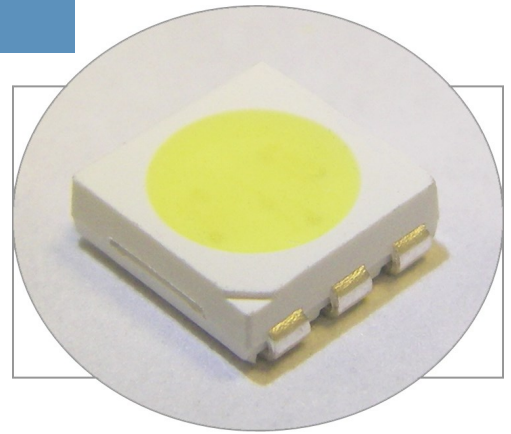




THE DATASHEET OF SMP6-UWDC



PLCC6 SMD Top View Package LED SMP6-UWDC, COOL WHITE



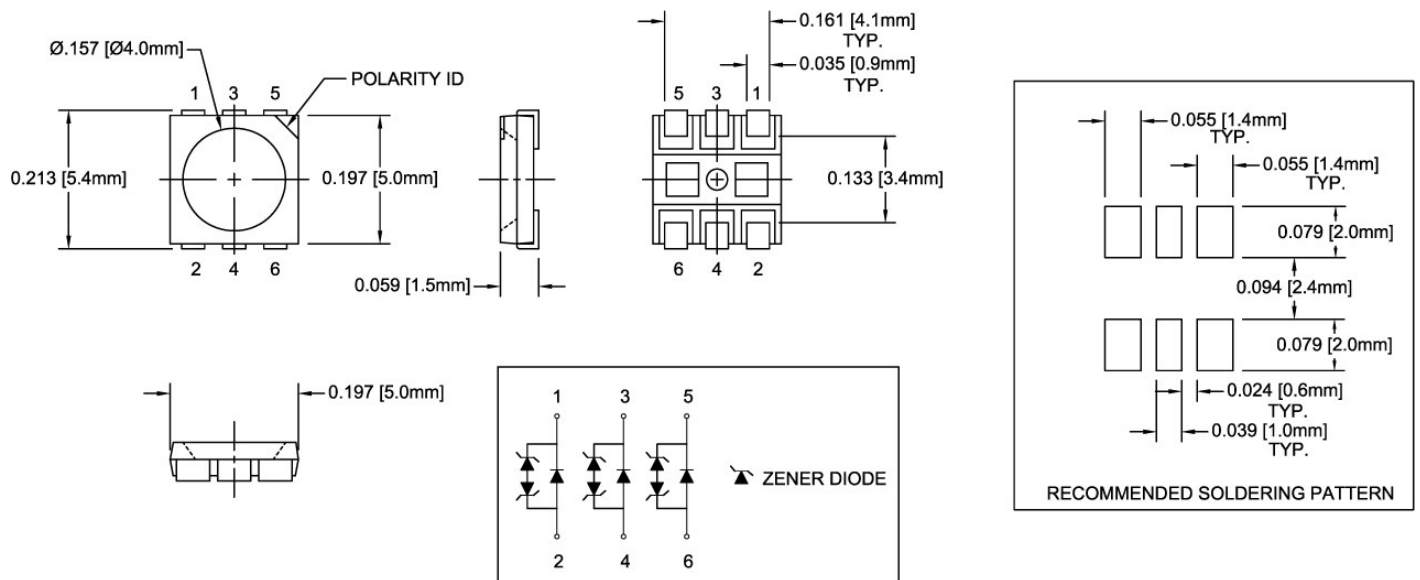
SMP6-UWDC

- ◆ Industry Standard PLCC6 Footprint
- ◆ Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency
- ◆ Equipped with Protective Zener Diode

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-UWDC	InGaN	Cool White	4000	Diffused	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-UWDC, COOL WHITE



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	75 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

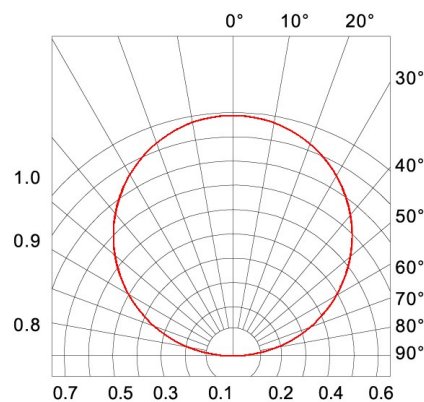
$T_A = 25^\circ\text{C}$ & $I_F = 60$ mA unless otherwise noted

