CIP LIGHTING
A division of Charlotte International Partners Inc.
1740 First Baxter Crossing, Fort Mill SC 29708 USA
1-803-396-1439 info@ciplighting.com

C-FR-F21S (RGB & RGBW)

Introduction-PVC

C-FR-F21S is a member of the Artist of Light series embodied all the benefits of F21A and F21B with the addition of DMX addressable technology, generating advanced chasing and programmable scenes and complete animated visual effects.

C-FR-F21S is UL/cUL, CE, TUV and RoHS compliant. **UL2108 - not for human inhabitants.** 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.

C-FR-F21S features the capability of producing millions of colors and impressive animated effects when paired with DMX controller, also large view angle of 160 degree and ultra pliability with small bend diameter in curve bending shape.

Applications:

1. Outdoor or Indoor Contour/Border Lighting
2. Architectural Outline/Decorative Lighting
3. Cove/Accent Lighting
4. Facade/Floor Lighting 5. Signage/Stage Lighting

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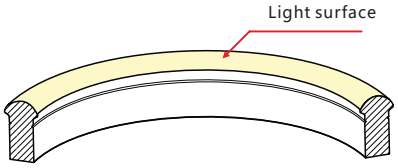
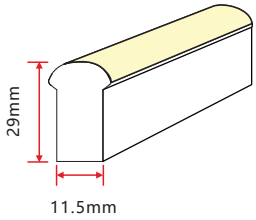
1. Specifications & Parameters

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

1.1 Dimensions of Light





Note: Unless otherwise stated, the tolerance of the light is ±0.3mm.

1.2 Technical Parameters

Code: C-FR-F21S-HB-24CC-RGBW

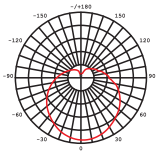
Technical Parameters		
Article No.	C-FR-F21S8-24CC	C-FR-F21S8-24CC
Color	RGB	RGBW(2700K/3000K/4000K)
IC Type	UCS2903	UCS2904
Working Voltage	DC24V	DC24V
Rated Power/m	12W	15W
LED Qty/m	56	56
LED Distance	17.8mm	17.8mm
Min. Cutting Unit	7LEDs (1 pixel)	7LEDs (1 pixel)
Min. Cutting Length	125mm (1unit)	125mm (1unit)
Continuous Length	15m (Dynamic Operating)	10m (Dynamic Operating)
	10m (Static Full Loading)	5m (Static Full Loading)
Weight/m	490g	
Storage Temperature	-20 ~ 60℃	
Ambient Working Temperature	-20 ~ 45℃	
Ambient Installation Temperature	0 ~ 45℃	
IP Rating	IP68/IP40	

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

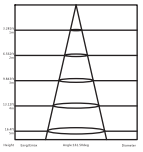
1.3 Optical Parameters

Photometric Data		
Article No.	C-FR-F21S-24CC(single color)	
LED Type	SMD	
Beam Angle 50%	160°	
Color	Wavelength	Lumen
Red	618-624nm	>42lm
Green	522-528nm	>110lm
Blue	468-474nm	>18lm
White	2725±145K	>110lm
	3045±175K	>110lm
	3985±275K	>110lm

Candle Power Distribution



Illuminance Characteristics



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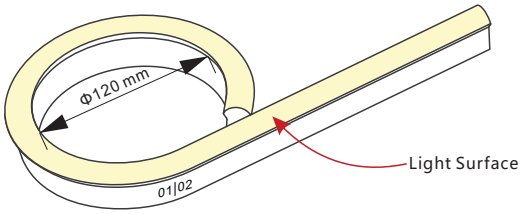
2. Functions & Features

