoor Contour/Border Lighting
2. Architectural Outline/Decorative Lighting
4. Facade/Display Lighting
5. Signage Display Lighting

1. Specifications & Parameters



1.1 Dimensions of Light



1.2 Technical Parameters

Technical Parameters

Article No.	C-FR-F15D-24CV
Color	W/WW
Working Voltage	DC24V
Rated Power/m	12W
LED Qty/m	144LEDs
LED Distance	13.89mm
Min. Cutting Unit	12LEDs (1 unit)
Min. Cutting Length	83.3mm(1 unit)
Continuous Length	10m
Weight/m	325g
Storage Temperature	-20~60°C
Ambient Working Temperature	-20~45°C
Ambient Installation Temperature	0~45°C
IP Rating	Ip68

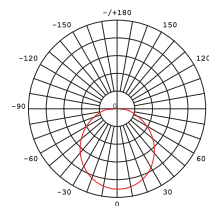


1.3 Optical Parameters

Photometric Data

Article No.	C-FR-F15D-24CV		
LED Type	SMD		
Beam Angle 50%	120°		
Color	CCT	Lumen/m	Power/m
WW	2238±102K	>110lm	
W	5669±355K	>110lm	
W+WW	3465±245K	>220lm	12w

Candle Power Distribution

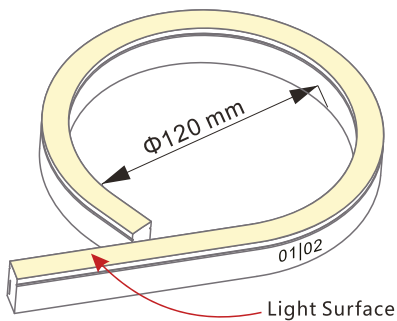


2. Functions & Features

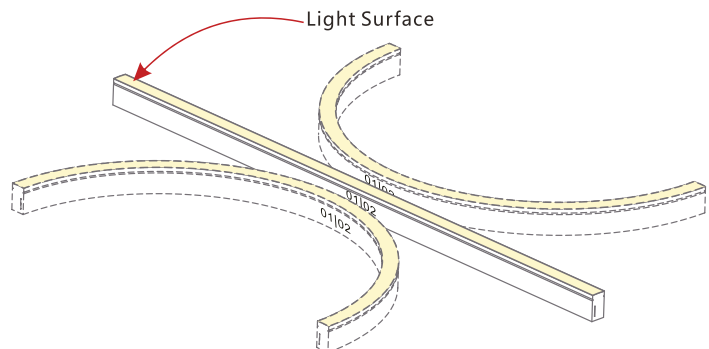
2.1 Product Features

1. Dynamic white system with adjustable color temperature from 2,200K to 5,700K.
2. High quality SMD LED chip.
3. UV & flame resistant construction (PVC).
4. High color consistency & smooth illumination with invisible light dots.
5. Extremely flat profile and flush light surface.
6. High lumen output and IP rating (IP68).
7. The product IP rate is ultimately in line with properly applied IP rated connectors.
8. Ultra flexible with 120mm minimum bending diameter.
9. Easy installation and assembly with DIY accessories for joining and terminating.
10. Continuous length up to 10m by energized from one end.
11. Environmentally friendly & energy efficient.

2.2 Minimum Bend Diameter



The light can only be bent laterally (opposite bend along to light surface).



Do not bend smaller than allowed minimum bend diameter.

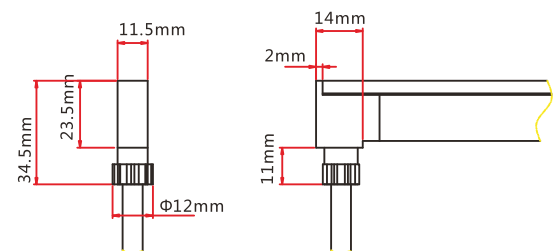
3. Types of Connector

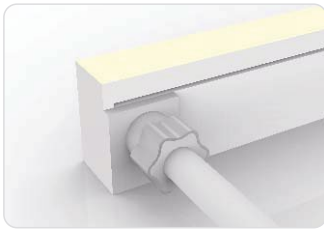
3.1 Injection-moulded Connector



Injection-moulded Front Connector (bottom)

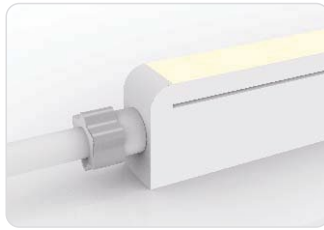
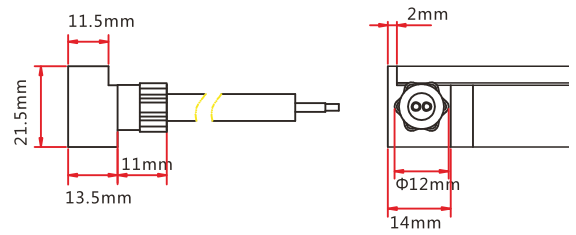
Connects light to power supply with pre-installed bottom feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.





