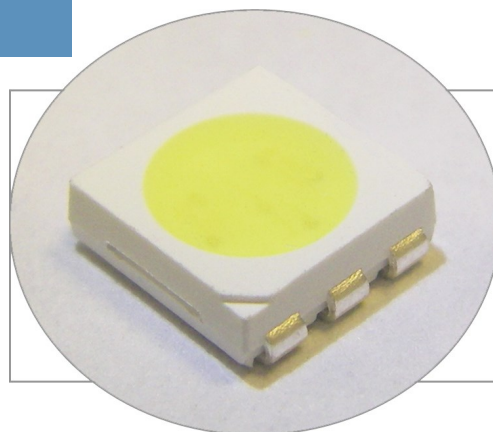


PLCC6 SMD Top View Package LED SMTL6-UWDC, COOL WHITE

BIVAR

SMTL6-UWDC

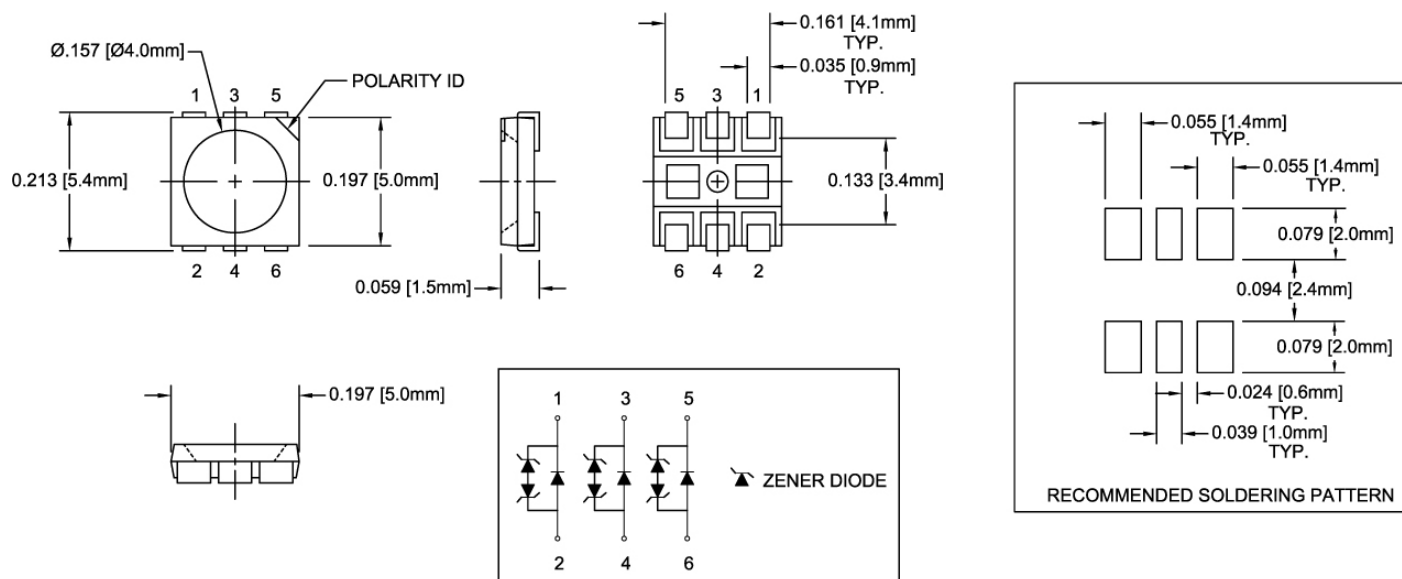
- ◆ Industry Standard PLCC6 Footprint
- ◆ Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency
- ◆ Equipped with Protective Zener Diode



Bivar SMTL6 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 SMTL6 LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Luminous Intensity Typ. mcd	Lens Color	Viewing Angle
SMTL6-UWDC	GaN	Cool White	7500	Diffused	120°

Outline Dimensions



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



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

PLCC6 SMD Top View Package LED SMTL6-UWDC, COOL WHITE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	100 mW
Continuous Forward Current (per die)	30 mA
Peak Forward Current ¹	100 mA
Electrostatic Discharge Classification (HBM)	8000 V
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/°C
Operating Temperature Range	-40 ~ +105°C
Storage Temperature Range	-40 ~ +105°C
Soldering Temperature	250°C

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec.

2. Solder time less than 5 seconds at temperature extreme.

Handling: Reflow soldering must not be performed more than twice. Hand soldering must not be performed more than once.