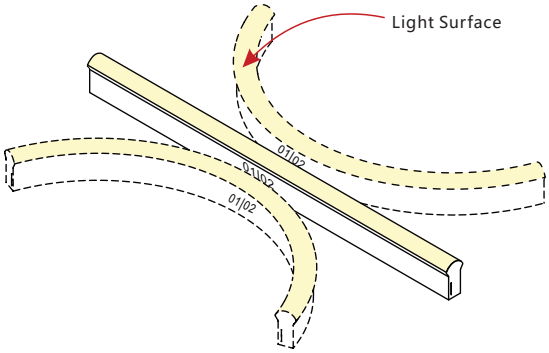
2.1 Product Features

1. High quality and high brightness SMD LED chip.
2. UCS2903/2904 IC, SPI signal input, DMX512 signal compatible, DMX address writable or programable.
3. UV & flame resistant construction(PVC).
4. Domed profile for large beam angle(160°).
5. High color consistency&smooth illumination with no light dots.
6. Flexible with 120mm minimum bending diameter.
7. Easy installation and assembly with DIY accessories for joining and terminating.
8. High IP rating(IP68).
9. The product IP rate is ultimately in line with properly applied IP rated connectors.
10. Continuous length up to 15m by powering one end.
11. Environmentally friendly & energy efficient.
12. Automated production, high reliability & long warranty.
13. 5 years life span.

2.2 Minimum Bend Diameter



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



Do not bend smaller than allowed minimum bend diameter.

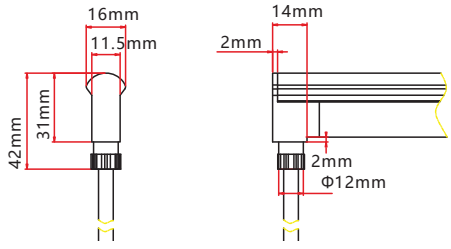
3. Types of Connector

3.1 Injection-moulded Connector

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

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.



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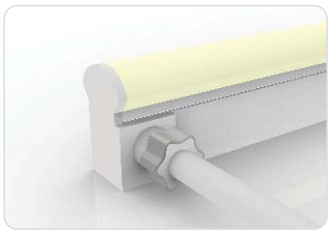
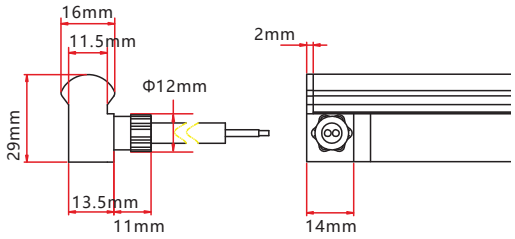
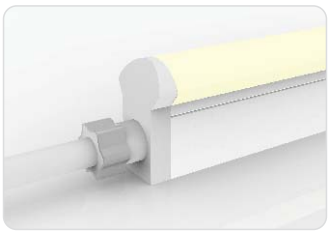


Injection-moulded Front Connector (side)

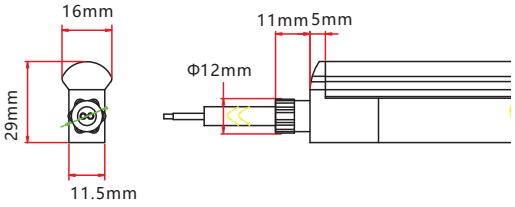
Connects light to power supply with pre-installed side feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m.

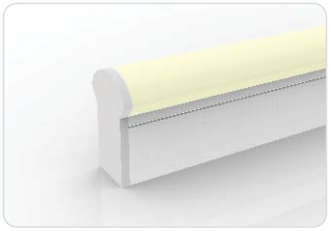




Injection-moulded Front Connector (top end)

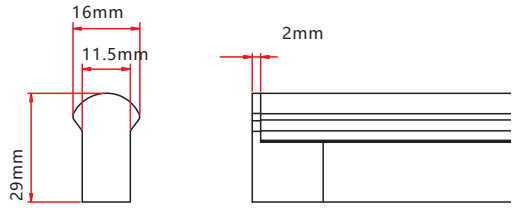
Connects light to power supply with pre-installed end feed cable, IP67. Cable length available in 0.3m, 1m, 3m, 5m, 10m.

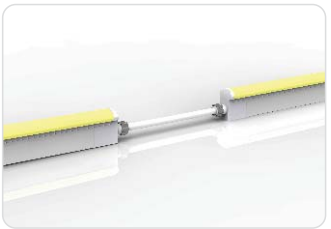




Injection-moulded End Cap

Pre-installed termination protection of the light, IP67.

