

- ◆ **Industry Standard PLCC2 Footprint**
- ◆ **Low Profile Package**
- ◆ **High Luminous Intensity**
- ◆ **Wide Viewing Angle**
- ◆ **High Power Efficiency**



Part Number	Material	Emitted Color	Lumen Typ. mcd	Lens Color	Viewing Angle
SMP2-SOC	AlGaInP	Super Orange	800	Water Clear	120°

0.110 [2.8mm]

0.126 [3.2mm]

0.138 [3.5mm]

0.077 [2.0mm]

0.094 [2.4mm]

0.075 [1.9mm]

0.031 [0.8mm] TYP.

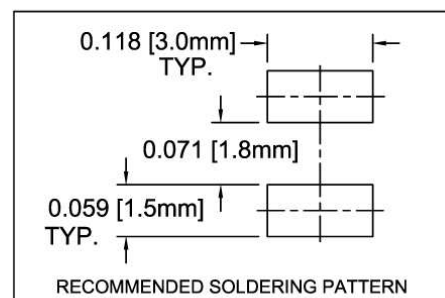
2

1

POLARITY ID

2

1



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



**CAUTION: LOOKING DIRECTLY AT
LED WITHOUT SHIELDED EYES
MAY CAUSE DAMAGE TO RETINA.**

PLCC2 SMD Top View Package LED SMP2-SOC, SUPER ORANGE



Absolute Maximum Ratings

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

Power Dissipation	72 mW
Continuous Forward Current	30 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Derating Linear From 25°C	0.4 mA/ $^\circ\text{C}$
Operating Temperature Range	$-40 \sim +85^\circ\text{C}$
Storage Temperature Range	$-40 \sim +100^\circ\text{C}$
Lead Soldering Temperature (1.6 mm from body) ²	260°C
Electrostatic Discharge (HBM)	2000 V

Notes: 1. 10% Duty Cycle, Pulse Width ≤ 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) ¹		Recommend Forward Current (mA)	Reverse Current (μA) $V_R=5\text{V}$	Dominant Wavelength (nm) ²			Luminous Intensity (mcd) ³		Viewing Angle $2\theta_{1/2}$ (deg)
	TYP	MAX	TYP	MAX	MIN	TYP	MAX	MIN	TYP	TYP
Super Orange	1.9	2.4	20	100	598	605	610	550	800	120

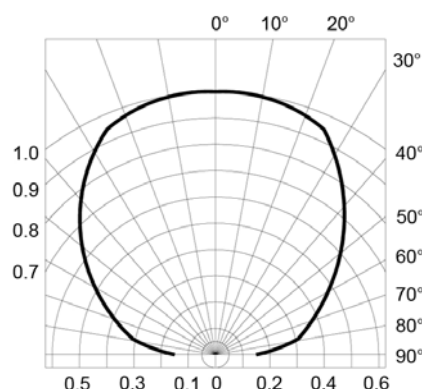
Notes: 1. Tolerance of Forward Voltage : $\pm 0.05\text{V}$.

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.

