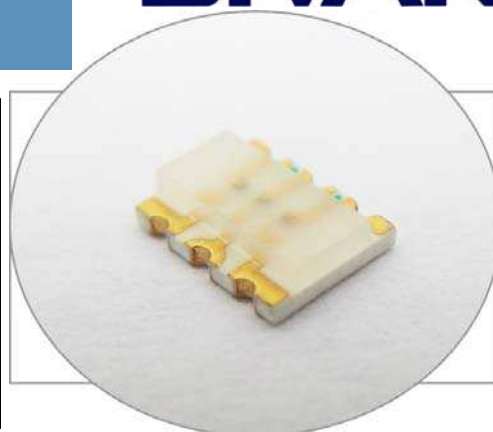


SURFACE MOUNT LED SUPER RGB, 1317 PACKAGE

BIVAR

SM1317SRGB

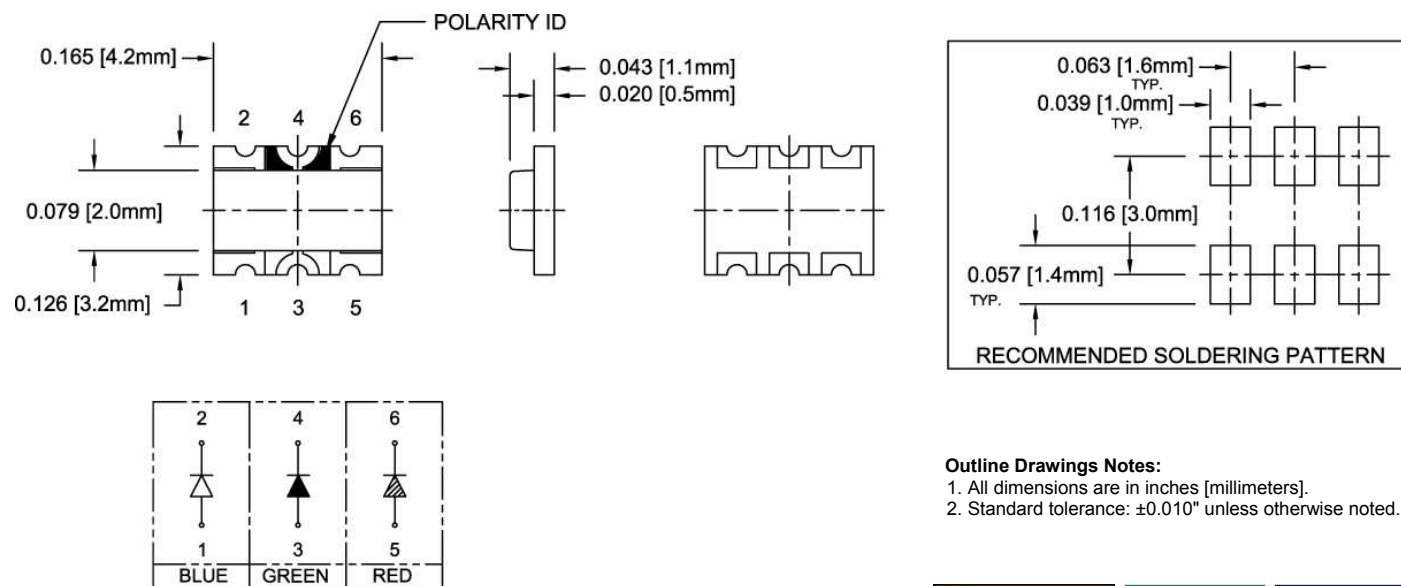
- ◆ Industry Standard Package
- ◆ RoHS Compliant
- ◆ Three Chips in One Package
- ◆ White Diffused Lens
- ◆ Wide Viewing Angle
- ◆ Ideal for Status Indication and Lighting



Bivar Surface Mount SM1317 RGB LED is offered in an industry standard package with high luminous intensity and wide viewing angles. The miniature package is ideal for small scale applications such as illumination, general indication, and backlighting. Low power consumption and excellent long life reliability are suitable for battery powered equipment. The flexible three chip design allows for a wide variety of lighting options where the chips can be individually driven or mixed to create numerous color and intensity combinations. Bivar SM1317 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
SM1317SRGB	GaAlAs	SUPER RED	654	White Diffused	45	120°
	InGaN/SiC	SUPER GREEN	525		120	
	GaN	SUPER BLUE	460		52	

Outline Dimensions



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

SURFACE MOUNT LED SUPER RGB, 1317 PACKAGE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	100 mW
Forward Current (DC)	30 mA
Peak Forward Current ¹	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) 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 Colors	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
SM1317SRGB	Red	/	2.0	2.5	/	20	/	100	/	/	/	/	45	/	120
	Green	/	3.2	3.6	/	20	/	100	/	/	/	/	120	/	
	Blue	/	3.4	4.0	/	20	/	100	/	/	/	/	52	/	