Sensitive to static electricity or surge voltage. Proper handling required to avoid ESD damage and impair LED reliability

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	Chromaticity Coordinates (XY) ² / CCT (Kelvin)	Luminous Intensity (mcd) ³		Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	TYP	MAX	TYP	MIN	MAX	TYP
Cool White	2.8	3.2	3.5	60	10	X=0.30 , Y=0.29 8000K	6000	9000	120

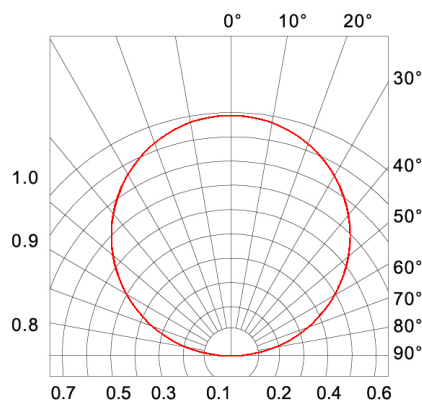
Notes: 1. Tolerance of Forward Voltage : ±0.05V.

2. Tolerance of Chromaticity Coordinates : ±0.05.

3. Tolerance of Luminous Intensity : ±15%.

Directivity Radiation

T_A = 25°C unless otherwise noted



Radiation Diagram

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PLCC6 SMD Top View Package LED SMTL6-UWDC, COOL WHITE



Typical Electrical / Optical Characteristics Curves

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

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

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

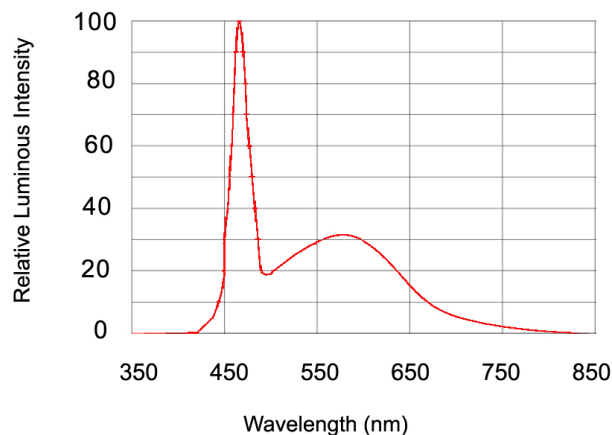


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current $I_F = f(V_F)$

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

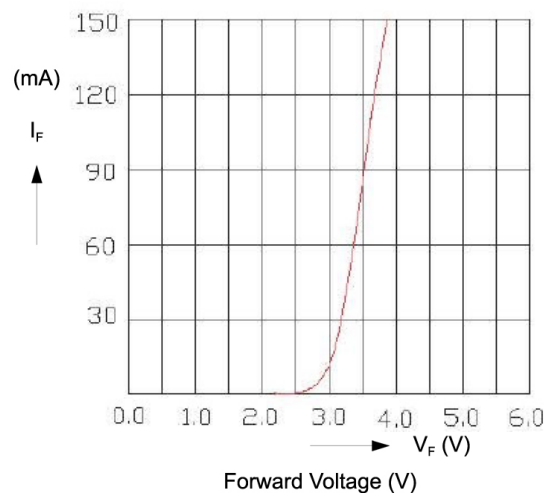
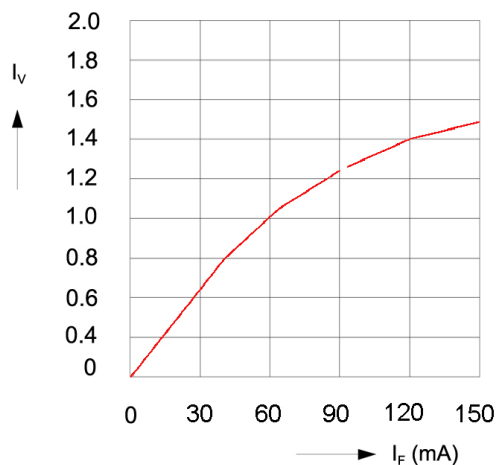


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity $I_V/I_V(60\text{ mA}) = f(I_F)$