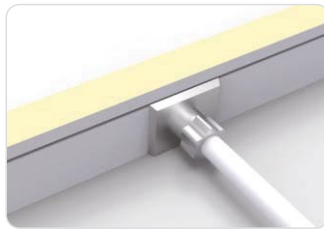
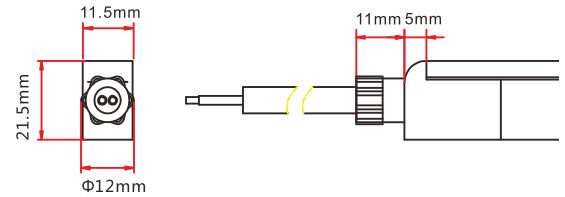
Injection-moulded Front Connector (side)

Connects light to power supply with pre-installed side feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



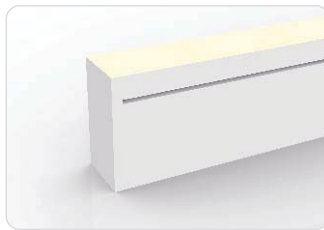
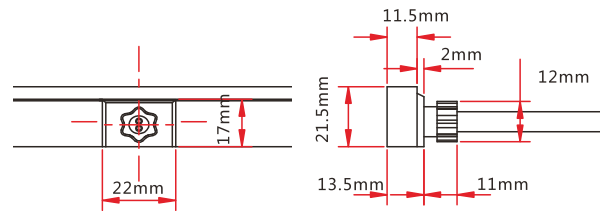
Injection-moulded Front Connector (top end)

Connects light to power supply with pre-installed end feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



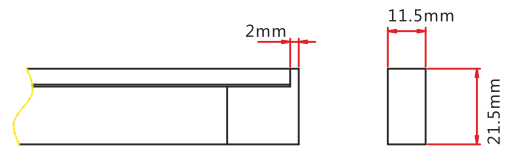
Injection-moulded Middle Feed Connector

Connects light to power supply with pre-installed end feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



Injection-moulded End Cap

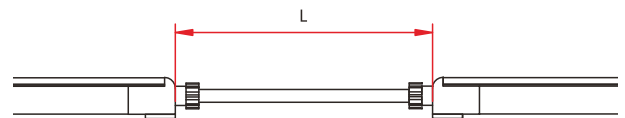
Pre-installed termination protection of the light, IP67.



Injection-moulded Jumper

Connects two pieces of lights together with a flexible cable. IP67 Injection-moulded connector. L available in 0.3~1m.

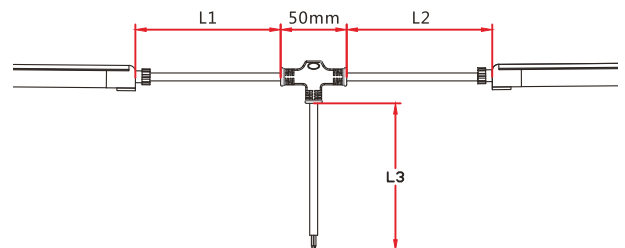
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



Injection-moulded T-feed

Connects two pieces of lights together with a T joint, energized from middle. IP67 Injection-moulded connector. L1 and L2 available in 0.15~0.5m. L3 available in 0.3~3m.

Maximum 8 T-feeds in 20m
Maximum 4 T-feeds in 10m

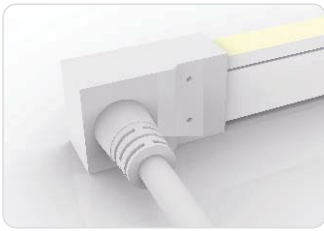
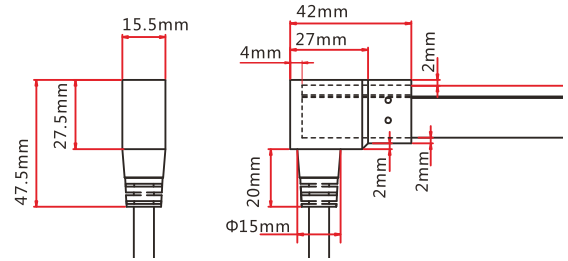


3.2 Dual Injection-moulded Connector



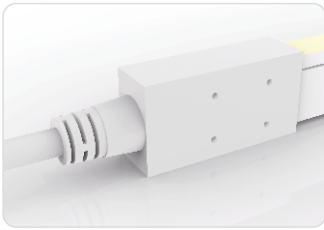
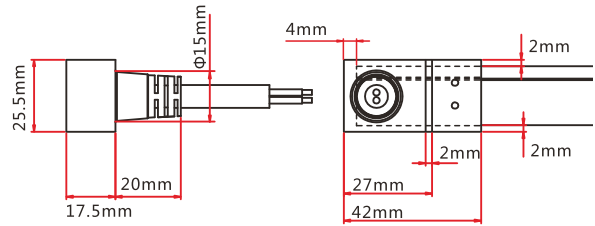
Dual Injection-moulded Front Connector (bottom)

Connects light to power supply with pre-installed bottom feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



