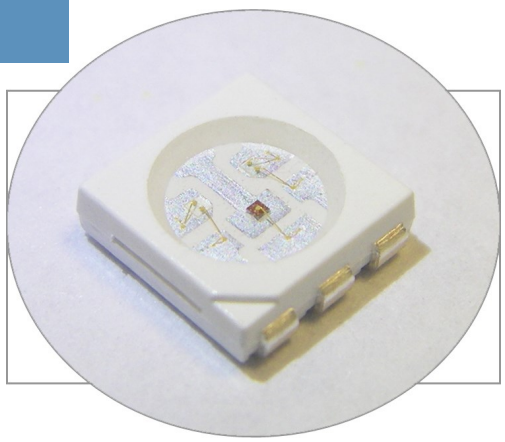
PLCC6 SMD Top View Package LED SMP6-RC, RED



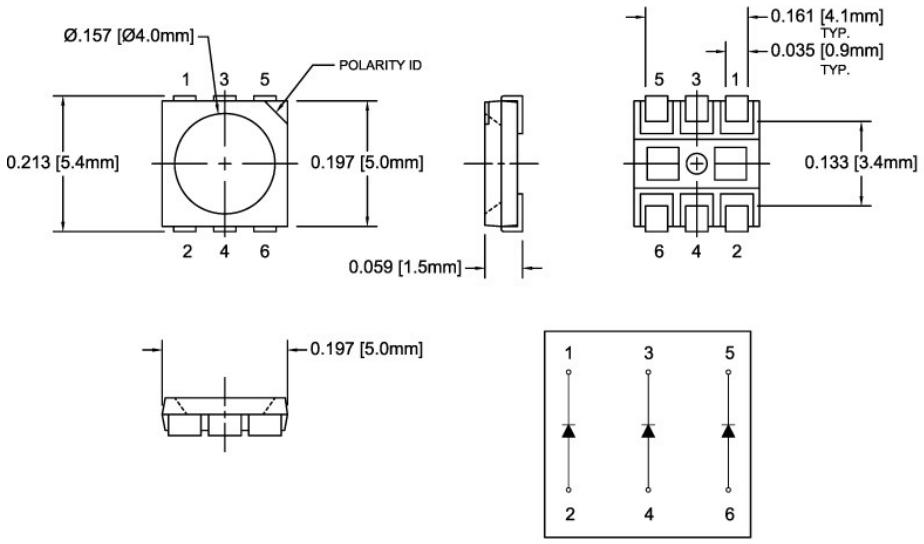
SMP6-RC

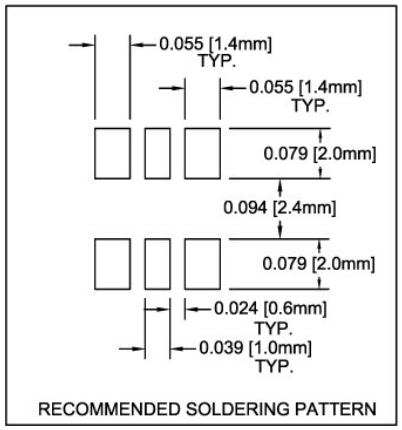
- **Industry Standard PLCC6 Footprint**
- **Low Profile Package**
- **High Luminous Intensity**
- **Wide Viewing Angle**
- **High Power Efficiency**

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





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

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

RoHS Compliant

Moisture Sensitivity Levels 4

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 ≤ 0.1 msec.
2. Solder time less than 5 seconds at temperature extreme.

Electrical Characteristics

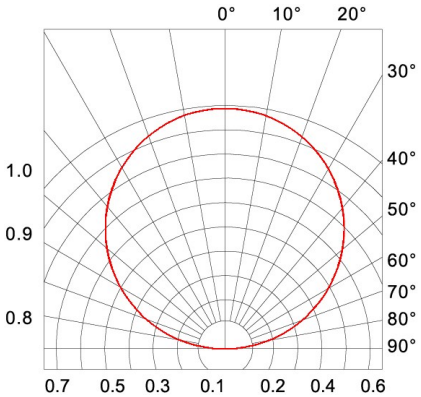
T_A = 25°C & I_F = 60 mA unless otherwise noted

