PLCC6 SMD Top View Package LED SMTL6-BWC, BLUE

SMTL6-BWC

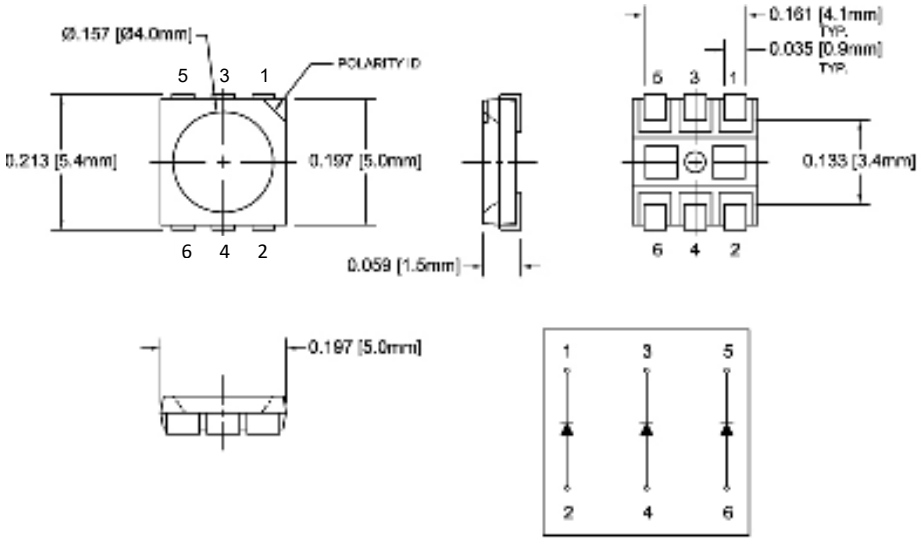
- **Industry Standard PLCC6 Package**
- **Low Profile Package**
- **High Luminous Intensity**
- **Wide Viewing Angle**
- **High Power Efficiency**

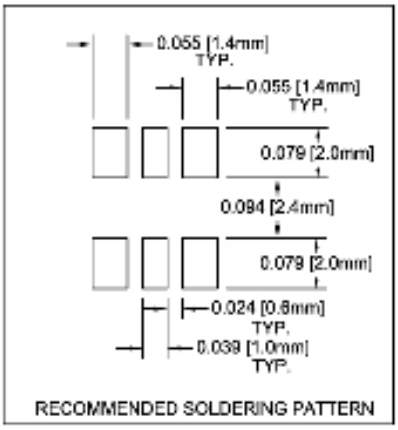


Bivar SMTL6 LED is offered in an industry standard PLCC6 package with high luminous intensity and wide viewing angles. The miniature package is ideal for small scale applications such as illumination, general indication, and backlighting. Low power consumption and excellent long life reliability are 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	Lumen Typ. mcd	Lens Color	Viewing Angle
SMTL6-BWC	InGaN	Blue	1200	Water Clear	120°

Outline Dimensions





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

ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

RoHS Compliant

Moisture Sensitivity Level 4

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

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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)	2000 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) [2]	250°C

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

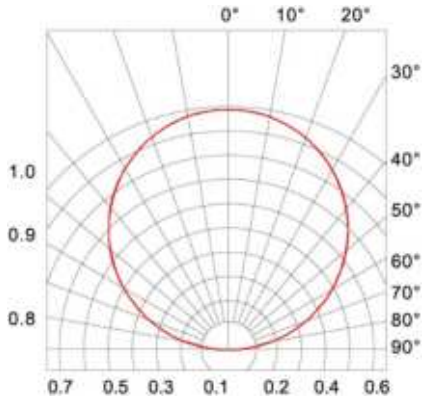
T_A = 25°C & I_F = 60 mA unless otherwise noted

Part Number	Forward Voltage (V)[1]			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm)[2]			Luminous Intensity Iv (mcd)[3]			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SMTL6-BWC	2.8	3.1	3.4	/	60	/	10	464	469	473	1000	1200	1400	120

