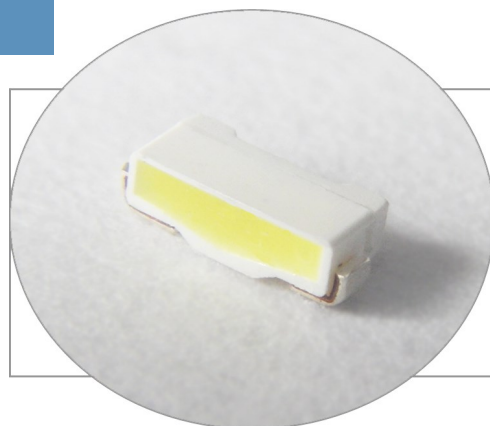


PLCC2 SMD Side View Package LED SMS1105UWDC, COOL WHITE

BIVAR

SMS1105UWDC

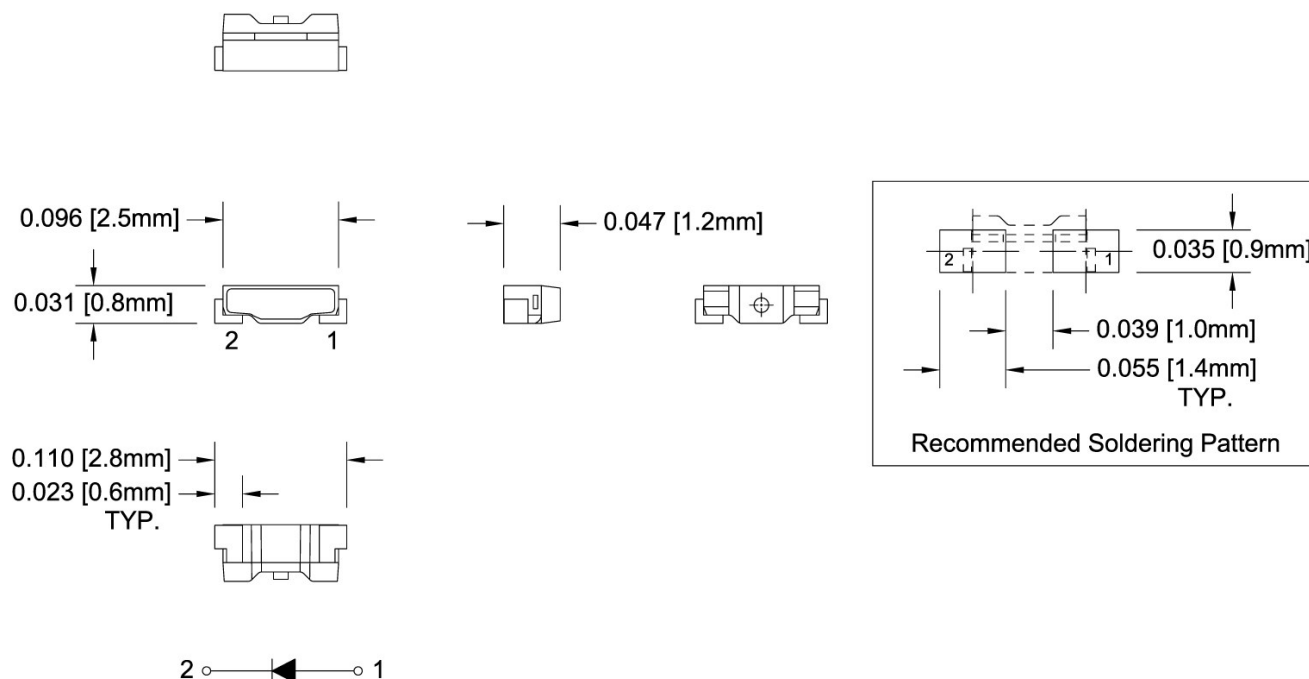
- ◆ Industry Standard Footprint
- ◆ Side Viewing, Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency



Bivar SMS1105 LED is offered in a side viewing PLCC2 package exhibiting high luminous intensity and wide viewing angles. The miniature package is ideal for small scale applications such as displays, general indication, and backlighting. Low power consumption and excellent long life reliability are suitable for battery powered equipment where minimal maintenance is required. Wide variety of color and intensity combinations are available to meet any illumination needs. Bivar SMS1105 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 |
|-------------|----------|---------------|----------------|------------|---------------|
| SMS1105UWDC | InGaN | Cool White | 1600 | Diffused | 120° |

Outline Dimensions



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

PLCC2 SMD Side View Package LED SMS1105UWDC, COOL WHITE



Absolute Maximum Ratings

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

| | |
|----------------------------------------------|------------------------------|
| Power Dissipation | 100 mW |
| Continuous Forward Current | 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/ $^\circ\text{C}$ |
| Operating Temperature Range | $-30 \sim +85^\circ\text{C}$ |
| Storage Temperature Range | $-40 \sim +90^\circ\text{C}$ |
| Soldering Temperature | 260°C |