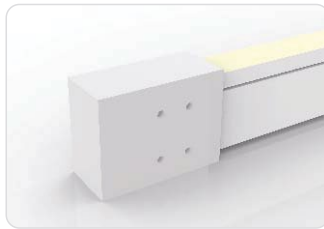
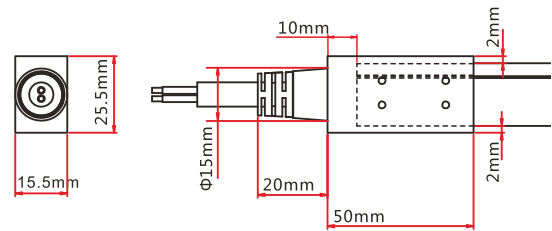
Dual Injection-moulded Front Connector (side)

Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



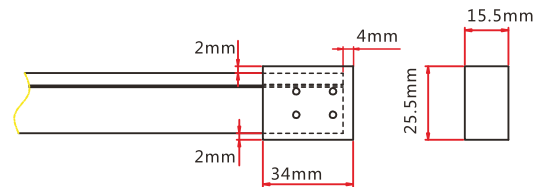
Dual Injection-moulded Front Connector (top end)

Connects light to power supply with pre-installed end feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.



Dual Injection-moulded End Cap

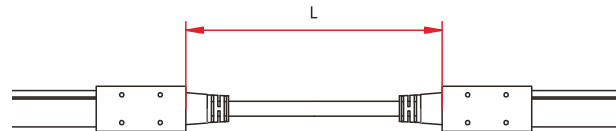
Pre-installed termination protection of the light, IP68.



Dual Injection-moulded Jumper

Connects two pieces of lights together with a flexible cable. IP68 Dual Injection-moulded connector. L available in 0.3~1m.

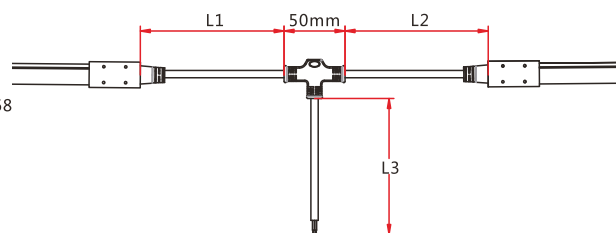
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



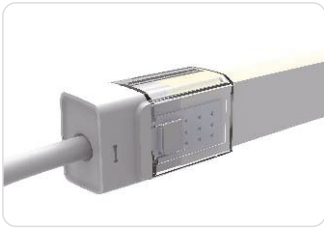
Dual Injection-moulded T-feed

Connects two pieces of lights together with a T joint, energized from middle. IP68 Dual Injection-moulded connector. L1 and L2 available in 0.15~0.5m. L3 available in 0.3~3m.

Maximum 8 T-feeds in 20m
Maximum 4 T-feeds in 10m



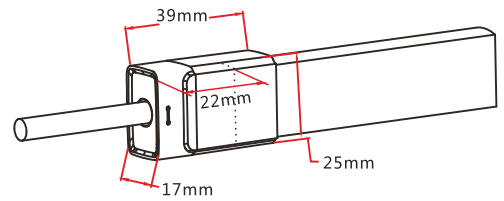
3.3 Sleeve Connector



Sleeve Front Connector

Connects light to power supply. IP40 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

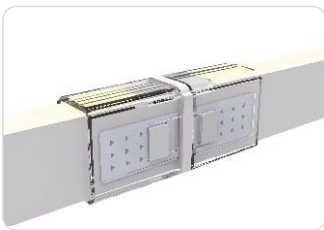
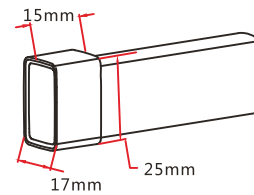
Feed connector*1 (Three-pin)
PC cover*1
Anti-skidding clips*2



Sleeve End Cap

Termination protection of the light. IP40 DIY connector.

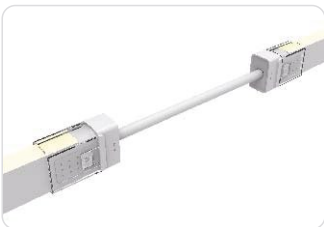
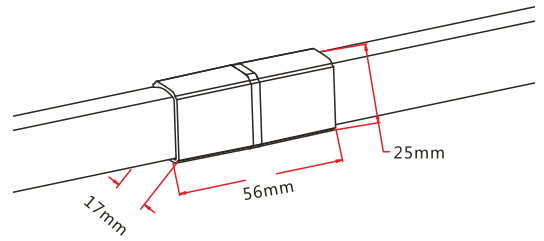
Shading Sheat*1
PC cover*1



Sleeve Middle Connector

Combine two pieces of lights together. DIY connector.

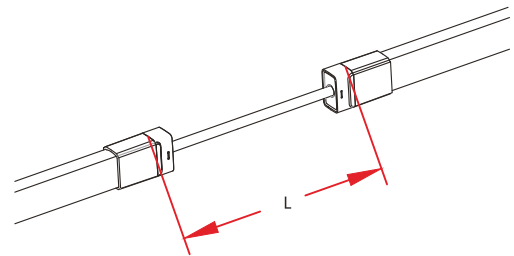
Pin connector*1 (Three-pin)
PC cover*2
Anti-skidding clips*4



Sleeve Jumper

Connects two pieces of lights together with a flexible cable. IP40 DIY connector. L available in 0.3m, 1m and 3m.

