

SURFACE MOUNT LED SUPER RED/GREEN, 0807 PACKAGE

BIVAR

SM0807SBC

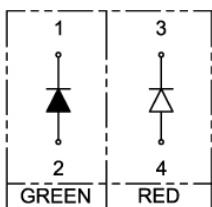
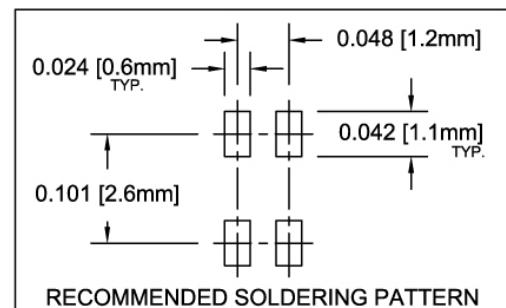
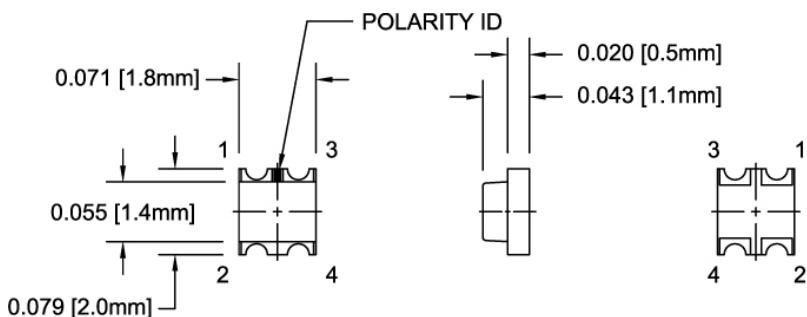
- ◆ Industry Standard Package
- ◆ RoHS Compliant
- ◆ Two Chips in One Package
- ◆ White Diffused Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Lighting



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 λ_p (nm) TYP.	Lens Appearance	Luminous Intensity @ 20mA (mcd) TYP.	Viewing Angle
SM0807SBC	AlGaInP	SUPER RED	652	White Diffused	50	140°
	AlGaInP	SUPER GREEN	573		50	

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.

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Absolute Maximum Ratings

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

Power Dissipation	75 mW
Forward Current (DC)	30 mA
Peak Forward Current ¹	125 mA
Reverse Voltage	5 V
Operating Temperature Range	-40 ~ +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

$T_A = 25^\circ\text{C}$ & $I_F = 20$ mA unless otherwise noted

Part Number	Emitted Colors	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		MIN	TYP	MAX	MIN	TYP	MAX	
SM0807SBC	Super Red	/	1.9	2.5	/	20	/	100	630	639	650	32	50	100	140
	Super Green	/	2.0	2.6	/	20	/	100	565	572	576	32	50	100	

Notes: 1. Tolerance of forward voltage : $\pm 0.05\text{V}$. 2. Tolerance of dominant wavelength : $\pm 1.0\text{nm}$.

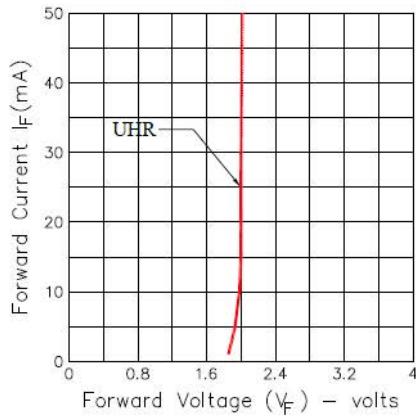
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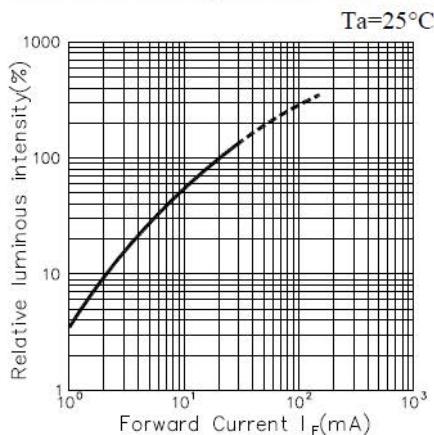
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Typical Electrical / Optical Characteristics / Red

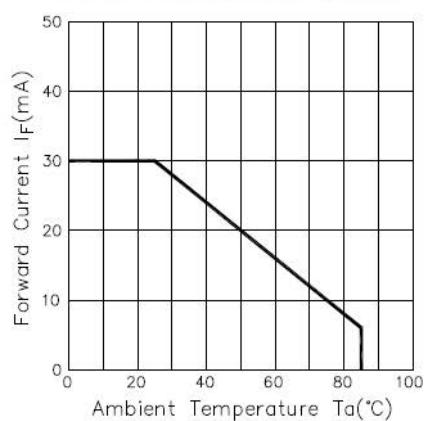
$T_A = 25^\circ\text{C}$ unless otherwise noted



