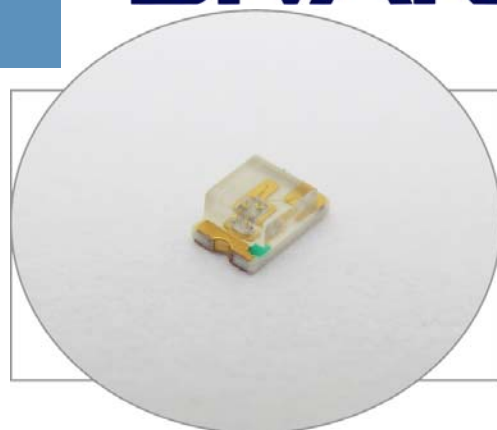


SURFACE MOUNT LED YELLOW, 0805 PACKAGE

BIVAR

SM0805YC

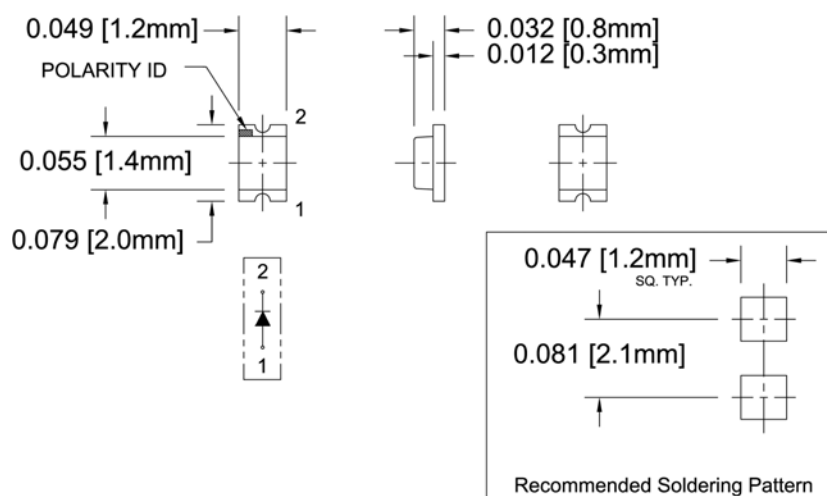
- ◆ Industry Standard 0805 Package
- ◆ RoHS Compliant
- ◆ Small Package and Footprint
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication, Display, and Backlighting



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
SM0805YC	GaAsP	YELLOW	583	Water Clear	6	130°

Outline Dimensions



Outline Drawings Notes:

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



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES



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

SURFACE MOUNT LED YELLOW, 0805 PACKAGE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	78 mW
Forward Current (DC)	30 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
SM0805YC	/	2.0	2.6	/	20	/	10	/	585	/	1	6	/	130

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

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SURFACE MOUNT LED YELLOW, 0805 PACKAGE

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Typical Electrical / Optical Characteristics

