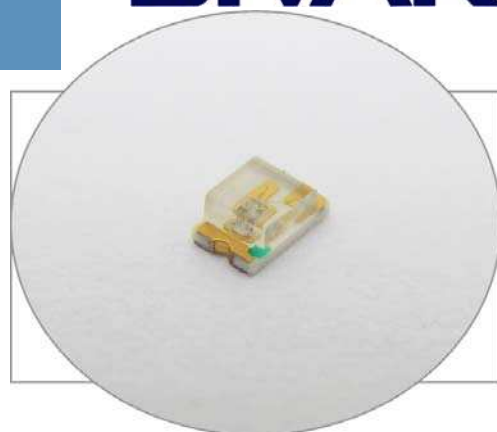


SURFACE MOUNT LED PURE GREEN, 0805 PACKAGE

BIVAR

SM0805SPGC

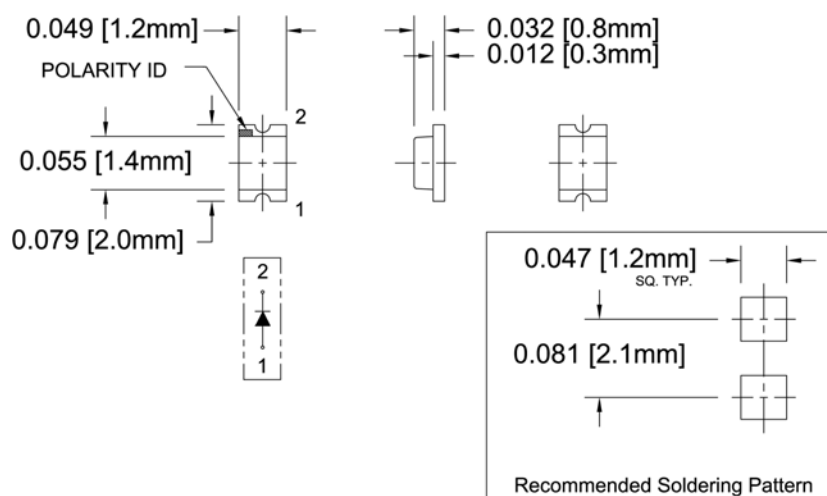
- ◆ Industry Standard 0805 Package
- ◆ RoHS Compliant
- ◆ Small Package and Footprint
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication, Display, and Backlighting



Bivar Surface Mount 0805 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 water clear LED lens for maximum luminous intensity. Wide variety of wavelength and intensity combinations are available to meet any illumination need. The SM0805 LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Peak Wavelength λ_p (nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM0805SPGC	InGaN	GREEN	500	Water Clear	225	130°

Outline Dimensions



Outline Drawings Notes:

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



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

SURFACE MOUNT LED PURE GREEN, 0805 PACKAGE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	100 mW
Forward Current (DC)	20 mA
Peak Forward Current ¹	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) 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°C & I_F = 20 mA unless otherwise noted

Part Number	Forward Voltage (V) ¹			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm) ²			Luminous Intensity I _v (mcd)			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM0805SPGC	/	3.3	4.2	/	20	/	10	/	505	/	145	225	/	130

Notes: 1. Tolerance of forward voltage : ±0.05V. 2. Tolerance of dominant wavelength : ±1.0nm.

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SURFACE MOUNT LED PURE GREEN, 0805 PACKAGE



