

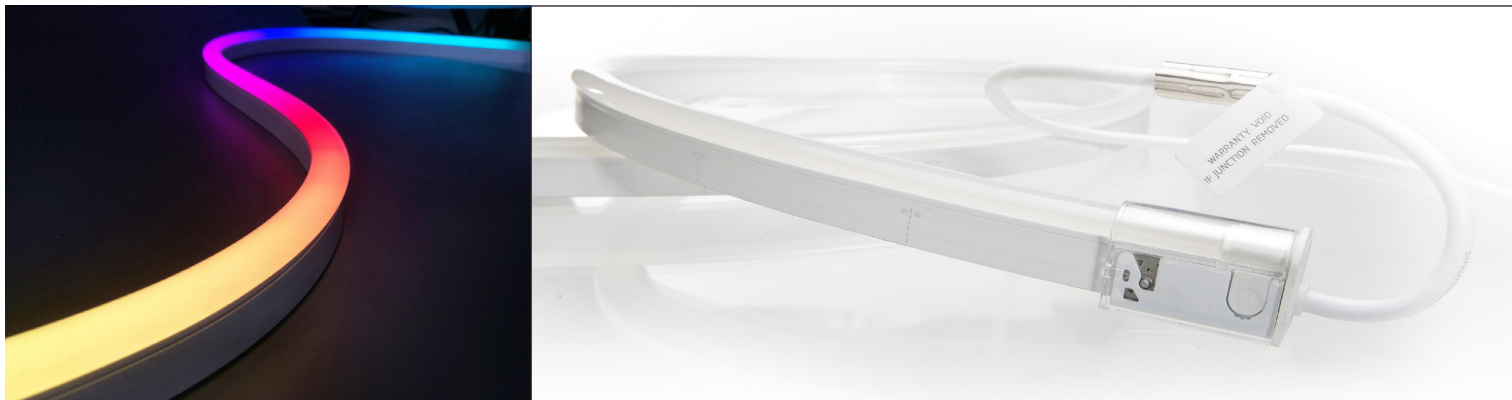


LLN-L21S PIXEL / LED NEON SILICONE / 24V / Horizontal Bending

Description:

LED neon provides the look of traditional neon with all the advantages of LED lighting. Conventional glass neon is expensive, extremely fragile and dangerous if broken. Instead of glass, the rugged housing is made of silicone. It is durable, flexible, customizable and easy to install.

The use of modern LED technology allows LED neon to achieve effects that were never before possible with traditional glass neon, such as dimming and color-changing options. The captivating appearance of LED neon makes it the perfect choice for architectural, entertainment and hospitality installations..



TECHNICAL SPECIFICATIONS
Specifications are subject to change without notice.

Light Dimension 0.45 x 1.14in (11.5x29mm)

Output	RGB	RGBW(27K/30K/40K)	WW+W(22K-57K)
LED Light	SMD LED chips	SMD LED chips	SMD LED chips
Continuous Length			
Single Feed (Full Load) <small>(Power supplies Class 2 Compliance)</small>	26.22ft (8m)	21ft (6.4m)	31.48ft (9.6m)
Double Feed (Full Load) <small>(Power supplies Class 2 Compliance)</small>	52.44ft (16m)	42ft (12.8m)	62.96ft (19.19m)
Light Surface	Round profile 270°		
Lumen Maintenance	70,000 Hours L70 @ 25°C : 90,000 L50 @ 25°C 50,000 Hours L70 @ 50°C : 70,000 Hours L50 @ 50°C		
Electrical			
Input Voltage	24V DC	24V DC	24V DC
Power Consumption	3.66W/ft (12W/m)	4.57W/ft (15W/m)	3.05W/ft (10W/m)
Physical			
LED Count	17 LEDs/ft (56 LEDs/m)	17 LEDs/ft (56 LEDs/m)	18+18 LEDs/ft (60+60 LEDs/m)
LED Spacing	0.70in (17.8mm)	0.70in (17.8mm)	0.66in (16.7mm)
Cutting Unit Length *	4.92in (125mm) 7 LEDs (1 pixel)	4.92in (125mm) 7 LEDs (1 pixel)	3.94in (100mm) 6+6 LEDs (1 pixel)
IC Type	UCS2903	UCS2904	UCS2903
Thermal Management	Free air convection		
Fixture Connections	End, side & bottom lead wires		
Minimum Bend Diameter	4.72in (120mm) (Side Bending)		
Temperature Ranges			
Installation	-40°F to 122°F (-40°C to 50°C)		
Operating	-40°F to 131°F (-40°C to 55°C)		
Humidity	0-95% non condensing		
Dependability			
Warranty	5 Year Limited Warranty		
Safety			
Certification	Tested to UL & CSA by Underwriters Laboratory for use in USA and Canada, complies with California Title 24 Requirements, Lighting Facts. Exceeds ANSI C78.377A, CE & RoHS Compliant.		
IP Rating	IP68 with appropriately rated accessories		