PLCC2 SMD Top View Package LED SMP2-SOC, SUPER ORANGE



Typical Electrical / Optical Characteristics Curves

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

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

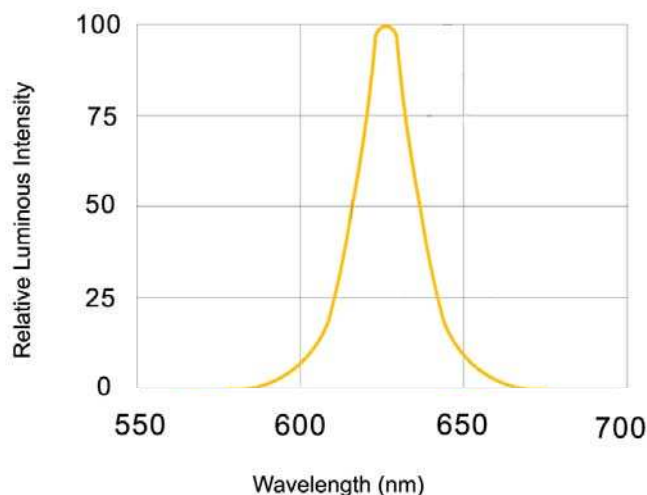


Fig.1 Relative Luminous Intensity vs. Wavelength

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

