SURFACE MOUNT LED BLUE, 1206 IL PACKAGE



SM1206NBWC-IL

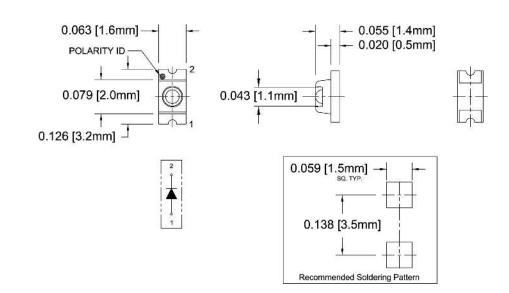
- Industry Standard 1206 Package
- RoHS Compliant
- Water Clear Inner Lens
- High Luminous Intensity
- Narrow Viewing Angle
- Ideal for Status Indication, Display, and Backlighting

Bivar Surface Mount 1206 Inner Lens package LED may be used in nearly any lighting or indication application. The water clear 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.

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Part Number	Material	Emitted Color	Peak Wavelength λp(nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle	
SM1206NBWC-IL	InGaN	BLUE	468	Water Clear	950	30°	

Outline Dimensions



Outline Drawings Notes:

1. All dimensions are in inches [millimeters].

2. Standard tolerance: ±0.010" unless otherwise noted.





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# Absolute Maximum Ratings

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

| Power Dissipation                                                                                     | 100 mW      |  |  |  |
|-------------------------------------------------------------------------------------------------------|-------------|--|--|--|
| Forward Current ( DC )                                                                                | 25 mA       |  |  |  |
| Peak Forward Current <sup>1</sup>                                                                     | 100 mA      |  |  |  |
| Reverse Voltage                                                                                       | 5 V         |  |  |  |
| Operating Temperature Range                                                                           | -30 ~ +80°C |  |  |  |
| Storage Temperature Range                                                                             | -40 ~ +85°C |  |  |  |
| Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) <sup>2</sup>                      | 260°C       |  |  |  |
| National 40% Data Orale Data With 204 meres - 0. Oralder the last the 5 meres de attacementer entered |             |  |  |  |

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

## **Electrical / Optical Characteristics**

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

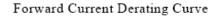
| Part Number   | Forward<br>Voltage (V) <sup>1</sup> |     | Recommend<br>Forward<br>Current (mA) |     | Reverse<br>Current<br>(µA) | Dominant<br>Wavelength (nm) <sup>2</sup> |     | Luminous<br>Intensity Iv (mcd) |     |     | Viewing<br>Angle<br>2 O <sup>1</sup> / <sub>2</sub><br>(deg) |     |     |     |
|---------------|-------------------------------------|-----|--------------------------------------|-----|----------------------------|------------------------------------------|-----|--------------------------------|-----|-----|--------------------------------------------------------------|-----|-----|-----|
|               | MIN                                 | ΤΥΡ | MAX                                  | MIN | ΤΥΡ                        | MAX                                      | MAX | MIN                            | ΤΥΡ | MAX | MIN                                                          | ΤΥΡ | MAX | ТҮР |
| SM1206NBWC-IL | /                                   | 3.1 | 3.6                                  | /   | 20                         | /                                        | 10  | /                              | 470 | /   | 750                                                          | 950 | /   | 30  |

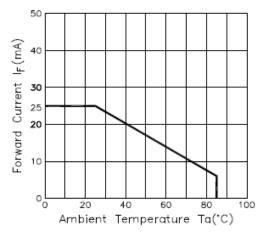
Notes: 1. Tolerance of forward voltage : ±0.05V. 2. Tolerance of dominant wavelength : ±5.0nm.

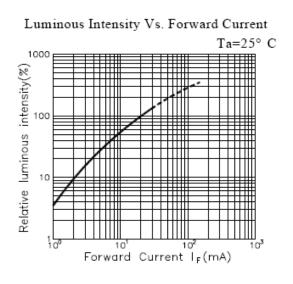


#### **Typical Electrical / Optical Characteristics** T<sub>A</sub> = 25°C unless otherwise noted

Forward Current Vs. Forward Voltage  $Ta=25^{\circ} C$ ( $\psi_{u}$ ) -  $\psi_{u}$  -

