Simply brighter.

SPECIFICATION

LedNEON LF22D-VB-2200-5700

Wer. 3.1

Table of Contents

Introduction

LF22D-VB-2200-5700 is a new member of the LedNEON series coupled with intelligent LEDs for dynamic white, which enable you to replace a variety of lighting sources and implement a lighting design consistently and efficiently that responds to your undefined and specific needs.

LedNEON LF22D-VB-2200-5700 is UL/cUL, CE, TUV and RoHS compliant. Moreover, it has passed rigorous 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 third party inspection authority.

Fully encapsulated in the flexible PVC chamber by utilizing consummate extrusion technology, assembled with multiple patented connectors to achieve IP68 protection; easy for installation and applicable for various circumstances.

LedNEON LF22D-VB-2200-5700 can vary color temperature from 2200K to 5700K with smooth illumination and small bend diameter in both horizontal and vertical bending direction.

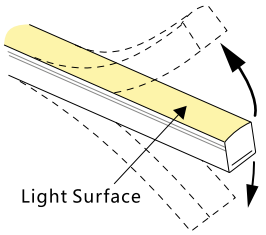
Applications:
1. Outdoor or Indoor Contour/Border Lighting
2. Architectural Outline/Decorative Lighting
3. Cove/Accent Lighting
4. Facade/Terrace Floor Lighting

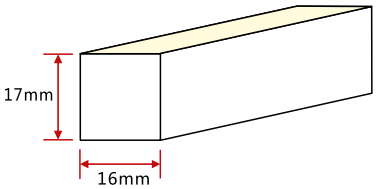
1. Specifications & Parameters

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

1.1 Dimensions of Light

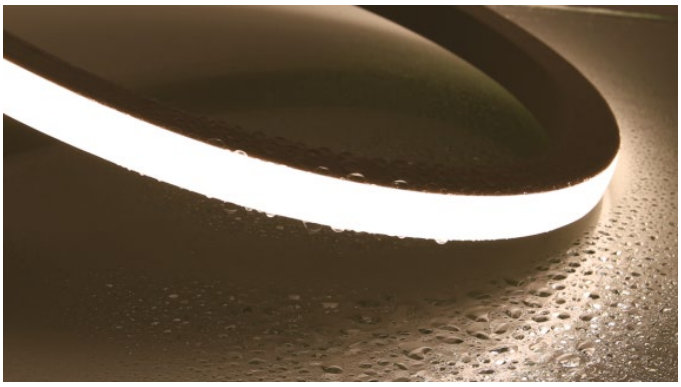
C-FR-F22D-VB





1.2 Technical Parameters

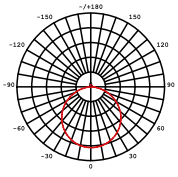
Technical Parameters	
Article No.	C-FR-F22D-24CV
Color	W/WW
Working Voltage	DC24V
Rated Power/m	12W
LED Qty/m	144LEDs
LED Distance	13.89mm
Min. Cutting Unit	12LEDs (1 unit)
Min. Cutting Length	83.3mm(1 unit)
Continuous Length	10m
Weight/m	350g
Storage Temperature	-20~60℃
Ambient Working Temperature	-20~45℃
Ambient Installation Temperature	0~45℃
IP Rating	IP68



1.3 Optical Parameters

Photometric Data			
Article No.	C-FR-F22D-24CV		
LED Type	SMD		
Beam Angle 50%	120°		
Color	CCT	Lumen/m	Power/m
WW	2238±102K	>180lm	
W	5669±355K	>180lm	
W+WW	3465±245K	>360lm	12w