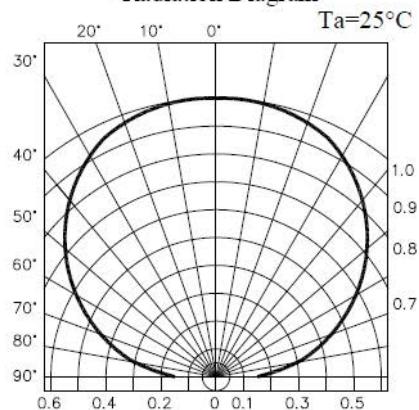
Luminous Intensity Vs. Forward Current



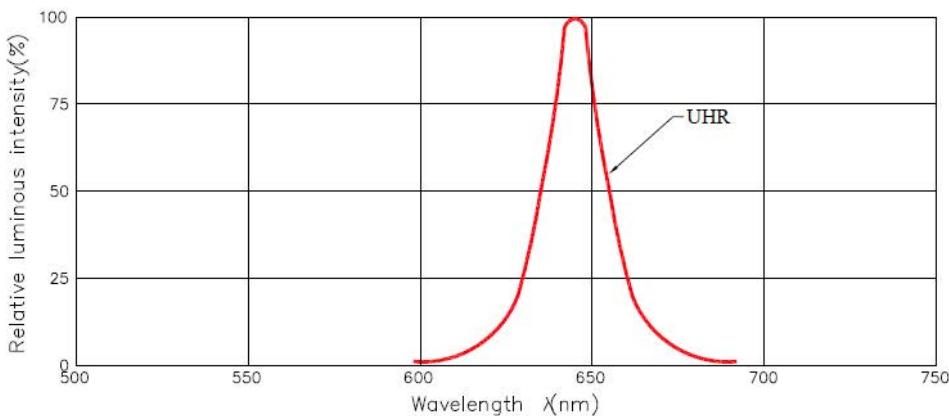
Forward Current Derating Curve



Radiation Diagram



Spectrum Distribution



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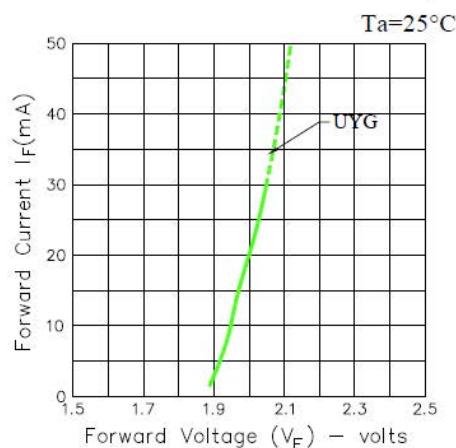
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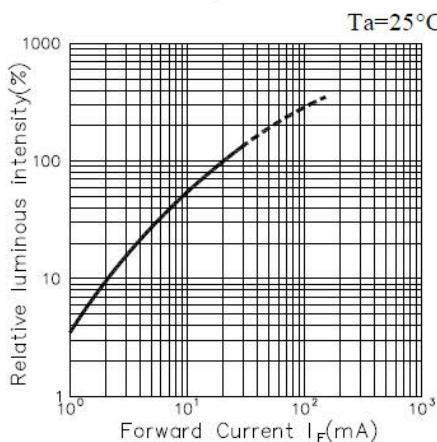
Typical Electrical / Optical Characteristics / Green

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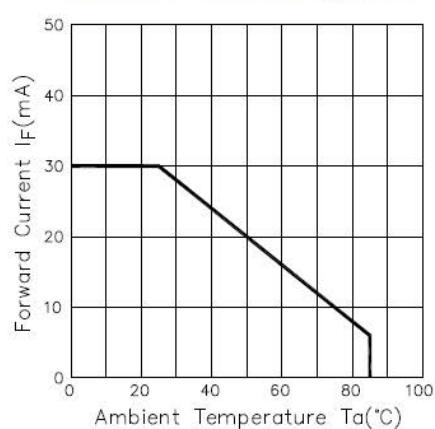
Forward Current Vs. Forward Voltage



