

LAZER LINE LIGHTING SYSTEM SLIM TURNBUCKLE DIY

SUSPENDED LED LIGHTING SYSTEM, 24VDC REMOTE POWER SUPPLY

DESIGNED BY DEREK PORTER & GREGORY KAY | ASSEMBLED IN AMERICA | US PATENT ISSUED

REV 11.28.23



DESCRIPTION

Lazer Line is a Direct and/or Indirect LED Lighting System that provides general illumination for architectural applications. Slim Turnbuckles and anchors can be mounted wall to wall or ceiling to floor or ceiling to wall. Turnbuckles allow Lazer Line to be positioned 0-60° relative to the mounting surface, creating a 3-dimensional look that is as functional as it is visually interesting. Feed power from one or both ends for longer lengths. Mounts to standard 4" square junction box with round plaster ring. Paint canopy to blend into the surface for a seamless look. For compact shipment and storage, Lazer Line coils like a retractable tape measure. When uncoiled, Lazer Line becomes a 0.5" wide stainless steel channel that spans opposing surfaces. The field-cutttable channel allows continual lengths up to 60' with power feeds at each end. Includes a 5 year pro-rated warranty. For custom designs and quotes, send drawings to: design@PureEdgeLighting.com.

POWER FEED & NON-POWER FEED TURNBUCKLES (SOLD SEPARATELY)

Turnbuckles support Lazer Line on any angle from 0-90°, feed power from one end and mount to a standard 4" square electrical junction box with round plaster ring. Turnbuckles may be mounted to a ceiling, wall or floor.

APPLICATIONS

Designed for indoor use only. Wherever direct and indirect light sources can be used such as offices, hallways, hotels, restaurants and retail environments.

POWER CONSUMPTION

- Single Strip: 3 or 5 watts per foot
- Dual Strips: 6 (3W up + 3W down) or 10 W/ft (5W up + 5W down)

MAXIMUM LENGTHS

Single Strip (Direct or Indirect)

- 3W-30' 5W-20' (power feeds at one end)
- 3W-60' 5W-40' (power feeds at both ends)

Two Strips (Direct and Indirect)

- 6W-15' 10W-10' (power feeds at one end)
- 6W-30' 10W-20' (power feeds at both ends)

REMOTE POWER SUPPLIES, DIMMERS & CONTROLS (SOLD SEPARATELY)

24VDC, Class 2 wiring

Static White & Monochromatic Color

- [Pure Smart™ WIZ Pro Power Supplies & Controls](#)
- [UNI Driver: Universal Dimming \(TRIAC, ELV, 0-10V\)](#)

Tunable White

- [Pure Smart™ WIZ Pro Power Supplies & Controls](#)
- [0-10V](#): Requires two dimmers, one for intensity and one for color temperature
- [DMX Dynamic Color Changing & PureEdge Controllers](#)

RGB/RGB+W

- [DMX Dynamic Color Changing & Controllers](#)

RGBTW

- [Pure Smart™ WIZ Pro Power Supplies & Controls](#)
- PureEdge Pure Smart™ Wi-Fi RGBTW Power Supply is the most advanced smart power supply on the market. No hub or additional equipment required. Google Assistant, Alexa, Siri Shortcuts, and IFTTT.
- [DMX Dynamic Color Changing & Controllers](#)

APPROVALS/COMPLIANCE

ETL, Class 2, Damp Rated



TURNBUCKLES (WITH POWER FEED CONNECTORS SOLD SEPARATELY)

Product	LLT	4RD	Finish
	LLT Lazer Line Turnbuckle	2RD 2" Round Canopy (Sold in Pairs) 4RD 4" Round Canopy 4R2 4" Round Canopy with 2 Turnbuckles (Sold as One Canopy with Turnbuckles) 4R3 4" Round Canopy with 3 Turnbuckles (Sold as One Canopy with Turnbuckles)	WH White BK Black

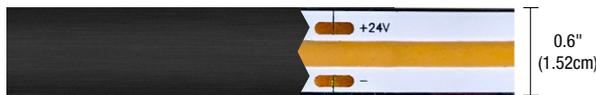
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<p>STATIC WHITE</p>  <p>24KZ - 2400K Amber White</p>  <p>27KZ - 2700K Very Warm White</p>  <p>30KZ - 3000K Warm White</p>  <p>35KZ - 3500K Neutral White</p>  <p>40KZ - 4000K Cool White</p>	<p>STATIC COLOR</p>  <p>RZ - Red</p>  <p>BZ - Blue</p>  <p>GZ - Green</p>  <p>AZ - Amber</p>  <p>30KZ - 3000K (With diffusing lens)</p>	 <p>2K6K - 2000K-6500K Tunable White (5W only)</p>  <p>RGB - Red, Green and Blue (5W only)</p>  <p>RGBW - (6W, Uplight Only. Use diffusing lens for pixelation reduction.)</p>  <p>RGBTW - (5W5, Uplight Only)</p>  <p>RGBTW - (With diffusing lens for pixelation reduction.)</p>
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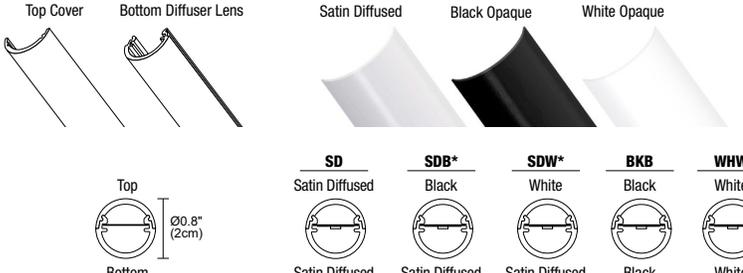
LAZER LINE STAINLESS STEEL TAPE

0.6" Stainless Steel Tape Only.

Product	Length in Feet	Finish
LZ.6	60FT	WH
LZ.6 Lazer Line 0.6" Stainless Steel Tape Only		
	10FT	WH White
	20FT	BK Black
	40FT	
	60FT	

Top Cover Bottom Diffuser Lens

Satin Diffused Black Opaque White Opaque



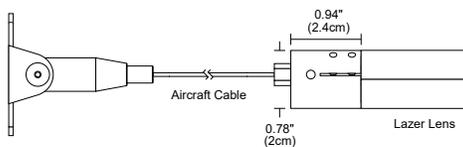
SD Satin Diffused **SDB*** Black **SDW*** White **BKB** Black **WHW** White

Top: $\varnothing 0.8"$ (2cm) Bottom

OPTIONAL LENSES

0.8" Diameter lenses easily snap into place.

