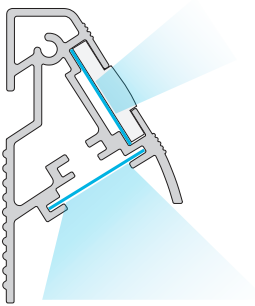


WallGuide™ Duo



SG-WG-DUO: Two Light Tape® lamps

Our WallGuide system is designed to be mounted on the wall to provide navigation illumination for entrance ways and stairs. The system has the ability for direct view and also immersive illumination, as well as dual illumination.

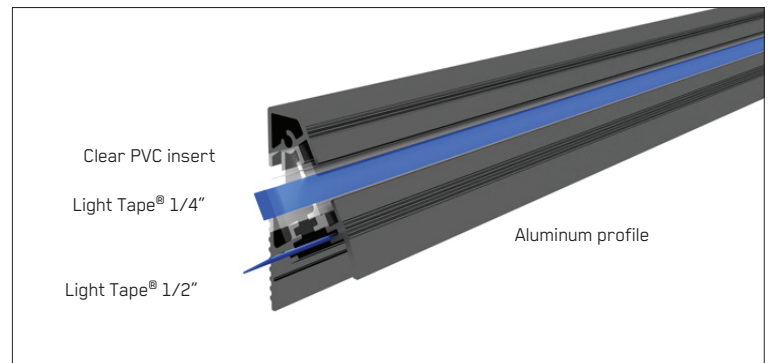
The SG-WG-DUO has one Light Tape® lamp in the bottom slot to provide a long continuous illuminated glow on the floor as a guide into a venue. As well as a Light Tape® top light for a visible guideline. without fear of glare.

The SG-WG-DUO design is recommended for mounting on walls in sections and then feeding one continuous Light Tape® lamp for navigation.

Design Features

- Profile arrives in sections up to 3 meters in length.
- Illuminated by one Light Tape® Electroluminescent lamp.
- Only one electrical connection required at beginning of profile with no termination connection at other end.
- Aluminum profile length +/-3mm.
- Extremely energy efficient: 1/2 a watt per meter
- Screwed into wall and then hung using rear mount channel.
- End caps as well as corner caps provided for transitions.

System and Parts



How to Order

- Part Number: SG-WG-DUO
- For a basic quote, we need the total length of profile needed per entrance or stairway for us to estimate materials and power.
- We also offer a service where we will go through architectural files to determine layout and what is required for the installation.

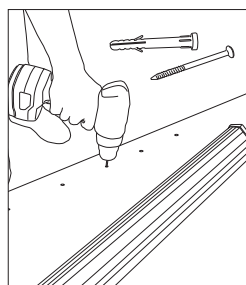
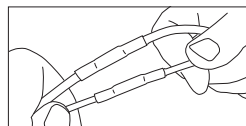
Available Colors



- No glare, completely uniform light with no heat.
- Perfect for high definition laser projection
- 1 watt per meter. 10% of LEDs at same brightness.
- Only 8 milliamps of current per linear meter step.

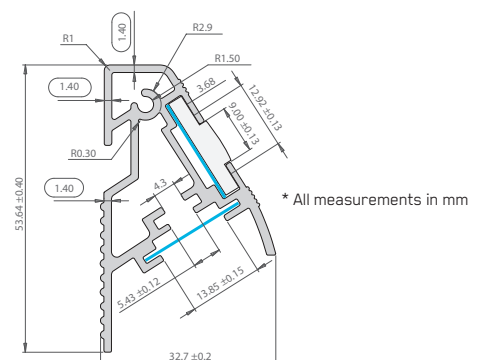
Rapid Installation

- Always use Heat Shrink Tubing Thin Wall, 2:1 Shrink Ratio to seal connections between profile lead and your main wiring.
- To fix profile on surface, we recommend using 1/4 x 2 1/4 screw with nylon anchor every 10cms / 3.93 inches.



For step by step installation process, please refer to our installation manual guide.

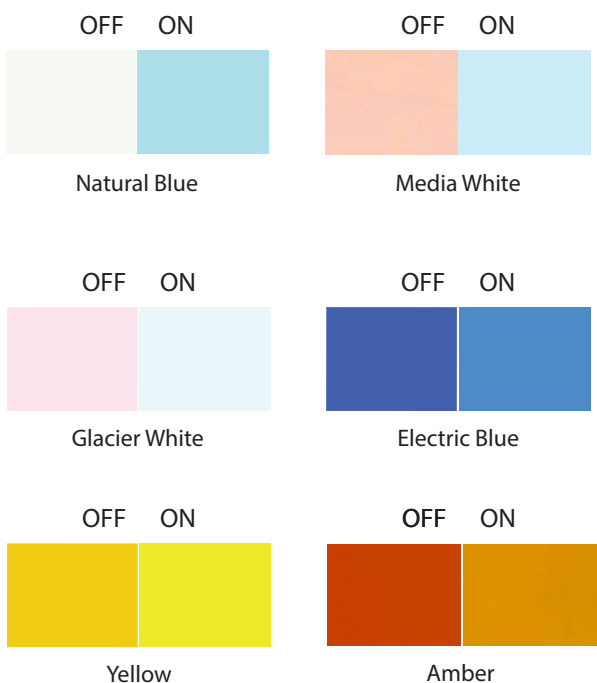
SG-WG-DUO Dimensions



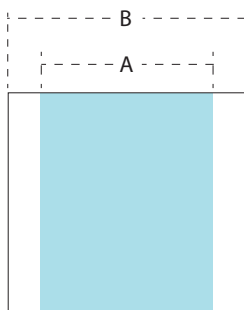
Color Options

Our base colors are Classic Natural Blue and Extreme Blue-Green. These colors appear white when off and colored when illuminated. We then add a filter to produce specific color options. All other colors will remain that color when not illuminated. Please check our website for updated and new colors.

Classic Series

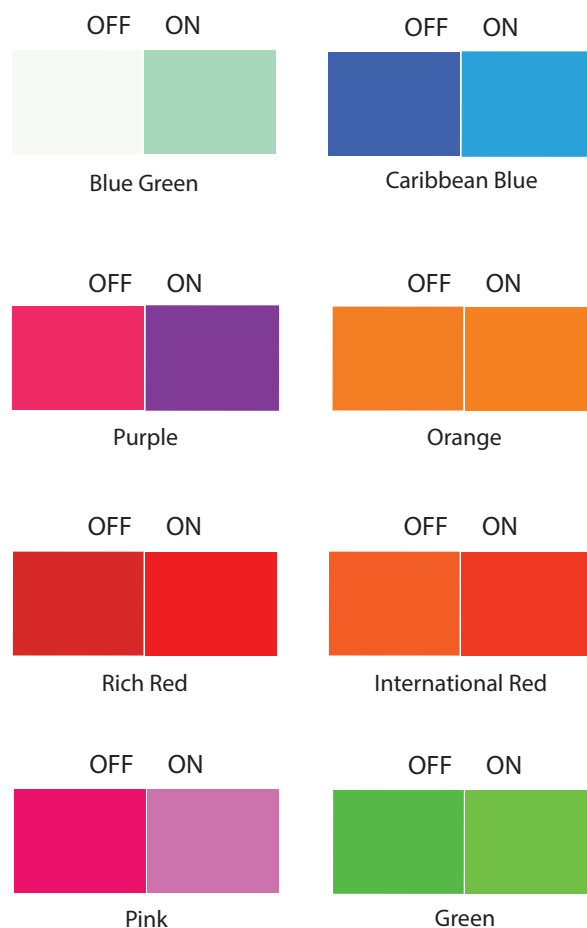


A	B	Inches
6.35mm	19.05mm	0.25



A= Illuminated width
B= Laminated width

Extreme Series

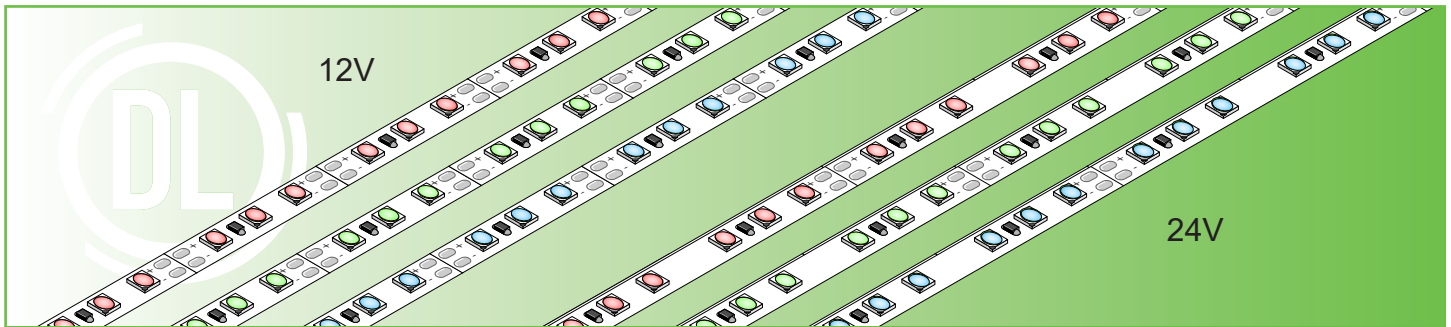


* The colors in this table are simulated and the final product may vary. If an exact color is required, we recommend seeing a physical sample. Custom colors and widths are available, but may be subject to minimum order quantities, set-up fees, and approval testing.