Emitting Color	Forward Voltage (V) ¹			Recommend Forward Current (mA)	Reverse Current (μA) $V_R=5\text{V}$	Chromaticity Coordinates (XY) ² / CCT (Kelvin)	Luminous Intensity (mcd) ³		Viewing Angle $2\theta_{1/2}$ (deg)
	MIN	TYP	MAX	TYP	MAX	TYP	MIN	MAX	TYP
Cool White	3.0	3.3	3.6	60	10	X=0.28, Y=0.28 8000K	3000	5000	140

- Notes: 1. Tolerance of Forward Voltage : $\pm 0.05\text{V}$.
2. Tolerance of Chromaticity Coordinates : ± 0.02 .
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-UWDC, COOL WHITE



Typical Electrical / Optical Characteristics Curves

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

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

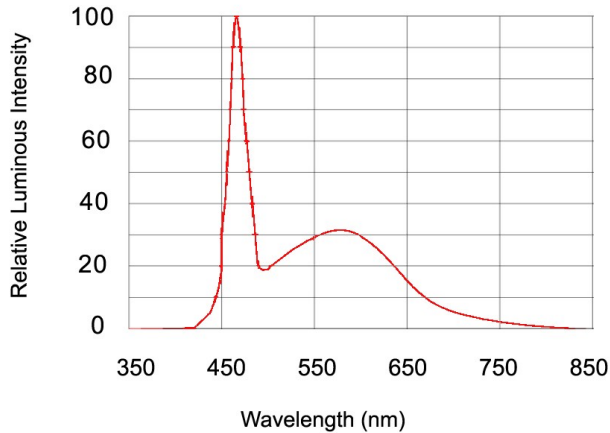


Fig.1 Relative Luminous Intensity vs. Wavelength

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

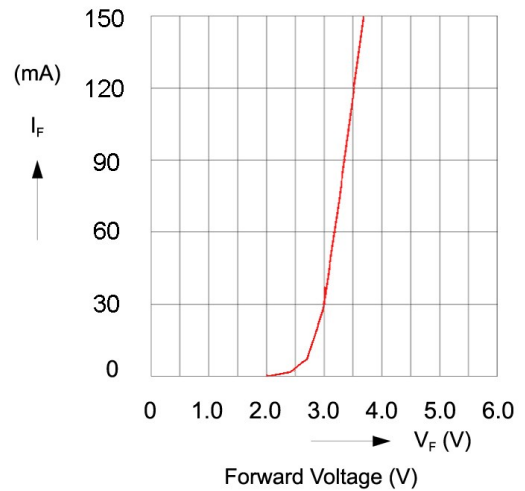


Fig.2 Forward Current vs. Forward Voltage

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

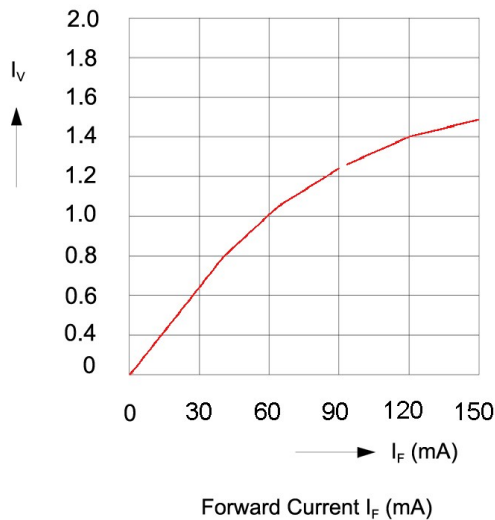


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

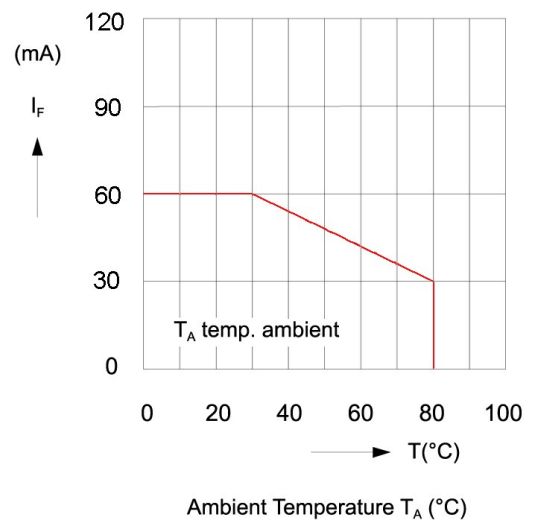


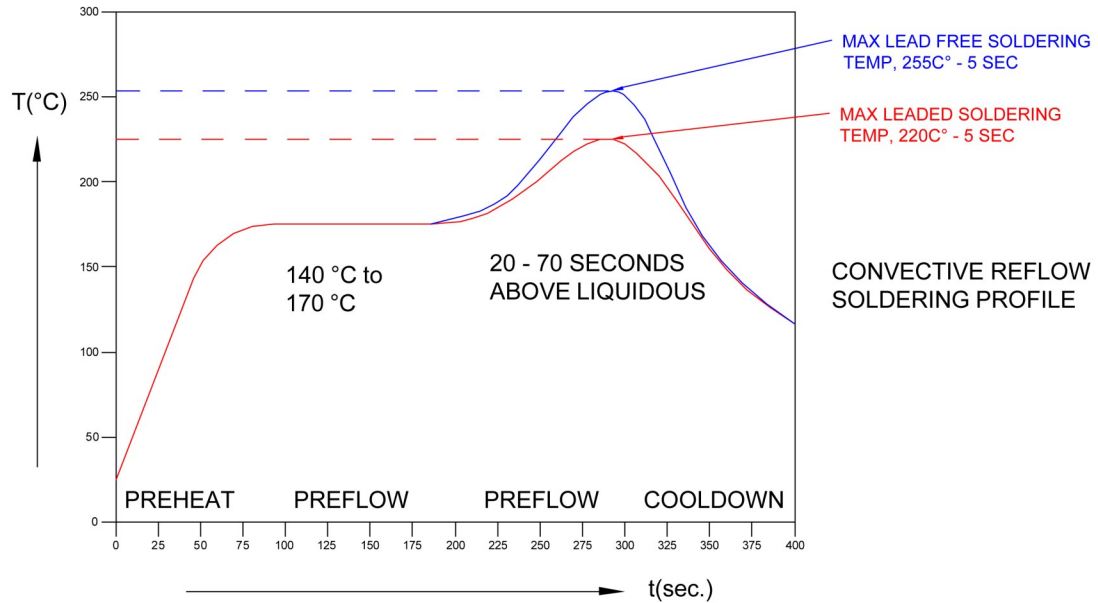
Fig.4 Forward Current vs. Ambient Temperature

