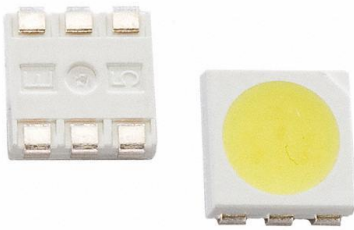


# SMTL6-UWDW Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



SMTL6-UWDW

<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	SMTL6-UWDW-DG
Manufacturer	<a href="#">Bivar Inc.</a>
Manufacturer Product Number	SMTL6-UWDW
Description	LED WARM WHITE DIFF 6PLCC SMD
Detailed Description	White, Warm 4500K LED Indication - Discrete 3V 6-SMD, J-Lead



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

SMTL6-UWDW

Series:

-

Color:

White, Warm

Lens Color:

Yellow

Millicandela Rating:

4000mcd

Lens Size:

4.00mm Dia

Current - Test:

60mA

Mounting Type:

Surface Mount

Wavelength - Peak:

-

Package / Case:

6-SMD, J-Lead

Size / Dimension:

5.40mm L x 5.00mm W

Base Product Number:

SMTL6

Manufacturer:

Bivar Inc.

Product Status:

Active

Configuration:

Standard

Lens Transparency:

Diffused

Lens Style:

Round with Flat Top

Voltage - Forward (Vf) (Typ):

3V

Viewing Angle:

140°

Wavelength - Dominant:

4500K

Features:

-

Supplier Device Package:

6-PLCC

Height (Max):

1.60mm

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.41.0000

Moisture Sensitivity Level (MSL):

4 (72 Hours)

ECCN:

