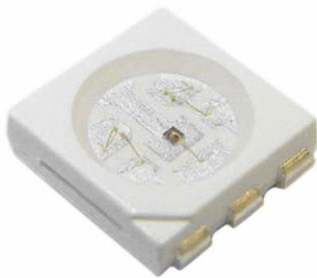


# SMP6-BWC Datasheet

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



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

DiGi Electronics Part Number	SMP6-BWC-DG
Manufacturer	<a href="#">Bivar Inc.</a>
Manufacturer Product Number	SMP6-BWC
Description	LED BLUE CLEAR 6PLCC SMD
Detailed Description	Blue 471nm LED Indication - Discrete 3.4V 6-SMD, J- -Lead

This model SMP6-BWC is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

 [Request a Quote](#)

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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:

SMP6-BWC

Series:

-

Color:

Blue

Lens Color:

Colorless

Millicandela Rating:

1500mcd

Lens Size:

4.00mm Dia

Current - Test:

60mA

Mounting Type:

Surface Mount

Wavelength - Peak:

-

Package / Case:

6-SMD, J-Lead

Size / Dimension:

5.00mm L x 5.00mm W

Manufacturer:

Bivar Inc.

Product Status:

Obsolete

Configuration:

Standard

Lens Transparency:

Clear

Lens Style:

Round with Flat Top

Voltage - Forward (Vf) (Typ):

3.4V

Viewing Angle:

140°

Wavelength - Dominant:

471nm

Features:

-

Supplier Device Package:

6-PLCC

Height (Max):

1.50mm

## Environmental & Export classification

Moisture Sensitivity Level (MSL):

4 (72 Hours)

HTSUS:

8541.41.0000

ECCN:

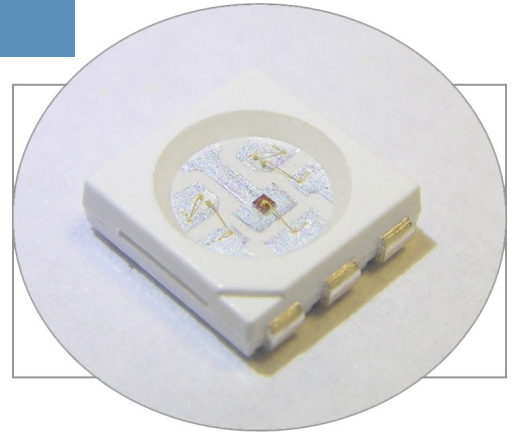
EAR99

# PLCC6 SMD Top View Package LED SMP6-BWC, BLUE

# BIVAR

## SMP6-BWC

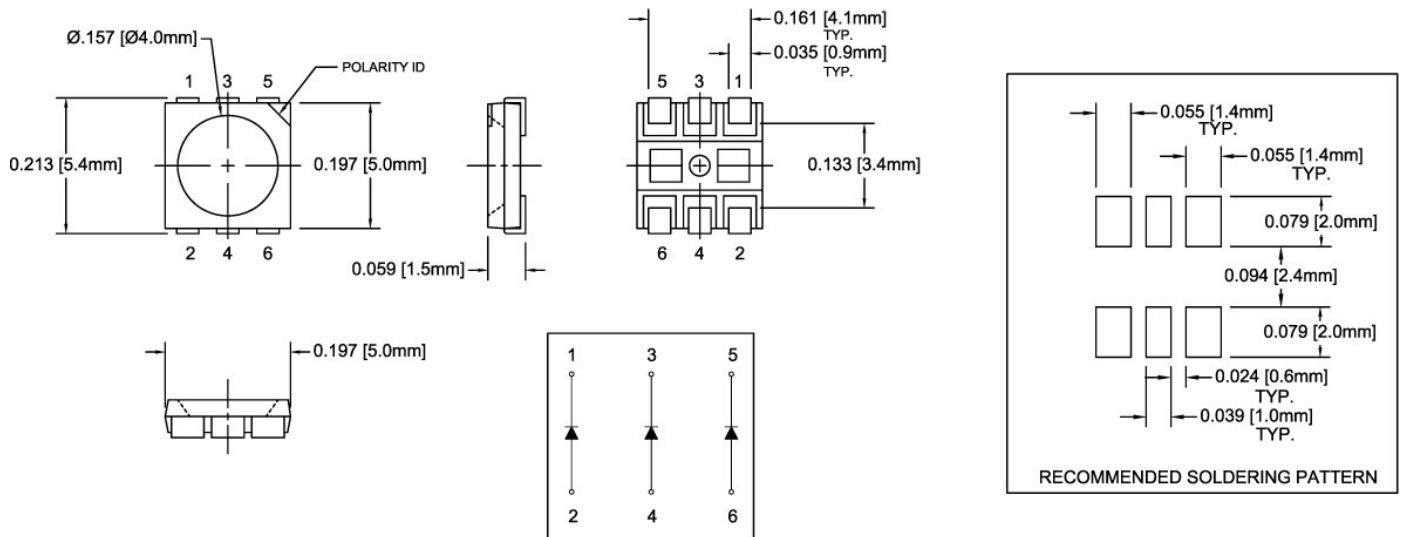
- ◆ Industry Standard PLCC6 Footprint
- ◆ Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency



