

# SURFACE MOUNT LED WHITE, 1206 PACKAGE

# BIVAR

## SM1206UWC

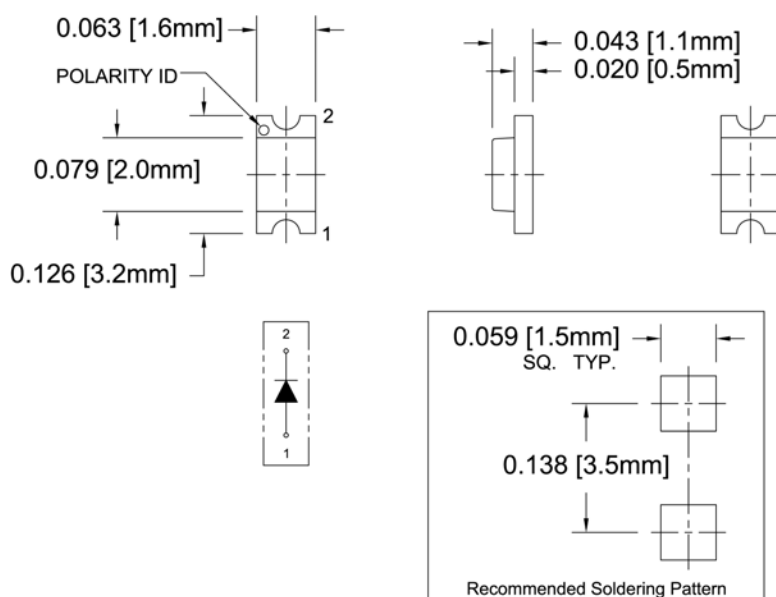
- ◆ Industry Standard 1206 Package
- ◆ RoHS Compliant
- ◆ Small Package and Footprint
- ◆ Diffused Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication, Display, and Backlighting



Bivar Surface Mount 1206 package LED may be used in nearly any lighting or indication application. The miniature package is ideal for small scale applications such as general indication and backlighting. Low power consumption and excellent long life reliability are suitable for battery powered equipment. Bivar offers diffused LED lens for uniform light output. Wide variety of wavelength and intensity combinations are available to meet any illumination need. The SM1206 LED is packaged in standard tape and reels for pick and place assemblies.

| Part Number | Material | Emitted Color | Chromaticity Coordinates | Lens Appearance | Luminous Intensity (mcd) TYP. | Viewing Angle |
|-------------|----------|---------------|--------------------------|-----------------|-------------------------------|---------------|
| SM1206UWC   | InGaN    | WHITE         | X = .29, Y = .29         | Diffused        | 450                           | 140°          |

## Outline Dimensions



### Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance:  $\pm 0.010$ " unless otherwise noted.



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

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## Absolute Maximum Ratings

$T_A = 25^{\circ}\text{C}$  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       |

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

## Electrical / Optical Characteristics

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

| Part Number | Forward Voltage (V) <sup>1</sup> |     |     | Recommend Forward Current (mA) |     |     | Reverse Current ( $\mu\text{A}$ ) | Dominant Wavelength (nm) <sup>2</sup> |     |     | Luminous Intensity $I_v$ (mcd) |     |     | Viewing Angle $2\theta_{1/2}$ (deg) |
|-------------|----------------------------------|-----|-----|--------------------------------|-----|-----|-----------------------------------|---------------------------------------|-----|-----|--------------------------------|-----|-----|-------------------------------------|
|             | MIN                              | TYP | MAX | MIN                            | TYP | MAX | MAX                               | MIN                                   | TYP | MAX | MIN                            | TYP | MAX | TYP                                 |
| SM1206UWC   | /                                | 3.3 | 4.2 | /                              | 20  | /   | 10                                | n/a                                   | n/a | n/a | 285                            | 450 | /   | 140                                 |

Notes: 1. Tolerance of forward voltage :  $\pm 0.05\text{V}$ .      2. Tolerance of dominant wavelength :  $\pm 1.0\text{nm}$ .

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## Typical Electrical / Optical Characteristics