Product	Length in Feet	Finish
LZ.8-DL	4FT	SD
LZ.8-DL Lazer Line 0.8" Lens		
	8FT	
SD	Satin Diffused (Bottom & Top Pieces)	
SDB	Satin Diffused & Black Opaque	
SDW	Satin Diffused & White Opaque	
BKB	Black (Bottom & Top Pieces Black Opaque Lens)*	
WHW	White (Bottom & Top Pieces White Opaque Lens)*	
*No light output		



Example using Liberty Link

LIBERTY LINK

Liberty Link has the skill to halt laser lines in mid-flight, weaving, intersecting, and reshaping the ambiance. Lazer Lens (above) required. Add the diffused lens to tailor your design for a captivating ambient glow, or use the opaque lenses to give the illusion of the Lasers starting and stopping midair. Add to the end of the Lazer Line steel tape only, not for power feed, 30 ft lazer tape feed from one end only max a 3 watt. 20ft at 5 watts.

Product	Length in Feet	Finish
LZ.6	LIB	40
LZ.6 Lazer Line 0.6" LIB Liberty Link 40FT		
		WH White
		BK Black

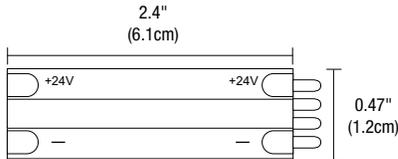
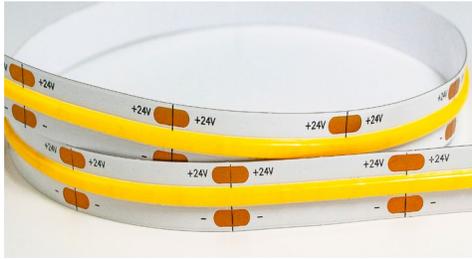
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LED LAZER STRIP - USE FOR UP OR DOWN LIGHT

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LS3, LS5 LED LAZER STRIP

High efficiency LED Lazer Strip with high CRI 92+ LEDs, offering superior color rendering and enhanced color. The remote phosphor allows for clean and uninterrupted illumination without the need for a diffuser to eliminate pixelation. Flexible copper strip with optically clear protective coating, and industrial strength 3M™ tape backing.

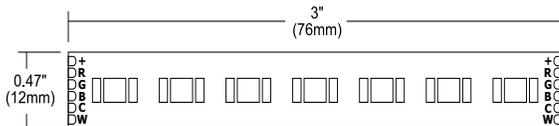
Maximum length if fed from one end only
 LS3: 30', LS5: 20'
Maximum length if fed from both ends
 LS3: 60', LS5: 40'

STATIC WHITE/MONOCHROMATIC COLORS

System	Type	Voltage	Length in Feet	Color Temperature	
LS3	PIN-6A	24V	1-20	35KZ	
LS3	3W LED Lazer Strip 3.3 Watts/ft	PIN-6A 6 Amp Pin	24V 24 Volt	1-30 (LS3) 1-20 (LS5)	24KZ 2400K Amber White RZ Red 27KZ 2700K Very Warm White BZ Blue 30KZ 3000K Warm White GZ Green 35KZ 3500K Neutral White AZ Amber 40KZ 4000K Cool White
LS5	5W LED Lazer Strip 4.4 Watts/ft				
LS3-ARC	Lazer Strip Arc Diffused Lens, 3.3 Watts/ft				
LS5-ARC	Lazer Strip Arc Diffused Lens, 4.4 Watts/ft				

TUNABLE WHITE & RGB

System	Type	Voltage	Length in Feet	Color Temperature	
LS5	PIN	24V	1-20	2K6K	
LS5	5W LED Lazer Strip 4.4 Watts/ft	PIN Pin Connector	24V 24 Volt	1-20	2K6K Tunable White 2000K-6500K RGB Red, Green and Blue



RGBTW LED STRIP

PureEdge Pure Smart **TruColor™** technology uses five channels of tunable LEDs, composed of **RGBTW** red, blue, green, and Tunable White (**1500K-6500K**). With our precision-engineered, proprietary color mixing, we produce one of the widest, most accurate spectrums available, giving our customers access to the warm glow of the sunset (1500K-2400K golden hour) to the pure white light of the mid-day sun (5700K) and everything in between. Requires WiZ or DMX power supplies and controls.

*Available as Indirect (Uplight) Only

Maximum length if fed from one end only
 S5W5 – Pure Smart™ WiZ Pro: 40 ft, DMX: 20ft
Maximum length if fed from both ends
 S5W5 – Pure Smart™ WiZ Pro: 20 ft, DMX: 10ft

System	Type	Voltage	Length in Feet	Color Temperature
S5W5	PIN	24V	16	RGBTW
S5W5	5 watts RGB & 5 watts Tunable White	PIN Pin Connector	24V 24 Volt	1-20 1' increments up to 20'* RGBTW Red, Green, Blue and Tunable White 1500K-6500K

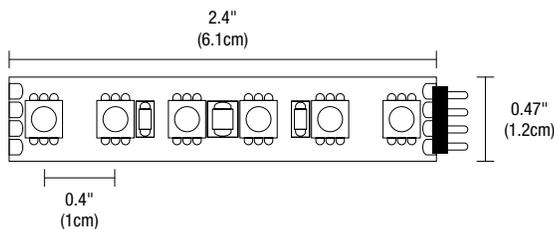
SS6 RGBW LED SOFT STRIP

Provides color effects with Red, Green, Blue and White LEDs. Flexible copper strip with optically clear protective coating, and industrial strength 3M™ tape backing. Compatible with DMX controls and Power Feed Connector (sold separately).

*Available as Indirect (Uplight) Only

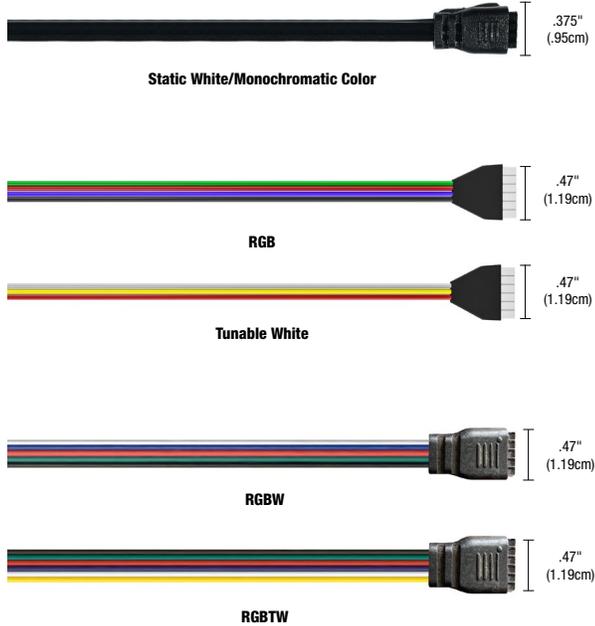
Maximum length if fed from one end only
 SS6 - 16'
Maximum length if fed from both ends
 SS6 - 32'

System	Type	Voltage	Length in Feet	Color Temperature	
SS6	PIN	24V	16	RGB20K	
SS6	6W LED Soft Strip	PIN Pin Connector	24V 24 Volt	1-16 1' increments up to 16'	RGB20K Red, Green, Blue + White 2000K RGB27K Red, Green, Blue + White 2700K RGB30K Red, Green, Blue + White 3000K RGB35K Red, Green, Blue + White 3500K RGB40K Red, Green, Blue + White 4000K



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LED STRIP ACCESSORIES



POWER FEED CONNECTORS (REQUIRED)

Female power feed connector cord conducts power from the power supply to the male end of the LED strip.