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-BWC	InGaN	Blue	1500	Water Clear	140°

## Outline Dimensions



### Outline Drawings Notes:

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



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

# PLCC6 SMD Top View Package LED SMP6-BWC, BLUE

## 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

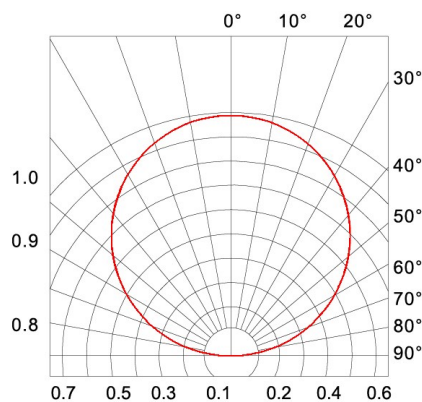
$T_A = 25^\circ\text{C}$  &  $I_F = 60$  mA unless otherwise noted

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
Blue	3.0	3.4	3.8	60	10	465	477	1000	2000	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-BWC, BLUE



## Typical Electrical / Optical Characteristics Curves

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

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

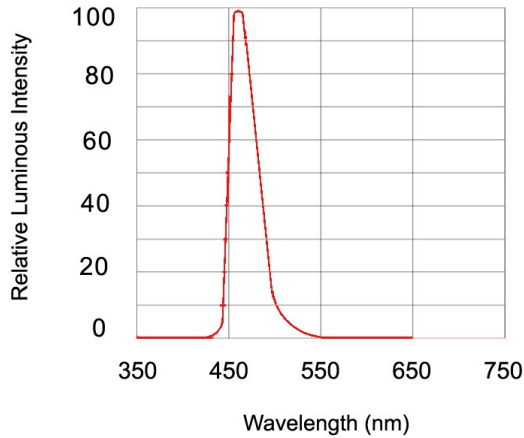


Fig.1 Relative Luminous Intensity vs. Wavelength

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

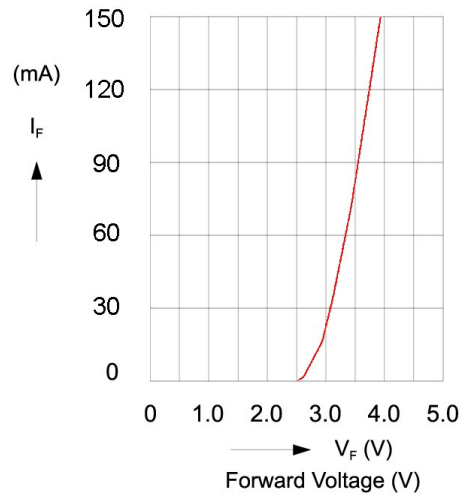


Fig.2 Forward Current vs. Forward Voltage

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

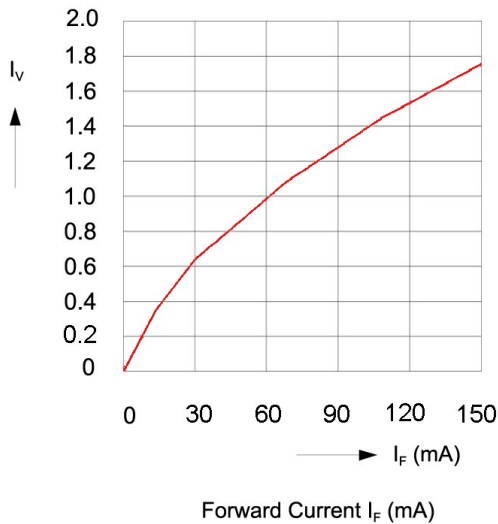


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

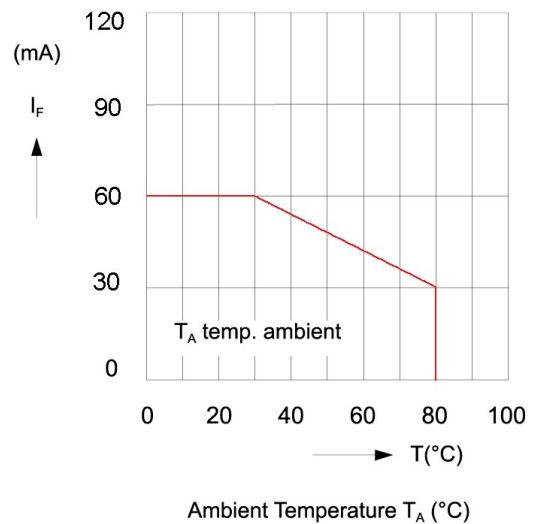


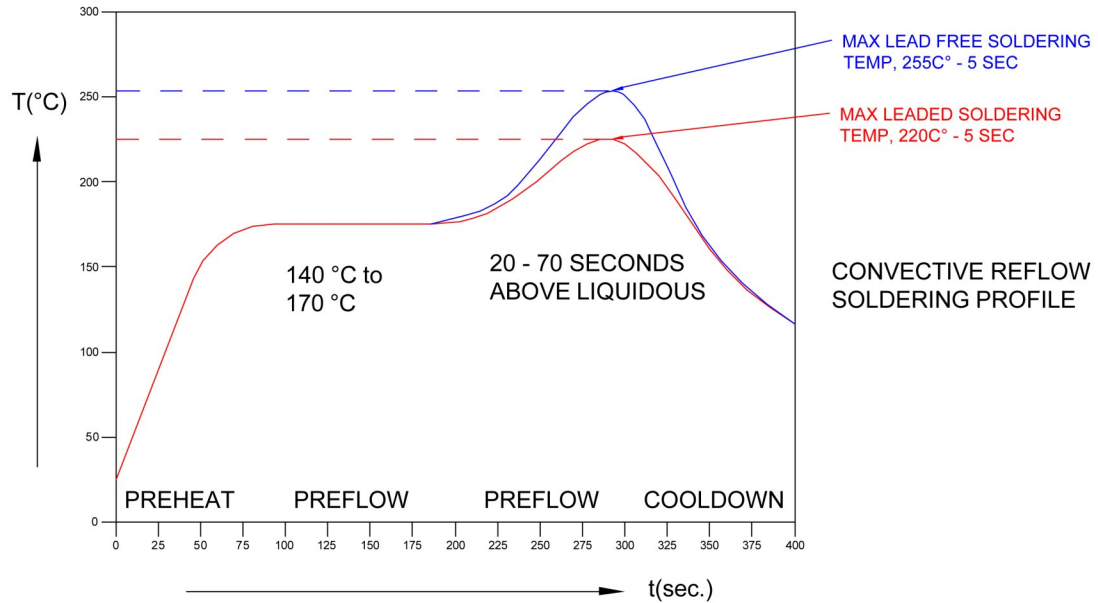
Fig.4 Forward Current vs. Ambient Temperature

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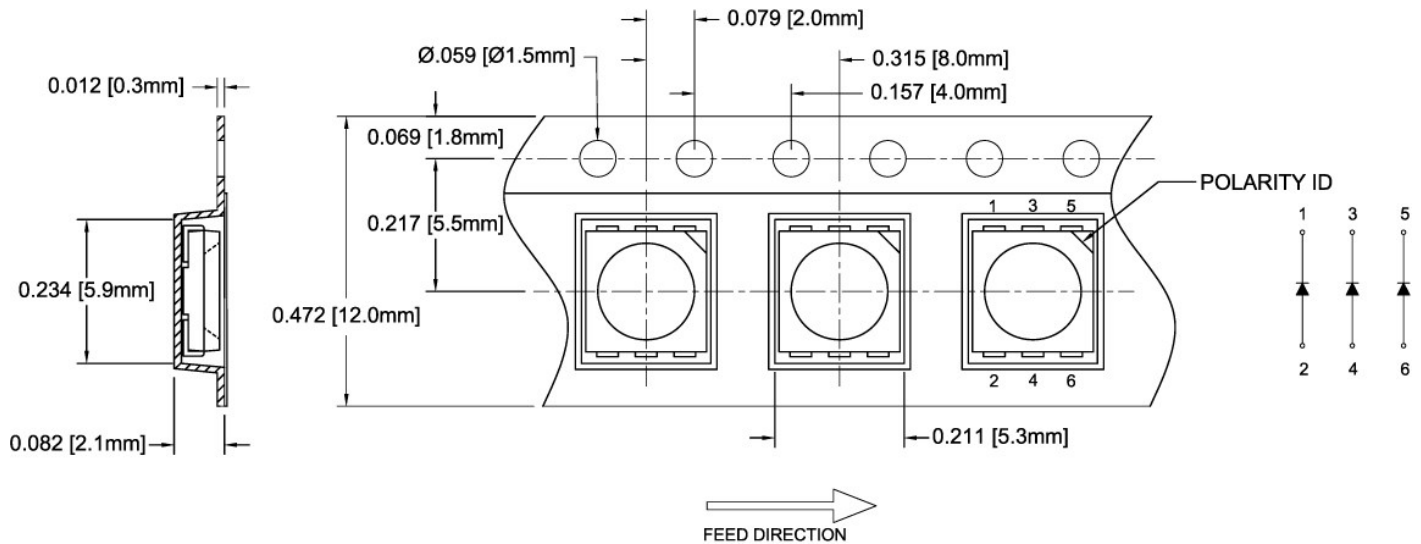
# PLCC6 SMD Top View Package LED SMP6-BWC, BLUE

