**Description**

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

**Features**

- 2 PINS.
- HIGH LUMINOUS INTENSITY.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- CATEGORIZED FOR LUMINOUS INTENSITY.
- EXCELLENT ON/OFF CONTRAST.
- EASY MOUNTING ON P.C. BOARD OR SOCKETS.
- SOLID STATE RELIABILITY.
- RoHS COMPLIANT.

**Notes:**

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Lead spacing is measured where the lead emerge from the package.
4. Specifications are subject to change without notice.
### Selection Guide

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dice</th>
<th>Lens Type</th>
<th>Iv (mod) [2] @ 10 mA</th>
<th>Viewing Angle [1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>DLC2/6ID</td>
<td>HIGH EFFICIENCY RED (GaAsP/GaP)</td>
<td>RED DIFFUSED</td>
<td>18</td>
<td>120°</td>
</tr>
</tbody>
</table>

### Electrical / Optical Characteristics at T<sub>A</sub>=25°C

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Device</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
<th>Test Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>λ&lt;sub&gt;peak&lt;/sub&gt;</td>
<td>Peak Wavelength</td>
<td>High Efficiency Red</td>
<td>627</td>
<td>nm</td>
<td>If=10mA</td>
<td></td>
</tr>
<tr>
<td>λ&lt;sub&gt;D&lt;/sub&gt; [1]</td>
<td>Dominant Wavelength</td>
<td>High Efficiency Red</td>
<td>625</td>
<td>nm</td>
<td>If=10mA</td>
<td></td>
</tr>
<tr>
<td>Δλ/2</td>
<td>Spectral Line Half-width</td>
<td>High Efficiency Red</td>
<td>45</td>
<td>nm</td>
<td>If=10mA</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Capacitance</td>
<td>High Efficiency Red</td>
<td>15</td>
<td>pF</td>
<td>V&lt;sub&gt;F&lt;/sub&gt;=0V; f=1MHz</td>
<td></td>
</tr>
<tr>
<td>V&lt;sub&gt;F&lt;/sub&gt; [2]</td>
<td>Forward Voltage</td>
<td>High Efficiency Red</td>
<td>5.7</td>
<td>7.5</td>
<td>V</td>
<td>If=10mA</td>
</tr>
<tr>
<td>I&lt;sub&gt;R&lt;/sub&gt;</td>
<td>Reverse Current</td>
<td>High Efficiency Red</td>
<td>20</td>
<td>uA</td>
<td>V&lt;sub&gt;R&lt;/sub&gt; = 15V</td>
<td></td>
</tr>
</tbody>
</table>

### Absolute Maximum Ratings at T<sub>A</sub>=25°C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>High Efficiency Red</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power dissipation</td>
<td>450</td>
<td>mW</td>
</tr>
<tr>
<td>Forward Current[1]</td>
<td>60</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>15</td>
<td>V</td>
</tr>
<tr>
<td>Operating/Storage Temperature</td>
<td>-40°C To +85°C</td>
<td></td>
</tr>
<tr>
<td>Lead Solder Temperature [2]</td>
<td>260°C For 5 Seconds</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. θ<sub>1/2</sub> is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous Intensity / Luminous Flux: +/-15%.
3. λ<sub>D</sub> is the peak wavelength.
4. Forward Voltage: +/-0.1V.
High Efficiency Red DLC2/6ID

**Relative Intensity vs. Wavelength**

- **Hi.Eff.Red**
- **$\lambda = 25^\circ C$**

**Forward Current vs. Forward Voltage**

- **Forward Voltage (V)**
- **Forward Current (mA)**

**Luminous Intensity vs. Forward Current**

- **IF = Forward Current (mA)**
- **Luminous Intensity vs. IF**

**Forward Current vs. Ambient Temperature**

- **Ambient Temperature ($T_a$) $^\circ C$**
- **Forward Current (mA)**

**Luminous Intensity vs. Ambient Temperature**

- **Ambient Temperature ($T_a$) $^\circ C$**
- **Luminous Intensity (cd)**

**Spatial Distribution**

- **Spatial Distribution Chart**
- **0°, 10°, 20°, 30°**
- **0, 0.5, 1.0, 1.7**
- **0°, 10°, 20°, 30°**

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**SPEC NO:** DSAB5156  
**REV NO:** V.8  
**DATE:** APR/14/2006  
**PAGE:** 3 OF 4  
**APPROVED:** J. Lu  
**CHECKED:** Tracy Deng  
**DRAWN:** Z.Z.YANG  
**ERP:** 1338000070
PACKING & LABEL SPECIFICATIONS  DLC2/6ID

Inside LABEL Paste On The IC-pipe

Outside LABEL Paste On The Box

Kingbright  TYPE: DLC2/6xxx  CODE: xx

RoHs Compliant

BIN CODE

Number OF FOC

Date

Number OF QA

Date

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