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SPECIFICATION

LedNEON_LF10 B-HB-MONOCOLOR&COLORS-RA80

Table of Contents

C US LISTED   CE   TÜV SÜD   RoHS COMPLIANT

Introduction

LF10 B-HB-MONOCOLOR&COLORS-RA80 is a member of the LedNEON series with smooth flat exterior that allows the most flexible and adaptable manipuations for visualiy appealing shapes and produces superior homogenized illumination along its full length.

Built-in protection circuit design which means single LED failure has no effect on other LEDs working in the same unit and the whole light can keep constant lighting.

LF10 B-HB-MONOCOLOR&COLORS-RA80 is UL/cUL, CE i TUV and RoHS compliant. Moreover, it has passed environmental resistance, optical, mechanical and electrical tests in our lab under the support of advanced experimental equipments and technology to ensure it meets the requirements of harsh environments. Also it has passed relevant tests of thrid party inspection authority.
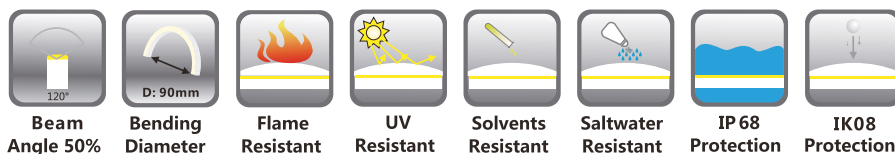
Fully encapsulated in the flexible PCV chamber by utilizing consumate extrusion technology, assembled with multiple patented connectors to achieve IP68 protection, easy for installation and applicable for various circumstances.

LF10 B-HB-MONOCOLOR&COLORS-RA80 features gright, solid illumination, and ultra flexibly with small bend diameter in curve bending shape.
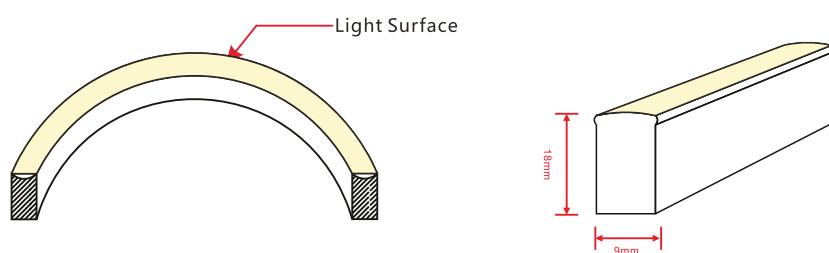
Application:
1. Outdoor or Indoor Contour/Border Lighting
2. Architectural Outline/Decorative Lighting
3. Cove/Accent Lighting
4. Facade/Floor Lighting
5. Signage/Guide Lighting

1. Specifications & Parameters

Beam Angle 50%	Bending Diameter	Flame Resistant	UV Resistant	Solvents Resistant	Saltwater Resistant	IP 68 Protection	IK08 Protection

1.1 Dimensions of Light

Light Surface

18mm

9mm

1.2 Technical Parameters

Technical Parameters

Article No.	C-FR-F10B-24CV	C-FR-F10B-24CV	C-FR-F10B-12CV
Color	Red/Amber	Green/Blue/White	Red/Amber/Green/Blue/White
Working Voltage	DC24V	DC24V	DC12V
Rated Power/m	3.5W	4.5W	4.5W
LED Qty/m	72	72	72
LED Distance	13.89mm	13.89mm	13.89mm
Min. Cutting Unit	9LEDs(1unit)	6LEDs(1unit)	3LEDs(1unit)
Min. Cutting Length	125mm(1unit)	83.3mm(1unit)	41.7mm(1unit)
Continuous Length	20m	15m	7.5m
Weight/m	210g		
Storage Temperature	-20 ~ 60℃		
Ambient Working Temperature	-20 ~ 45℃		
Ambient Installation Temperature	0 ~ 45℃		
IP Rating	IP68		

