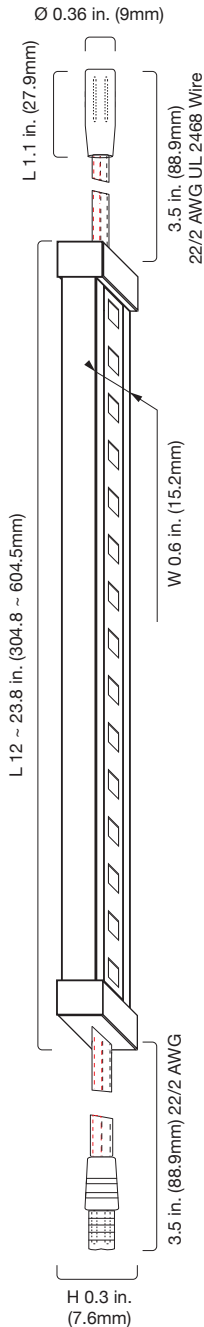


# CASCADE™ LED LIGHT BAR

# SPECIFICATION SHEET

- High brightness
- Outdoor / wet location
- ETL Listed
- 3-Year limited warranty



## SPECIFICATIONS

**Input Voltage:** 12VDC Constant Voltage  
**Power Consumption:** See chart below  
**LED Chip Type:** Epistar 5050 SMD  
**LED Chip Beam Angle:** 120°  
**Color Rendering Index:** 70  
**Mounting:** 2 stainless steel mounting clips mounting screws included  
**Connections <sup>1</sup>:** 3.5 in. female wet location plug, 3.5 in. male wet location plug opposing end. Plug: 9mm Dia. 22/2 AWG UL 2468 wire  
**Dimmable:** Yes

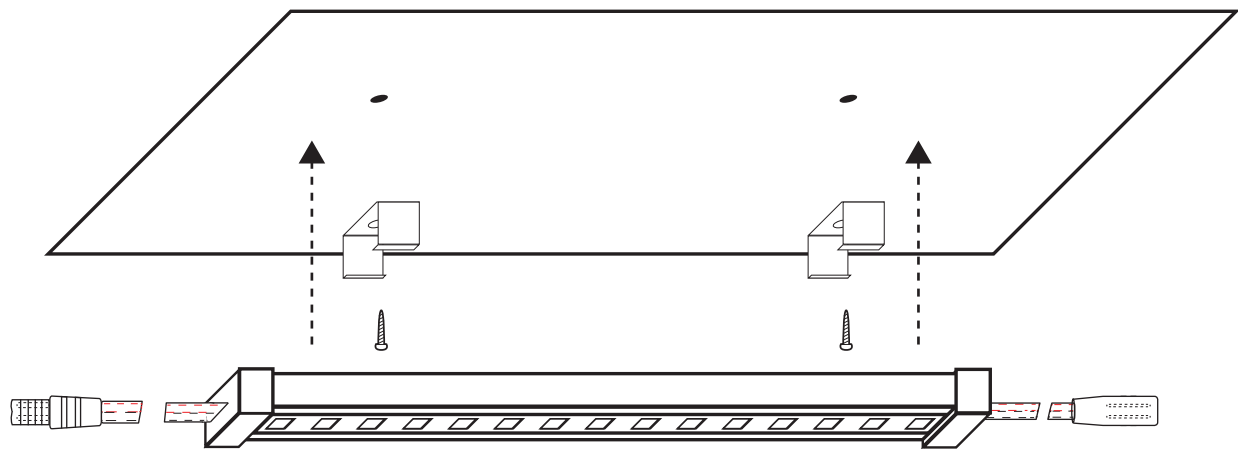
**Ambient Temp <sup>2</sup>:** -4 ~ 122°F (-20 ~ 50°C)  
**Operating Temp <sup>3</sup>:** -4 ~ 176°F (-20 ~ 80°C)  
**Environment <sup>4</sup>:** Outdoor / Wet location / IP68  
**Dimensions:** 0.6 x 0.3 in. (W x H)  
 (H = 0.5 in. with mounting clips)  
**Certifications:** ETL Listed: 4001928. Conforms to ANSI/UL Std 2108. Certified to CAN/CSA Std C22.2 No. 250.0-08.  
**Included Items:** 2 mounting clips, 2 mounting screws, 1 wet location splice connector pair