Typical Electrical / Optical Characteristics

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

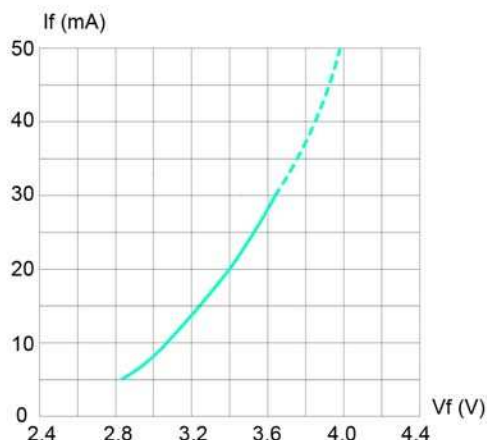


Fig. 1 Forward Current vs. Forward Voltage

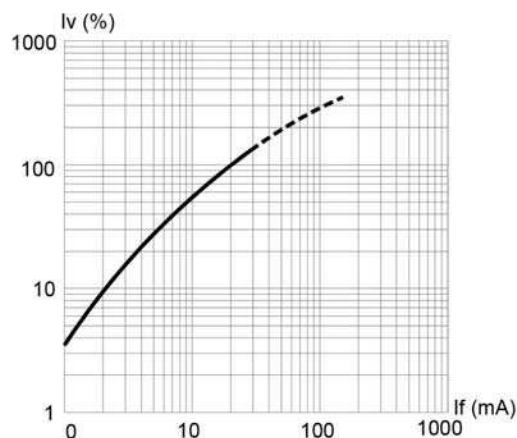


Fig. 2 Relative Luminous Intensity vs. Forward Current

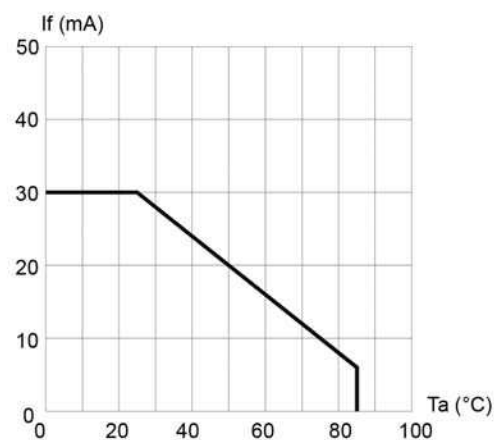


Fig. 3 Forward Current vs. Temperature

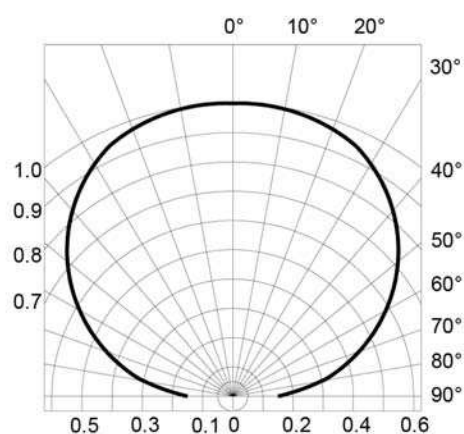


Fig. 4 Directivity Radiation Diagram

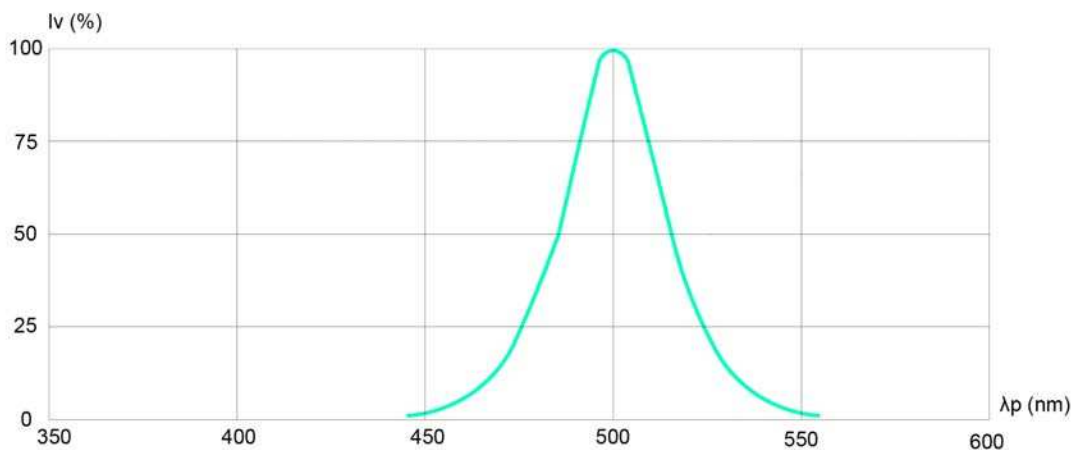


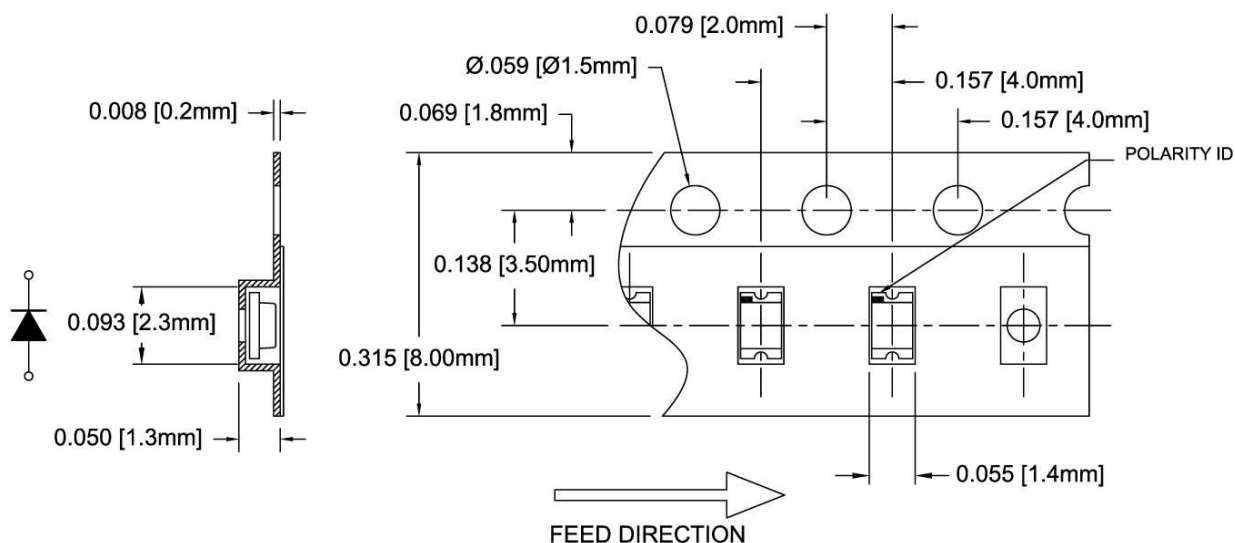
Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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