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

Project: _____
 Type: _____
 Model: _____

Description:

LLN-L21 PIXEL addressable LED is a Neon flexible strip with individual cutting increments that can be controlled via a SPI signal. It is available in, Single color, RGB, RGBW & WW+W. An infinite amount of control, allows you to design impressive eye-catching animations & effects when paired with a DMX Controller and SPI decoder.



Example: LLN-L21S-X-PXAD-R30-21-CC-1-ED-01M-P

Series	Voltage	NEON Type	NEON Color	MAX Length (Nominal)	Connector Type	Fixture End	Exit Type	Length	Power / Signal			
LLN-L21S Silicone NEON	X X = 24 Volts	PXAD Pixel Addressable	RGB Pixel Red Green Blue	26 26.22 feet	CC Clamp Connector IP67	1 Input side	ED End	0M3 0.98ft (30cm)	P Power or for End Cap			
			R27 RGBW(2700K)	21 21 feet						SM Seamless Connector IP68	2 Output side	BM Bottom
			R30 RGBW(3000K)	21 21 feet	0 Jumpers T-feeds/ Seamless (or submersible) Bottom/ Seamless (or submersible) End	SL Side Left	03M 9.84ft (3m)					
			R40 RGBW(4000K)	21 21 feet				SR Side Right	05M 16ft (5m)			
			PDW Pixel Dynamic White	31 31.48 feet	EJ End jumper	10M 32.81ft (10m)						
	See Cutting Unit Length for exact increments. *	BJ Bottom jumper	EC End Cap									
				TF Power T-Feed								

Enter configuration: _____

** Special Order

Dimensions and values shown are nominal. LuminosoLED continually works to improve products and reserves the right to make changes which may alter the performance or appearance of products.

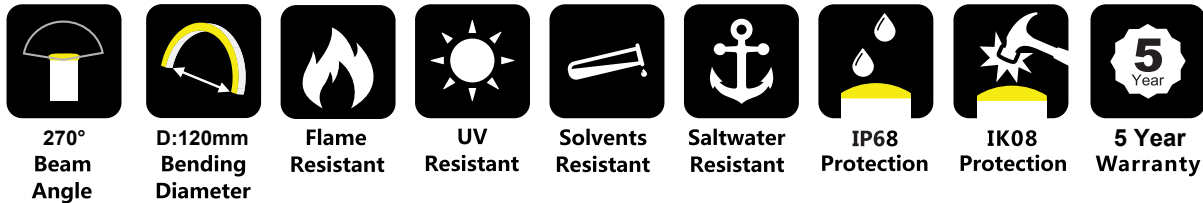
Specifications are subject to change without notice.