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

Electrical Characteristics

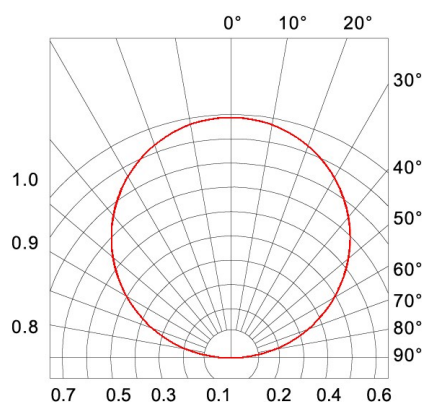
$T_A = 25^\circ\text{C}$ & $I_F = 20$ mA unless otherwise noted

| Emitting Color | Forward Voltage (V) ¹ | | | Recommend Forward Current (mA) | Reverse Current (μA) $V_R=5\text{V}$ | Chromaticity Coordinates (XY) ² | Luminous Intensity (mcd) ³ | | Viewing Angle $2\theta_{1/2}$ (deg) |
|----------------|----------------------------------|-----|-----|--------------------------------|------------------------------------------------------|--------------------------------------------|---------------------------------------|------|----------------------------------------|
| | MIN | TYP | MAX | TYP | MAX | TYP | MIN | MAX | TYP |
| Cool White | 2.8 | 3.1 | 3.4 | 20 | 10 | X=0.30 , Y=0.29 | 1300 | 1900 | 120 |

Notes: 1. Tolerance of Forward Voltage : $\pm 0.05\text{V}$.
2. Tolerance of Chromaticity Coordinates : ± 0.02 .
3. Tolerance of Luminous Intensity : $\pm 15\%$.

Directivity Radiation

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



Radiation Diagram

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PLCC2 SMD Side View Package LED SMS1105UWDC, COOL WHITE



