

# LIGHT CHANNEL COMPLETE FIXTURE 45° ANGLE

24VDC, SURFACE MOUNT, TUNABLE WHITE

DESIGNED BY GREGORY KAY | ASSEMBLED IN AMERICA

REV 07.16.24



## DESCRIPTION

PureEdge's 45° Surface-mounted Tunable White Light Channel is a versatile, made-to-order, 24VDC Class 2 luminaire. The channel's 45° angle design provides designers with enhanced flexibility when illuminating challenging areas. Offered in lengths from 12" to 120"(10') in 2" or 3" increments for precise sizing and available in three wattage options (2W, 5W & 7W). Tunable White 2000K-6500K (**2K6K**) or 2700K-6500K (**27K6**) grants independent control and adjustment of color temperature and intensity from 2000K (Sunset) through 6500K (Day Light White). Tunable white lighting visually, biologically, and emotionally contributes to human interaction with the physical world. Human-centric lighting (HCL) builds on this technology, bringing the dynamics of natural daylight indoors and delivering a positive effect on human health, well-being, and performance. With its combination of flexibility, customization, and lighting quality, the Light Channel 45° is an excellent choice for a wide range of applications. Click here for all [Other Color Temperatures](#). For Field cuttable runs, see DIY spec sheet. Fixture includes a 5-year pro-rated warranty. For custom quotes and layout assistance, send your drawings and ideas to our design team: [design@PureEdgeLighting.com](mailto:design@PureEdgeLighting.com)

## FEATURES AND BENEFITS

- Low voltage, 24VDC Power supplies can be remotely located up to 40' away provides installation flexibility
- Slim profile aluminum extrusion easily installs into small spaces
- 93+ CRI LED strip offers outstanding color accuracy
- Class 2 wiring, eliminates the need for conduit
- 45° angle design provides enhanced flexibility when it comes to illuminating challenging areas

## LENS OPTIONS

- Clear Lens (**C**) provides maximum illumination using a 40° transparent clear lens, LED diodes will show
- Diffused White Lens (**D**) projects clean lines of light through a 100° lens eliminating pixelation
- Diffused Lens with Gel Color Filter (**G**) (Provided by Customer) Clear and Diffused Lens are Gel Color Filter Suitable allowing for color personalization. Zircon LED Gel filters recommended. Purchase Gel Lens from [www.leefilters.com](http://www.leefilters.com). See manufacturer spec sheet for more information.

## LAMP

- Tunable White: 2000K-6500K (**2K6K**) and 2700K-6500K (**27K6**) grants independent control for adjusting color temperature and intensity
- Lumen Performance: up to 305lm/ft at 3000K 7W per foot
- CRI 93+
- Average life: 50,000 hours
- For additional color temperatures refer to other specifications

## SPECIFICATIONS

- 24VDC, Class 2
- 2.5, 4.6 or 7.5 watts per foot
- 2 and 3-inch increments up to 120" (10ft)
- Operating temperature: -22°F to 140°F (-30°C to 60°C)

## INCLUDED COMPONENTS

- 72" Power Connector (Included 1 per fixture). Order extra as needed based on your installation requirements.
- Mounting Clips (Included with every 2' of Channel)

## POWER SUPPLIES\*, DIMMERS & CONTROLS (REMOTE SOLD SEPARATELY)

24VDC, Class 2 wiring

- Pure Smart™ WiZ Pro [Power Supplies](#) & [Controls](#)
- [0-10V](#) Requires two dimmers, one for intensity and one for color temperature
- [DMX & Controls](#)

\*In-wall mounting and drop ceiling kits available for select power supplies

## COMPLIANCE

ETL, Class 2, Damp Location, Made in USA.

## APPLICATIONS

Designed for indoor use only. Ideal applications include display shelving and cabinetry, under-cabinet, cabinet lightning, coves, and bars within residential, commercial, retail, and hospitality environments.