1.3 Optical Parameters

Photometric Data

Article No.	C-FR-F10B-24(12)CV			C-FR-F10B-24(12)CV-R80	
LED Type	SMD			SMD	
Beam Angle 50%	120°			120°	
Color	Wavelength	Lumen/m	Color	CCT	Lumen/m
Red	618-624nm	>45lm	2200K	2238±102K	>110lm
Green	522-528nm	>80lm	2700K	2725±145K	>110lm
Blue	468-474nm	>15lm	3000K	3045±175K	>120lm
Amber	588-594nm	>50lm	3500K	3465±245K	>120lm
			4000K	3985±275K	>120lm
			5700K	5669±355K	>110lm

Candle power distribution

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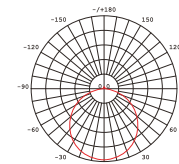
2. Functions & Features

2.1 Product Features

1. High quality and high brightness SMD LED chip.
2. Protection Circuit: Each LED Protected.
3. Variety of monochromatic lights for option including Red, Green, Blue, Amber and White light.
4. UV & flame resistant construction(PVC).
5. Flat profile, good choice for recessed mounting.
6. High color consistency & smooth illumination with invisible light dots.
7. Ultra flexible with 90mm minimum bending diameter.
8. Easy installation and assembly with DIY accessories for joining and terminating.
9. High IP rating(IP68).
10. The product IP rate is ultimately in line with properly applied IP rated connectors.
11. Continuous length up to 20m (R, A-DC24V)/ 15m (G, B, W-DC24V) /7.5m(R/G/B/A/W-DC12V)by powering one end.
12. Environmentally friendly & energy efficient.

2.2 Minimum Bend Diameter

Φ90 mm

01|02
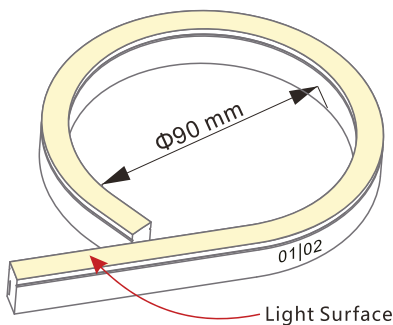
Light Surface

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

Light Surface

01|02
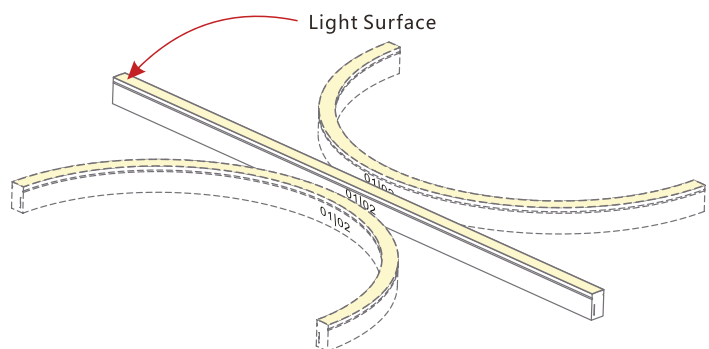
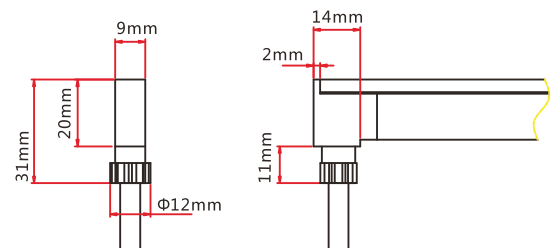Do not bend smaller than allowed minimum bend diameter.

3. Types of Connector

3.1 Injection-moulded Connector
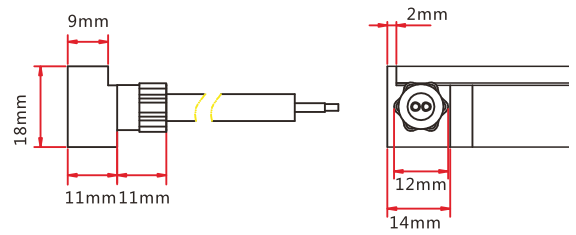

**Injection-moulded Front
Connector (bottom)**

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

9mm
31mm
20mm
Φ12mm

14mm
2mm
11mm

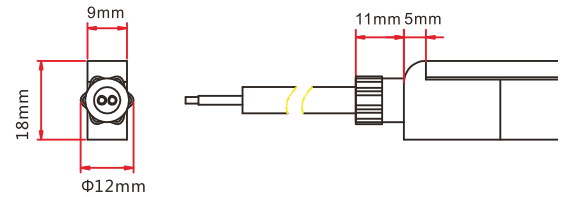C UL US LISTED   CE   TÜV SÜD   RoHS COMPLIANT