Available Colors

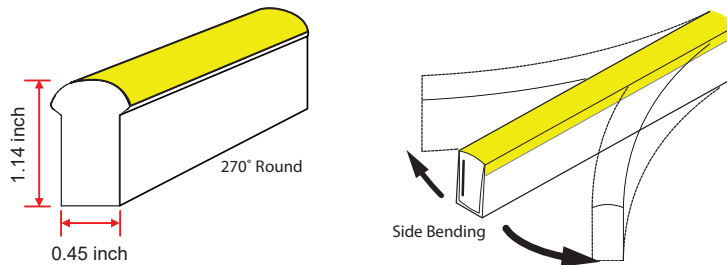
Color	CCT Wavelength
Red	618-624nm
Green	522-528nm
Blue	468-474nm
RGB	R+G+B
2700K	2725 ± 145K
3000K	2725 ± 145K
4000K	3985 ± 275K

Lumen Count

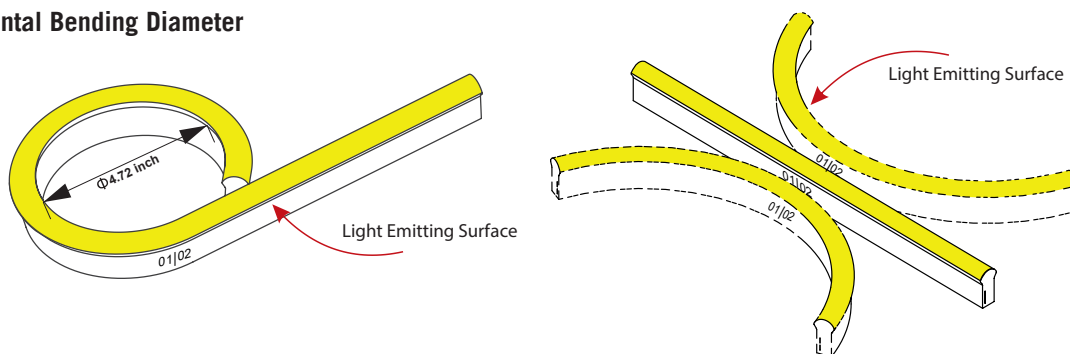
Color	Per Foot	Per Meter
Red	>18.29lm	>60lm
Green	>42.68lm	>140lm
Blue	>9.14lm	>30lm
RGB	>73.17lm	>240lm
2700K	>42.68lm	>140lm
3000K	>42.68lm	>140lm
4000K	>42.68lm	>140lm
WW (22K)	>51.82lm	>170lm
W (57K)	>64lm	>210lm
WW+W (35K)	>115.82lm	>380lm



Dimensions



Minimum Horizontal Bending Diameter

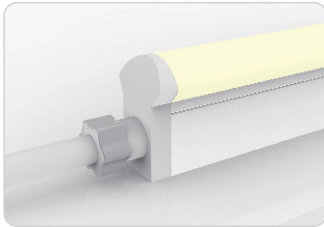


01 and 02 Explanation

There are 01 and 02 marks on light body and connector. Since the PCB is not centralized and pins are separated for positive and negative, the 01-pin connector can only fit into 01 end marked on light body and likewise for 02-pin connector, please see below drawings for more details.

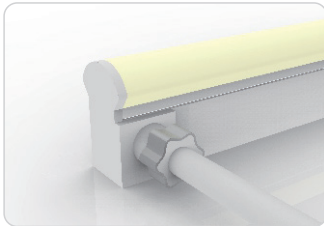
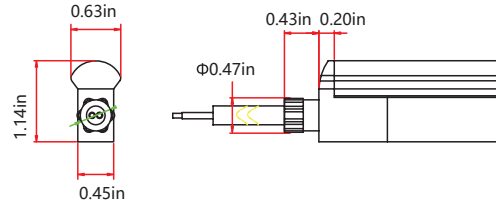
Specifications are subject to change without notice.

(Connectors)
IP68: Rated for outdoor use.
Factory Assembly or DIY.