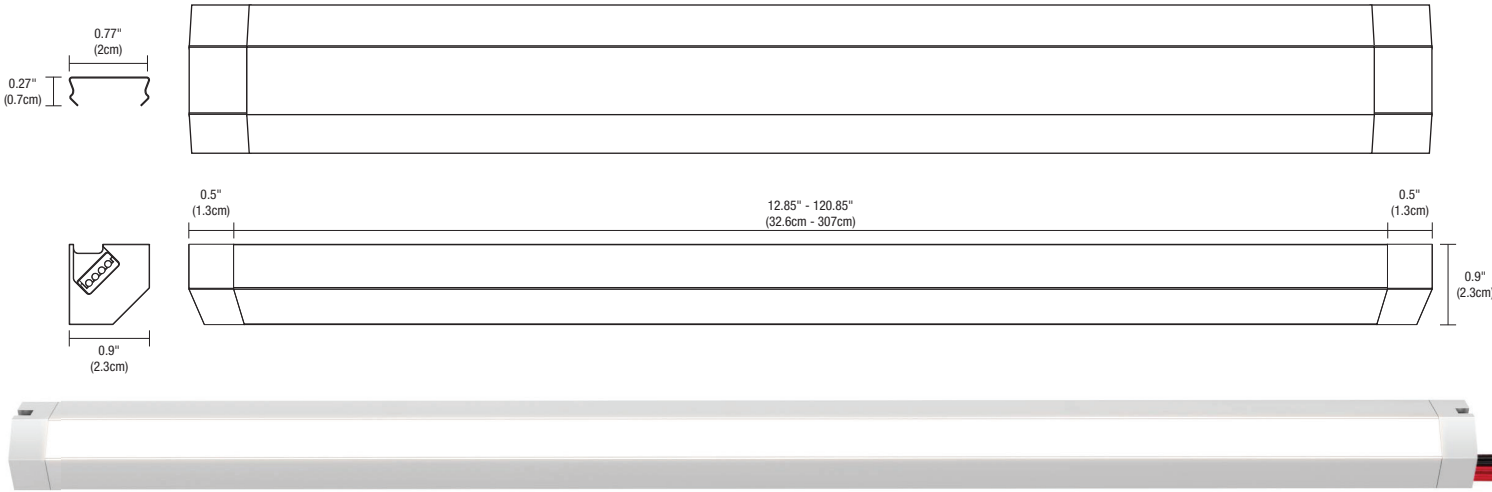
Product	Wattage	Nominal Length	Lens	Color Temperature	Finish
<b>LC45</b>	<b>5W</b>	<b>61</b>	<b>D</b>	<b>2K6K</b>	<b>SA</b>
LC45 Light Channel Surface Mount 45°	2W 2.5 watts 5W 4.6 watts 7W 7.5 watts	12-120 Available from 12" to 120" in 2" or 3" increments. See chart for exact lengths.	D Diffused Lens C Clear Lens G Diffused Lens with Gel Color (Color Provided by Customer)	2K6K Tunable White 2000K-6500K 27K6 Tunable White 2700K-6500K	SA Satin Aluminum WH White

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## LENS OPTIONS



**LC45 LIGHT CHANNEL 61° DIFFUSED LENS**  
White Diffused Lens projects clean lines of light, eliminating LED diodes



**LC45 LIGHT CHANNEL 26° CLEAR LENS**  
Clear Lens provides maximum light levels and will show slight LED diodes



**LC45 LIGHT CHANNEL DIFFUSED LENS WITH GEL COLOR FILTER (PROVIDED BY CUSTOMER)**

Clear and Diffused Lens are Gel Color Filter Suitable allowing for color personalization. Zircon LED Gel filters are recommended and can be purchased from [www.leafilters.com](http://www.leafilters.com). Gel filter life is 5,000 hours before needing to be changed

## FOOT CANDLE CHARTS

30K 100° 5W DIFFUSED LENS		
DISTANCE	BEAM	FOOT CANDLE
12"	29"	240
18"	43"	106
24"	57"	60
36"	86"	26

30K 40° 5W CLEAR LENS		
DISTANCE	BEAM	FOOT CANDLE
12"	8"	720
18"	13"	320
24"	18"	180
36"	26"	80

\*Foot Candle Data is based off 4' Channel.

