



Simply **brighter.**

SPECIFICATION

LedNEON_LF22E-HB-RGBW



Ver. 3.1

Table of Contents

Introduction		03
1. Specifications & Parameters		04
1.1 Dimensions of Light	4	
1.2 Technical Parameters	4	
1.3 Optical Parameters	4	
2. Functions & Features		05
2.1 Product Features	5	
2.2 Minimum Bend Diameter	5	
3. Types of Connector		05
3.1 Injection-moulded Connector		
3.2 Dual Injection-moulded Connector	5	
3.3 Anti-wicking Ferrule	7	
3.4 Male & Female Connector	8	
4. Mounting Profile		09
4.1 Standard Aluminum Profile	9	
4.2 Plastic Profile	9	
4.3 Spring Clip Aluminum Profile	10	
4.4 Hybrid Profile	10	
4.5 Cable Exit Oriented Aluminum Profile		
(Applicable to Injection-moulded Connector Only)	11	
4.6 Corner Aluminum Profile		
(Applicable to Injection-moulded Connector Only)	11	
4.7 Bendable Stainless Steel Profile	12	
4.8 Recessed Mounting Profile	12	
5. Appendix		13
5.1 Certificate	13	
5.2 Third-Party Test Report	13	
5.3 Reliability Test of Light	14	

Introduction

LF22E-HB-RGBW is a new member of the LedNEONseries with RGB LED to achieve your desired artistic effect which employs constant current design.

LedNEON LF22E-HB-RGBW is CE, 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 fo third party inspection authority.

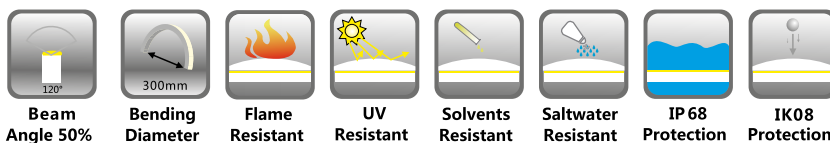
Fully encapsulated in the flexible PVC chamber by utilizing consummate extrusion technology, assembled with injection-moulded connectors to achieve IP68 protection, easy for installation and applicable for various circumstances.

LedNEON_LF22E-HB-RGBW features dynamic color effects with smooth color-mixing illumination and small bend diameter in wave bending shape.

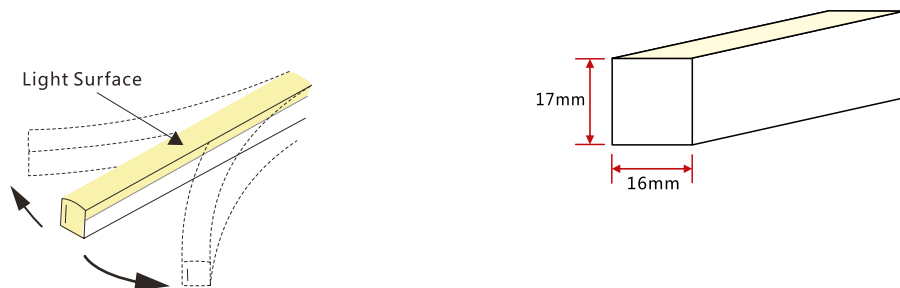
Applications:

1. Outdoor or Indoor Contour/Border Lighting
2. Architectural Outline/Decorative Lighting
3. Cove/Accent Lighting
4. Signage/Statue

1. Specifications & Parameters



1.1 Dimensions of Light



1.2 Technical Parameters

Technical Parameters

Article No.	C-FR-F22E-24CV
Color	RGB+W (2700/3000k/4000K)
Working Voltage	DC24V
Rated Power/m	15w
LED Qty/m	84LEDs
LED Distance	11.9mm
Min. Cutting Unit	7LEDs (1unit)
Min. Cutting Length	83.3mm(1unit)
Continuous Length	5m
Weight/m	350g
Storage Temperature	-20~60°C
Ambient Working Temperature	-20~45°C
Ambient Installation Temperature	0~45°C
IP Rating	IP68



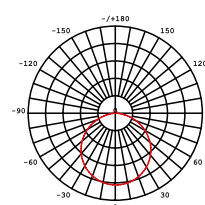
Note: For this product that over 12W per meter, full loading operating is not recommended.