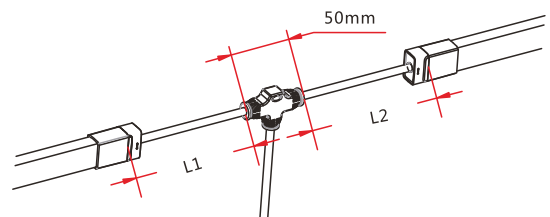
Double-end feed connector*1 (Three-pin)
PC cover*2
Anti-skidding clips*4



Sleeve Power T-feed

Connects two pieces of lights together with a T joint, energized from middle. IP40 DIY connector. L1 and L2 available in 0.3m.

T joint*1 (Three-pin)
PC cover*2
Anti-skidding clips*4



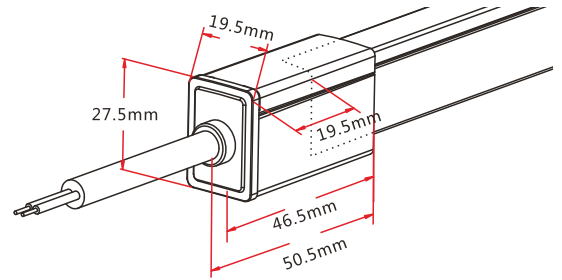
3.4 Snap Connector



Snap Front Connector(top end)

Connects light to power supply. IP67 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

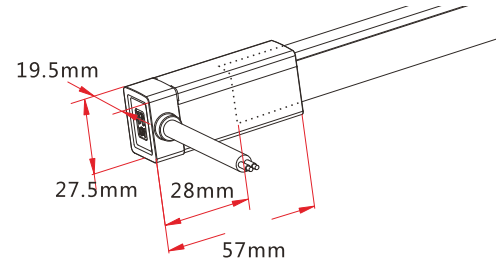
- Feed connector*1 (Three-pin)
- Silicone gasket*1
- U steel plate*1
- Anti-skidding clip*1
- PC Cover*1



Snap Front Connector(side)

Connects light to power supply. IP67 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

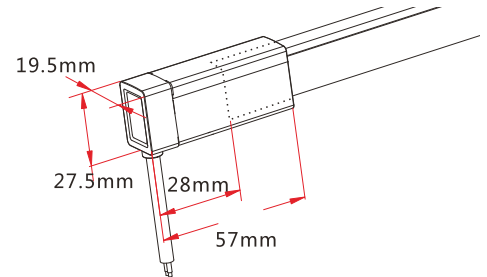
- Feed connector*1 (Three-pin)
- Silicone gasket*1
- U steel plate*1
- Anti-skidding clip*1
- PC Cover*1



Snap Front Connector(bottom)

Connects light to power supply. IP67 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

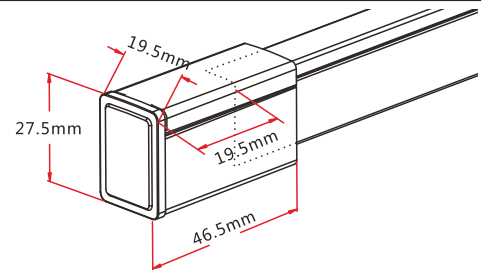
- Feed connector*1 (Three-pin)
- Silicone gasket*1
- U steel plate*1
- Anti-skidding clip*1
- PC Cover*1



Snap End Cap

Termination protection of the light. IP67. DIY connector.

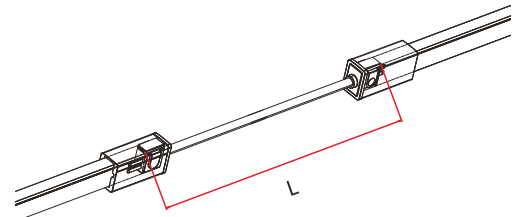
- Tail plug*1
- Silicone gasket*1
- U steel plate*1
- Anti-skidding clip*1
- PC Cover*1



Snap Jumper

Connects two pieces of lights together with a flexible cable. IP67 DIY connector. L available in 0.3m, 1m and 3m.

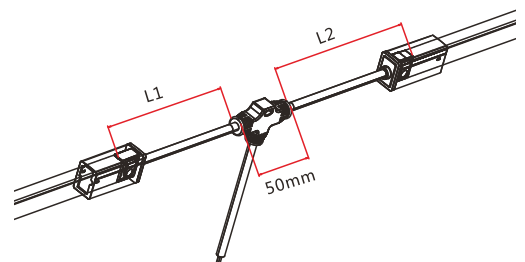
- Double-end feed connector*1 (Three-pin)
- Silicone gasket*2
- U steel plate*2
- Anti-skidding clip*2
- PC Cover*2



Snap Power T-feed

Connects two pieces of lights together with a T joint, energized from middle. IP67 DIY connector. L1 and L2 available in 0.3m.