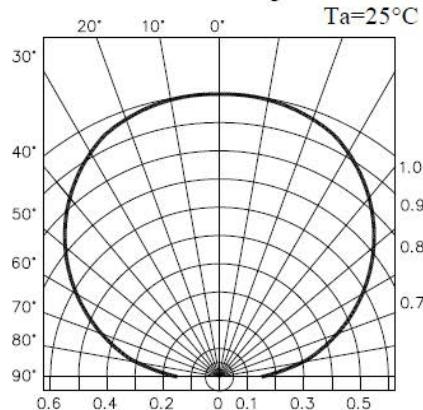
Luminous Intensity Vs. Forward Current



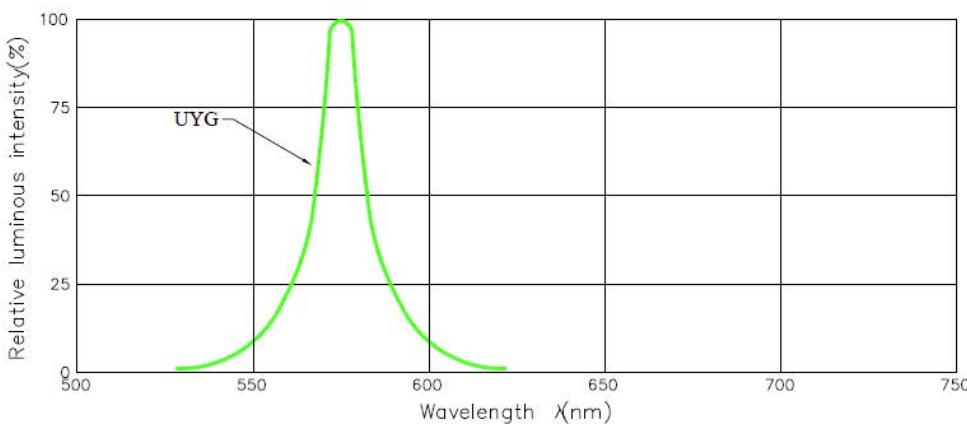
Forward Current Derating Curve



Radiation Diagram



Spectrum Distribution



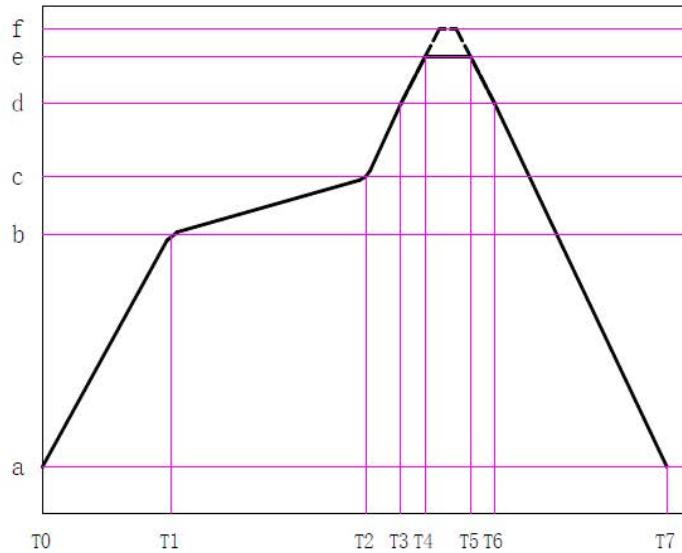
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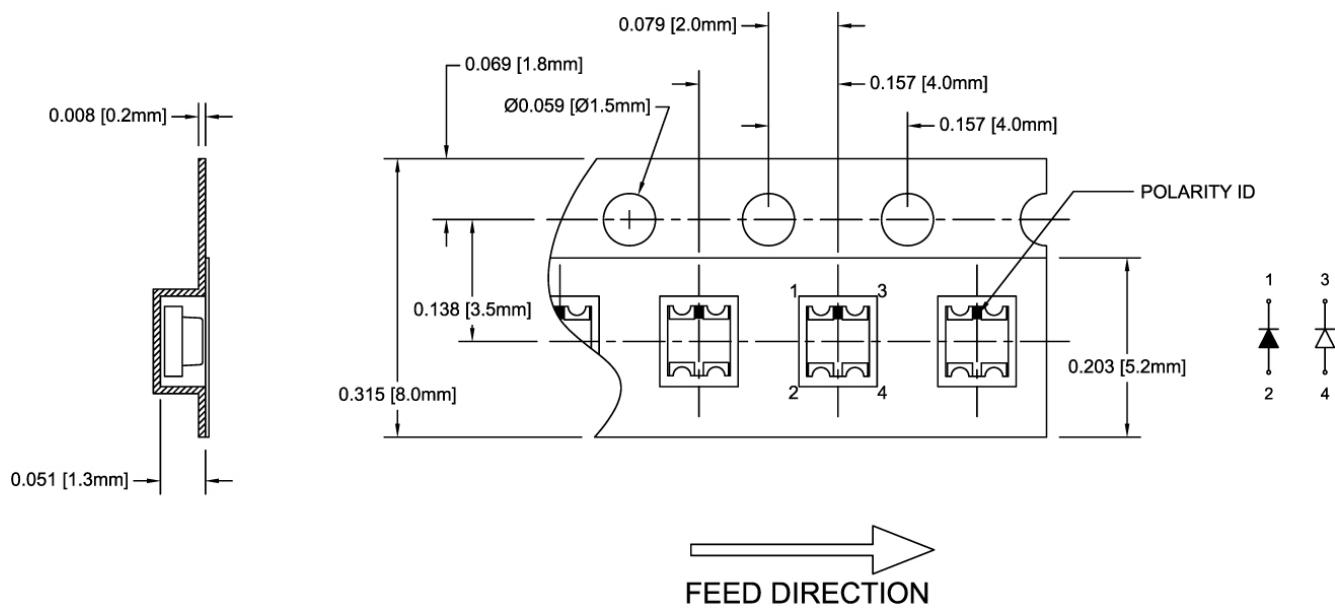
Reflow Temp./ Time

