3.5x2.8mm SURFACE MOUNT LED LAMP

Part Number: KAA-3528ESGC    HIGH EFFICIENCY RED
SUPER BRIGHT GREEN

Features
- BOTH CHIPS CAN BE CONTROLLED SEPARATELY.
- SUITABLE FOR ALL SMT ASSEMBLY AND SOLDER PROCESS.
- AVAILABLE ON TAPE AND REEL.
- PACKAGE: 1500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.

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

Notes:
1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subjected to change without notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.

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## Selection Guide

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Dice</th>
<th>Lens Type</th>
<th>Iv (mcd) [2] @ 20mA</th>
<th>Viewing Angle [1]</th>
</tr>
</thead>
<tbody>
<tr>
<td>KAA-3528ESGC</td>
<td>HIGH EFFICIENCY RED (GaAsP/GaP)</td>
<td>WATER CLEAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SUPER BRIGHT GREEN (GaP)</td>
<td></td>
<td>10</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
<td>20</td>
</tr>
</tbody>
</table>

Notes:
1. \( \theta \) 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous Intensity / Luminous Flux: +/-15%.

## Electrical / Optical Characteristics at \( TA=25°C \)

<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>( \lambda_{\text{peak}} )</td>
<td>Peak Wavelength</td>
<td>High Efficiency Red</td>
<td>627</td>
<td>565</td>
<td>nm</td>
<td>( I_{F}=20mA )</td>
</tr>
<tr>
<td>( \lambda_{D} ) [1]</td>
<td>Dominant Wavelength</td>
<td>High Efficiency Red</td>
<td>625</td>
<td>568</td>
<td>nm</td>
<td>( I_{F}=20mA )</td>
</tr>
<tr>
<td>( \Delta \lambda_{1/2} )</td>
<td>Spectral Line Half-width</td>
<td>High Efficiency Red</td>
<td>45</td>
<td>30</td>
<td>nm</td>
<td>( I_{F}=20mA )</td>
</tr>
<tr>
<td>C</td>
<td>Capacitance</td>
<td>High Efficiency Red</td>
<td>15</td>
<td>15</td>
<td>pF</td>
<td>( V_{F}=0V; f=1MHz )</td>
</tr>
<tr>
<td>( V_{F} ) [2]</td>
<td>Forward Voltage</td>
<td>High Efficiency Red</td>
<td>2.0</td>
<td>2.2</td>
<td>V</td>
<td>( I_{F}=20mA )</td>
</tr>
<tr>
<td>( I_{R} )</td>
<td>Reverse Current</td>
<td>High Efficiency Red</td>
<td>10</td>
<td>10</td>
<td>( V_{R}=5V )</td>
<td></td>
</tr>
</tbody>
</table>

Notes:
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

## Absolute Maximum Ratings at \( TA=25°C \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>High Efficiency Red</th>
<th>Super Bright Green</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power dissipation</td>
<td>75</td>
<td>62.5</td>
<td>mW</td>
</tr>
<tr>
<td>DC Forward Current</td>
<td>30</td>
<td>25</td>
<td>mA</td>
</tr>
<tr>
<td>Peak Forward Current [1]</td>
<td>160</td>
<td>140</td>
<td>mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>5</td>
<td>V</td>
<td></td>
</tr>
<tr>
<td>Operating/Storage Temperature</td>
<td></td>
<td>-40°C To +85°C</td>
<td></td>
</tr>
</tbody>
</table>

Note:
1. 1/10 Duty Cycle, 0.1ms Pulse Width.
KAA-3528ESGC
High Efficiency Red
Super Bright Green

Forward Voltage (V) vs. Forward Current (mA)

Luminous Intensity (lm) vs. Forward Current (mA)

Relative Luminous Intensity vs. Ambient Temperature

Spatial Distribution
KAA-3528ESGC

Reflow Soldering Profile For Lead-free SMT Process.

NOTES:
1. We recommend the reflow temperature 245°C(+/-5°C), the maximum soldering temperature should be limited to 260°C.
2. Don't cause strain to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

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

Tape Specifications
(Units : mm)