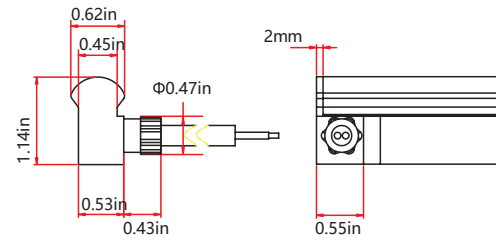
Seamless End Exit

LLN-L21S-X-PXAD-RGB-SM-0-ED-XXX-S
LLN-L21S-X-PXAD-RGB-SM-0-ED-XXX-P



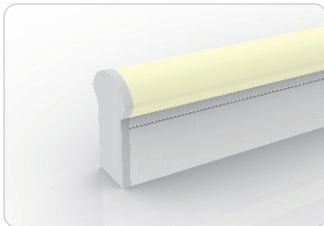
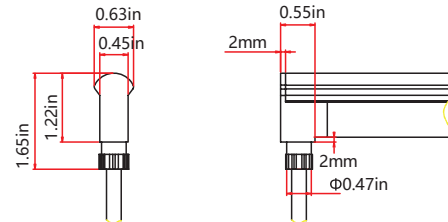
Seamless Side Exit

LLN-L21S-X-PXAD-XX-SM-1-SR-XXX-S
LLN-L21S-X-PXAD-XX-SM-2-SL-XXX-S



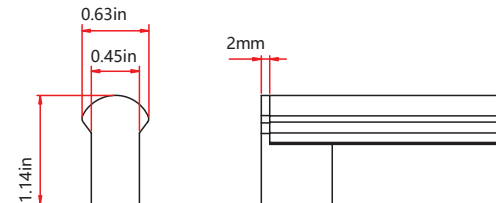
Seamless Bottom Exit

LLN-L21S-X-PXAD-XX-SM-0-BM-XXX-S



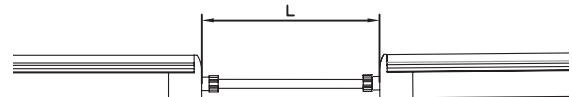
Seamless End Cap

LLN-L21S-X-PXAD-XX-SM-1-EC-P
LLN-L21S-X-PXAD-XX-SM-2-EC-P



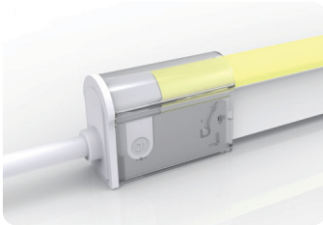
Seamless Jumper

LLN-L21S-X-PXAD-XX-SM-0-EJ-XXX-S



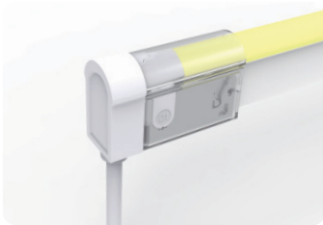
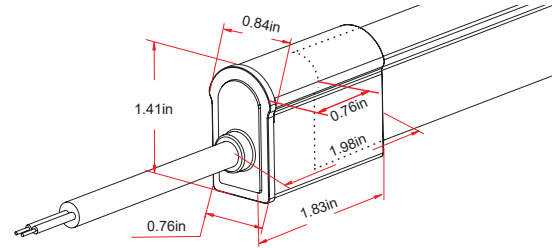
Specifications are subject to change without notice.

(Connectors)
IP67: Rated for outdoor use.
Factory Assembly or DIY.



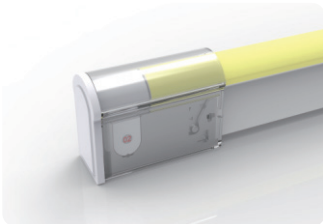
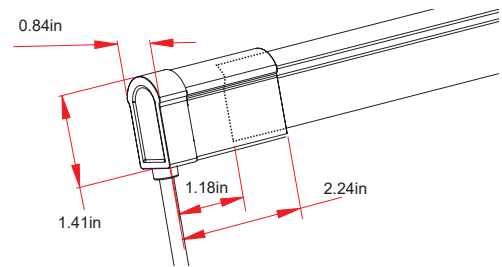
Clamp End Exit