| Item #             | Power Consumption | Max. Wattage Per Bar <sup>5</sup> | CCT (Kelvin) <sup>6</sup> | Lumens <sup>7</sup> | Efficacy (lm/W) <sup>8</sup> |
|--------------------|-------------------|-----------------------------------|---------------------------|---------------------|------------------------------|
| DI-0220 (12 in.)   | 3.6W / 300mA      | 21.6W                             | 3000K                     | 387                 | 100                          |
| DI-0221 (12 in.)   | 3.6W / 300mA      | 21.6W                             | 6300K                     | 381                 | 100                          |
| DI-0222 (23.8 in.) | 7.2W / 600mA      | 21.6W                             | 3000K                     | 767                 | 100                          |
| DI-0223 (23.8 in.) | 7.2W / 600mA      | 21.6W                             | 6300K                     | 730                 | 100                          |

- Note <sup>1</sup>** Attached connectors and connector accessories are not rated for in-wall installation unless otherwise noted. Attached connections are field cuttable.  
**Note <sup>2</sup>** 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.  
**Note <sup>3</sup>** Operating temperature is measured according to the minimum and maximum ambient temperature environment.  
**Note <sup>4</sup>** Do not install near or around chlorinated/treated water. This product is not rated as submersible. Do not install in location where water may pool or collect. Do not install in location where LED chips are exposed to direct sunlight as damage to the phosphor will occur.  
**Note <sup>5</sup>** Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run wattage.  
**Note <sup>6</sup>** Epistar 5050 SMD Chip binning ranges: (3000K 70 CRI: 2975K-3100K), (6300K 70 CRI: 6000-6500K).  
**Note <sup>7</sup>** Lumen value measured in accordance to IES LM-79-08. LED chips have a luminous flux range with a tolerance of +/- 5%.  
**Note <sup>8</sup>** Actual efficacy value is dependent to specified LED driver (power supply). An estimated efficacy value has been provided and

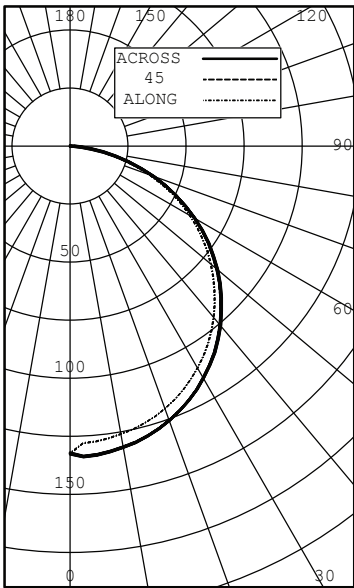
|         |          |
|---------|----------|
| Item #: | Project: |
|---------|----------|

# MOUNTING



**CASCADE™ 12 in. 3000K**  
DI-0220

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

| ANGLE | ALONG | 22.5 | 45  | 67.5 | ACROSS |
|-------|-------|------|-----|------|--------|
| 0     | 132   | 132  | 132 | 132  | 132    |
| 5     | 128   | 132  | 133 | 133  | 134    |
| 10    | 126   | 130  | 132 | 131  | 132    |
| 15    | 124   | 128  | 129 | 128  | 129    |
| 20    | 120   | 124  | 125 | 125  | 126    |
| 25    | 116   | 119  | 121 | 120  | 121    |
| 30    | 110   | 114  | 115 | 114  | 115    |
| 35    | 104   | 107  | 108 | 108  | 109    |
| 40    | 96    | 100  | 100 | 100  | 101    |
| 45    | 88    | 91   | 92  | 91   | 92     |
| 50    | 79    | 82   | 82  | 82   | 83     |
| 55    | 70    | 72   | 72  | 72   | 73     |
| 60    | 59    | 62   | 62  | 62   | 62     |
| 65    | 48    | 50   | 50  | 50   | 50     |
| 70    | 37    | 38   | 38  | 38   | 39     |
| 75    | 24    | 25   | 26  | 26   | 26     |
| 80    | 13    | 13   | 14  | 14   | 15     |
| 85    | 5     | 5    | 5   | 5    | 5      |
| 90    | 0     | 0    | 0   | 0    | 0      |

