

PLCC6 SMD Top View Package LED SMTL6-RGB, RED/GREEN/BLUE

BIVAR

SMTL6-RGB

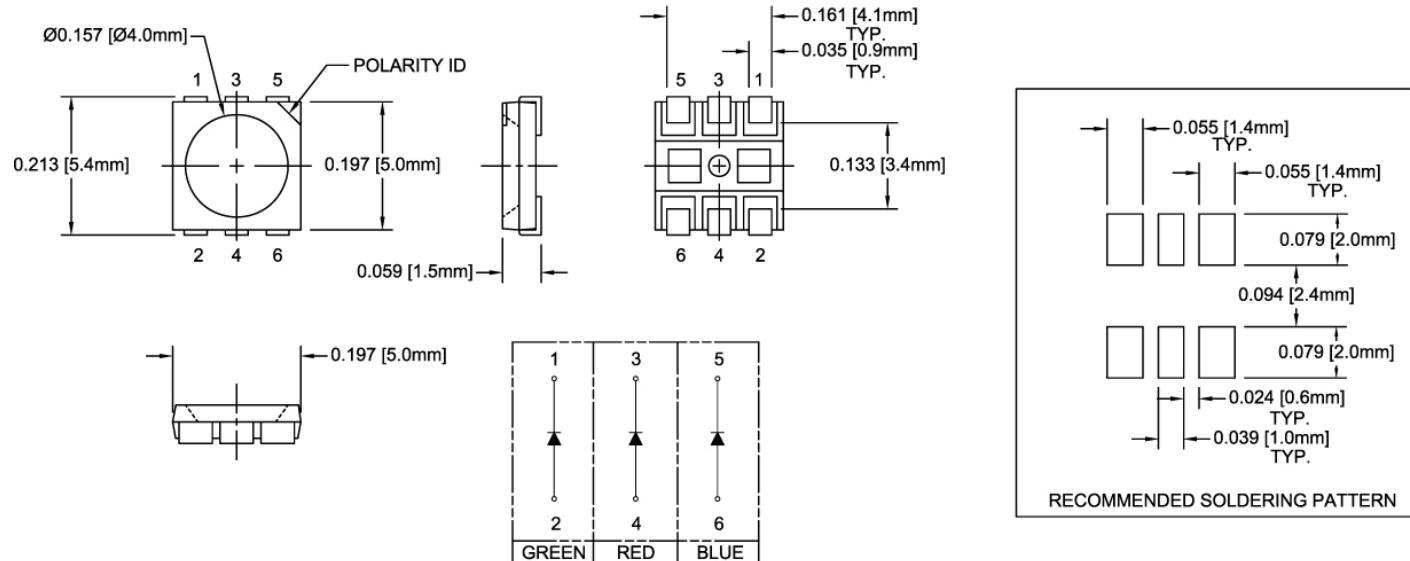
- ♦ Industry Standard PLCC6 Footprint
- ♦ 3 Chips in One Low Profile Package
- ♦ High Luminous Intensity
- ♦ Wide Viewing Angle
- ♦ High Power Efficiency



Bivar SMTL6-RGB LED is offered in an industry standard PLCC6 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 SMTL6 LED is packaged in standard tape and reels for pick and place assemblies.

Emitted Color	Material	Emitted Color	Lumen Typ. mcd	Lens Color	Viewing Angle
SMTL6-RGB	AlGaNp	Red	600	Water Clear	140°
	InGaN	Green	800		
	InGaN	Blue	350		

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.

PLCC6 SMD Top View Package LED SMTL6-RGB, RED/GREEN/BLUE

BIVAR

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	100 mW
Continuous Forward Current	30 mA
Peak Forward Current ¹	100 mA
Electrostatic Discharge Classification (HBM)	2000 V
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/°C
Operating Temperature Range	-30 ~ +85°C
Storage Temperature Range	-40 ~ +100°C
Soldering Temperature	260°C

Notes: 1. 10% Duty Cycle, Pulse Width \leq 0.1 msec.

