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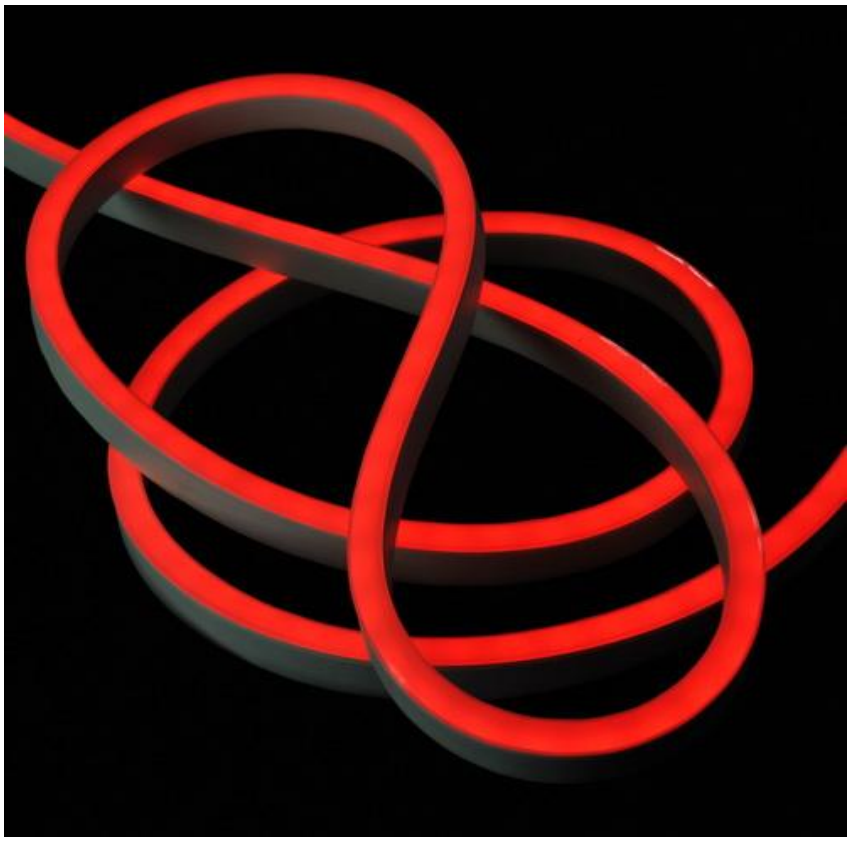

LED Neon-Flex Series-4N

S4N-SV-24V

c UL us LISTED CE TÜV RoHS COMPLIANT

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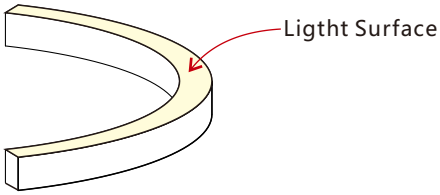
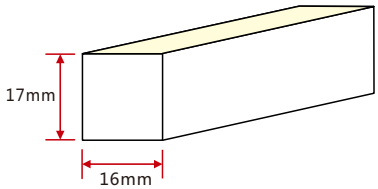
1. Specifications & Parameters

Beam Angle 10% | 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.

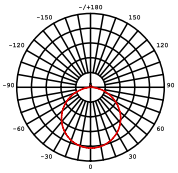
1.2 Technical Parameters

Technical Parameters		
Article No.	NF-S4-SV-24V	
Color	Red/Amber	Green/Blue/White
Working Voltage	DC24V	DC24V
Rated Power/m	8W	12W
LED Qty/m	108LEDs	108LEDs
LED Distance	9.26mm	9.26mm
Min. Cutting Unit	9LEDs (1unit)	6LEDs (1unit)
Min. Cutting Length	8.33cm(1unit)	5.56cm(1unit)
Continuous Length	15m	10m
Weight/m	325g	
Storage Temperature	-20~60℃	
Environmental Working Temperature	-20~45℃	
Environmental Installation Temperature	0~45℃	
IP Rating	Ip68	

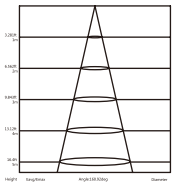
1.3 Optical Parameters

Photometric Data					
Article No.	NF-S4-SV-24V				
LED Type	SMD				
Beam angle	160°				
Color	Wavelength	Lumen/m	Color	CCT	Lumen/m
Red	620-630nm	>150Lm	2500K	2460±120K	>400Lm
Green	520-530nm	>400Lm	2700K	2725±145K	>400Lm
Blue	465-475nm	>65Lm	3000K	3045±175K	>450Lm
Amber	585-595nm	>150Lm	3500K	3465±245K	>450Lm
			4000K	3985±275K	>450Lm
			4500K	4503±243K	>450Lm
			5000K	5029±283K	>450Lm
			5700K	5669±355K	>400Lm
			6500K	6532±510K	>400Lm

Candle power distribution



Illuminance Characteristics

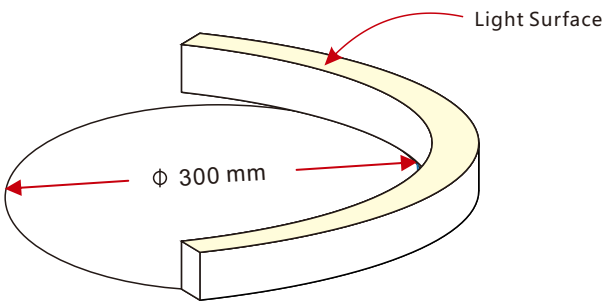


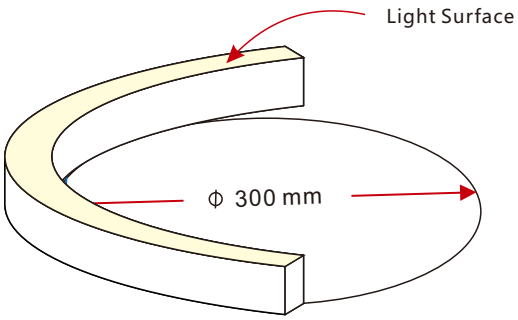
2. Functions & Features

2.1 Product Features

1. High quality SMD LED chip.
2. Protection Circuit: Each LED Protected.
3. UV & flame resistant construction(PVC).
4. Extremely flat profile for slimline projects.
5. Perfect uniform & even light source with invisible light dots.
6. High illumination.
7. Easily to be installed.
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 (R, A)/10m (G, B, W) by powering one end.
11. Environmentally friendly & energy efficient.
12. Automated production, high reliability & long warranty.
13. 5 years life span(Do not continuously operate over 8 hours per day)

2.2 Minimum Bend Diameter





The light can only be bent horizontally (opposite bend along to light surface).
Do not bend smaller than allowed minimum bend diameter.