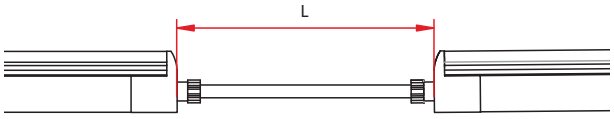




Injection-moulded Jumper

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

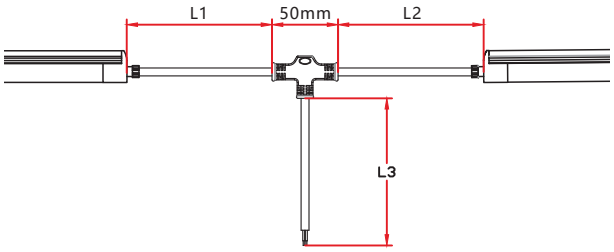
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



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



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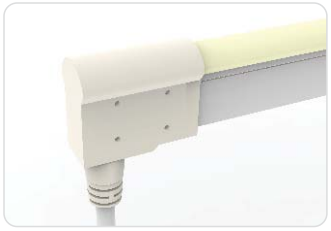
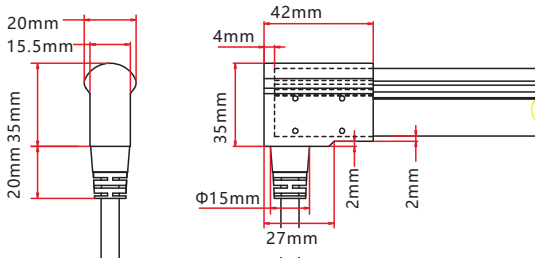
3.2 Dual Injection-moulded Connector

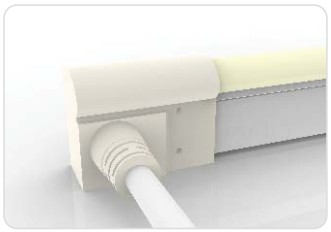
Note: Unless otherwise stated, the tolerance of the connector is ±0.5mm.



Dual Injection-moulded Front Connector (bottom)

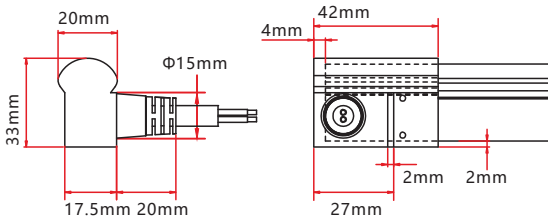
Connects light to power supply with pre-installed bottom feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

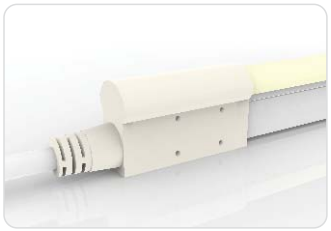




Dual Injection-moulded Front Connector (side)

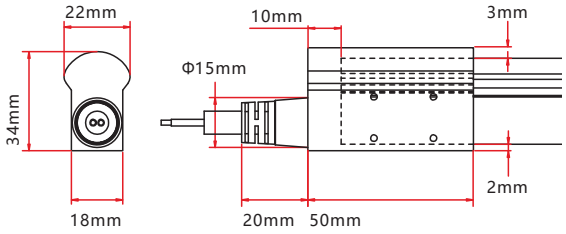
Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

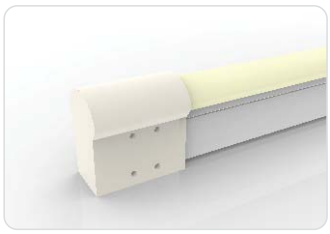




Dual Injection-moulded Front Connector (top end)

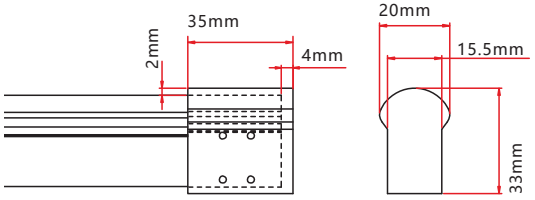
Connects light to power supply with pre-installed end feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

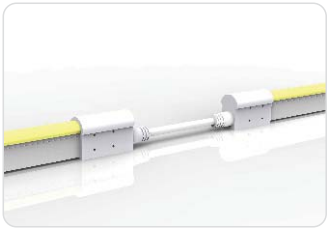




Dual Injection-moulded End Cap

Pre-installed termination protection of the light, IP68.

