

VLM Series 12V / 24V / 48V Constant Voltage Driver

Compact driver for on/off, PWM dimming, and color-changing applications.

Date <https://www.diodeled.com/vlm-series-led-driver.html>

Project Notes



12/24/48
VDC

FEATURES

- Small form factor
- Works with REIGN® low-voltage dimmers
- Dimmable with PWM (low voltage) dimmers
- Pairs with controls including TOUCHDIAL™, DMX, and Casambi
- UL-listed junction box optional
- 5 Year limited warranty



12V ORDERING CODES

Driver and optional Junction Box

Diode LED	Model	Voltage	Junction Box
DI			
	VLM100W	12 (12 Volts)	LPL (Junction Box)
	VLM120W		LPM (Junction Box)
	VLM60W		LPS3R (Junction Box)

12V VLM SERIES - SPECIFICATION TABLE

Models	VLM60W-12	VLM60W-12-LPM	VLM60W-12-LPS3R	VLM100W-12	VLM120W-12-LPL
Input Voltage / Frequency	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz
Maximum Load	60W	60W	60W	96W	60W (x2)
Output Voltage	12VDC	12VDC	12VDC	12VDC	12VDC
Efficiency	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9
Class 2	Yes	Yes	Yes	Yes	No
Ambient Temperature	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)
Operating Temperature	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)
Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load
Dimmable	PWM	PWM	PWM	PWM	PWM
Input Connection Type	Wire	Wire	Wire	Wire	Wire
Lead Wire A	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)
Output Connection Type	Wire	Wire	Wire	Wire	Wire
Lead Wire B	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)
Circuit Breakers	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup
Working Humidity	5 - 95% RH non-condensing	5 - 95% RH non-condensing	5 - 95% RH non-condensing	5 - 95% RH non-condensing	5 - 95% RH non-condensing
Dimensions	5.1 × 0.75 × 0.77 in. (L x W x H)	8.19 × 2.94 × 1.31 in. (L x W x H)	10.79 × 7.34 × 2.36 in. (L x W x H)	5.38 × 1 × 0.77 in. (L x W x H)	13.5 × 4.5 × 2.38 in. (L x W x H)
Certification	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2, Class P Driver. (VLM60W-12-LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2, Class P Driver. (VLM60W-12-LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2, Class P Driver. (VLM60W-12-LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class P Driver. (VLM100W-12-LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2, Class P Driver. (VLM120W-12-LPL: E469769. Patented)
Warranty	5 Year	See Individual Components	See Individual Components	5 Year	5 Year

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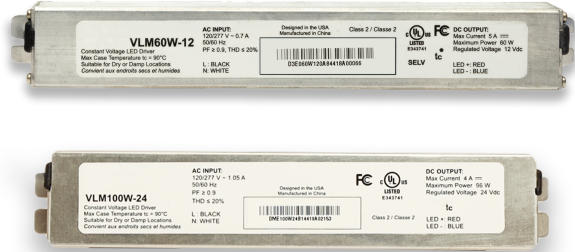
Project Notes



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FEATURES

- Small form factor
- Works with REIGN® low-voltage dimmers
- Dimmable with PWM (low voltage) dimmers
- Pairs with controls including TOUCHDIAL™, DMX, and Casambi
- UL-listed junction box optional
- 5 Year limited warranty



24V ORDERING CODES

Driver and optional Junction Box

Diode LED	Model	Voltage	Junction Box
DI			
	VLM100W	24 (24 Volts)	LPL (Junction Box)
	VLM200W		LPM (Junction Box)
	VLM60W		LPS (Junction Box)
			LPS3R (Junction Box)