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

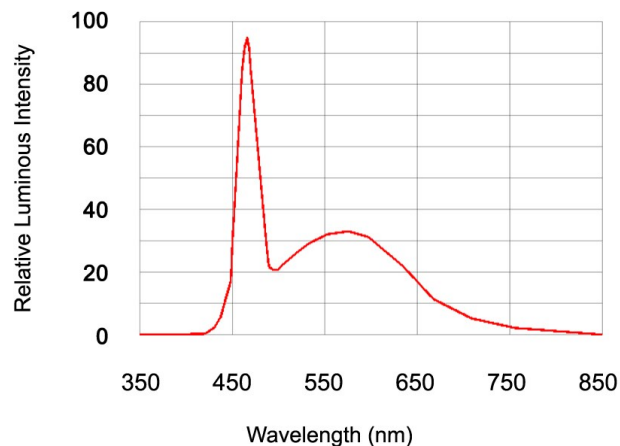


Fig.1 Relative Luminous Intensity vs. Wavelength

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

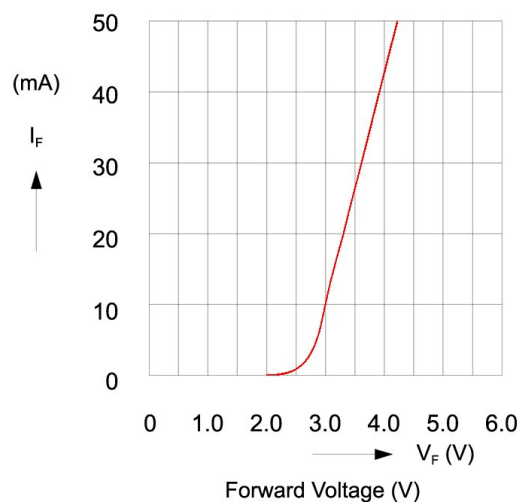


Fig.2 Forward Current vs. Forward Voltage

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

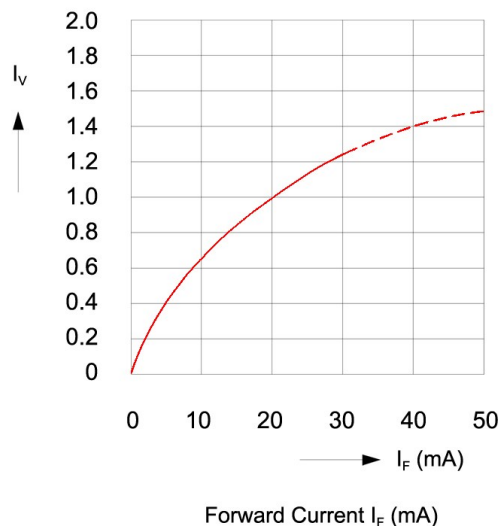


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current

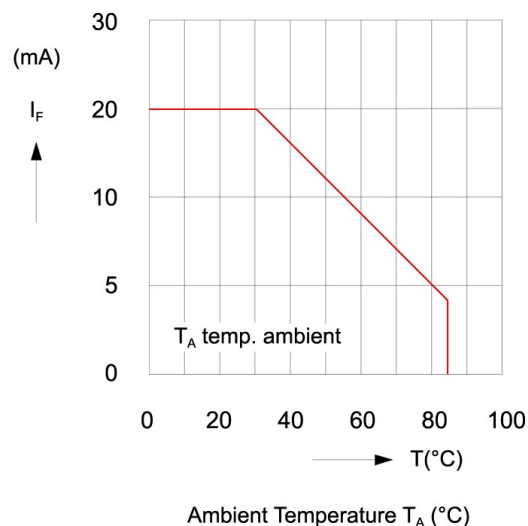


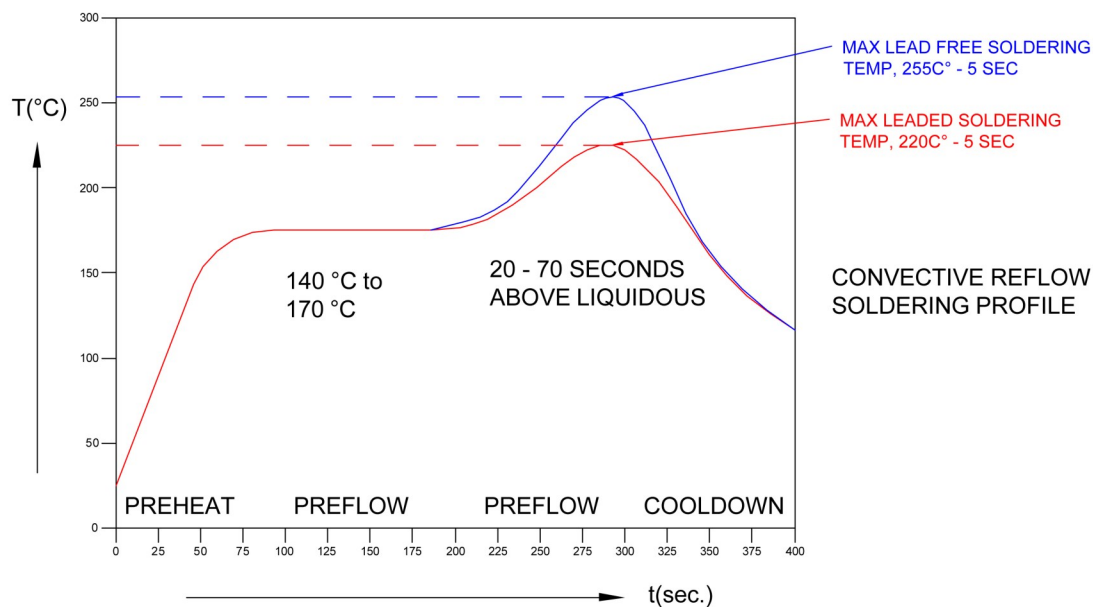
Fig.4 Forward Current vs. Ambient Temperature

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PLCC2 SMD Side View Package LED SMS1105UWDC, COOL WHITE

