



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# PLCC4 SMD Top View Package LED SMTL4-SRYB, RED/YELLOW/BLUE

# BIVAR



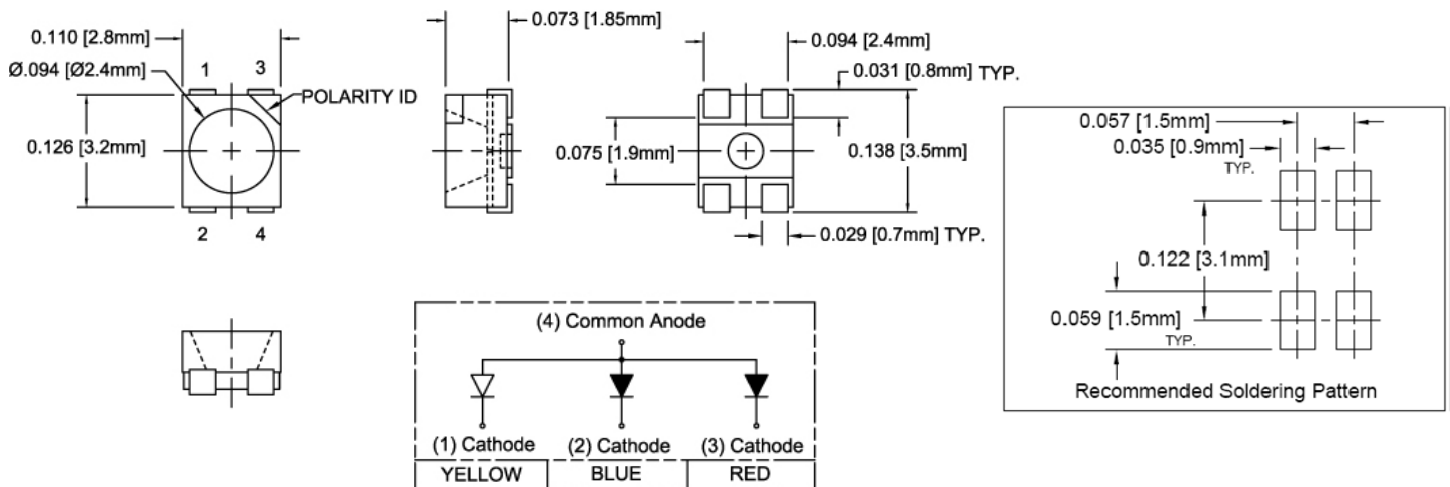
## SMTL4-SRYB

- ◆ Industry Standard PLCC4 Footprint
- ◆ 3 Super Bright Chips in One Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency

Bivar SMTL4 Super Bright Tri-Color LED combines three chips in a single package and is offered in an industry standard PLCC4 footprint. The SMTL4 LED has a water clear lens for high luminous intensity and wide viewing angle making them ideal for outdoor illumination applications where higher ambient lighting conditions exist. The flexible three chip design allows for a wide variety of lighting options where the chips can be individually driven or mixed to create different color combinations. The robust package is ideal for harsh working environments and can be clustered in LED arrays for high luminous applications. Low power consumption and excellent long life reliability are suitable for battery powered equipment. Bivar SMTL4 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
SMTL4-SRYB	AlGaInP	Red	180	Water Clear	120°
	AlGaInP	Yellow	180		
	InGaN	Blue	285		

## 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.

# PLCC4 SMD Top View Package LED SMTL4-SRYB, RED/YELLOW/BLUE



## Absolute Maximum Ratings

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

Power Dissipation	Red, Yellow - 78 mW Blue - 100 mW
Continuous Forward Current	Red, Yellow - 30 mA Blue - 25mA
Peak Forward Current <sup>1</sup>	100 mA
Reverse Voltage	5 V
Electrostatic Discharge Classification (HBM)	2000 V
Derating Linear From 25°C	0.4 mA/°C
Operating Temperature Range	-40 ~ +85°C
Storage Temperature Range	-40 ~ +100°C
Soldering Temperature <sup>2</sup>	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