2. Solder time less than 5 seconds at temperature extreme.

Electrical Characteristics

T_A = 25°C & I_F = 20 mA unless otherwise noted

Emitting Color	Forward Voltage (V) ¹			Recommend Forward Current (mA)	Reverse Current (μ A) V _R =5V	Dominant Wavelength (nm) ²		Luminous Intensity (mcd) ³		Viewing Angle 2 Θ 1/2 (deg)
	MIN	TYP	MAX			MIN	MAX	MIN	MAX	
Red	1.8	2.1	2.4	20	10	620	632	500	700	140
Green	3.0	3.3	3.6	20	10	520	532	700	900	140
Blue	3.0	3.3	3.6	20	10	465	477	200	500	140

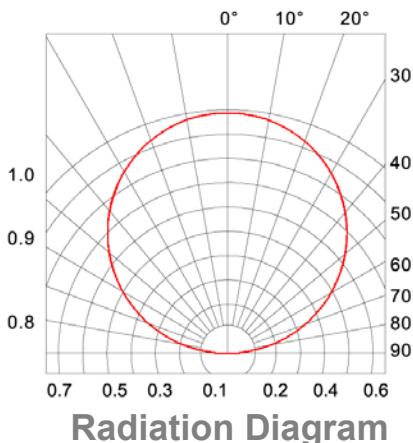
Notes: 1. Tolerance of Forward Voltage : ± 0.05 V.

2. Tolerance of Dominant Wavelength : ± 0.1 nm.

3. Tolerance of Luminous Intensity : $\pm 15\%$.

Directivity Radiation

T_A = 25°C unless otherwise noted



Radiation Diagram

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

PLCC6 SMD Top View Package LED SMTL6-RGB, RED/GREEN/BLUE

BIVAR

Typical Electrical / Optical Characteristics Curves

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

Relative Spectrum Emission $I_{\text{rel}} = f(I)$, $T_A = 25^\circ\text{C}$, $I_F = 20\text{ mA}$
 $V(I)$ = Standard eye response curve

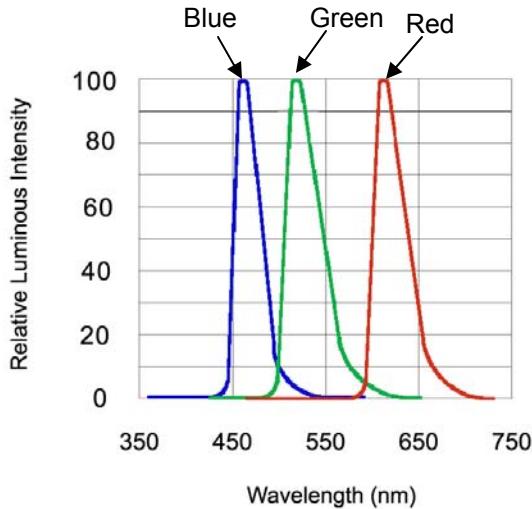


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current $I_F = f(V_F)$
 $T_A = 25^\circ\text{C}$

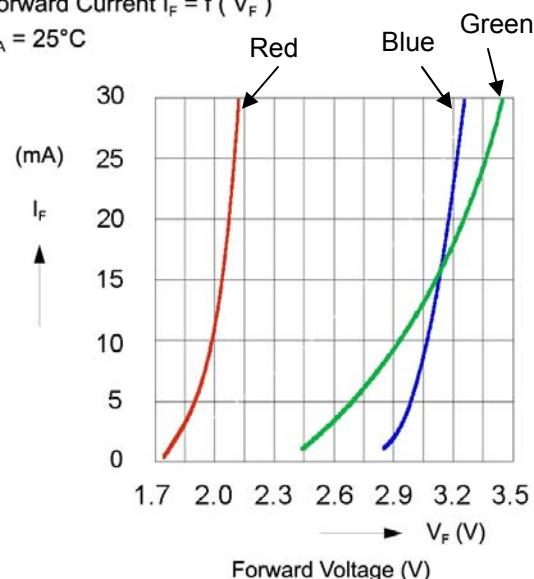


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity $I_v/I_v(20\text{mA}) = f(I_F)$
 $T_A = 25^\circ\text{C}$

