

## L2 Starboard Light Engines Featuring CREE XLamp XM-L Dice Design L2-ML STARBOARD L2-ML STARBOARD L2-ML STARBOARD WITH CONNECTOR

The L2 Series is optimized for high output, high CRI, and lighting uniformity, making it ideal for directional lighting applications. It delivers light with consistent CCT, in a highly efficient package that enables true halogen performance in a thermally constrained design. The products in this series provide the lighting industry with efficient and environmentally-friendly LED lighting.

## **FEATURES**

- · Luminous Output: 103 ~ 144 Lumens at 400mA and 169 ~ 236 Lumens at 750mA.
- Unique factory Tc (case temperature test point) for max current drive and temperature control.
- · Optional pin headers allows quick hook-up, eliminates delicate soldering process.
- · Low Voltage Input: 2.9VDC.
- 125° Viewing Angle.
- Low Thermal Resistance.
- CCT (Correlated Color Temperature): 3100K / 4100K / 6500K.
- · CRI (Color Rendering Index): 80 / 75 / 65.

## **APPLICATIONS**

- Indoor Directional Lighting
  - o Accent Lighting / Track Lighting / Spot Lights
- Indoor Commercial Lighting
  - o High and Low Bay Lighting (Ex.: Distribution Center / Warehouse)
- Outdoor Landscape Lighting
  - o Path Lighting / Step Lighting
- Outdoor Roadway and Parking Lighting
  - o Tunnel Lighting / Parking Garage / Parking Lot / Street and Road Lighting
- Outdoor Portable Lighting
  - o Headlamp Lights / Flash Lights / Bicycle Lights
- Outdoor Solar-Powered Lighting (off-grid)



| Table 1: Typical Characteristics without Additional Heat Sink |         |     |  |   |   |                                      |  |  |  |
|---|---------|-----|--|---|---|--------------------------------------|--|--|--|
| Part Number   | CCT (K) | CRI | Typical Luminous<br>Flux @ If =<br>400mA, Tc=70C<br>(lm) | Typical Luminous<br>Flux @ If =<br>750mA, Tc=100C<br>(lm) | Typical DC<br>Forward<br>Current,Vf (V) | Viewing Angle,<br>Axis 1 / Axis2 (°) |  |  |  |
| L2-MLC1-F   | 6500    | 65  | 144  | 236   | 2.8 ~ 2.9                               | 125                                  |  |  |  |
| L2-MLC1-S   | 6500    | 65  | 144  | 236   | 2.8 ~ 2.9                               | 125                                  |  |  |  |
| L2-MLN1-F   | 4100    | 75  | 124  | 202   | 2.8 ~ 2.9                               | 125                                  |  |  |  |
| L2-MLN1-S   | 4100    | 75  | 124  | 202   | 2.8 ~ 2.9                               | 125                                  |  |  |  |
| L2-MLW1-F   | 3100    | 80  | 103  | 169   | 2.8 ~ 2.9                               | 125                                  |  |  |  |
| L2-MLW1-S   | 3100    | 80  | 103  | 169   | 2.8 ~ 2.9                               | 125                                  |  |  |  |

| Table 2: Absolute Maximum Ratings with Thermal Management |         |     |  |   |   |                                      |  |  |  |  |
|---|---------|-----|--|---|---|--------------------------------------|--|--|--|--|
| Part Number   | CCT (K) | CRI | Typical Luminous<br>Flux @ If =<br>1000mA,<br>Tc=110C (lm) | Typical Luminous<br>Flux @ If =<br>3000mA, Tc=60C<br>(lm) | Typical DC<br>Forward<br>Current,Vf (V) | Viewing Angle,<br>Axis 1 / Axis2 (°) |  |  |  |  |
| L2-MLC1-F   | 6500    | 65  | 281  | 660   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |
| L2-MLC1-S   | 6500    | 65  | 281  | 660   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |
| L2-MLN1-F   | 4100    | 75  | 241  | 566   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |
| L2-MLN1-S   | 4100    | 75  | 241  | 566   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |
| L2-MLW1-F   | 3100    | 80  | 201  | 472   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |
| L2-MLW1-S   | 3100    | 80  | 201  | 472   | 3.0 ~ 3.3                               | 125                                  |  |  |  |  |

<sup>\*</sup> Please do not drive L2 Starboards at maximum ratings more than 5 seconds without proper Heat Sink / Thermal Management.

<sup>\*\* -</sup>S = Starboard w/out connector header.

<sup>\*\*\* -</sup>F = Starboard w/connector header.