- T joint*1 (Three-pin)
- Silicone gasket*2
- U steel plate*2
- Anti-skidding clip*2
- PC Cover*2



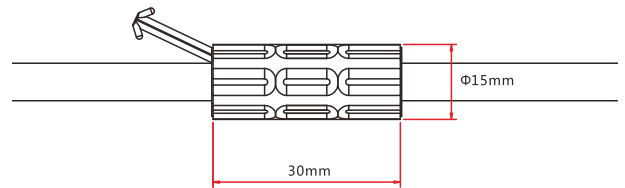
3.5 Anti-wicking Ferrule



Anti-wicking Ferrule

The anti-wicking ferrule is located at 115mm (± 5 mm tolerance) from the connector on the cable.

For protection against water ingress from inside of cable wire and hence damage the light.

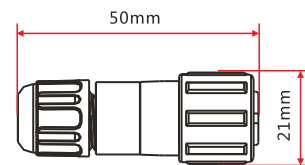


3.6 Male & Female Connector



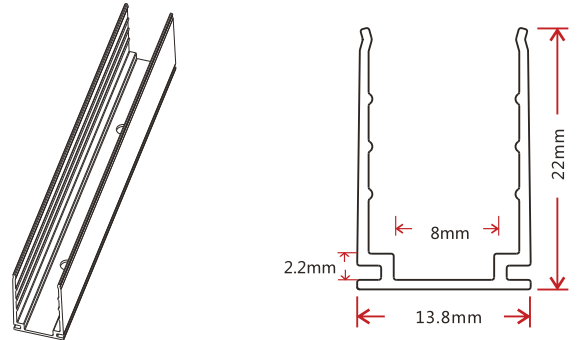
Male & female Connector

For plug and play cable junction, DIY or Pre-installed connector, IP68



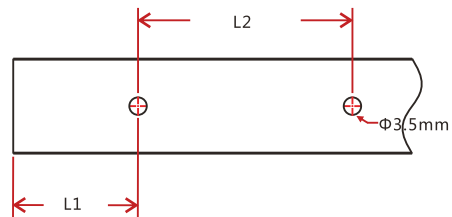
4. Mounting Profile

4.1 Standard Aluminum Profile



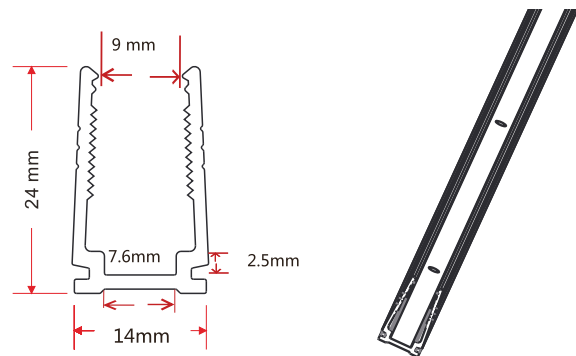
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way



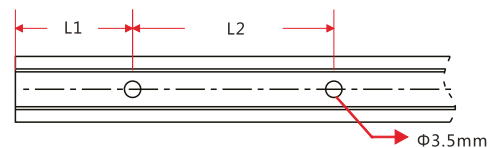
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F15-A/PL	13.8*22	35	17.5	/	$\Phi 3.5$	1
		500	50	200	$\Phi 3.5$	3
		1000	100	200	$\Phi 3.5$	5
		2000	100	200	$\Phi 3.5$	10

4.2 Plastic Profile



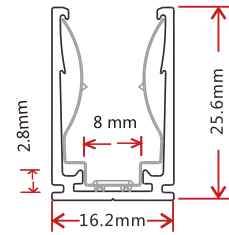
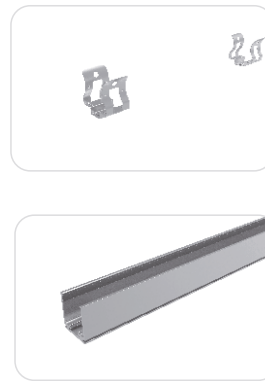
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way



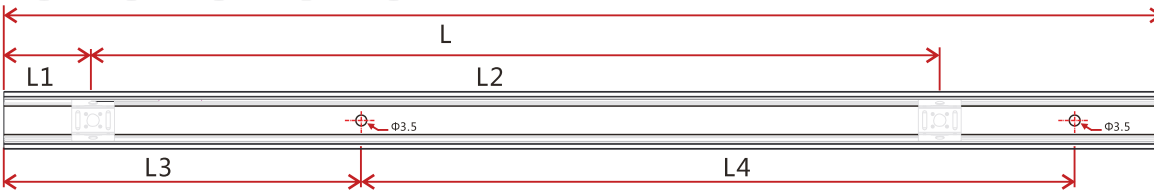
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F15-P/PL	14*24	500	50	200	$\Phi 3.5$	3
		1000	100	200	$\Phi 3.5$	5
		2000	100	200	$\Phi 3.5$	10

4.3 Spring Clip Aluminum Profile



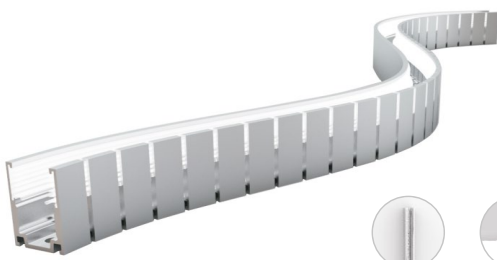
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way