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

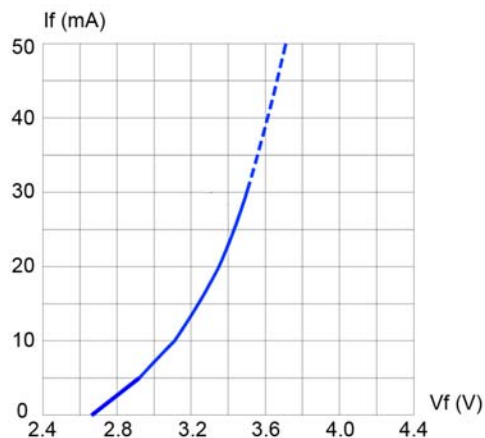


Fig. 1 Forward Current vs. Forward Voltage

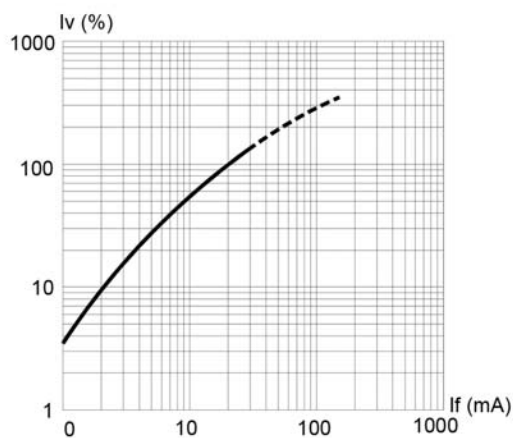


Fig. 2 Relative Luminous Intensity vs. Forward Current

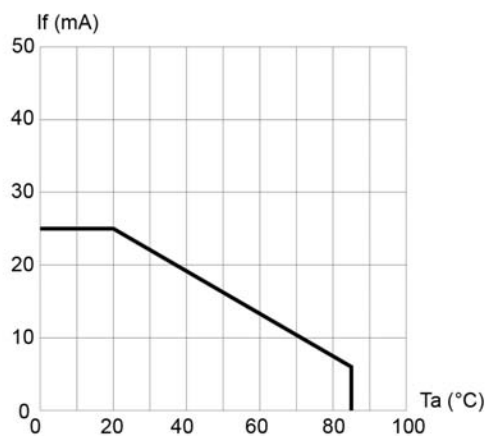


Fig. 3 Forward Current vs. Temperature

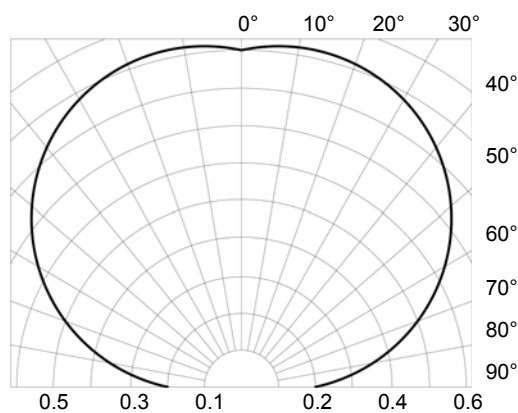


Fig. 4 Directivity Radiation Diagram

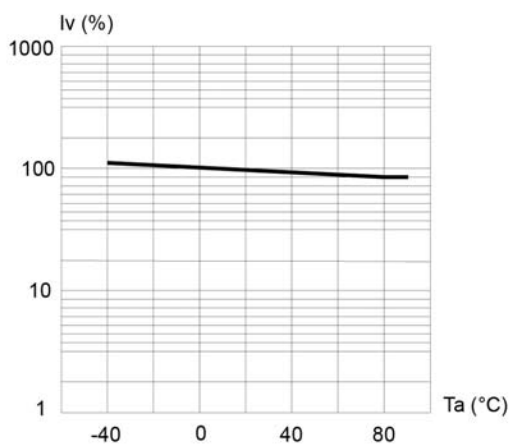


Fig. 5 Relative Luminous Intensity vs. Ambient Temperature

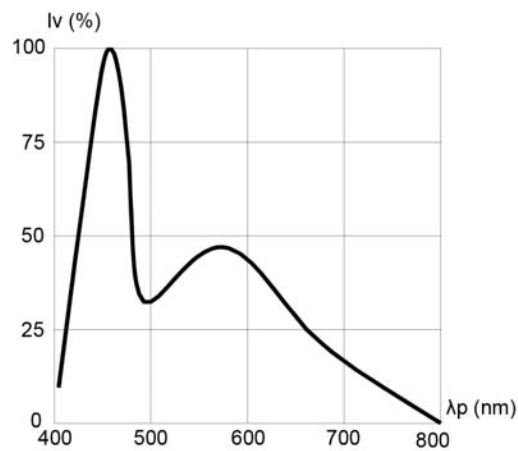


Fig. 6 Relative Luminous Intensity vs. Wavelength

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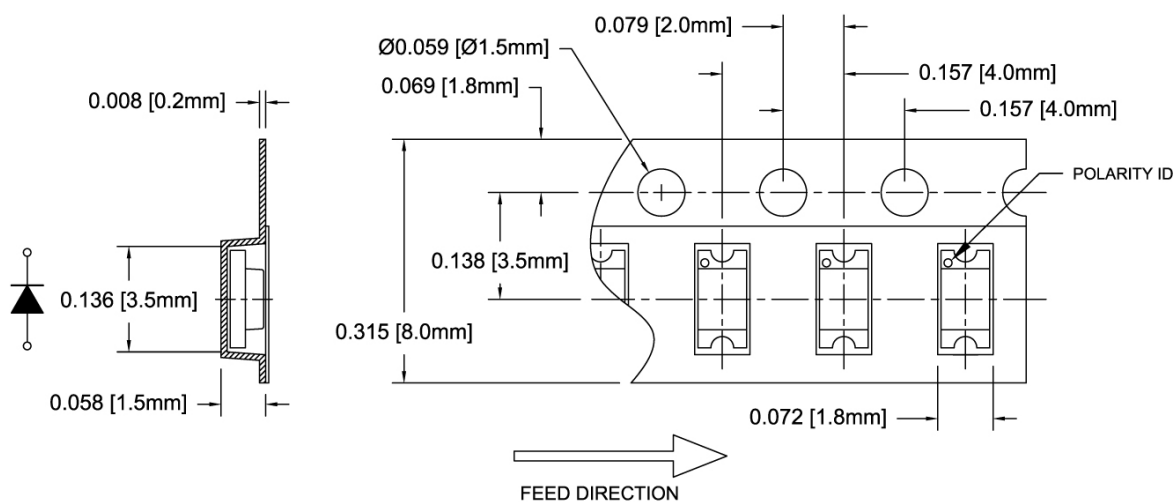


## Recommended Soldering Conditions



## Tape and Reel Dimensions

Note: 3000 pcs/Reel



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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.   | XXXXXXXXXX   |
| Q'ty:     | X.XXX PCS    |
| Q.C.      | XXX BIN      |
| Date:     | 2008.XX.XX   |

Internal Quality Control



Bivar Standard Packaging Label

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