Simply brighter.

SPECIFICATION

LedNEON LF22S-RGB-RGBW

Wer. 3.1

Table of Contents

Introduction

LF22S-RGB-RGBW is a member of the LedNEON series, embodied all the benefits of RGB and Single Color products with the addition of DMX addressable technology, it integrates with an IC Chip that allows every pixel is indiviually addressable with discrete control of each 8333mm.

LedNEON LF22S-RGB-RGBW is not only available in RGB but also RGBW and Dynamic White, which enables the capability of producing millions of colors and impressive eye-catching effects when paired with DMX Controller and SPI/universal decoder.

LedNEON_LF22S-RGB-RGBW 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.

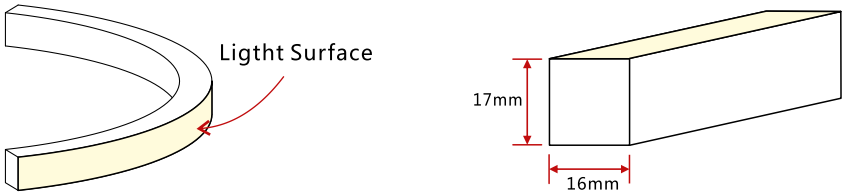
Fully encapsulated in the flexible PVC chamber by utilizing consummate extrusion technology, and pre-installed injection moulded connector to achieve IP68 protection, easy for installation and applicable for various circumstances.

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



1.2 Technical Parameters

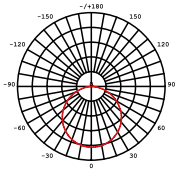
Technical Parameters		
Article No.	C-FR-F22S12-24CC	C-FR-F22S12-24CC
Color	RGB	RGBW
IC Type	UCS2903	UCS2904
Working Voltage	DC24V	DC24V
Rated Power/m	16.5W	22W
LED Qty/m	84LEDs	84LEDs
LED Distance	11.9mm	11.9mm
Min. Cutting Unit	7LEDs(1unit)	7LEDs(1unit)
Min. Cutting Length	83.3mm(1unit)	83.3mm(1unit)
Continuous Length	10m (Dynamic Operating)	10m (Dynamic Operating)
	5m (Static Full Loading)	5m (Static Full Loading)
Weight/m	350g	
Storage Temperature	-20 ~ 60℃	
Ambient Working Temperature	-20 ~ 45℃	
Ambient Installation Temperature	0 ~ 45℃	
IP Rating	IP68	

Note: For this product that over 12W per meter, full loading operating is not recommended.

1.3 Optical Parameters

Photometric Data				
Article No.	C-FR-F22S12-24CC			
LED Type	SMD			
Beam Angle 50%	120°			
Color	Wavelength	Lumen/m	CCT	Lumen/m
Red	618-624nm	>80lm	2725±145K	>190lm
Green	522-528nm	>190lm	3045±175K	>190lm
Blue	468-474nm	>30lm	3985±275K	>190lm