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## NOMINAL DELIVERED LUMENS (2K6K)

	DIFFUSED LENS																										
WATTS PER FOOT	2K6K 2W (2.5 watts)									2K6K 5W (4.6 watts)									2K6K 7W (7.5 watts)								
COLOR TEMPERATURE	20K	22K	24K	27K	30K	35K	40K	57K	65K	20K	22K	24K	27K	30K	35K	40K	57K	65K	20K	22K	24K	27K	30K	35K	40K	57K	65K
LUMENS PER FOOT (lm/ft)	64	65	66	67	68	70	76	82	88	156	162	168	175	181	194	208	210	212	217	227	237	247	257	278	292	295	298
LUMENS PER WATT (lm/w)	35	33	33	33	34	35	90	41	49	34	34	35	36	38	40	43	44	46	34	31	33	34	36	39	41	41	47
CRI	91+	91+	91+	91+	91+	94+	94+	94+	91+	91+	91+	91+	91+	91+	94+	94+	94+	91+	91+	91+	91+	91+	94+	94+	94+	91+	91+

	CLEAR FROSTED LENS																											
WATTS PER FOOT	2K6K 2W (2.5 watts)										2K6K 5W (4.6 watts)										2K6K 7W (7.5 watts)							
COLOR TEMPERATURE	20K	22K	24K	27K	30K	35K	40K	57K	65K	20K	22K	24K	27K	30K	35K	40K	57K	65K	20K	22K	24K	27K	30K	35K	40K	57K	65K	
LUMENS PER FOOT (lm/ft)	75	76	77	79	80	82	89	96	103	182	190	197	205	212	227	243	246	248	254	266	278	290	301	325	343	346	350	
LUMENS PER WATT (lm/w)	41	38	39	39	40	41	90	48	57	40	40	41	43	44	47	51	51	54	40	37	39	40	42	45	48	48	55	
CRI	91+	91+	91+	91+	91+	94+	94+	94+	91+	91+	91+	91+	91+	91+	94+	94+	94+	91+	91+	91+	91+	91+	91+	94+	94+	94+	91+	

## NOMINAL DELIVERED LUMENS (27K6)

WATTS PER FOOT	DIFFUSED LENS																									
	27K6 2W (2.5 watts)								27K6 5W (4.6 watts)								27K6 7W (7.5 watts)									
COLOR TEMPERATURE	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K
LUMENS PER FOOT (lm/ft)	70	83	85	87	95	102	98	218	225	231	238	229	226	219	254	260	270	279	276	274	273	273	273	273	273	273
LUMENS PER WATT (lm/w)	35	33	34	35	38	41	49	55	56	56	55	56	57	56	40	36	37	39	38	38	43	43	43	43	43	43
CRI	93+	93+	94+	94+	94+	93+	93+	93+	93+	94+	94+	94+	93+	93+	93+	93+	94+	94+	94+	93+	93+	93+	93+	93+	93+	93+

WATTS PER FOOT	CLEAR FROSTED LENS																									
	27K6 2W (2.5 watts)								27K6 5W (4.6 watts)								27K6 7W (7.5 watts)									
COLOR TEMPERATURE	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K	57K	65K	27K	30K	35K	40K	45K
LUMENS PER FOOT (lm/ft)	82	97	99	102	112	120	114	256	263	271	279	268	265	257	298	305	316	327	324	321	320	320	320	320	320	320
LUMENS PER WATT (lm/w)	41	39	40	41	45	48	57	64	66	66	65	65	66	65	47	42	44	45	45	45	50	50	50	50	50	50
CRI	93+	93+	94+	94+	94+	93+	93+	93+	93+	94+	94+	94+	93+	93+	93+	93+	94+	94+	94+	93+	93+	93+	93+	93+	93+	93+

