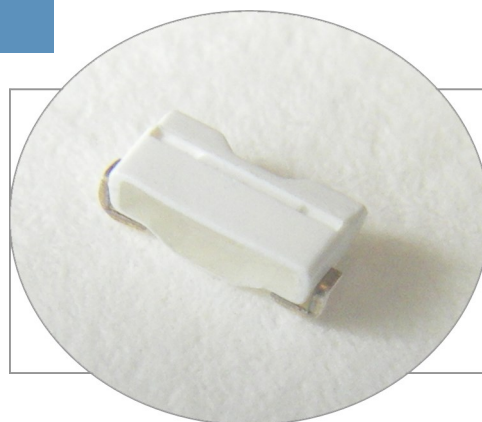


# PLCC2 SMD Side View Package LED SMS1105BWC, BLUE

# BIVAR

## SMS1105BWC

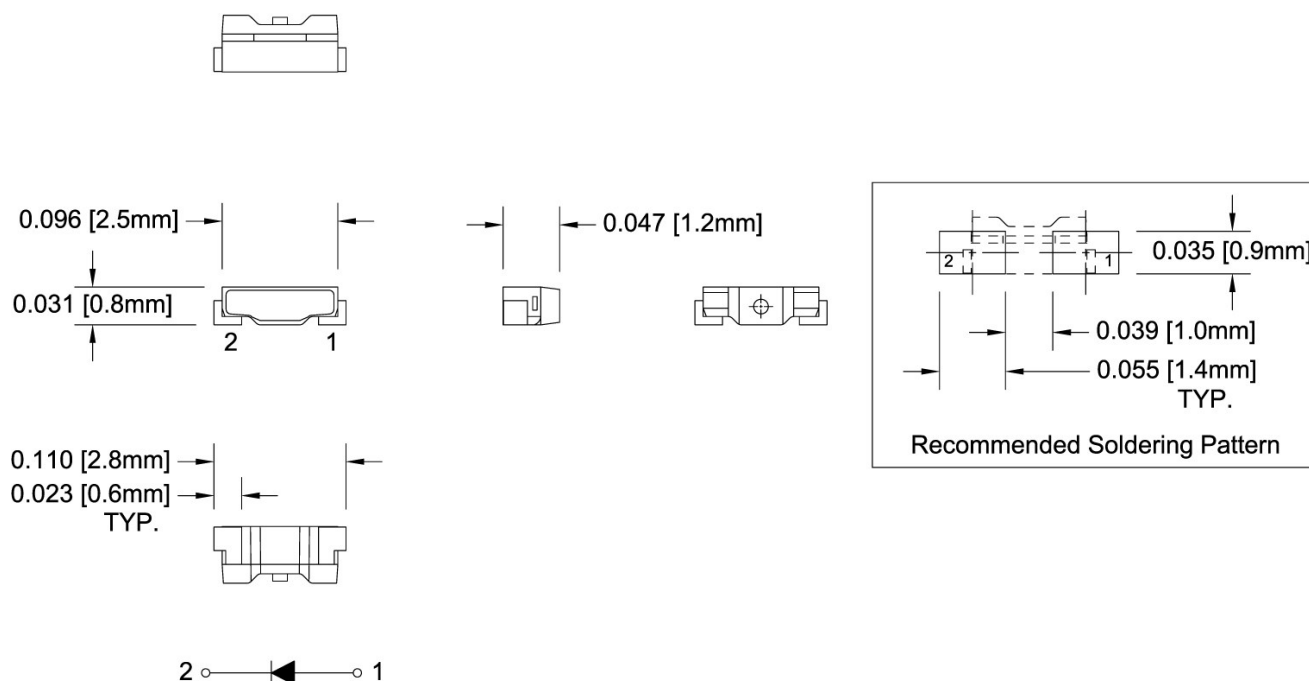
- ◆ Industry Standard Footprint
- ◆ Side Viewing, Low Profile Package
- ◆ High Luminous Intensity
- ◆ Wide Viewing Angle
- ◆ High Power Efficiency