Candle power distribution

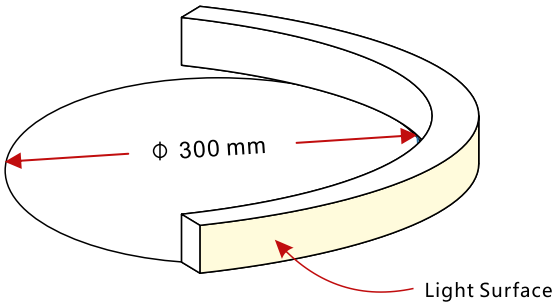


2. Functions & Features

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. Perfect uniform & smooth illumination with invisible light dots.
5. Extremely flat profile and flush light surface.
6. High lumen output and IP rating (IP68).
7. Ultra flexible with 300mm minimum bending diameter.
8. Easy installation and assembly with injection-molded connectors.
9. Continuous length up to 10m by energized from one end.
10. Environmentally friendly & energy efficient.

2.2 Minimum Bend Diameter



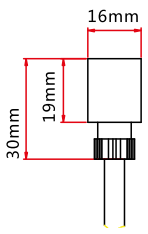
The light can only be bent along the light surface. Do not bend smaller than allowed minimum bend diameter.

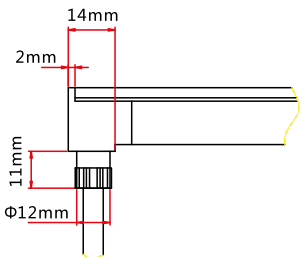
3. Types of Connector

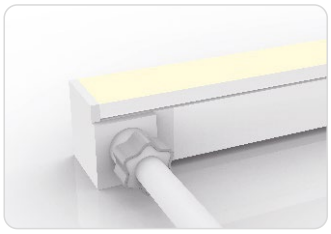
3.1 Injection-moulded Connector

Injection-moulded Front Connector (bottom)

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

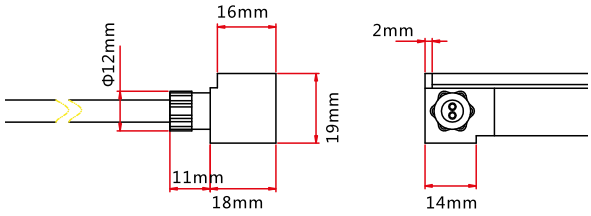


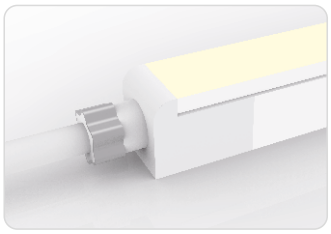




Injection-moulded Front Connector (side)

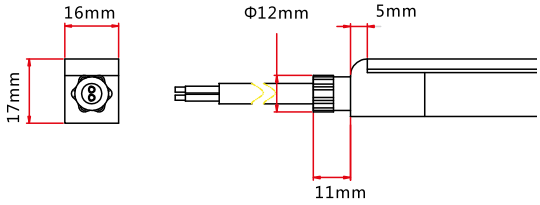
Connects light to power supply with pre-installed side feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.

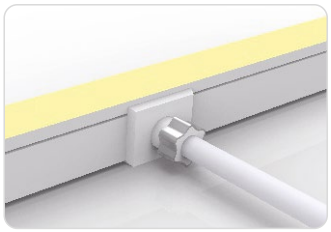




Injection-moulded Front Connector (end)

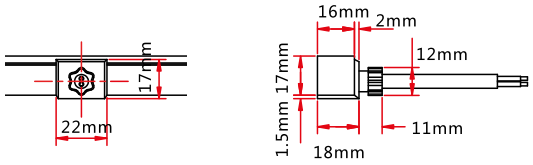
Connects light to power supply with pre-installed end feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.

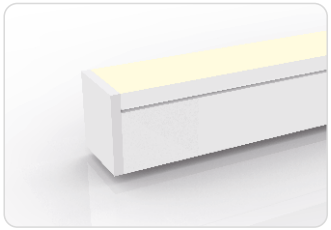




Injection-moulded Middle Feed Connector

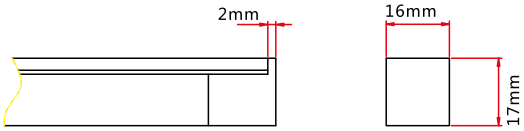
Connects light to power supply with pre-installed end feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.