Item #

Project



		DI-12V-BLC	DI-24V-BLC
Voltage		12VDC	24VDC
Wattage		2.93/ft	2.93/ft
Cut Points		1 in.	2 in.
Lumens	Red	29/ft	89/ft
	Green	187/ft	192/ft
	Blue	43/ft	45/ft
Max. Run¹		20 ft.	40 ft.
LED Chips		36/ft	36/ft
Colors		Red, Green, Blue	
Dimmable		Yes	
Dimensions		0.32 x 0.1 in. (W x H)	
Environment²		Indoor / Damp Location	
Certification		UL Listed 2108	
Warranty		12-Year Warranty	

SKU Builder

DI

Voltage

12V

24V

Model

BLC

Color

RD

GR

BL

Length

016

100

Example: DI-12V-BLCGR-016 = Diode LED, 12 Volt, BLAZE™ COLORS, Green, 16.4 foot spool.

SPECIFICATIONS

- LED Chip Type: 2835 GuangMu Chip
- LED Chip Beam Angle: 120°
- Mounting³: 3M™ 55236 Adhesive Backing
- Connections⁴: 2.5 inch hard-wire lead: 20/2 AWG
- Ambient Temp⁵: -4 ~ 122°F (-20 ~ 50°C)
- Operating Temp⁶: -4 ~ 176°F (-20 ~ 80°C)

COMPLIANCE & REGULATORY APPROVALS

Safety

- UL Listed 2108 Low Voltage Lighting System / Low Voltage Luminaire. UL 1598 / CSA 250.0-08, UL 8750. UL 879 / CAN/CSA-C22.2 no. 207-M89. Certified for United States and Canada. File # E469769.
- UL Listed Field Cuttable.
- UL Recognized Component - Sign Accessories. Available in UL Sign Components Manual (SAMS Manual). File # E469770.
- CE & EMC Compliant: Verification No. GZEM141200683705V
- Approved for storage areas of clothes closets per NEC 410.16.A.3 and 410.16.C.5

Environmental

- RoHS Compliant: Verification No. CANEC1610091501

Performance

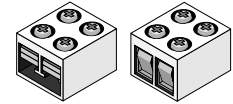
- LED chip data measured in accordance to IES LM-80-08.
- Photometric & Colorimetry data measured in accordance to IES LM-79-08, in Elemental LED's Innovation Lab.

ADDITIONAL ACCESSORIES

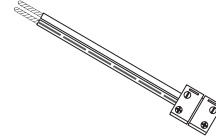
Accessories listed below fully support our LED Light Tape product line.

TERMINAL BLOCK CONNECTOR

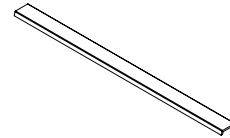
Tape Light Connector



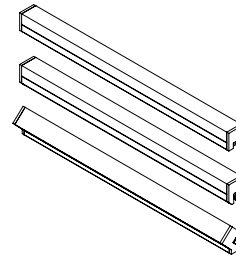
CLICKTIGHT® Tape Light Connectors



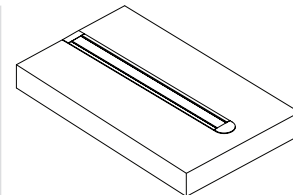
TAPEGUARD® LED Light Cover



CHROMAPATH® Builder Channels



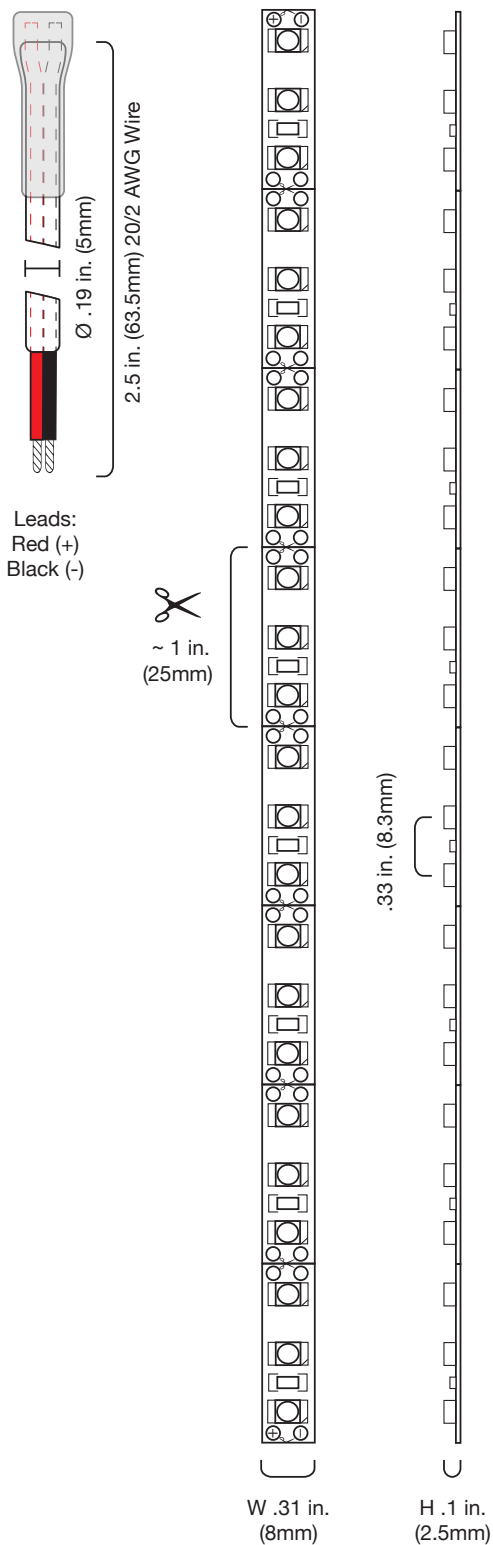
CHROMAPATH® Bundle Channels



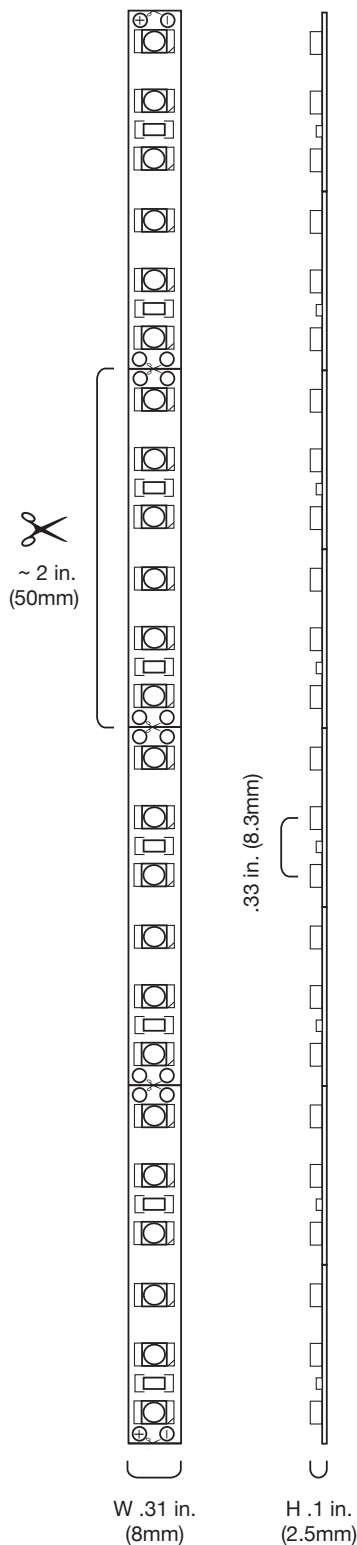
1. Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length.
2. Do not install in environment where LED chips are exposed to direct sunlight as damage to the phosphor will occur. NEC definition of damp location: Locations protected from weather and not subject to saturation with water or other liquids but subject to moderate degrees of moisture. Examples of such locations include partially protected locations under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, some barns, and some cold-storage warehouses.
3. Ideal tape application temperature range is 70°F to 100°F (21°C to 38°C). Initial tape application to surfaces at temperatures below 50°F (10°C) is not recommended because the adhesive becomes too firm to adhere readily. However, once properly applied, low temperature holding is generally satisfactory.
4. Wire leads and accessories are not rated for in-wall installation unless otherwise noted. Attached wire leads and connections are field-cuttable.
5. Do not install product in an environment outside the listed ambient temperature. Exceeding the maximum ambient temperature may damage LED chips, reduce the total lamp life, lumen output, and/or adversely impact color consistency.
6. Operating temperature is measured according to the minimum and maximum ambient temperature environment.

