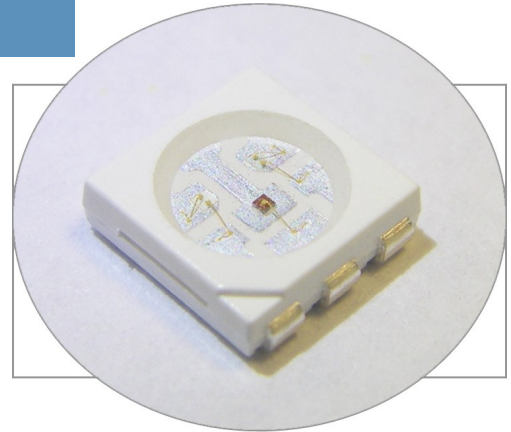




# THE DATASHEET OF SMP6-GC



# PLCC6 SMD Top View Package LED SMP6-GC, GREEN



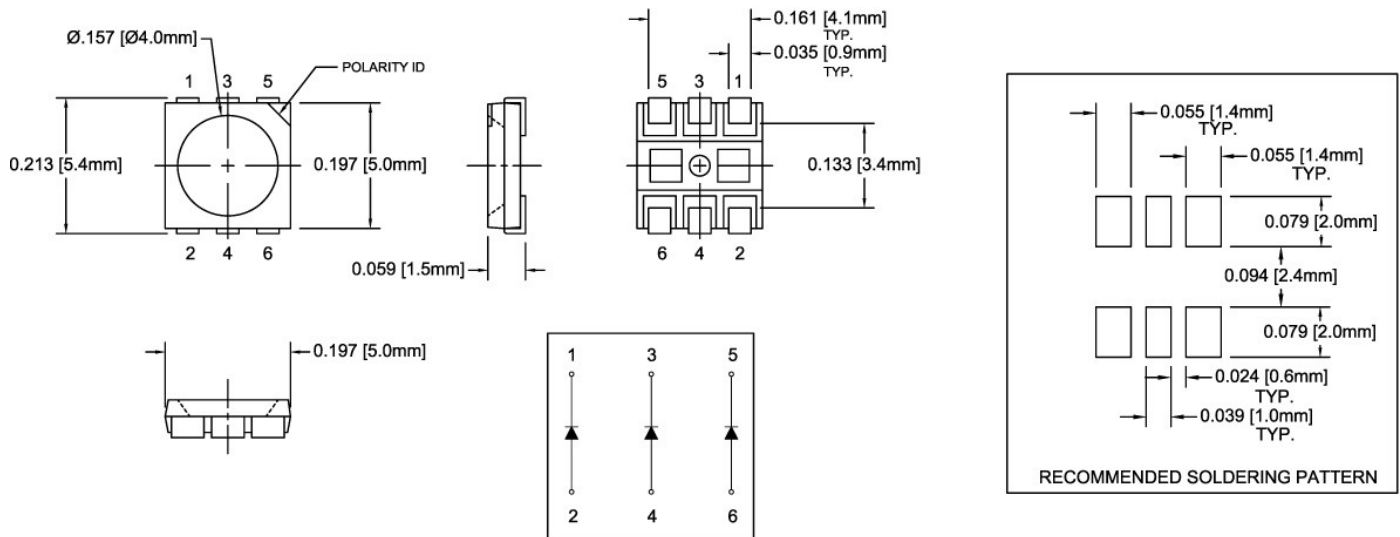
## SMP6-GC

- ◆ 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-GC	InGaN	Green	2700	Water Clear	140°

## 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-GC, GREEN



## Absolute Maximum Ratings

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

Power Dissipation	100 mW
Continuous Forward Current	30 mA
Peak Forward Current <sup>1</sup>	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

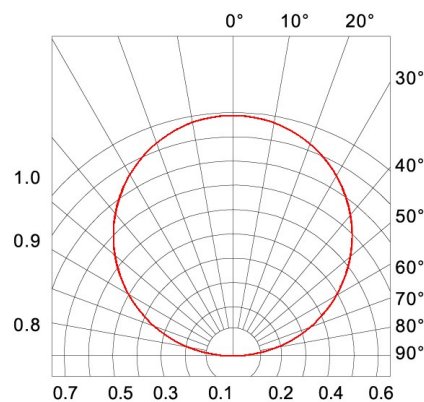
$T_A = 25^\circ\text{C}$  &  $I_F = 60$  mA unless otherwise noted