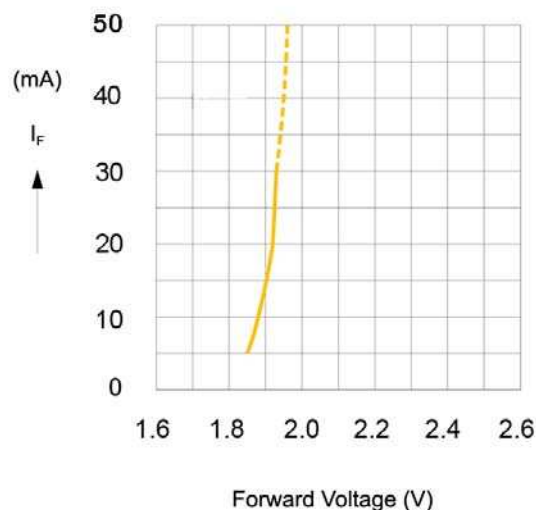


Fig.2 Forward Current vs. Forward Voltage

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

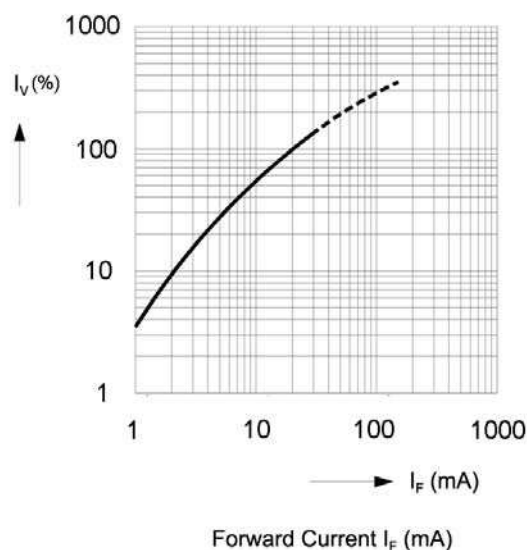


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

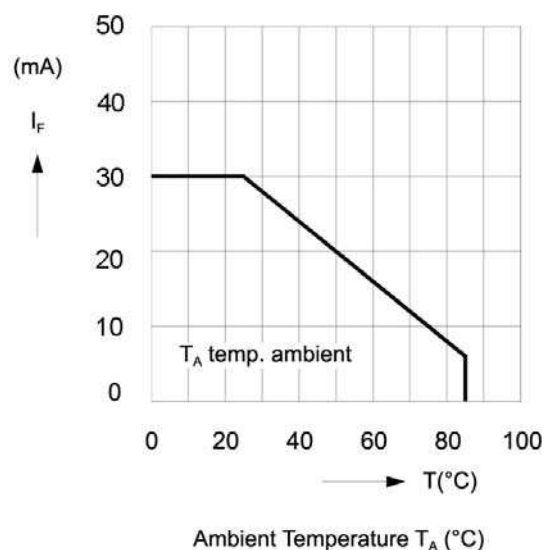


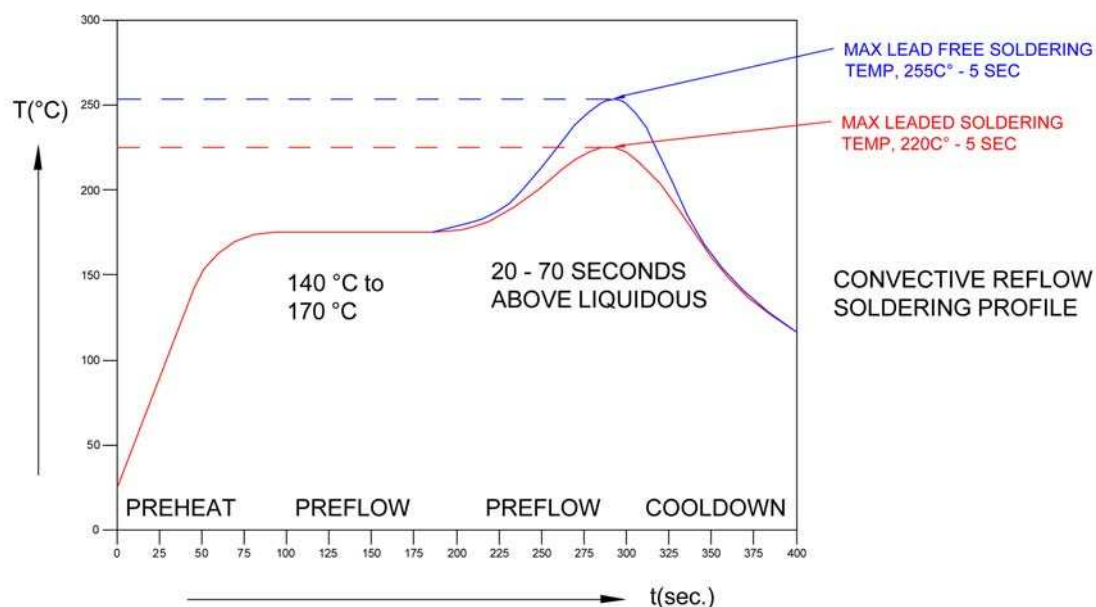
Fig.4 Forward Current vs. Ambient Temperature