MECHANICAL DIAGRAM

BLAZE™ COLORS 12V



BLAZE™ COLORS 24V

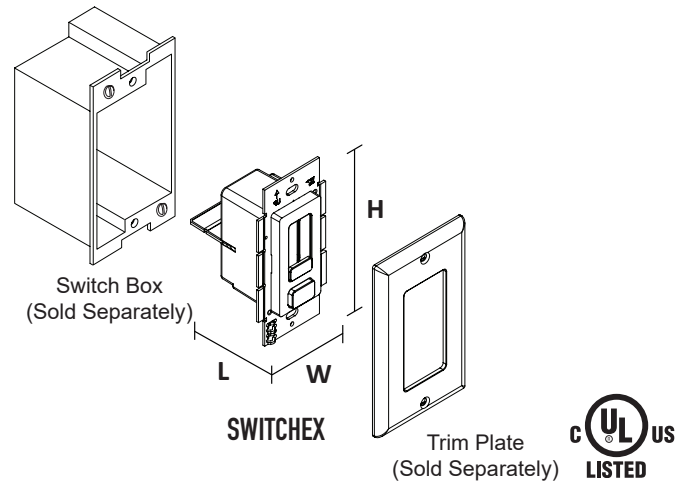
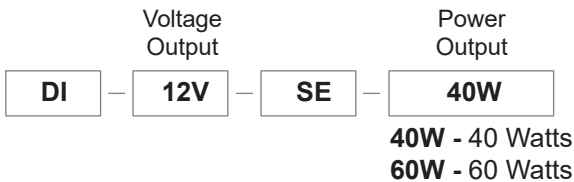


LED DRIVERS (Required)

The following Listed LED Drivers are recommended to meet NEC code when installed according to specifications.

SWITCHEX® DRIVER + DIMMER SWITCH

SWITCHEX combines an LED driver and LED dimmer switch into a single integrated unit. Fits into standard switch boxes.

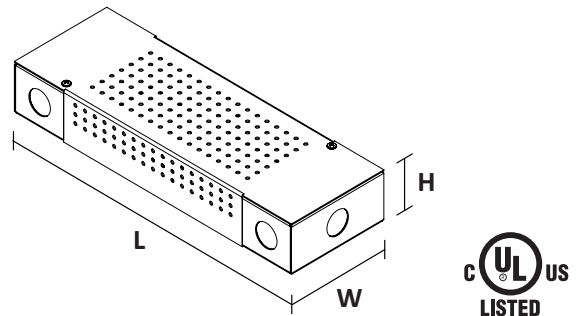
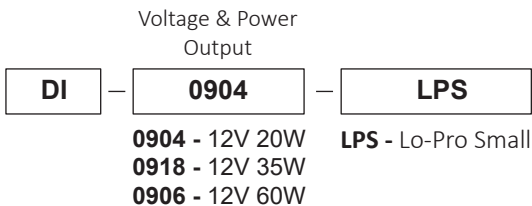


SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-12V-SE-40W			
DI-12V-SE-60W			

Fits in Standard Switch Box

LO-PRO® JUNCTION BOX & DRIVER COMBO - 12V CONSTANT VOLTAGE LED DRIVER

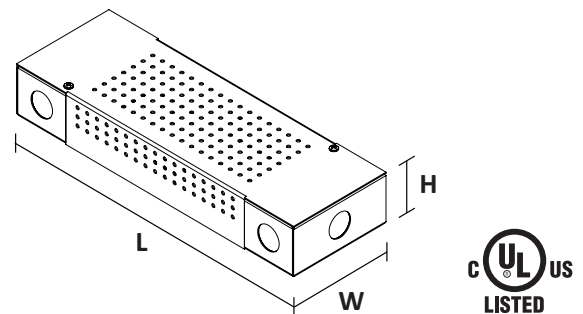
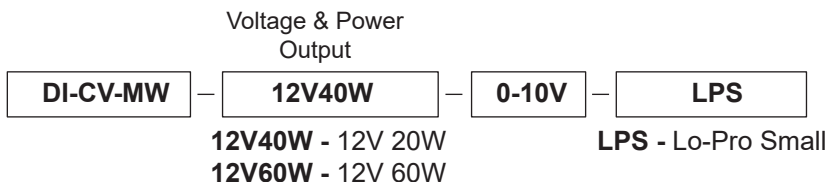
Use Constant Voltage Drivers to power your low voltage tape light. Compatible with Standard 120VAC On/Off Switches, REIGN® 12-24V Low Voltage Dimmers, TOUCHDIAL™ Control System, DMX Decoders, and PWM Controls.



SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-0904-LPS			
DI-0918-LPS	11.25 in.	3.75 in.	1.90 in.
DI-0906-LPS			

LO-PRO® JUNCTION BOX & DRIVER COMBO - 12V COMMERCIAL GRADE 0-10V LED DIMMABLE DRIVER

Compatible with 0-10V controls and dimmer systems.



SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-CV-MW-12V40W-0-10V-LPS			
DI-CV-MW-12V60W-0-10V-LPS	11.25 in.	3.75 in.	1.90 in.

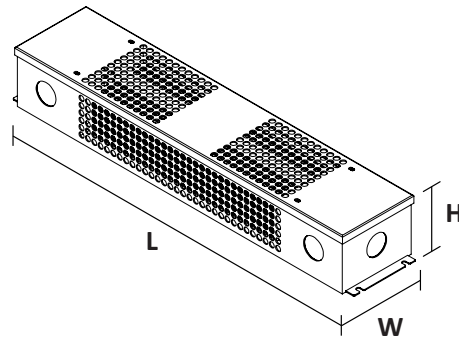
The following Listed LED Drivers are recommended to meet NEC code when installed according to specifications.

OMNIDRIVE® 2 ELECTRONIC DIMMABLE LED DRIVER

OMNIDRIVE 2 features a zero minimum load and 100-5% dimming range. Compatible with Forward Phase and Reverse Phase Dimmers.

Voltage & Power Output		
DI	OD2	12V24W
12V24W - 12V 24W		
12V60W - 12V 60W		
12V120W - 12V 120W		
12V200W - 12V 200W		

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-OD2-12V24W	13.75 in.	3.00 in.	1.60 in.
DI-OD2-12V60W	13.75 in.	3.00 in.	1.60 in.
DI-OD2-12V120W	15.00 in.	3.10 in.	2.40 in.
DI-OD2-12V200W	16.10 in.	3.40 in.	2.40 in.

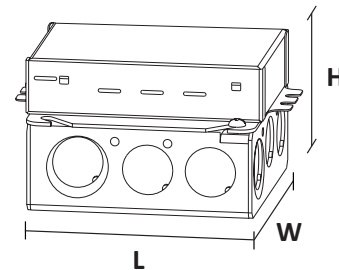


LUTRON® Hi-lume 1% LED DIMMABLE DRIVER

Hi-lume 1% LED driver has a minimum load of 5W and Dims from 100-1%.