LLN-L21S-X-PXAD-XX-CC-1-ED-XXX-S
LLN-L21S-X-PXAD-XX-CC-2-ED-XXX-S



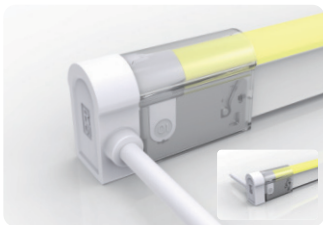
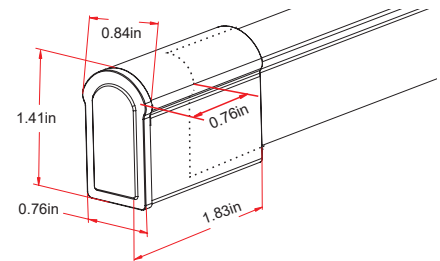
Clamp Bottom Exit

LLN-L21S-X-PXAD-XX-CC-1-BM-XXX-S
LLN-L21S-X-PXAD-XX-CC-2-BM-XXX-S



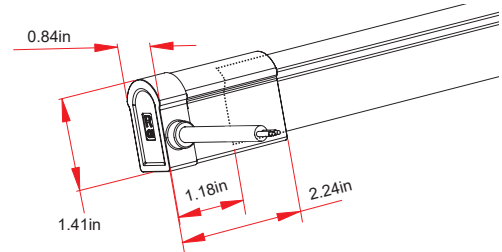
Clamp End Cap

LLN-L21S-X-PXAD-XX-CC-1-EC-P
LLN-L21S-X-PXAD-XX-CC-2-EC-P



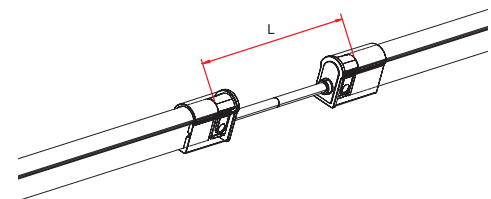
Clamp Side Exit

LLN-L21S-X-PXAD-XX-CC-1-SL-XXX-S
LLN-L21S-X-PXAD-XX-CC-2-SL-XXX-S
LLN-L21S-X-PXAD-XX-CC-1-SR-XXX-S
LLN-L21S-X-PXAD-XX-CC-2-SR-XXX-S



Clamp Jumper

LLN-L21S-X-PXAD-XX-CC-0-EJ-XXX-S

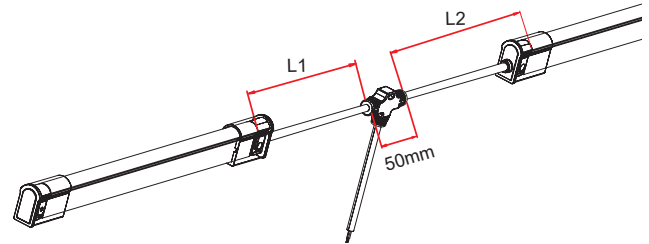


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(Connectors)
IP67: Rated for outdoor use.
Factory Assembly or DIY.

Clamp Power T Feed

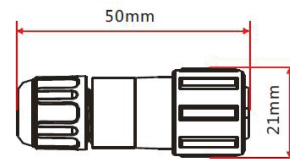
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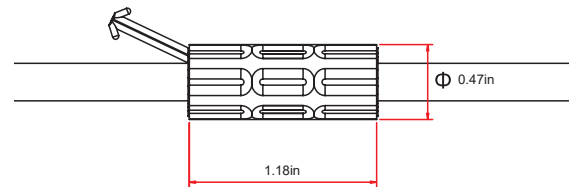
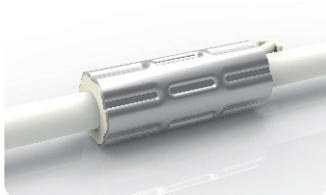
(Barrel Connectors)

Barrel Connectors

- BA-XX-BC-DC-CXX-F
- BA-XX-BC-DC-CXX-M
- BA-XX-BN-XXA-CXX-F
- BA-XX-BN-XXA-CXX-M
- BA-XX-PL-XXA-CXX-F
- BA-XX-PL-XXA-CXX-M