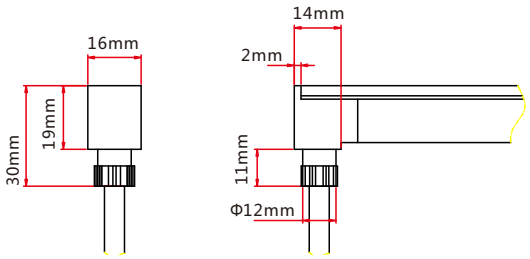
3. Types of Connector

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. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.



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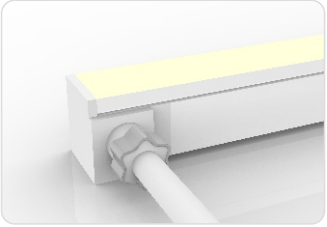
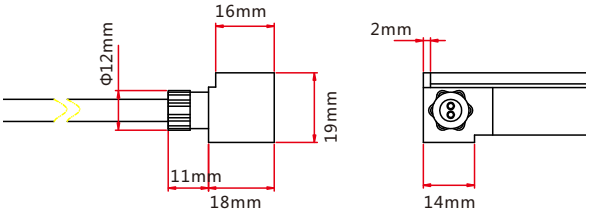
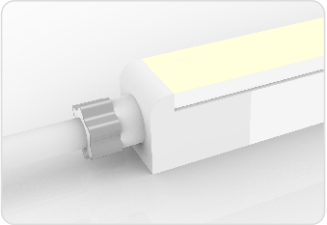


Injection-moulded Front Connector (side)

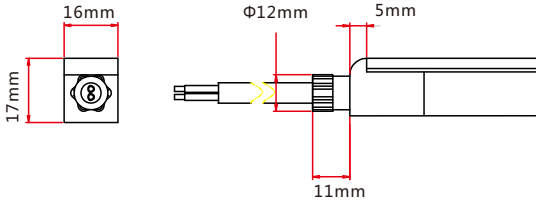
Connects light to power supply with pre-installed side feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.

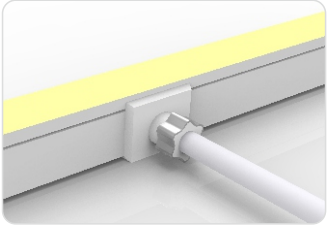




Injection-moulded Front Connector (end)

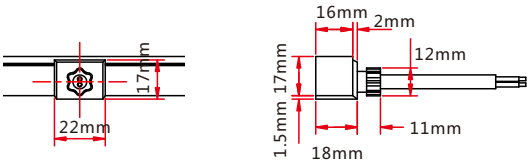
Connects light to power supply with pre-installed end feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.

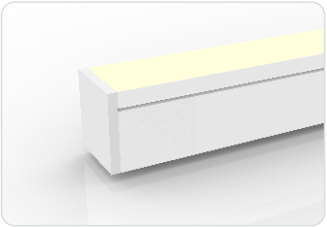




Injection-moulded Middle Feed Connector

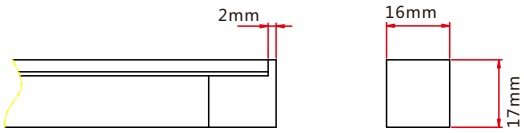
Connects light to power supply with pre-installed end feed cable, IP67. Available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m lengths.





Injection-moulded End Cap

Pre-installed termination protection of the light, IP67.



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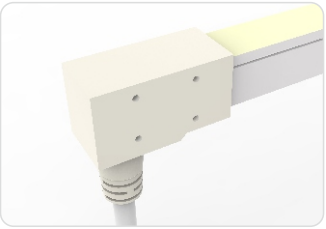
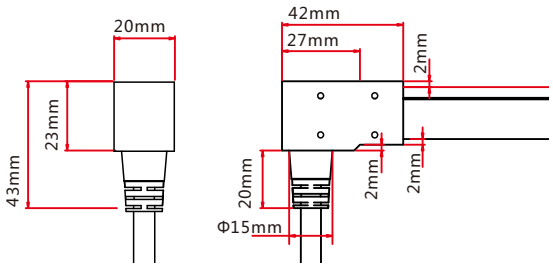
3.2 Dual Injection-moulded Connector

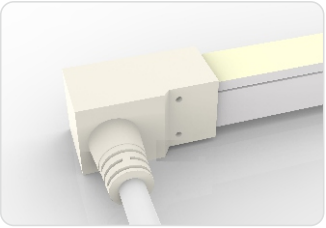
Note: Unless otherwise stated, the tolerance of the connector is ±0.5mm.



Dual Injection-moulded Front Connector (bottom)

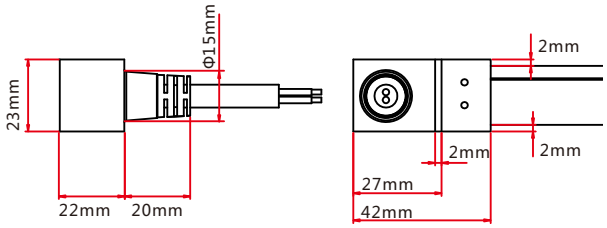
Connects light to power supply with pre-installed bottom feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

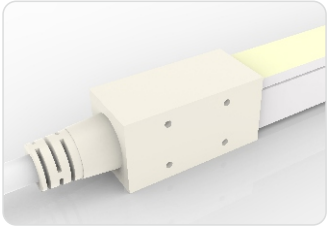




Dual Injection-moulded Front Connector (side)

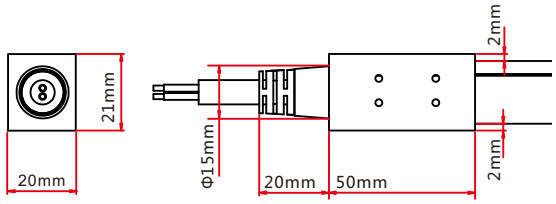
Connects light to power supply with pre-installed side feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.

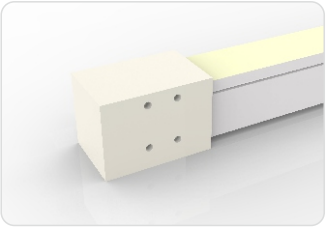




Dual Injection-moulded Front Connector (top end)

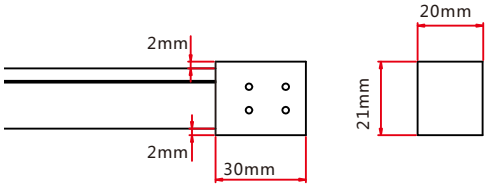
Connects light to power supply with pre-installed end feed cable, IP68. Cable length available in 0.3m, 1m, 3m, 5m, 10m, 15m, 20m.