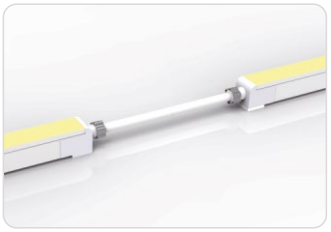




Injection-moulded End Cap

Pre-installed termination protection of the light, IP67.

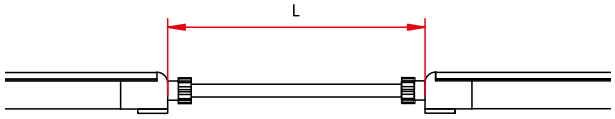




Injection-moulded Jumper

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

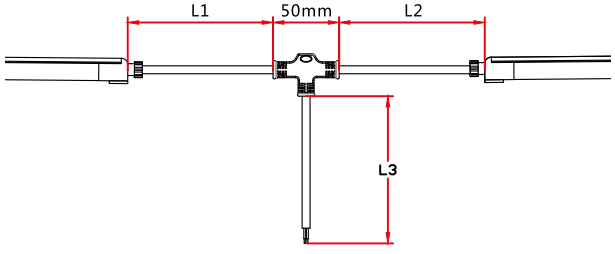
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



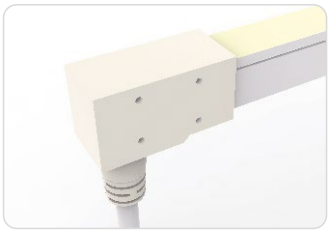
Injection-moulded T-feed

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

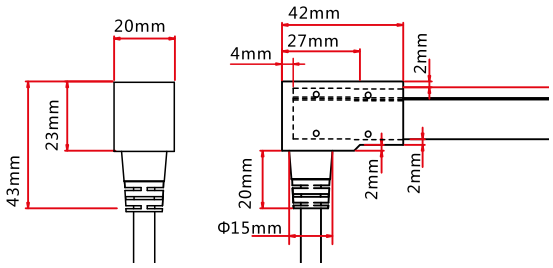


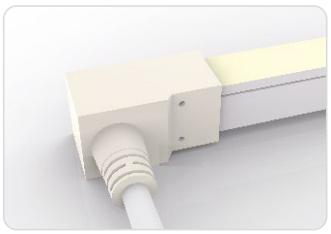
3.2 Dual Injection-moulded Connector



Dual Injection-moulded Front Connector (bottom)

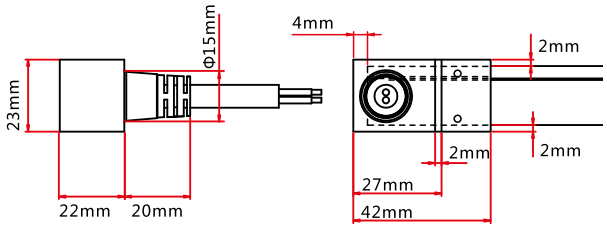
Connects light to power supply with pre-installed bottom feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

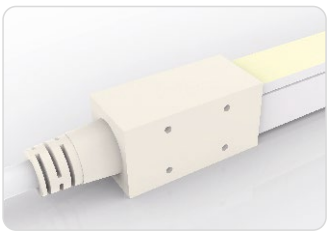




Dual Injection-moulded Front Connector (side)

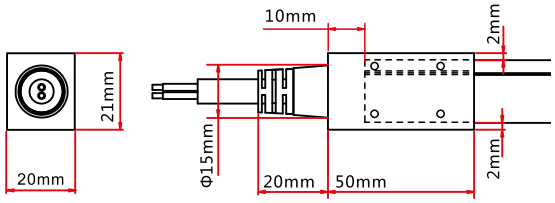
Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