STATIC WHITE/MONOCROMATIC COLORS

System	Type	Length in Inches	Type
LS	PFE	12IN	6A
LS Lazer Strip	PFE Power Feed Connector Cord	12IN 12 Inches	6A 6 Amp

RGB & TUNABLE WHITE

System	Type	Length in Inches	Color Temperature
LS	PFE	12IN	RGB
LS Lazer Strip	PFE Power Feed Connector Cord	12IN 12 Inches	RGB Red, Green, & Blue TW Tunable White

RGBW & RGBTW

System	Type	Length in Inches	Color Temperature
SS	PFE	12IN	RGBTW
SS Soft Strip	PFE Power Feed Connector Cord	12IN 12 Inches	RGBW Red, Green, Blue & White RGBTW Red, Green, Blue & Tunable White

PIN CONNECTORS

Extra soldering pin connectors. Male only.

STATIC WHITE/MONOCROMATIC COLORS

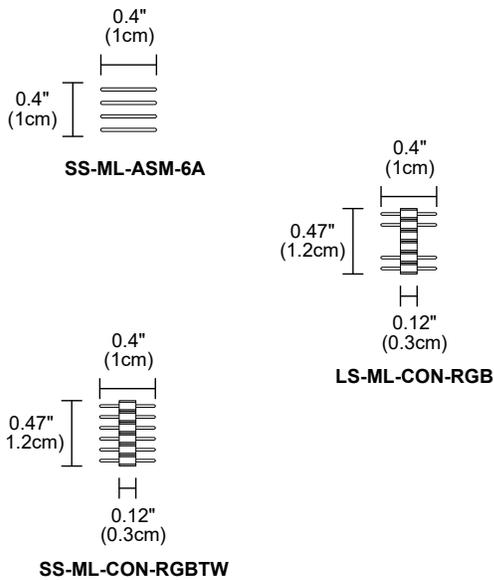
System	Product	Type
SS	ML	ASM-6A
SS Soft Strip	ML Male Connector	ASM-CON Male 6 Amp Connector

RGB & TUNABLE WHITE

System	Product	Type	Color Temperature
LS	ML	CON	RGB
LS Lazer Strip	ML Male Connector	CON Connector	RGB Red, Green & Blue

RGBW & RGBTW

System	Product	Type	Color Temperature
SS	ML	CON	RGBTW
SS Soft Strip	ML Male Connector	CON Connector	RGBW Red, Green, Blue & White RGBTW Red, Green, Blue & Tunable White



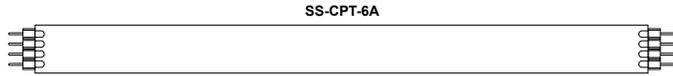
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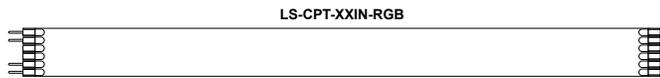
POWER TAPE

Flexible Connector Power Tape.



STATIC WHITE/MONOCROMATIC COLORS

System	Product	Type	Length
SS	CPT	6A	12IN
SS Soft Strip	CPT Connector Power Tape	6A 6 Amp Pin Connector	3IN 3 Inches 6IN 6 Inches 12IN 12 Inches 36IN 36 Inches 96IN 96 Inches 144IN 144 Inches



RGB & TUNABLE WHITE

System	Product	Length	Color Temperature
LS	CPT	12IN	RGB
LS Soft Strip	CPT Connector Power Tape	3IN 3 Inches 6IN 6 Inches 12IN 12 Inches 36IN 36 Inches 96IN 96 Inches 144IN 144 Inches	RGB Red, Green & Blue 2K6K Tunable White



RGBW & RGBTW

System	Product	Length	Color Temperature
SS	CPT	12IN	RGBTW
SS Soft Strip	CPT Connector Power Tape	3IN 3 Inches 6IN 6 Inches 12IN 12 Inches 36IN 36 Inches 96IN 96 Inches 144IN 144 Inches	RGBW Red, Green, Blue & White RGBTW RGB + Tunable White 1500K-6500K

NOMINAL LAMP DATA

	STATIC WHITE LS3 & LS5 LAZER STRIP							
	LS3 (3.3 watts)				LS5 (4.4 watts)			
WATTS PER FOOT								
COLOR TEMPERATURE	24K	27K	30K	35K	24K	27K	30K	35K
LUMENS PER FOOT (lm/ft)	253	269	361	363	318	338	454	456
LUMENS PER WATT (lm/w)	77	82	109	110	72	77	103	104

	TUNABLE WHITE 2K6K LAZER STRIP								
	LS5 (4.4 watts)								
WATTS PER FOOT									
COLOR TEMPERATURE	20K	22K	24K	27K	30K	35K	40K	57K	65K
LUMENS PER FOOT (lm/ft)	197	245	308	355	394	415	350	229	229
LUMENS PER WATT (lm/w)	56	58	87	100	111	59	61	58	67
CRI	81	87	90	90	90	93	92	92	93