Candle power distribution

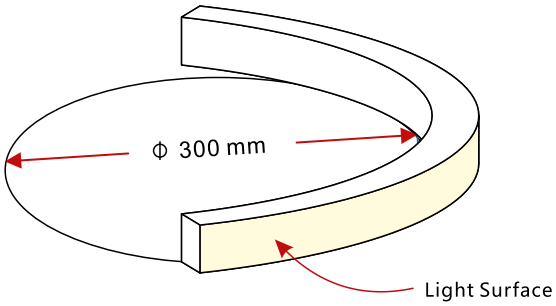


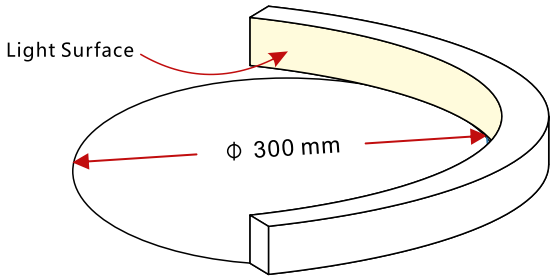
2. Functions & Features

2.1 Product Features

1. High quality EPISTAR SMD LED chip.
2. UV & flame resistant construction(PVC).
3. Extremely flat profile for slimline projects.
4. Perfect uniform & even light source with invisible light dots.
5. Not only available in RGB but also RGBW and Dynamic White.
6. Pre-installed injection moulded connector available, no need to do connector assembly.
7. High IP rating (IP68).
8. Up to 10m length when dynamic programming with power feed from single end.
9. Environmentally friendly & energy efficient.

2.2 Minimum Bend Diameter





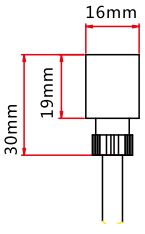
The light can only be bent along the light surface. Do not bend smaller than allowed minimum bend diameter.

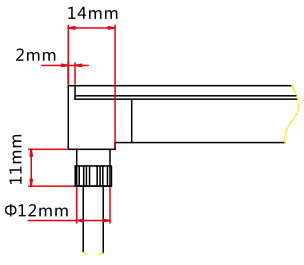
3. Types of Connector

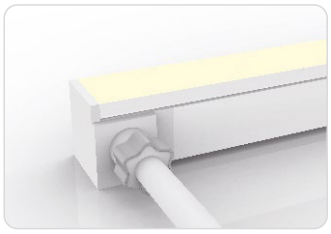
3.1 Injection-moulded Connector

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 lengths.

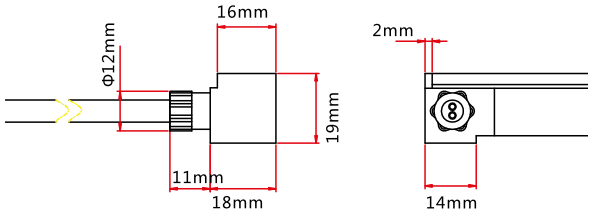


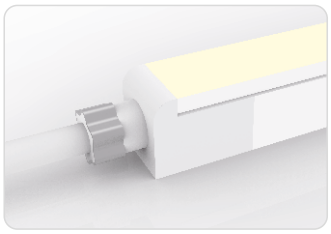




Injection-moulded Front Connector (side)

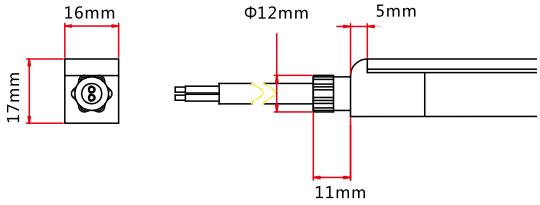
Connects light to power supply with pre-installed side feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m lengths.





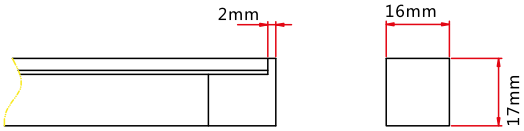
Injection-moulded Front Connector (end)

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



Injection-moulded End Cap

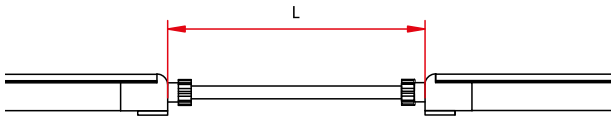
Pre-installed termination protection of the light, IP67.