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

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

Typical Electrical / Optical Characteristics

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

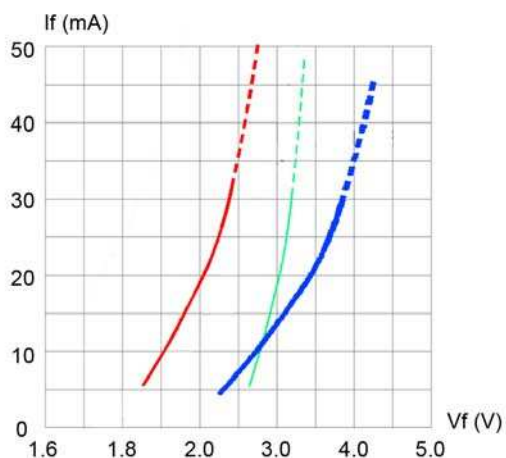


Fig. 1 Forward Current vs. Forward Voltage

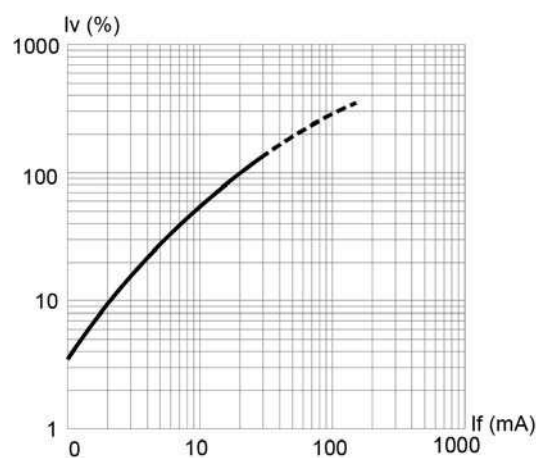