Dual Injection-moulded End Cap

Pre-installed termination protection of the light, IP68.



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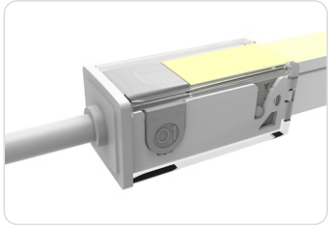
3.3 Swivel Connector

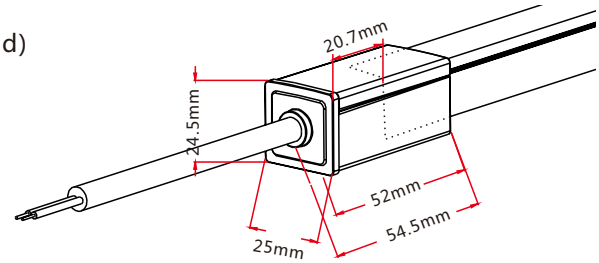
Note: Unless otherwise stated, the tolerance of the connector is ±0.5mm.

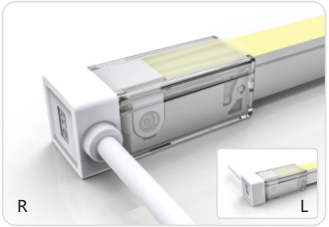


Snap Front Connector(top end)

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

Feed connector with silicone gasket *1 (Two-pin)
Anti-skidding clip *1
U steel plate *1
PC Cover * 1

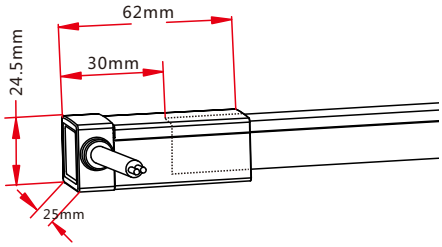


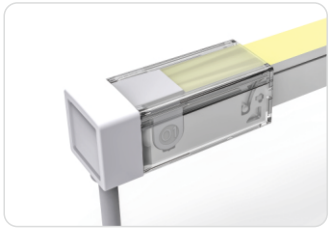


Snap Front Connector(side right/left)

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

Feed connector with silicone gasket *1 (Two-pin)
Anti-skidding clip *1
U steel plate *1
PC Cover * 1

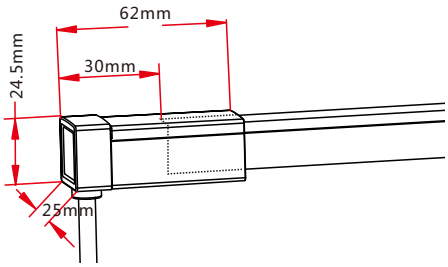




Snap Front Connector(bottom)

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

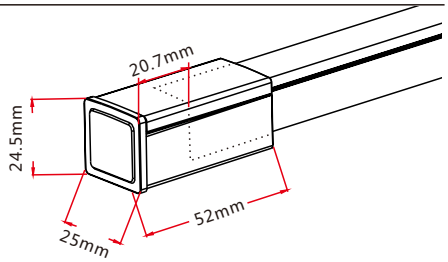
Feed connector with silicone gasket *1 (Two-pin)
Anti-skidding clip *1
U steel plate *1
PC Cover * 1

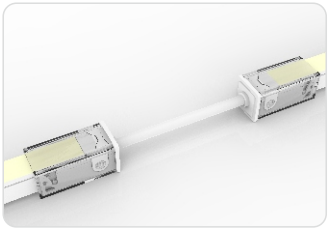


Snap End Cap

Termination protection of the light, IP67 DIY connector.

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

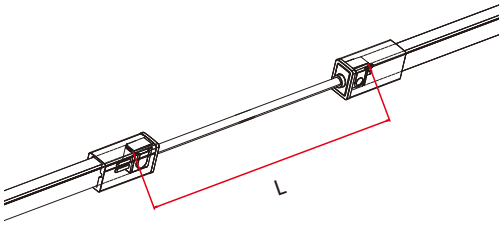




Snap Jumper

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

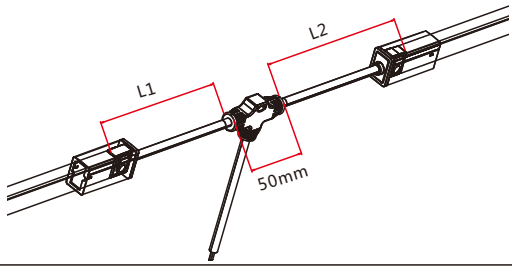
Double-end feed connector*1 (Two-pin)
Silicone gasket*2
U steel plate*2
Anti-skidding clip*2
PC cover*2



Snap Power T-feed

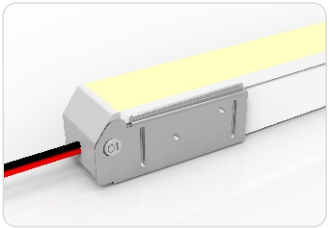
Connects two pieces of lights together with a T joint, energized from middle. IP67 DIY connector. L1 and L2 available in 0.3m.

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



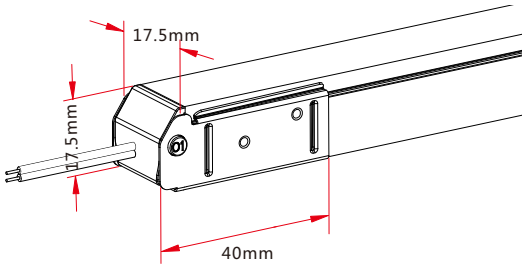
3.4 Swivel Connector

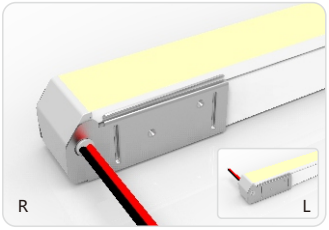
Note: Unless otherwise stated, the tolerance of the connector is ±0.5mm.



Swivel Front Connector (top end)

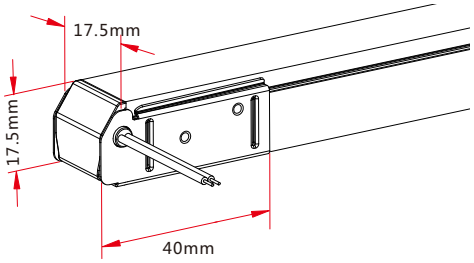
Connects light to power supply. IP20 DIY connector. Cable length available in 0.3m, 1m.