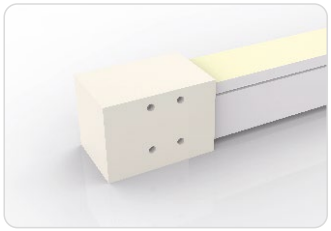




Dual Injection-moulded Front Connector (top end)

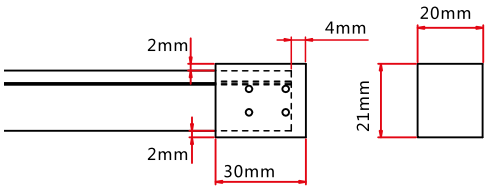
Connects light to power supply with pre-installed end feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

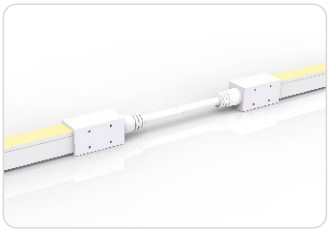




Dual Injection-moulded End Cap

Pre-installed termination protection of the light, IP68.

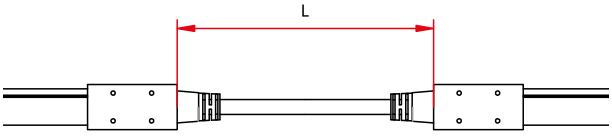




Dual Injection-moulded Jumper

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

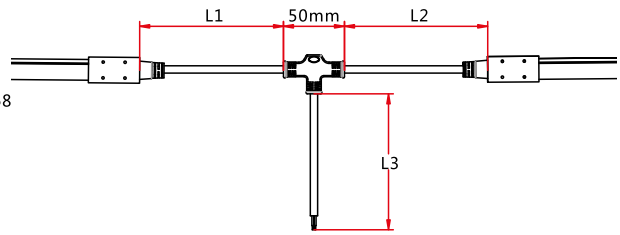
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



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

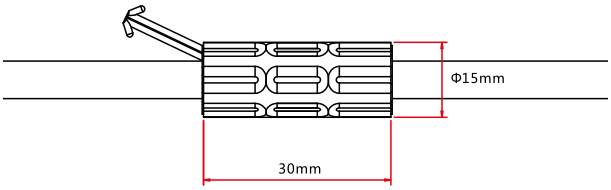


3.3 Anti-wicking Ferrule

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.

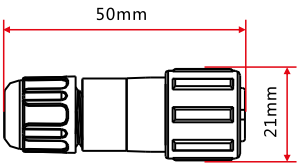


3.4 Male & Female Connector

Note: Unless otherwise stated, the tolerance is ±2mm.

