SURFACE MOUNT LED BLUE, 0402 PACKAGE





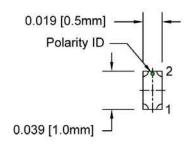
- **Industry Standard 0402 Package**
- **RoHS Compliant**
- **Small Package and Footprint**
- Water Clear Lens
- Wide Viewing Angle
- Ideal for Status Indication, Display, and Backlighting

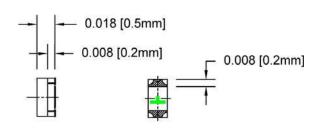


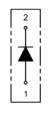
Bivar Surface Mount 0402 package LED can be used in nearly any lighting or indication application. It's ultra-miniature packaging makes it ideal for smaller handheld devices, small back panel displays, and any other size constraint applications. Low power consumption and excellent long life reliability makes it excellent for battery powered equipment and applications. Bivar offers water clear LED lens for maximum luminous intensity. The SM0402 LED is packaged in standard tape and reels for pick and place assemblers.

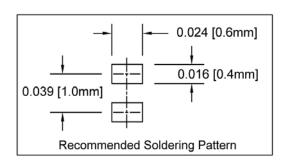
Part Number	Material	Emitted Color	Peak Wavelength λp (nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle	
SM0402BWC	InGaN	BLUE	468	Water Clear	100	130°	

Outline Dimensions









- Outline Drawings Notes:
 1. All dimensions are in inches [millimeters].
- 2. Standard tolerance: ±0.006" unless otherwise noted.







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Absolute Maximum Ratings

 $T_A = 25$ °C unless otherwise noted

Power Dissipation	100 mW
Continuous Forward Current	25 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/°C
Electrostatic Discharge (HBM)	2000 V
Operating Temperature Range	-30 ~ +80°C
Storage Temperature Range	-40 ~ +85°C
Lead Soldering Temperature ²	260°C

Notes: 1. ≤ 10% Duty Cycle, Pulse Width ≤ 0.1 msec.

2. Solder time less than 5 seconds at temperature extreme.

Electrical / Optical Characteristics

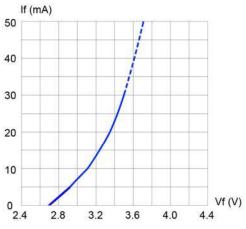
 $T_A = 25^{\circ}C \& I_F = 20 \text{ mA}$ unless otherwise noted

Part Number	Forward Voltage (V)			Recommend Forward Current (mA)		Reverse Current (µA)	I Dominant		Luminous Intensity Iv (mcd)			Viewing Angle 2 Θ ½ (deg)		
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM0402BWC	/	3.1	4.0	/	20	/	10	/	470	/	72	100	/	130

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Typical Electrical / Optical CharacteristicsT_A = 25°C unless otherwise noted





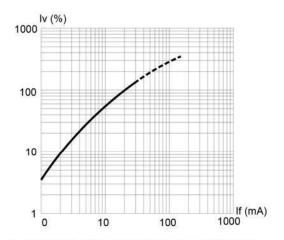


Fig. 2 Relative Luminous Intensity vs. Forward Current

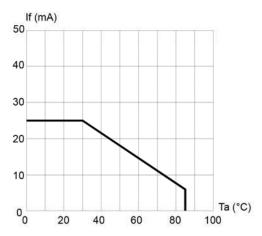


Fig. 3 Forward Current vs. Temperature

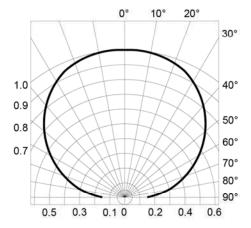
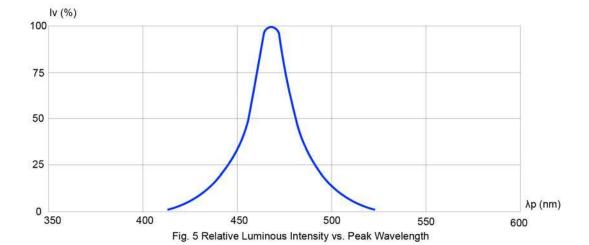


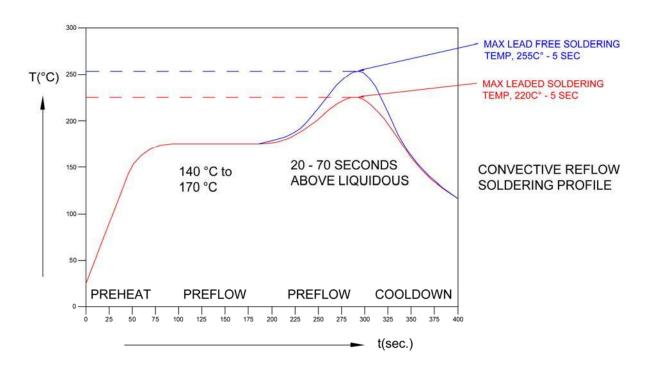
Fig. 4 Directivity Radiation Diagram



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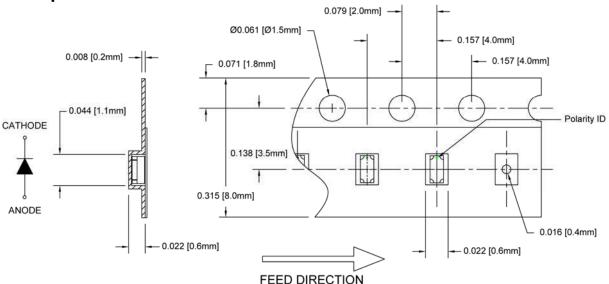


Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 5000 pcs / Reel

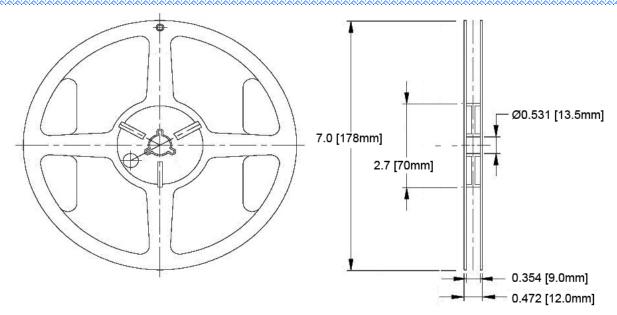


Outline Drawings Notes:

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

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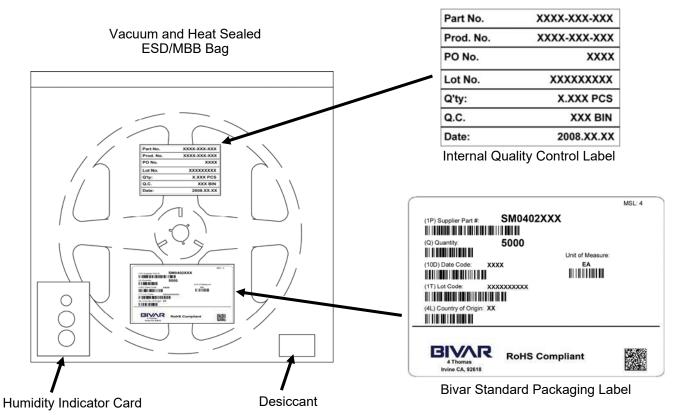


Outline Drawings Notes:

- 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



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