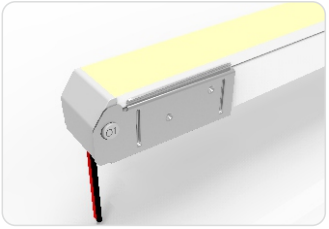




Swivel Front Connector (side right/left)

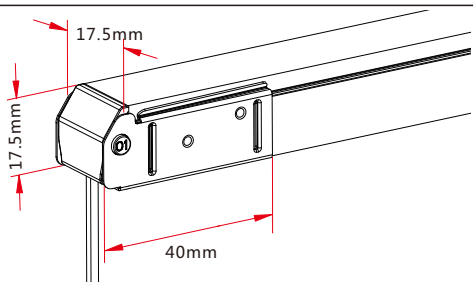
Connects light to power supply. IP20 DIY connector. Cable length available in 0.3m, 1m.

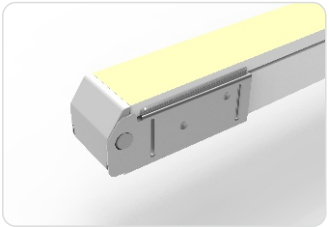




Swivel Front Connector (bottom)

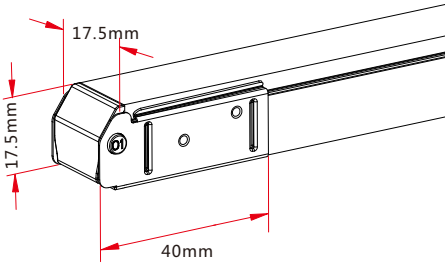
Connects light to power supply. IP20 DIY connector. Cable length available in 0.3m, 1m.





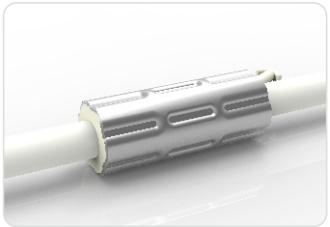
Swivel End Cap

Termination protection of the light,IP20 DIY connector.



3.5 Anti-wicking Ferrule

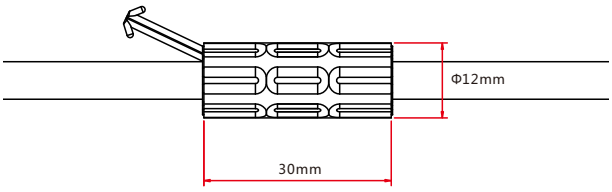
Note: Unless otherwise stated, the tolerance is ±0.5mm.



Anti-wicking Ferrule

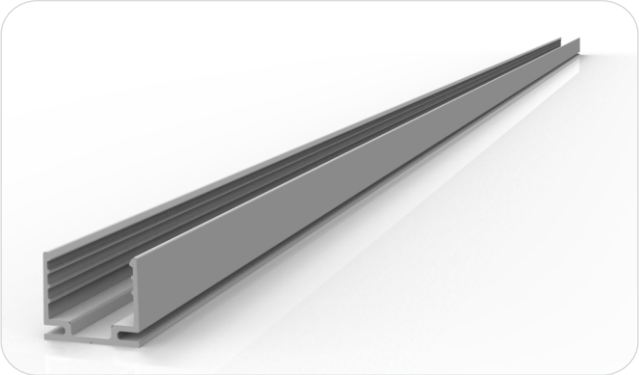
The anti-wicking ferrule is located at 115mm (±5mm tolerance) from the connector on the cable.

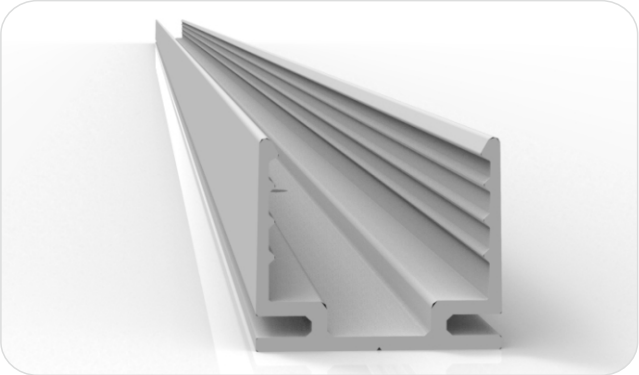
For protection against water ingress from inside of cable wire and hence damage the light.



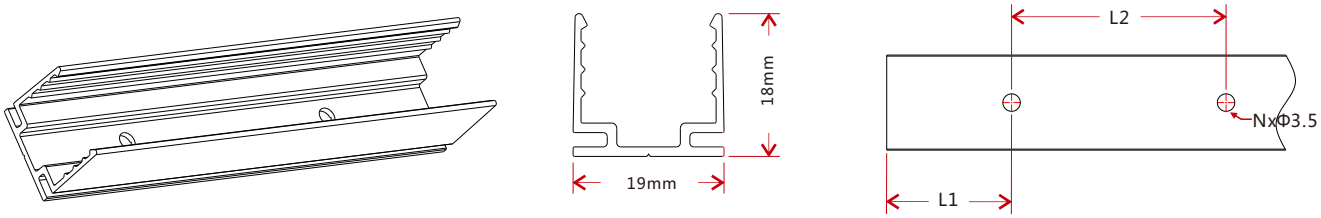
4. Mounting Profile

4.1 Standard Aluminum Profile



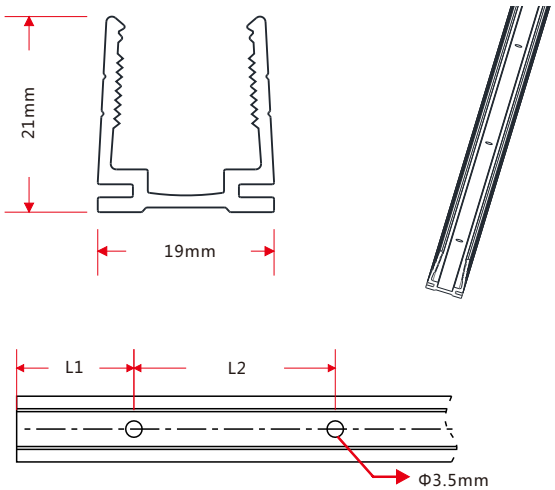


Dimensions Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.