ZONAL LUMENS AND PERCENTAGES

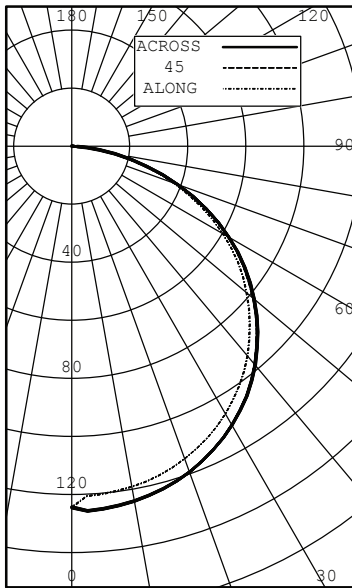
| ZONE   | LUMENS | % LUMINAIRE |
|--------|--------|-------------|
| 0-30   | 104    | 26.79       |
| 0-40   | 171    | 44.09       |
| 0-60   | 305    | 78.76       |
| 0-90   | 387    | 100.00      |
| 40-90  | 217    | 55.91       |
| 60-90  | 82     | 21.24       |
| 90-180 | 0      | 0.00        |
| 0-180  | 387    | 100.00      |

Cone Of Light Tabulation

| Mounting Height (Feet) | Footcandles at Nadir | Diameter (Feet) |
|------------------------|----------------------|-----------------|
| 4.00                   | 8.30                 | 5.10            |
| 6.00                   | 3.69                 | 7.66            |
| 8.00                   | 2.07                 | 10.2            |
| 10.0                   | 1.33                 | 12.8            |
| 12.0                   | 0.922                | 15.3            |
| 14.0                   | 0.677                | 17.9            |
| 16.0                   | 0.519                | 20.4            |

**CASCADE™ 12 in. 6300K**  
DI-0221

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

| ANGLE | ALONG | 22.5 | 45  | 67.5 | ACROSS |
|-------|-------|------|-----|------|--------|
| 0     | 124   | 124  | 124 | 124  | 124    |
| 5     | 120   | 124  | 125 | 125  | 125    |
| 10    | 119   | 123  | 124 | 123  | 124    |
| 15    | 117   | 121  | 122 | 121  | 122    |
| 20    | 114   | 118  | 119 | 119  | 119    |
| 25    | 111   | 114  | 115 | 115  | 115    |
| 30    | 106   | 110  | 111 | 110  | 111    |
| 35    | 101   | 104  | 105 | 104  | 105    |
| 40    | 94    | 97   | 98  | 98   | 98     |
| 45    | 87    | 90   | 90  | 90   | 91     |
| 50    | 79    | 81   | 82  | 82   | 82     |
| 55    | 70    | 72   | 72  | 72   | 73     |
| 60    | 60    | 62   | 62  | 62   | 62     |
| 65    | 49    | 51   | 51  | 51   | 51     |
| 70    | 38    | 39   | 39  | 39   | 39     |
| 75    | 25    | 26   | 26  | 27   | 27     |
| 80    | 14    | 14   | 15  | 15   | 15     |
| 85    | 5     | 5    | 5   | 5    | 5      |
| 90    | 0     | 0    | 0   | 0    | 0      |

ZONAL LUMENS AND PERCENTAGES

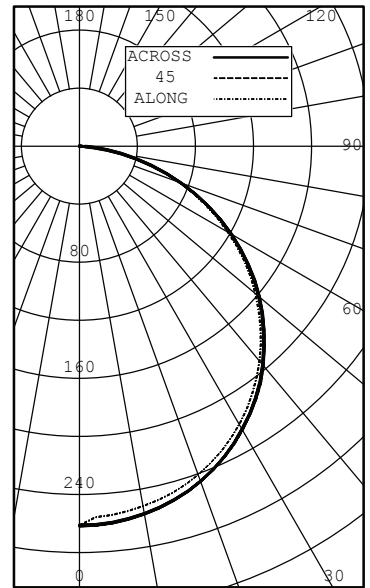
| ZONE   | LUMENS | % LUMINAIRE |
|--------|--------|-------------|
| 0-30   | 99     | 25.93       |
| 0-40   | 164    | 42.98       |
| 0-60   | 297    | 77.92       |
| 0-90   | 381    | 100.00      |
| 40-90  | 217    | 57.02       |
| 60-90  | 84     | 22.08       |
| 90-180 | 0      | 0.00        |
| 0-180  | 381    | 100.00      |