## ACTUAL LENGTHS FOR LIGHT CHANNEL 45° TUNABLE WHITE

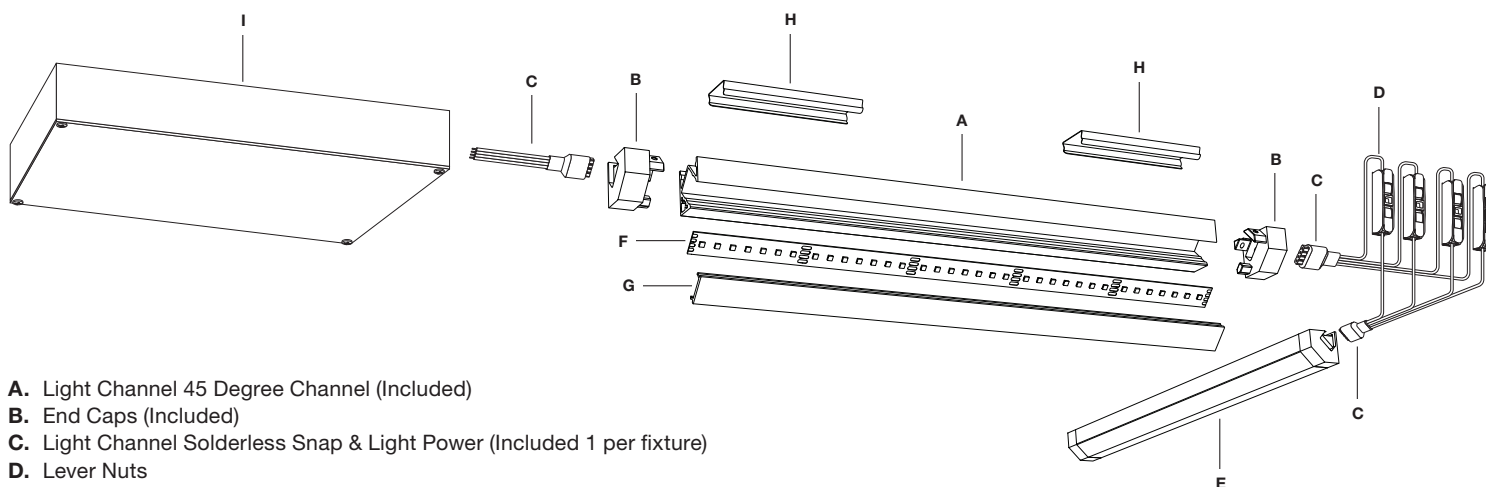
Ordering Code (Nominal Size)	Illuminated Length (Inches)	Overall Length (Inches)	Ordering Code (Nominal Size)	Illuminated Length (Inches)	Overall Length (Inches)
12	12.0	13.0	68	67.2	68.2
15	14.4	15.4	70	69.6	70.6
17	16.8	17.8	72	72.0	73.0
20	19.2	20.2	75	74.4	75.4
22	21.6	22.6	77	76.8	77.8
24	24.0	25.0	80	79.2	80.2
27	26.4	27.4	82	81.6	82.6
29	28.8	29.8	84	84.0	85.0
32	31.2	32.2	87	86.4	87.4
34	33.6	34.6	89	88.8	89.8
36	36.0	37.0	92	91.2	92.2
39	38.4	39.4	94	93.6	94.6
41	40.8	41.8	96	96.0	97.0
44	43.2	44.2	99	98.4	99.4
46	45.6	46.6	101	100.8	101.8
48	48.0	49.0	104	103.2	104.2
51	50.4	51.4	106	105.6	106.6
53	52.8	53.8	108	108.0	109.0
56	55.2	56.2	111	110.4	111.4
58	57.6	58.6	113	112.8	113.8
60	60.0	61.0	116	115.2	116.2
63	62.4	63.4	118	117.6	118.6
65	64.8	65.8	120	120.0	121.0

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## Light Channel 45° system overview