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

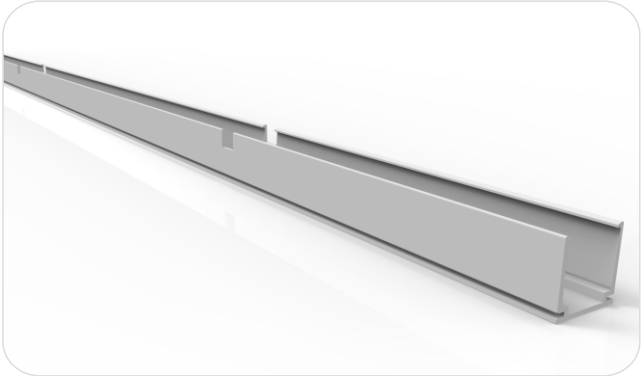
4.2 Plastic Profile

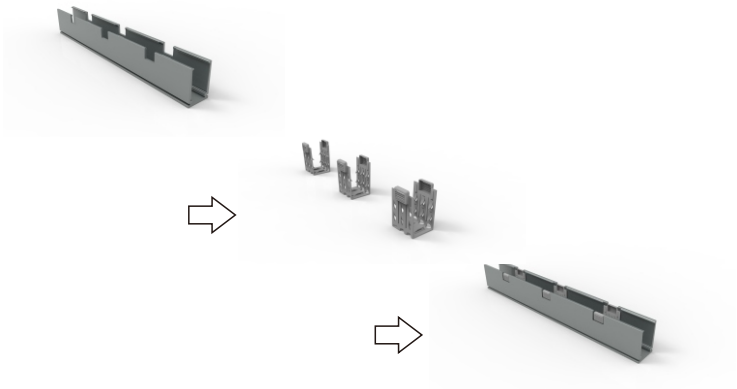


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

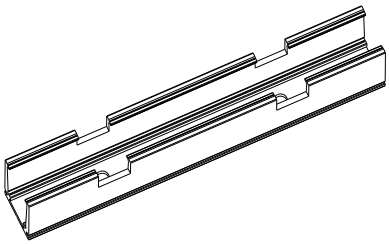
Model	W*H(mm)	Standard Length (mm)	L1 (mm)	L2 (mm)	Screw Hole (mm)	Hole Number
	19*21	500	50	200	Φ3.5	3
		1000	100	200	Φ3.5	5
		2000	100	200	Φ3.5	10

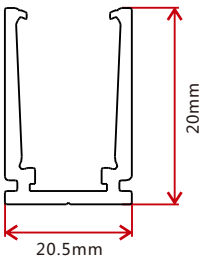
4.3 Self-locking Aluminum Profile Ver 1.0 (Using with the Clip)

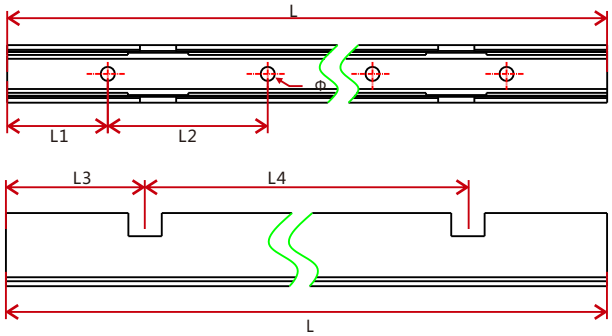




Dimensions Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

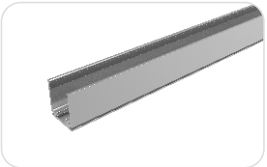


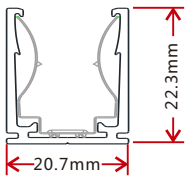




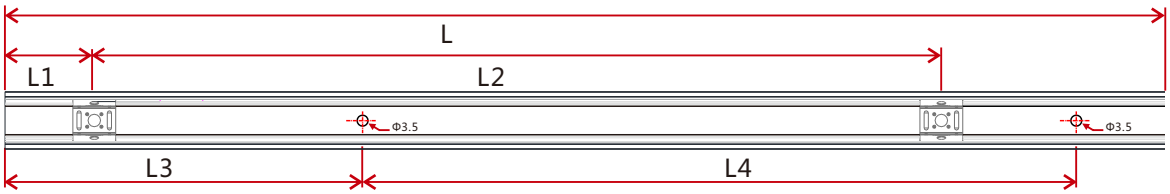
Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
	20.5*20	35	17.5	25	5	/	Φ3 5	2	1
		500	50	200	75	350	Φ3 5	3	2
		1000	100	200	150	350	Φ3 5	5	3
		2000	100	200	125	350	Φ3 5	10	6

4.4 Self-locking Aluminum Profile Ver 2.0 (Using with the Clip)



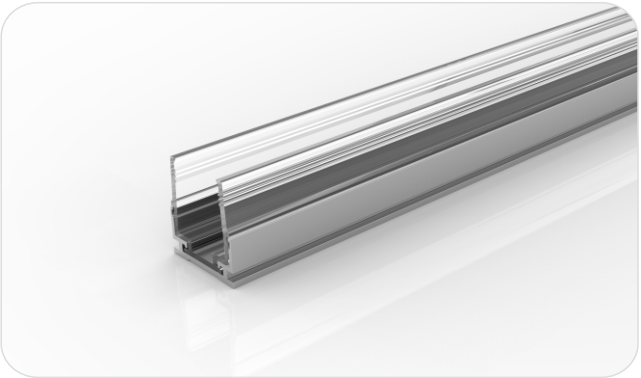


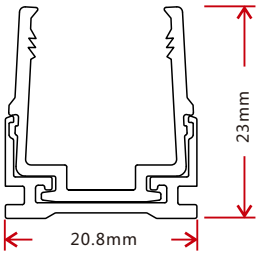
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

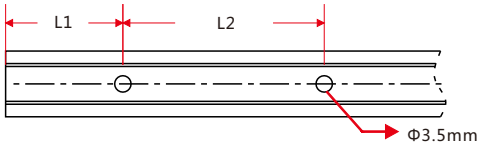


Model	W*H(mm)	Standard Length(mm)	L1(mm)	L2(mm)	L3(mm)	L4(mm)	Hole Screw(mm)	Hole Number	Clip Number
	20.7*22.3	35	17.5	/	5	25	Φ3.5	2	1
		500	25	150	50	200	Φ3.5	3	4
		1000	25	190	100	200	Φ3.5	5	6
		2000	25	195	100	200	Φ3.5	10	11

4.5 Plastic & Aluminum Combination Profile



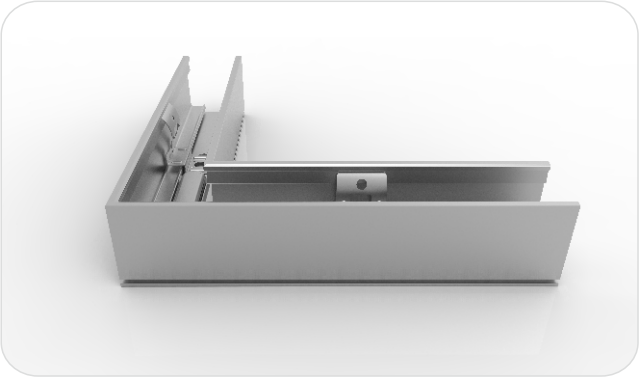


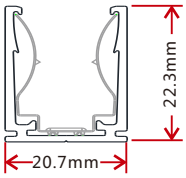


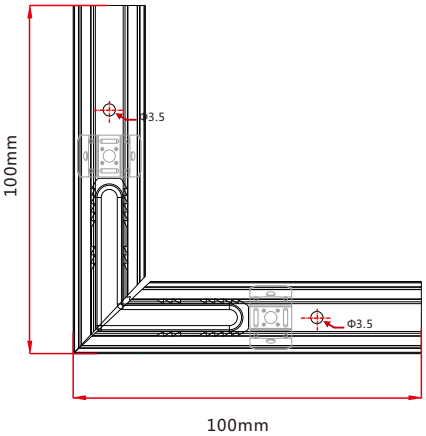
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