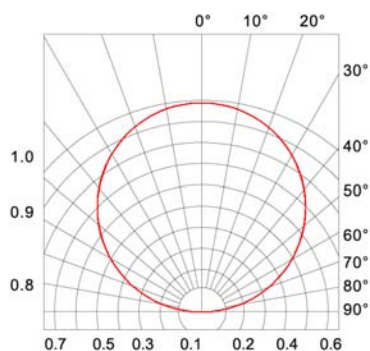
$T_A = 25^\circ\text{C}$  &  $I_F = 20$  mA unless otherwise noted

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)
	TYP	MAX	TYP	MAX	TYP	MIN	TYP	TYP
Red	1.9	2.4	20	10	631	115	180	120
Yellow	1.9	2.4	20	10	591	115	180	
Blue	3.2	3.5	20	10	470	115	285	

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

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

# PLCC4 SMD Top View Package LED SMTL4-SRYB, RED/YELLOW/BLEUE



## Typical Electrical / Optical Characteristics Curves

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

Relative Spectrum Emission  $I_{rel} = f(\lambda)$ ,  $T_A = 25^\circ\text{C}$ ,  $I_F = 20\text{ mA}$

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

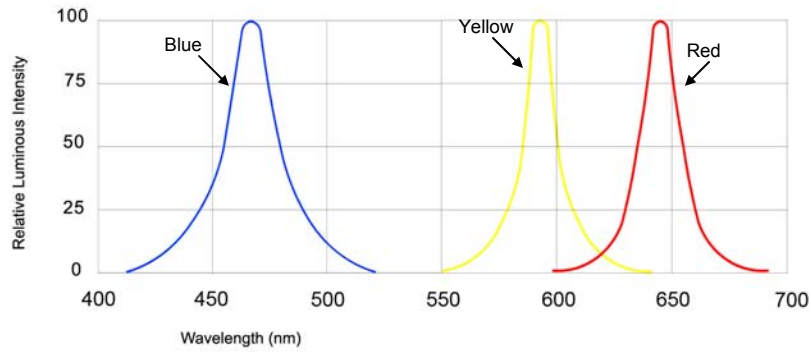


Fig.1 Relative Luminous Intensity vs. Wavelength

Relative Luminous Intensity  $I_V/I_V(20\text{ mA}) = f(I_F)$

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

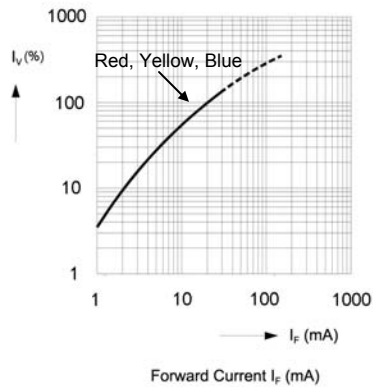


Fig.2 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

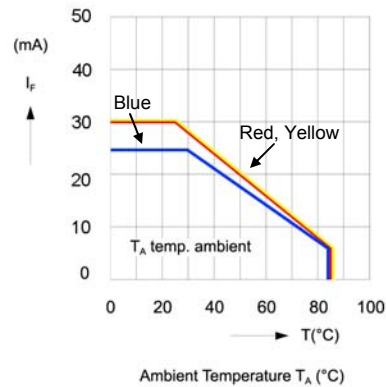


Fig.3 Forward Current vs. Ambient Temperature

Forward Current  $I_F = f(V_F)$

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

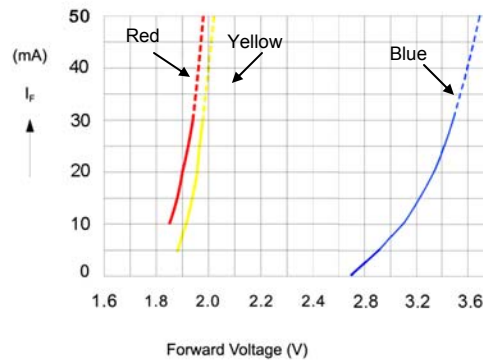


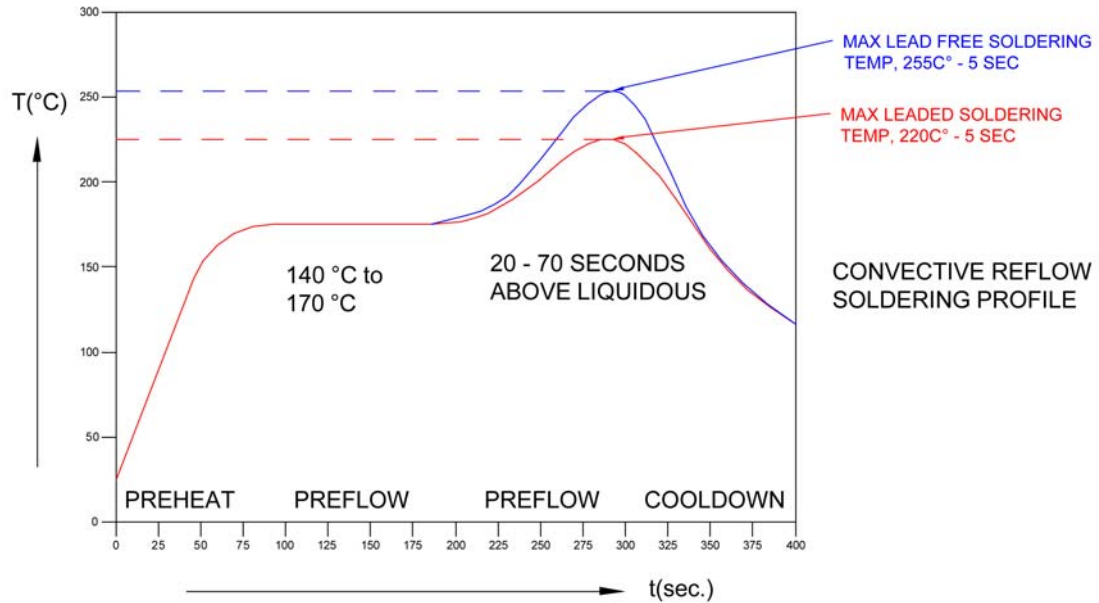
Fig.4 Forward Current vs. Forward Voltage