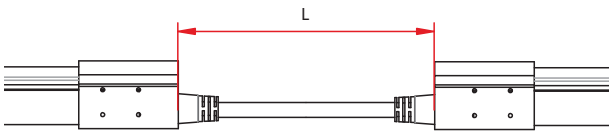




Dual Injection-moulded Jumper

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

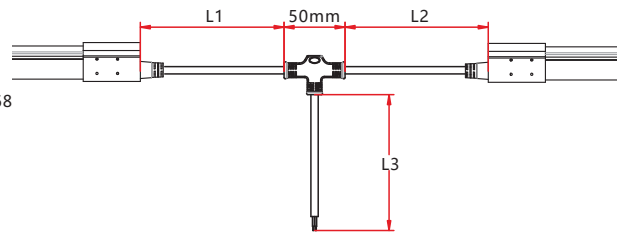
Maximum 8 Jumpers in 20m
Maximum 4 Jumpers in 10m



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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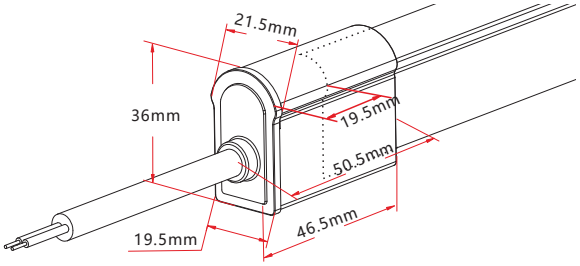
3.3 Snap Connector

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

Snap Front Connector

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

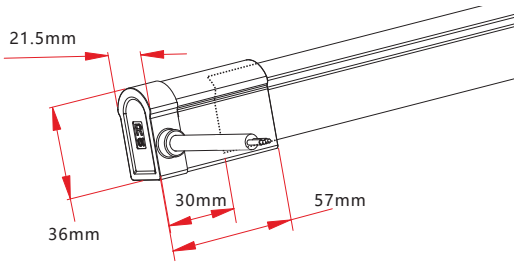
Feed connector*1 (Three-pin)
Silicone gaskett*1
U steel plate*1
Anti-skidding clip*1
PC Cover*1



Snap Front Connector (side right/left)

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

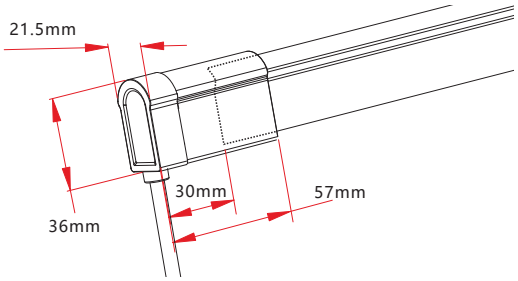
Feed connector*1 (Three-pin)
Silicone gaskett*1
U steel plate*1
Anti-skidding clip*1
PC Cover*1

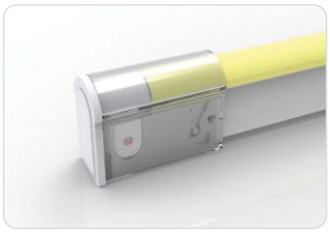


Snap Front Connector(bottom)

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

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

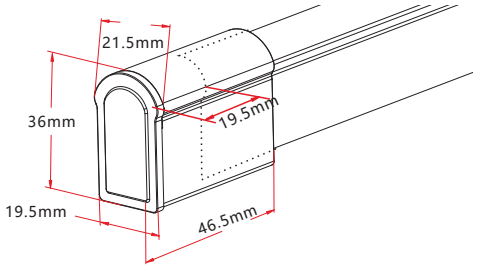




Snap End Cap

Termination protection of the light. IP67. DIY connector.