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 | Luminous Intensity (mcd) TYP. | Lens Color  | Viewing Angle |
|-------------|----------|---------------|-------------------------------|-------------|---------------|
| SMS1105BWC  | GaN      | Blue          | 650                           | Water Clear | 120°          |

## Outline Dimensions



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

# PLCC2 SMD Side View Package LED SMS1105BWC, BLUE



## Absolute Maximum Ratings

T<sub>A</sub> = 25°C unless otherwise noted

|                                              |              |
|----------------------------------------------|--------------|
| Power Dissipation                            | 68 mW        |
| Continuous Forward Current                   | 30 mA        |
| Peak Forward Current <sup>1</sup>            | 100 mA       |
| Electrostatic Discharge Classification (HBM) | 2000 V       |
| Reverse Voltage                              | 5 V          |
| Derating Linear From 25°C                    | 0.4 mA/°C    |
| Operating Temperature Range                  | -40 ~ +105°C |
| Storage Temperature Range                    | -40 ~ +105°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<sub>A</sub> = 25°C & I<sub>F</sub> = 20 mA unless otherwise noted

| Emitting Color | Forward Voltage (V) <sup>1</sup> |     |     | Recommend Forward Current (mA) | Reverse Current (μA)<br>V <sub>R</sub> =5V | Dominant Wavelength (nm) <sup>2</sup> |     | Luminous Intensity (mcd) <sup>3</sup> |     | Viewing Angle<br>2 Θ ½ (deg) |
|----------------|----------------------------------|-----|-----|--------------------------------|--------------------------------------------|---------------------------------------|-----|---------------------------------------|-----|------------------------------|
|                | MIN                              | TYP | MAX | TYP                            | MAX                                        | MIN                                   | MAX | MIN                                   | MAX | TYP                          |
| Blue           | 2.8                              | 3.1 | 3.4 | 20                             | 10                                         | 467                                   | 476 | 400                                   | 900 | 120                          |

Notes: 1. Tolerance of Forward Voltage : ±0.05V.  
2. Tolerance of Dominant Wavelength : -1.0nm of MIN & +1.0nm of MAX  
3. Tolerance of Luminous Intensity : ±15%.

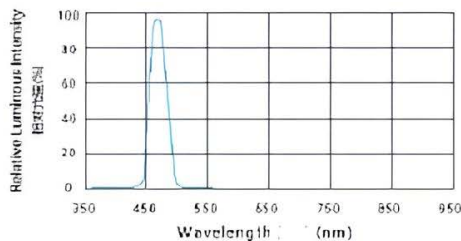
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# PLCC2 SMD Side View Package LED SMS1105BWC, BLUE



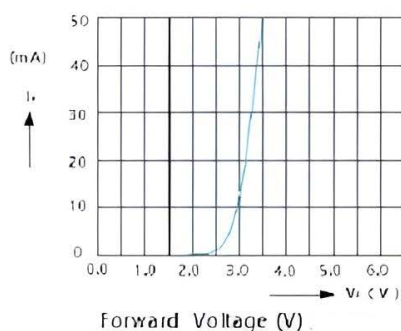
## Typical Electrical / Optical Characteristics Curves