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

# PLCC4 SMD Top View Package LED SMTL4-SRYB, RED/YELLOW/BLUE

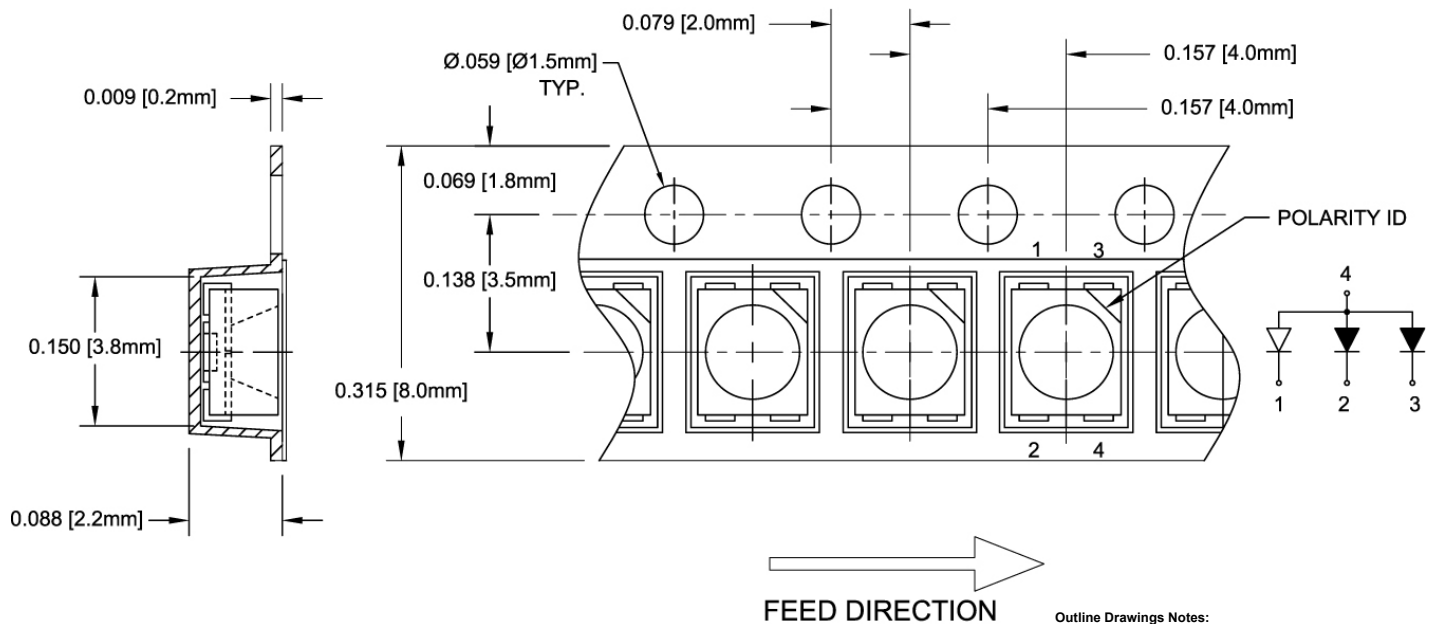


## Recommended Soldering Conditions



## Tape and Reel Dimensions

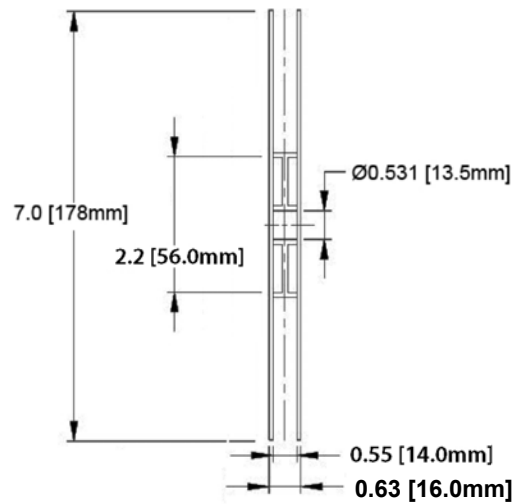
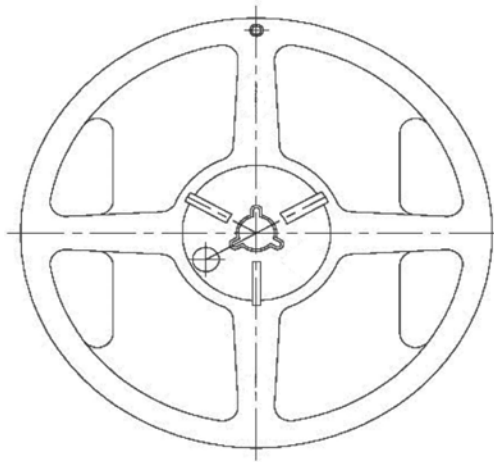
Note: 2000 pcs/Reel



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.

# PLCC4 SMD Top View Package LED SMTL4-SRYB, RED/YELLOW/BLUE



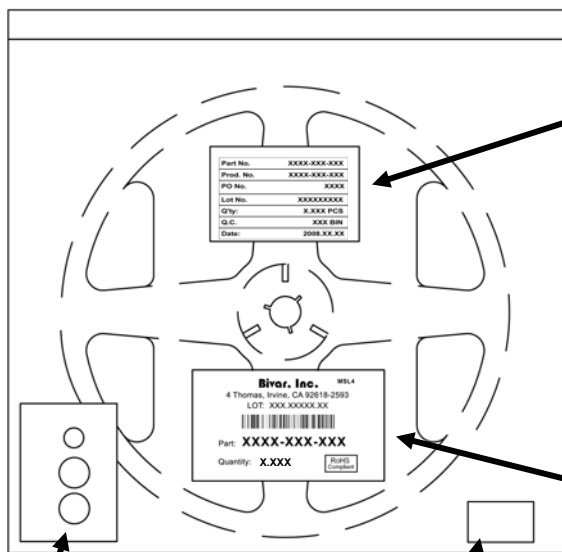
### Outline Drawings Notes:

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

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.