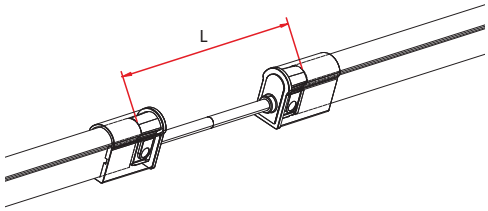
Tail plug*1
Silicone gasket*1
U steel plate*1
Anti-skidding clip*1
PC Cover*1



Snap Jumper

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

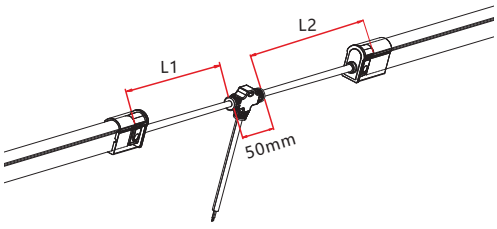
Double-end feed connector*1 (Three-pin)
Silicone gasket*2
U steel plate*2
Anti-skidding clip*2
PC Cover*2



Snap Power T-feed

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

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



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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.

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.

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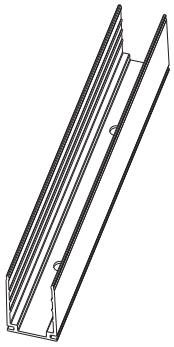
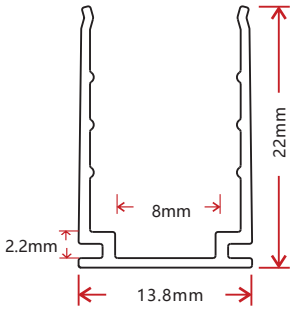
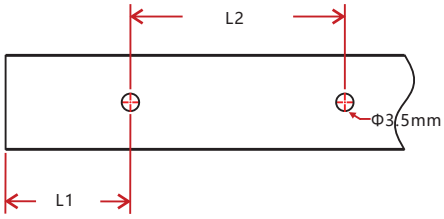
5. Mounting Profile

5.1 Standard Aluminum Profile





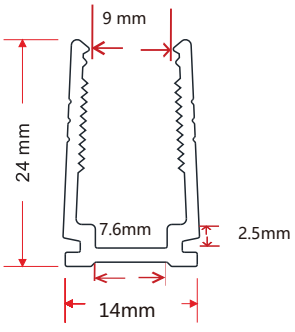


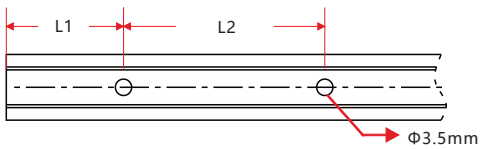
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

Installation Way

Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
F21-A/PL	13.8*22	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
F21-P/PL	14*24	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

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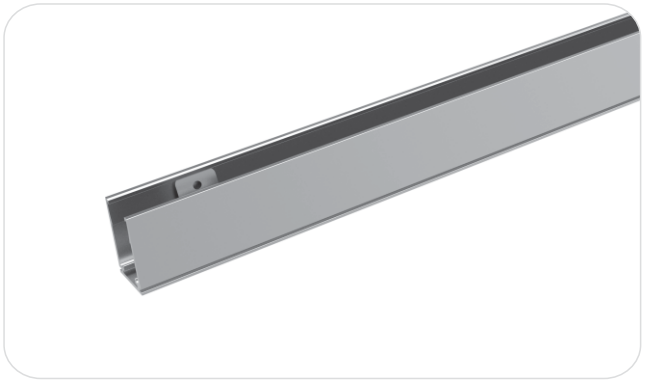
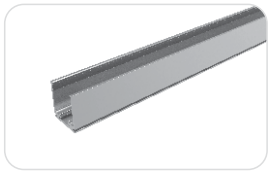
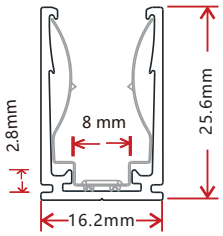
5.3 Spring Clip Aluminum Profile