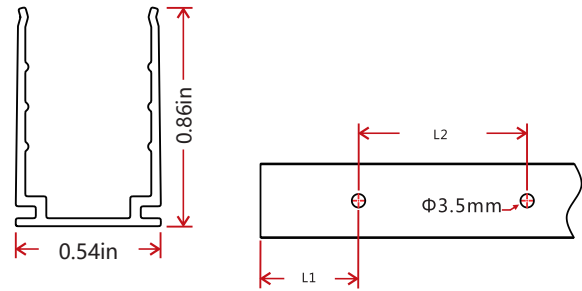
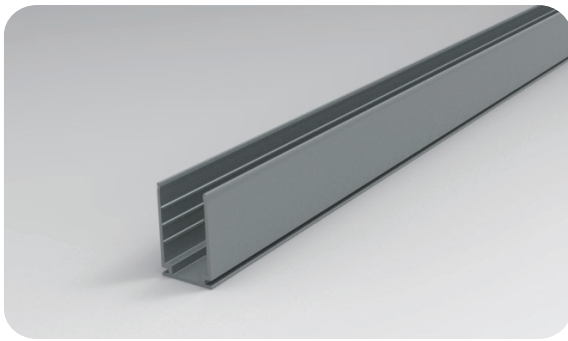


Anti-Wicking Ferrule



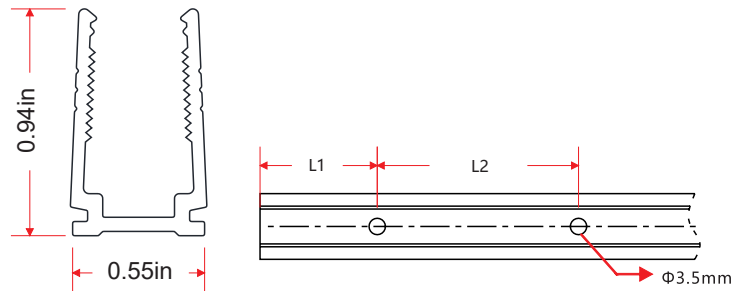
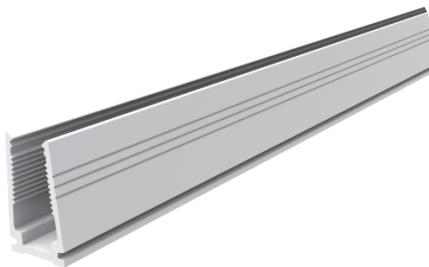
Specifications are subject to change without notice.

Standard Anodized Aluminum Channel



W x H	Standard Length	Part Number	L1	L2	Screw Hole Φ	Hole #
0.54 x 0.87in	1.38in (35mm)	AL-11-R-AL-3C5-SD	0.69in (17.5mm)	/	0.39x0.16in(10x4mm)	1
(13.8 x 22mm)	19.69in (500mm)	AH-11-R-AL-0M5-SD	1.97in (50mm)	7.87in (200mm)	0.39x0.16in(10x4mm)	3
	39.37in (1000mm)	AH-11-R-AL-01M-SD	3.94in (100mm)	7.87in (200mm)	0.39x0.16in(10x4mm)	5
	78.74in (2000mm)	AH-11-R-AL-02M-SD	3.94in (100mm)	7.87in (200mm)	0.39x0.16in(10x4mm)	10