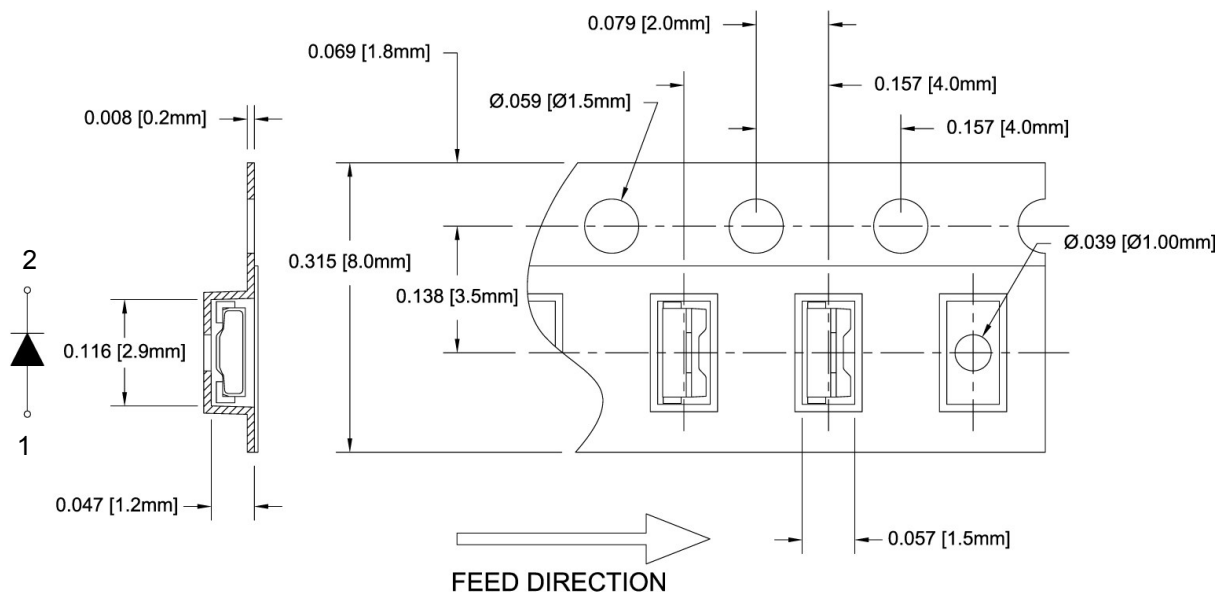


Recommended Soldering Conditions



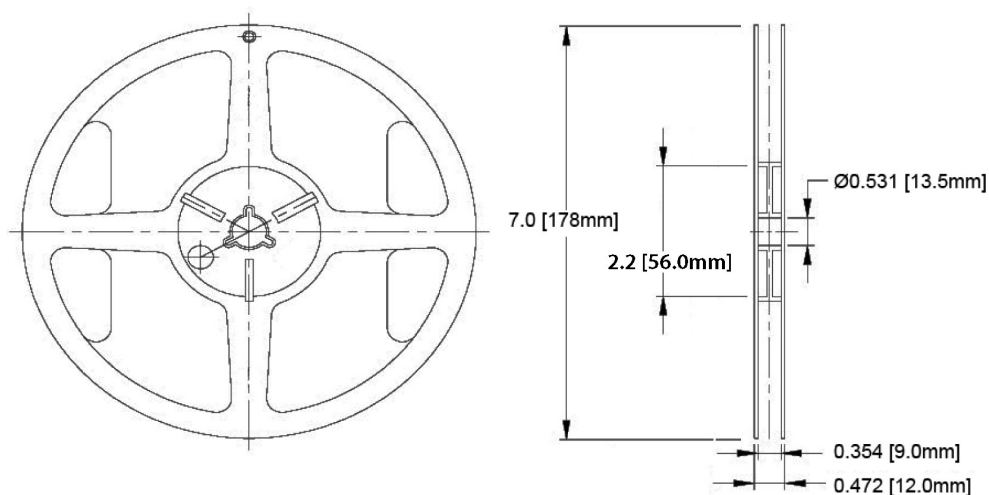
Tape and Reel Dimensions

Note: 3000 pcs/Reel



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PLCC2 SMD Side View Package LED SMS1105UWDC, COOL WHITE

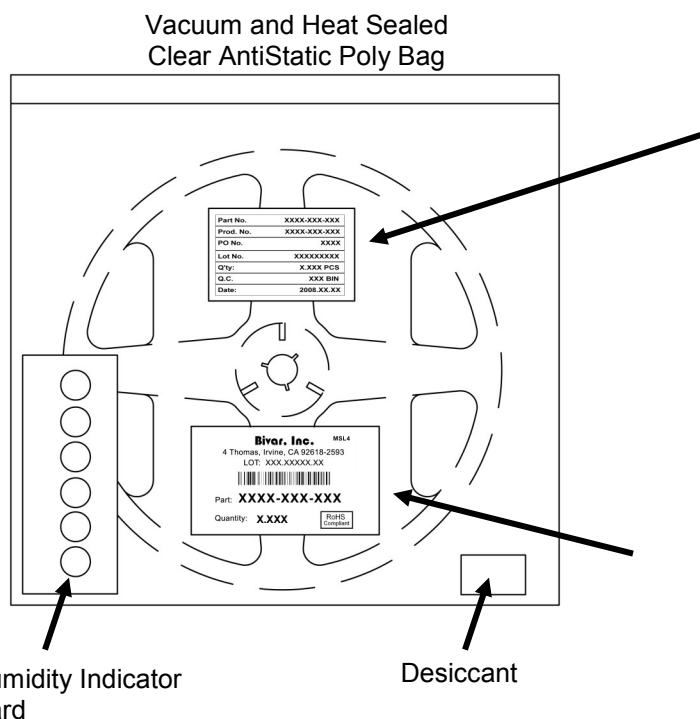


Outline Drawings Notes:

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 |



Bivar Standard Packaging Label

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

BIVAR:

[SMS1105UWDC](#)