Bivar Surface Mount 1206 Inner Lens package LED may be used in nearly any lighting or indication application. The diffused inner lens provides a narrow viewing angle and high luminous intensity making it suitable for small scale applications such as display, backlighting, and general indication. Low power consumption and excellent long life reliability are ideal for battery powered equipment. Wide variety of wavelength and intensity combinations are available to meet any illumination need. The SM1206-IL LED is packaged in standard tape and reels for pick and place assemblies.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Material</th>
<th>Emitted Color</th>
<th>Chromaticity Coordinates (±0.05)</th>
<th>Lens Appearance</th>
<th>Luminous Intensity (mcd) TYP.</th>
<th>Viewing Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM1206NUWC-IL</td>
<td>InGaN</td>
<td>WHITE</td>
<td>X=.30, Y=.29</td>
<td>Diffused</td>
<td>750</td>
<td>30°</td>
</tr>
</tbody>
</table>

**Outline Dimensions**

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

\( T_a = 25^\circ C \) unless otherwise noted

<table>
<thead>
<tr>
<th>Parameter</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>MIN</th>
<th>TYP</th>
<th>MAX</th>
<th>Notes: 1. 10% Duty Cycle, Pulse Width ( \leq 0.1 \text{ msec.} )</th>
<th>2. Solder time less than 5 seconds at temperature extreme.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Dissipation</td>
<td></td>
<td></td>
<td></td>
<td>100 mW</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Forward Current (DC)</td>
<td></td>
<td></td>
<td></td>
<td>25 mA</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Peak Forward Current</td>
<td></td>
<td></td>
<td></td>
<td>100 mA</td>
<td></td>
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</tr>
<tr>
<td>Reverse Voltage</td>
<td></td>
<td></td>
<td>5 V</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Operating Temperature Range</td>
<td></td>
<td></td>
<td>-30 ~ +80°C</td>
<td></td>
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</tr>
<tr>
<td>Storage Temperature Range</td>
<td></td>
<td></td>
<td>-40 ~ +85°C</td>
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<tr>
<td>Lead Soldering Temperature (3 mm from the base of the epoxy bulb)</td>
<td></td>
<td></td>
<td>260°C</td>
<td></td>
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</tr>
</tbody>
</table>

Notes: 1. Tolerance of forward voltage : \( \pm 0.05 \text{V}. \) 2. Tolerance of dominant wavelength : \( \pm 5.0 \text{nm}. \)

Electrical / Optical Characteristics

\( T_a = 25^\circ C \) & \( I_F = 20 \text{ mA} \) 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((\mu\text{A}))</th>
<th>Dominant Wavelength (nm)(^2)</th>
<th>Luminous Intensity (I_v) (mcd)</th>
<th>Viewing Angle 2 (\Theta ) (1/2) (deg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM1206NUWC-IL</td>
<td>3.1 (\pm 0.05) (\text{V})</td>
<td>20 (\pm 0.05) (\text{mA})</td>
<td>10 (\pm 0.05) (\mu\text{A})</td>
<td>450 (\pm 0.05) (\text{mcd})</td>
<td>750 (\pm 0.05) (\text{mcd})</td>
<td>30 (\pm 0.05) (\text{deg})</td>
</tr>
</tbody>
</table>

Notes: 1. Tolerance of forward voltage : \( \pm 0.05 \text{V}. \) 2. Tolerance of dominant wavelength : \( \pm 5.0 \text{nm}. \)
Typical Electrical / Optical Characteristics

$T_a = 25^\circ\text{C}$ unless otherwise noted
Recommended Soldering Conditions

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.
Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
ESD/MBB Bag

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

Humidity Indicator Card
Desiccants

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:

SM1206NUWC-IL