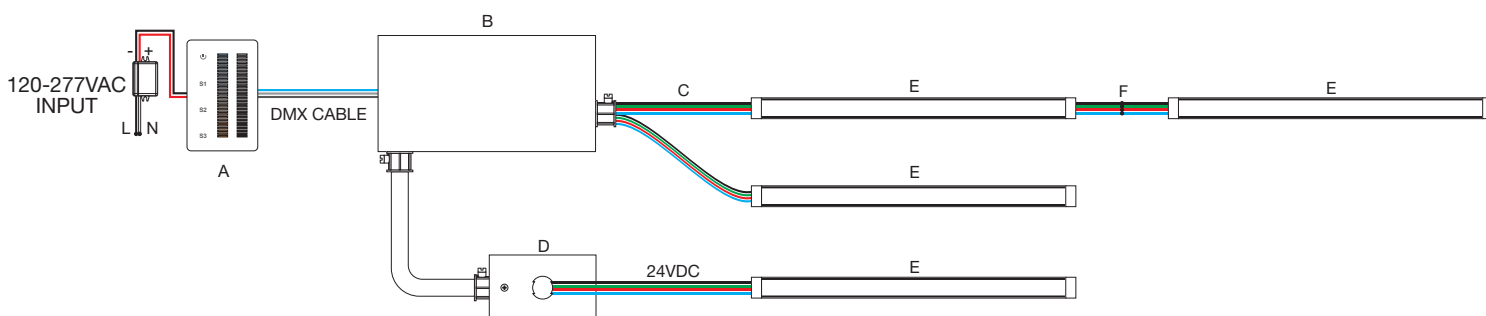


- A. Light Channel 45 Degree Channel (Included)
- B. End Caps (Included)
- C. Light Channel Solderless Snap & Light Power (Included 1 per fixture)
- D. Lever Nuts
- E. Light Channel 45 Degree Assembly
- F. 24VDC LED Strip (Included)
- G. Lens (Included)
- H. Mounting Clips (Included with every 2' of channel)
- I. 24VDC Remote Power Supply (Sold Separately)

## WIRING DIAGRAM: DMX dimming/control for Light Channel 45°

**Power Supply:** 120VAC input, 24VDC 96 watt output PSB-100W-24VDC-DMX

**Dimming:** Shown with CDMX1-2XK-WH Tunable White Controller. See power supply spec sheet for additional details.



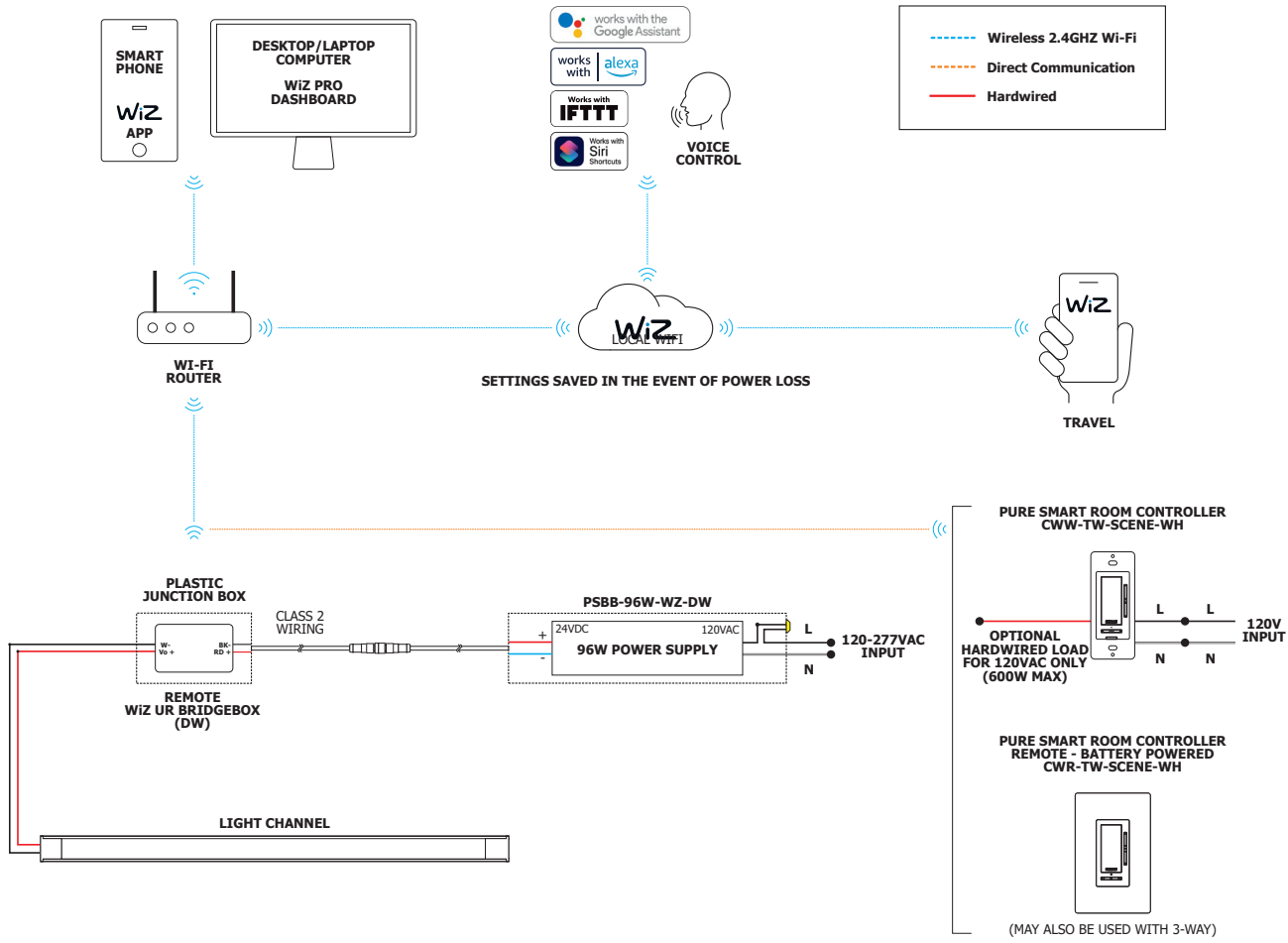
- A. CDMX1-2XK-WH with Controller Power Adapter
- B. 100W 24VDC Power Supply PSB-100W-24VDC-DMX
- C. Light Channel Power Connector SS-FE-CON-72IN-RGB
- D. 3" Rectangle Canopy Cover 3RE-WH
- E. Light Channel Fixture
- F. Light Channel Flexible Connector SS-CFX-CON-\_\_-RGB