24V VLM SERIES - SPECIFICATION TABLE

Models	VLM60W-24	VLM60W-24-LPS	VLM60W-24-LPS3R	VLM60W-24-LPM	VLM100W-24	VLM100W-24-LPS	VLM100W-24-LPS3R	VLM100W-24-LPM	VLM200W-24-LPL
Input Voltage / Frequency	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz
Maximum Load	60W	60W	60W	60W	96W	96W	96W	96W	100W (x2)
Output Voltage	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC	24VDC
Efficiency	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9
Class 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ambient Temperature	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)
Operating Temperature	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)
Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load
Dimmable	PWM	PWM	PWM	PWM	PWM	PWM	PWM	PWM	PWM
Input Connection Type	Wire	Wire	Wire	Wire	Wire	Wire	Wire	Wire	Wire
Lead Wire A	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)
Output Connection Type	Wire	Wire	Wire	Wire	Wire	Wire	Wire	Wire	Wire
Lead Wire B	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)	UL 1007 18/2AWG, V+ (Red), V-(Blue)
Circuit Breakers	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup
Working Humidity	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing	5 - 95% RH non- condensing
Dimensions	5.1 × 0.75 × 0.77 in. (L x W x H)	11.25 × 3.75 × 1.9 in. (L x W x H)	10.79 × 7.34 × 2.36 in. (L x W x H)	8.19 × 2.94 × 1.31 in. (L x W x H)	5.38 × 1 × 0.77 in. (L x W x H)	11.25 × 3.75 × 1.9 in. (L x W x H)	10.79 × 7.34 × 2.36 in. (L x W x H)	8.19 × 2.94 × 1.31 in. (L x W x H)	13.5 × 4.5 × 2.38 in. (L x W x H)
Certification	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2. Class P Driver. (VLM60W-24-LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2. Class P Driver. (VLM60W-24-LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2. Class P Driver. (VLM60W-24-LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2. Class P Driver. (VLM60W-24-LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2. Class P Driver. (VLM100W-24LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2. Class P Driver. (VLM100W-24LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2. Class P Driver. (VLM100W-24LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2. Class P Driver. (VLM100W-24LPS- E469769, Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2. Class P Driver. (VLM200W-24-LPL- E469769, Patented)
Warranty	3 Year	5 Year	See Individual Components	See Individual Components	3 Year	5 Year	See Individual Components	See Individual Components	5 Year

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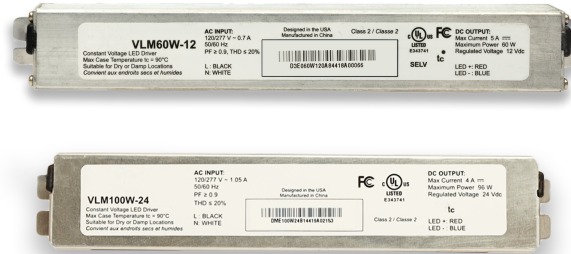
Project Notes



12/24/48
VDC

FEATURES

- Small form factor
- Works with REIGN® low-voltage dimmers
- Dimmable with PWM (low voltage) dimmers
- Pairs with controls including TOUCHDIAL™, DMX, and Casambi
- UL-listed junction box optional
- 5 Year limited warranty



48V ORDERING CODES

Driver and optional Junction Box

Diode LED	Model	Voltage	Junction Box
DI			
	VLM100W	48 (48 Volts)	LPM (Junction Box)
	VLM60W		LPS3R (Junction Box)

48V VLM SERIES - SPECIFICATION TABLE

Models	VLM60W-48	VLM60W-48-LPS3R	VLM60W-48-LPM	VLM100W-48-LPM
Input Voltage / Frequency	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz	120 / 277VAC 47 - 63Hz
Maximum Load	60W	60W	60W	96W
Output Voltage	48VDC	48VDC	48VDC	48VDC
Efficiency	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9	93% / PF>0.9
Class 2	Yes	Yes	Yes	Yes
Ambient Temperature	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)	-4 - 122°F (-20 - +50°C)
Operating Temperature	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)	-4 - 194°F (-20 - +90°C)
Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load	No Minimum Load
Dimmable	PWM	PWM	PWM	PWM
Input Connection Type	Wire	Wire	Wire	Wire
Lead Wire A	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)	UL 1015 18/2AWG, AC/L (Black), AC/N (White)
Output Connection Type	Wire	Wire	Wire	Wire
Lead Wire B	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)	UL 1007 18/2AWG, V+(Red), V-(Blue)
Circuit Breakers	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup	Auto Reset Hiccup
Working Humidity	5 - 95% RH non-condensing	5 - 95% RH non-condensing	5 - 95% RH non-condensing	5 - 95% RH non-condensing
Dimensions	5.1 × 0.75 × 0.77 in. (L x W x H)	10.79 × 7.34 × 2.36 in. (L x W x H)	8.19 × 2.94 × 1.31 in. (L x W x H)	8.19 × 2.94 × 1.31 in. (L x W x H)
Certification	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2, Class P Driver. (VLM60W-48LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2, Class P Driver. (VLM60W-48LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.1314, Class 2, Class P Driver. (VLM60W-48LPS: E469769. Patented)	E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14, Class 2, Class P Driver. (VLM100W-48-LPS: E469769. Patented)
Warranty	5 Year	See Individual Components	See Individual Components	See Individual Components

**VLM Series 12V / 24V / 48V
Constant Voltage Driver**

Compact driver for on/off, PWM dimming, and color-changing applications.