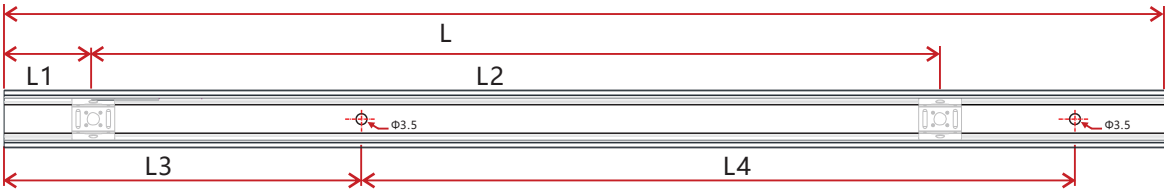






Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

Installation Way



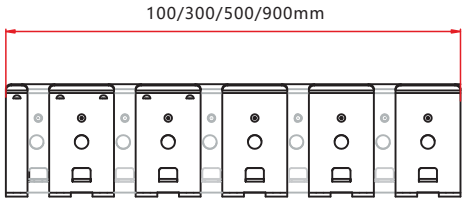
Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
F21-SCA/PL	16.2*25.6	35	17.5	/	5	25	Φ3.5	2	1
		500	25	225	50	200	Φ3.5	3	3
		1000	25	237.5	100	200	Φ3.5	5	5
		2000	25	243.8	100	200	Φ3.5	10	9

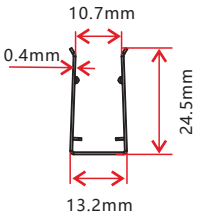
5.4 Bendable Stainless Steel Profile

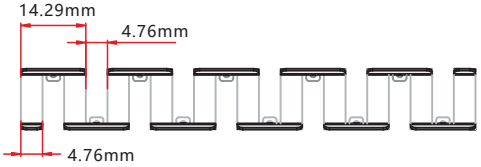
Model: F21-CS/PL

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

Installation Way







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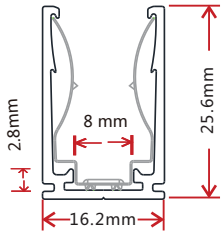
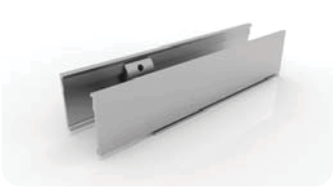
5.5 Cable Exit Oriented Aluminum Profile
(Applicable to Injection-moulded Connector Only)

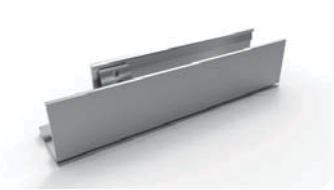


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.



Bottom Feed

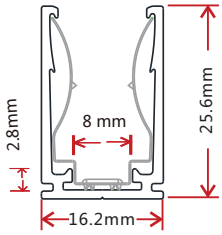
Middle Feed



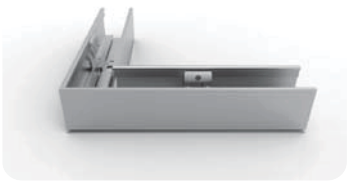
Side Feed From Left

Side Feed From Right

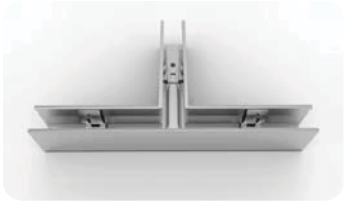
5.6 Corner Aluminum Profile
(Applicable to Injection-moulded Connector Only)



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



L Shape



T Shape

Outward L Shape

Inward L Shape

X Shape

NOTE: Please contact our sales team for more detailed information

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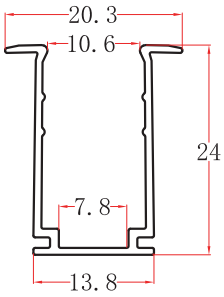
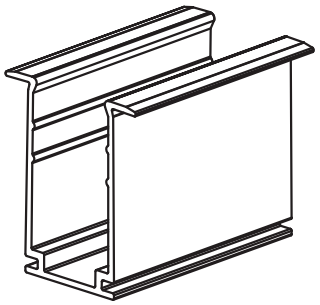
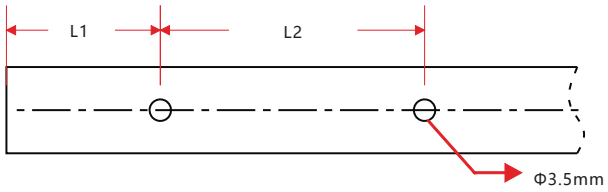
5.7 Recessed Mounting Profile





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
F21-RMA/PL	20.3*24	35	5	25	Φ3.5	2
		500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10