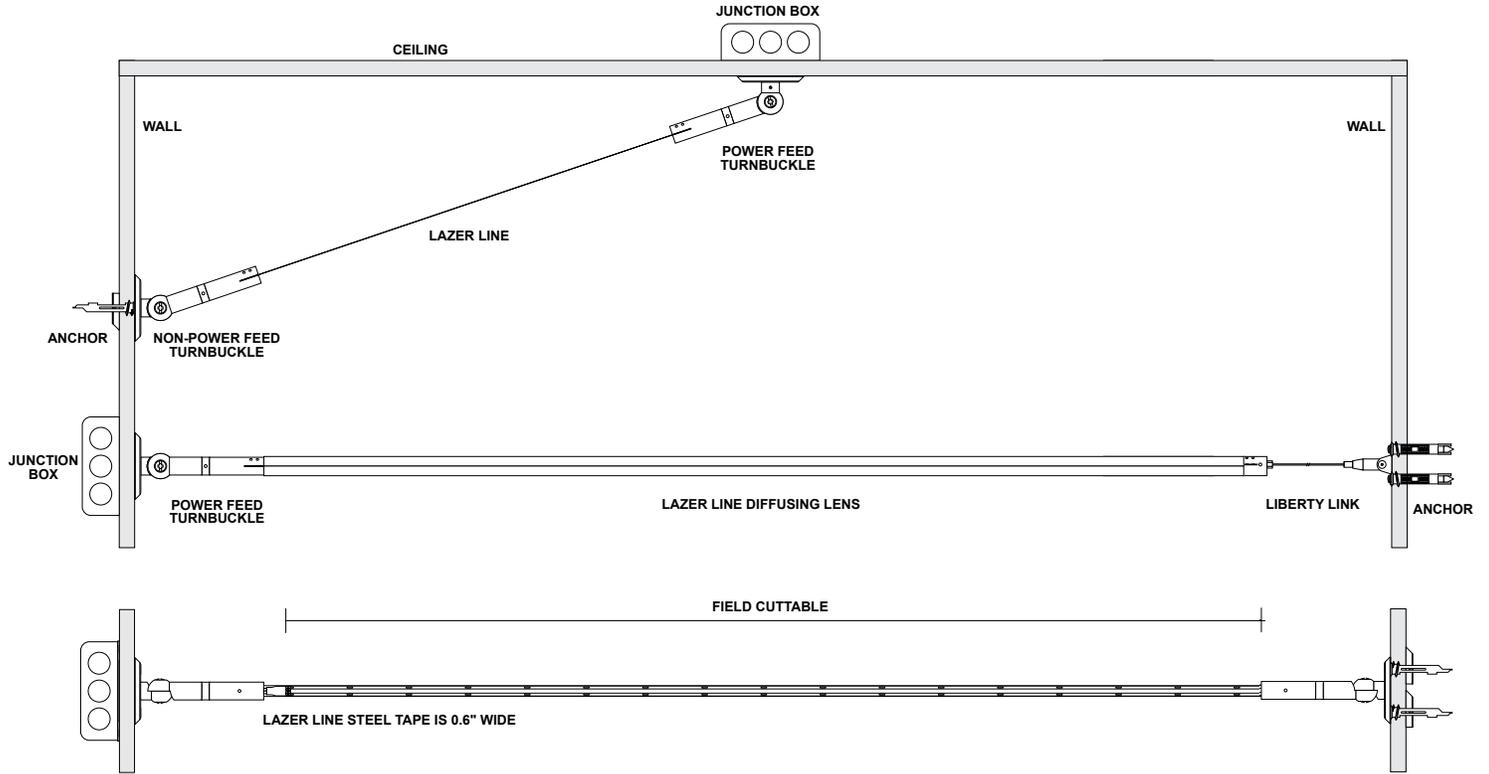
	RGBTW - S5W5 5W RGB & 5W TUNABLE WHITE									
	5W Tunable White									
WATTS PER FOOT										
COLOR TEMPERATURE	20K	22K	24K	27K	30K	35K	40K	57K	65K	
LUMENS PER FOOT (lm/ft)	171	256	311	349	360	380	410	288	265	
LUMENS PER WATT (lm/w)	63	56	71	82	85	87	98	98	111	
CRI	92	94	95	95	96	97	97	92	90	
Duv	-0.004	-0.0012	-0.0034	-0.0058	-0.0055	-0.0033	-0.0014	-0.0049	-0.0063	
Rf	91	93	94	94	95	94	94	92	90	
Rg	105	101	103	105	104	102	100	102	103	
R9	90	90	90	94	97	97	91	81	70	
R13	92	94	95	95	94	96	99	90	87	
R15	99	99	99	98	97	97	97	89	85	
WATTS/FOOT	2.7	4.55	4.35	4.25	4.25	4.35	4.2	2.95	2.4	

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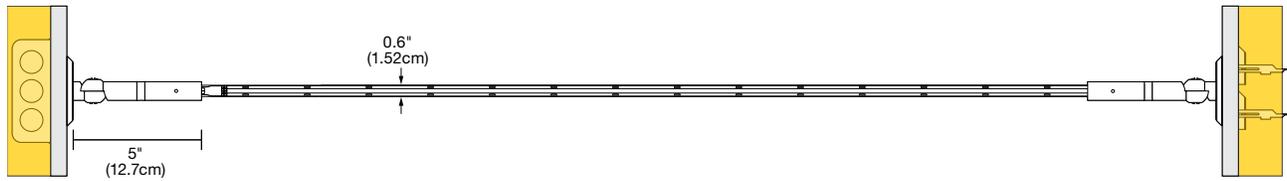
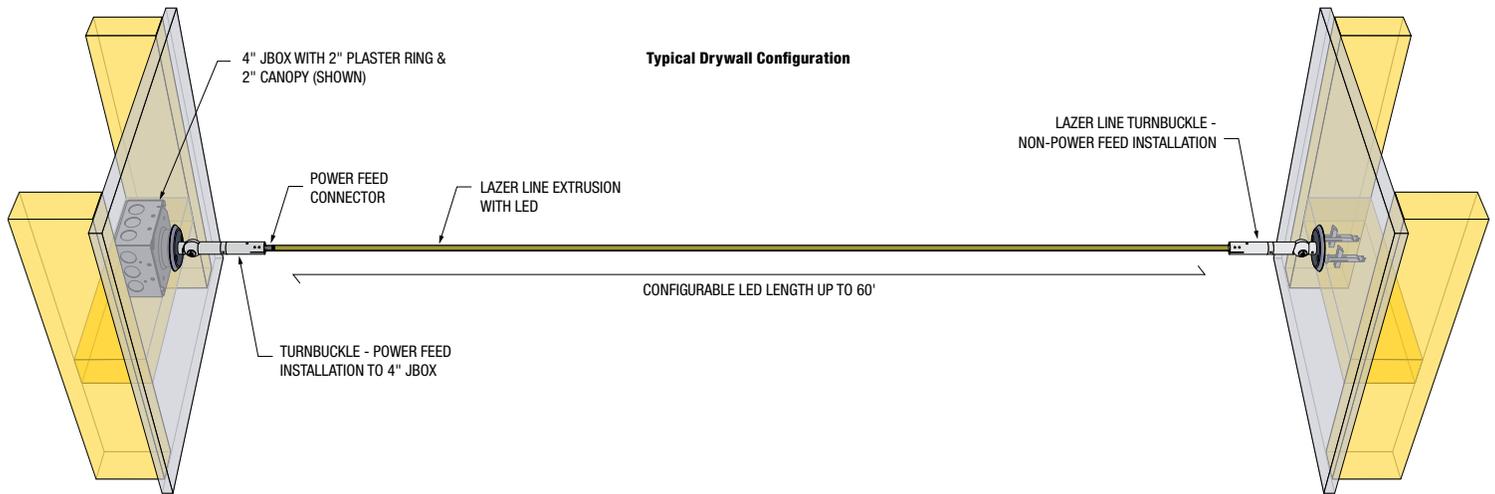
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LAZER LINE STEEL TAPE IS 0.6" WIDE