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.
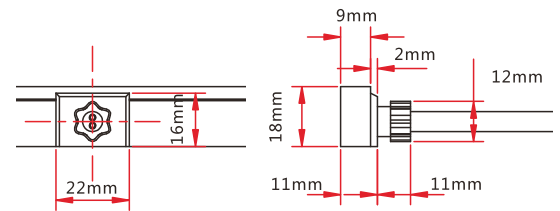
9mm
18mm
11mm 11mm
2mm
12mm
14mm

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.
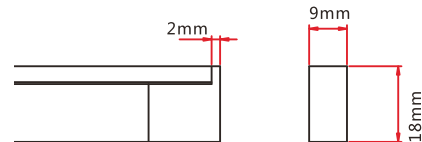
9mm
18mm
Φ12mm
11mm 5mm

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.

16mm
22mm
9mm
2mm
18mm
12mm
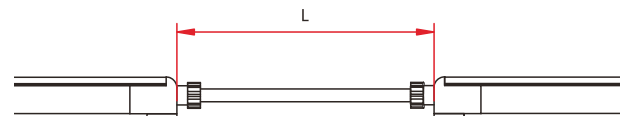11mm 11mm

Injection-moulded End Cap

Pre-installed termination protection of the light, IP67.

2mm
9mm
18mm

Injection-moulded Jumper

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

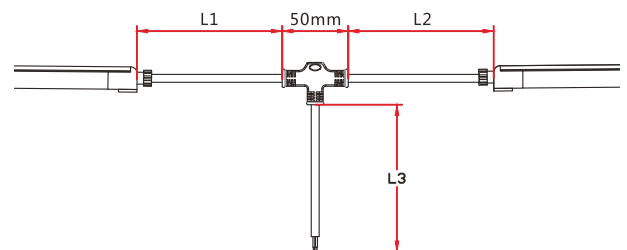Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m

L

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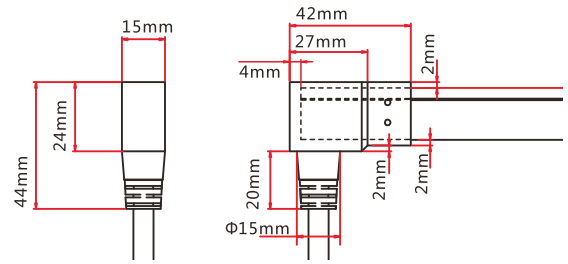
Maximum 8 T-feeds in 20m
Maximum 4 T-feeds in 10m

L1   50mm   L2
L3

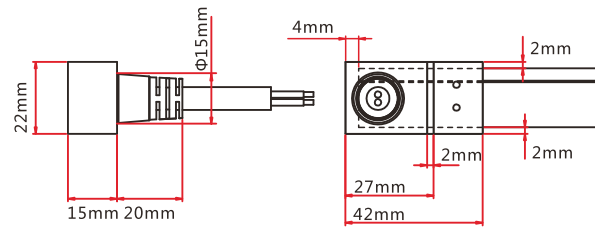# 3.2 Dual Injection-moulded Connector

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.
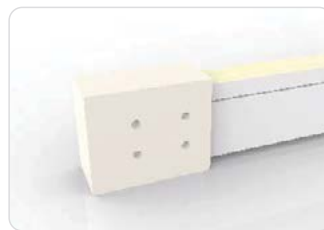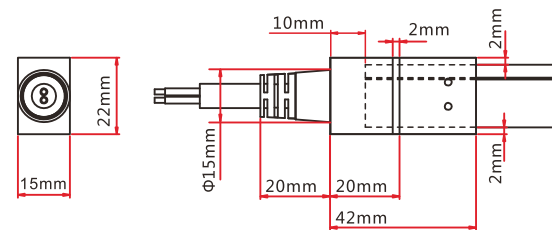
Dual Injection-moulded Front Connector (side)

Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.
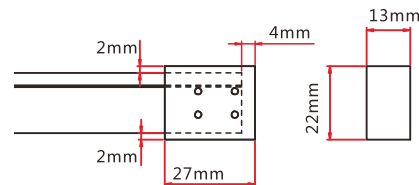
Dual Injection-moulded Front Connector (top end)

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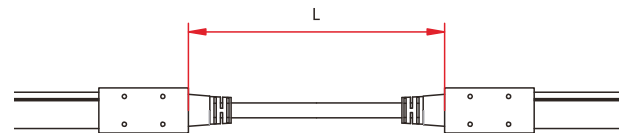
Dual Injection-moulded End Cap

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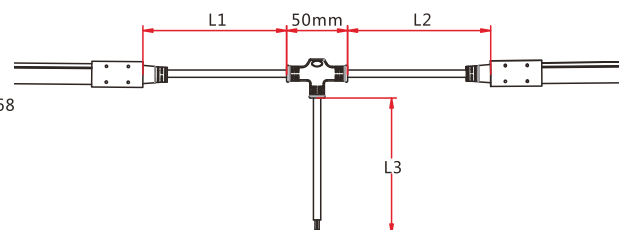
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m

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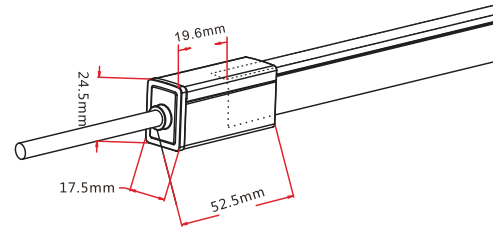
Maximum 8 T-feeds in 20m
Maximum 4 T-feeds in 10m

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3.3 Snap Connector

Snap Front Connector(top end)

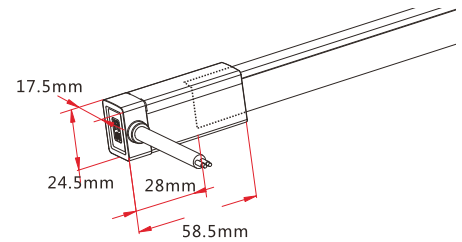Connects light to power supply. IP67 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

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

19.6mm
24.5mm
17.5mm
52.5mm

Snap Front Connector(side right/left)

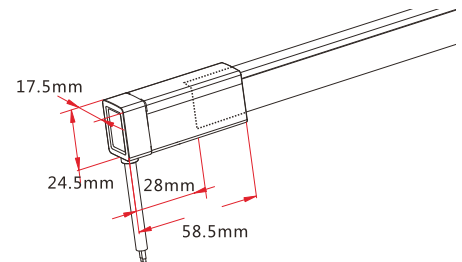Connects light to power supply. IP67 DIY connector. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

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

R   L

17.5mm
24.5mm   28mm
58.5mm

Snap Front Connector(bottom)

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

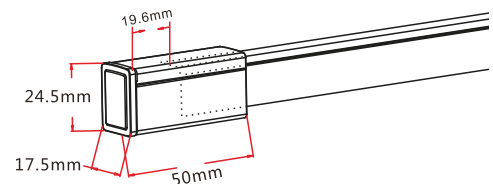Feed connector*1 (Two-pin)
Silicone gasket*1
U steel plate*1
Anti-skidding clip*1
PC cover*1

17.5mm
24.5mm   28mm
58.5mm

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

19.6mm
24.5mm
17.5mm
50mm

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 (Two-pin)
Silicone gasket*2
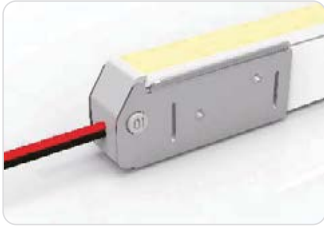U steel plate*2
Anti-skidding clip*2
PC cover*2

