

SURFACE MOUNT LED RED/GREEN, 1204 PACKAGE

BIVAR

SM1204BC-R/G

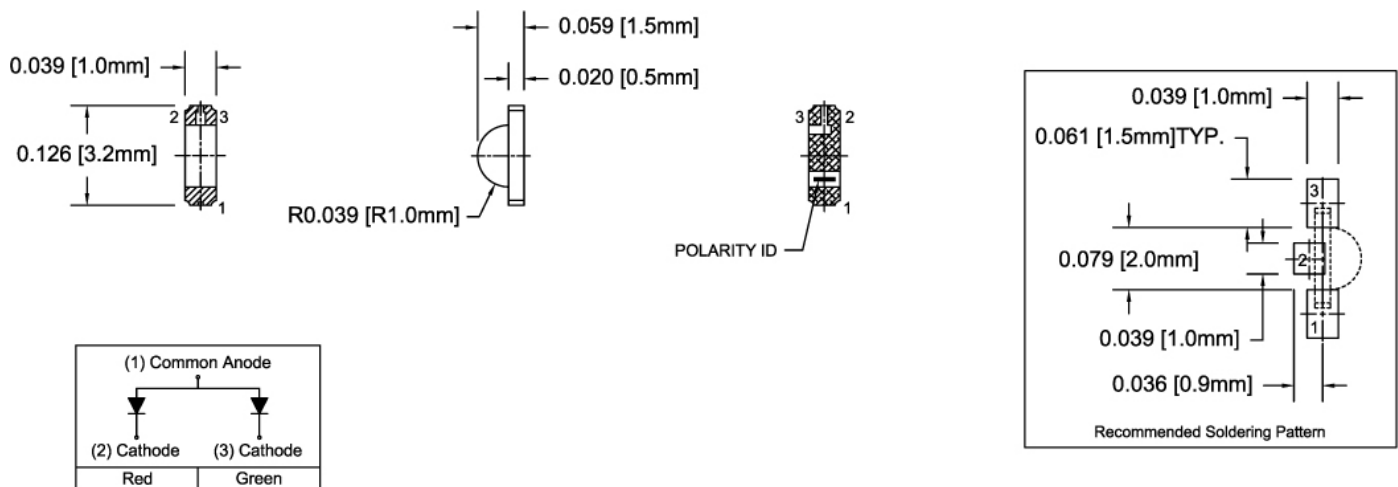
- ◆ Industry Standard 1204 Package
- ◆ RoHS Compliant
- ◆ Two Chips in One Package
- ◆ Right Angle Mounting
- ◆ Water Clear Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Display



Bivar Surface Mount 1204 Bi-Color LED combines two chips in a single package. The right angle package is ideal for small scale applications where multiple signals need to be displayed. The third color can be created by powering up both chips together. Low power consumption and excellent long life reliability are ideal 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 SM1204 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 |
|--------------|----------|---------------|---------------------------------------|-----------------|-------------------------------|---------------|
| SM1204BC-R/G | AlGaInP | RED | 645 | Water Clear | 115 | 130° |
| | AlGaInP | GREEN | 575 | | 72 | |

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 | 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 \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 color | Forward Voltage (V) ¹ | | | Recommend Forward Current (mA) | | | Reverse Current (μA) | Dominant Wavelength (nm) ² | | | 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 |
| SM1204BC-R/G | RED | / | 2.1 | 2.6 | / | 20 | / | 10 | / | 631 | / | 45 | 115 | / | 130 |
| | GREEN | / | 2.2 | 2.7 | / | 20 | / | 10 | / | 574 | / | 28.5 | 72 | / | |

