

# SURFACE MOUNT LED RED/GREEN, 0807 PACKAGE

# BIVAR



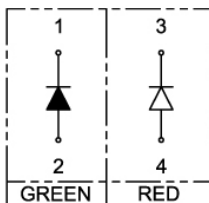
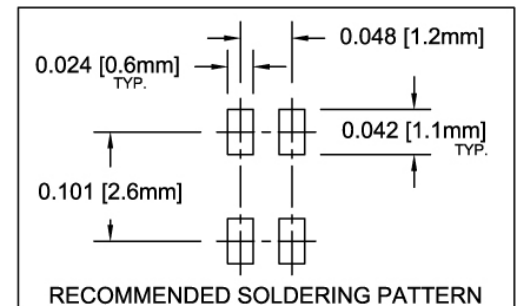
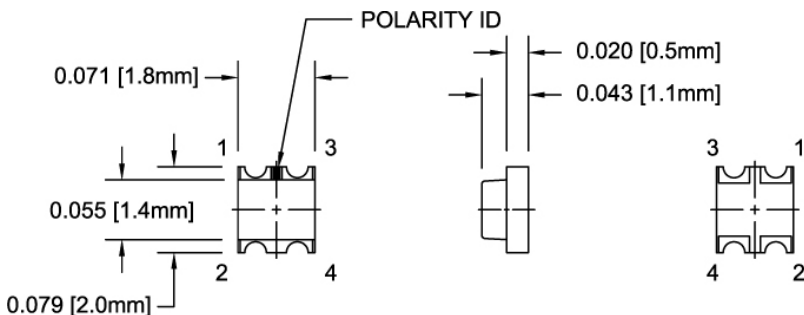
## SM0807BC

- ◆ Industry Standard Package
- ◆ RoHS Compliant
- ◆ Two Chips in One Package
- ◆ White Diffused Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Lighting

Bivar Surface Mount 0807 package Bi-Color LED combines two chips in a single package. They are ideal for small scale applications where multiple signals need to be displayed. When needed, the third color can be created by powering up both chips together. Bivar offers white diffused LED lens for uniform light output and wide viewing angles. Low power consumption and excellent long life reliability are ideal for battery powered equipment. The SM0807 LED is packaged in standard tape and reels for pick and place assemblies.

| Part Number | Material | Emitted Color | Peak Wavelength $\lambda_p$ (nm) TYP. | Lens Appearance | Luminous Intensity @ 20mA (mcd) TYP. | Viewing Angle |
|-------------|----------|---------------|---------------------------------------|-----------------|--------------------------------------|---------------|
| SM0807BC    | GaAl/As  | RED           | 660                                   | White Diffused  | 20                                   | 120°          |
|             | GaP      | GREEN         | 560                                   |                 | 11                                   |               |

## 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 )                                                           | 30 mA        |
| Peak Forward Current <sup>1</sup>                                                | 150 mA       |
| Reverse Voltage                                                                  | 5 V          |
| Operating Temperature Range                                                      | -25 ~ +85°C  |
| Storage Temperature Range                                                        | -30 ~ +100°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 | Emitted Colors | 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                                 |
| SM0807BC    | Red            | /                                | 1.8 | 2.3 | /                              | 20  | /   | 100                               | /                                     | /   | /   | /                              | 20  | /   | 120                                 |
|             | Green          | /                                | 2.3 | 2.7 | /                              | 20  | /   | 100                               | /                                     | /   | /   | /                              | 11  | /   |                                     |