Voltage & Power Output		3-Wire or 2-Wire Dimmers
DI-DM	12V40W	L3D
12V40W - 12V 40W		L3D - Lutron Hi-lume 1% EcoSystem /3-Wire Voltage LED Driver
		LTE - Lutron Hi-lume 1% 2-Wire LED Driver (120V Forward Phase Only)

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-DM-12V40W-L3D	4.89 in.	4.00 in.	2.62 in.
DDI-DM-12V40W-LTE			

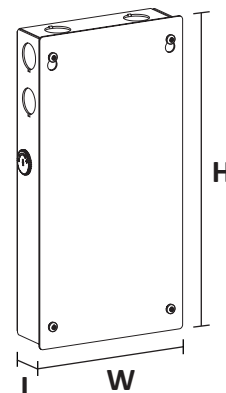


LUTRON® Hi-lume Premier 0.1% LED DIMMABLE DRIVER

Hi-Lume Premier 0.1% LED driver has a minimum load of 5W and Dims from 100-0.1%.

Voltage & Power Output		
DI-DM	24V96W	L3D
12V40W - 12V 40W		L3D - Lutron Hi-lume Premier 0.1% EcoSystem/3-Wire LED Driver

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-DM-24V96W-L3D	5.50 in.	2.20 in.	10.50 in.



LED DRIVERS (Required)

SPECIFICATION SHEET

The following Listed LED Drivers are recommended for compatibility and to meet NEC code when installed according to specifications.

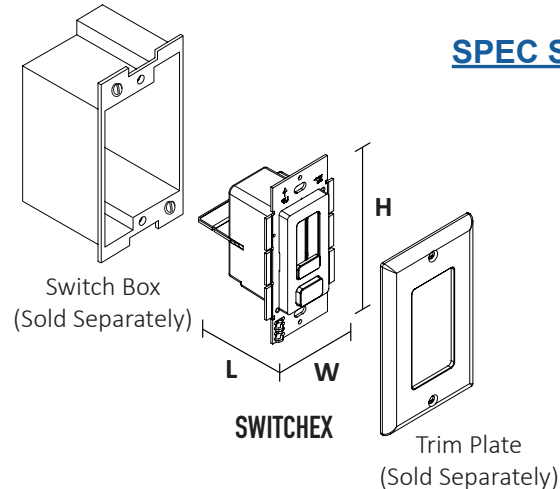
SWITCHEX® DRIVER + DIMMER SWITCH

SWITCHEX combines an LED driver and LED dimmer switch into a single integrated unit. Fits into standard switch boxes.

	Voltage Output		Power Output
DI	24V	SE	60W

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-24V-SE-60W	1.40 in.	2.10 in.	4.10 in.
DI-24V-SE-100W	1.40 in.	2.10 in.	4.10 in.

Fits in Standard Switch Box



[SPEC SHEET](#)

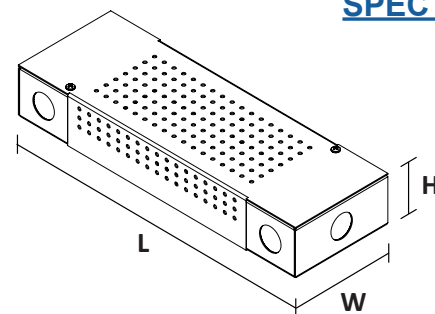


LO-PRO® JUNCTION BOX & DRIVER COMBO - 24V CONSTANT VOLTAGE LED DRIVER

Use Constant Voltage Drivers to power your lighting system. Compatible with Standard 120VAC On/Off Switches, REIGN® Low Voltage Dimmers, TOUCHDIAL™ Control System, DMX Decoders, and PWM Controls.

	Voltage & Power Output	Junction Box
DI	0970	LPS

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-0970-LPS	11.25 in.	3.75 in.	1.90 in.
DI-CV-MW24V60W-277-LPS	11.25 in.	3.75 in.	1.90 in.
DI-CV-MW24V90W-277-LPS	11.25 in.	3.75 in.	1.90 in.
DI-0954-LPL	13.5 in.	4.5 in.	2.37 in.



[SPEC SHEET](#)

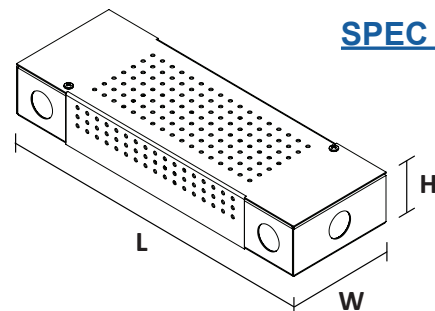


LO-PRO® JUNCTION BOX & DRIVER COMBO - 24V COMMERCIAL GRADE 0-10V LED DIMMABLE DRIVER

Compatible with 0-10V controls and dimming systems.

	Voltage & Power Output		Junction Box
DI-DM	MW24V60W	0-10V	LPS

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-DM-MW-24V60W-0-10V-LPS	11.25 in.	3.75 in.	1.90 in.
DI-DM-MW-24V90W-0-10V-LPL	13.5 in.	4.5 in.	2.37 in.



[SPEC SHEET](#)



LED DRIVERS CONT. (Required)

SPECIFICATION SHEET

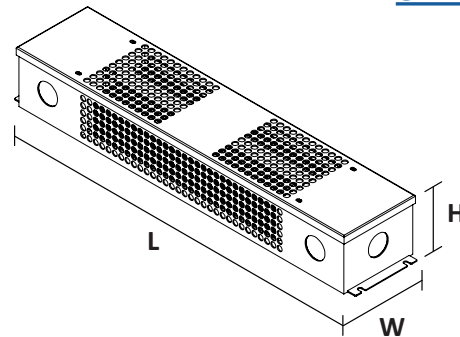
The following Listed LED Drivers are recommended for compatibility and to meet NEC code when installed according to specifications.

OMNIDRIVE® 2 ELECTRONIC DIMMABLE LED DRIVER

OMNIDRIVE 2 features a zero minimum load and 100-5% dimming range. Compatible with Forward Phase and Reverse Phase Dimmers.

Voltage & Power Output		
DI	—	OD2
24V24W		

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-OD2-24V24W	13.75 in.	3.00 in.	1.60 in.
DI-OD2-24V60W	13.75 in.	3.00 in.	1.60 in.
DI-OD2-24V96W	15.00 in.	3.10 in.	2.40 in.
DI-OD2-24V120W	15.00 in.	3.10 in.	2.40 in.
DI-OD2-24V200W	16.10 in.	3.40 in.	2.40 in.



[SPEC SHEET](#)

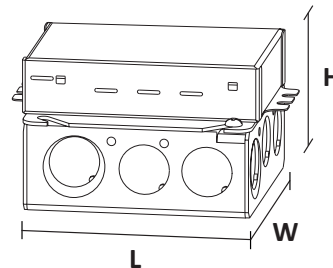


LUTRON® Hi-lume 1% LED DIMMABLE DRIVER

Hi-lume 1% LED Driver has a minimum load of 5W and dims from 100-1%.

Voltage & Power Output		
DI-DM	—	24V40W
3-Wire or 2-Wire Dimmers		
L3D		

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-DM-24V40W-L3D	4.89 in.	4.00 in.	2.62 in.
DI-DM-24V40W-LTE			



[L3D SPEC SHEET](#)

[LTE SPEC SHEET](#)

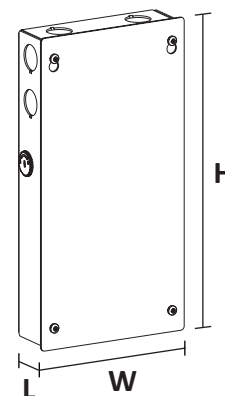


LUTRON® Hi-lume Premier 0.1% LED DIMMABLE DRIVER

Hi-Lume Premier 0.1% LED Driver has a minimum load of 5W and dims from 100-0.1%.

Voltage & Power Output		
DI-DM	—	24V96W
L3D		

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
DI-DM-24V96W-L3D	5.50 in.	2.20 in.	10.50 in.



[SPEC SHEET](#)





BLAZE™ COLORS LED Light Tape

LED DRIVERS (Required)

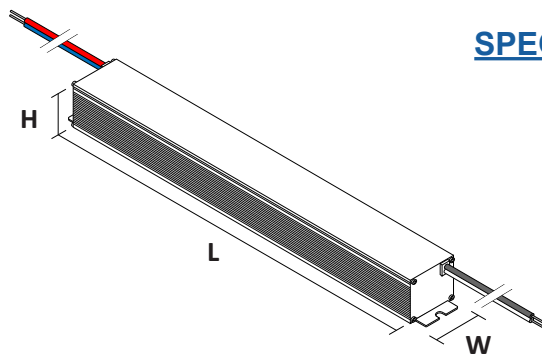
SPECIFICATION SHEET

The following Listed LED Drivers are recommended to meet NEC code when installed according to specifications.

