

PLCC4 SMD Top View Package LED SMTL4-BC-YG, YELLOW/GREEN

BIVAR

SMTL4-BC-YG

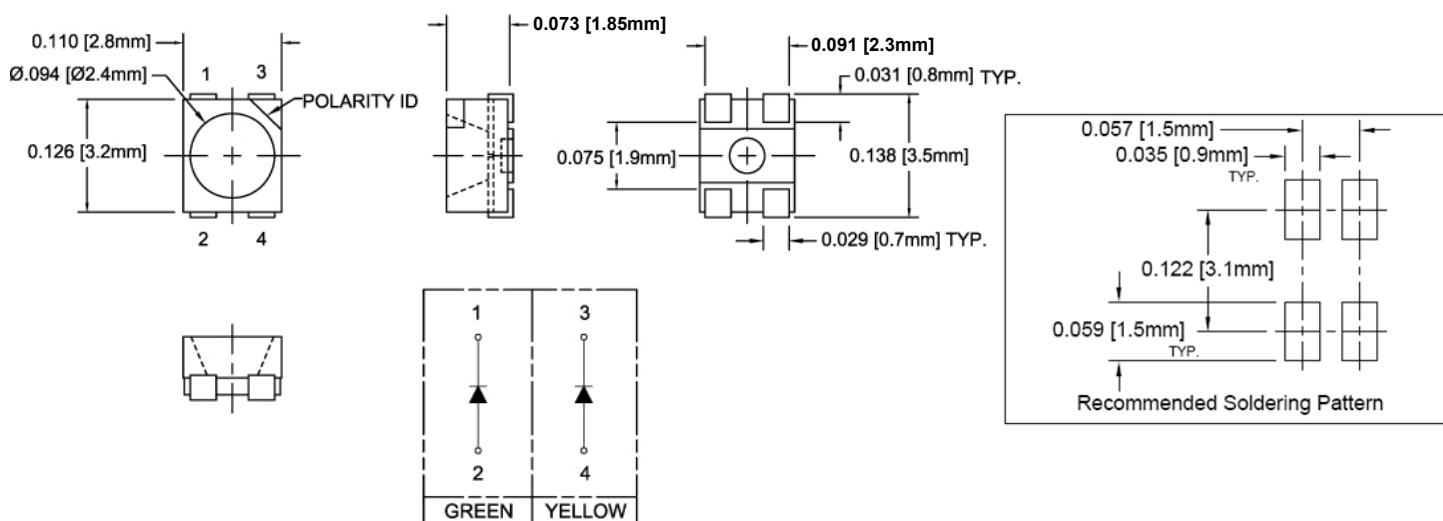
- ◆ Industry Standard PLCC4 Footprint
- ◆ 2 Chips in One Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency



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	Luminous Intensity Typ. mcd	Lens Color	Viewing Angle
SMTL4-BC-YG	GaAsP	Yellow	14.5	Water Clear	120°
	GaP	Green	28.5		

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-BC-YG, YELLOW/GREEN



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	78 mW
Forward Current (DC)	30 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/°C
Operating Temperature Range	-40 ~ +85°C
Electrostatic Discharge Classification (HBM)	2000 V
Storage Temperature Range	-40 ~ +85°C
Lead Soldering Temperature (1.6 mm from body) ²	260°C

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 0.1 msec. 2. Solder time less than 5 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

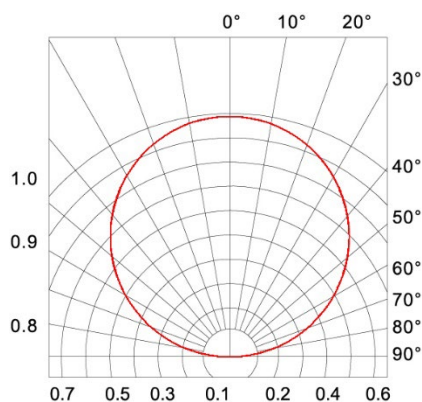
T_A = 25°C & I_F = 20 mA unless otherwise noted

Emitting Color	Forward Voltage (V) ¹			Recommend Forward Current (mA)			Reverse Current (μA) V _R =5V	Dominant Wavelength (nm) ²			Luminous Intensity I _v (mcd) ³			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
Yellow	/	1.9	2.6	/	20	/	10	585	588	591	9.0	14.5	22.5	120
Green	/	1.9	2.6	/	20	/	10	568	570	574	18.0	28.5	45.0	

Notes: 1. Tolerance of forward voltage: ±0.05V. 2. Tolerance of dominant wavelength: -1nm of MIN and +1 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.