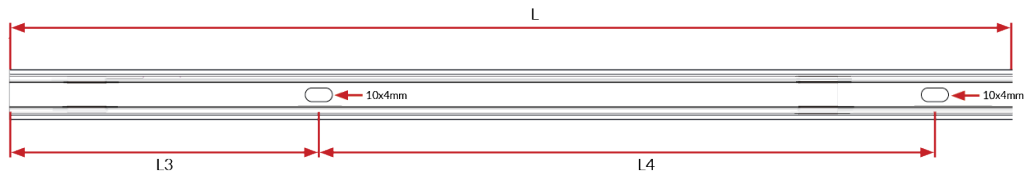
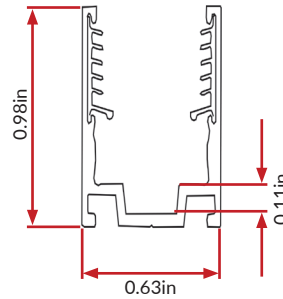
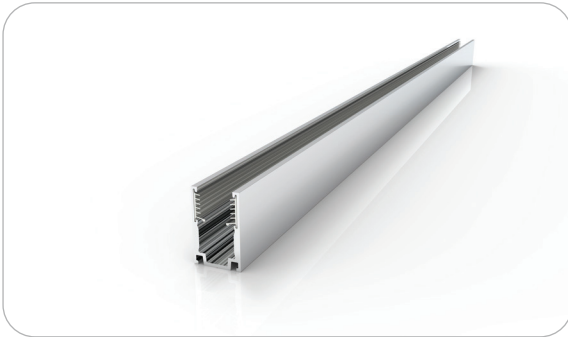
Plastic Channel



W x H	Standard Length	Part Number	L1	L2	Screw Hole Φ	Hole #
0.55 x 0.94in	19.69in (500mm)	AH-11-R-PL-0M5-SD	1.97in (50mm)	7.87in (200mm)	0.14in (3.5mm)	3
(14 x 24mm)	39.37in (1000mm)	AH-11-R-PL-01M-SD	3.94in (100mm)	7.87in (200mm)	0.14in (3.5mm)	5
	78.74in (2000mm)	AH-11-R-PL-02M-SD	3.94in (100mm)	7.87in (200mm)	0.14in (3.5mm)	10

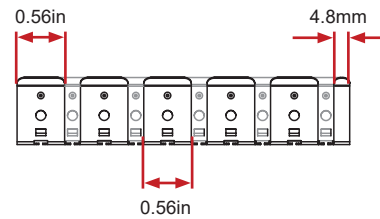
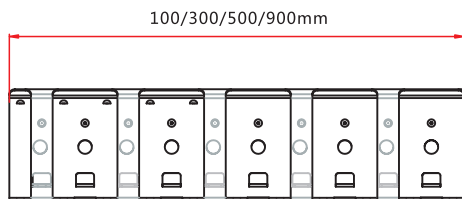
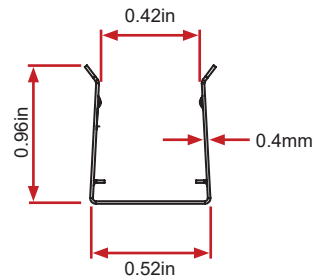
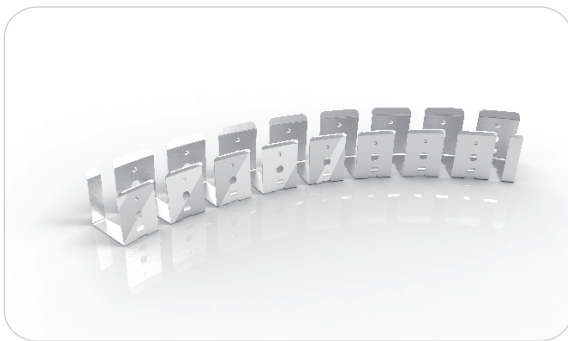
Specifications are subject to change without notice.