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## NETWORK TOPOGRAPHY

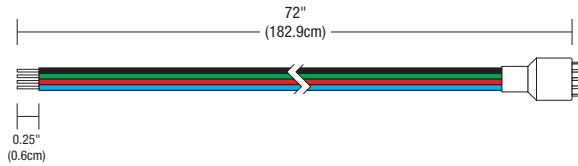
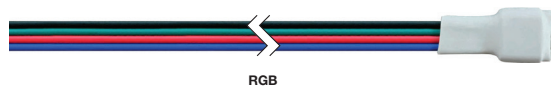


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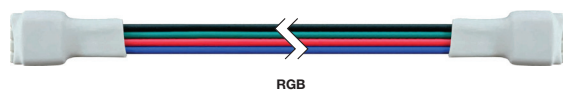
**ACCESSORIES:** Order based on your lighting design specifications or as replacement parts.



## LIGHT CHANNEL POWER CONNECTOR

One Female Power Connector is included with each order of channel. For jumper connections, use our Flexible Connector or, WAGO 221 lever nuts according to your specific application requirements.

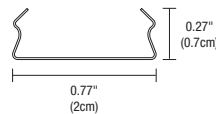
System	Type	Product	Length	Color Temperature
<b>SS</b>	<b>FE</b>	<b>CON</b>	<b>72IN</b>	<b>RGB</b>
SS Stomp/Soft Strip	FE Female Pin	CON Connector	72IN 72"	RGB RGB (Tunable White Compatible)



## FLEXIBLE CONNECTOR

Flexible connectors link two sections of the Light Channel end to end. WAGO 221 lever nuts can also be used as jumper connections according to your specific application requirements.

System	Type	Product	Size	Color Temperature
<b>SS</b>	<b>CFX</b>	<b>CON</b>	<b>12IN</b>	<b>RGB</b>
SS Stomp Strip/Soft Strip	CFX Flexible Connector	CON Connector	12IN 12 Inches 72IN 72 Inches	RGB RGB (Tunable White Compatible)



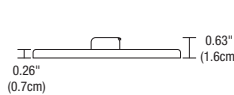
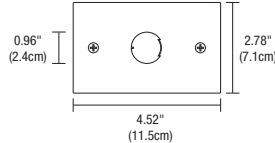
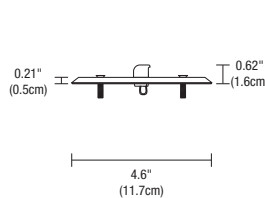
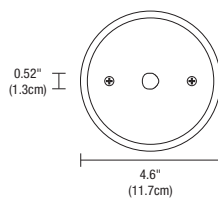
## MOUNTING CLIP

Light Channel comes with standard mounting clips. LC45-MCL mounting clips are provided with every 2' of Light Channel.