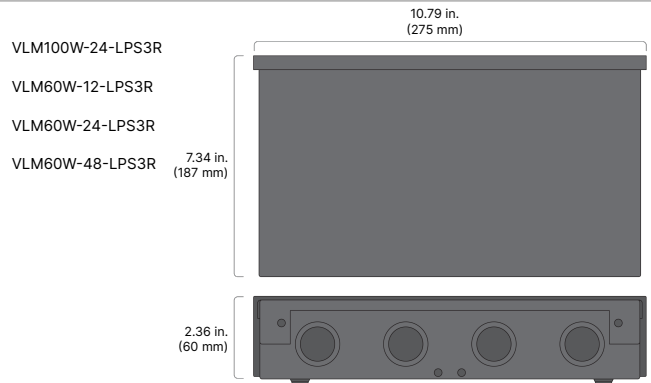
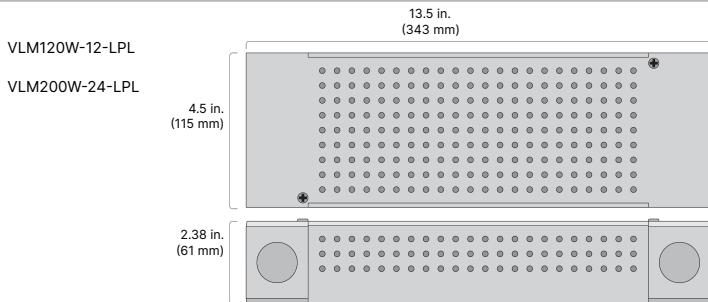
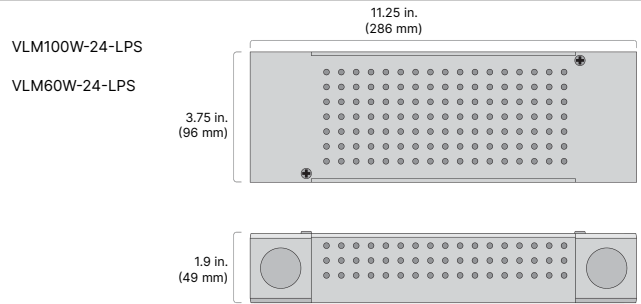
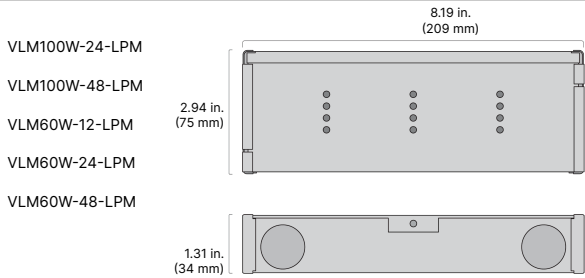
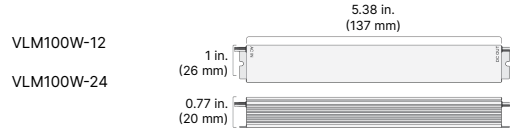
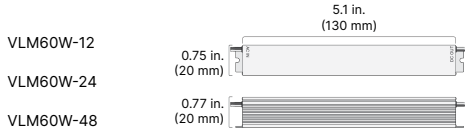
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MECHANICAL DIAGRAMS



**VLM Series 12V / 24V / 48V
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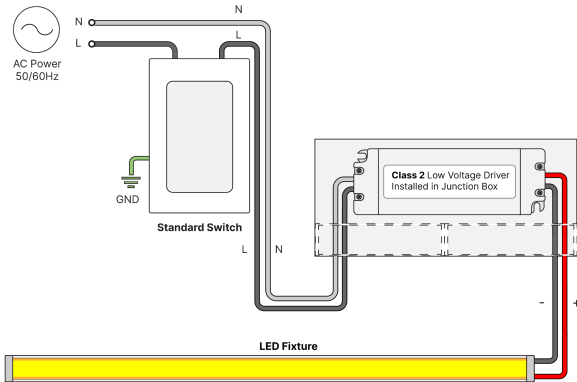
Project Notes _____