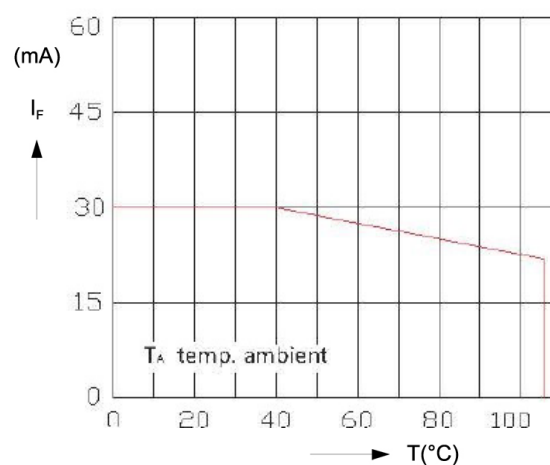
$T_A = 25^\circ\text{C}$



Forward Current I_F (mA)

Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current



Ambient Temperature T_A ($^\circ\text{C}$)

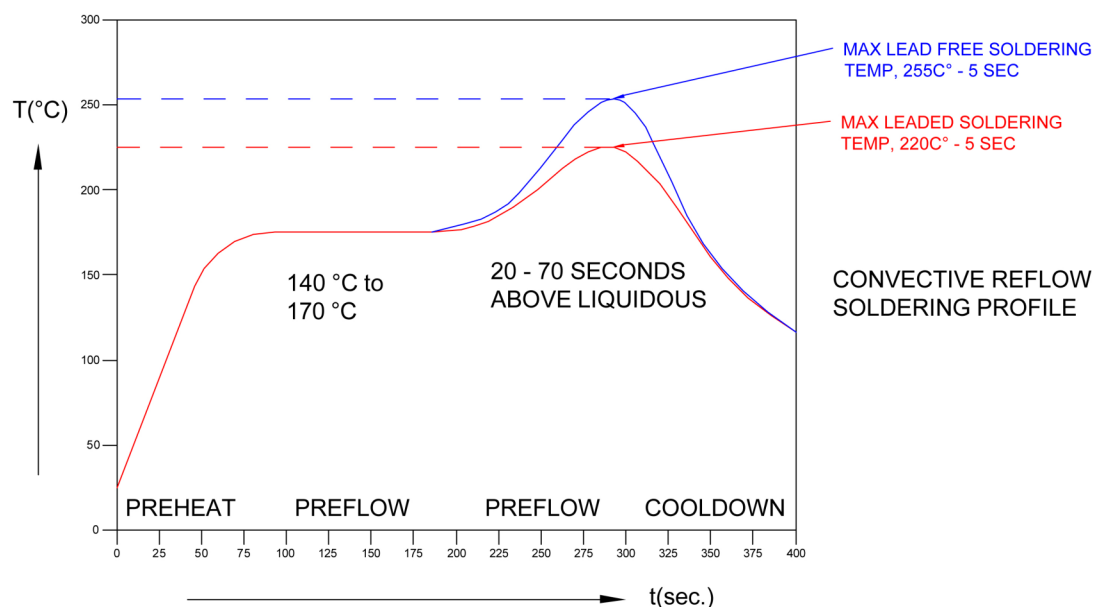
Fig.4 Forward Current vs. Ambient Temperature

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PLCC6 SMD Top View Package LED SMTL6-UWDC, COOL WHITE