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

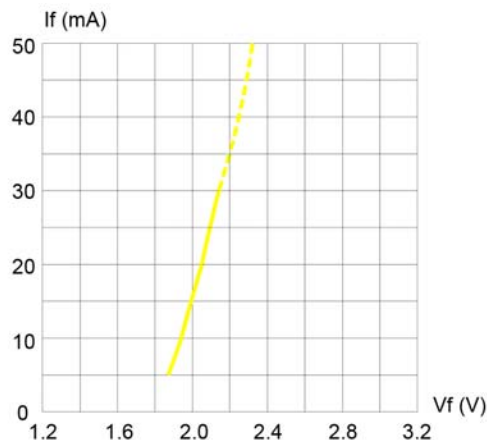


Fig. 1 Forward Current vs. Forward Voltage

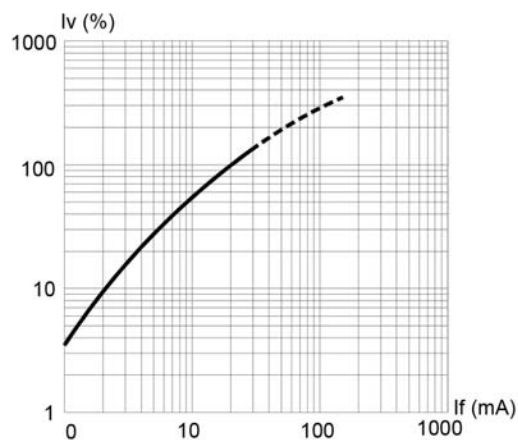


Fig. 2 Relative Luminous Intensity vs. Forward Current

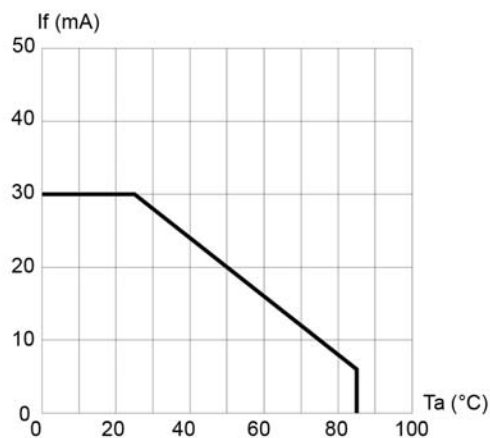


Fig. 3 Forward Current vs. Temperature

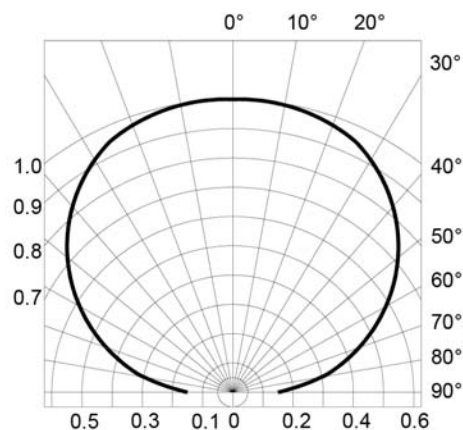


Fig. 4 Directivity Radiation Diagram

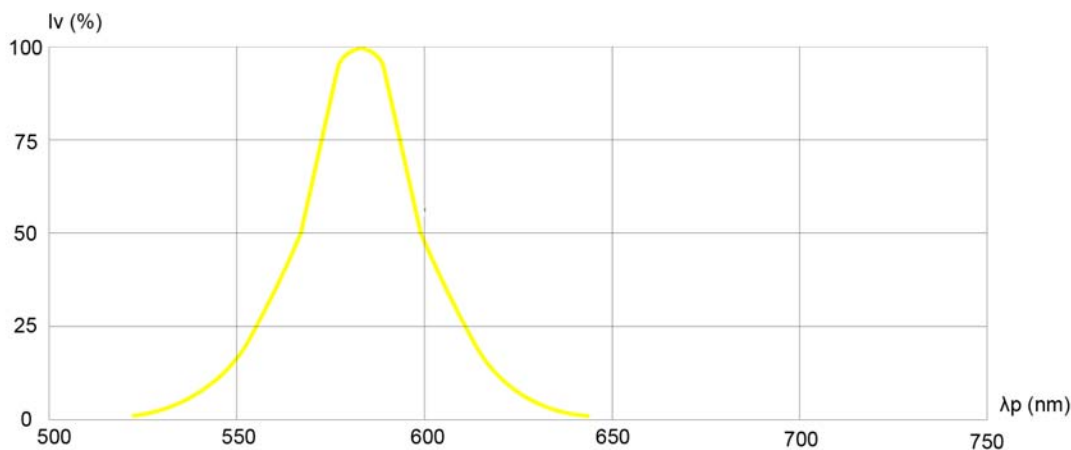


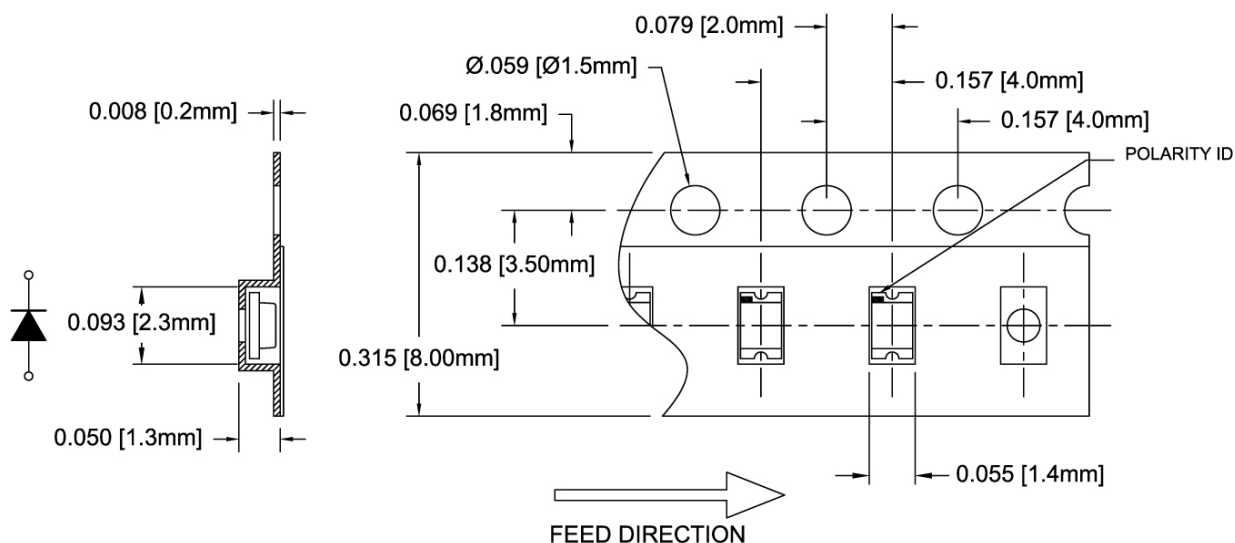
Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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 in $^{\circ}\text{C}$) from 0 to 300, and the X-axis represents Time (t in 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 MAX LEAD FREE SOLDERING TEMP, $255^{\circ}\text{C} - 5 \text{ SEC}$, and a red curve for MAX LEADED SOLDERING TEMP, $220^{\circ}\text{C} - 5 \text{ SEC}$. The graph also indicates a temperature range of 140°C to 170°C and a duration of 20 - 70 SECONDS ABOVE LIQUIDOUS.

Time (sec.)	Lead Free Soldering Temp ($^{\circ}\text{C}$)	Leaded Soldering Temp ($^{\circ}\text{C}$)
0	~25	~25
25	~100	~100
50	~150	~150
75	~170	~170
100	~170	~170
125	~170	~170
150	~170	~170
175	~170	~170
200	~180	~180
225	~200	~190
250	~230	~210
275	~250	~220
300	~255	~220
325	~200	~200
350	~150	~150
375	~120	~120
400	~110	~110

Note: 4000 pcs/Reel



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

SURFACE MOUNT LED YELLOW, 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.