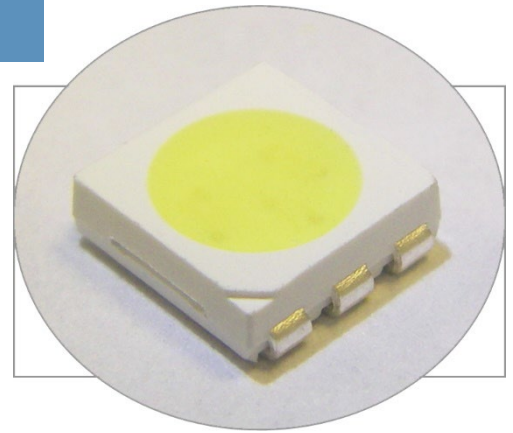
EAR99



# PLCC6 SMD Top View Package LED SMTL6-UWDW, WARM WHITE

## SMTL6-UWDW

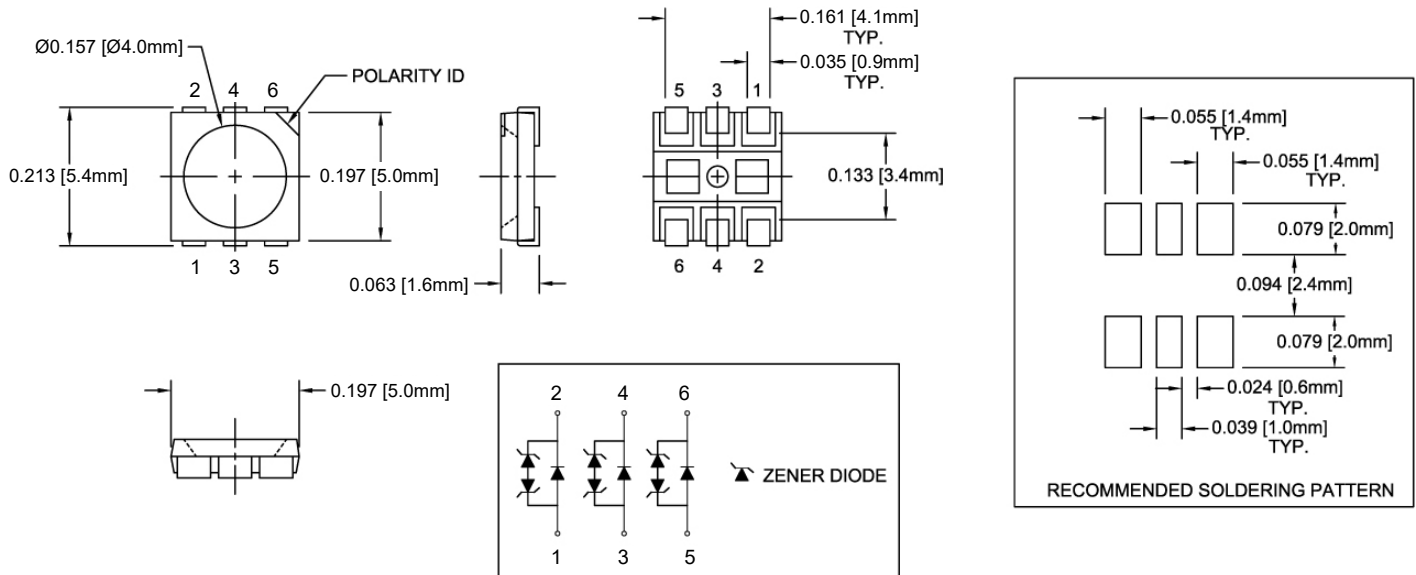
- ◆ Industry Standard PLCC6 Footprint
- ◆ Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency
- ◆ Equipped with Protective Zener Diode



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-UWDW	InGaN	Warm White	8000	Diffused	120°

## 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 SMTL6-UWDW, WARM WHITE

## Absolute Maximum Ratings

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

Power Dissipation	300 mW
Continuous Forward Current	90 mA
Peak Forward Current <sup>1</sup>	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
Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) <sup>2</sup>	250°C

Notes: 1. 10% Duty Cycle, Pulse Width  $\leq 0.1$  msec. 2. Solder time less than 4 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 / Optical 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 ( $\mu\text{A}$ )	Chromaticity Coordinates (XY) <sup>2</sup> / CCT (Kelvin)	Luminous Intensity $I_v$ (mcd) <sup>3</sup>			Viewing Angle $2\theta_{1/2}$ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	TYP	MIN	TYP	MAX	TYP
Warm White	2.8	3.2	3.5	/	60	/	10	X=0.45, Y=0.41 2840K	6000	8000	10000	120

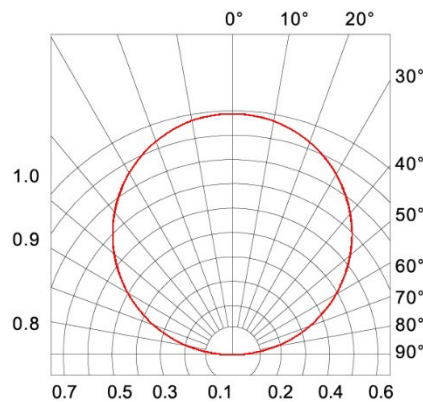
Notes: 1. Tolerance of forward voltage:  $\pm 0.05\text{V}$ .