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

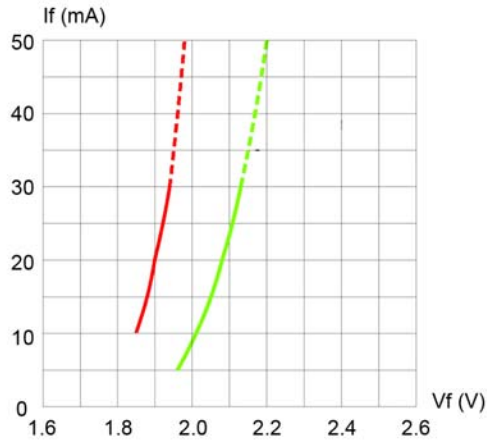


Fig. 1 Forward Current vs. Forward Voltage

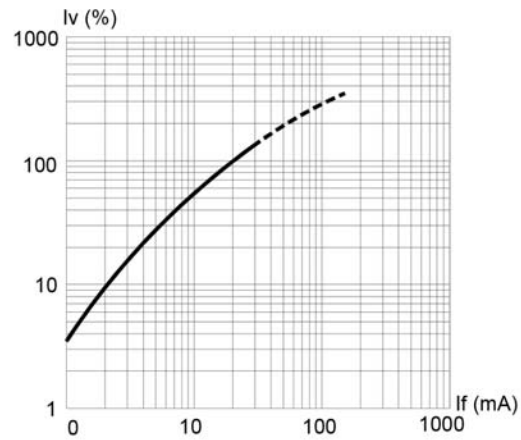


Fig. 2 Relative Luminous Intensity vs. Forward Current

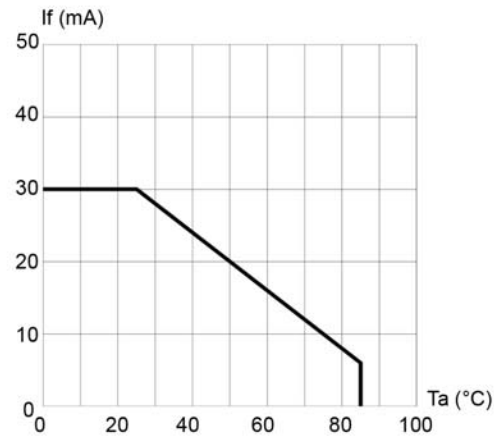


Fig. 3 Forward Current vs. Temperature

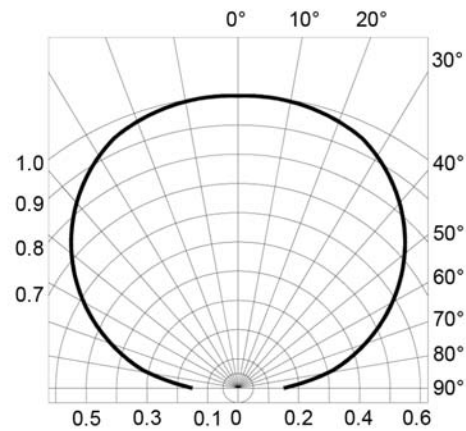


Fig. 4 Directivity Radiation Diagram

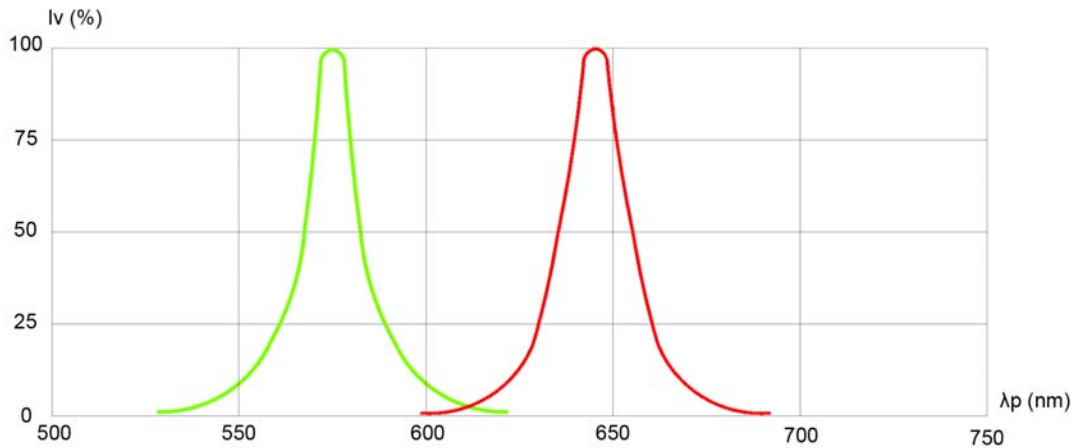


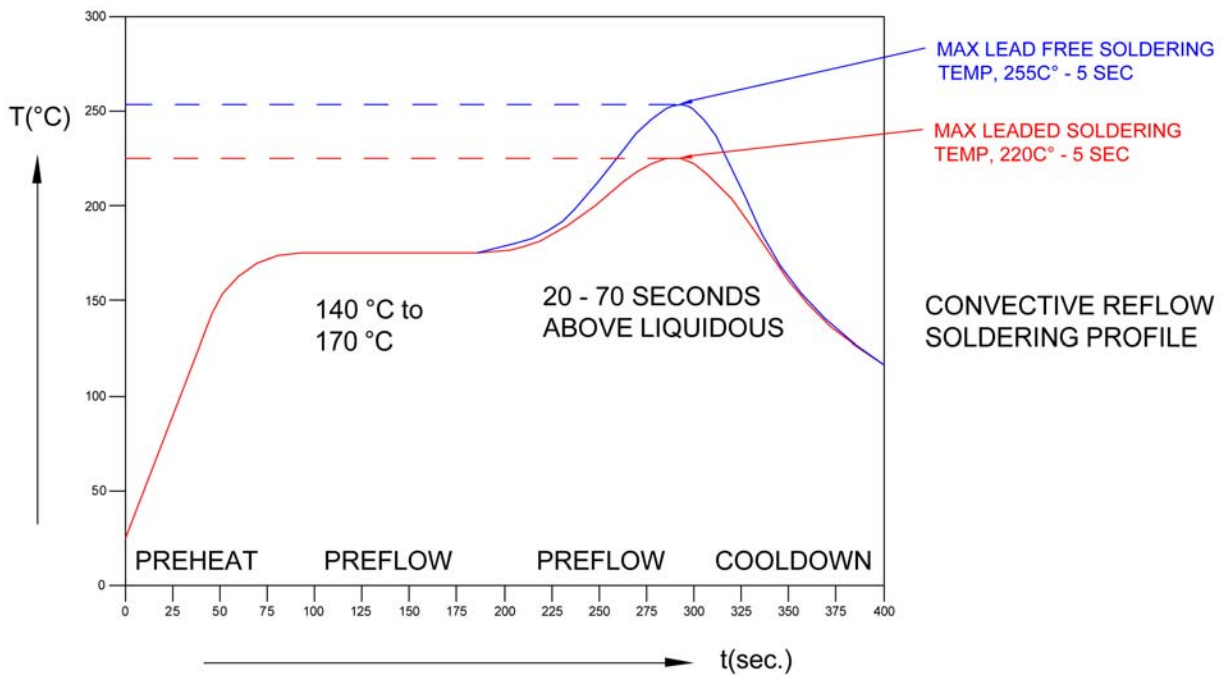
Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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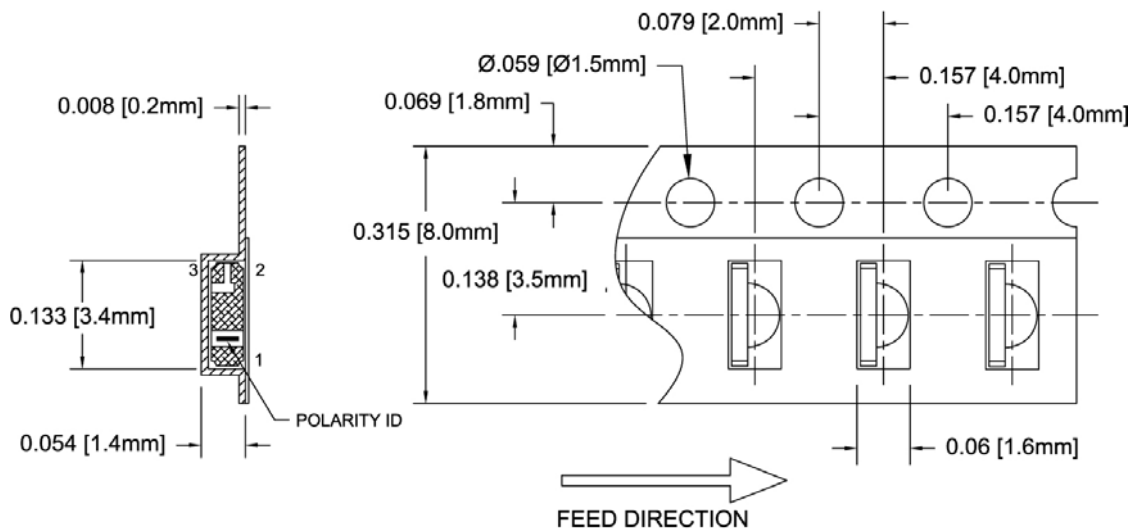


Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 3000 pcs/Reel



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Outline Drawings Notes:

- All dimensions are in inches [millimeters].
- Standard tolerance unless otherwise noted: $X.XXX \pm 0.010"$
 $X.X \pm 0.1"$

Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
Clear AntiStatic Poly 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, Inc. MSL4

4 Thomas, Irvine, CA 92618-2593
LOT: XXX.XXXXX.XX



Part: **XXXX-XXX-XXX**

Quantity: **X.XXX**

RoHS
Compliant

Bivar Standard Packaging Label

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

Mouser Electronics

Authorized Distributor

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[SM1204BC-R/G](#)