Notes: 1. Tolerance of forward voltage: ±0.05V. 2. Tolerance of dominant wavelength: -1nm of MIN and +1nm of MAX.
3. Tolerance of luminous intensity: ±15%

Directivity Radiation

T_A = 25°C unless otherwise noted



Radiation Diagram

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

Typical Electrical / Optical Characteristics

T_A = 25°C unless otherwise noted

Relative Spectrum Emission I_{rel} = f (l), T_A = 25°C , I_F = 60 mA
V(l) = Standard eye response curve

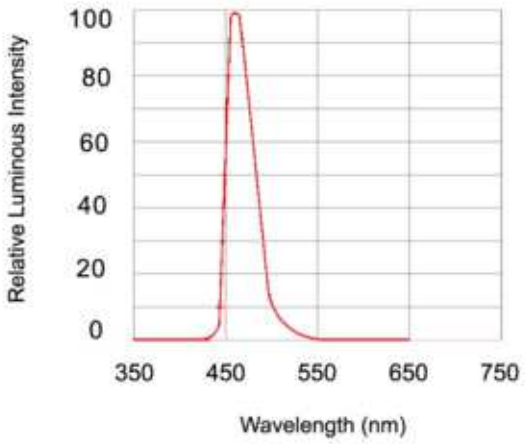


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current I_F = f (V_F)
T_A = 25°C

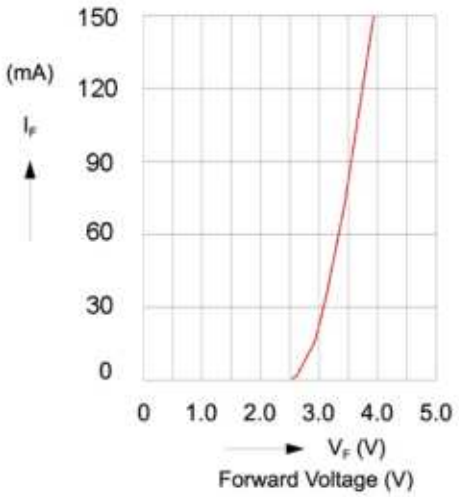


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity I_V/I_V (60 mA) = f (I_F)
T_A = 25°C