Injection-moulded Jumper

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

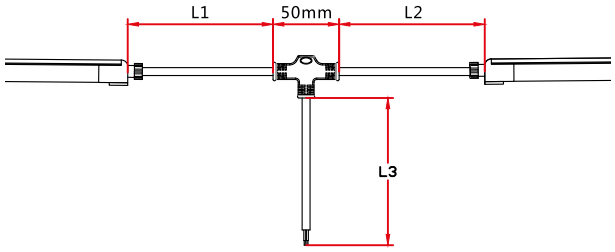
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



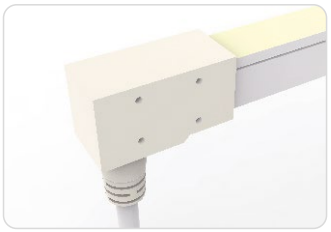
Injection-moulded T-feed

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

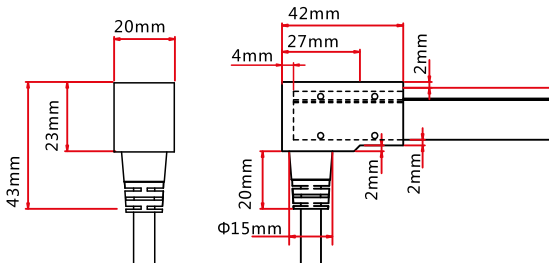


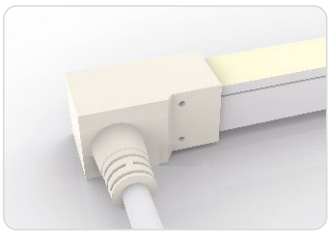
3.2 Dual Injection-moulded Connector



Dual Injection-moulded Front Connector (bottom)

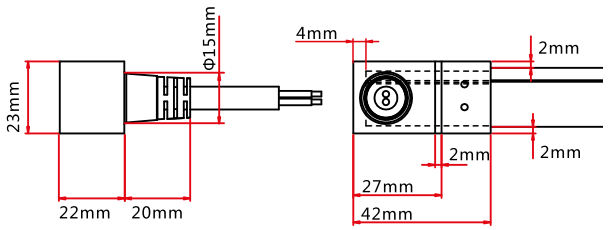
Connects light to power supply with pre-installed bottom feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

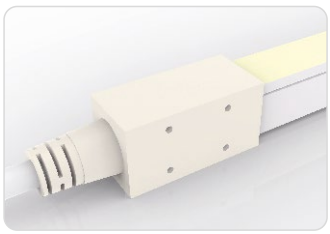




Dual Injection-moulded Front Connector (side)

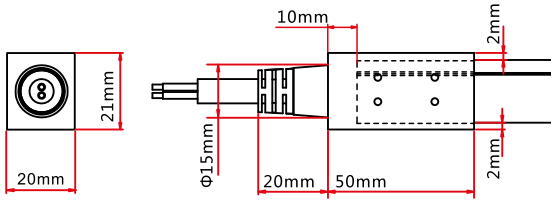
Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

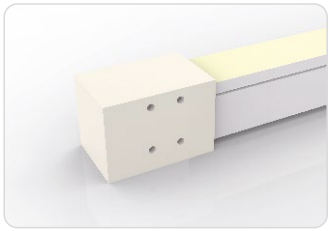




Dual Injection-moulded Front Connector (top end)

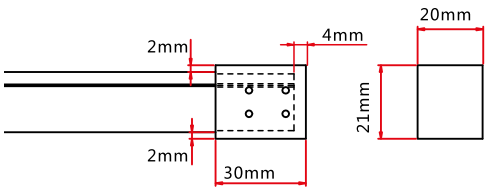
Connects light to power supply with pre-installed end feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

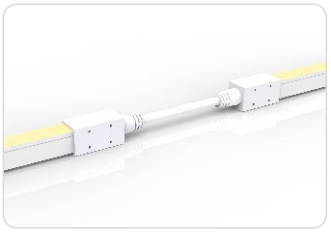




Dual Injection-moulded End Cap

Pre-installed termination protection of the light, IP68.