1.3 Optical Parameters

Photometric Data

Article No.	C-FR-F22E-24CV	
LED Type	SMD	
Beam Angle 50%	120°	
Color	CCT/Wavelength	Lumen/m
Red	618-624nm	> 60lm
Green	522-528nm	> 150lm
Blue	468-474nm	> 20lm
2700K	2725±145K	> 150lm
3000K	3045±175K	> 150lm
4000K	3985±275K	> 150lm

Candle power distribution

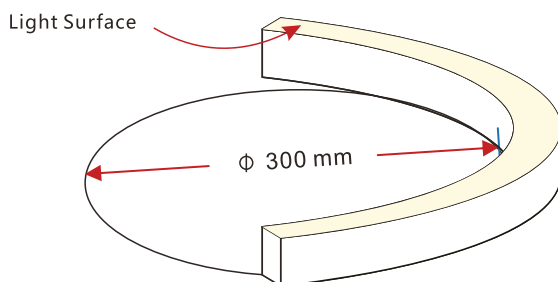


2. Functions & Features

2.1 Product Features

1. High quality 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. High illumination.
6. Easily to be installed.
7. High IP rating (IP68).
8. The product IP rate is ultimately in line with properly applied IP rated connectors.
9. Continuous length up to 5m by powering 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.

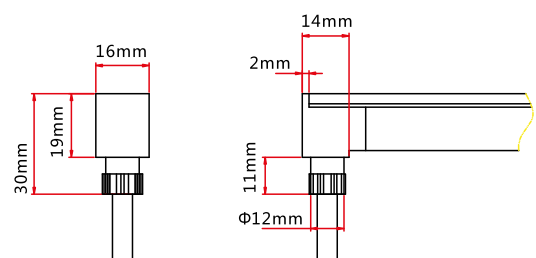
3. Types of Connector

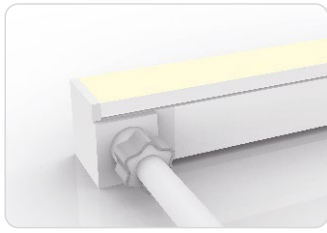
3.1 Injection-moulded Connector



Injection-moulded Front Connector (bottom)

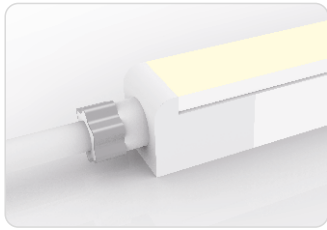
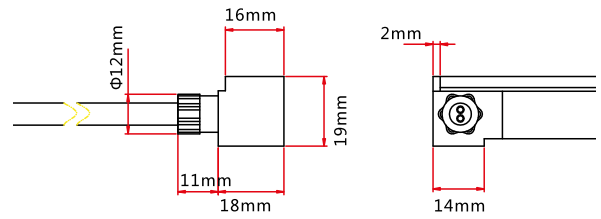
Connects light to power supply with pre-installed bottom feed cable IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.





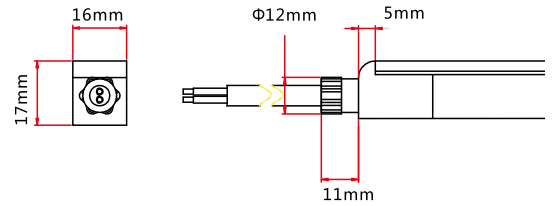
Injection-moulded Front Connector (side)