L
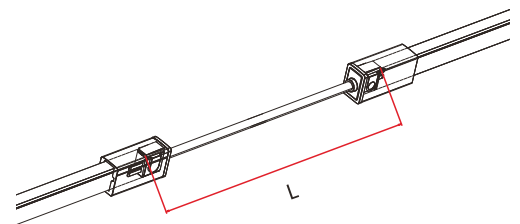
Snap Power T-feed

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 (Two-pin)
Silicone gasket*2
U steel plate*2
Anti-skidding clip*2
PC cover*2

L1   L2
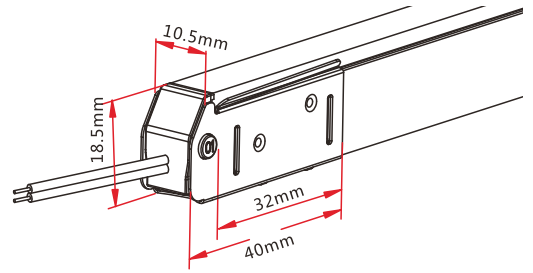50mm

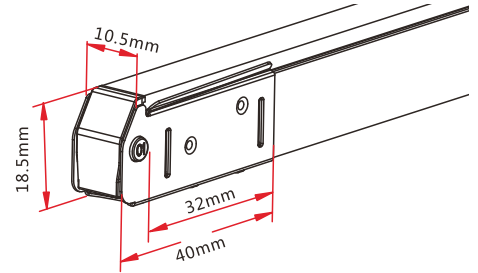C UL US LISTED   CE   TÜV   RoHS COMPLIANT
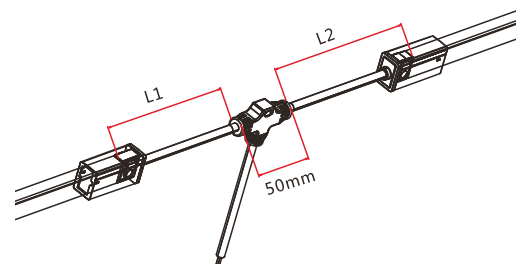
3.4 Swivel Connector

Swivel Front Connector (top end)

Connects light to power supply. IP20 DIY connector. Cable length available in 0.3m, 1m.

10.5mm
18.5mm
32mm
40mm

Swivel End Cap

Termination protection of the light,IP20 DIY connector.
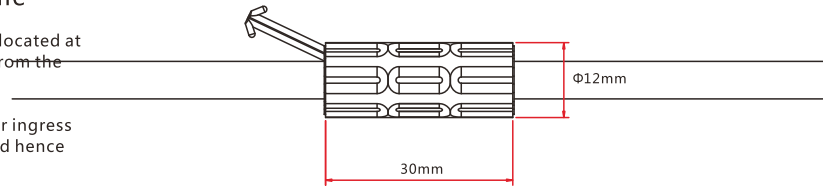
10.5mm
18.5mm
32mm
40mm

3.5 Anti-wicking Ferrule

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

Anti-wicking Ferrule

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

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

Φ12mm
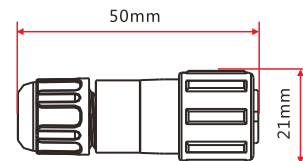30mm

3.6 Male & Female Connector
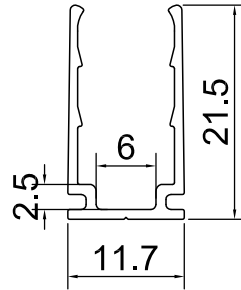
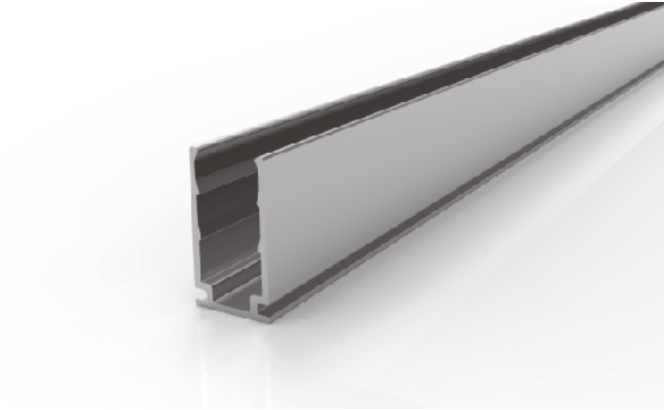Note: Unless otherwise stated, the tolerance is ±2mm.