Emitting Color	Forward Voltage (V)[1]			Recommend Forward Current (mA)	Reverse Current (μA) V_R=5V	Dominant Wavelength (nm)[2]		Luminous Intensity (mcd)[3]		Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	TYP	MAX	MIN	MAX	MIN	MAX	TYP
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°C unless otherwise noted



Radiation Diagram

Typical Electrical / Optical Characteristics Curves

T_A = 25°C unless otherwise noted

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

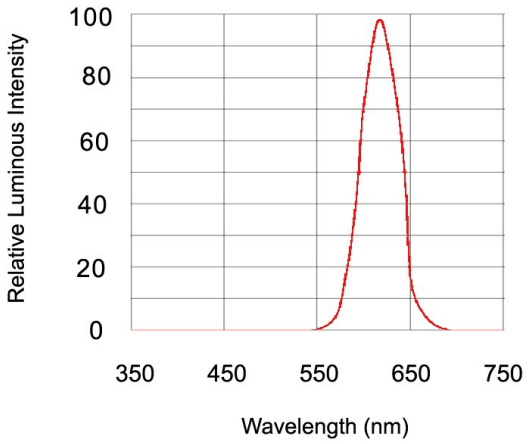


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current I_F = f (V_F)
T_A = 25°C

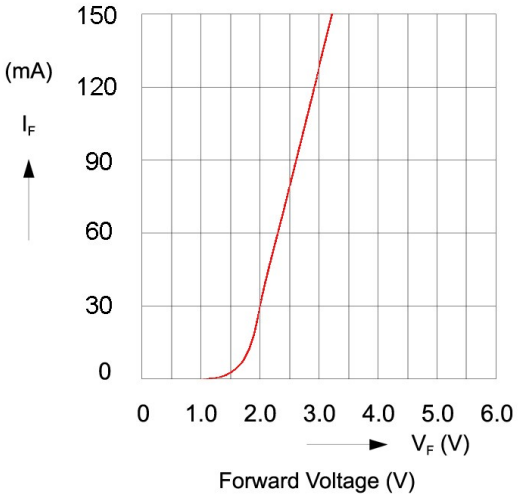


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity I_V/I_V (60 mA) = f (I_F)
T_A = 25°C