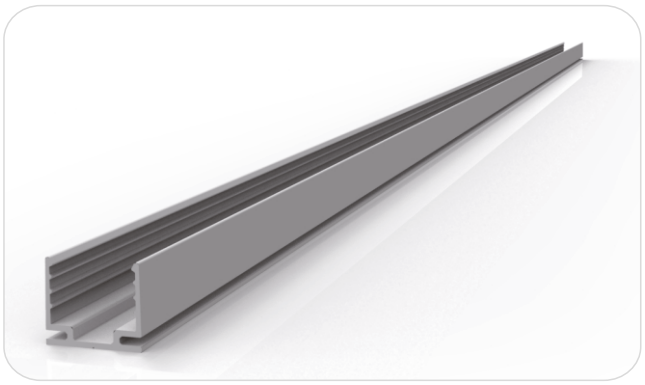
Male & female Connector

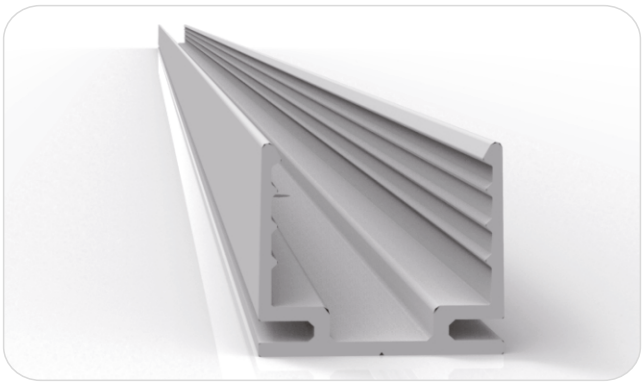
For plug and play cable junction, DIY or Pre-installed connector, IP68



4. Mounting Profile

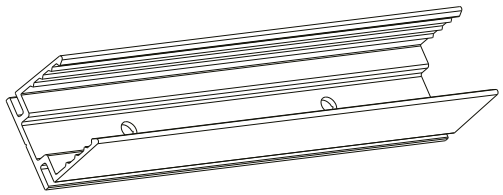
4.1 Standard Aluminum Profile

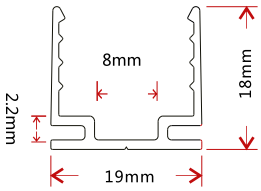


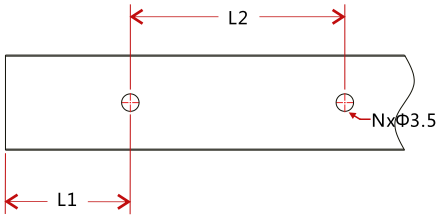


Dimensions

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



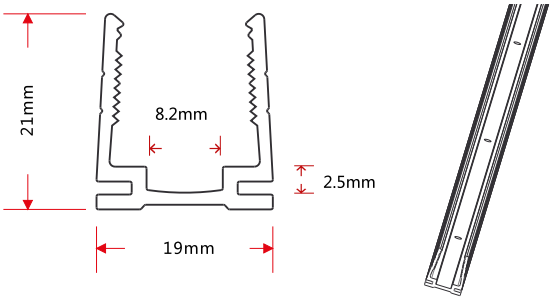


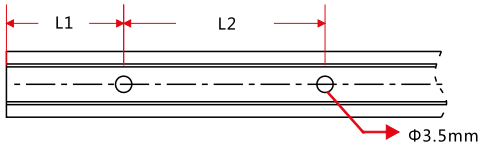


Installation Way

Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-A/PL	19*18	35	17.5	/	Φ3.5	1
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

4.2 Plastic Profile



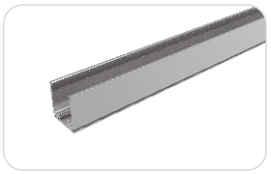


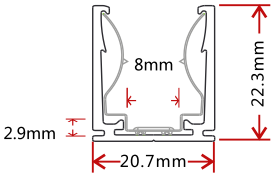
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

Installation Way

Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-P/PL	19*21	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

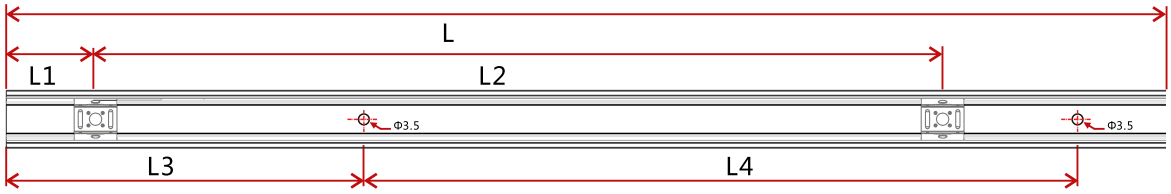
4.3 Spring Clip Aluminum Profile





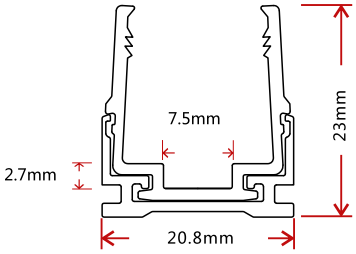
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