PLCC4 SMD Top View Package LED SMTL4-BC-YG, YELLOW/GREEN



Typical Electrical / Optical Characteristics

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

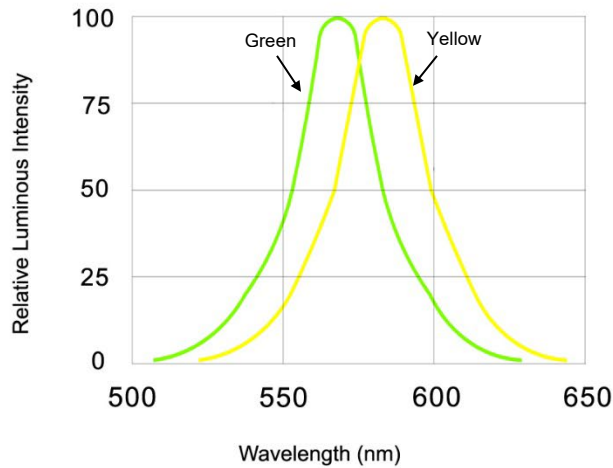


Fig.1 Relative Luminous Intensity vs. Wavelength

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

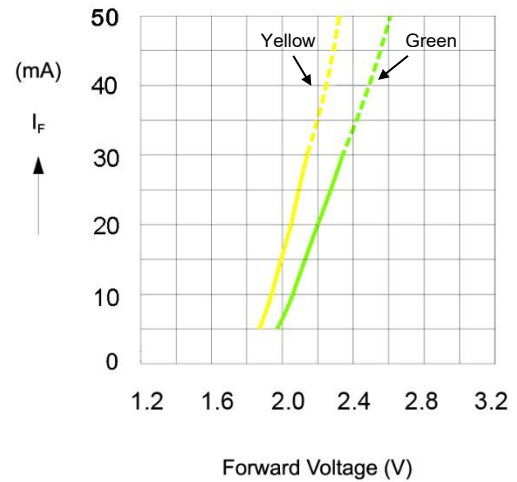


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity $I_V/I_V(20\text{ mA}) = f(I_F)$
 $T_A = 25^\circ\text{C}$