Fig. 2 Relative Luminous Intensity vs. Forward Current

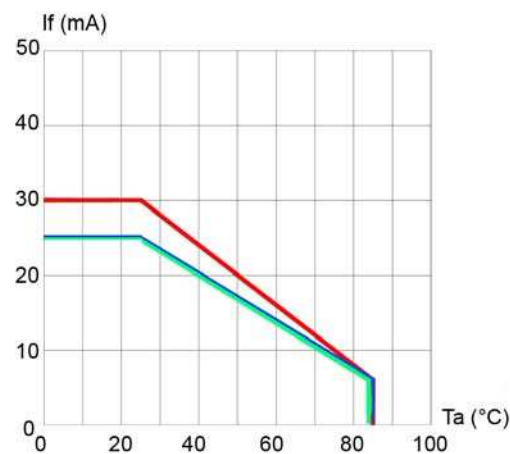


Fig. 3 Forward Current vs. Temperature

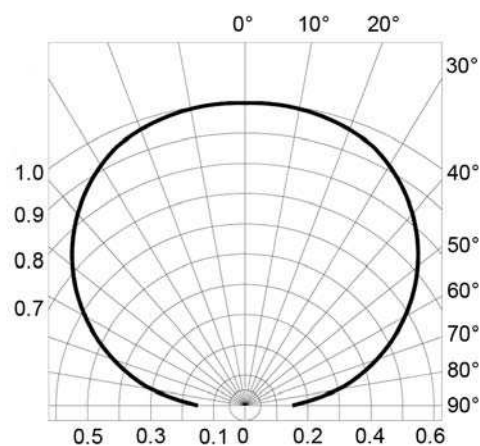


Fig. 4 Directivity Radiation Diagram

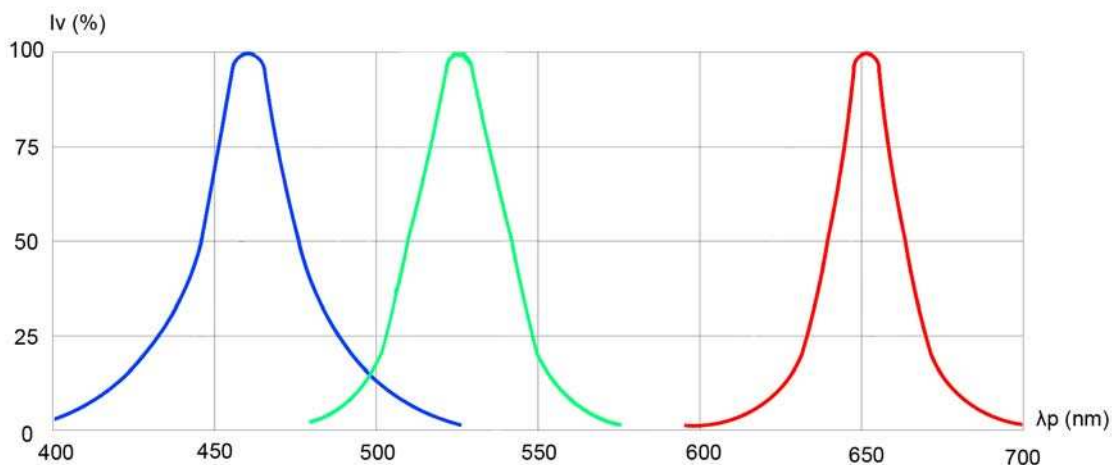


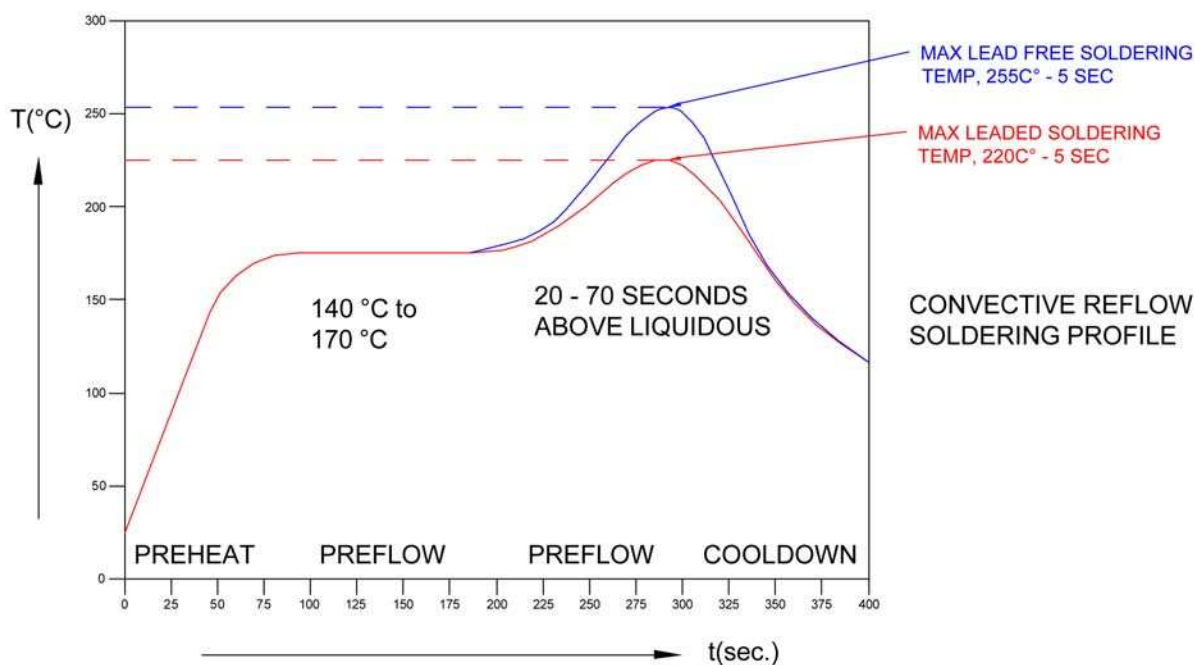
Fig. 5 Relative Luminous Intensity vs. Peak Wavelength