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

PLCC6 SMD Top View Package LED SMP6-UWDC, COOL WHITE

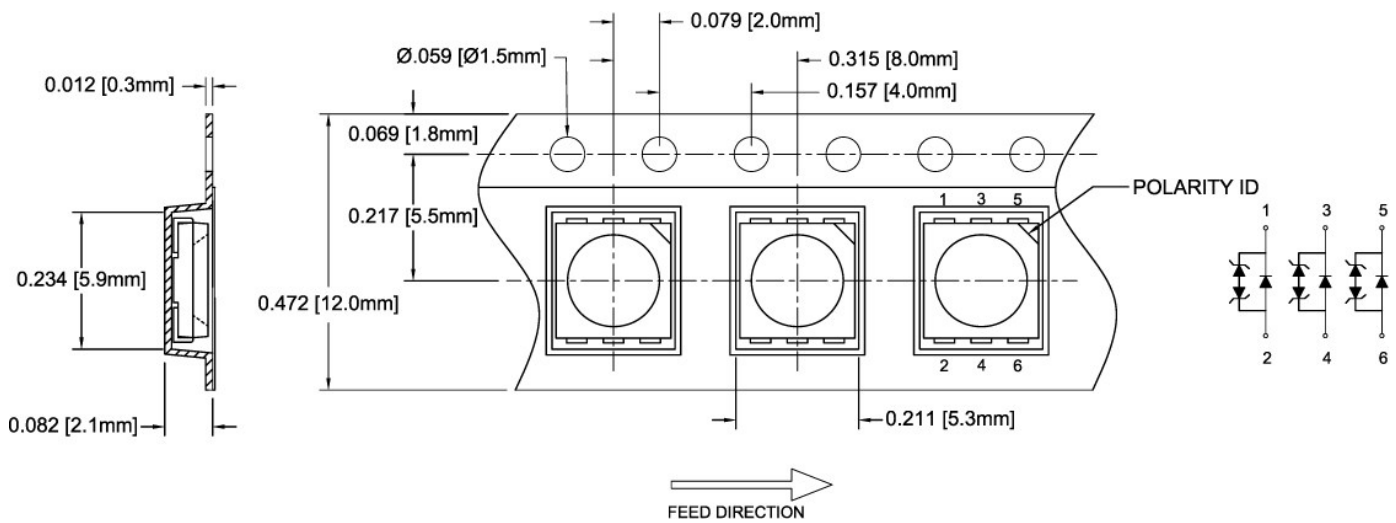


Recommended Soldering Conditions



Tape and Reel Dimensions

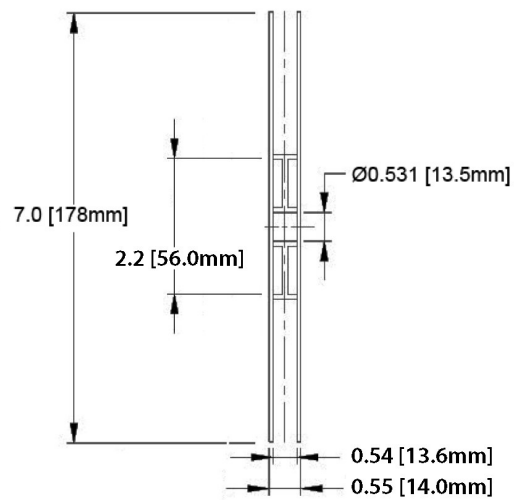
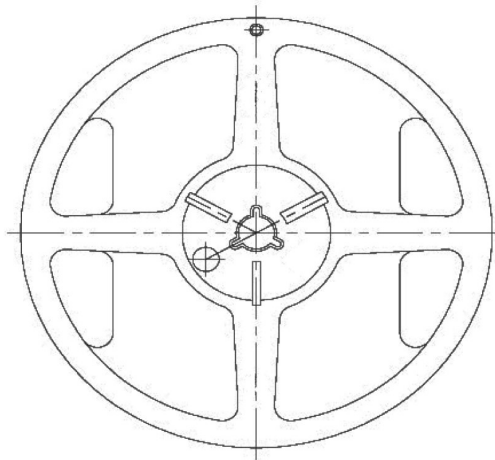
Note: 1000 pcs/Reel



Outline Drawings Notes:
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 2. Standard tolerance: $\pm 0.010^{\circ}$ unless otherwise noted.

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PLCC6 SMD Top View Package LED SMP6-UWDC, COOL WHITE

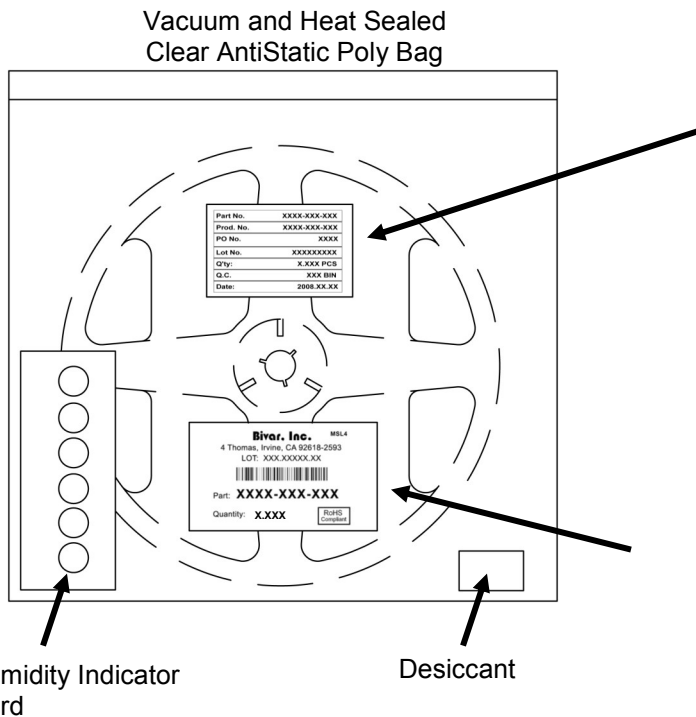


Outline Drawings Notes:

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.

Looking for pricing, stock, or lifecycle information?

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 [Bivar Inc. Information](#)

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