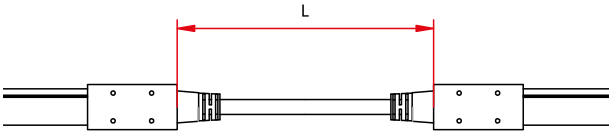




Dual Injection-moulded Jumper

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

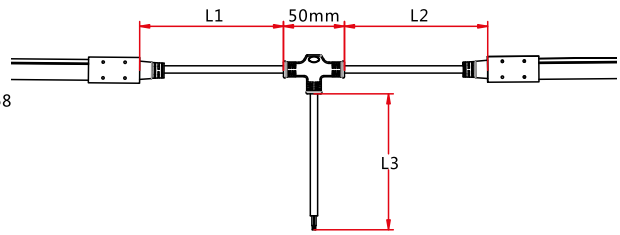
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



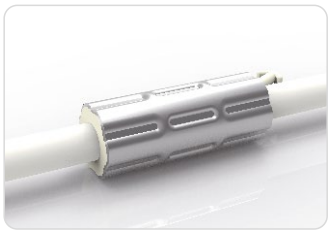
Dual Injection-moulded T-feed

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



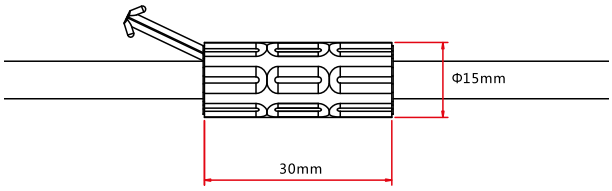
3.3 Anti-wicking Ferrule



Anti-wicking Ferrule

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

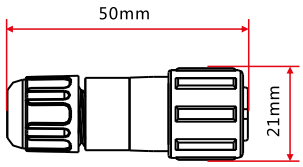
For protection against water ingress from inside of cable wire and hence damage the light.



3.4 Male & Female Connector

Male & female Connector

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



4. Compatible DMX Control System (Recommended)

4.1 LT-200 Unit

1. SPI signal output, control light directly to achieve max.540 lighting effects.
2. Support third-party DMX 512 interface, it can be realized DMX management mode, invoke controller' s most function by DMX console.
3. It can work as DMX-SPI decoder, using DMX 512 console to control every channel and program new changing effect.

Suitable for controlling maximum 100m by series connection and each length maximum 15m.

4.2 LT-800 & LT-DMX-1809 Unit

1. LT-1809 decoder works to convert DMX512 digital signal to SPI (TTL) digital signal, realizing the function of 0~100% dimming or editing all sorts of change effect.
2. LT-800 DMX512 controller works with LT-1809 decoder to control lights .
3. Each LT-800 DMX512 controller can control max. 32 sets LT-1809 decoders.

Note: A DMX console is required when connect LT-DMX-1809 with RGBW Pixel LED Neon that has 4 channels per pixel

Suitable for relatively large projects; each decoder can control max. 15m lights.

4.3 LT-600 Unit

1. Offline SD card store request programme. Ethernet real time computer control via synchronous display.
2. DMX 512 and SPI signal outputs are optional; can be connected with DMX console to form lighting control network.
3. Extra large control capability, 16 channels signal output, max. control 30720 pixels.

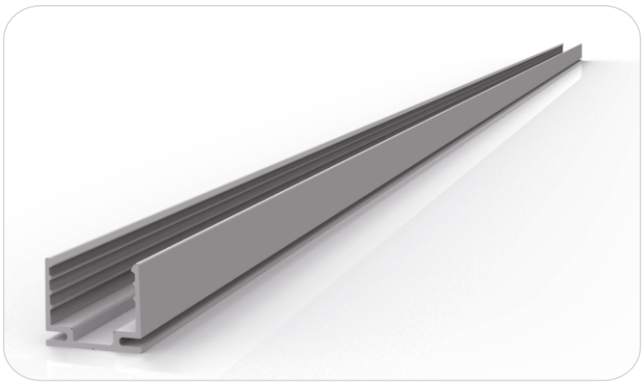
Suitable for large projects; each channel can control max. 120m lights, each LT-600 can control around 1600m lights.

