



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

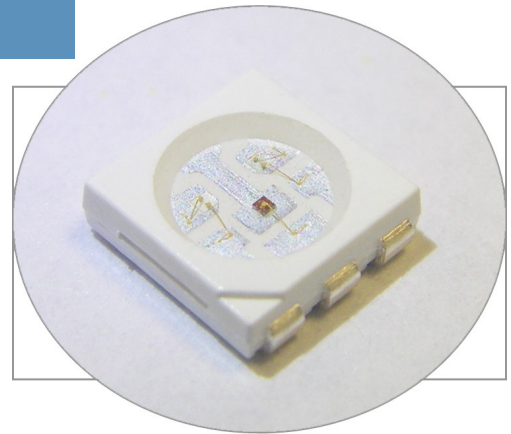
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PLCC6 SMD Top View Package LED SMP6-RGB, RED/GREEN/BLUE



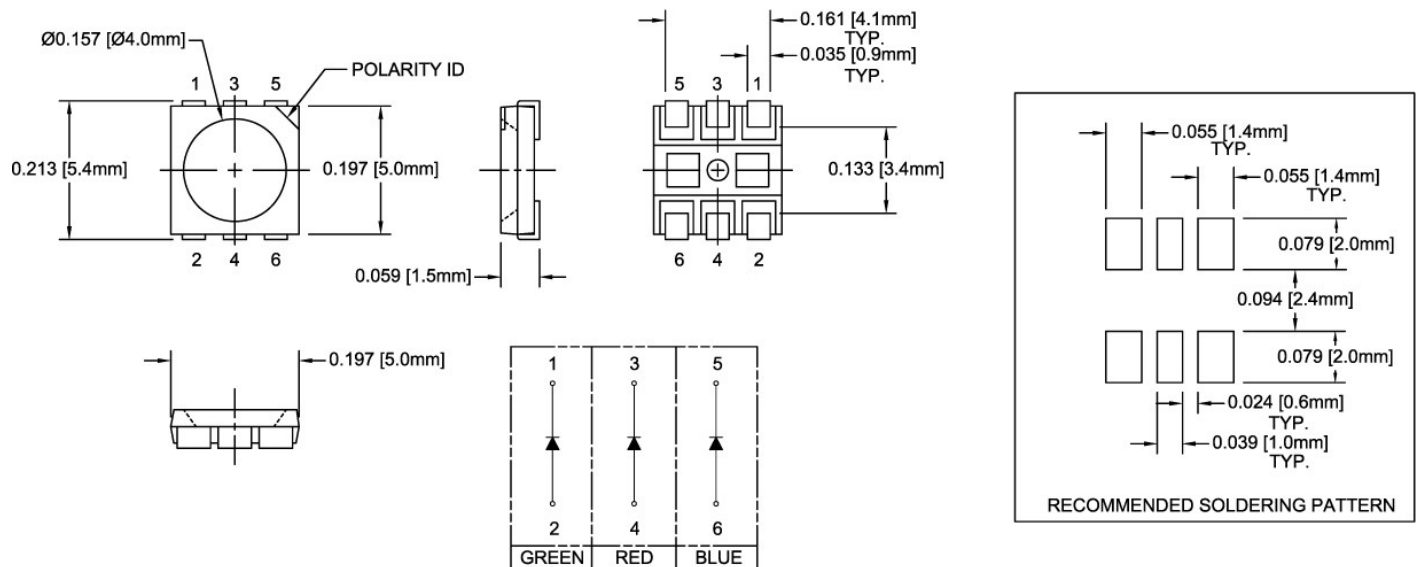
SMP6-RGB

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

Bivar SMP6 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 SMP6 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
SMP6-RGB	AlGaInP	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: $\pm 0.010''$ unless otherwise noted.



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

PLCC6 SMD Top View Package LED SMP6-RGB, RED/GREEN/BLUE



Absolute Maximum Ratings

$T_A = 25^\circ\text{C}$ 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 ≤ 0.1 msec.
2. Solder time less than 5 seconds at temperature extreme.