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



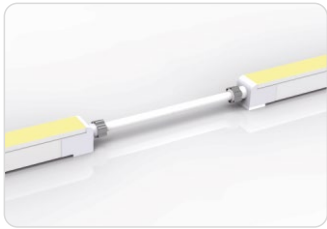
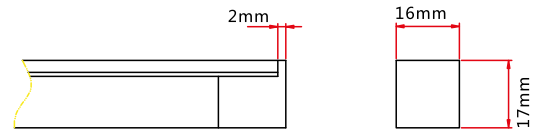
Injection-moulded Front Connector (end)

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 End Cap

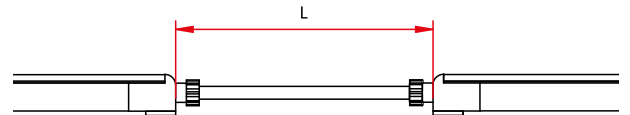
Pre-installed termination protection of the light, IP67.



Injection-moulded Jumper

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

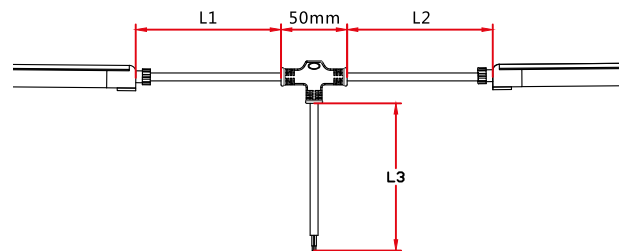
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



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

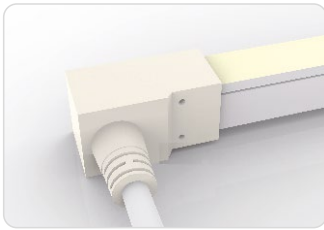
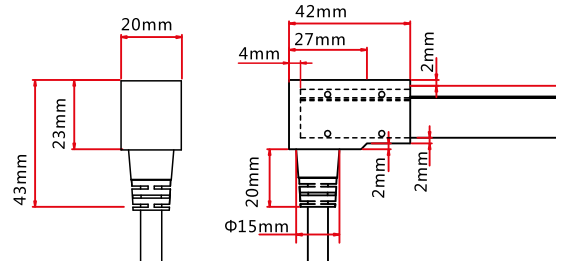


3.2 Dual Injection-moulded Connector



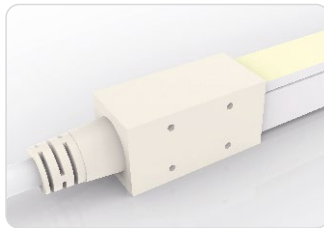
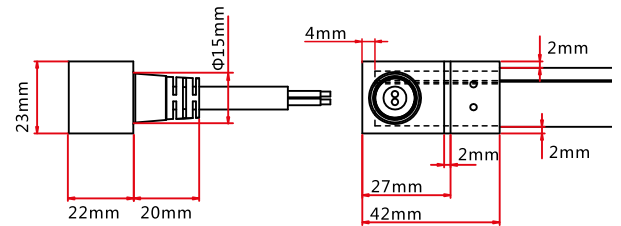
Dual Injection-moulded Front Connector (bottom)

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



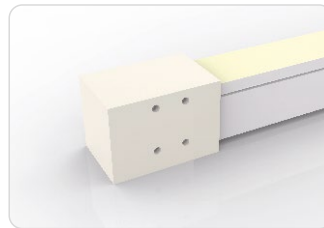
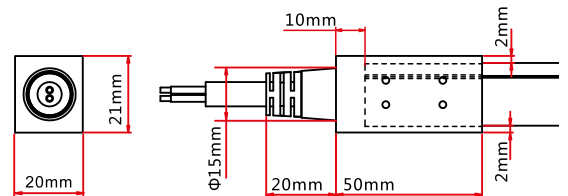
Dual Injection-moulded Front Connector (side)

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



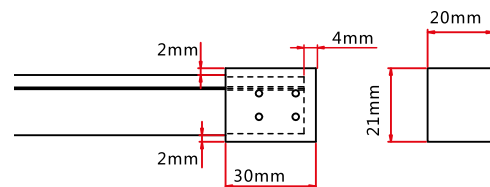
Dual Injection-moulded Front Connector (top end)

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

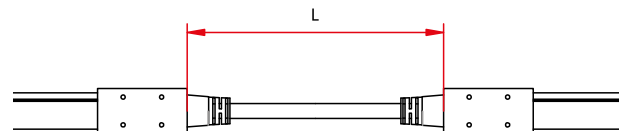
Pre-installed termination protection of the light, IP68.