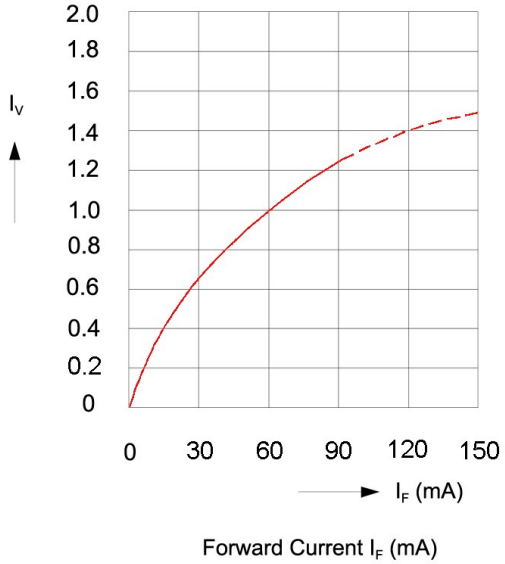


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

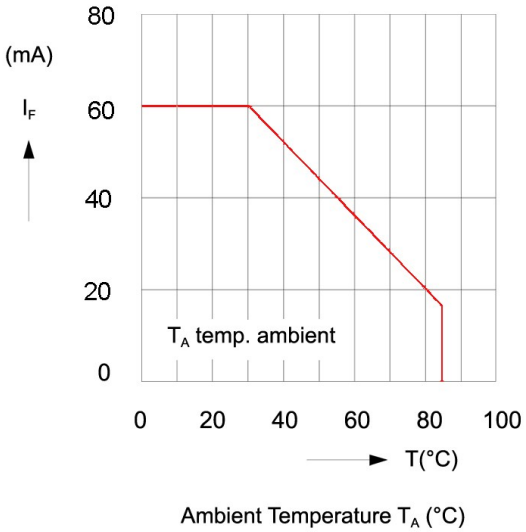
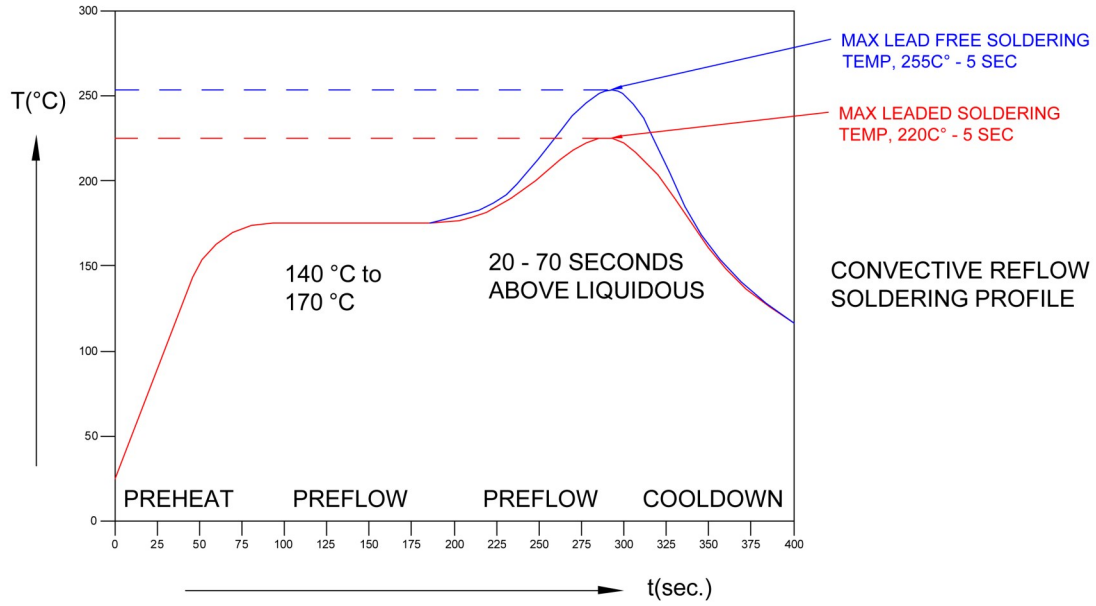


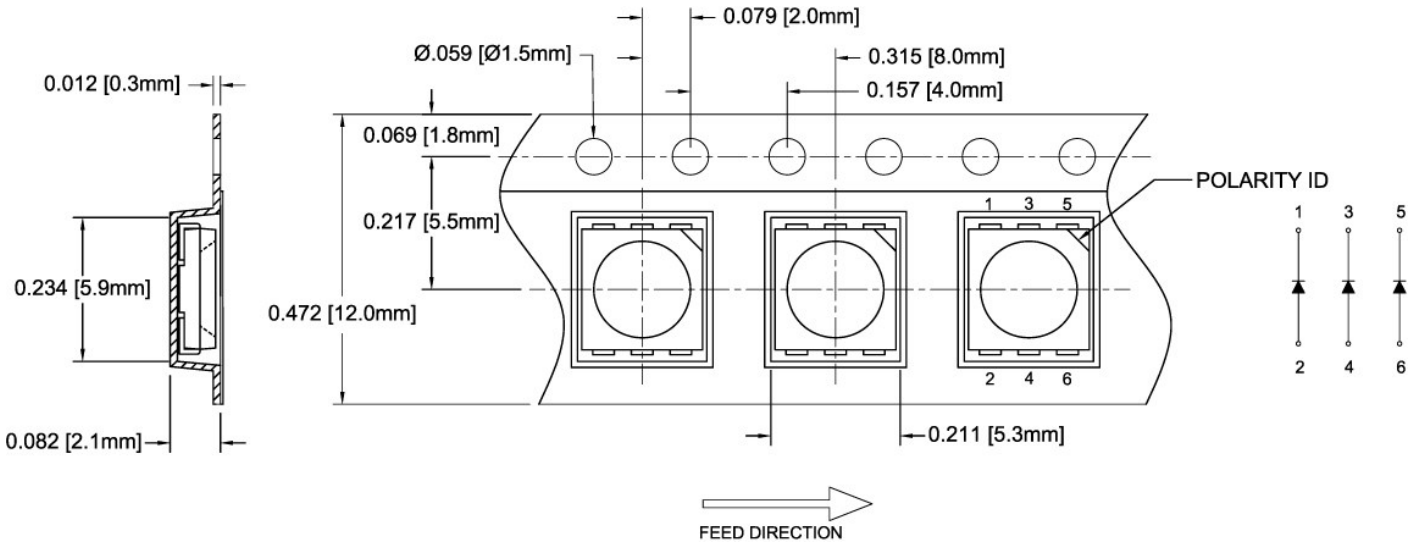
Fig.4 Forward Current vs. Ambient Temperature