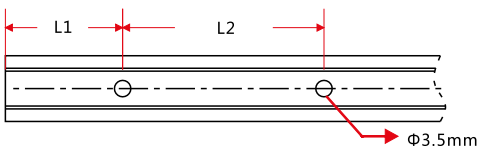
Installation Way



Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
F22-SCA/PL	20.7*22.3	35	17.5	/	5	25	Φ3.5	2	1
		500	25	150	50	200	Φ3.5	3	4
		1000	25	190	100	200	Φ3.5	5	6
		2000	25	195	100	200	Φ3.5	10	11

4.4 Hybrid Profile



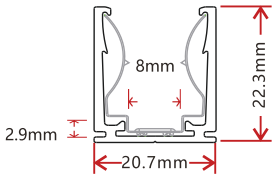


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

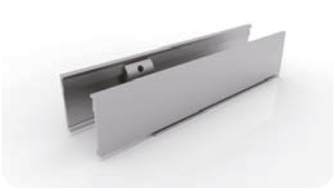
Installation Way

Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-HP/PL	20.8*23	35	17.5	/	Φ3.5	1
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

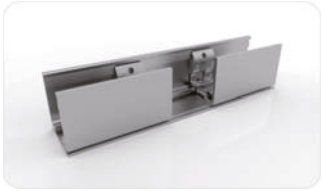
4.5 Cable Exit Oriented Aluminum Profile (Applicable to Injection-moulded Connector Only)



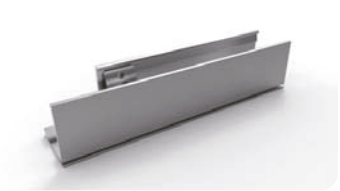
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.



Bottom Feed



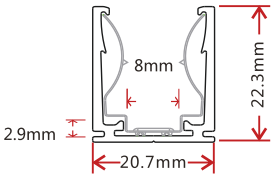
Middle Feed



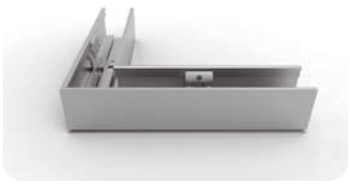
Side Feed From Left

Side Feed From Right

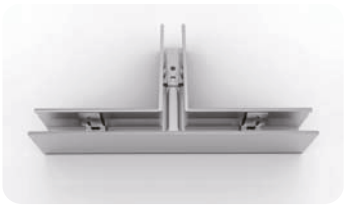
4.6 Corner Aluminum Profile (Applicable to Injection-moulded Connector Only)