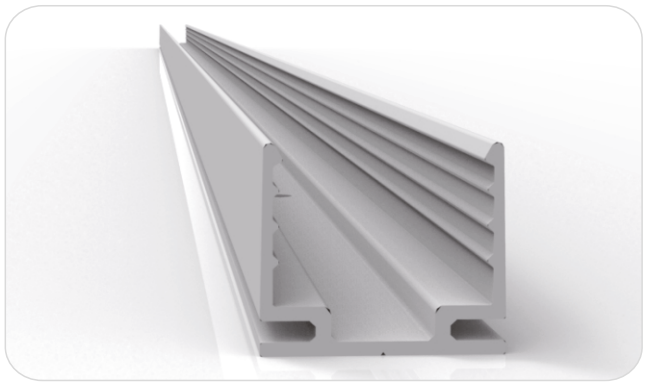
Note:
The Pixel Addressable Light series allows precise control of every cutting increment. To ensure IC chips receive strong control signals, please adhere to the parameters listed below.

1) To ensure strong signal the 3-wire signal cable should not exceed 10m.
2) For cable lengths longer than 10m, a signal amplifier must be used for strong signal transmission. Please ask our technical team for more details.

5. Mounting Profile

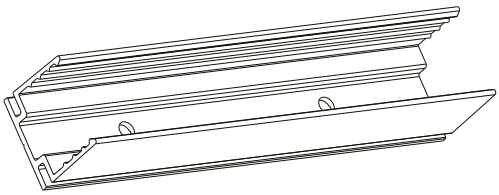
5.1 Standard Aluminum Profile

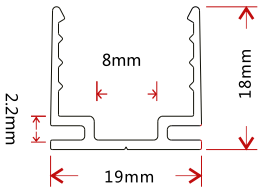


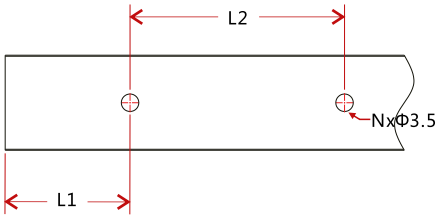


Dimensions

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



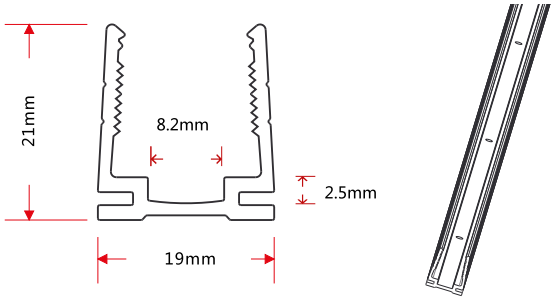


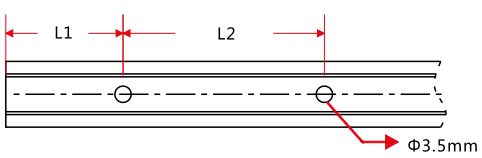


Installation Way

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

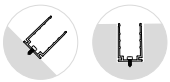
5.2 Plastic Profile





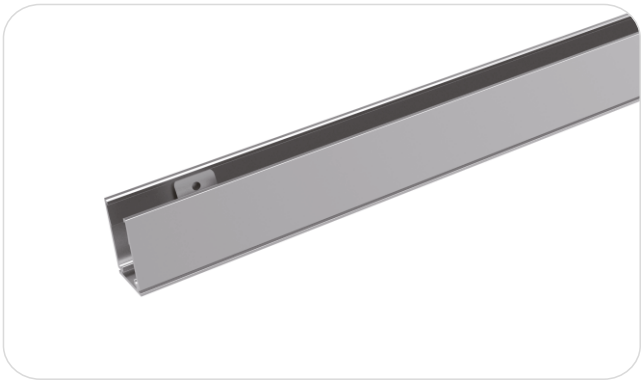
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