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

4.6 L Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)

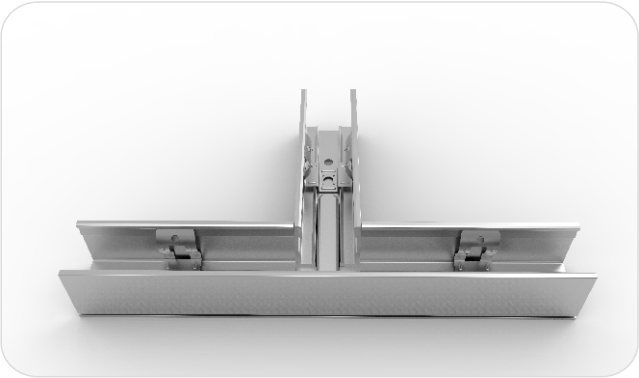


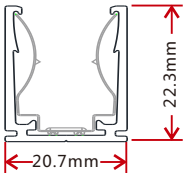


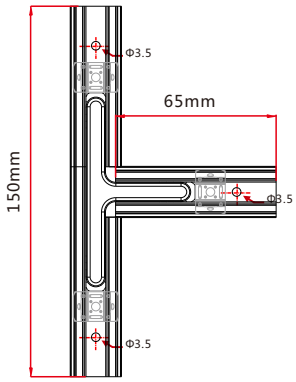


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

4.7 T Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)

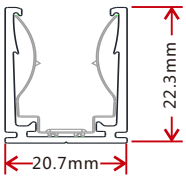


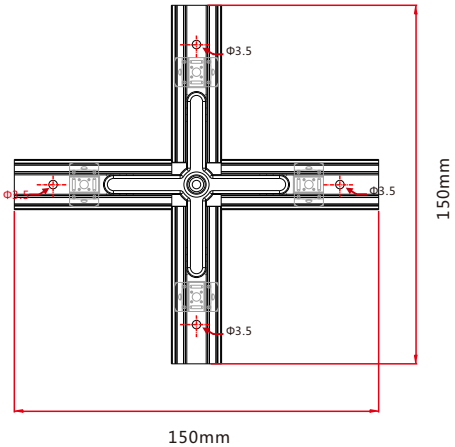




Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

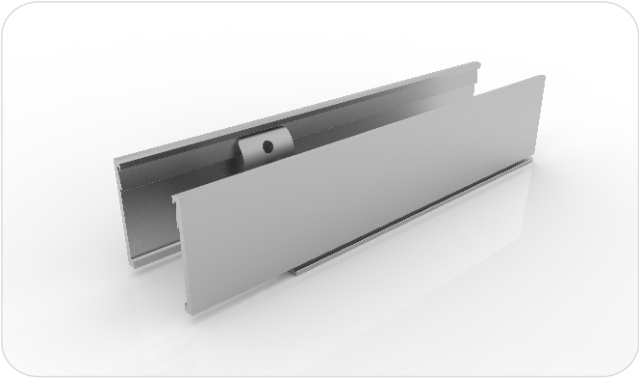
4.8 X Shape Self-locking Aluminum Profile Ver. 2 (Using with the Clip)

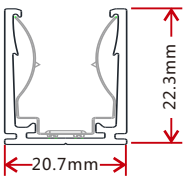


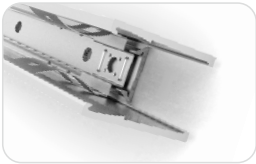


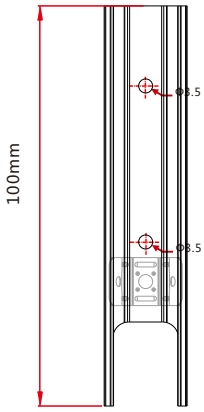
Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