Cone Of Light Tabulation

| Mounting Height (Feet) | Footcandles at Nadir | Diameter (Feet) |
|------------------------|----------------------|-----------------|
| 4.00                   | 7.80                 | 5.22            |
| 6.00                   | 3.47                 | 7.84            |
| 8.00                   | 1.95                 | 10.4            |
| 10.0                   | 1.25                 | 13.1            |
| 12.0                   | 0.867                | 15.7            |
| 14.0                   | 0.637                | 18.3            |
| 16.0                   | 0.488                | 20.9            |

**CASCADE™ 23.8 in. 3000K**  
DI-0222

POLAR CANDELA DISTRIBUTION GRAPH



INTENSITY (CANDLEPOWER) SUMMARY

| ANGLE | ALONG | 22.5 | 45  | 67.5 | ACROSS |
|-------|-------|------|-----|------|--------|
| 0     | 261   | 261  | 261 | 261  | 261    |
| 5     | 255   | 264  | 261 | 261  | 260    |
| 10    | 252   | 261  | 258 | 258  | 257    |
| 15    | 247   | 256  | 253 | 253  | 252    |
| 20    | 241   | 249  | 246 | 246  | 245    |
| 25    | 232   | 239  | 237 | 237  | 236    |
| 30    | 221   | 228  | 226 | 225  | 225    |
| 35    | 208   | 215  | 212 | 212  | 212    |
| 40    | 193   | 200  | 197 | 197  | 197    |
| 45    | 176   | 183  | 180 | 180  | 180    |
| 50    | 158   | 164  | 162 | 162  | 162    |
| 55    | 139   | 144  | 142 | 142  | 142    |
| 60    | 118   | 122  | 121 | 121  | 121    |
| 65    | 96    | 100  | 98  | 98   | 98     |
| 70    | 73    | 76   | 75  | 75   | 75     |
| 75    | 50    | 51   | 51  | 51   | 52     |
| 80    | 27    | 28   | 28  | 29   | 29     |
| 85    | 9     | 10   | 10  | 10   | 10     |
| 90    | 0     | 0    | 0   | 0    | 0      |

ZONAL LUMENS AND PERCENTAGES

| ZONE   | LUMENS | % LUMINAIRE |
|--------|--------|-------------|
| 0-30   | 205    | 26.78       |
| 0-40   | 338    | 44.07       |
| 0-60   | 603    | 78.70       |
| 0-90   | 767    | 100.00      |
| 40-90  | 429    | 55.93       |
| 60-90  | 163    | 21.30       |
| 90-180 | 0      | 0.00        |
| 0-180  | 767    | 100.00      |

Cone Of Light Tabulation

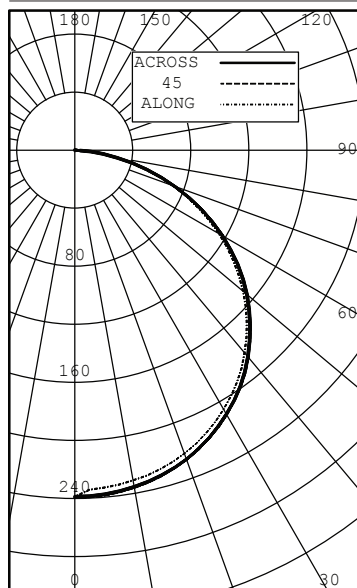
| Mounting Height (Feet) | Footcandles at Nadir | Diameter (Feet) |
|------------------------|----------------------|-----------------|
| 4.00                   | 16.4                 | 5.11            |
| 6.00                   | 7.29                 | 7.67            |
| 8.00                   | 4.10                 | 10.2            |
| 10.0                   | 2.63                 | 12.8            |
| 12.0                   | 1.82                 | 15.3            |
| 14.0                   | 1.34                 | 17.9            |
| 16.0                   | 1.03                 | 20.4            |

\* Photometric data complies with LM-79-08, ANSI C82.77-02.