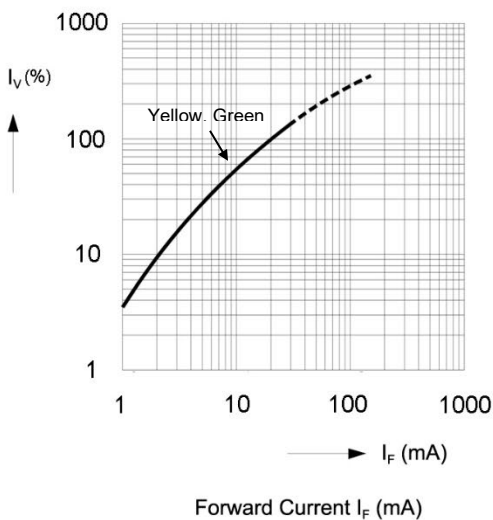


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

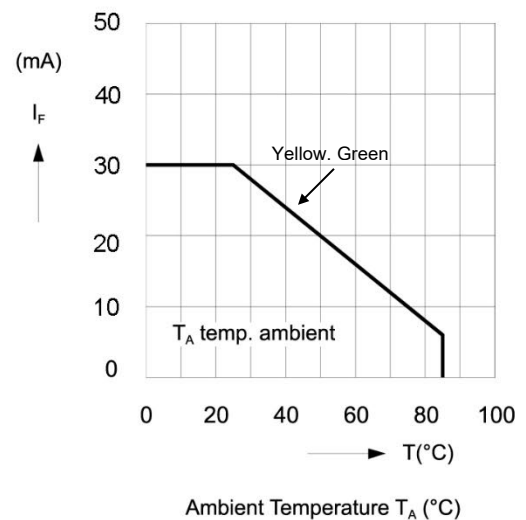


Fig.4 Forward Current vs. Ambient Temperature

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

PLCC4 SMD Top View Package LED SMTL4-BC-YG, YELLOW/GREEN



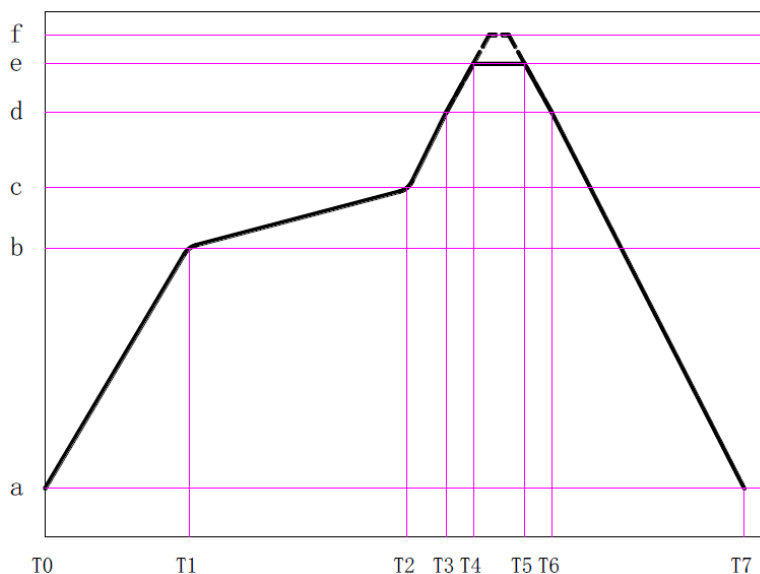
Soldering Iron

1. Temperature at tip of iron: 300 °C Max. (25 W Max.)
2. Soldering Time: 5 ± 1 sec.

Recommended Soldering Conditions

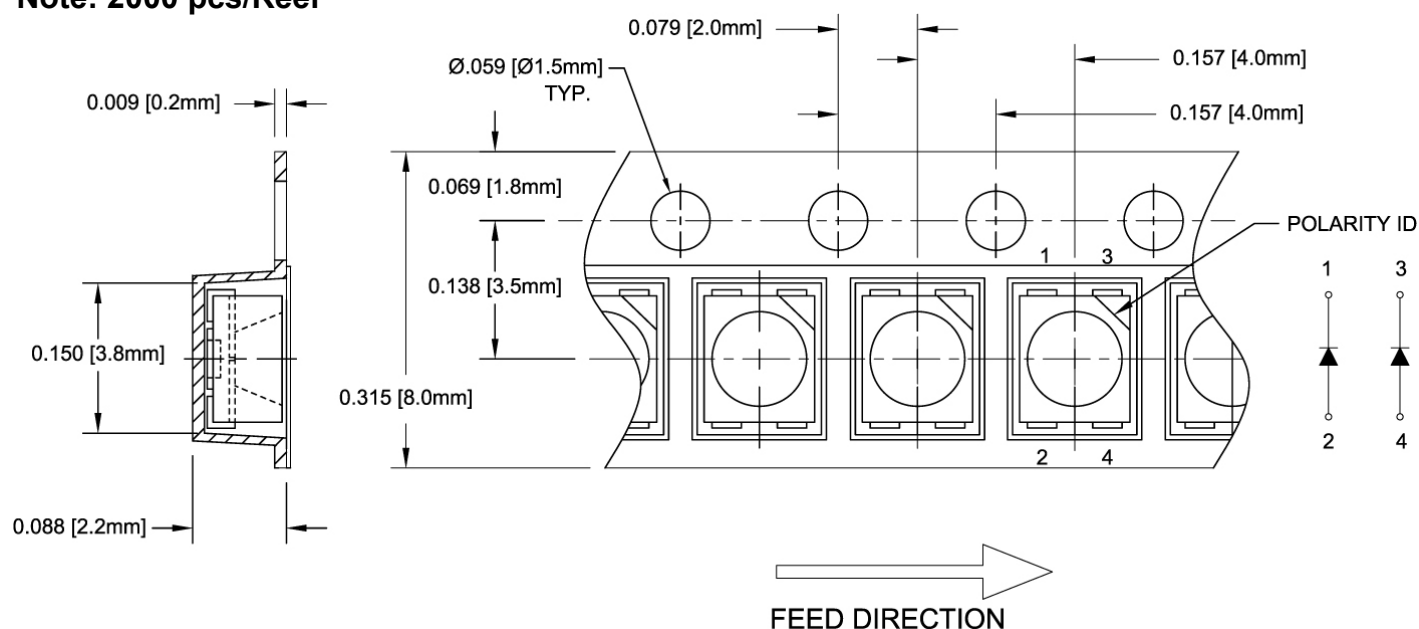
Temp. (°C)		Time (sec)	
a	25	T0~T1	Max. 3 °C/sec
b	150	T1~T2	90~130 sec
c	200	T2~T4	Max. 3 °C/sec
d	220	T3~T6	Max. 50 sec
e	245		
f	Max. 260		Max. 10 sec
		T5~T7	Max. -3 °C/sec
Belt Speed		70~90 cm/min	

Note: Will vary based on equipment and process used.