4.9 Self-locking Aluminum Profile Ver. 2, Bottom Feed (Using with the Clip)



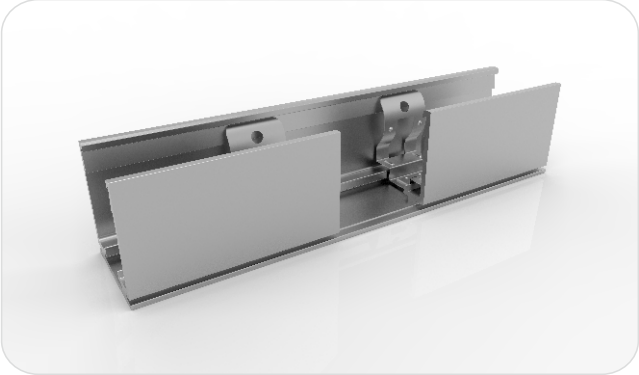


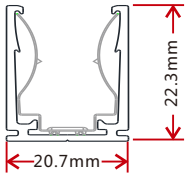


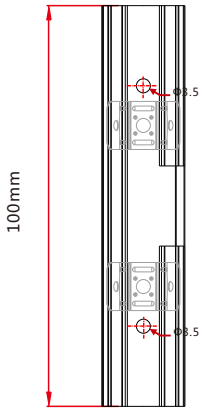


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

4.10 Self-locking Aluminum Profile Ver. 2, Middle Feed (Using with the Clip)

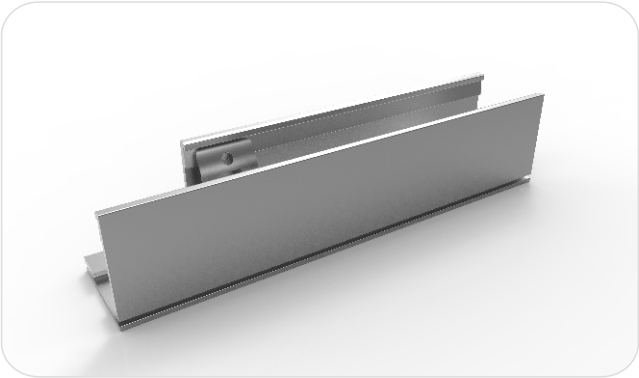


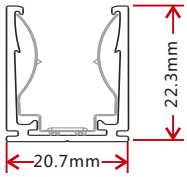


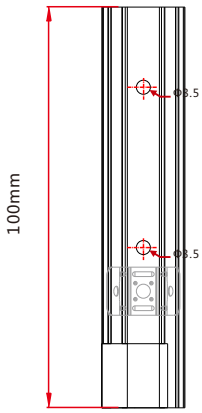


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

4.11 Self-locking Aluminum Profile Ver. 2, Side Feed From Left (Using with the Clip)

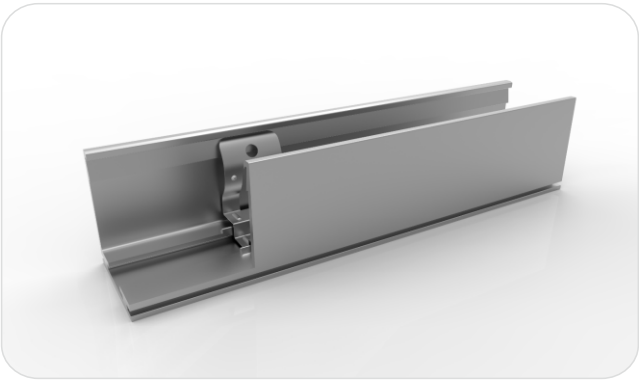


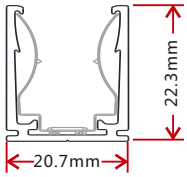


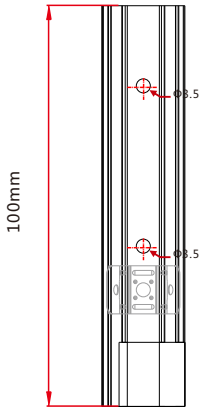


Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

4.12 Self-locking Aluminum Profile Ver. 2, Side Feed From Right (Using with the Clip)

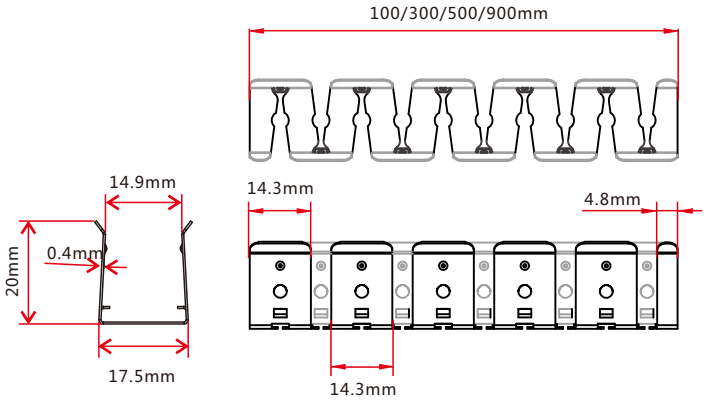






Note: Unless otherwise stated, the tolerance of the profile is ±0.5mm.

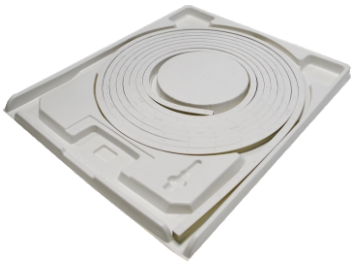
4.13 Curve Stainless Steel Profile



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

5.Packaging

Packaging Method



Plastic Plate

White Box

Carton

Packaging Detail

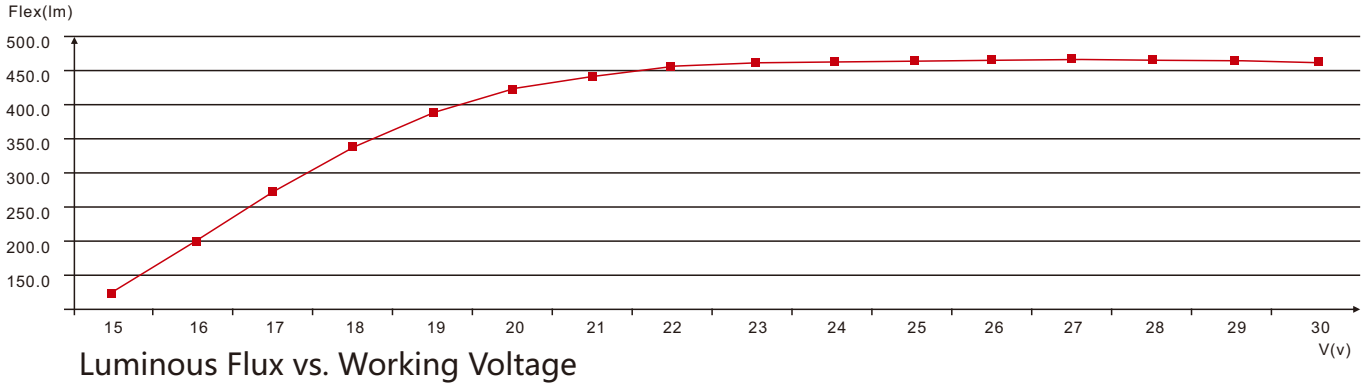
Light Length	White Box Dimension (cm)	Carton Dimension (cm)	Numbers of White Box	Carton Weight (kg)
<4.5m	39*5.2*50	52*41*28	5	<8
5-8m	51*5.2*62	64*53*17.5	3	6-9
5-8m	51*5.2*62	64*53*28	5	9-14
10m	60*3.7*71	73*62*20	5	17
15m	68*5.2*79	81*70*12.5	2	11

LEDPRO
PROFESSIONAL LED

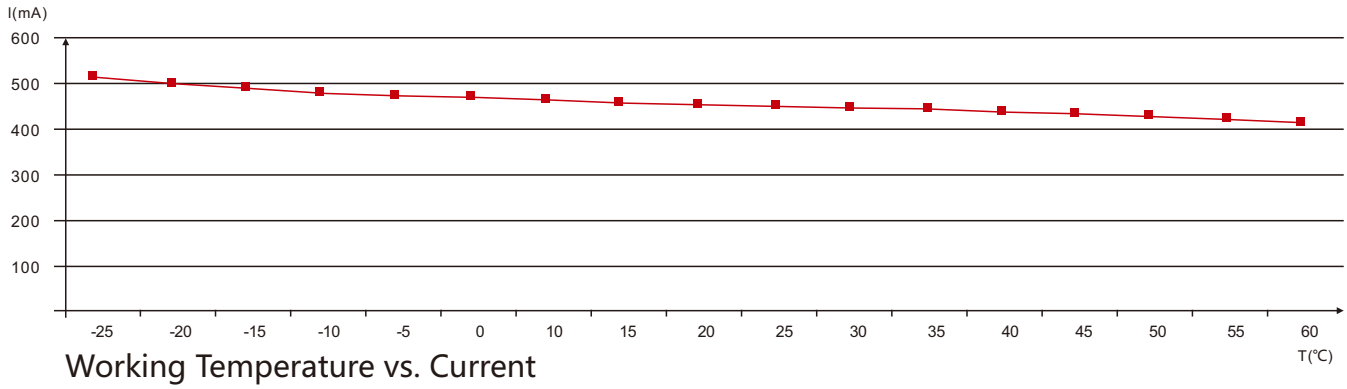
6.4 Reliability Test of Light

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)

