**Features**

- Ideal for indication light on hand held products
- Long life and robust package
- Standard Package: 2,000pcs/ Reel
- MSL (Moisture Sensitivity Level): 3
- RoHS compliant

**ATTENTION**

**OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES**

![Image](image.png)

**Part Number: XZMDKDGCBD110W**

**1.6x1.6mm FULL-COLOR SURFACE MOUNT LED**

<table>
<thead>
<tr>
<th>Absolute Maximum Ratings (T_A=25°C)</th>
<th>Red (AlGaInP)</th>
<th>Green (InGaN)</th>
<th>Blue (InGaN)</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Voltage</td>
<td>V_R</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Forward Current</td>
<td>I_F</td>
<td>30</td>
<td>25</td>
<td>30</td>
</tr>
<tr>
<td>Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width</td>
<td>I_F</td>
<td>185</td>
<td>150</td>
<td>150</td>
</tr>
<tr>
<td>Power Dissipation</td>
<td>P_R</td>
<td>75</td>
<td>102.5</td>
<td>120</td>
</tr>
<tr>
<td>Electrostatic Discharge Threshold (HBM)</td>
<td>3000</td>
<td>450</td>
<td>250</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>T_A</td>
<td>-40 ~ +85</td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>T_stg</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A Relative Humidity between 40% and 60% is recommended in ESD-protected work areas to reduce static build up during assembly process (Reference JEDEC/JESD625-A and JEDEC/J-STD-033)

**Operating Characteristics (T_A=25°C)**

<table>
<thead>
<tr>
<th>Luminous Intensity CIE127-2007* (I_F=20mA)</th>
<th>Red (AlGaInP)</th>
<th>Green (InGaN)</th>
<th>Blue (InGaN)</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>typ.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Red</td>
<td>40*</td>
<td>79*</td>
<td>645*</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>120*</td>
<td>278*</td>
<td>515*</td>
<td>130*</td>
</tr>
<tr>
<td>Blue</td>
<td>40*</td>
<td>69*</td>
<td>460*</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Wavelength CIE127-2007* (λ_F=20mA)</th>
<th>Red (AlGaInP)</th>
<th>Green (InGaN)</th>
<th>Blue (InGaN)</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>λ_P</td>
<td>645*</td>
<td>515*</td>
<td>460*</td>
<td>nm</td>
</tr>
<tr>
<td>λ_D</td>
<td>630*</td>
<td>525*</td>
<td>465*</td>
<td>nm</td>
</tr>
<tr>
<td>Δλ</td>
<td>28</td>
<td>35</td>
<td>25</td>
<td>nm</td>
</tr>
<tr>
<td>Capacitance (Typ.) (V_F=0V, f=1MHz)</td>
<td>C</td>
<td>35</td>
<td>45</td>
<td>100</td>
</tr>
</tbody>
</table>

*Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

Feb 26, 2019  
XDSB4378  V7-Z  Layout: Maggie L.
Part Number: XZMDKDGCBD110W
1.6x1.6mm FULL-COLOR SURFACE MOUNT LED

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**Red**

- Relative Intensity Vs. CIE Wavelength
- Wavelength (nm)
- Spatial Distribution
- Ta = 25 °C

---

**Green**

- Relative Intensity Vs. CIE Wavelength
- Wavelength (nm)
- Spatial Distribution
- Ta = 25 °C

---

**Blue**

- Relative Intensity Vs. CIE Wavelength
- Wavelength (nm)
- Spatial Distribution
- Ta = 25 °C
LED is recommended for reflow soldering and soldering profile is shown below.

The device has a single mounting surface. The device must be mounted according to the specifications.

**Recommended Soldering Pattern**
(Units : mm; Tolerance: ± 0.1)

**Tape Specification (Units : mm)**

**Reel Dimension**

Remarks:
If special sorting is required (e.g. binning based on forward voltage, Luminous intensity / luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous intensity / luminous flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.
PACKING & LABEL SPECIFICATIONS

1. Data presented in this document reflect statistical figures and should be treated as technical reference only.
2. Contents within this document are subject to improvement and enhancement changes without notice.
3. The product(s) in this document are designed to be operated within the electrical and environmental specifications indicated on the datasheet. User accepts full risk and responsibility when operating the product(s) beyond their intended specifications.
4. The product(s) described in this document are intended for electronic applications in which a person’s life is not reliant upon the LED. Please consult with a SunLED representative for special applications where the LED may have a direct impact on a person’s life.
5. The contents within this document may not be altered without prior consent by SunLED.