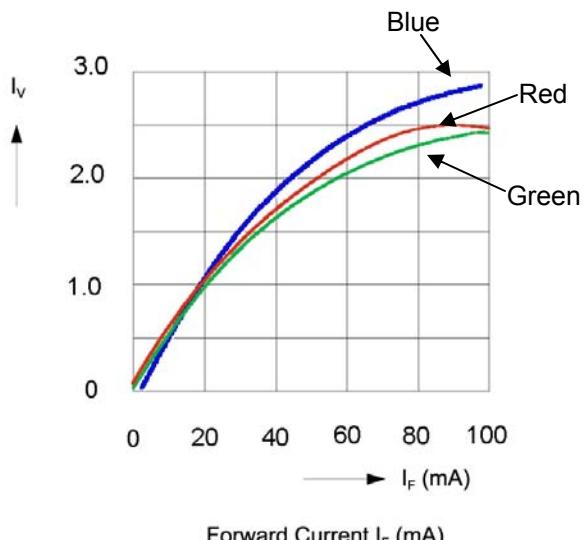


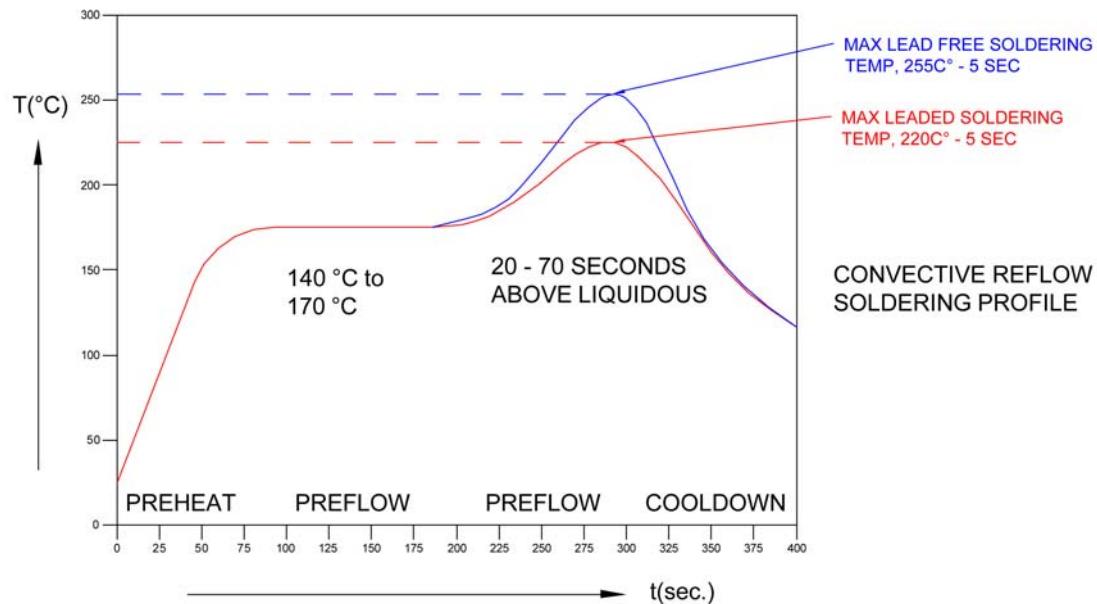
Fig.3 Relative Luminous Intensity vs. Forward Current