Electrical Characteristics

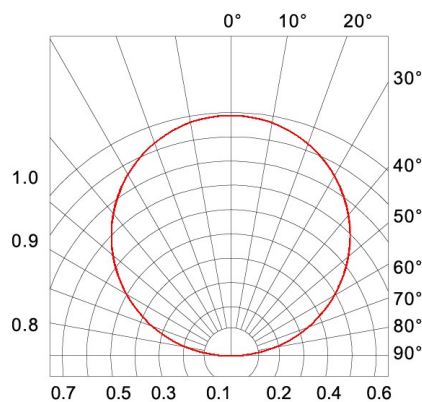
$T_A = 25^\circ\text{C}$ & $I_F = 20$ mA unless otherwise noted

Emitting Color	Forward Voltage (V) ¹			Recommend Forward Current (mA)	Reverse Current (μA) $V_R=5\text{V}$	Dominant Wavelength (nm) ²		Luminous Intensity (mcd) ³		Viewing Angle $2\theta_{1/2}$ (deg)
	MIN	TYP	MAX	TYP	MAX	MIN	MAX	MIN	MAX	TYP
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 : $\pm 0.05\text{V}$.
2. Tolerance of Dominant Wavelength : $\pm 0.1\text{nm}$.
3. Tolerance of Luminous Intensity : $\pm 15\%$.

Directivity Radiation

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



Radiation Diagram

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Typical Electrical / Optical Characteristics Curves

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

Relative Spectrum Emission $I_{rel} = f(\lambda)$, $T_A = 25^\circ\text{C}$, $I_F = 20\text{mA}$

$V(\lambda)$ = Standard eye response curve

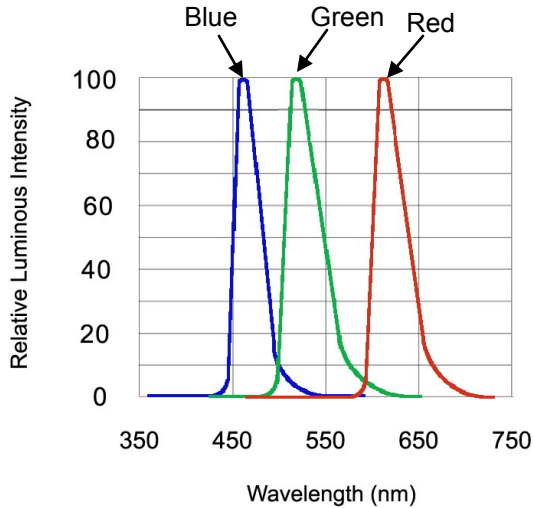


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current $I_F = f(V_F)$

$T_A = 25^\circ\text{C}$

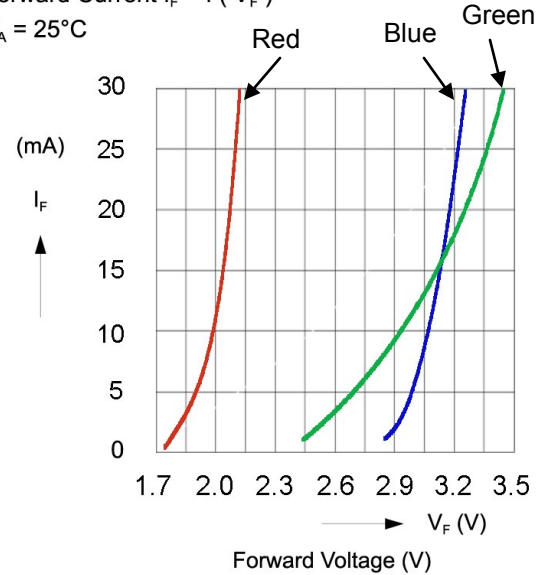


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity $I_v/I_v(20\text{mA}) = f(I_F)$