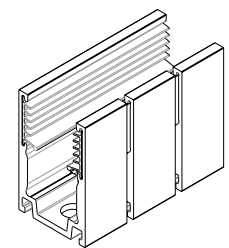
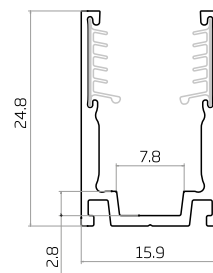
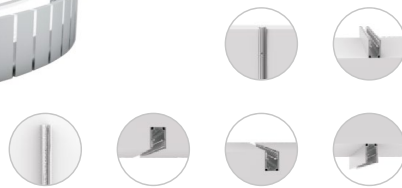


Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
F15-SCA/PL	16.2*25.6	35	17.5	/	5	25	$\phi 3.5$	2	1
		500	25	225	50	200	$\phi 3.5$	3	3
		1000	25	237.5	100	200	$\phi 3.5$	5	5
		2000	25	243.8	100	200	$\phi 3.5$	10	9

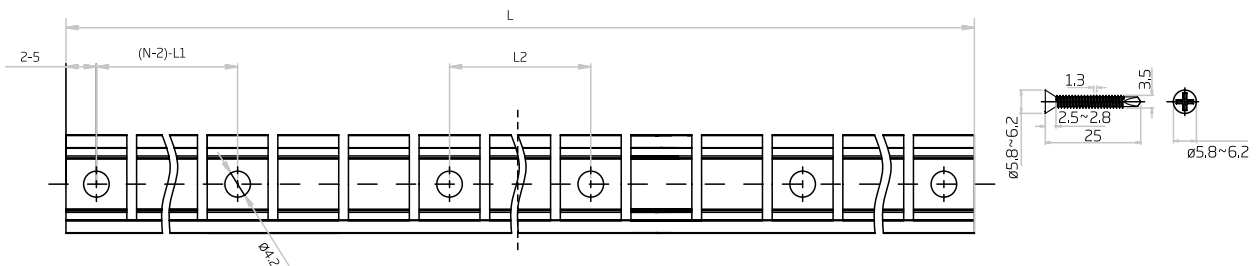
4.4 Bendable Stainless Steel Profile



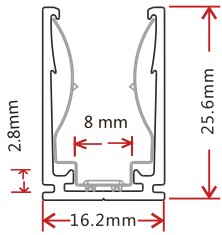
Installation Way



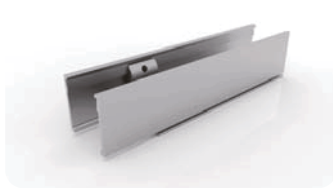
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.2\text{mm}$.



4.5 Cable Exit Oriented Aluminum Profile (Applicable to Injection-moulded Connector Only)



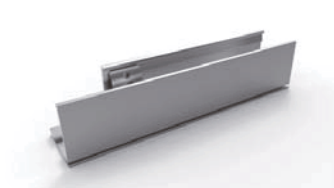
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.



Bottom Feed



Middle Feed

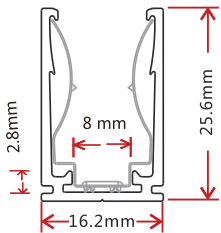


Side Feed From Left

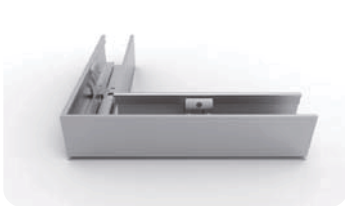


Side Feed From Right

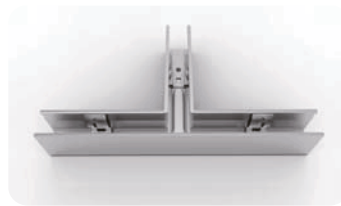
4.6 Corner Aluminum Profile (Applicable to Injection-moulded Connector Only)



Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.



L Shape



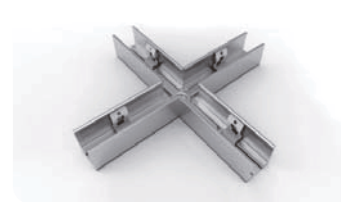
T Shape



Outward L Shape

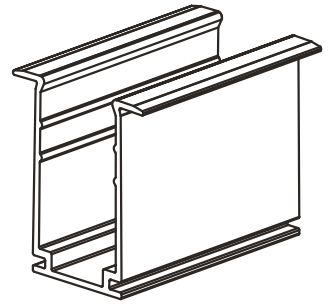
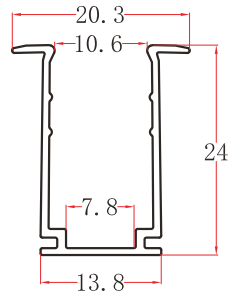


Inward L Shape



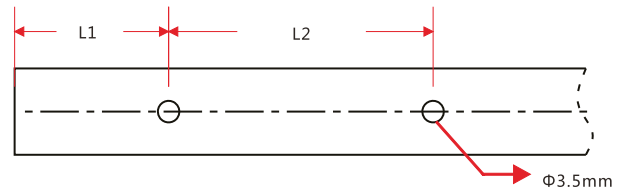
X Shape

4.7 Recessed Mounting Profile



Note: Unless otherwise stated, the tolerance of the profile is ± 0.5 mm.