Emitting Color	Forward Voltage (V) <sup>1</sup>			Recommend Forward Current (mA)	Reverse Current ( $\mu\text{A}$ ) $V_R=5\text{V}$	Dominant Wavelength (nm) <sup>2</sup>		Luminous Intensity (mcd) <sup>3</sup>		Viewing Angle $2\theta_{1/2}$ (deg)
	MIN	TYP	MAX	TYP	MAX	MIN	MAX	MIN	MAX	TYP
Green	2.8	3.3	3.5	60	10	520	532	2000	5000	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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# PLCC6 SMD Top View Package LED SMP6-GC, GREEN



## Typical Electrical / Optical Characteristics Curves

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

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

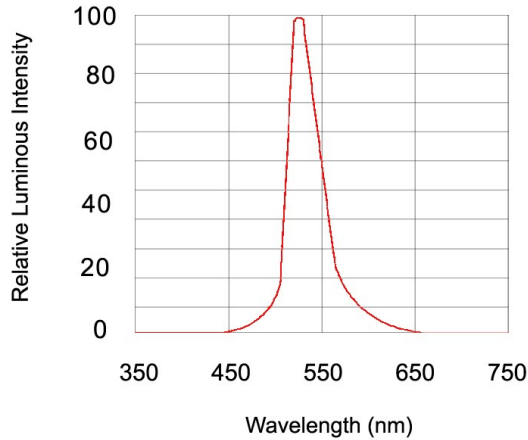


Fig.1 Relative Luminous Intensity vs. Wavelength

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

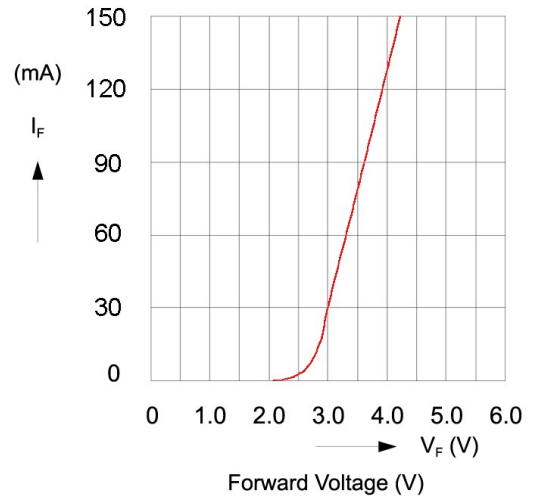


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity  $I_V/I_V(60\text{ mA}) = f(I_F)$   
 $T_A = 25^\circ\text{C}$