2. Tolerance of chromaticity coordinates:  $\pm 0.05$ .

3. Tolerance of luminous intensity:  $\pm 15\%$

## Directivity Radiation

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



Radiation Diagram

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



# PLCC6 SMD Top View Package LED SMTL6-UWDW, WARM WHITE

## Typical Electrical / Optical Characteristics Curves

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

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

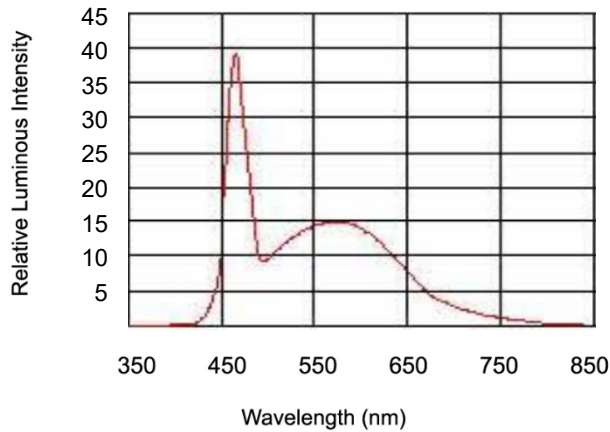


Fig.1 Relative Luminous Intensity vs. Wavelength

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

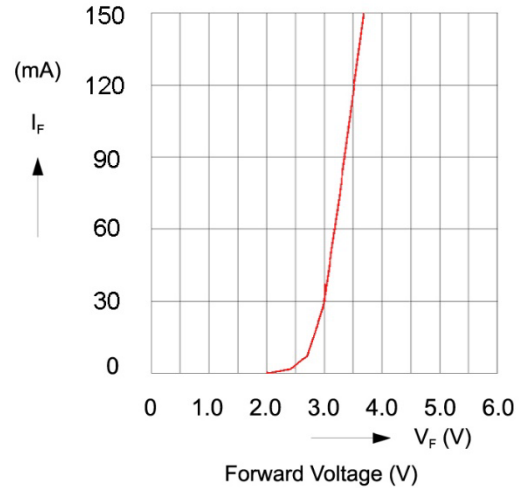


Fig.2 Forward Current vs. Forward Voltage

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

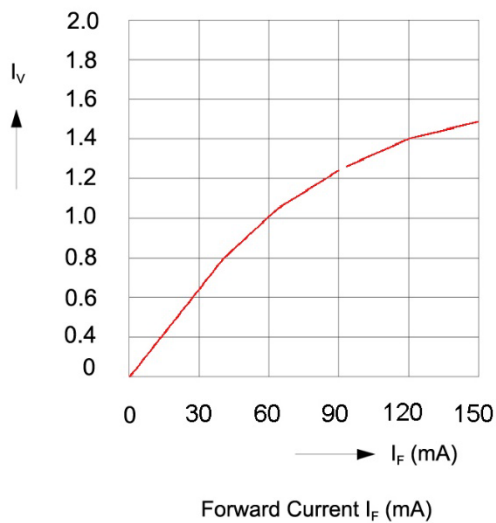


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

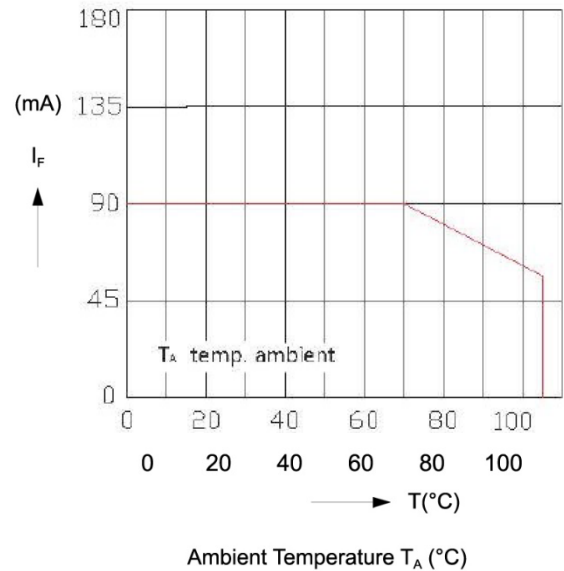
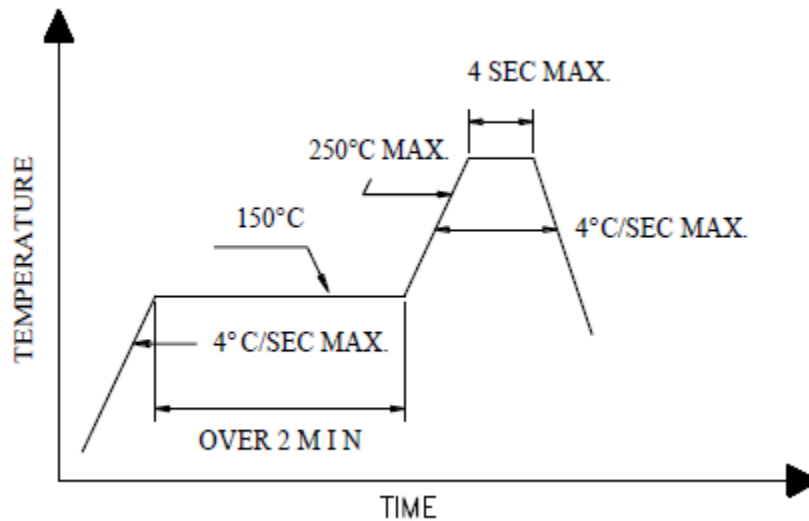