Installation Way



Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F15-RMA/PL	20.3*24	35	5	25	Φ3.5	2
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

5. Appendix

5.1 Certificate

Certificating Type	Testing Organization	Certificate Serial Number	Report Reference
UL 2108	UL	20180801-E360029	E360029-20130322
CE-EMC	SGS	SZEM1712012372LMV	SZEM171201237201

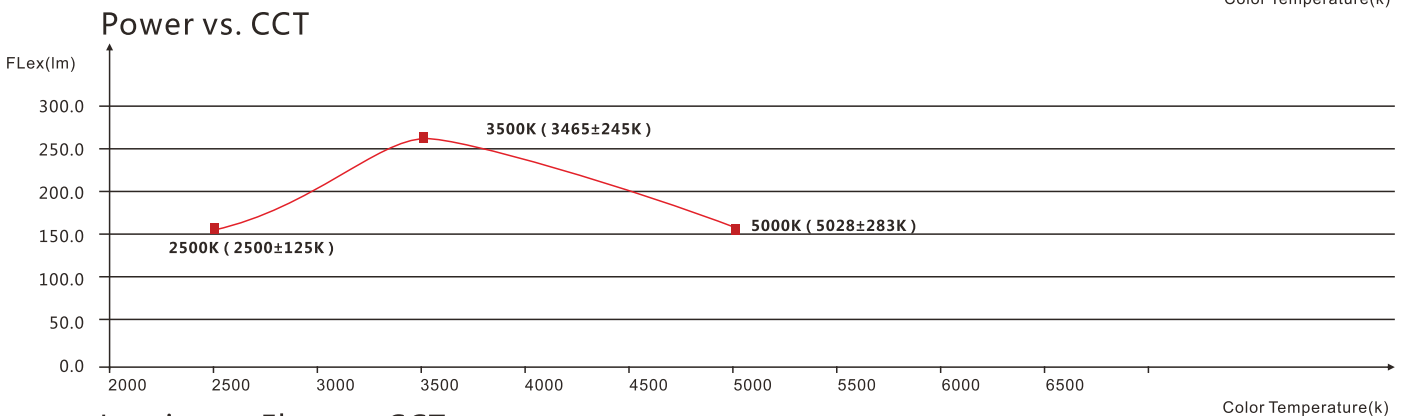
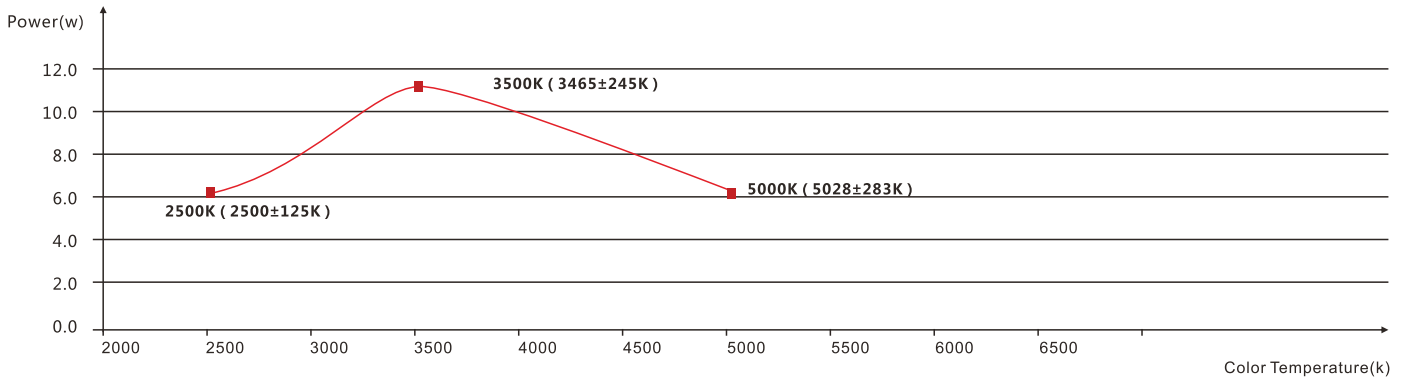
5.2 Third-Party Test Report