**CASCADE™ 23.8 in. 6300K**

DI-0223

POLAR CANDELA DISTRIBUTION GRAPH



**INTENSITY (CANDLEPOWER) SUMMARY**

| ANGLE | ALONG | 22.5 | 45  | 67.5 | ACROSS |
|-------|-------|------|-----|------|--------|
| 0     | 239   | 239  | 239 | 239  | 239    |
| 5     | 234   | 241  | 239 | 239  | 238    |
| 10    | 231   | 239  | 236 | 236  | 236    |
| 15    | 228   | 235  | 233 | 233  | 232    |
| 20    | 222   | 229  | 227 | 227  | 226    |
| 25    | 215   | 222  | 219 | 220  | 219    |
| 30    | 206   | 212  | 210 | 210  | 210    |
| 35    | 195   | 201  | 199 | 199  | 199    |
| 40    | 182   | 188  | 186 | 186  | 186    |
| 45    | 168   | 173  | 171 | 171  | 171    |
| 50    | 151   | 157  | 155 | 155  | 155    |
| 55    | 134   | 139  | 137 | 137  | 137    |
| 60    | 114   | 119  | 118 | 118  | 117    |
| 65    | 94    | 97   | 97  | 97   | 96     |
| 70    | 72    | 75   | 74  | 75   | 74     |
| 75    | 50    | 51   | 51  | 52   | 52     |
| 80    | 28    | 29   | 29  | 30   | 30     |
| 85    | 10    | 11   | 11  | 11   | 11     |
| 90    | 0     | 0    | 0   | 0    | 0      |

**ZONAL LUMENS AND PERCENTAGES**

| ZONE   | LUMENS | % LUMINAIRE |
|--------|--------|-------------|
| 0-30   | 190    | 25.95       |
| 0-40   | 314    | 42.98       |
| 0-60   | 568    | 77.77       |
| 0-90   | 730    | 100.00      |
| 40-90  | 416    | 57.02       |
| 60-90  | 162    | 22.23       |
| 90-180 | 0      | 0.00        |
| 0-180  | 730    | 100.00      |






**Cone Of Light Tabulation**

| Mounting Height (Feet) | Footcandles at Nadir | Diameter (Feet) |
|------------------------|----------------------|-----------------|
| 4.00                   | 15.0                 | 5.22            |
| 6.00                   | 6.66                 | 7.82            |
| 8.00                   | 3.74                 | 10.4            |
| 10.0                   | 2.40                 | 13.0            |
| 12.0                   | 1.66                 | 15.6            |
| 14.0                   | 1.22                 | 18.3            |
| 16.0                   | 0.936                | 20.9            |

\* Photometric data complies with LM-79-08, ANSI C82.77-02.

## ACCESSORIES

CASCADE™ LED Light Bars feature 9mm wet location plugs. These plugs are compatible with the following 9mm accessories. All fixture accessories including Wet Location Connections, etc. have a Class 2 amperage rating unless otherwise noted (60W/5A @ 12V DC; 100W/4.17A @ 24V DC).