## Recommended Soldering Conditions



## Tape and Reel Dimensions

Note: 1000 pcs/Reel

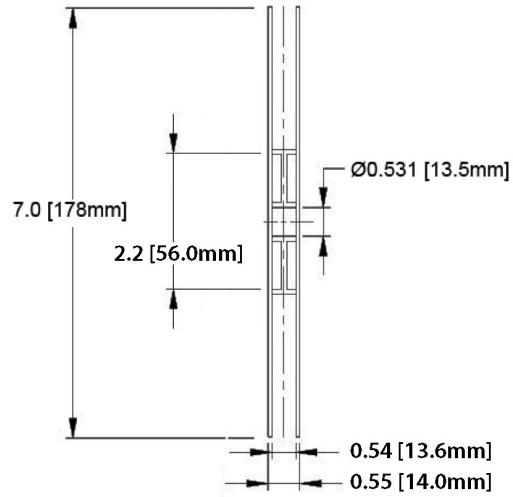
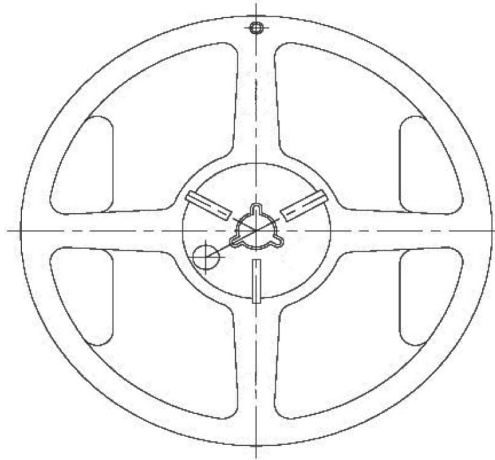


**Outline Drawings Notes:**  
 1. All dimensions are in inches [millimeters].  
 2. Standard tolerance:  $\pm 0.010''$  unless otherwise noted.

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# PLCC6 SMD Top View Package LED SMP6-BWC, BLUE



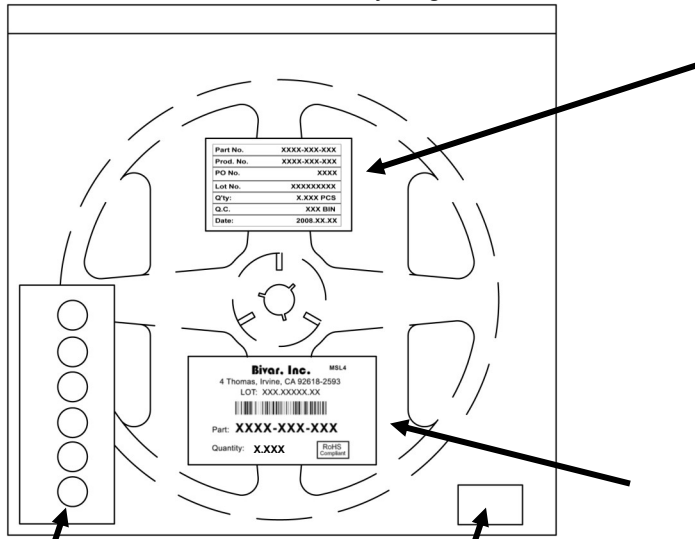
**Outline Drawings Notes:**

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



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

Humidity Indicator  
Card

Desiccant  
Card

**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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