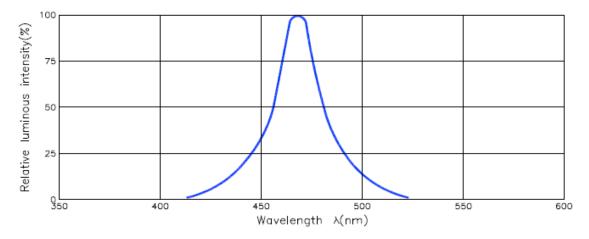






#### Radiation Diagram Ta=25° C 20 30' 40' 1.0 0.9 50' 0.8 60' 0.7 70' 80' 90' 0.4 0.2 0.3 0 0.1 0.5 0.6

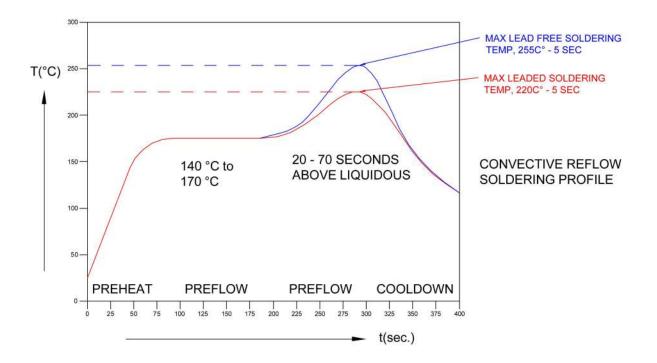
Spectrum Distribution



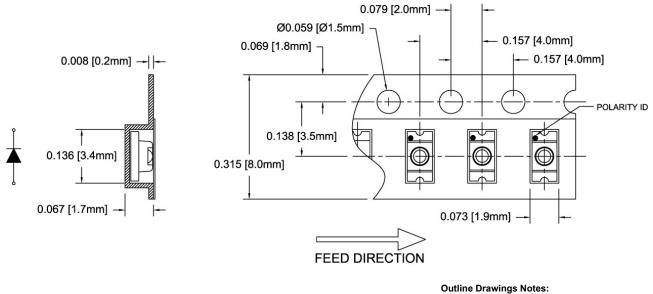
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#### **Recommended Soldering Conditions**



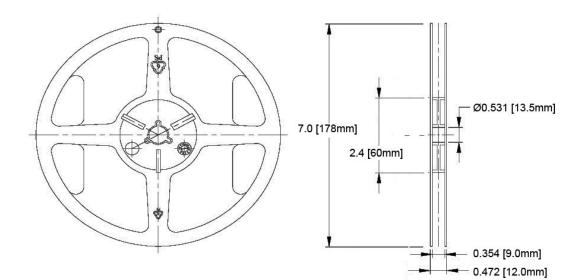
### Tape and Reel Dimensions Note: 3000 pcs/Reel



All dimensions are in inches [millimeters].
Standard tolerance: ±0.010" unless otherwise noted.

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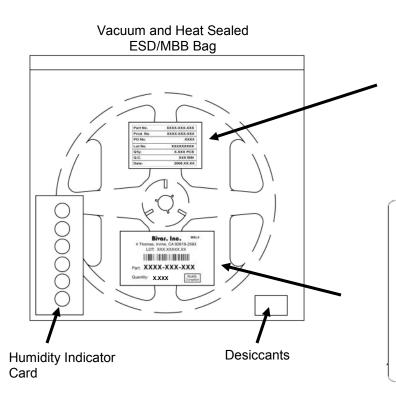


#### **Outline Drawings Notes:**

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



| Part No.  | XXXX-XXX-XXX |
|-----------|--------------|
| Prod. No. | XXXX-XXX-XXX |
| PO No.    | XXXX         |
| Lot No.   | XXXXXXXXX    |
| Q'ty:     | X.XXX PCS    |
| Q.C.      | XXX BIN      |
| Date:     | 2008.XX.XX   |

Internal Quality Control

| Bivar. Inc.                     | MSL4              |  |  |  |  |  |
|---------------------------------|-------------------|--|--|--|--|--|
| 4 Thomas, Irvine, CA 92618-2593 |                   |  |  |  |  |  |
| LOT: XXX.XXXXX.XX               |                   |  |  |  |  |  |
|                                 |                   |  |  |  |  |  |
| Part: XXXX-XXX-XXX              |                   |  |  |  |  |  |
| Quantity: X.XXX                 | RoHS<br>Compliant |  |  |  |  |  |

**Bivar Standard Packaging Label**