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



L Shape



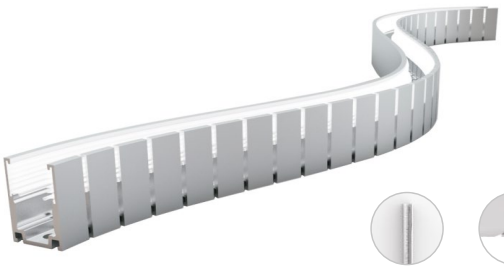
T Shape

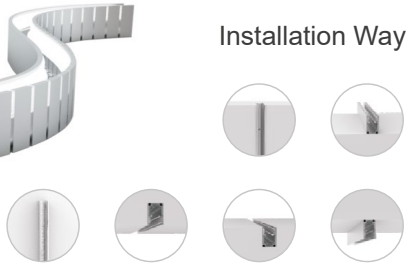
Outward L Shape

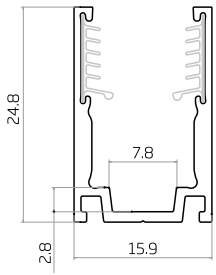
Inward L Shape

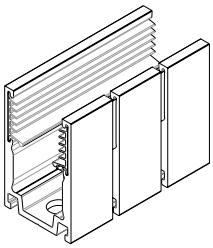
X Shape

4.7 Bendable Stainless Steel Profile

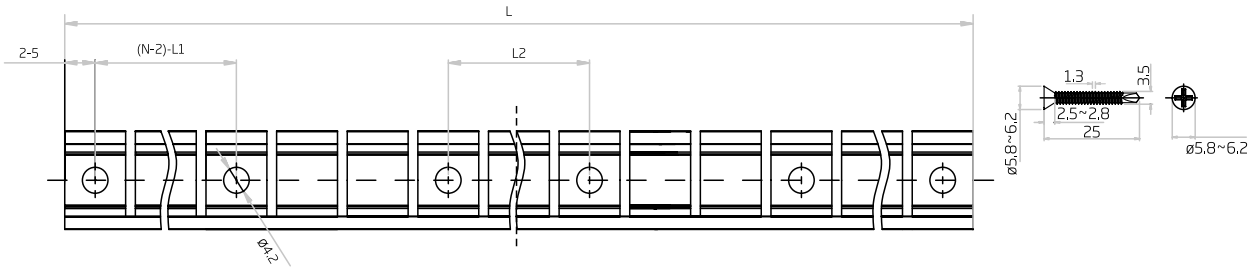




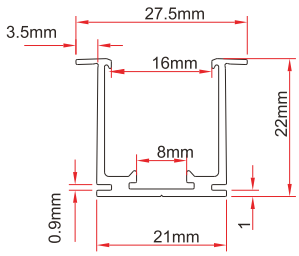




Note: Unless otherwise stated,the tolerance of the profile is ±0,2 mm.

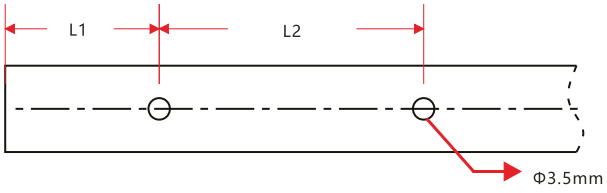


4.8 Recessed Mounting Profile



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
F22-RMA/PL	18*13.2	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

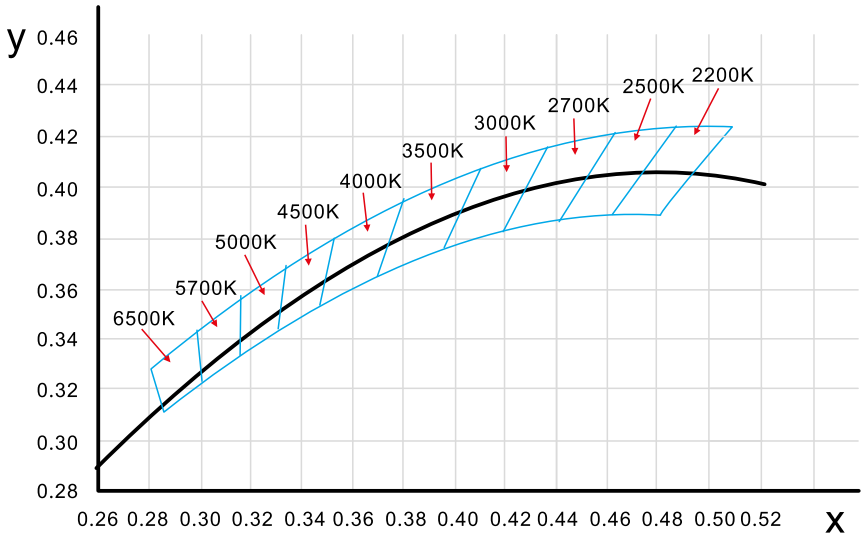
5.2 Third-Party Test Report

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 Mouding	SGS	SZES171001697401 SZES171202089731
Safely: IEC60598-1& IEC60598-2-21	LCS	LCS180307033BS LCS180307034BS LCS180307035BS LCS180307036BS LCS180307037BS