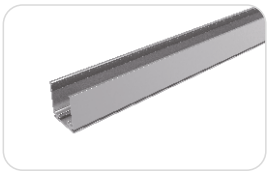
Installation Way

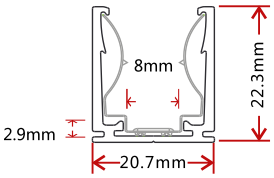


Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-P/PL	19*21	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

5.3 Spring Clip Aluminum Profile

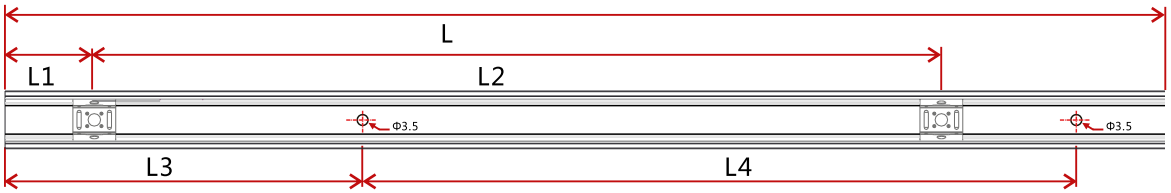






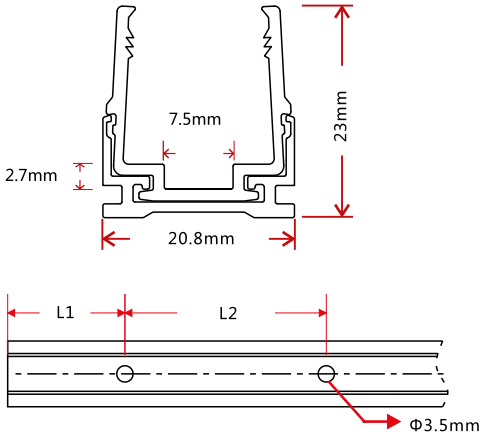
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

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

5.4 Hybrid Profile

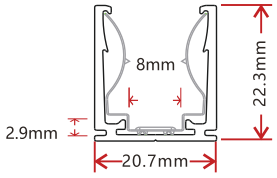


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

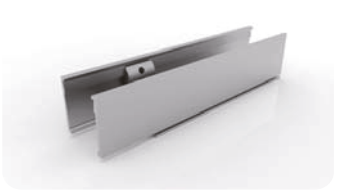
Installation Way

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

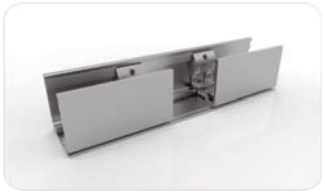
5.5 Cable Exit Oriented Aluminum Profile (Applicable to Injection-moulded Connector Only)



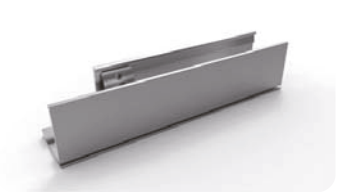
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.



Bottom Feed



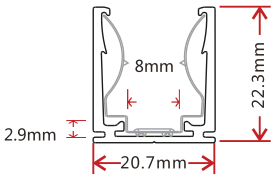
Middle Feed



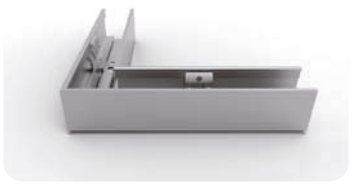
Side Feed From Left

Side Feed From Right

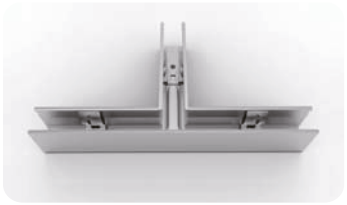
5.6 Corner Aluminum Profile (Applicable to Injection-moulded Connector Only)