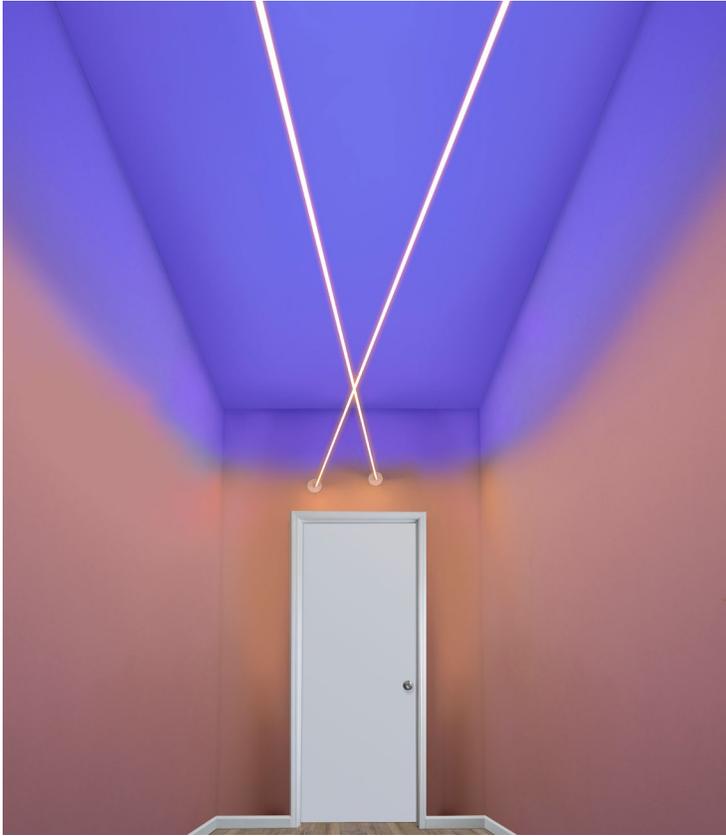
TURNBUCKLE - POWER FEED INSTALLATION

TURNBUCKLE - NON-POWER FEED INSTALLATION (IF APPLICABLE)

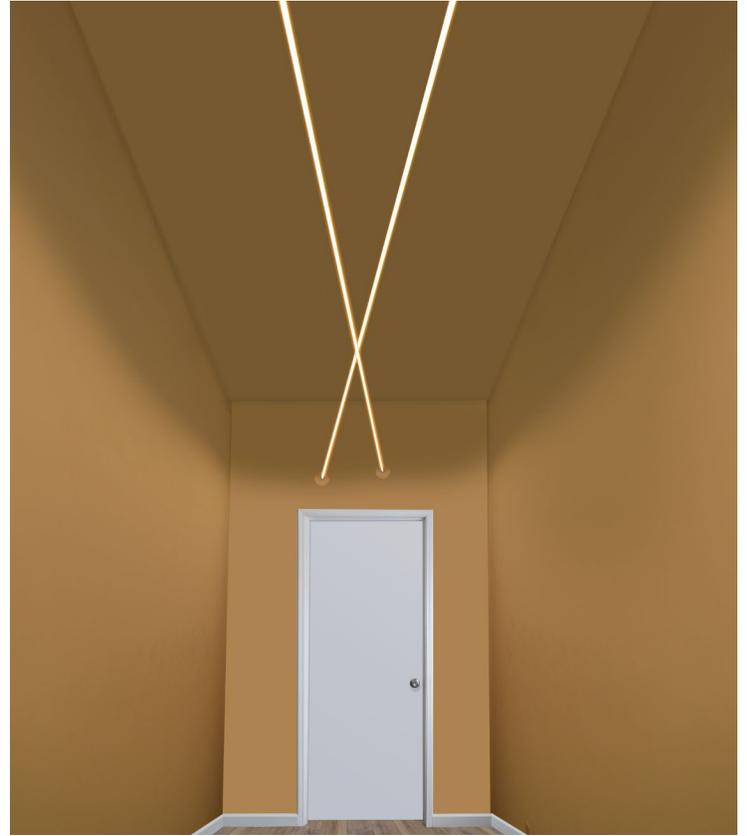
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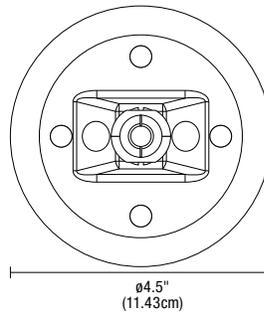
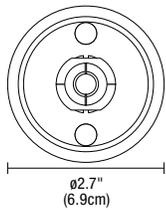
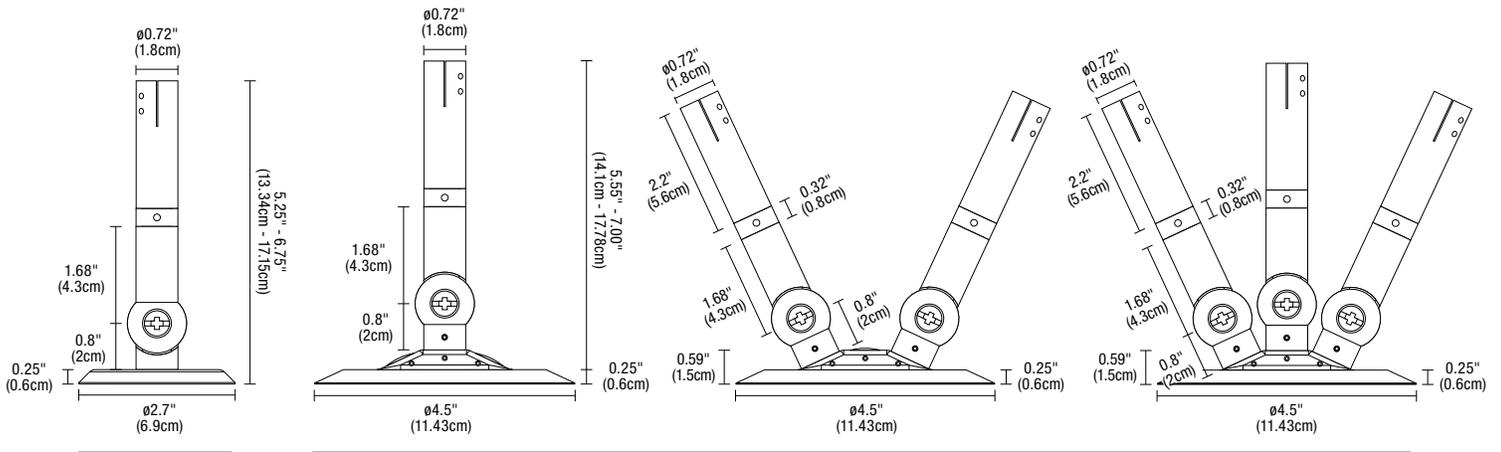
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LAZER LINE UP/DOWN (RGB UP LIGHT, DOWN 27K)