VLM SERIES CONSTANT VOLTAGE DRIVER

Use Constant Voltage Drivers to power your low voltage tape light. Compatible with Standard 120VAC On/Off Switches, REIGN® 12-24V Low Voltage Dimmers, TOUCHDIAL™ Control System, DMX Decoders, and PWM Controls.

VLM		-	24
Wattage		Voltage	
60W			
100W			



[SPEC SHEET](#)

SKU	L - LENGTH	W - WIDTH	H - HEIGHT
VLM60W-24	5.1 in.	.75 in.	.77 in.
VLM100W-24	5.38 in.	1 in.	.77 in.





BLAZE™ COLORS LED Light Tape

ADDITIONAL INFORMATION

SPECIFICATION SHEET

- LOW VOLTAGE LED TAPE LIGHT Installation Guide

SAFETY / WARNINGS / DISCLOSURES

1. Install in accordance with national and local electrical code regulations.
2. This product is intended to be installed and serviced by a qualified, licensed electrician.
3. Only install with a Class 2 DC Constant Voltage LED driver.
4. Only use copper wiring. Use wires rated for at least 176°F (80°C) and certified for use with external connection of electrical equipment.
5. Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length.
6. Tape light, attached wire leads, and additional extension cables, connectors, etc., are not rated for in-wall installation unless otherwise noted. Tape light and attached wire leads are field-cuttable.
7. Ensure applicable wire is installed between driver, fixture, and any controls in-between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.). Inadequate wire installation could overheat wires, and cause fire.
8. Do not install in environment where LED chips are exposed to direct sunlight as damage to the phosphor will occur.
9. Do not install in environment where excessive heat may exist (ex. close proximity to fireplace, etc.) See Ambient Temperature ratings
10. Do not install indoor LED tape light products in outdoor / wet location environments. Only wet location tape light models are rated for outdoor / wet locations.
11. Do not modify product beyond instructions or warranty will be void.
12. Tape light must be handled with care. Excessive handling, bending, and pressure may damage the product, voiding the warranty.
13. Actual color may vary from what is pictured on this sheet and other print materials due to the limitations of photographic processes.
14. We reserve the right to modify and improve the design of our fixtures without prior notice. We cannot guarantee to match existing installed fixtures for subsequent orders or replacements in regards to product appearance, CCT, or lumen output.



SAFETY & WARNINGS

1. Install in accordance with national and local electrical code regulations.
2. This product is intended to be installed and serviced by a qualified, licensed electrician.
3. DO NOT connect directly to high voltage power. Install with a compatible Class 2 constant voltage LED driver (power supply).
4. This product is rated for indoor installation and is not protected against moisture.
5. Install appropriately rated wire between driver, decoder, and fixture. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, etc.) Inadequate wire installation may cause fire.
6. Do not modify or disassemble product beyond instructions or warranty will be void.

MAXIMUM DAISY-CHAIN DMX DECODERS

A maximum of 10x DMX Decoders may be connected together via RJ45 DMX Connection Ports. DMX signal may be extended further by installing a DMX 8-Way Splitter (DI-1804) after the 10th DMX Decoder.

QUICK SPECS / MODELS

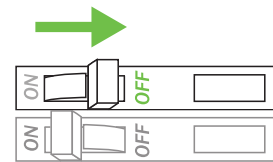
	Input	Output	Max Load
DI-1810 (also DI-1918)	12 - 24VDC	12 - 24VDC	4CH x 5A 4CH x 96W (12V) 4CH x 192W (24V)

INSTALLATION

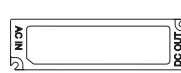
1 TURN POWER OFF AT CIRCUIT BREAKER



SHOCK HAZARD! May result in serious injury or death.
Turn power OFF at circuit breaker prior to installation.



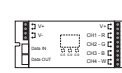
2 DETERMINE LOCATION TO INSTALL COMPONENTS



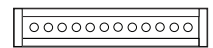
1) Driver



2) DMX
Controller



3) DMX
Decoder



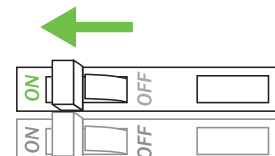
4) Fixture(s)

3 CONNECT DECODER TO DRIVER. ATTACH LED FIXTURE. ONLY USE COPPER WIRING.

Reference SYSTEM DIAGRAM located further in guide for visual.

4 CONNECT DECODER TO MASTER DMX CONTROLLER.

5 INSTALL ADDITIONAL COMPONENTS, VERIFY CONNECTIONS, TURN MAIN POWER ON AT BREAKER.

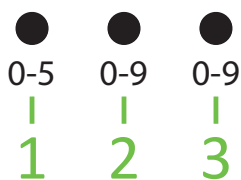


OPERATION

DMX START CHANNEL DISPLAY



Adjust the following settings with the DMX Start Channel Display (Fig. 1.):



- a. DMX Address
- b. Output Channels (professional use only)
- c. PWM Frequency (professional use only)

SETTING THE DMX ADDRESS

Use the 3 buttons of the DMX start channel to adjust the values of the DMX address. The decoder will control up to 512 channels.

- a. To set the DMX address, press and hold 'button 1' for 2 seconds until numbers on display flash.
- b. Select an address based on the functionality of the Master DMX Controller (see controller installation guide). Once an address is selected, the remaining 3 channels will be utilized digitally. For example, if the decoder is addressed to 001 on the display then CH1 – 001, CH2 – 002, CH3 – 003, CH4 – 004.
- c. Once display stops flashing, DMX address is set.

OPERATION (PROFESSIONAL USE ONLY)

Diode LED strongly recommends only professional DMX installers utilize the following settings. All standard DMX applications specified by Diode LED do not require these settings to be adjusted.

SETTING DMX CHANNELS

The DMX channels can be adjusted, which allows the user to conserve DMX addresses that may be wasted when programming a large DMX universe.

The factory default is 4cH: 4 channels (address 001 - 004) as highlighted in the chart below. Charts have also been provided for 1cH, 2cH, and 3cH settings.

4cH (001 - 004)

Channel	Address
CH1	001
CH2	002
CH3	003
CH4	004

1cH (001 Only)

Channel	Address
CH1	001
CH2	001
CH3	001
CH4	001

2cH (001 - 002 Only)

Channel	Address
CH1	001
CH2	002
CH3	001
CH4	002

3cH (001 - 003 Only)

Channel	Address
CH1	001
CH2	002
CH3	003
CH4	001



Fig. 2



Fig. 3

To change channel setting:

- a. Press and hold 'button 2 and 3' simultaneously for 2 seconds until 'cH' flashes on display (Fig. 2).
- b. Press 'button 1' to choose 1, 2, 3, or 4 channel outputs (Fig. 3).
- c. Press and hold any button for >2 seconds to set channel output.

SETTING PWM FREQUENCY & DIMMING TYPE

The PWM frequency & dimming type can be adjusted for special applications.

RGB & RGBW SETTINGS

RGB & RGBW installations will only operate correctly with consistent color output when programmed to **P1 (1500Hz PWM OUTPUT) and c2 (LINEAR DIMMING)**.

PWM & DIM (P_c)

PWM Output (P)	Dimming Output (c)
1 = 1500Hz	1 = Logarithmic Dimming
2 = 200 Hz	2 = Linear Dimming