6.5 Figures of Typical Characteristics

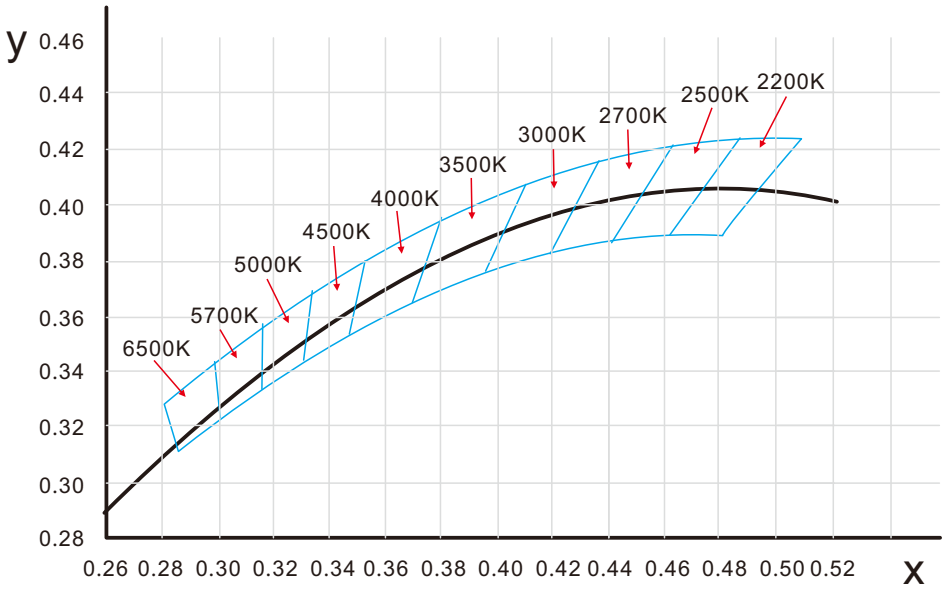


Luminous Flux vs. Working Voltage

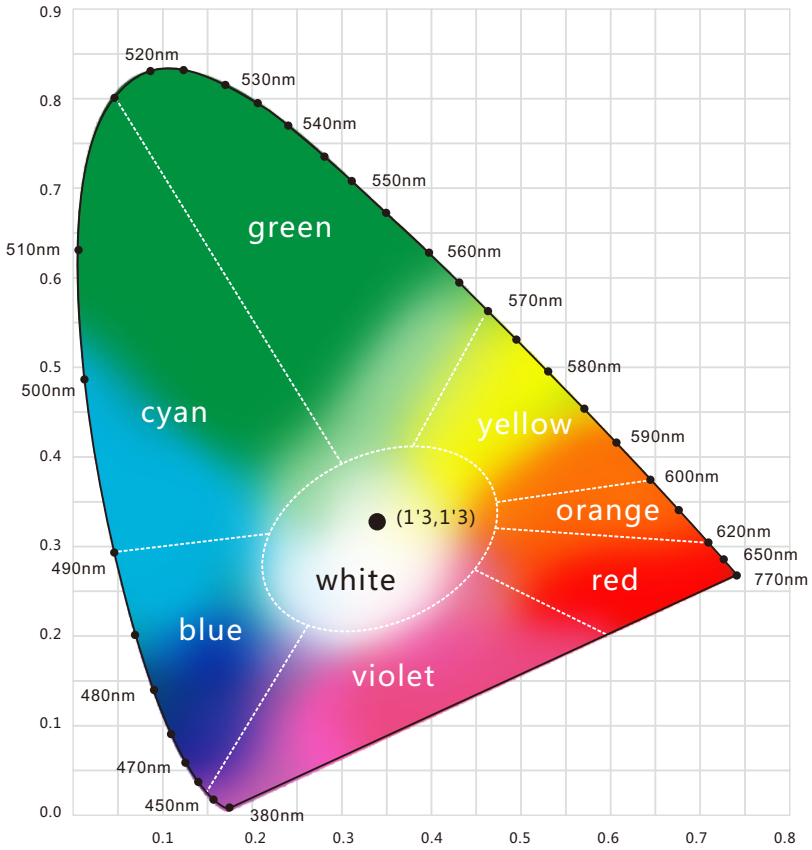


Working Temperature vs. Current

6.6 (X,Y) Chromaticity Diagram



6.7 Wavelength of Color Light



Light Color

Red	620-630nm
Green	520-530nm
Blue	465-475nm

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6.8 Correlated Color Temperature

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Nominal CCT Categories

Nominal CCT	Target CCT and tolerance(K)	Target D_{uv}	D_{uv} Tolerance Range
2200K	2238 ±102	0.0000	Tx:CCT of the source
2500K	2460±120	0.0000	For Tx<2870K
2700K	2725 ±145	0.0000	0.000±0.0060
3000K	3045±175	0.0001	For Tx≥2870K
3500K	3465±245	0.0005	Duv(Tx)±0.0060
4000K	3985±275	0.0010	where
4500K	4503±243	0.0015	Duv(Tx)=57700 x (1/Tx)2
5000K	5029±283	0.0020	-44.6 x (1/Tx)
5700K	5667±355	0.0025	+0.00854
6500K	6532±510	0.0031	
Flexible CCT (2200-6500K)	T_F 1) ±ΔT 2)	$D_{uv}T_F$ 3)	

Remark:

1) T_F is chosen to be at 100K steps (2300,2400,.....,6400K),excluding the ten nominal CCTs listed in Table 1.
2) $\Delta T=1.1900x10^8xT^3-1.5434x10^4xT^2+0.7168xT-902.55$
3) Same as in the D_{uv} Tolerance Range.

6.9 Loading Chart

Type.	Rated Power /mtr	Power Supply									
		35w	60w	75w	80w	100w	120w	150w	185w	240w	320w
	6.5w/7.2w/8w	3m	6m	7.5m	8m	10m	12m	15m	18m	24m	30m
	10.6w/11w/12w	2m	3.5m	4.5m	5m	6m	7m	10m	12m	14m	20m
Energizing way		DC input 01/02							DC input 01		DC input 02

Note : 1. These are the light maximum recommended running length subject to selected power supply.
2. For example: It is recommended to use one 80W power supply loading maximum 8m light (7.2w/m) or maximum 5m light (12w/m) by energizing the light one end.