SURFACE MOUNT LED
RED/GREEN, 1204 PACKAGE

BIVAR

SM1204BC

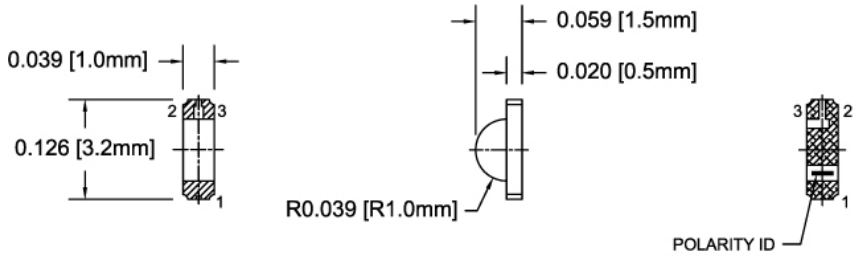
- **Industry Standard 1204 Package**
- **RoHS Compliant**
- **Two Chips in One Package**
- **Right Angle Mounting**
- **Water Clear Lens**
- **Wide Viewing Angle**
- **Ideal for Status Indication and Display**

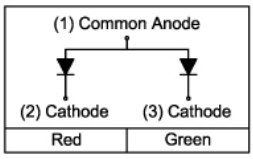


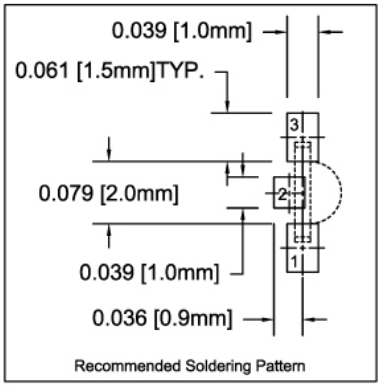
Bivar Surface Mount 1204 Bi-Color LED combines two chips in a single package. The right angle package is ideal for small scale applications where multiple signals need to be displayed. The third color can be created by powering up both chips together. Low power consumption and excellent long life reliability 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 λp(nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM1204BC	AlGaInP	RED	640	Water Clear	7.2	130°
	AlGaInP	GREEN	568		18	

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

RoHS Compliant

Moisture Sensitivity Level 4

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

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	Red - 69 mW Green - 78 mW
Forward Current (DC)	30 mA
Peak Forward Current [1]	100 mA
Reverse Voltage	5 V
Operating Temperature Range	-30 ~ +85°C
Storage Temperature Range	-40 ~ +100°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	Emitted color	Forward Voltage (V)[1]			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm)[2]			Luminous Intensity Iv (mcd)			Viewing Angle 2 Θ ½ (deg)
		MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM1204BC	RED	/	2.0	2.3	/	20	/	10	/	628	/	3.6	7.2	/	130
	GREEN	/	2.0	2.3	/	20	/	10	/	570	/	11.5	18	/	

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

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Typical Electrical / Optical Characteristics