$T_A = 25^\circ\text{C}$

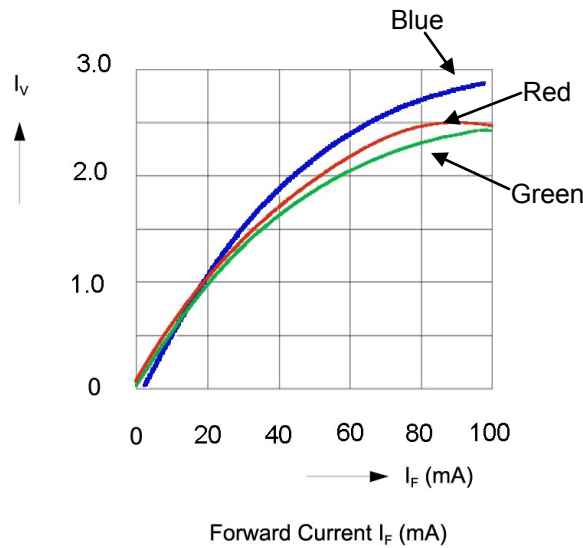


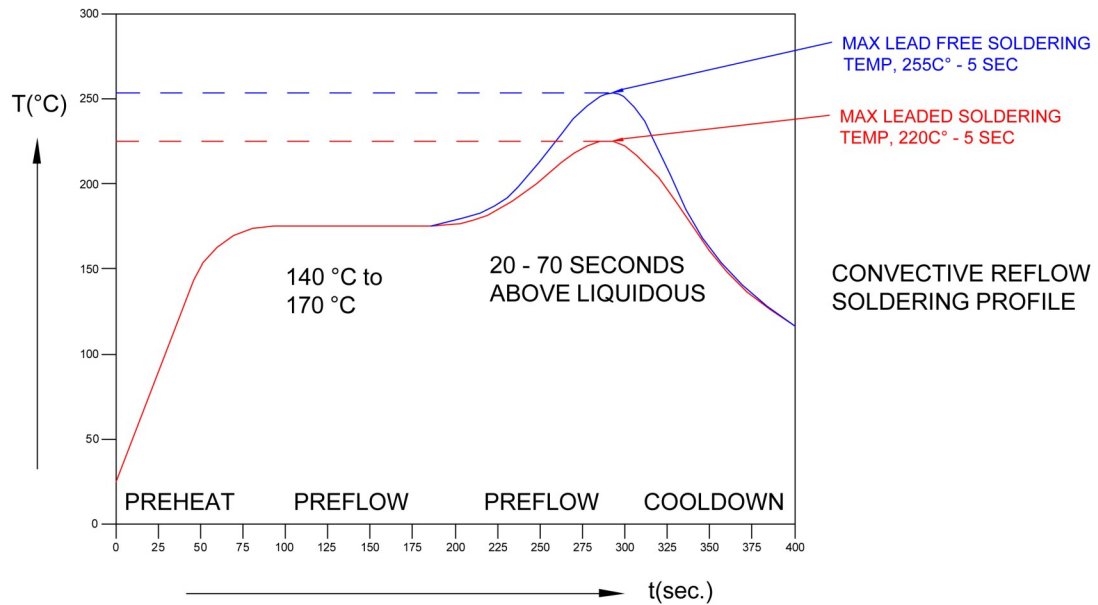
Fig.3 Relative Luminous Intensity vs. Forward Current

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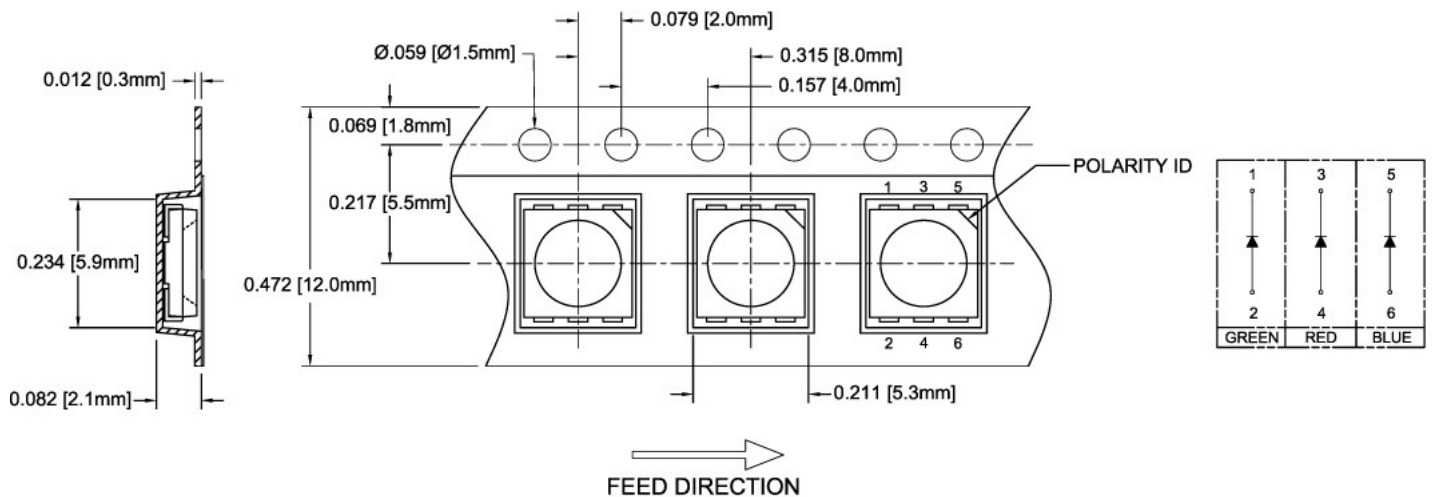