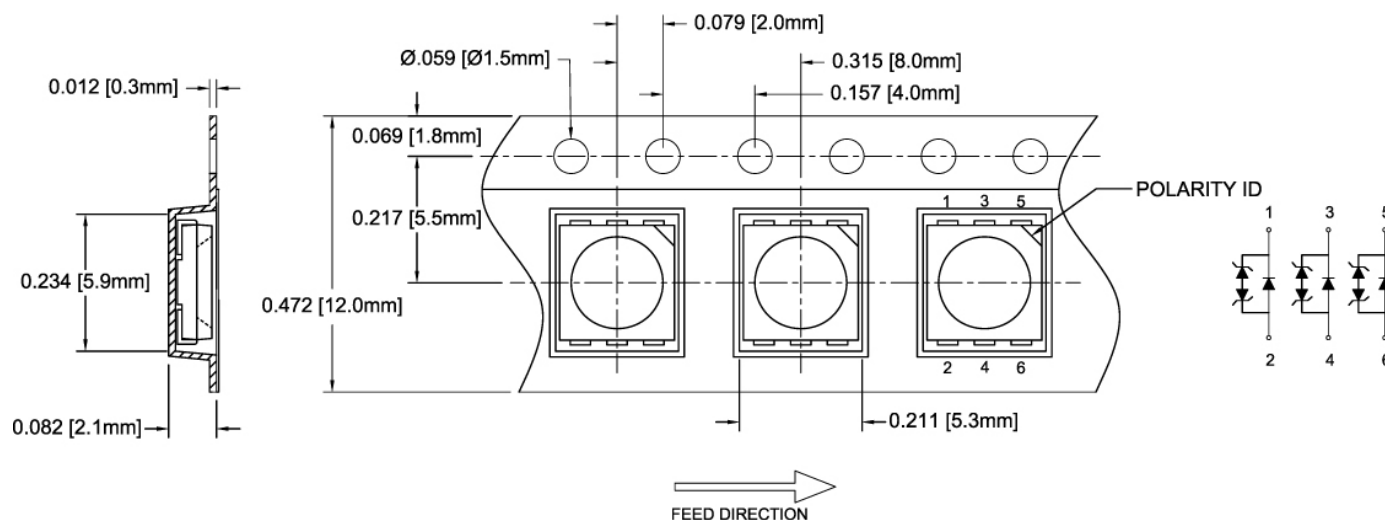


Recommended Soldering Conditions



Tape and Reel Dimensions

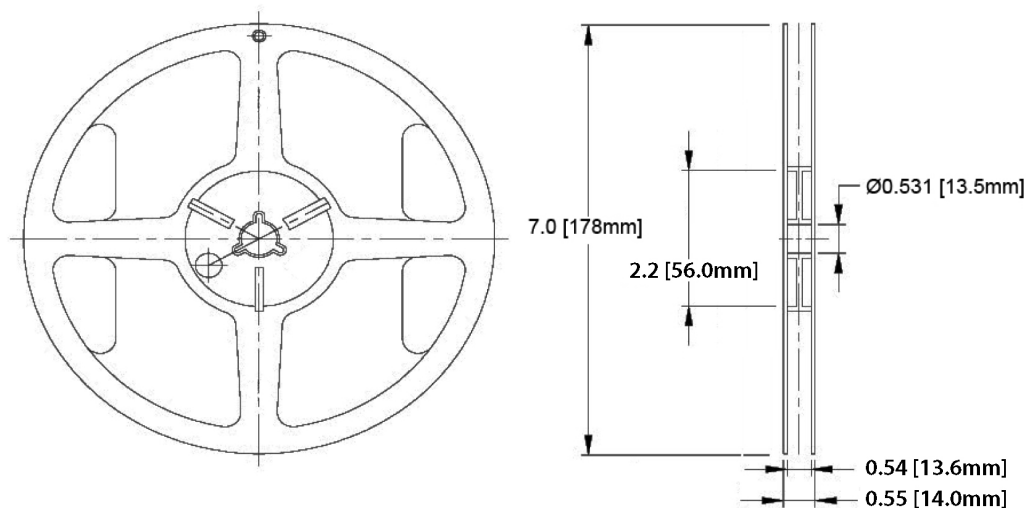
Note: 1000 pcs/Reel



Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance: $\pm 0.010^{\circ}$ unless otherwise noted.

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PLCC6 SMD Top View Package LED SMTL6-UWDC, COOL WHITE



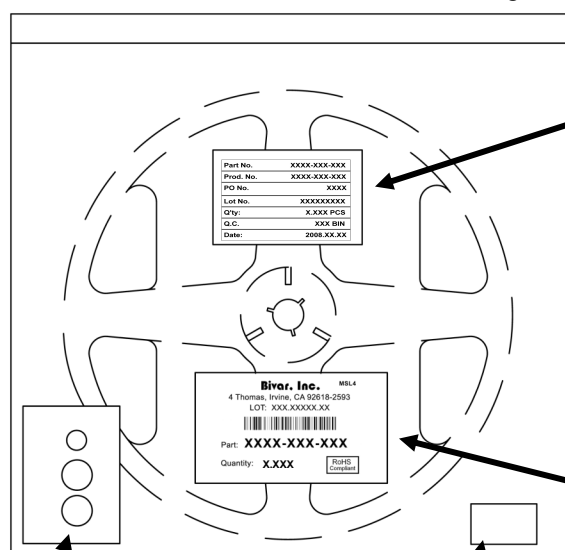
Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX \pm 0.010"
X.X \pm 0.1"

Packaging and Labeling Plan

Note: 1 Reel / Bag

Sealed ESD and Moisture Barrier Bag



Humidity Indicator Card

Desiccant

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 Standard Packaging Label

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