T_A = 25°C unless otherwise noted

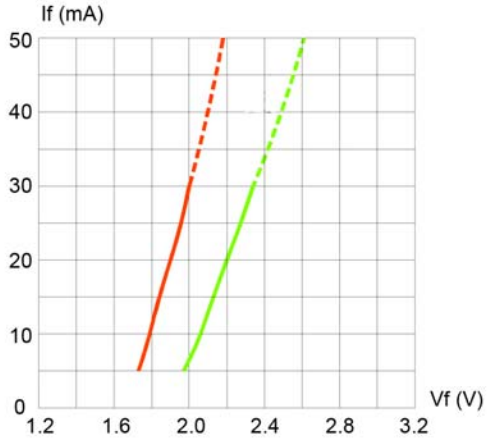


Fig. 1 Forward Current vs. Forward Voltage

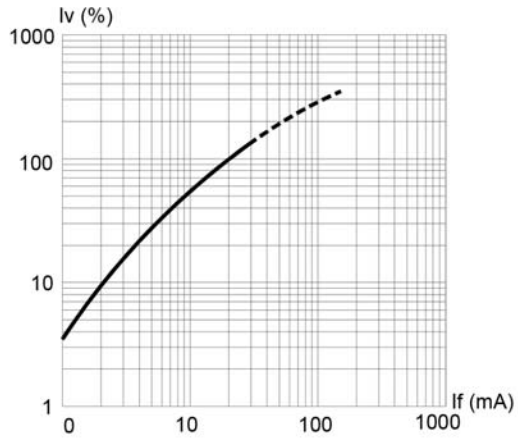


Fig. 2 Relative Luminous Intensity vs. Forward Current

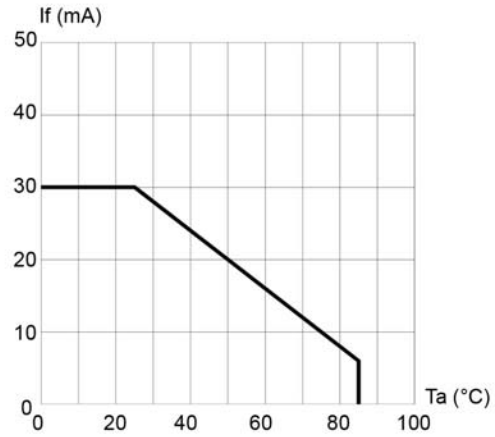


Fig. 3 Forward Current vs. Temperature

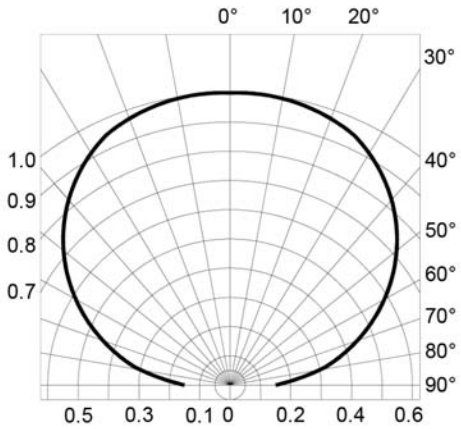