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

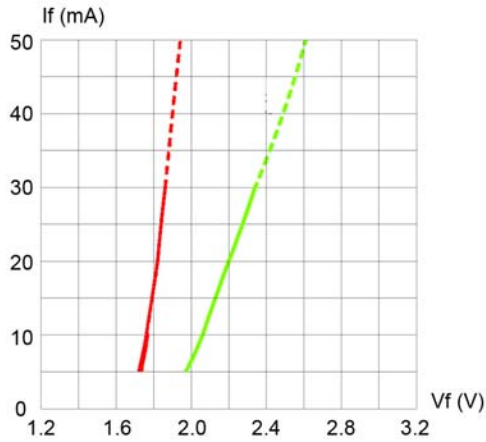


Fig. 1 Forward Current vs. Forward Voltage

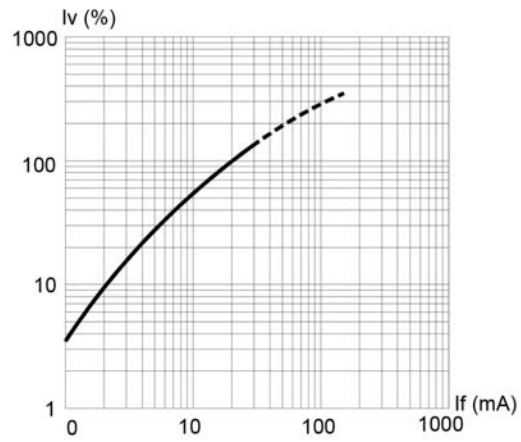


Fig. 2 Relative Luminous Intensity vs. Forward Current

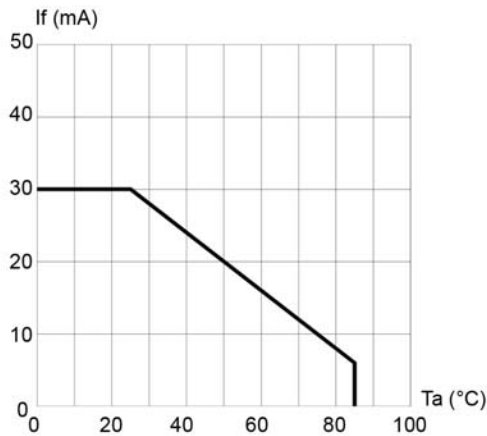


Fig. 3 Forward Current vs. Temperature

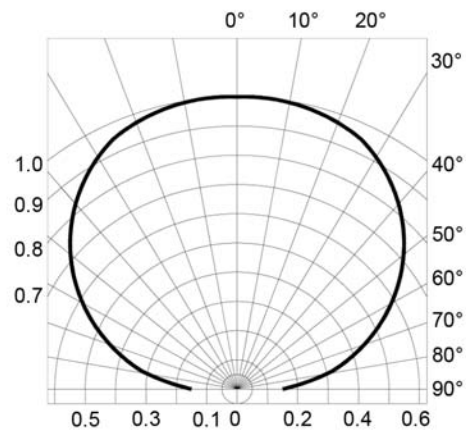


Fig. 4 Directivity Radiation Diagram

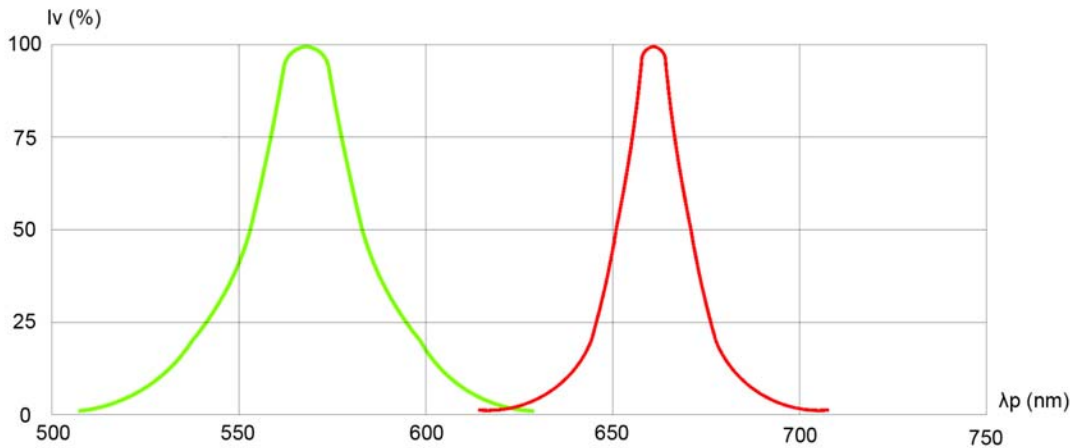


Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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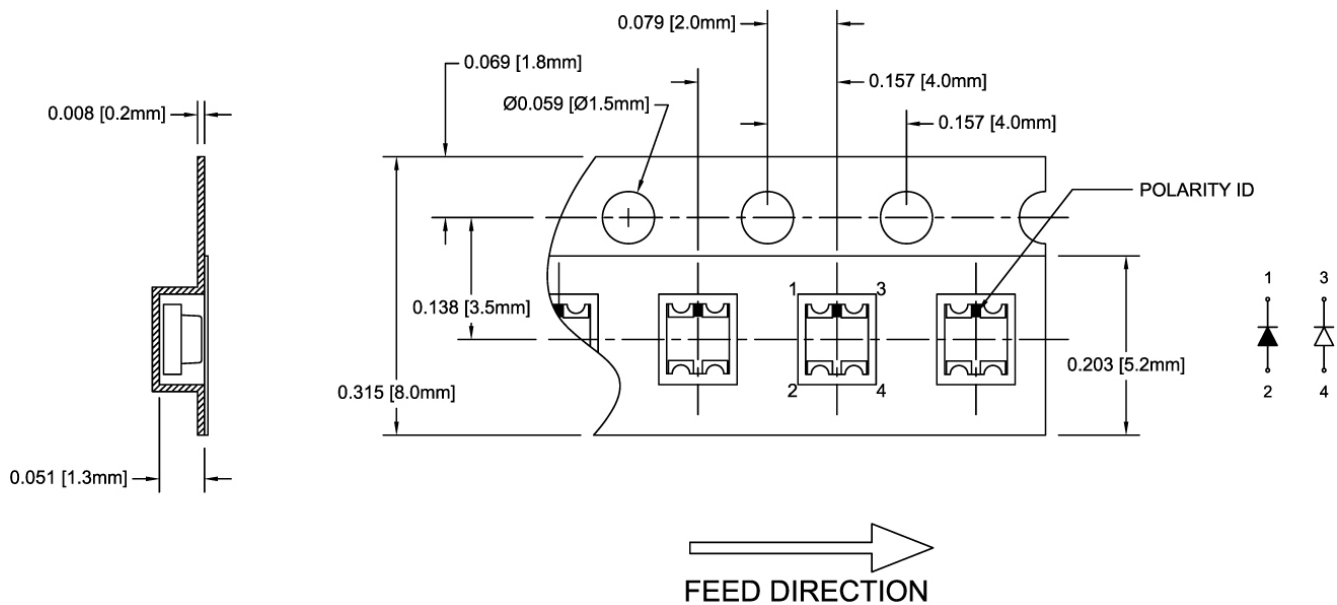