LAZER LINE DOWN (27K)



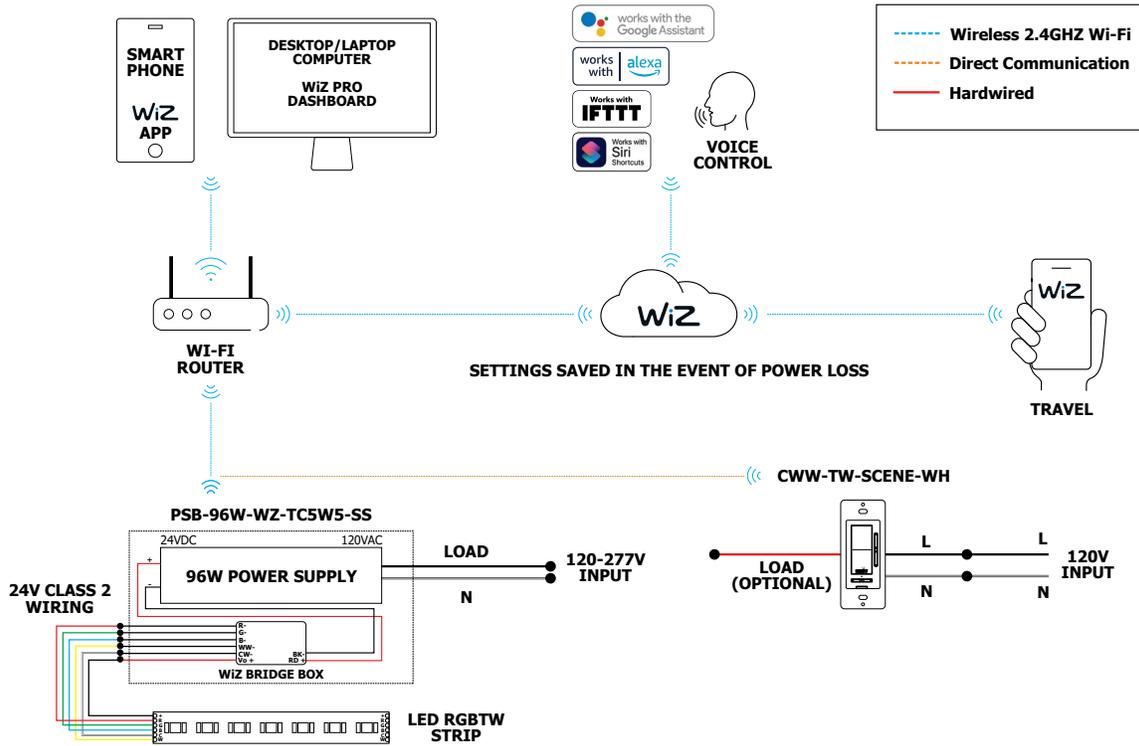
4RD, 4R2 & 4R3 SHARE SAME CANOPY

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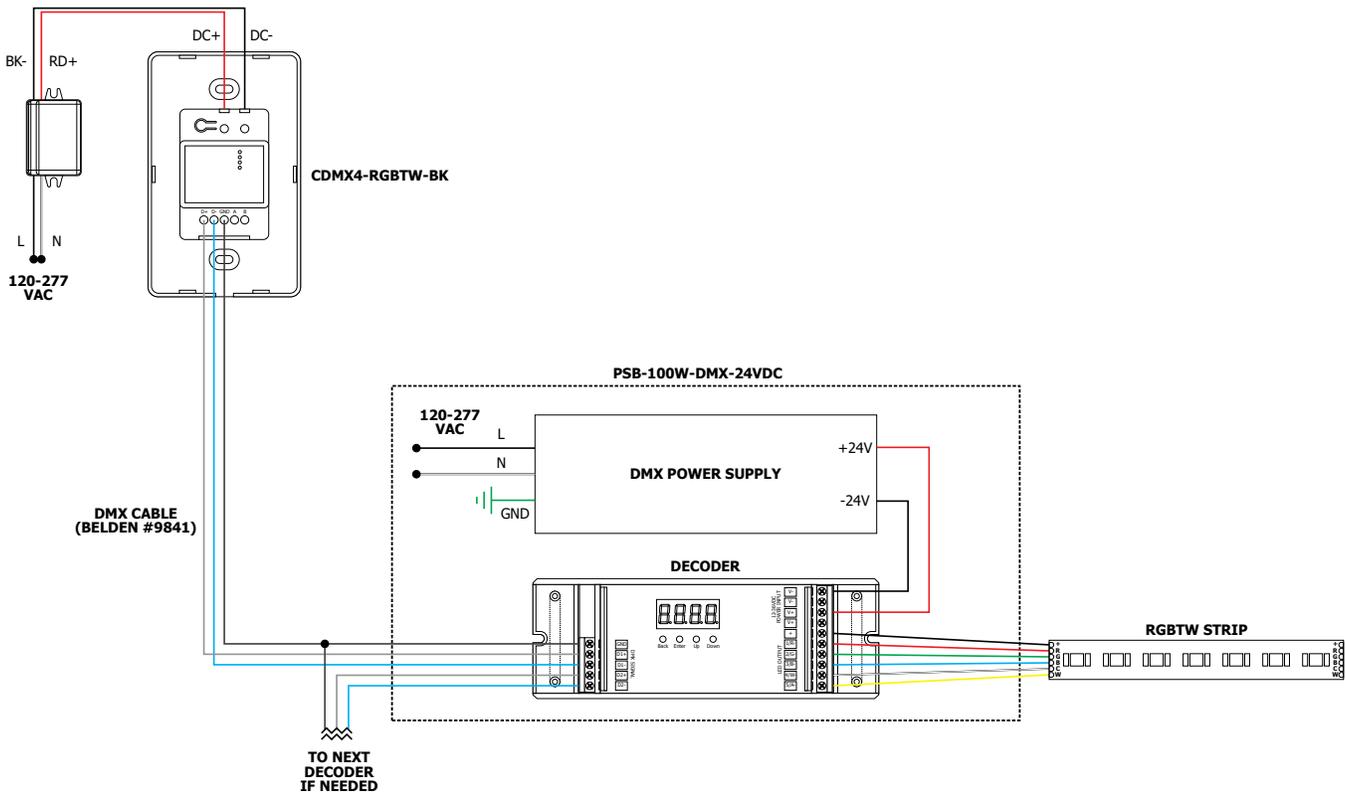
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RGBTW WIRING DIAGRAM



RGBTW WIRING DIAGRAM



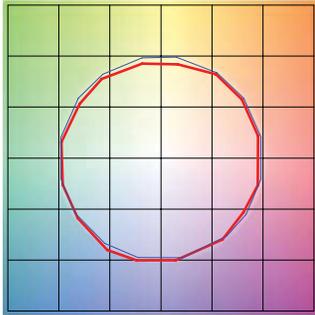
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SUSPENSION TM30 DATA

SUSPENDED LED LIGHTING SYSTEM, 24VDC REMOTE POWER SUPPLY

TM-30-15 DATA: The data below is for Lazer Strip bare LED Soft Strips. 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.