Fig.4 Forward Current vs. Ambient Temperature

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## PLCC6 SMD Top View Package LED SMTL6-UWDW, WARM WHITE

### Recommended Soldering Conditions



### Soldering Iron

1. Temperature at tip of iron: 360 °C Max. (20W Max.)
2. Soldering time: 3 sec  $\pm$  1, one time only.



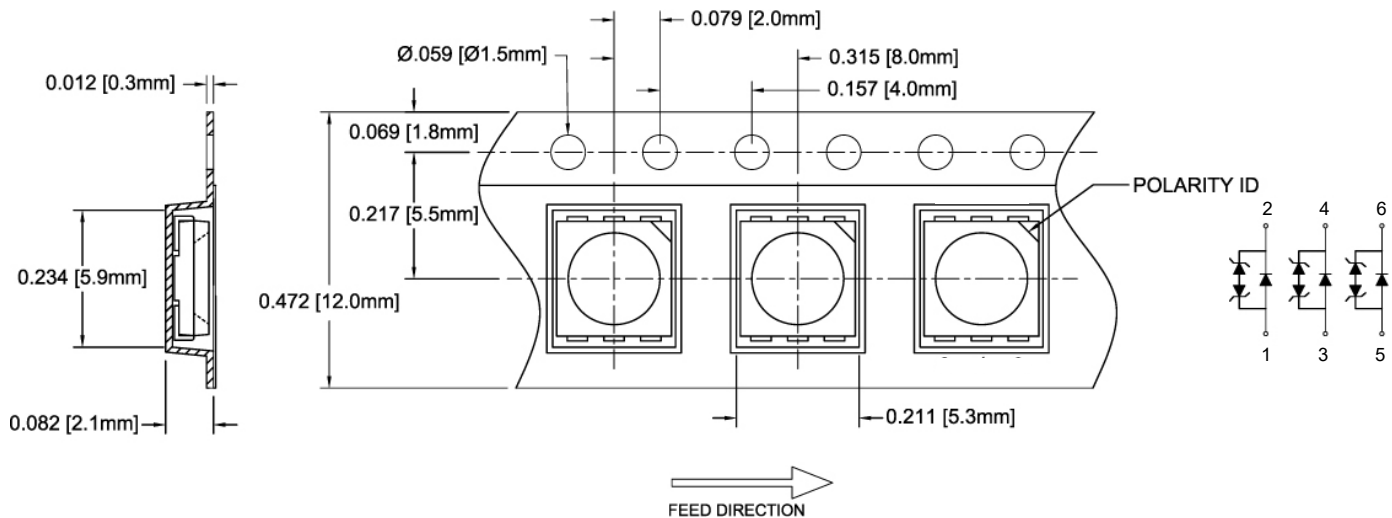
## PLCC6 SMD Top View Package LED SMTL6-UWDW, WARM WHITE

### Storage

1. The storage temperature and R.H. are 5°C ~30°C, R.H. 60% Max.
2. Once the package is opened, the products should be used within 24 hrs. Otherwise, they should be kept in a dampproof box with a desiccating agent.
3. It is recommended to bake at 70°C ± 3°C for 48 hrs before soldering them after the package is unsealed for 24 hrs.