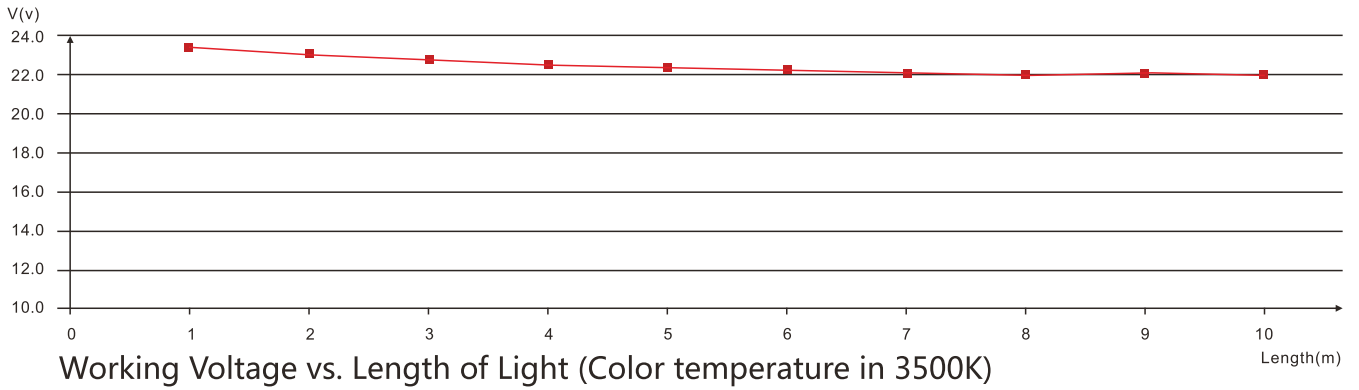
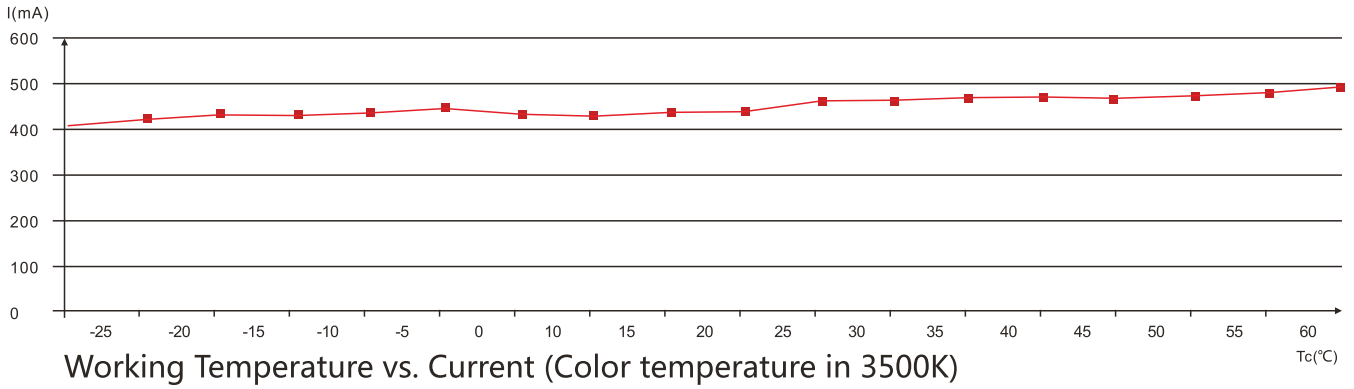
Testing Item	Testing Organization	Report Number
RoHS	SGS	CANEC1815144401
		CANEC1815146401
IP68: Screw type	TUV SUD	68.140.12.136.02
IP68: Clasp type	SGS	GZES140200135301
		GZES140200135401
		GZES140200135501
		GZES140200135701
		GZES140200135801
IPX8: Molding type	SGS	SZES141200357301
		SZES141200357401
		SZES141200357501
IPX8: Snap type	SGS	GZES160600792031
Flame retardant	TUV SUD	68.140.13.068.01
IPX8: Dual Injection Moulding	SGS	SZES171001697401
		SZES171202089731
Safely: IEC60598-1& IEC60598-2-21	LCS	LCS180307033BS
		LCS180307034BS
		LCS180307035BS
		LCS180307036BS
		LCS180307037BS

5.3 Reliability Test of Light

TESTING ITEM	PERFORMANCE	STANDARD/REFERENCE VALUE/DESCRIPTION
PHOTOMETRIC TESTING	Spectrum Analysis	IES LM 79 (lumen, CCT, CRI, XY, SDCM, wave length)
	Photometric Distribution	IES LM 79(lumen intensity distribution & Lux diagram)
	Lumen Maintenance & Life Time	IES LM84 & IES TM28
TEMPERATURE RISE TESTING	Normal Temperature Test	UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21
	Abnormal Operation Test	UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21
MECHANICS & PHYSICS TESTING	Bending Test	Manufacturer-defined, 500 cycles
	Swing Test	UL2388, > 750 cycles
	Tensile Test	Manufacturer-defined, > the weight of light in maximum connection length with both ends feed
	Twist Test	Manufacturer-defined, > 200 cycles
	Ball Impact	UL1598 & UL2388 & IEC60598-1 & IEC60598-2-21
	IK07 IK08	IEC62262
WEATHERING TESTING	Swimming Pool Water Immersion Test	GB9667, PH6.8-7.6, free chlorine 0.3-0.6mg/L
	Sea Water Immersion Test	IEC60598-1, Salinity 4%
	Salt Spray Test	IEC68-2-11
	Outdoor Exposure	Manufacturer-defined
ENVIROMENT TESTING	Flame Resistant Test	UL94
	UV Exposure Test	ASTMG 154 , ISO 4892-3 , UVA@340nm
	IPX5 IPX6 IPX7 IPX8	IEC60529
ENDURANCE & THERMAL TEST LAB	Temperature Shock Test	Manufacturer-defined , -40°C-60°C (typical temperature range)
	Constant Temperature Test	Manufacturer-defined , 70°C (typical temperature)

5.4 Figures of Typical Characteristics





5.5 (X,Y) Chromaticity Diagram