Fig. 4



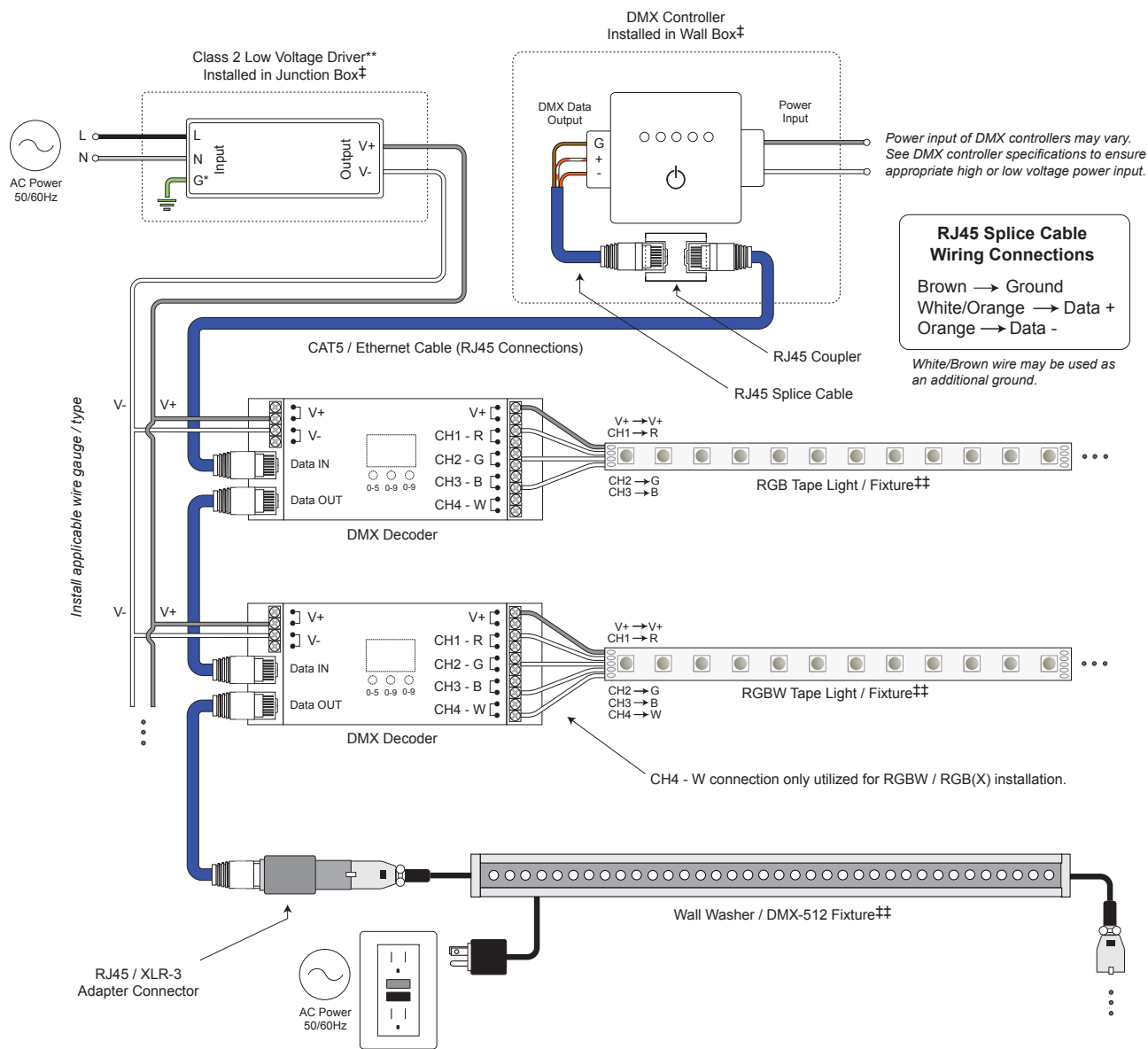
RGB/RGBW
REQUIRED SETTING

To change PWM or DIM:

- a. Press and hold 'button 1 and 3' simultaneously for 2 seconds until 'P_c' flashes on display (Fig. 4).
- b. Press 'button 1' to choose PWM output type.
- c. Press 'button 3' to choose Dimming type.
- d. Once display stops flashing, PWM & DIM is set.

SYSTEM DIAGRAM

The following diagram is provided as an example system design. CAT5 (RJ45 connections) data cables are the most cost-effective solution for transmitting DMX-512 signals. XLR-3 cables may also be installed but require an additional adapter for connecting to DMX decoders.



MAXIMUM DAISY-CHAIN DMX DECODERS

A maximum of 10x DMX Decoders may be connected together via RJ45 DMX Connection Ports. DMX signal may be extended further by installing a DMX 8-Way Splitter (DI-1804) after the 10th DMX Decoder.

* Driver may not require a fault ground connection. Refer to driver specifications for additional information.

** Install a compatible Class 2 constant voltage driver. It is recommended to load the driver no more than 80% its labeled rating for maximum longevity.

‡ Refer to driver specifications for a compatible junction box.

‡‡ See fixture specifications for maximum series run limits.

TROUBLESHOOTING

Symptom	Common Cause
Fixture responding incorrectly and/or flickering	• Incorrect wiring. Reversing Data + and Data - will cause lights to flicker.
	• Incorrect voltage pairing of driver and fixture. (12V & 12V, or 24V and 24V)
	• Ensure compatible constant voltage driver is installed.
	• Check connections of additional components.
Cannot change DMX address	• Hold in button '0-5' for 3 seconds until display flashes continuously, then set address.

VOLTAGE DROP CHARTS

For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

Example: 12V Voltage Drop & Wire Length Distance Chart

Wire Gauge	10 W .83 A	20 W 1.7 A	30 W 2.5 A	40 W 3.3 A	50 W 2.1 A	60 W 4.2 A
18 AWG	34 ft.	17 ft.	11 ft.	8 ft.	6 ft.	5 ft.
16 AWG	54 ft.	27 ft.	18 ft.	13 ft.	10 ft.	9 ft.
14 AWG	86 ft.	43 ft.	29 ft.	21 ft.	17 ft.	14 ft.
12 AWG	134 ft.	68 ft.	45 ft.	34 ft.	27 ft.	22 ft.
10 AWG	199 ft.	99 ft.	66 ft.	49 ft.	39 ft.	33 ft.



1 Determine load size. Let's assume load is 55 W. Round up to nearest load.



2 Determine distance from driver to load. Let's assume the distance is 20 ft.



3 It's recommended to install 12 AWG to eliminate excess voltage drop.

12V Voltage Drop & Wire Length Distance Chart

Wire Gauge	10 W .83 A	20 W 1.7 A	30 W 2.5 A	40 W 3.3 A	50 W 2.1 A	60 W 4.2 A
18 AWG	34 ft.	17 ft.	11 ft.	8 ft.	6 ft.	5 ft.
16 AWG	54 ft.	27 ft.	18 ft.	13 ft.	10 ft.	9 ft.
14 AWG	86 ft.	43 ft.	29 ft.	21 ft.	17 ft.	14 ft.
12 AWG	134 ft.	68 ft.	45 ft.	34 ft.	27 ft.	22 ft.
10 AWG	199 ft.	99 ft.	66 ft.	49 ft.	39 ft.	33 ft.

24V Voltage Drop & Wire Length Distance Chart

Wire Gauge	10 W .42 A	20 W .83 A	30 W 1.3 A	40 W 1.7 A	50 W 2.1 A	60 W 2.5 A	70 W 2.9 A	80 W 3.3 A	100 W 4.2 A
18 AWG	134 ft.	68 ft.	45 ft.	33 ft.	27 ft.	22 ft.	19 ft.	17 ft.	14 ft.
16 AWG	215 ft.	109 ft.	72 ft.	54 ft.	43 ft.	36 ft.	31 ft.	27 ft.	22 ft.
14 AWG	345 ft.	174 ft.	115 ft.	86 ft.	69 ft.	57 ft.	49 ft.	43 ft.	36 ft.
12 AWG	539 ft.	272 ft.	181 ft.	135 ft.	108 ft.	90 ft.	77 ft.	68 ft.	56 ft.
10 AWG	784 ft.	397 ft.	263 ft.	197 ft.	158 ft.	131 ft.	112 ft.	98 ft.	82 ft.

LM-79 Test Report

Relevant Standards

IES LM-79-2008
IES TM-30-2015
CIE 13.3-1995

Product SKU

BLAZE™ 100 LED Tape Light - DI-12V-BLBSC1-30-***

Test Conditions

Test Temperature: 26.5 °C
Luminaire Sample Length: 12 in.
Power Supply: Agilent E3634A DC Power Supply
Voltage: 12 VDC
Current: 0.114 A
Power Consumption: 1.368 W

Test Date

7/3/2018

Prepared By

Rachel Backlund

Rachel Backlund

Approved By

Olivia M. Tanguileg

Olivia Tanguileg, Electrical Engineer

The results contained in this report pertain only to the tested sample.
Photometric & Colorimetry data measured in accordance to IES LM-79-2008 standards, at the Elemental LED, Inc. Innovation Lab.