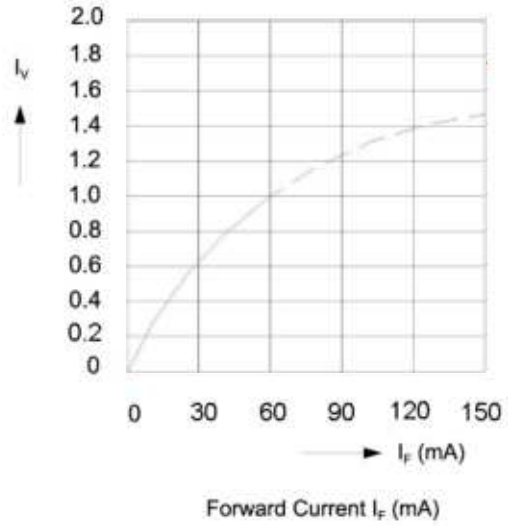


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

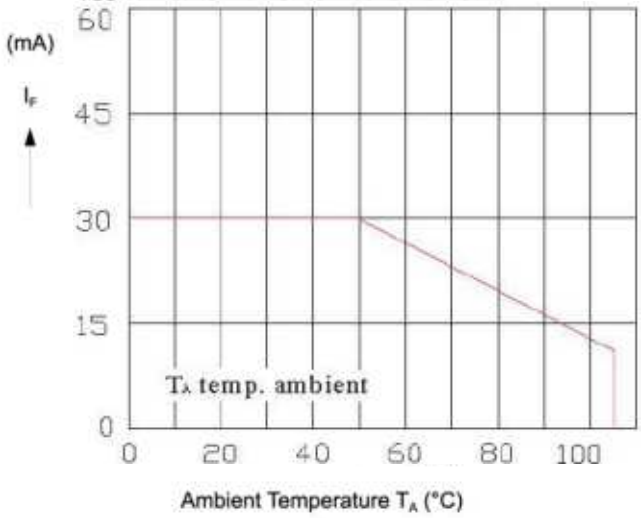
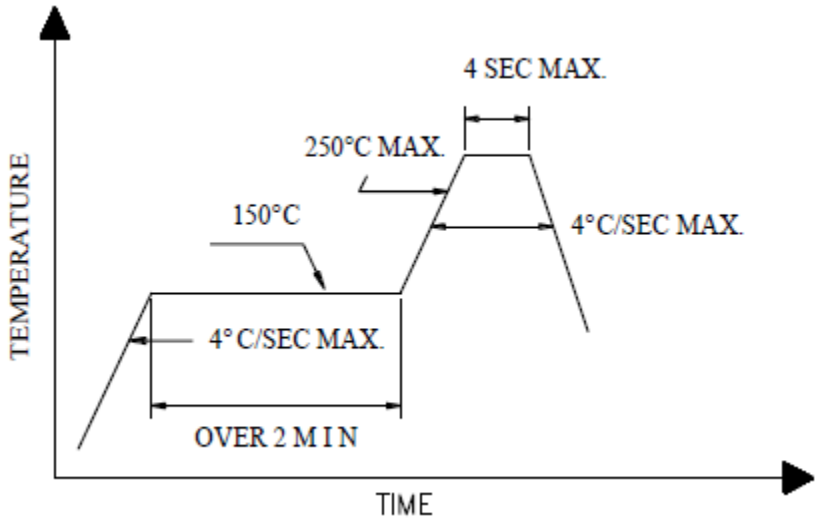


Fig.4 Forward Current vs. Ambient Temperature

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Recommended Soldering Conditions



Soldering Iron

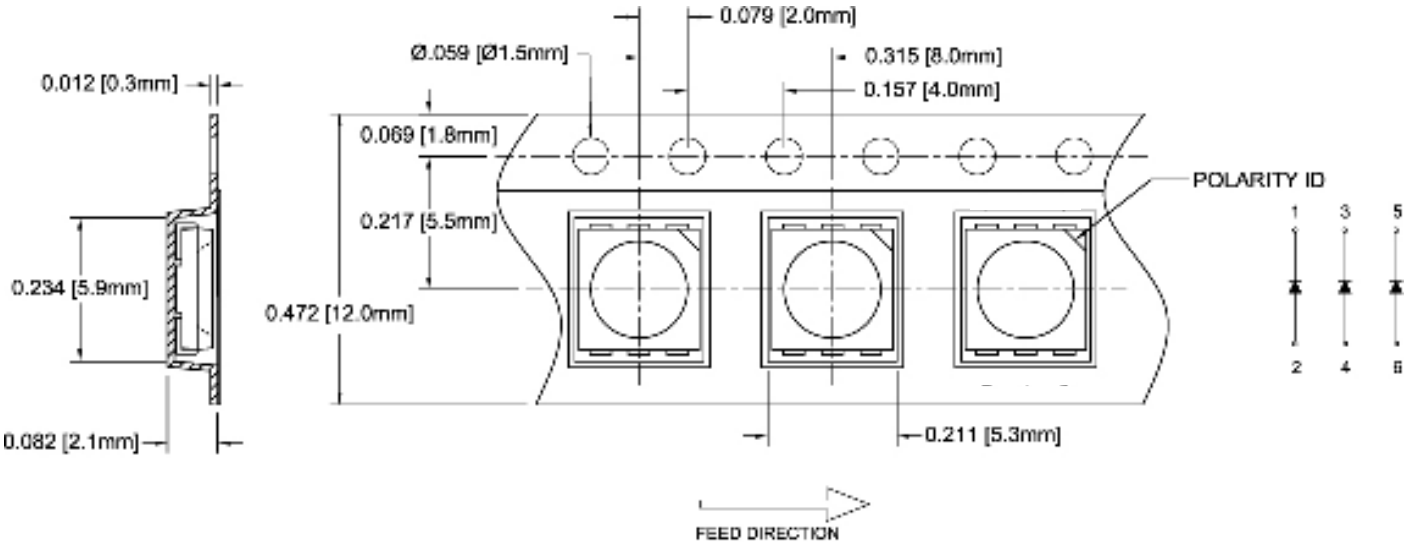
1. Temperature at tip of iron: 360℃ Max. (20W Max.)
2. Soldering time: 3 sec ± 1, one time only.