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



L Shape



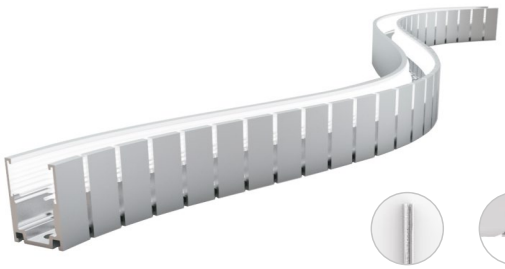
T Shape

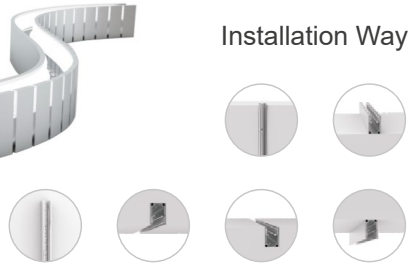
Outward L Shape

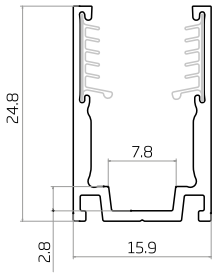
Inward L Shape

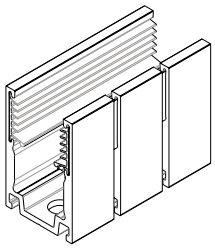
X Shape

5.7 Bendable Stainless Steel Profile

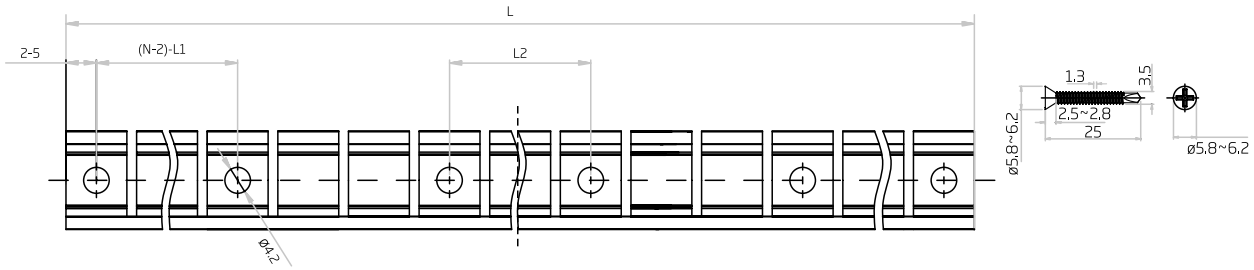




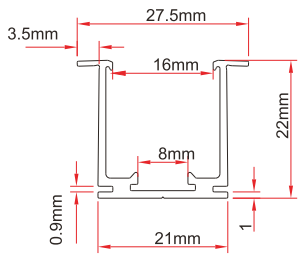




Note: Unless otherwise stated,the tolerance of the profile is ±0,2 mm.

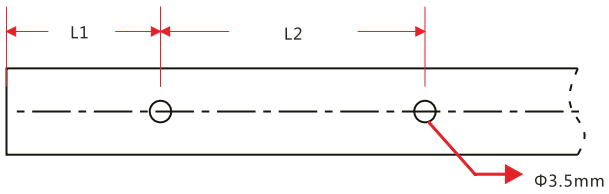


5.8 Recessed Mounting Profile



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	27.5*22	35	5	25	Φ3.5	2
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

6. Appendix

6.1 Certificate

Certificating Type	Testing Organization	Certificate Serial Number	Report Reference
CE-EMC	SGS	SZEM1712012372LMV	SZEM171201237201

6.2 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

>>Note: The testing reports and certificates are available from the related official website.

6.3 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)

6.4 (X,Y) Chromaticity Diagram