Bivar's Surface Mount 0603 UV package LED is offered in a standard 0603 footprint and is ideal for any UV applications. The miniature package provides long life and reliability making it ideal for industrial curing, hazard detection, medical applications such as instrument sterilization, fluorescent counterfeit watermark detection, and forensic applications. The water clear LED lens provides for maximum radiant power output and wide viewing angles. Bivar SM0603 UV LED is packaged in standard tape and reels for pick and place assemblies.

### Table of Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Material</th>
<th>Emitted Color</th>
<th>Peak Wavelength $\lambda_p$(nm)</th>
<th>Lens Appearance</th>
<th>Radiant Power (mW)</th>
<th>Viewing Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM0603UV-400</td>
<td>InGaN/SiC</td>
<td>ULTRA VIOLET</td>
<td>400 ~ 405</td>
<td>Water Clear</td>
<td>5 ~ 10</td>
<td>130°</td>
</tr>
</tbody>
</table>

### Outline Dimensions

Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance: ±0.010" unless otherwise noted.

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CAUTION: EMITS ULTRAVIOLET RADIATION!!

- This UV (ultraviolet) LED during operation radiates intense UV light.
- Do not look directly into the UV light during operation of device. This can be harmful to human body especially to the eyes and skin, even for brief period due to the intense UV light.
- If viewing the UV light is necessary, please use UV filtered glasses to avoid damage by the UV light.
- If the UV LED in your product might be viewed directly, please affix a caution label to your product to that effect.
- Avoid direct eye and skin exposure to UV light. Keep out of reach of children.
Absolute Maximum Ratings

$T_A = 25^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dissipation</td>
<td>100 mW</td>
</tr>
<tr>
<td>Forward Current (DC)</td>
<td>25 mA</td>
</tr>
<tr>
<td>Peak Forward Current $^1$</td>
<td>100 mA</td>
</tr>
<tr>
<td>Reverse Voltage</td>
<td>5 V</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-30 ~ +80°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>-40 ~ +85°C</td>
</tr>
<tr>
<td>Lead Soldering Temperature (3 mm from the base of the epoxy bulb) $^2$</td>
<td>260°C</td>
</tr>
</tbody>
</table>

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec.  2. Solder time less than 5 seconds at temperature extreme.

Electrical / Optical Characteristics

$T_A = 25^\circ C$ & $I_F = 20$ mA unless otherwise noted

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Forward Voltage (V)$^1$</th>
<th>Recommend Forward Current (mA)</th>
<th>Reverse Current (µA)</th>
<th>Dominant Wavelength (nm)$^2$</th>
<th>Radiant Power (mW)</th>
<th>Viewing Angle 2 $\Theta$ ½ (deg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM0603UV-400</td>
<td>/</td>
<td>3.4 4.2</td>
<td>/ 20 /</td>
<td>/ / /</td>
<td>5 / 10</td>
<td>130</td>
</tr>
</tbody>
</table>

Notes: 1. Tolerance of forward voltage : ±0.05V.  2. Tolerance of dominant wavelength : ±1.0nm.
Typical Electrical / Optical Characteristics

$T_A = 25^\circ C$ unless otherwise noted

![Graphs showing electrical and optical characteristics of a SMT LED.](image-url)
Recommended Soldering Conditions

![Soldering Profile Graph]

Tape and Reel Dimensions

Note: 4000 pcs/Reel

Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance: ±0.010" unless otherwise noted.
Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
ESD/MBB Bag

Humidity Indicator Card
Desiccants

Internal Quality Control

Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted:
   X.XXX ± 0.010”
   X.X ± 0.1”

Part No. XXXX-XXXX-XXX
Prod. No. XXXX-XXXX-XXX
PO No. XXXX
Lot No. XXXXXXXXXX
Q’ty: X.XXX PCS
Q.C. XXX BIN
Date: 2008.XX.XX

Bivar Standard Packaging Label

Bivar reserves the right to make changes at any time without notice.
Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

BIVAR:
SM0603UV-400