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.

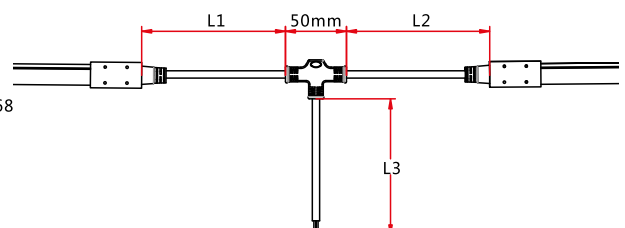
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



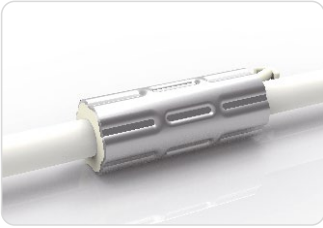
Dual Injection-moulded T-feed

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



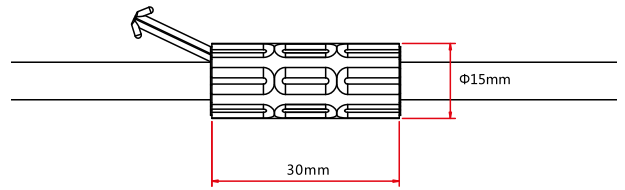
3.3 Anti-wicking Ferrule



Anti-wicking Ferrule

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

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



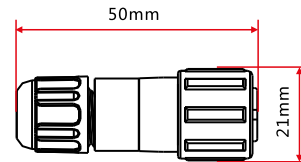
3.4 Male & Female Connector

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



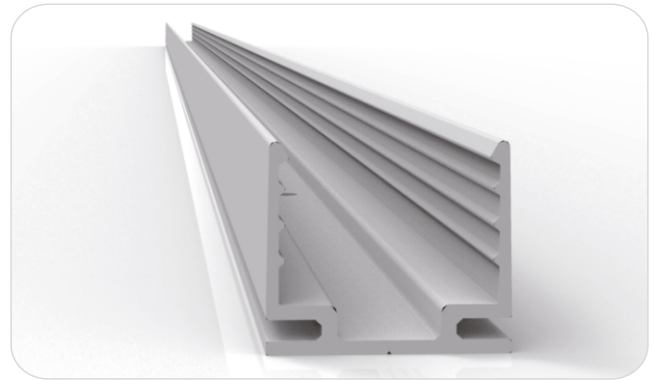
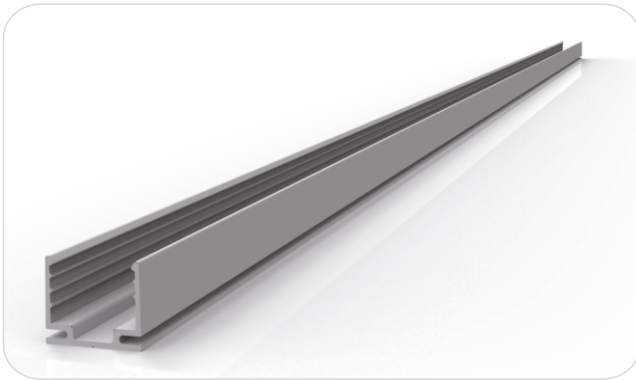
Male & female Connector