### Tape and Reel Dimensions

Note: 1000 pcs/Reel



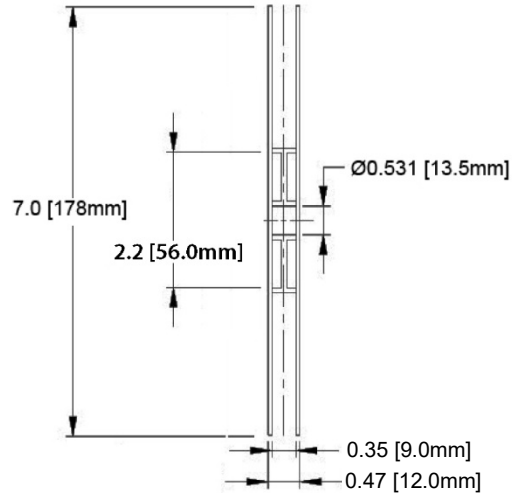
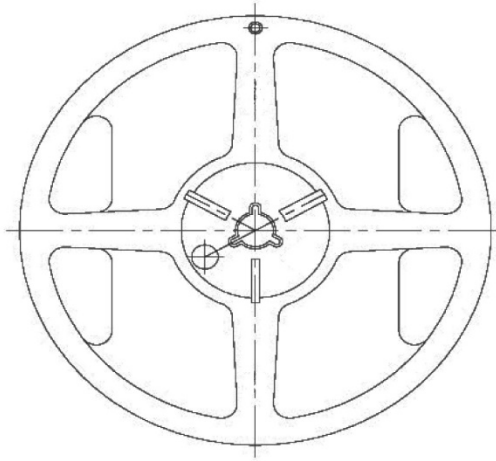
#### Outline Drawings Notes:

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 SMTL6-UWDW, WARM WHITE



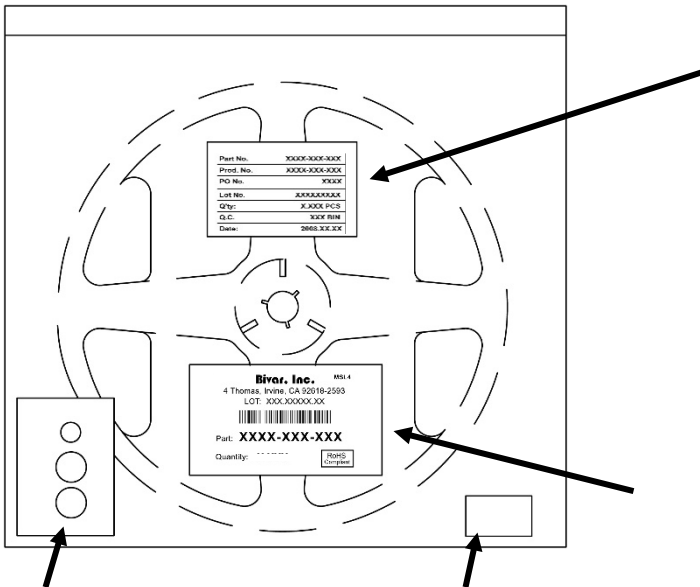
**Outline Drawings Notes:**

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**

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, Inc.** MSL4

4 Thomas, Irvine, CA 92618-2593  
 LOT: XXX.XXXXXX.XX



Part: **XXXX-XXX-XXX**

Quantity: **X.XXX**

RoHS  
Compliant

Bivar Standard Packaging Label

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# PLCC6 SMD Top View Package LED SMTL6-UWDW, WARM WHITE

## REVISION HISTORY

Rev	Description	Date	Approved
A	Engineering Release	02/26/2016	Jeffrey Chiang
B	Material Change, ECO-1132	05/17/2022	Angelito Valdez
C	Specification Change	07/30/2024	Ricardo Pereyra

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