Male & female Connector

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

50mm
21mm

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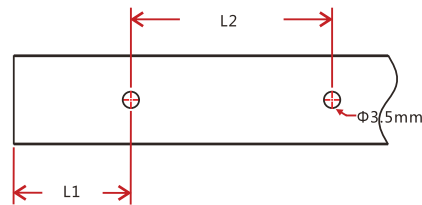C UL US LISTED   CE   TÜV SÜD   RoHS COMPLIANT

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4. Mounting Profile

4.1 Standard Aluminum Profile

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

Installation Way

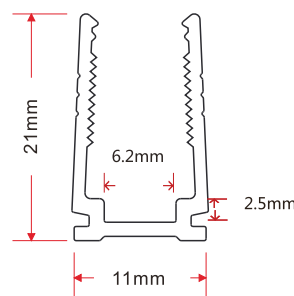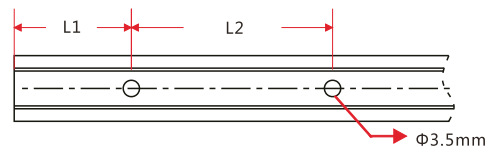| Model	W*H(mm)	Standard Length (L:mm)	L1 (mm)	L2 (mm)	Screw Hole (Φ:mm)	Hole Number
F10- A/PL	11.7*21.5	35	17.5	/	Φ3.5	1
		500	25	/	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

4.2 Plastic Profile

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

Installation Way

Model	W*H(mm)	Standard Length (L:mm)	L1 (mm)	L2 (mm)	Screw Hole (Φ:mm)	Hole Number
F10-P/PL	11*21	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

4.3 Spring Clip Aluminum Profile
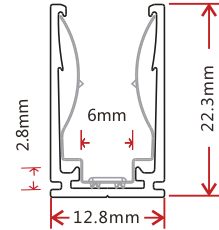

22.3mm
2.8mm
6mm
12.8mm

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

Installation Way

L
L1
L2
Φ3.5
Φ3.5
L3
L4

Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
F10-SCA/PL	12.8*22.3	35	17.5	/	5	25	Φ3.5	2	1
		500	25	225	50	200	Φ3.5	3	3
		1000	25	237.5	100	200	Φ3.5	5	5
		2000	25	243.8	100	200	Φ3.5	10	9

4.4 Recessed Mounting Profile
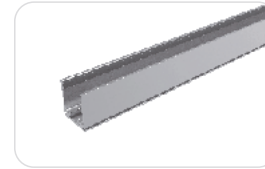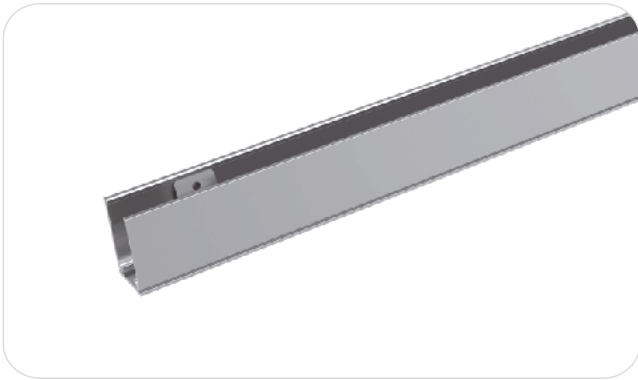

18
8.5
21
2.2
6.3
11.2

L1
L2
Φ3.5mm

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

Installation Way

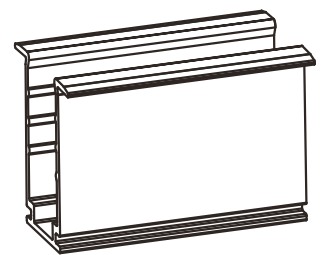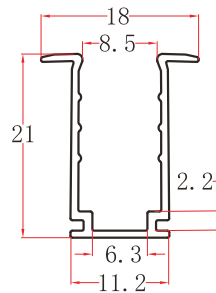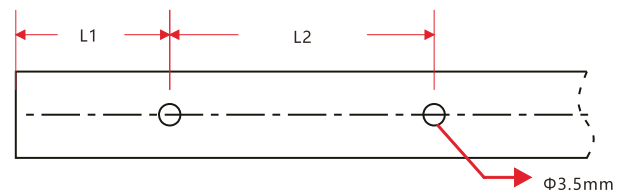| Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F10-RMA/PL	18*21	35	5	25	Φ3.5	2
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