Fig. 4 Directivity Radiation Diagram

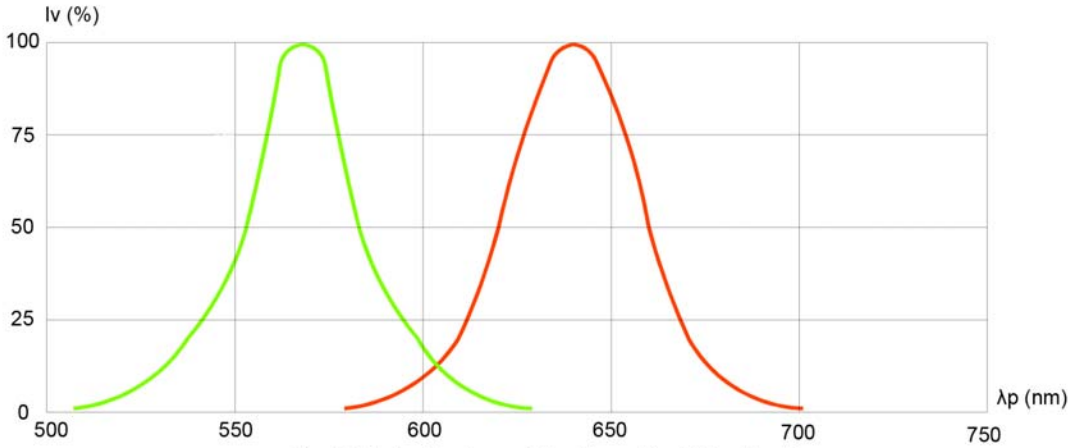
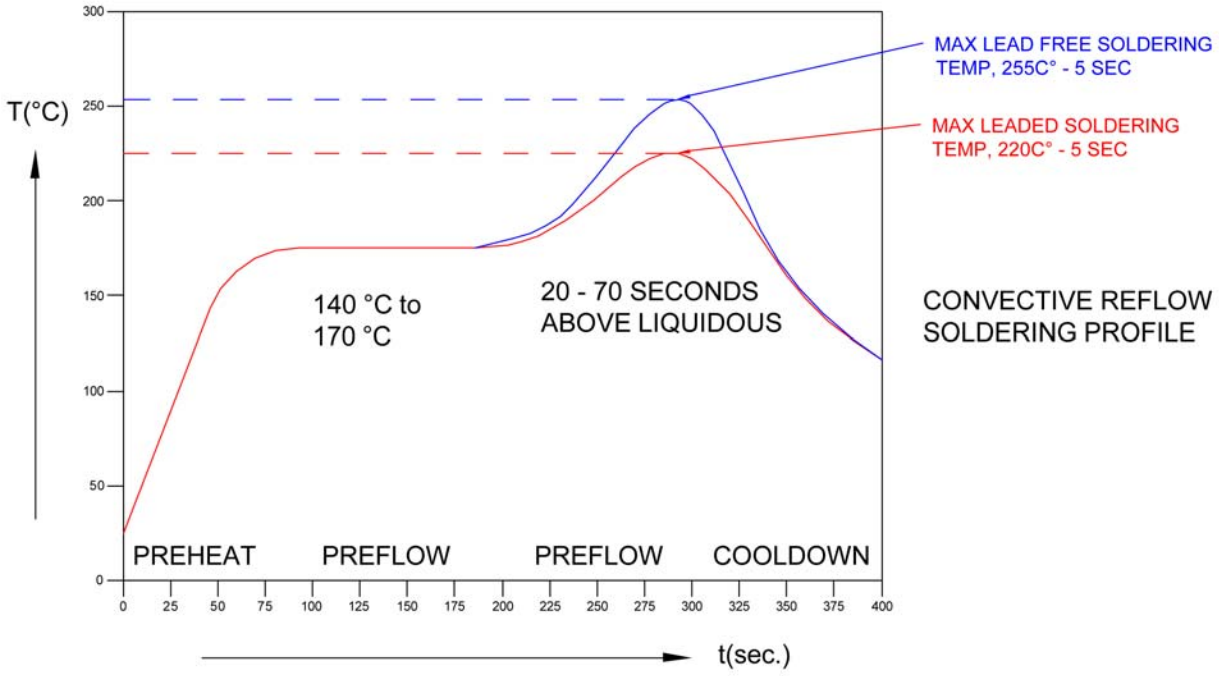


Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

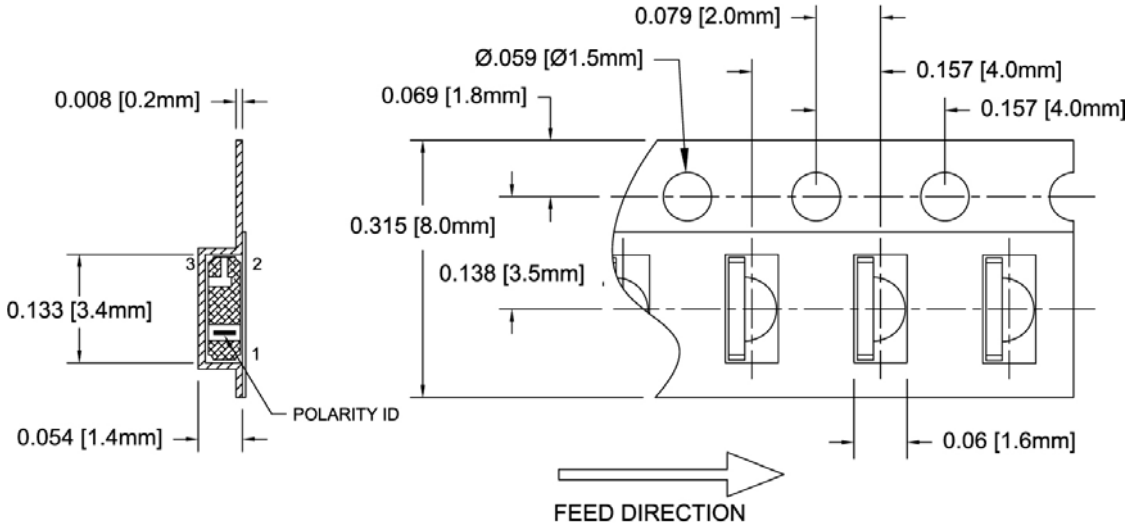
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Recommended Soldering Conditions