Recommended Soldering Conditions



Tape and Reel Dimensions

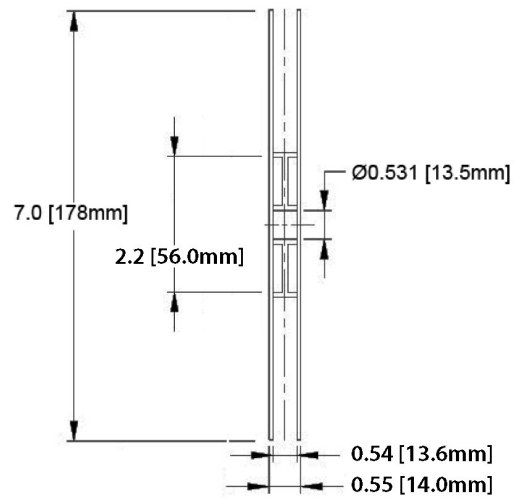
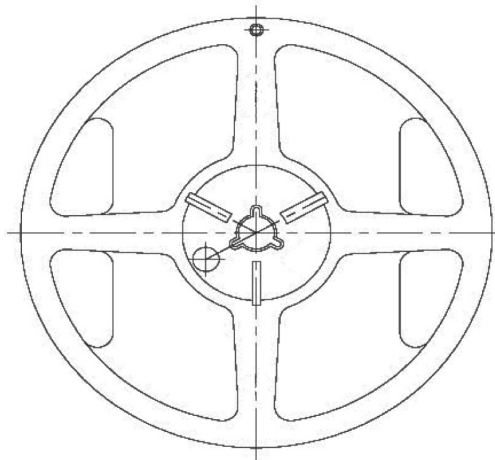
Note: 1000 pcs/Reel



Outline Drawings Notes:
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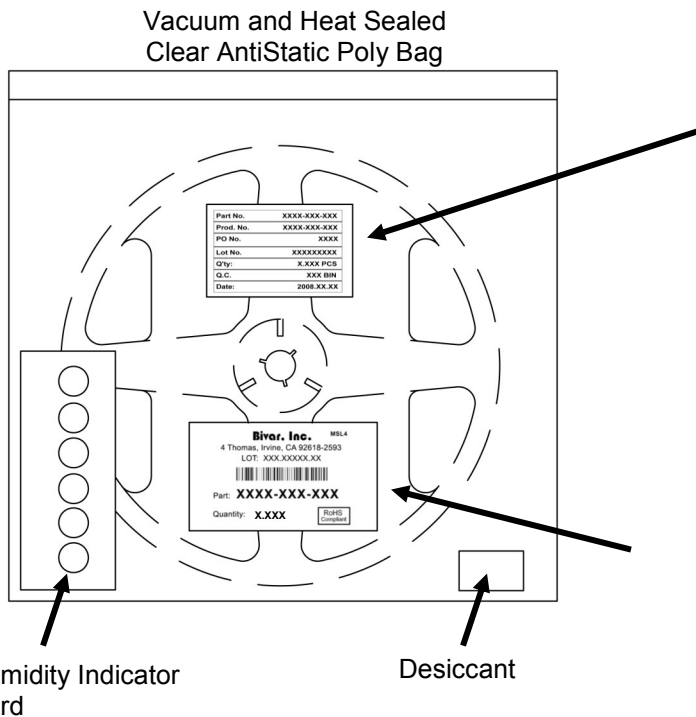


Outline Drawings Notes:

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



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, 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.