Integrating Sphere Test

SUMMARY OF RESULTS

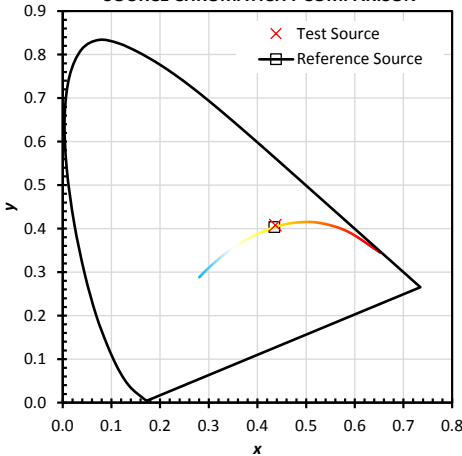
Metric	Test	Reference	Notes	Metric	Test	Reference	Notes
R_f	91	100	IES TM-30-15 Fidelity Index	CCT	3032	3031	Correlated Color Temperature
R_g	99	100	IES TM-30-15 Gamut Index	D_{uv}	0.0015	0.0000	Distance from the blackbody locus
R_a (CRI)	92	100	CIE Test Color Method General Index	x	0.4369	0.4347	CIE 1931 chromaticity coordinate
R_9	64	100	CIE Test Color Method Sample Nine Score	y	0.4079	0.4033	CIE 1931 chromaticity coordinate
LER	287	164	Luminous Efficacy of Radiation	u	0.2489	0.2495	CIE 1960 chromaticity coordinate
Lumens	116	1852	Luminous Flux	v	0.3486	0.3472	CIE 1960 chromaticity coordinate
$R_{f,skin}$	95	100	Average of CES15 and CES18 (skin)	u'	0.2489	0.2495	CIE 1976 chromaticity coordinate
				v'	0.5229	0.5207	CIE 1976 chromaticity coordinate

COLOR RENDERING INDEX

R 1	R 2	R 3	R 4	R 5	R 6	R 7	R 8	R 9	R 10	R 11	R 12	R 13	R 14
92.1	94.3	95.0	92.7	91.1	92.1	94.5	85.1	63.9	85.4	92.4	76.4	92.4	96.4

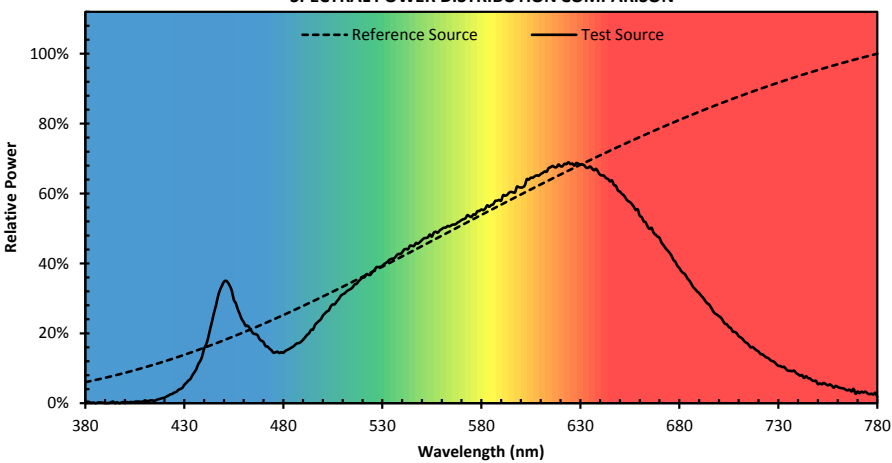
SOURCE PROPERTIES

SOURCE CHROMATICITY COMPARISON



This chart plots the chromaticity of the test and reference sources in the CIE 1931 chromaticity

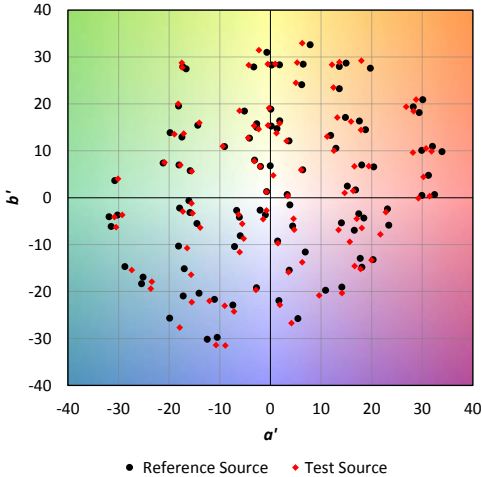
SPECTRAL POWER DISTRIBUTION COMPARISON



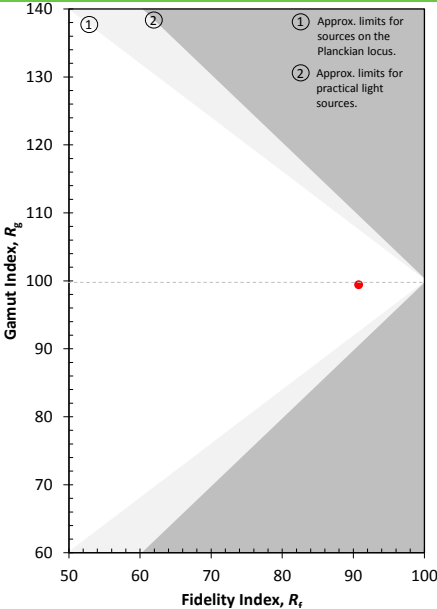
This chart displays the spectral power distributions for the test and reference source. Each SPD has been normalized so that the maximum values is 100%.

GENERAL COLOR RENDITION

CES CHROMATICITY COMPARISON

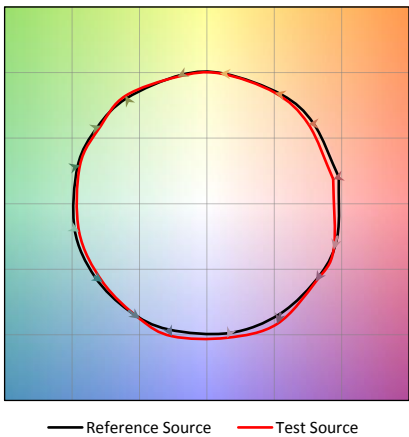


This plot shows the shift in chromaticity for each individual CES.



This plot shows the R_f and R_g values relative to possible values.

COLOR VECTOR GRAPHIC



This plot shows the average chromaticity shift for the samples within each of 16 hue bins. The values are normalized so that the reference is a circle.

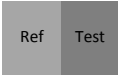
COLOR SAMPLE COMPARISON (APPROXIMATION)

CES 1	CES 2	CES 3	CES 4	CES 5	CES 6	CES 7	CES 8
Type C	Type C	Type A	Type A	Type D	Type C	Type E	Type D
CES 9	CES 10	CES 11	CES 12	CES 13	CES 14	CES 15	CES 16
Type F	Type G	Type C	Type A	Type F	Type E	Type B	Type C
CES 17	CES 18	CES 19	CES 20	CES 21	CES 22	CES 23	CES 24
Type C	Type B	Type E	Type F	Type D	Type D	Type G	Type E
CES 25	CES 26	CES 27	CES 28	CES 29	CES 30	CES 31	CES 32
Type A	Type C	Type A	Type G	Type C	Type A	Type D	Type C
CES 33	CES 34	CES 35	CES 36	CES 37	CES 38	CES 39	CES 40
Type D	Type G	Type G	Type A	Type A	Type A	Type F	Type F
CES 41	CES 42	CES 43	CES 44	CES 45	CES 46	CES 47	CES 48
Type C	Type F	Type C	Type F	Type G	Type E	Type C	Type D
CES 49	CES 50	CES 51	CES 52	CES 53	CES 54	CES 55	CES 56
Type D	Type F	Type F	Type F	Type E	Type F	Type G	Type G
CES 57	CES 58	CES 59	CES 60	CES 61	CES 62	CES 63	CES 64
Type C	Type D	Type E	Type G	Type F	Type C	Type F	Type E
CES 65	CES 66	CES 67	CES 68	CES 69	CES 70	CES 71	CES 72
Type F	Type E	Type E	Type F	Type F	Type F	Type F	Type F
CES 73	CES 74	CES 75	CES 76	CES 77	CES 78	CES 79	CES 80
Type F	Type C	Type F	Type F	Type A	Type F	Type C	Type G
CES 81	CES 82	CES 83	CES 84	CES 85	CES 86	CES 87	CES 88
Type A	Type C	Type C	Type F	Type A	Type C	Type F	Type F
CES 89	CES 90	CES 91	CES 92	CES 93	CES 94	CES 95	CES 96
Type A	Type E	Type A	Type A	Type D	Type C	Type A	Type A
CES 97	CES 98	CES 99					
Type F	Type A	Type E					

NOTE: CES stands for "Color Evaluation Sample", these 99 samples are used in place of the 16 R values. The colors shown are approximate and depend on proper monitor calibration. Some colors may be outside of the gamut of the monitor, and will not be displayed accurately. For each sample, the color on the left represents the reference source, and the color on the right represents the test source.