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

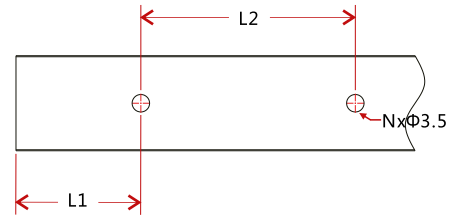
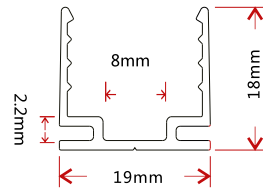
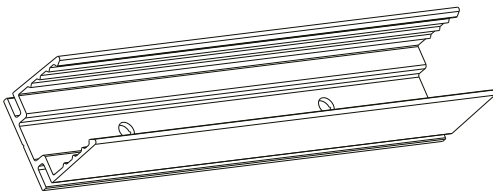


4. Mounting Profile

4.1 Standard Aluminum Profile



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

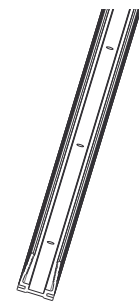
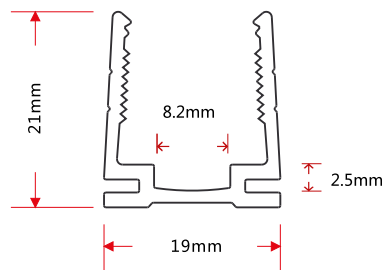


Installation Way



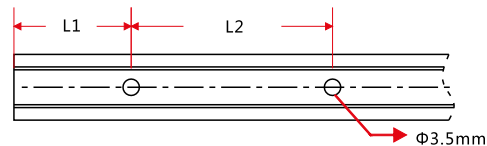
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-A/PL	19*18	35	17.5	/	Φ3.5	1
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

4.2 Plastic Profile



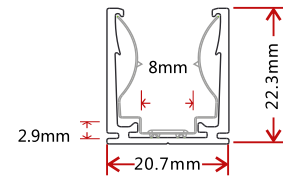
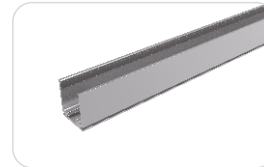
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way



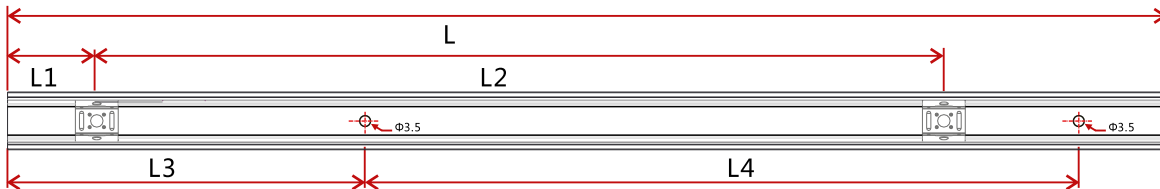
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-P/PL	19*21	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

4.3 Spring Clip Aluminum Profile



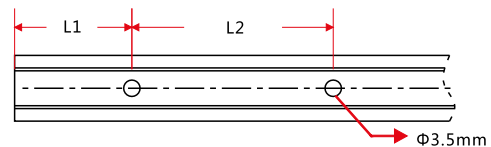
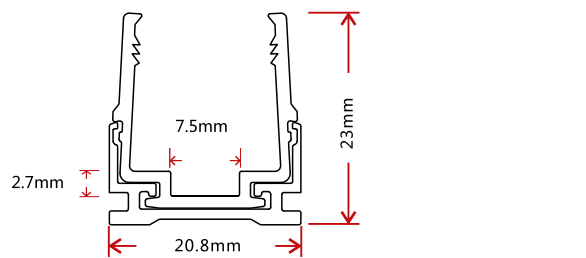
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way



Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
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



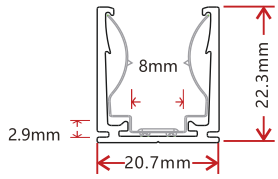
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.