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

SURFACE MOUNT LED SUPER RGB, 1317 PACKAGE

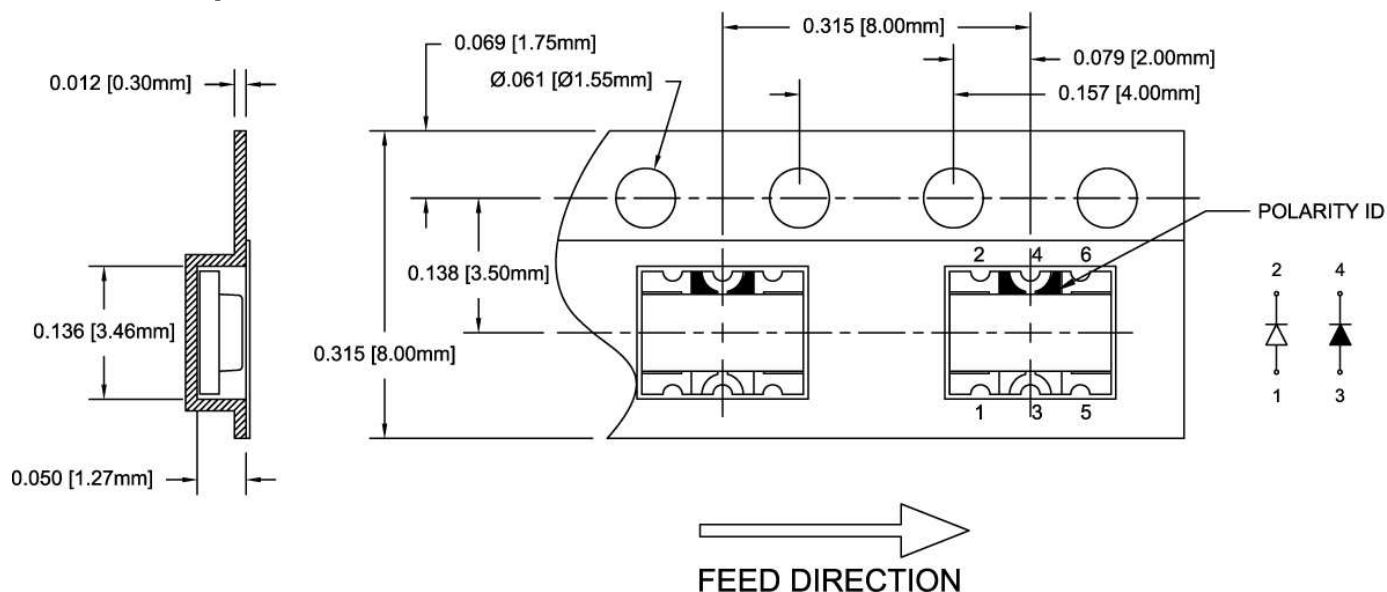


Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 1500 pcs/Reel



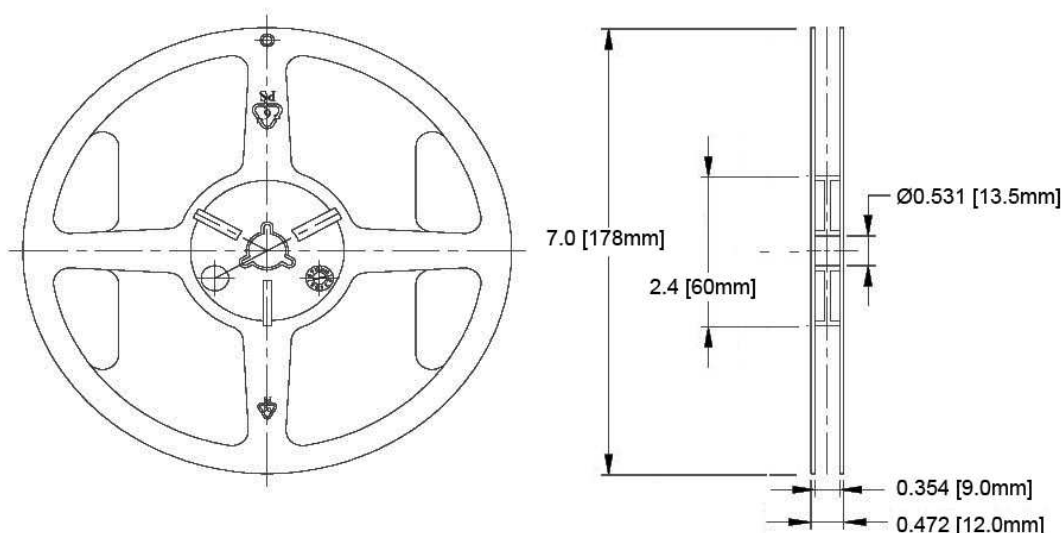
Outline Drawings Notes:

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.

SURFACE MOUNT LED SUPER RGB, 1317 PACKAGE

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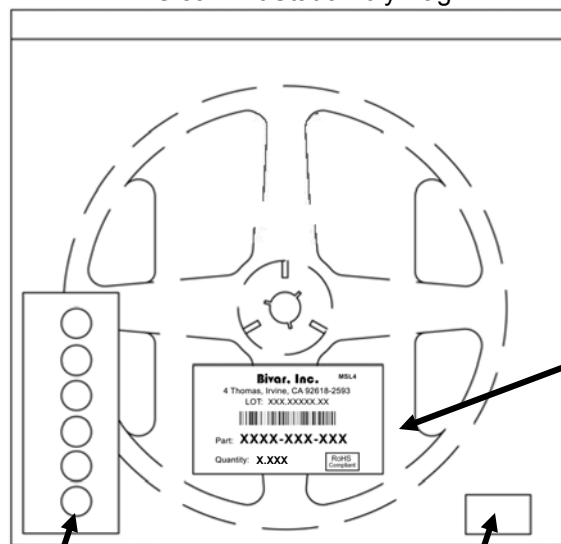
Outline Drawings Notes:

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

Vacuum and Heat Sealed
Clear AntiStatic Poly Bag



Humidity Indicator
Card

Desiccant



Bivar Standard Packaging Label

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