The graph illustrates the temperature profile for a convective reflow soldering process. The y-axis represents temperature $T(^{\circ}\text{C})$ from 0 to 300, and the x-axis represents time $t(\text{sec.})$ from 0 to 400. The profile is divided into four stages: PREHEAT, PREFLOW, PREFLOW, and COOLDOWN. Two curves are shown: a blue curve for lead-free soldering and a red curve for leaded soldering. The lead-free curve peaks at 255°C, while the leaded curve peaks at 220°C. Both curves show a plateau at 170°C for 20-70 seconds above the liquidus. The graph also indicates a maximum temperature of 140°C to 170°C during the preheat stage.

Stage	Time (sec.)	Lead-free Temp (°C)	Leaded Temp (°C)
PREHEAT	0 - 100	140 - 170	140 - 170
PREFLOW	100 - 200	170 - 170	170 - 170
PREFLOW	200 - 300	170 - 255	170 - 220
COOLDOWN	300 - 400	255 - 120	220 - 120

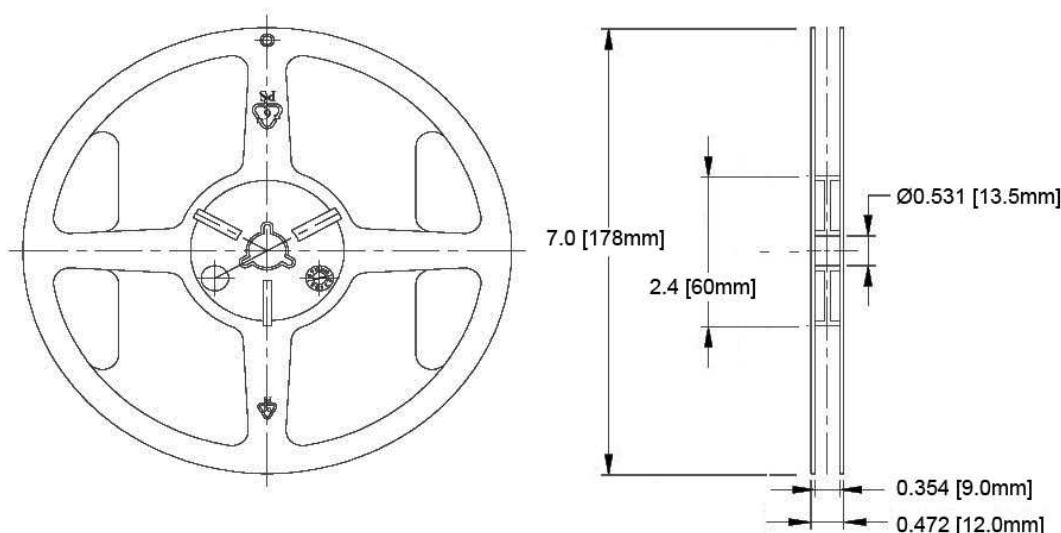
Note: 4000 pcs/Reel



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

SURFACE MOUNT LED PURE GREEN, 0805 PACKAGE

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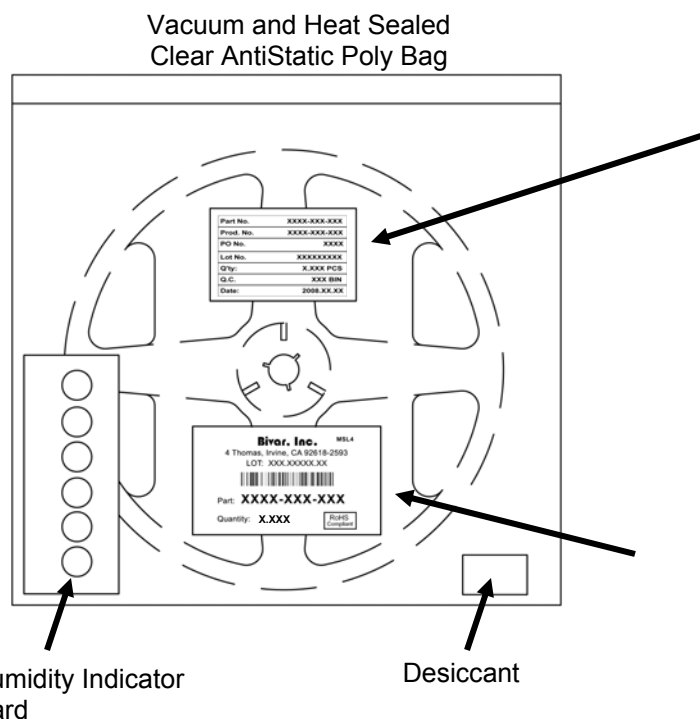


Outline Drawings Notes:

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

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