## Recommended Soldering Conditions



## Tape and Reel Dimensions

Note: 3000 pcs/Reel

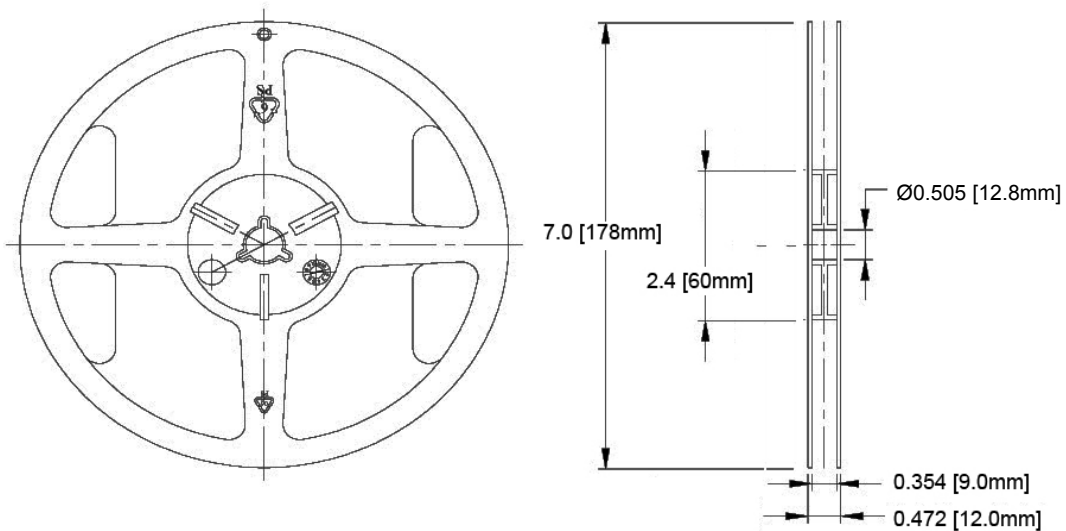


### Outline Drawings Notes:

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

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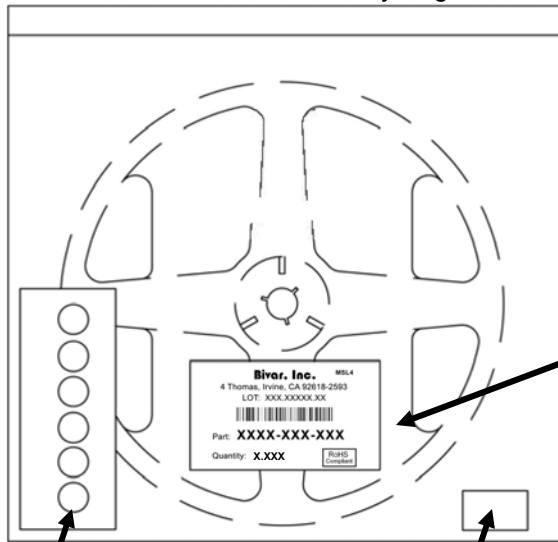
**Outline Drawings Notes:**

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**

Vacuum and Heat Sealed  
Clear AntiStatic Poly Bag



Humidity Indicator  
Card

Desiccant



Bivar Standard Packaging Label

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## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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