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

PLCC2 SMD Top View Package LED SMP2-SOC, SUPER ORANGE

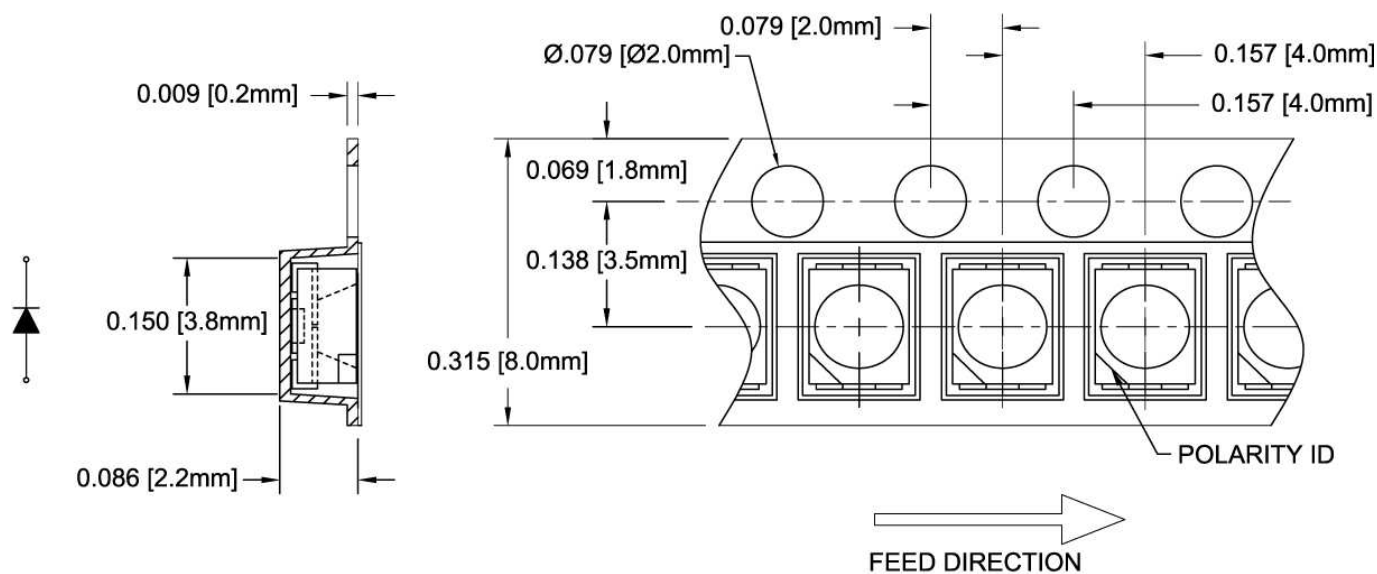


Recommended Soldering Conditions



Tape and Reel Dimensions

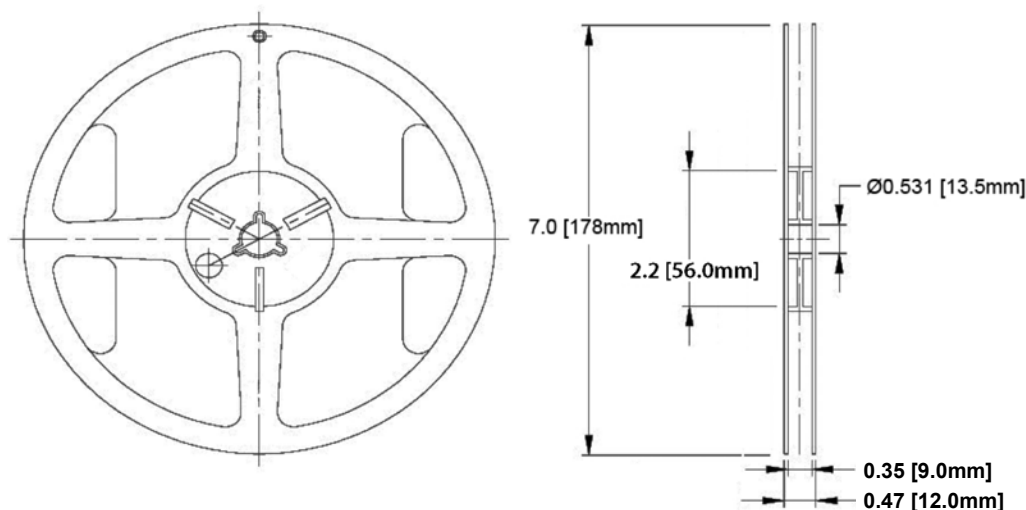
Note: 2000 pcs/Reel



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

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PLCC2 SMD Top View Package LED SMP2-SOC, SUPER ORANGE

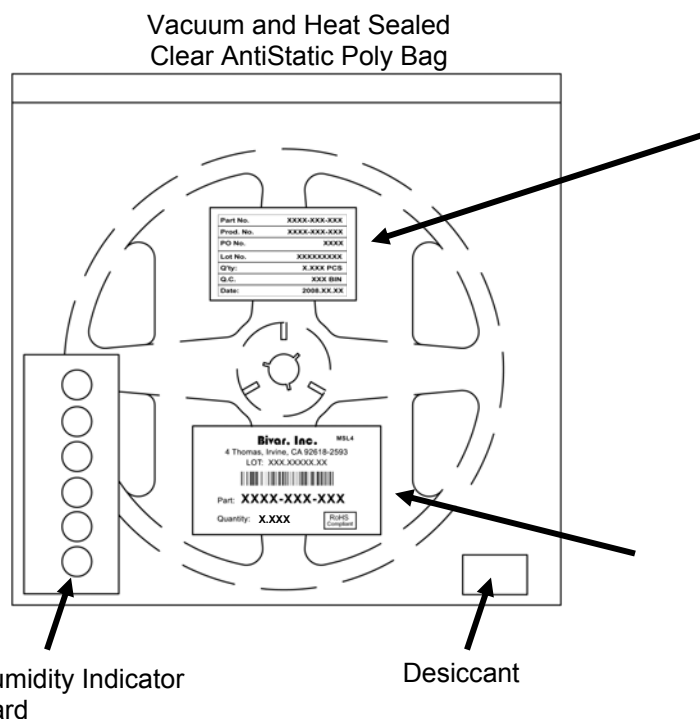


Outline Drawings Notes:

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

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