Bivar's Surface Mount 1206 UV Inner Lens LED is offered in a standard 1206 footprint and is ideal for any UV applications. The water clear inner lens provides a narrow viewing angle and maximum radiation power output. 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. Bivar SM1206 UV-IL LED is packaged in standard tape and reels for pick and place assemblies.

**Outline Dimensions**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Material</th>
<th>Emitted Color</th>
<th>Peak Wavelength λp(nm) TYP.</th>
<th>Lens Appearance</th>
<th>Luminous Intensity (mW) TYP.</th>
<th>Viewing Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM1206UV-395-IL</td>
<td>InGaN/SiC</td>
<td>ULTRA VIOLET</td>
<td>395 ~ 400</td>
<td>Water Clear</td>
<td>.65</td>
<td>30°</td>
</tr>
</tbody>
</table>

**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.
Absolute Maximum Ratings
$T_A = 25^\circ C$ unless otherwise noted

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></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 $\leq 0.1$ 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>Luminous Intensity Iv (mW)</th>
<th>Viewing Angle $2 \Theta \frac{1}{2}$ (deg)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MIN</td>
<td>TYP</td>
<td>MAX</td>
<td>MIN</td>
<td>TYP</td>
<td>MAX</td>
</tr>
<tr>
<td>SM1206UV-395-IL</td>
<td>/</td>
<td>3.4</td>
<td>4.2</td>
<td>/</td>
<td>20</td>
<td>/</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

**Fig. 1 Forward Current vs. Forward Voltage**

**Fig. 2 Relative Luminous Intensity vs. Forward Current**

**Fig. 3 Forward Current vs. Temperature**

**Fig. 4 Directivity Radiation Diagram**

**Fig. 5 Relative Luminous Intensity vs. Peak Wavelength**
Recommended Soldering Conditions

Preheat Temperature: 100°C Max.  
Peak Temperature: 260°C Max.  
Preheat Time: 20 ~ 50 Seconds  
Solder Time Above 217°C: 5 Seconds Max.

Note: Turn off top heater at preheat to prevent the lamp body directly exposed to the heat source.

Tape and Reel Dimensions

Note: 3000 pcs/Reel

Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance: ±0.010” unless otherwise noted.
3mm (T1) Package Discrete LEDs

AMBER

Bivar reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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Phone: (949) 951-8808   Fax: (949) 951-3974   E-mail: bivar@bivar.com   Web: www.bivar.com

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

Packaging and Labeling Plan
Note: 1 Reel / Bag

Vacuum and Heat Sealed
Clear AntiStatic Poly Bag

Humidity Indicator
Card
Desiccant

Bivar Standard Packaging Label

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