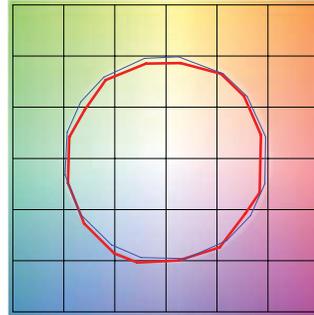
2400K | Rf: 91.2 | Rg: 96.8
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	92.0	-2.4%	1.5%
2	94.7	-2.1%	0.0%
3	95.4	-1.9%	-0.1%
4	88.7	-6.7%	-3.1%
5	92.8	-5.6%	1.0%
6	92.7	-3.4%	3.4%
7	89.9	-4.3%	4.1%
8	92.4	-1.4%	4.4%
9	89.0	-0.6%	5.8%
10	88.9	0.4%	6.2%
11	89.7	4.0%	5.4%
12	92.6	3.0%	-0.7%
13	90.9	1.1%	-7.0%
14	89.9	0.5%	-5.8%
15	92.1	-3.2%	0.1%
16	88.9	-1.7%	-6.3%

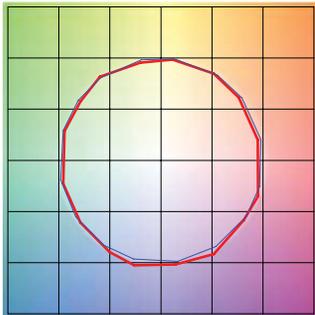
2700K | Rf: 87.7 | Rg: 96.1
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	88.0	-4.3%	2.6%
2	91.6	-2.4%	2.0%
3	93.7	-1.4%	1.9%
4	88.9	-5.6%	-3.1%
5	92.3	-5.5%	-0.5%
6	92.9	-3.5%	0.1%
7	84.5	-7.5%	4.6%
8	90.8	-3.0%	4.4%
9	84.5	-1.3%	8.3%
10	83.9	2.0%	9.8%
11	87.2	5.3%	7.1%
12	89.2	5.4%	-2.6%
13	88.7	0.3%	-7.8%
14	86.8	1.7%	-9.3%
15	87.6	-5.4%	-1.3%
16	83.6	-3.3%	-9.5%

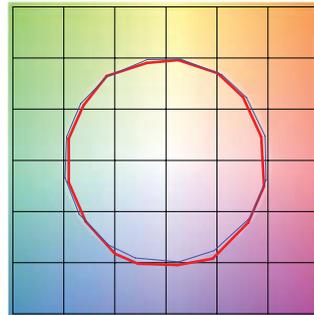
3000K | Rf: 88.1 | Rg: 99.7
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	92.5	-3.1%	0.3%
2	93.3	-2.3%	1.9%
3	90.9	-0.8%	3.9%
4	94.3	-1.1%	1.4%
5	92.5	-2.6%	1.5%
6	96.4	1.2%	-0.3%
7	92.6	-2.5%	-0.0%
8	96.9	-1.4%	0.2%
9	92.3	-1.8%	4.3%
10	86.6	-0.7%	7.0%
11	86.5	2.4%	8.2%
12	89.8	5.9%	1.7%
13	93.9	2.6%	-2.7%
14	89.4	5.1%	-5.8%
15	90.1	-0.1%	-4.7%
16	86.5	0.3%	-9.7%

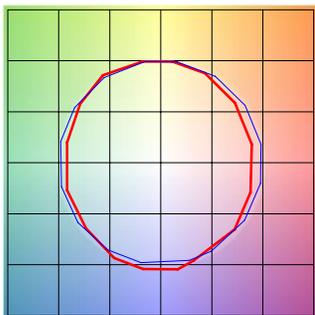
3500K | Rf: 86.1 | Rg: 95.5
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	90.8	-3.8%	0.3%
2	92.3	-2.8%	2.1%
3	89.7	-1.0%	4.3%
4	92.6	-1.4%	1.7%
5	91.8	-3.1%	1.3%
6	96.2	0.8%	-0.4%
7	92.9	-3.2%	0.2%
8	94.3	-2.5%	1.5%
9	90.4	-2.5%	5.2%
10	84.3	-1.4%	9.5%
11	83.1	3.5%	9.8%
12	88.2	4.8%	3.4%
13	94.0	2.7%	-2.0%
14	88.7	5.9%	-5.8%
15	88.7	0.7%	-5.9%
16	86.8	-0.7%	-6.7%

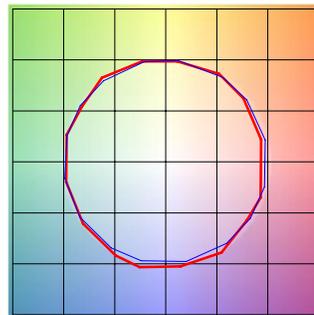
2000K ONLY (2K6K) | Rf: 84.3 | Rg: 96.9
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	80.3	-8.9%	1.7%
2	79.7	-7.0%	7.8%
3	78.9	-2.9%	10.0%
4	89.5	-0.5%	5.1%
5	94.4	0.7%	1.7%
6	92.1	2.4%	-0.3%
7	89.4	-2.4%	-5.9%
8	89.7	-6.4%	-0.2%
9	86.0	-4.9%	4.6%
10	81.8	-3.4%	9.3%
11	83.1	3.3%	9.7%
12	85.8	5.6%	3.3%
13	85.6	6.2%	-12.8%
14	61.7	-1.9%	-19.0%
15	79.7	-3.3%	-12.9%
16	78.1	-7.9%	-10.6%

3000K (2K6K) | Rf: 90.2 | Rg: 101.4
Color Vector Graphic



■ Test ■ Reference

HUE BIN	Rf	GRAPHIC SHIFTS %	
		CHROMA	HUE
1	90.9	-3.8%	1.3%
2	91.7	-1.9%	3.3%
3	88.7	0.7%	5.1%
4	92.4	-1.0%	0.7%
5	92.9	0.9%	1.7%
6	93.1	3.3%	-0.6%
7	91.0	-1.8%	-0.4%
8	97.0	0.2%	-1.1%
9	92.8	-0.5%	3.6%
10	88.3	1.0%	7.0%
11	87.1	3.8%	7.8%
12	87.6	6.5%	-0.3%
13	89.3	3.6%	-6.3%
14	86.1	4.5%	-9.1%
15	91.6	-1.9%	-3.1%
16	83.8	-1.5%	-11.2%