Sample Type:

- A - Nature
- B - Skin
- C - Textiles
- D - Paints
- E - Plastic



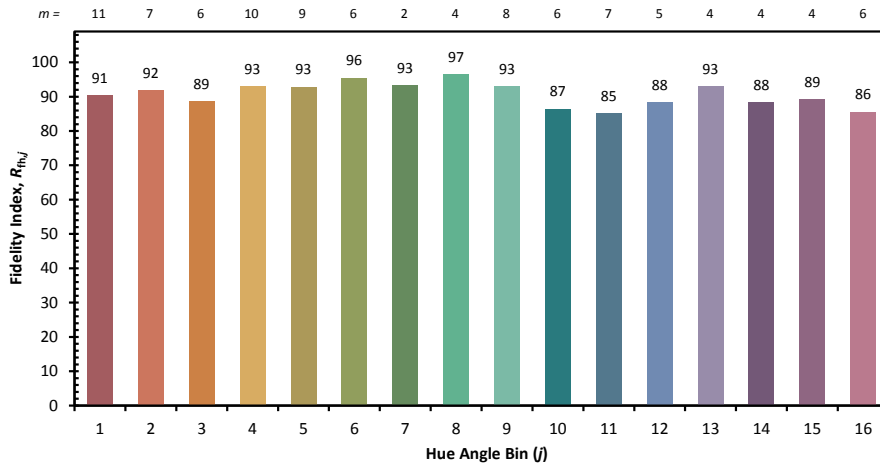
Elemental



Competitor



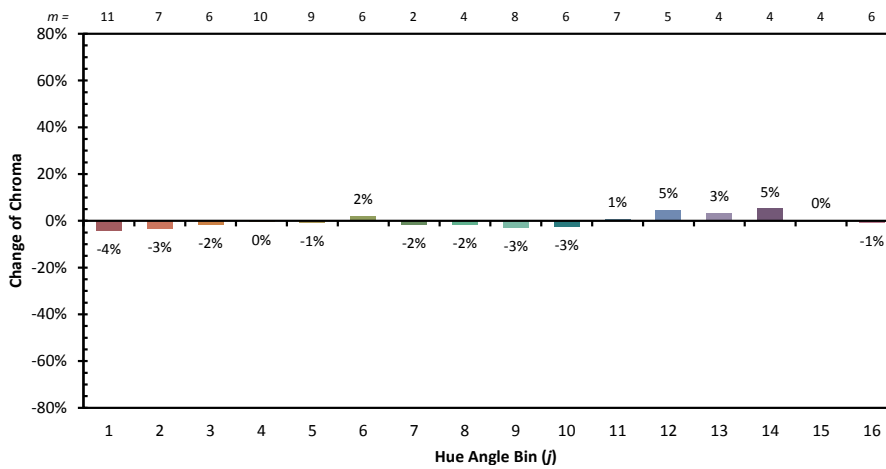
COLOR RENDITION BY HUE



This chart displays the average Fidelity Index for all samples within the hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only.

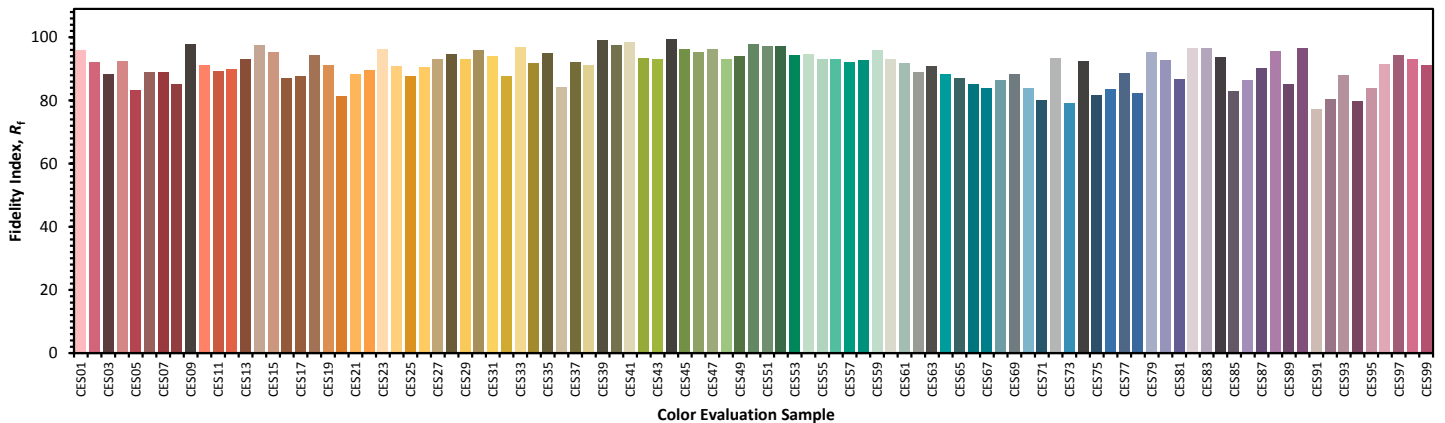
j	Hue Angle
1	0.0° - 22.5°
2	22.5° - 45.0°
3	45.0° - 67.5°
4	67.5° - 90.0°
5	90.0° - 112.5°
6	112.5° - 135.0°
7	135.0° - 157.5°
8	157.5° - 180.0°
9	180.0° - 202.5°
10	202.5° - 225.0°
11	225.0° - 247.5°
12	247.5° - 270.0°
13	270.0° - 292.5°
14	292.5° - 315.0°
15	315.0° - 337.5°
16	337.5° - 360.0°

m = Samples per Angle Bin



This chart displays the change in chroma for the average sample within each hue bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000 K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only.

COLOR FIDELITY BY SAMPLE



This chart displays the Fidelity Index for each of the 99 CES. The CES are arranged by their hue angle under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on proper monitor calibration. Some colors may be outside of the gamut of the monitor, and will not be displayed accurately.

Goniophotometer Test

SUMMARY OF RESULTS

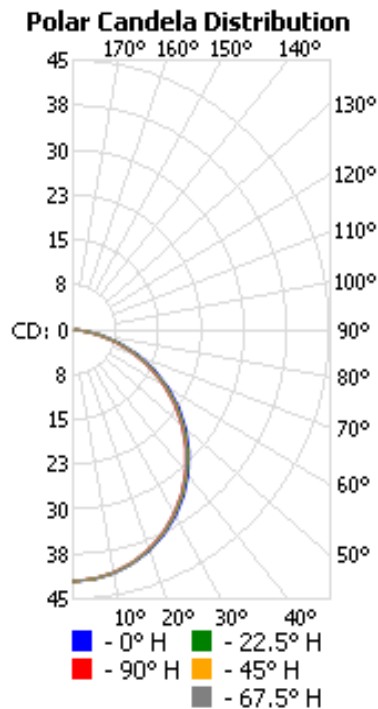
Luminaire: BLAZE™ 100 LED Tape Light
 SKU: DI-12V-BLBSC1-30-***
 Luminous Flux: 119 Lumens
 Power Consumption: 1.368 Watts
 Efficacy: 87.0 Lumens/Watt
 Spacing Criterion (0-180): 1.28
 Spacing Criterion (90-270): 1.26

Graphs below are for reference, full IES files are available via request

DISTRIBUTION CHARTS AND TABLES

Zonal Lumen Data

Zone	Lumens	%Luminaire
0-20	15.27	12.80
0-30	32.45	27.20
0-40	53.24	44.70
0-60	94.38	79.20
0-80	117.09	98.30
0-90	119.14	100.00
20-40	37.97	31.90
20-50	59.60	50.00
40-70	55.82	46.90
60-80	22.71	19.10
70-80	8.03	6.70
80-90	2.04	1.70
90-180	0.00	0.00
0-180	119.14	100.00



Illuminance at a Distance

	Center Beam fc	Beam Width	
1.5ft	18.6 fc	4.6 ft	4.4 ft
3.0ft	4.65 fc	9.2 ft	8.9 ft
4.5ft	2.07 fc	13.8 ft	13.3 ft
6.0ft	1.16 fc	18.4 ft	17.8 ft
7.5ft	0.74 fc	23.0 ft	22.2 ft
9.0ft	0.52 fc	27.7 ft	26.7 ft

■ Vert. Spread: 113.9°
 ■ Horiz. Spread: 112.0°



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