Tape and Reel Dimensions

Note: 2000 pcs/Reel

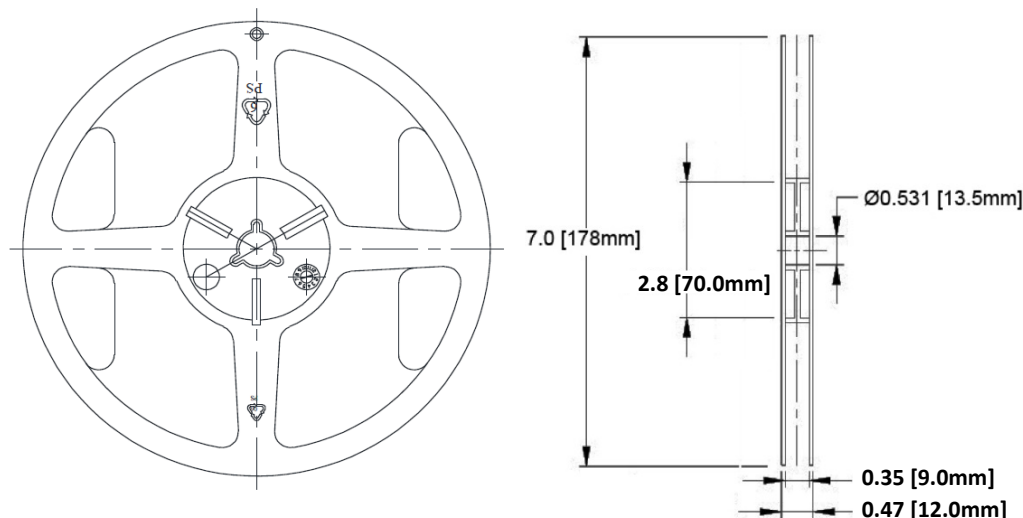


Outline Drawings Notes:

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

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

PLCC4 SMD Top View Package LED SMTL4-BC-YG, YELLOW/GREEN

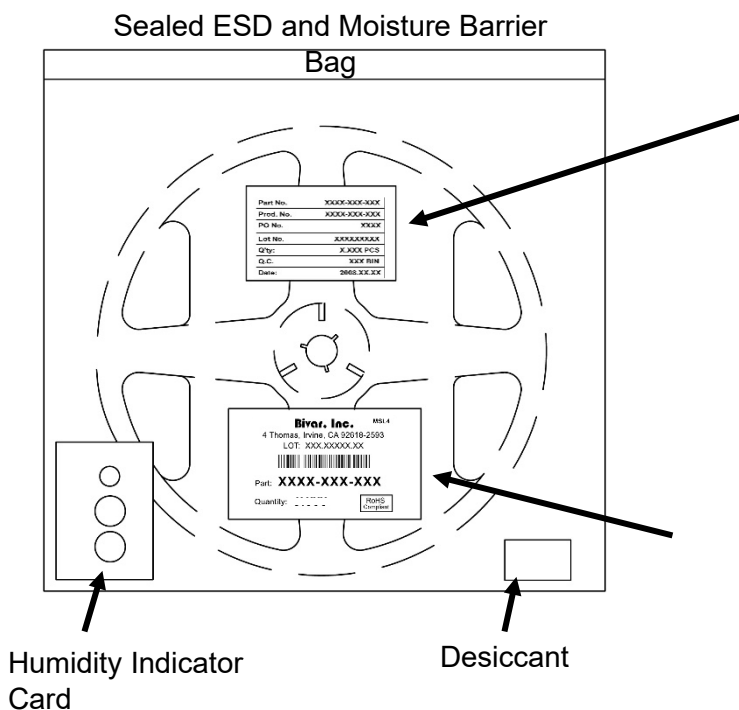


Outline Drawings Notes:

1. All dimensions are in inches [millimeters].
2. Standard tolerance unless otherwise noted: X.XXX \pm 0.010"
X.X \pm 0.1"

Packaging and Labeling Plan

Note: 1 Reel / 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



Bivar Standard Packaging Label

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