Standard Aluminum Channel with Silicone Grip



W x H	Standard Length	Part Number	L3	L4	Screw Hole	Hole#
0.82 x 0.88in (20.7 x 22.3mm)	0.79in (20mm)	AL-11-R-AL-02C-SE	0.2in (5mm)	0.98in (25mm)	0.39in x 0.16in (10 x 4mm)	1
	19.69in (500mm)	AH-11-R-AL-0M5-SE	1.97in (50mm)	7.87in (200mm)	0.39in x 0.16in (10 x 4mm)	3
	39.37in (1000mm)	AH-11-R-AL-01M-SE	3.94in (100mm)	7.87in (200mm)	0.39in x 0.16in (10 x 4mm)	5
	78.74in (2000mm)	AH-11-R-AL-02M-SE	3.94in (100mm)	7.87in (200mm)	0.39in x 0.16in (10 x 4mm)	10

Stainless Steel Flexible Channel



W x H	Standard Length	Part Number
0.52 x 0.97in (13.2 x 24.5mm)	3.94in (100mm)	FH-11-F-SS-0M1-SD
	11.81in (300mm)	FH-11-F-SS-0M3-SD
	19.69in (500mm)	FH-11-F-SS-0M5-SD
	35.43in (900mm)	FH-11-F-SS-0M9-SD

This profile can be mounted using screws in any gaps where the channel bends.

ANSI STANDARD

Nominal CCT Categories

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

Remark:

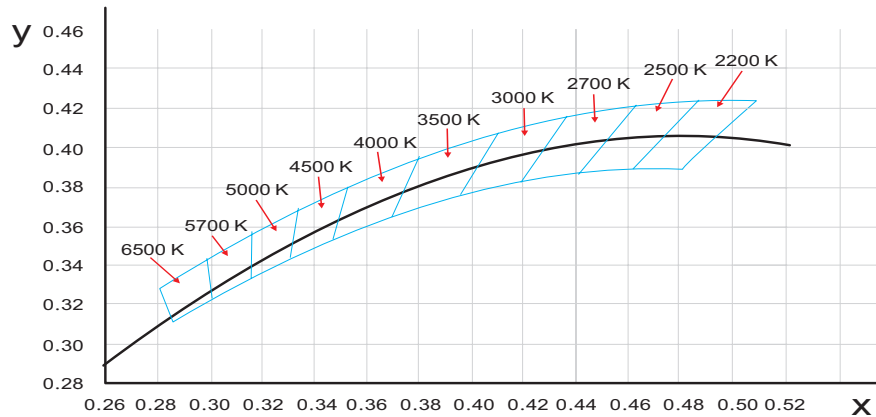
- T_F is chosen to be at 100K steps (2300, 2400, ..., 6400K), excluding the ten nominal CCTs listed in Table 1.
- $\Delta T = 1.1900 \times 10^8 \times T^3 - 1.5434 \times 10^4 \times T^2 + 0.7168 \times T - 902.55$
- Same as in the D_{uv} Tolerance Range.

Flexible CCT
(2200-6500K)

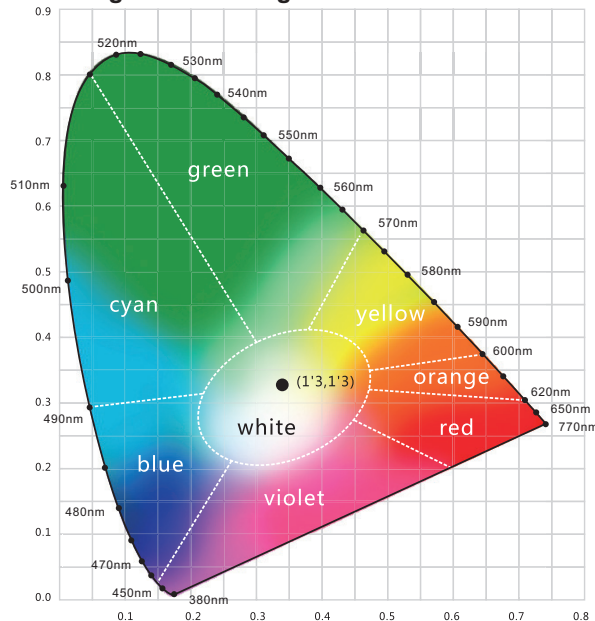
$$T_F^{1)} \pm \Delta T^{2)}$$

$$D_{uv} T_F^{3)}$$

(X,Y) Chromaticity Diagram



Wavelength of Color Light



Light Color