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

22.3mm

2.8mm

6mm

12.8mm
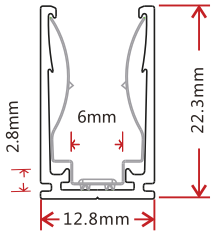
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.
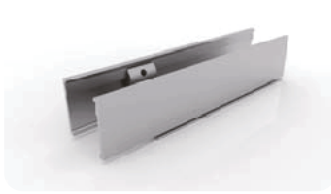
Bottom Feed

Middle Feed

Side Feed From Left

Side Feed From Right

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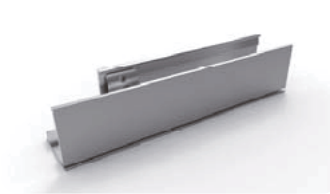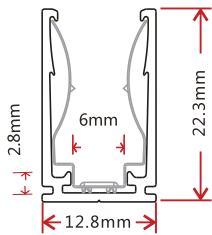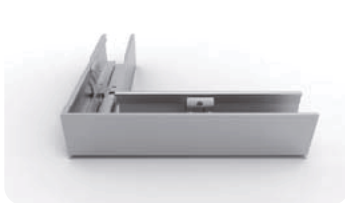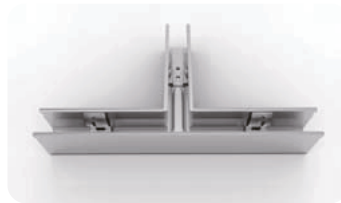## (Applicable to Injection-moulded Connector Only)

22.3mm

2.8mm

6mm

12.8mm

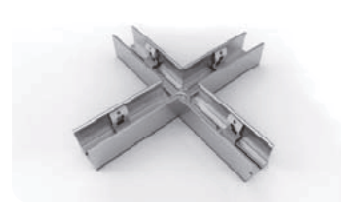Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

L Shape

T Shape

Outward L Shape

Inward L Shape

X Shape

5. Appendix

5.1 Certificate

Certificating Type	Testing Organization	Certificate Serial Number	Report Reference
UL 2108	UL	201800801-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 Mouding	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℃-60℃ (typical temperature range)
	Constant Temperature Test	Manufacturer-defined，70℃ (typical temperature)

5.4 Figures of Typical Characteristics

Working Temperature vs. Power

Working voltage vs. Length of Light

Lumen(lm)