Temp.(°C)	Time(Sec)	
a 25	T0~T1	Max. 3°C/sec
b 150	T1~T2	90~130 sec
c 200	T2~T4	Max. 3°C/sec
d 220	T3~T6	Max. 50sec
e 245		
f Max. 260		Max. 10sec
	T5~T7	Max. -3°C/sec
Blet Speed	70~90 cm/min	



Tape and Reel Dimensions

Note: 3000 pcs/Reel



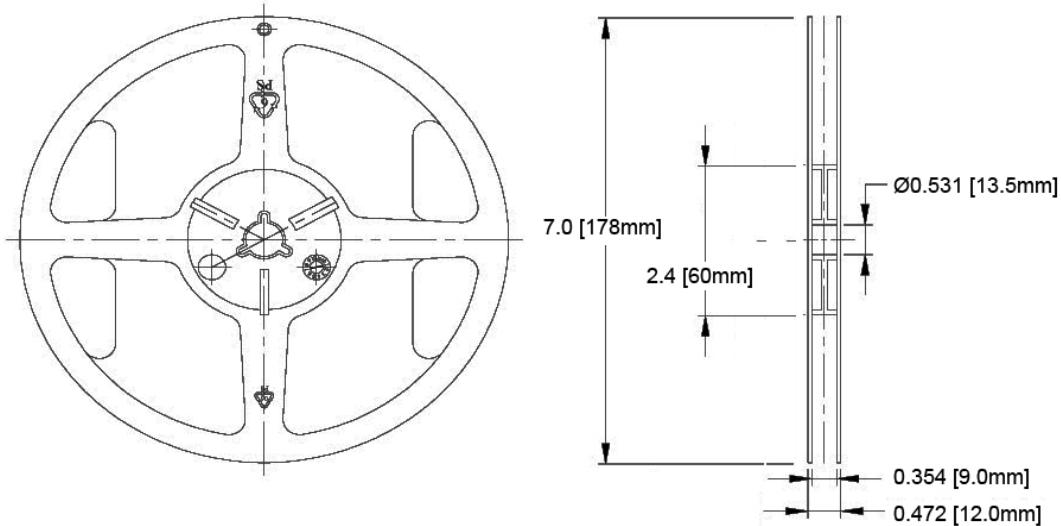
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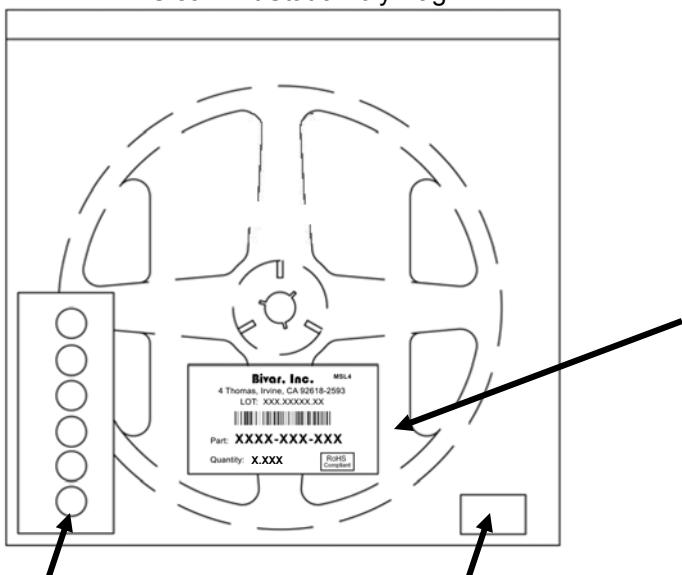
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Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
Clear AntiStatic Poly Bag



Humidity Indicator
Card

Desiccant



Bivar Standard Packaging Label

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