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

PLCC6 SMD Top View Package LED SMTL6-RGB, RED/GREEN/BLUE

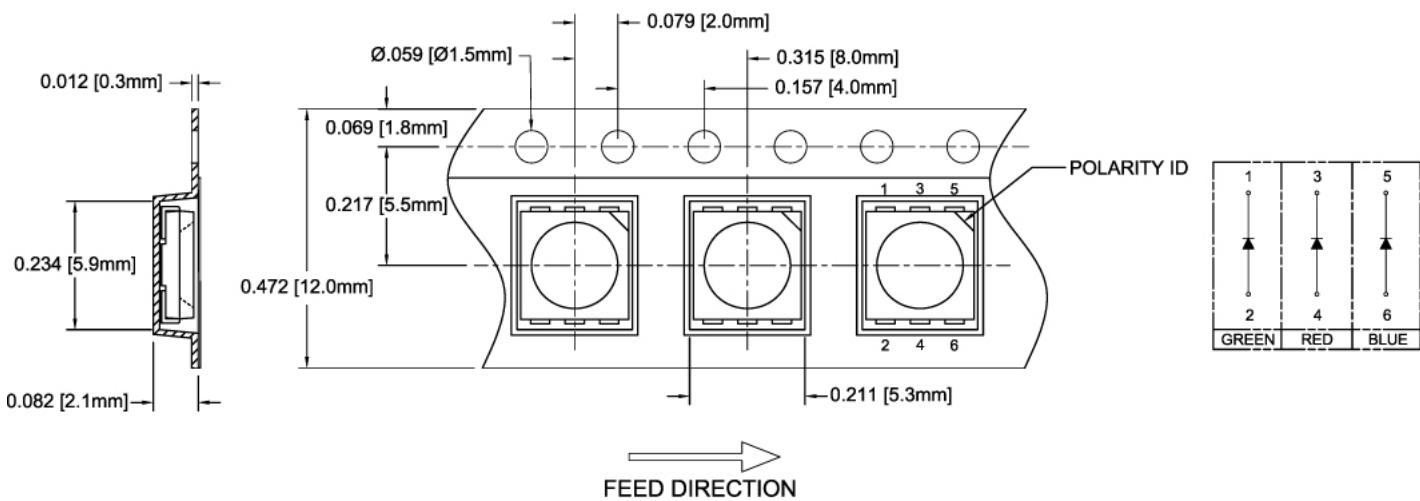
BIVAR

Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 1000 pcs/Reel



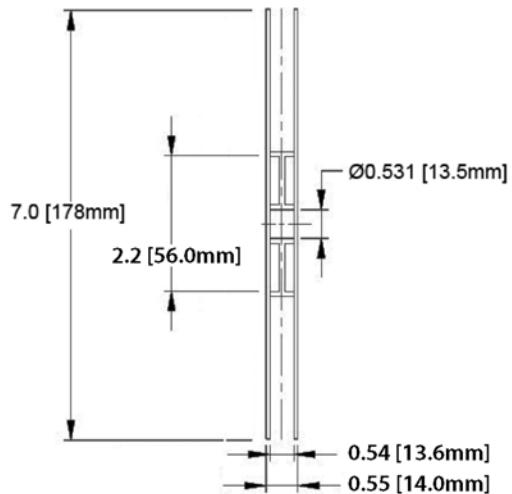
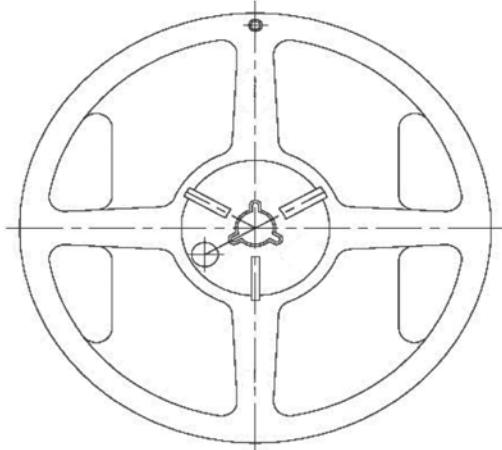
Outline Drawings Notes:

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.

PLCC6 SMD Top View Package LED SMTL6-RGB, RED/GREEN/BLUE

BIVAR



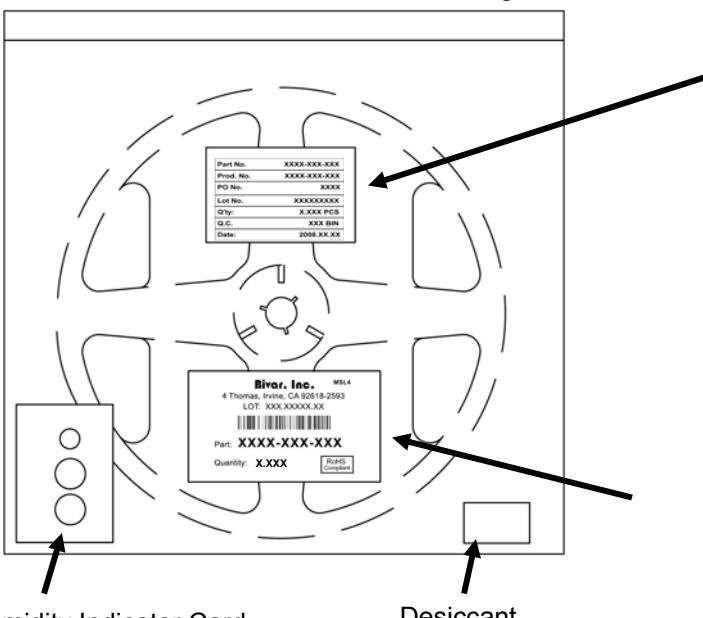
Outline Drawings Notes:

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

Sealed ESD and Moisture Barrier Bag



Humidity Indicator Card

Desiccant

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 Label



Bivar Standard Packaging Label

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