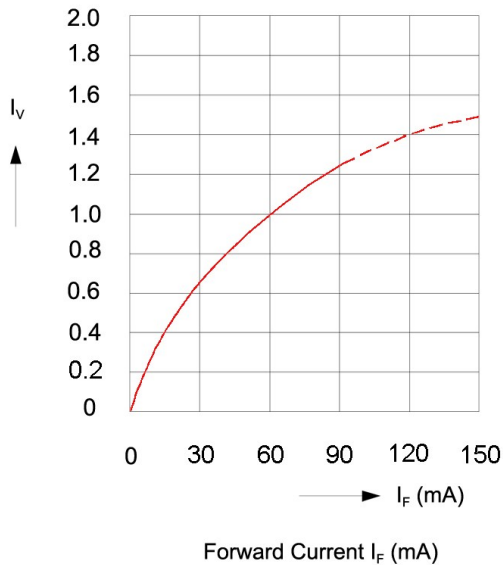


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

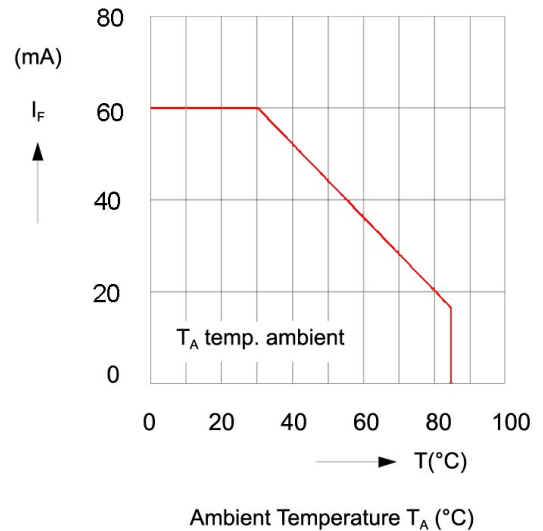


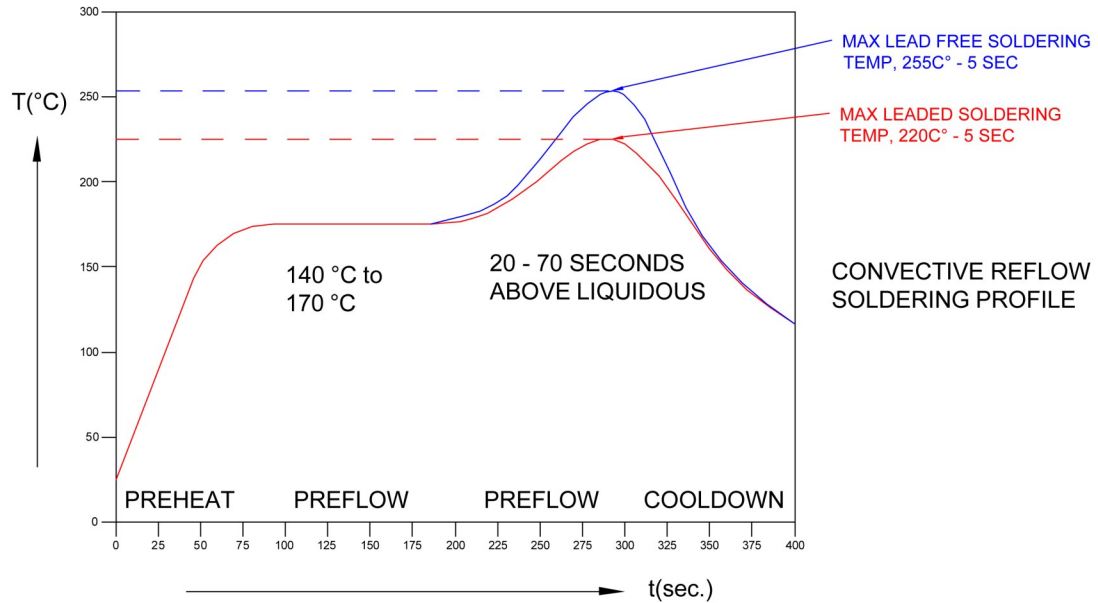
Fig.4 Forward Current vs. Ambient Temperature

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# PLCC6 SMD Top View Package LED SMP6-GC, GREEN