Luminous Flux VS. Length of Light
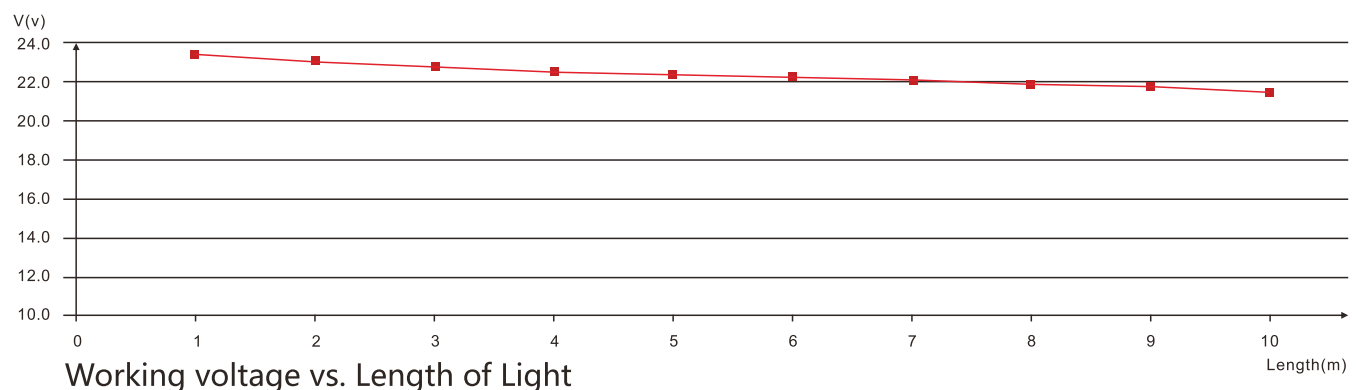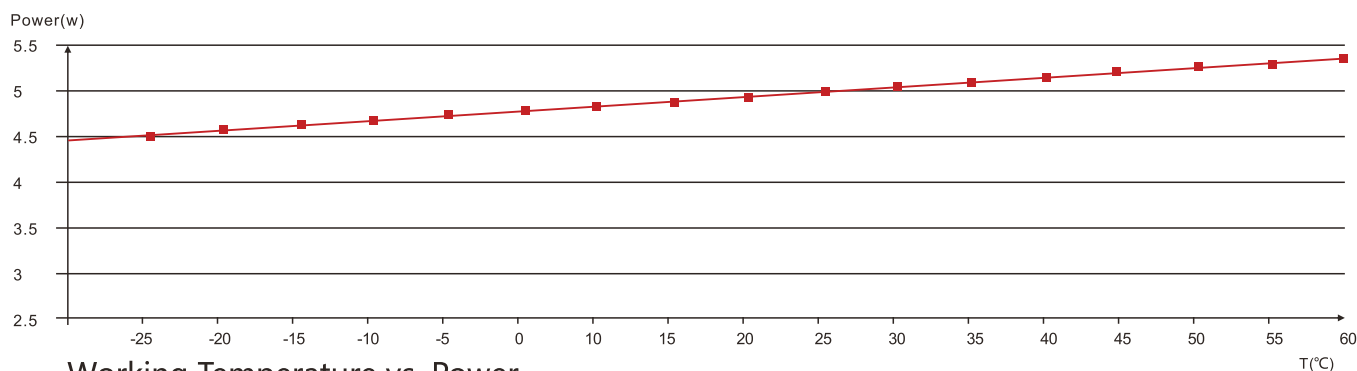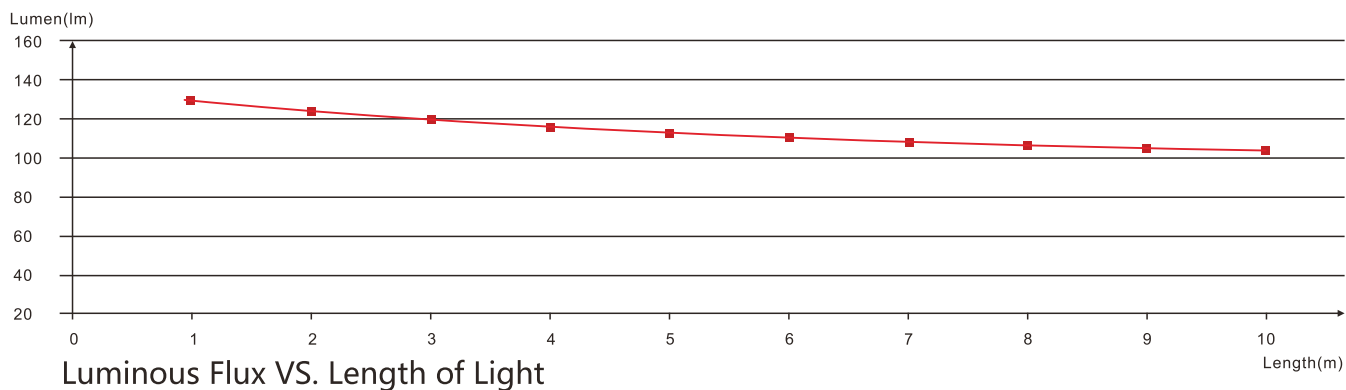
5.5 (X,Y) Chromaticity Diagram

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