| Item #   | Type   | Description   | Image  |
|--|--|---|--|
| DI-0710-M-** (Male)<br>DI-0710-F-** (Female)   | Wet Location Plug (9mm) to DC Connector        | Attaches a wet location plug to a male DC accessory or plug-in adapter (not rated for wet location environments). Gender specification applies to the wet location connection only. Wire: 20/2 AWG. Dimensions: 7 x 0.3 in. (L x W) |   |
| DI-0725-**   | Wet Location Solder Connector Pair (9mm Plugs) | Converts a wet location plug to a hard-wired connection (1x male & 1x female wet location plug). Wire: 22/2 AWG. Dimensions: 4.5 x 0.3 in. (L x W)  |   |
| DI-0757-** (6 in.)<br>DI-0758-** (12 in.)<br>DI-0759-** (24 in.)<br>DI-0709-** (39 in.)<br>DI-0810-** (16 ft.) | Wet Location Extension Cable (9mm Plugs)       | Creates an extension between wet location plugs. Wire: 22/2 AWG. Connector width: 0.3 in.   |   |
| DI-0804-** (2-way)<br>DI-0805-** (3-way)<br>DI-0806-** (5-way)   | Wet Location Splitter Cable (9mm Plugs)        | Splits a connection for wet location accessories. Wire: 22/2 AWG. Dimensions: 8.5 x 0.6 x 0.3 in. (L x W x H) Connector width: 0.3 in.  |   |
| DI-0752-**   | CASCADE Light Bar Mounting Clips               | Mounts CASCADE™ Light Bars. 1 screw included per clip. 0.6 x 0.5 x 0.4 in. (L x W x H)  |   |
| DI-1740 (9.5 ft.)<br>DI-0775-S (100 ft.)   | 3M™ Adhesive Tape                              | 3M™ 4229 adhesive tape for indoor and outdoor installation of wet location LED fixtures.  |  |

\*\* Products available in 10x(CASCADE Light Bar Mounting Clips only), 25x, and 50x pack bulk quantities. Add -10(CASCADE Light Bar Mounting Clips only), -25, or -50 to each product # for bulk quantities.

## SWITCHES, CONTROLS, LED DRIVERS, & SYSTEM DIAGRAMS

We offer a variety of switches, controls, and LED drivers (power supplies) to address all common light installations. For additional information, please see the additional component sections of our website or catalog. For additional questions and concerns please contact technical support.

## ADDITIONAL RESOURCES

Visit the on line product page at [www.DiodeLED.com](http://www.DiodeLED.com) for additional resources including:

- **Voltage Drop Charts**

Use to specify appropriate wire gauge for installation. Available at the 'Tools & Resources' page at [www.DiodeLED.com](http://www.DiodeLED.com).

## SAFETY & DISCLOSURES

- Install in accordance with the national and local electrical code regulations.
- This product is intended to be installed and serviced by a qualified, licensed electrician.
- This product must be powered with a compatible Class 2 DC constant voltage LED driver (power supply).
- Do not connect directly to high voltage or AC power.
- Do not install near or around chlorinated/treated water. This product is not rated as submersible. Do not install in location where water may pool or collect.
- Do not install in location where LED chips are exposed to direct sunlight as damage to the phosphor will occur.
- It is generally recommended to load the driver no more than 80% the labeled rating for maximum performance and longevity. However, see each driver specification sheet for exact minimum and maximum loading values.
- Do not install product in an environment outside the listed ambient temperature. Ensure adequate airflow and heatsinking is considered when mounting/installing.
- Operating temperature is measured according to the minimum and maximum ambient temperature environment. Exceeding the maximum operating temperature may damage the controller or fixture.
- 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.
- 'Voltage drop' is a gradual decrease in voltage along a conductor through which current is flowing. When specifying an LED system, ensure to calculate voltage drop appropriately. Voltage drop calculators will suggest the proper gauge wire and distance to install the driver from the fixture.
- Attached wire leads, and additional extension cables, connectors, etc., are not rated for in-wall installation unless otherwise noted.
- All fixture accessories including wet location connectors, DC connections, etc. have a Class 2 amperage rating unless otherwise noted (60W/5A @ 12V DC; 100W/4.17A @ 24V DC).
- Do not modify or disassemble this product beyond instructions or the warranty will be void. Attached connections are field cuttable and will not void warranty if modified.
- Actual color may vary from what is pictured on this sheet and other print materials due to the limitations of photographic processes.
- 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 INFORMATION

### Limited Warranty

This LED fixture has a three (3) year limited warranty from the date of shipment. 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](http://www.DiodeLED.com) under the 'Tools & Resources' tab. For warranty related questions, please contact customer service.

### Consumer's Acknowledgment

Diode LED 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 infield adjustments can have a significant impact on an entire system. Choosing the right components is essential. Diode 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 Diode 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 Diode 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 purchaser 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. Diode LED strongly recommends that licensed professionals be used in the design and installation of lighting systems that include Diode 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 Diode LED product specifications can make the requisite decisions appropriate for a successful finished lighting application.



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