PLCC6 SMD Top View Package LED SMP6-RC, RED



SMP6-RC

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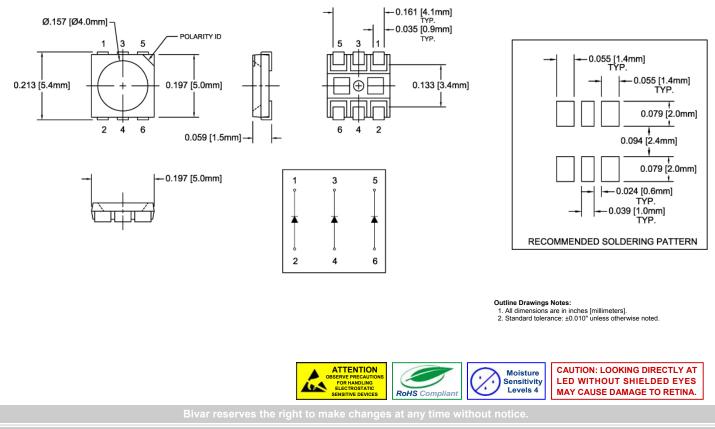
- Industry Standard PLCC6 Footprint
- Low Profile Package
- High Luminous Intensity
- Wide Viewing Angle
- High Power Efficiency



Bivar SMP6 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 in combinations. Bivar SMP6 LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Lumen Typ. mcd	Lens Color	Viewing Angle
SMP6-RC	InGaN	Red	1350	Water Clear	140°

Outline Dimensions



Bivar, Inc. — 4 Thomas, Irvine, California 92618, U.S.A. Phone: (949) 951-8808 Fax: (949) 951-3974 E-mail: bivar@bivar.com Web: www.bivar.com



Absolute Maximum Ratings

 $T_A = 25^{\circ}C$ 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

 $T_A = 25^{\circ}C \& I_F = 60 \text{ mA}$ unless otherwise noted

Emitting Color	Forward g Voltage (V) ¹		Recommend Forward Current (mA)	Reverse Current (μΑ) V _R =5V	Dominant Wavelength (nm) ²		Luminous Intensity (mcd) ³		Viewing Angle 2 ⊖ ½ (deg)	
	MIN	ТҮР	MAX	ТҮР	MAX	MIN	MAX	MIN	MAX	ТҮР
Red	1.8	2.2	2.6	60	10	620	632	900	1800	140

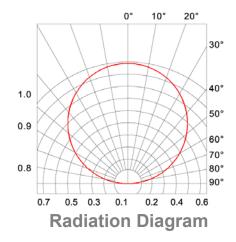
Notes: 1. Tolerance of Forward Voltage : ±0.05V.

2. Tolerance of Dominant Wavelength : ±0.1nm.

3. Tolerance of Luminous Intensity : ±15%.

Directivity Radiation

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



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

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Typical Electrical / Optical Characteristics Curves

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

Relative Spectrum Emission $I_{rel} = f(I)$, $T_A = 25^{\circ}C$, $I_F = 60 \text{ mA}$ V(I) = Standard eye response curve

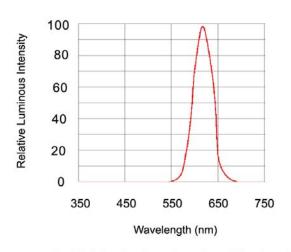


Fig.1 Relative Luminous Intensity vs. Wavelength

Relative Luminous Intensity I_v/I_v (60 mA) = f (I_F)

 $T_A = 25^{\circ}C$

 I_v

2.0

1.8

1.6

1.4

1.2 1.0

0.8 0.6

0.4

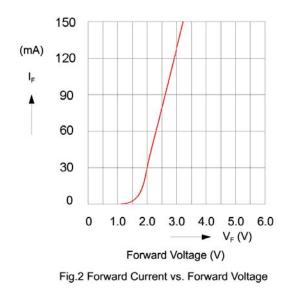
0

0

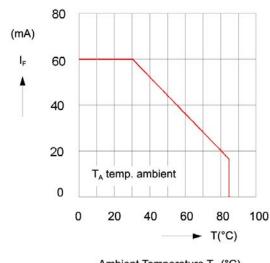
30

60

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



Ambient Temperature vs. Allowable Forward Current



Ambient Temperature T_A (°C)



Forward Current I_F (mA)

90

120

 I_F (mA)

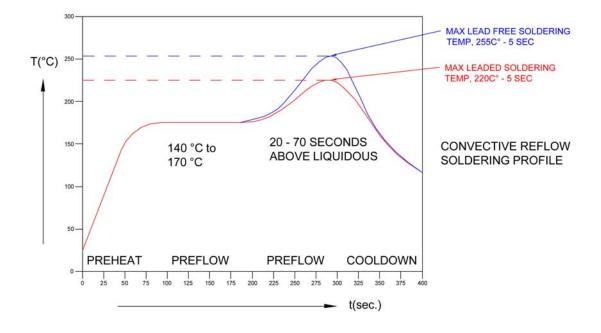
150

Fig.4 Forward Current vs. Ambient Temperature

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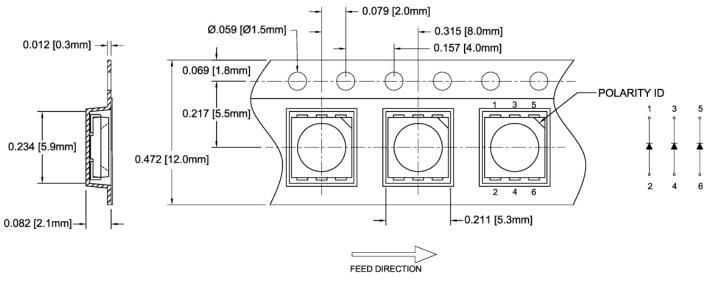


Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 1000 pcs/Reel

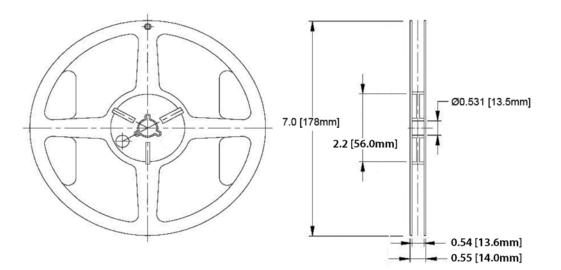


Outline Drawings Notes: 1. All dimensions are in inches [millimeters]. 2. Standard tolerance: ±0.010" unless otherwise noted.

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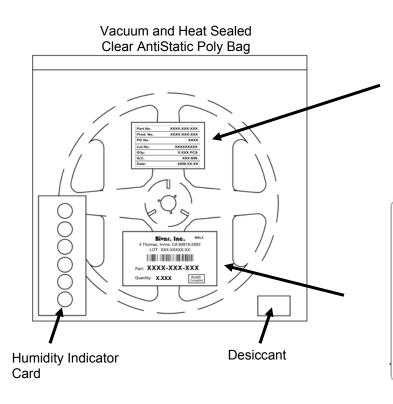
Outline Drawings Notes:

All dimensions are in inches [millimeters].
Standard tolerance unless otherwise noted: X.XXX ± 0.010"

X.XXX ± 0.01 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 BI		
Date:	2008.XX.XX		

Internal Quality Control Label

Bivar. Inc.	MSL4				
4 Thomas, Irvine, CA 92618	3-2593				
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.