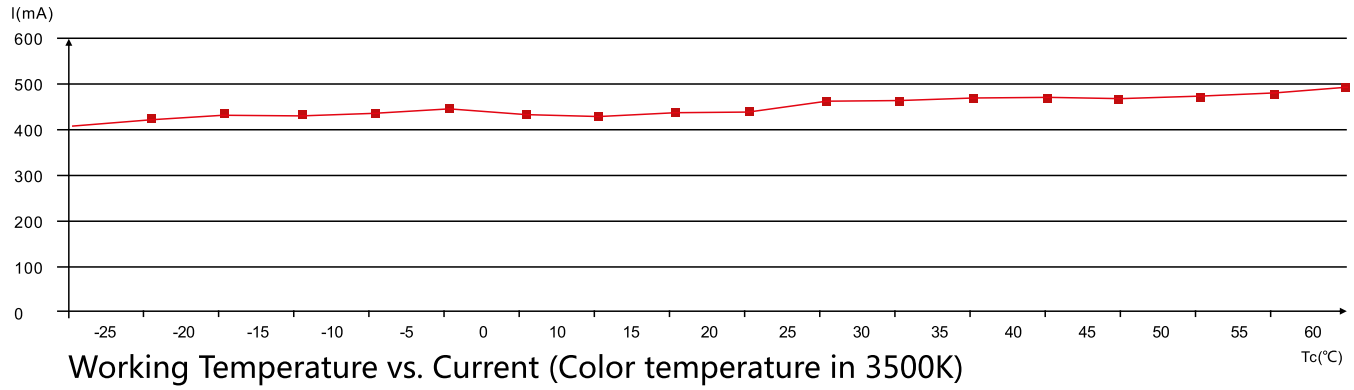
5.3 Reliability Test of Light

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
	Twist Test	maximum connection length with both ends feed 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)

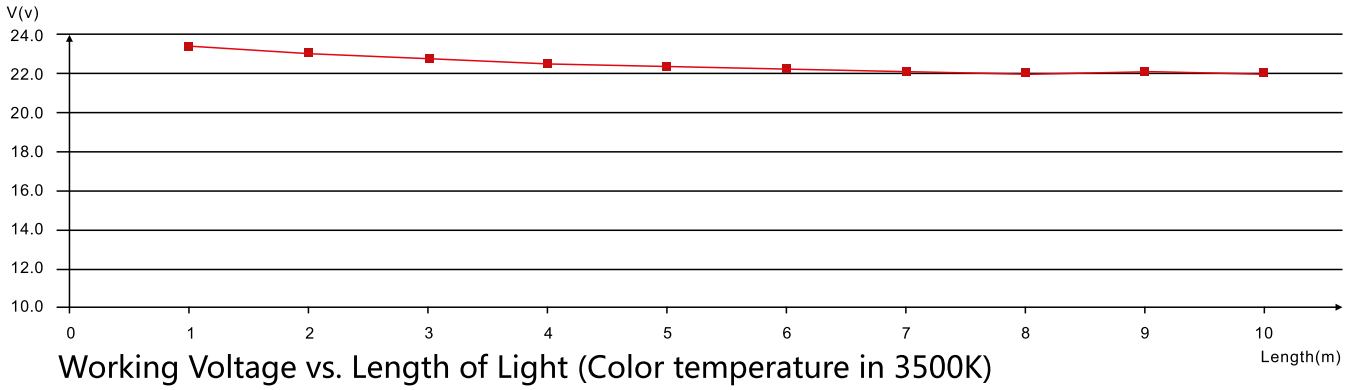
5.4 (X,Y) Chromaticity Diagram



5.5 Figures of Typical Characteristics



Working Temperature vs. Current (Color temperature in 3500K)



Working Voltage vs. Length of Light (Color temperature in 3500K)