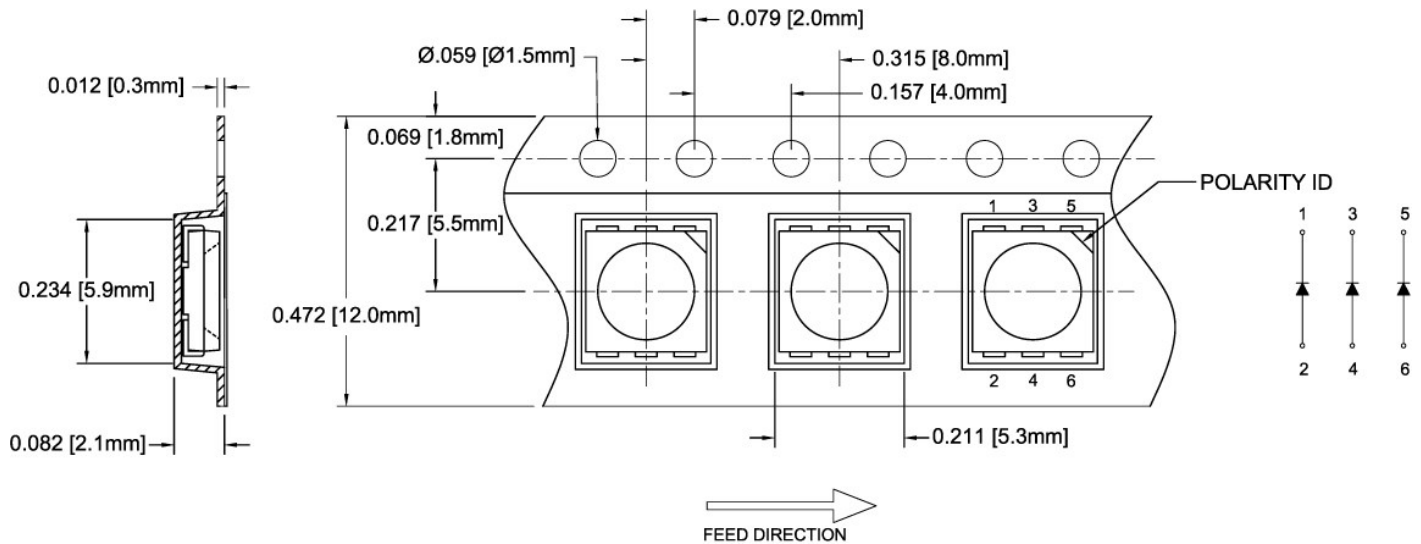


## Recommended Soldering Conditions



## Tape and Reel Dimensions

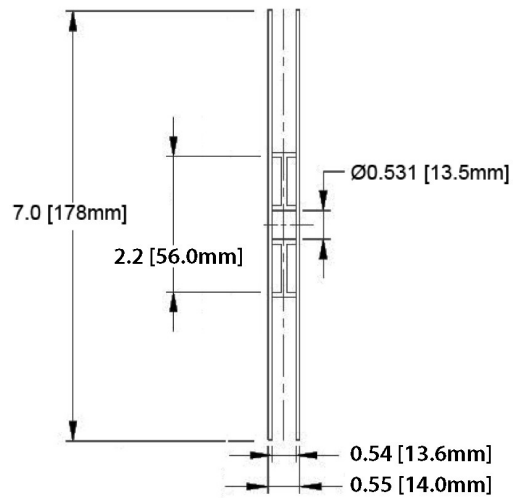
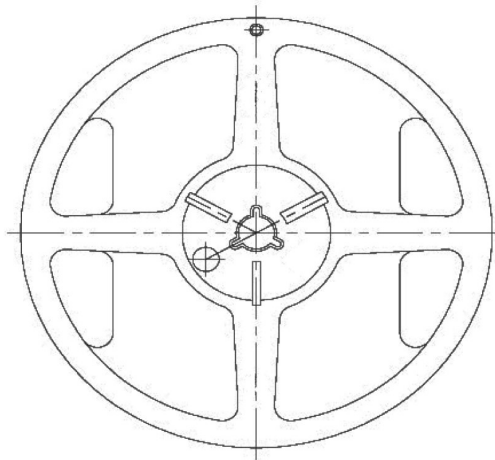
Note: 1000 pcs/Reel



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

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# PLCC6 SMD Top View Package LED SMP6-GC, GREEN

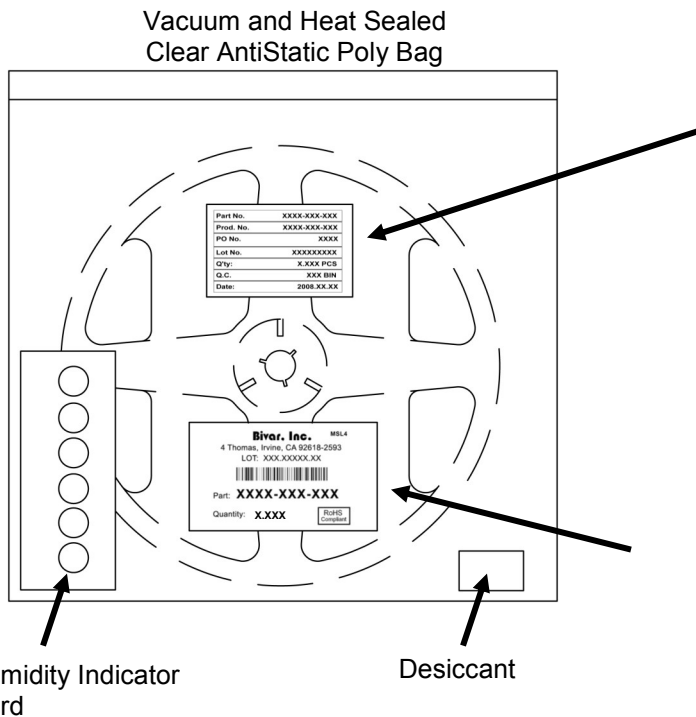


**Outline Drawings Notes:**

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

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## Looking for pricing, stock, or lifecycle information?

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-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management