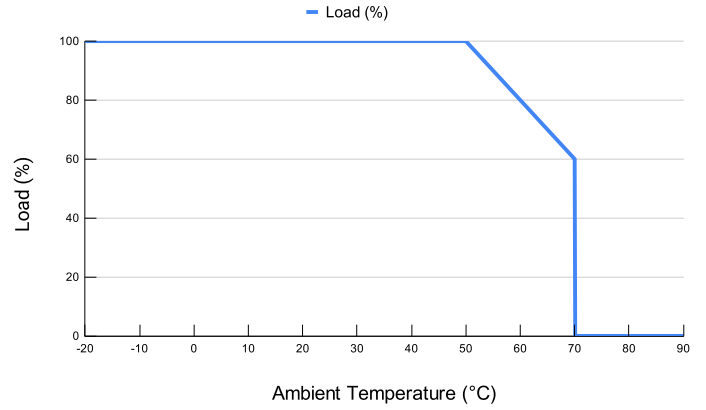
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SYSTEM DIAGRAMS

STANDARD SWITCH



DERATING CURVE



VLM Series 12V / 24V / 48V

Constant Voltage Driver

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Project Notes



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VDC

CERTIFICATIONS

Safety

- Driver Only: E343741 cULus R/C 8750, CAN/CSA C22.2 No. 250.13-14. CE Certified. Class 2. Class P Driver.
- Driver in Junction Box: E469769 cULus Listed 2108, LED Low Voltage Power Units, CAN/CSA C22.2, Class 2 Power Supply, Nema1 Enclosure. Patent. <https://led-patent.com/>

Environmental

- Indoor/Damp Location

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 use copper wiring. Use wires rated for at least 176°F (80°C) and certified for use with external connection of electrical equipment.
4. 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.
5. 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.
6. Do not install in environment where excessive heat may exist (ex. close proximity to fireplace, etc.) See Ambient Temperature ratings
7. Do not modify product beyond instructions or warranty will be void.
8. Tape light must be handled with care. Excessive handling, bending, and pressure may damage the product, voiding the warranty.
9. Actual color may vary from what is pictured on this sheet and other print materials due to the limitations of photographic processes.
10. 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.

WARRANTY

Limited Warranty

- 3 Year / 5 Year / See Individual Components

This warranty does not include the additional accessories referenced in this specification sheet. Complete warranty details for fixtures and additional accessories are available at www.diodeled.com/limited-warranty/ within the Policies section. For warranty related questions please contact product support.

Consumer's Acknowledgment

Elemental LED, Inc. stands behind its products when they are used properly and according to our specifications. By purchasing our products, the purchaser agrees and acknowledges that lighting design, configuration and installation is a complex process, wherein seemingly minor factors or changes in layout and in-field adjustments can have a significant impact on an entire system. Choosing the correct components is essential. Elemental LED is able to work with the original purchaser to make an appropriate product selection to the extent of the limited information that the customer can provide, but it is virtually impossible for Elemental LED to design a system that foresees every unknown factor. For this reason, this Warranty does not cover problems caused by improper design, configuration or installation issues. Any statement from a Elemental LED employee or agent regarding a customer's bill of goods and/or purchase order is NOT an acknowledgment that the products purchased are designed and configured correctly. The purchase agrees and acknowledges that it is the customer's responsibility to adhere strictly to all information contained in the Product Specification Sheets.

There is often more than one way to design, configure and layout an LED lighting application properly to achieve the same lighting effect. Elemental LED strongly recommends that licensed professionals be used in the design and installation of lighting systems that include Elemental LED products. The specifications include important information that a designer and installer should carefully review and strictly follow. Qualified designers and certified and/or licensed installers, with access to the final installation environment, customer goals, and Elemental LED product specifications can make the requisite decisions appropriate for a successful finished lighting application.

- Lumen value measured in accordance to IES LM-80-08. LED chips have a luminous flux range with a tolerance of +/- 5%.
- Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length. Max run may exceed Class 2 limit. Actual wattage may differ from calculated wattage due to voltage drop across run.
- 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.
- Actual efficacy value is dependent to specified LED driver (power supply). An estimated efficacy value can be calculated as follows: Lumen value divided by average power consumption per foot.
- Operating temperature is measured according to the minimum and maximum ambient temperature environment.