Installation Way

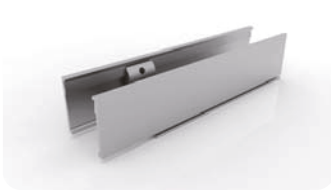


Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F22-HP/PL	20.8*23	35	17.5	/	Φ3.5	1
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

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



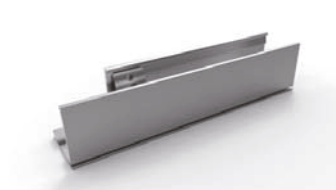
Note: Unless otherwise stated, the tolerance of the profile is $\pm 0.5\text{mm}$.



Bottom Feed



Middle Feed

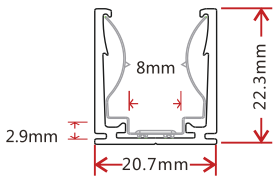


Side Feed From Left

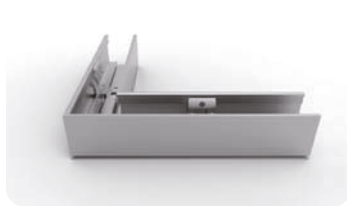


Side Feed From Right

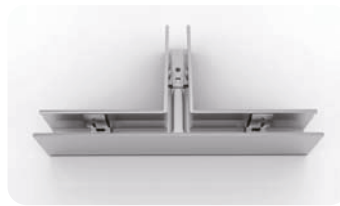
4.6 Corner Aluminum Profile (Applicable to Injection-moulded Connector Only)



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

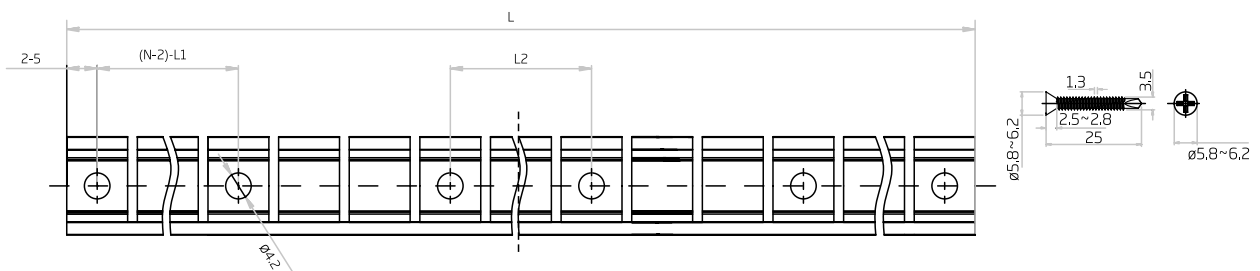


X Shape

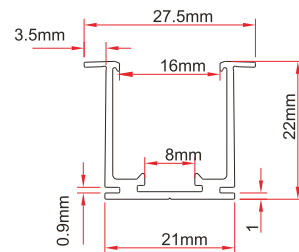
4.7 Bendable Stainless Steel Profile



Note: Unless otherwise stated, the tolerance of the profile is $\pm 0,2$ mm.

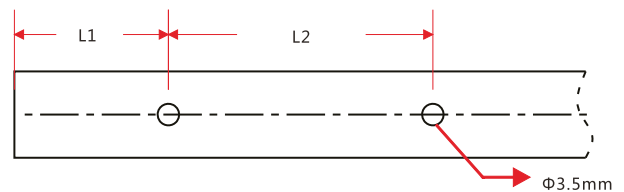


4.8 Recessed Mounting Profile



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
F22-RMA/PL	27.5*22	35	5	25	$\varnothing 3.5$	2
		500	50	200	$\varnothing 3.5$	3
		1000	100	200	$\varnothing 3.5$	5
		2000	100	200	$\varnothing 3.5$	10

5. Appendix

5.1 Certificate

Certificating Type	Testing Organization	Certificate Serial Number	Report Reference
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

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

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)