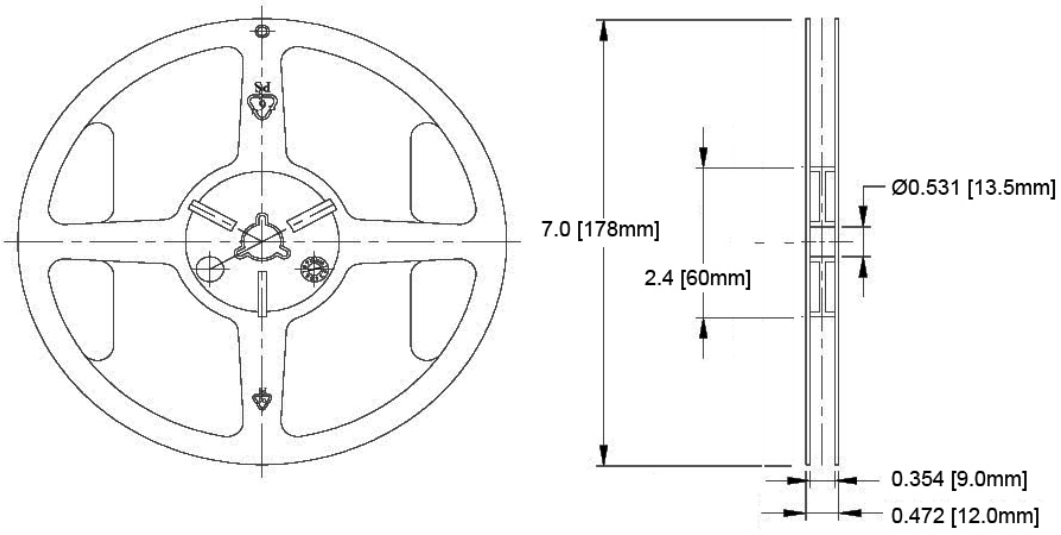
Tape and Reel Dimensions

Note: 3000 pcs/Reel



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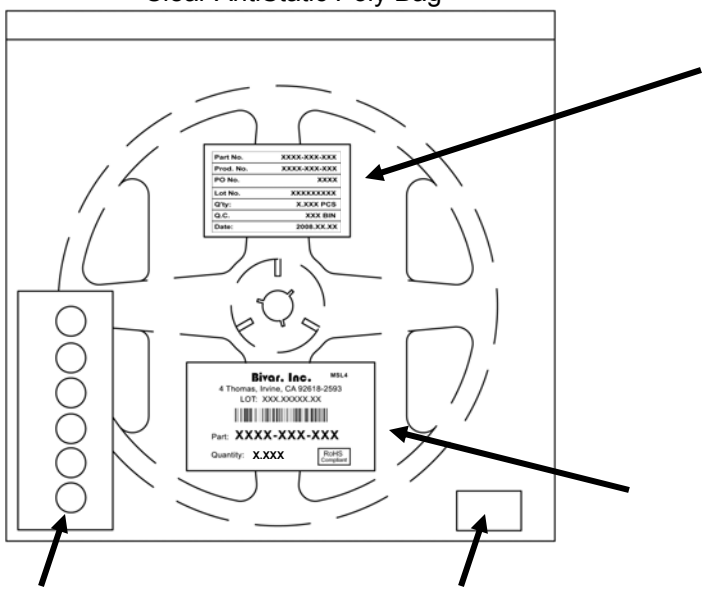


Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"
   X.X ± 0.1"

Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
Clear AntiStatic Poly Bag



Humidity Indicator Card

Desiccant

Part No.	XXXX-XXX-XXX
Prod. No.	XXXX-XXX-XXX
PO No.	XXXX
Lot No.	XXXXXXXXX
Q'ty:	X.XXX PCS
Q.C.	XXX BIN
Date:	2008.XX.XX

Internal Quality Control



Bivar Standard Packaging Label