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Storage

1. The storage temperature and R.H. are 5℃ ~30℃, 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℃ ± 3℃ for 48 hrs before soldering them after the package is unsealed for 24 hrs.

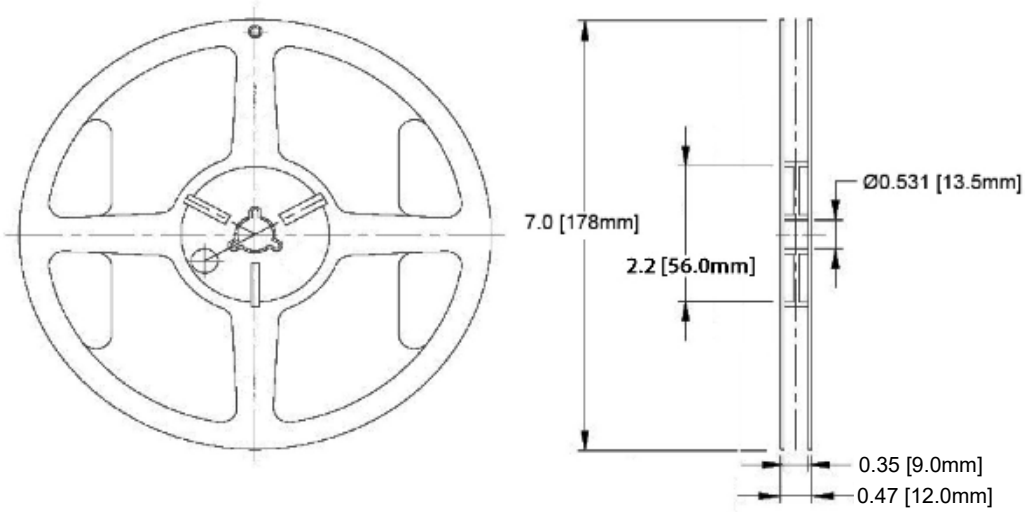
Tape and Reel Dimensions
Note: 1000 pcs/Reel



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

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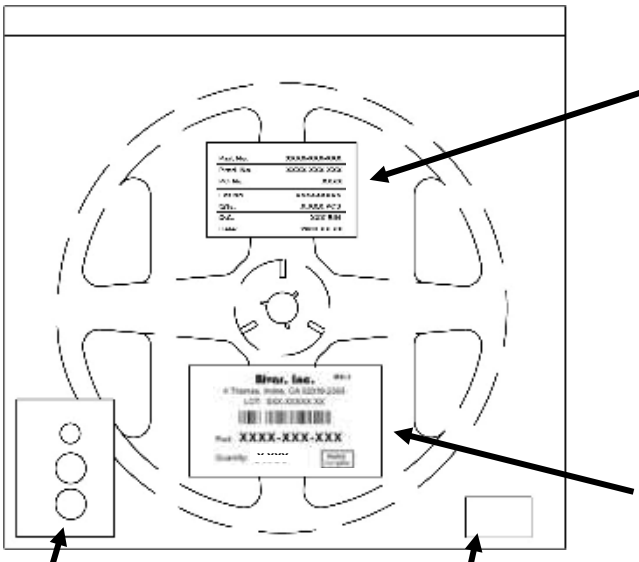


Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX ± 0.010" X.X ± 0.1"

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.	XXXXXXXXX
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