

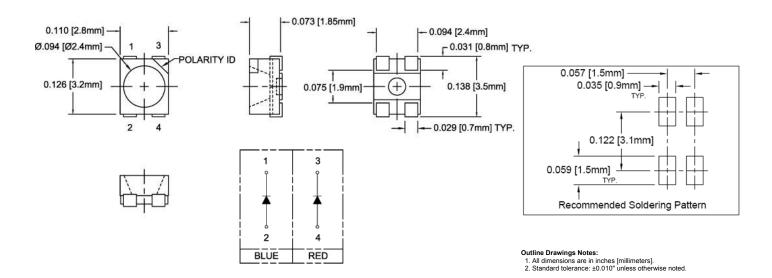
- Industry Standard PLCC4 Footprint
- ♦ 2 Chips in One Low Profile Package
- High Luminous Intensity
- Wide Viewing Angle
- High Power Efficiency



Bivar SMTL4 Bi-Color LED combines two 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 small scale applications such as illumination, general indication, and backlighting. 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-BC-RB	AlGaAs	Red	36	Water Clear	120°
	GaN	Blue	50	vvalei Cleai	

Outline Dimensions











Absolute Maximum Ratings

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

Power Dissipation	Red - 72 mW Blue - 100 mW	
Continuous Forward Current	Red - 30 mA Blue - 25 mA	
Peak Forward Current ¹	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 ²	260°C	

Electrical Characteristics

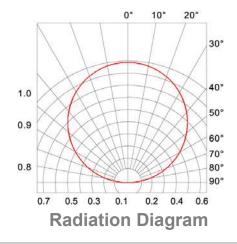
 $T_A = 25$ °C & $I_F = 20$ mA unless otherwise noted

Emitting Color	_	ward ge (V)¹	Recommend Forward Current (mA)	Reverse Current (μA) V _R =5V	Dominant Wavelength (nm) ²	Lumi Intensity	nous y (mcd) ³	Viewing Angle 2 Θ ½ (deg)
	TYP	MAX	TYP	MAX	TYP	MIN	TYP	TYP
Red	1.85	2.3	20	10	640	18	36	120
Blue	3.3	4.2	20	10	466	20	50	120

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

Directivity Radiation

 $T_A = 25$ °C unless otherwise noted



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

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

^{2.} Solder time less than 5 seconds at temperature extreme.

^{2.} Tolerance of Dominant Wavelength: ±0.1nm.

^{3.} Tolerance of Luminous Intensity: ±15%.



Typical Electrical / Optical Characteristics Curves

 $T_A = 25$ °C unless otherwise noted

Relative Spectrum Emission I $_{\rm rel}$ = f (I), T $_{\rm A}$ = 25°C , I $_{\rm F}$ = 20 mA V(I) = Standard eye response curve

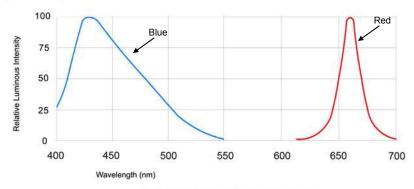


Fig.1 Relative Luminous Intensity vs. Wavelength

Relative Luminous Intensity I_V/I_V (20 mA) = f (I_F) $T_A = 25$ °C Ambient Temperature vs. Allowable Forward Current

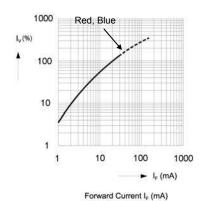
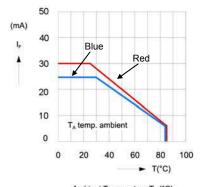
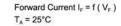


Fig.2 Relative Luminous Intensity vs. Forward Current



Ambient Temperature T_A (°C)

Fig. 3 Forward Current vs. Ambient Temperature



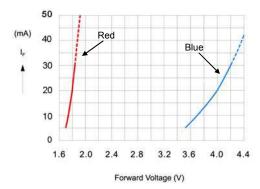
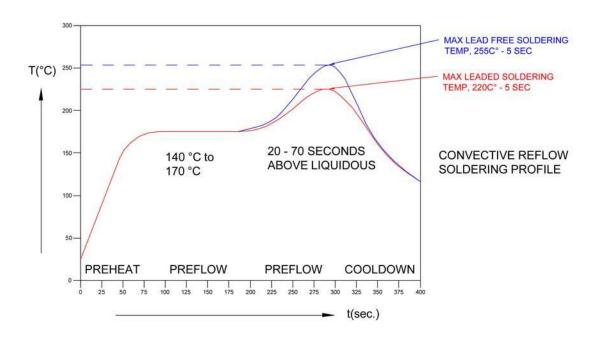


Fig.4 Forward Current vs. Forward Voltage

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

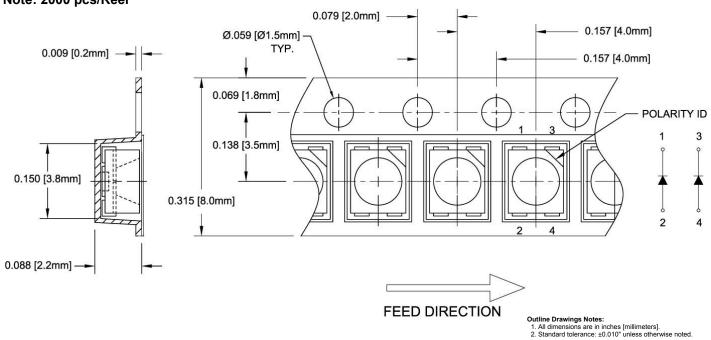


Recommended Soldering Conditions



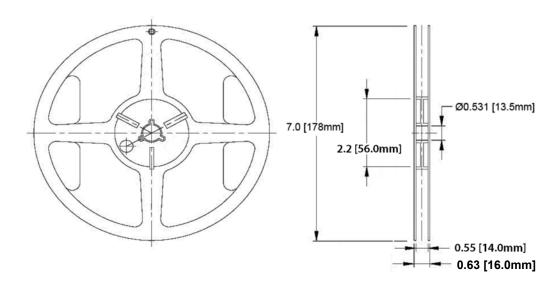
Tape and Reel Dimensions

Note: 2000 pcs/Reel



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Outline Drawings Notes:

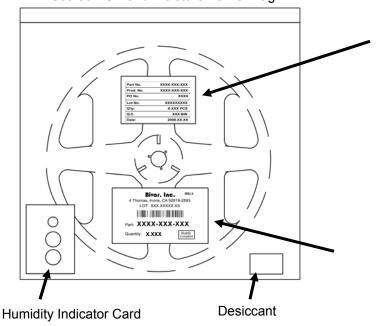
- 1. All dimensions are in inches [millimeters].
- 2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"

 $X.X \pm 0.1$ "

Packaging and Labeling Plan

Note: 1 Reel / Bag

Sealed ESD and Moisture Barrier Bag



Part No.	XXXX-XXX-XXX			
Prod. No.	xxxx-xxx-xxx			
PO No.	xxxx			
Lot No.	XXXXXXXX			
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

Quantity: X,XXX

RoHS Compliant

Bivar Standard Packaging Label