System	Product
<b>LC45</b>	<b>MCL</b>
LC45 Light Channel 45°	MCL Mounting Clip

## CANOPY COVER & SPLICE BOX

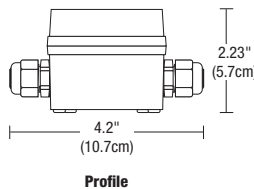
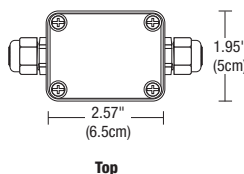
Use for remote located power supply. The 3 inch rectangle or 4 inch round white canopy covers the electrical box and feeds wires for Light Channel. The Splice Box provides a safe enclosure for low voltage connections.



Product	Finish
<b>3RE</b>	<b>WH</b>
3RE 3" Rectangle Canopy Cover 4RD 4" Round Canopy Cover	WH White

## JUNCTION BOX

Low voltage Splice Box with connectors.



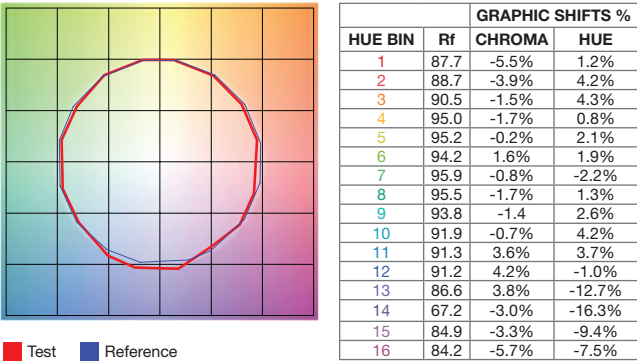
Product	Type	Option
<b>2RE</b>	<b>JBOX</b>	<b>W</b>
2RE 2" Rectangle	JBOX Junction Box	W Wet Location

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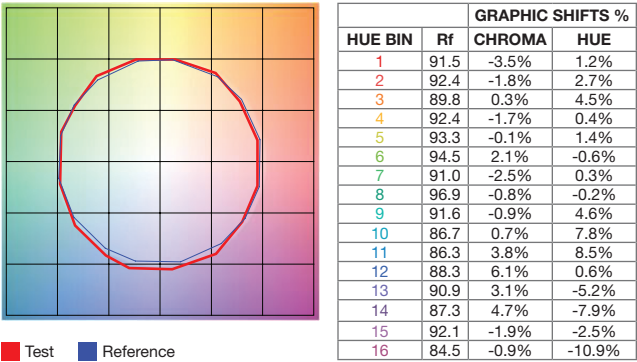
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TM-30-15 DATA: The data below is for Tunable White bare LED Strip. Consistent color temperatures throughout a single strip and among multiple strips is possible through a 3 phase binning process in which each order is inspected with a color meter to ensure uniformity.

2000K ONLY (2K6K/27K6) | Rf: 90.6 | Rg: 98.5
Color Vector Graphic



3000K (2K6K/27K6) | Rf: 90.5 | Rg: 100.7
Color Vector Graphic



4000K ONLY (2K6K/27K6) | Rf: 86.4 | Rg: 96.1
Color Vector Graphic

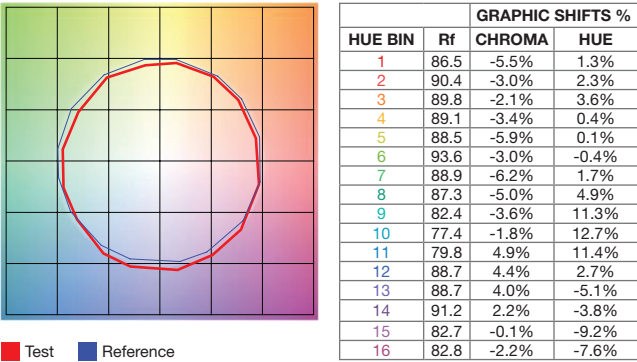


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