Recommended Soldering Conditions



Tape and Reel Dimensions

Note: 1000 pcs/Reel



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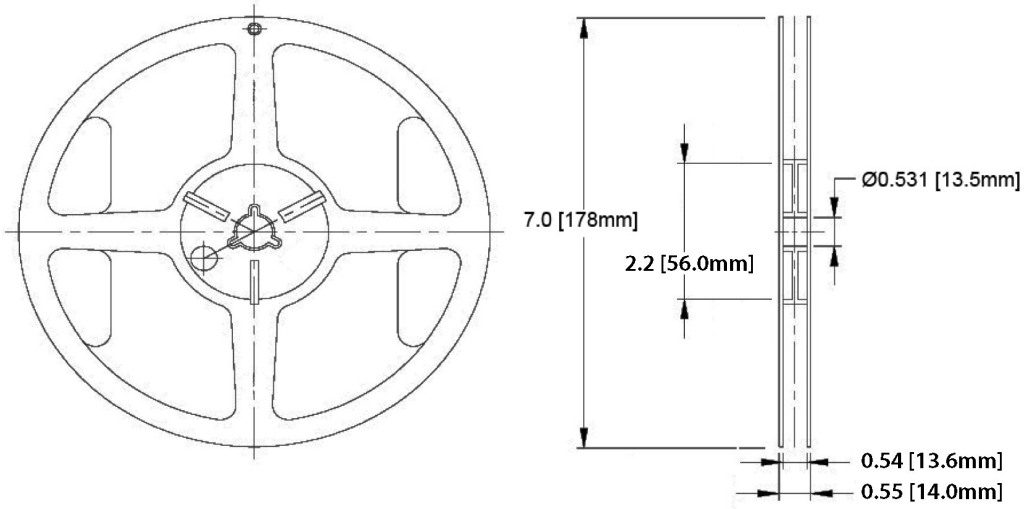
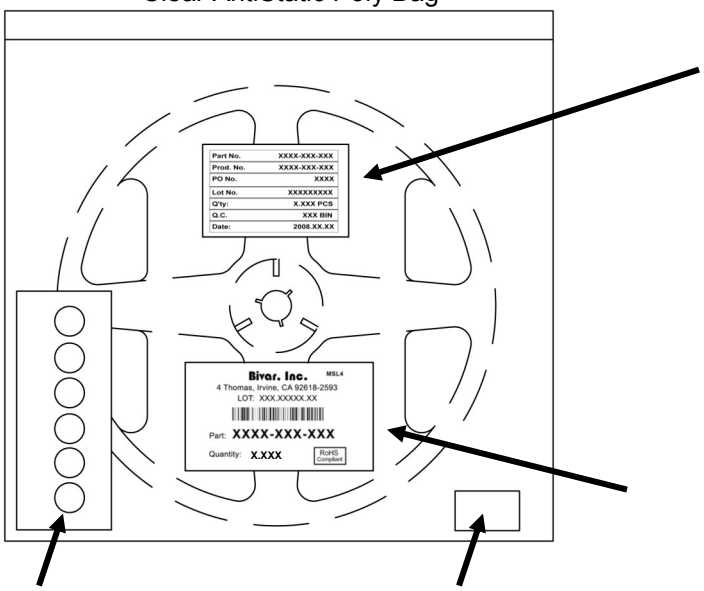


Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"
   X.X ± 0.1"

Packaging and Labeling Plan

Note: 1 Reel / Bag

Vacuum and Heat Sealed
Clear AntiStatic Poly Bag



Humidity Indicator Card

Desiccant

Part No.	**XXXX-XXX-XXX**
Prod. No.	**XXXX-XXX-XXX**
PO No.	**XXXX**
Lot No.	**XXXXXXXXX**
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