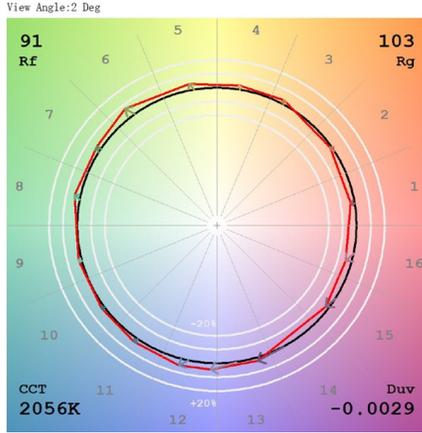
PROJECT	FIXTURE TYPE	DATE
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SUSPENSION TM30 DATA

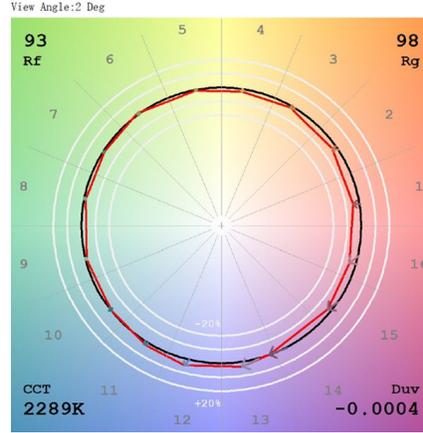
SUSPENDED LED LIGHTING SYSTEM, 24VDC REMOTE POWER SUPPLY

TM-30-15 DATA: The data below is for Lazer Strip bare LED Soft Strips. 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.

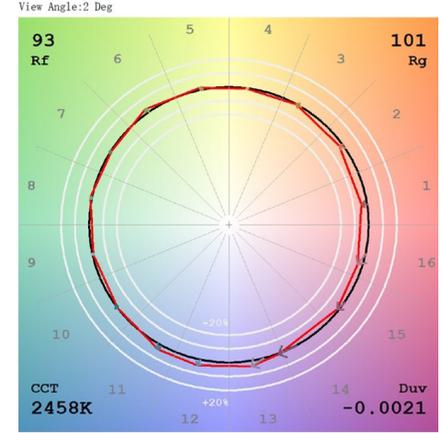
2000K (TruColor™ RGBTW)



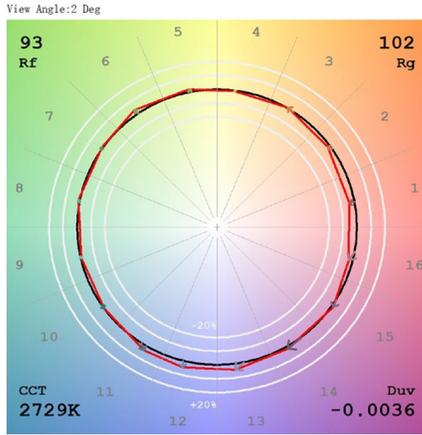
2200K (TruColor™ RGBTW)



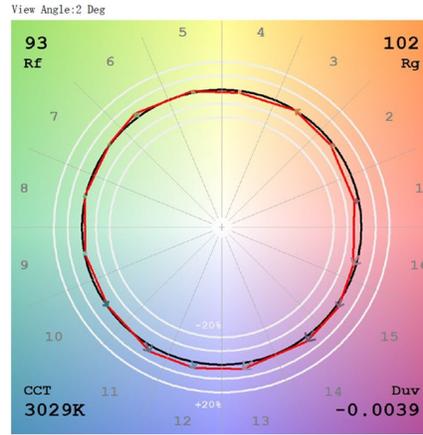
2400K (TruColor™ RGBTW)



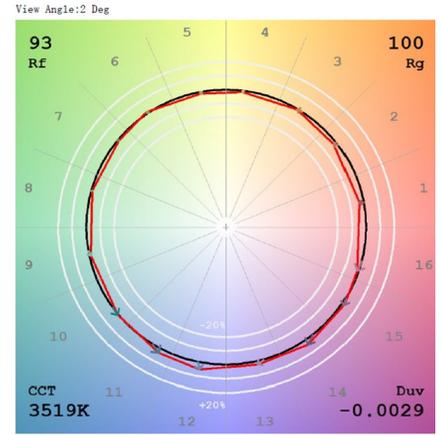
2700K (TruColor™ RGBTW)



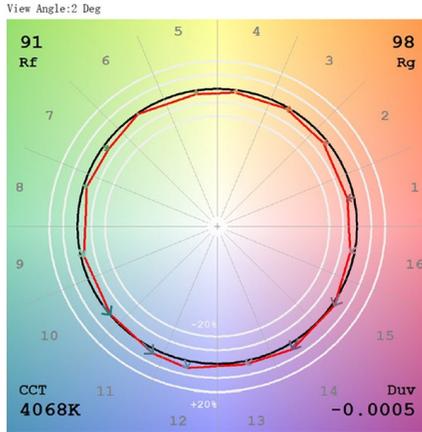
3000K (TruColor™ RGBTW)



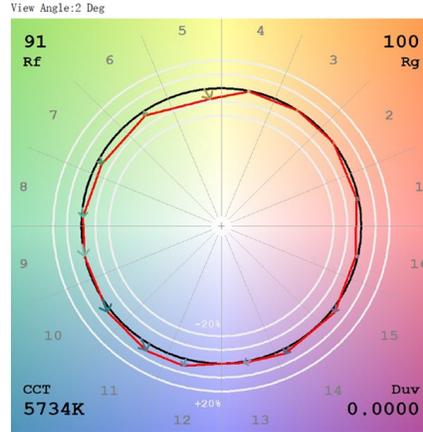
3500K (TruColor™ RGBTW)



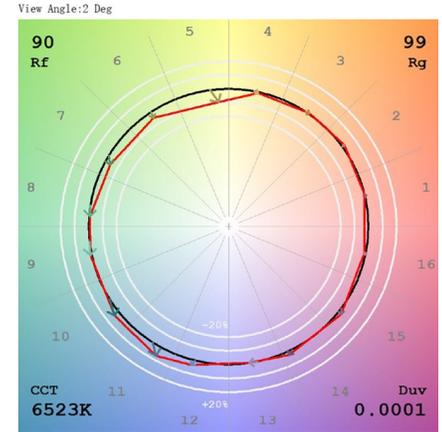
4000K (TruColor™ RGBTW)



5700K (TruColor™ RGBTW)



6500K (TruColor™ RGBTW)



PROJECT	FIXTURE TYPE	DATE
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