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



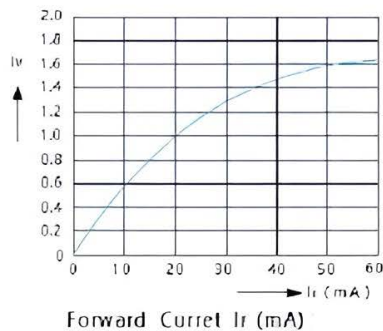
Forward Current  $I_F = f(V_F)$

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

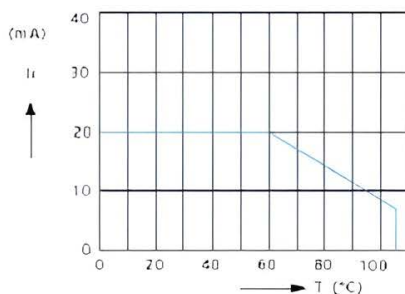


Relative Luminous Intensity

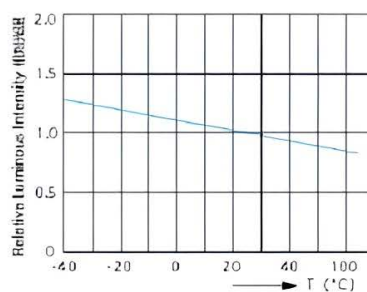
$T_A = 25^\circ\text{C}$



Ambient Temperature VS.  
Allowable Forward Current



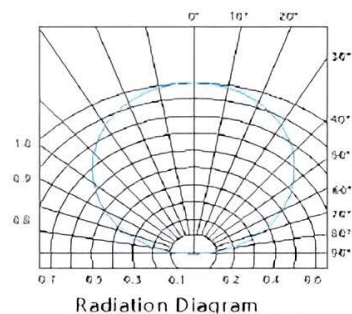
Ambient Temperature VS.  
Relative Intensity



Ambient Temperature  $T_A$  ( $^\circ\text{C}$ )

Ambient Temperature  $T_A$  ( $^\circ\text{C}$ )

Radiation Characteristic  $I_{mI} = f(\theta)$

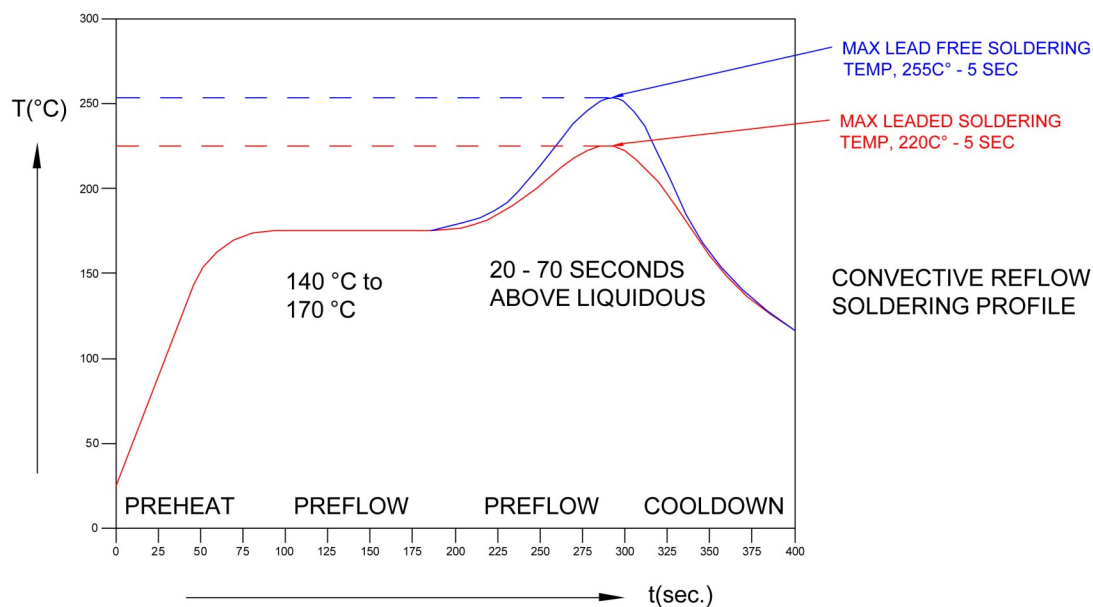


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# PLCC2 SMD Side View Package LED SMS1105BWC, BLUE

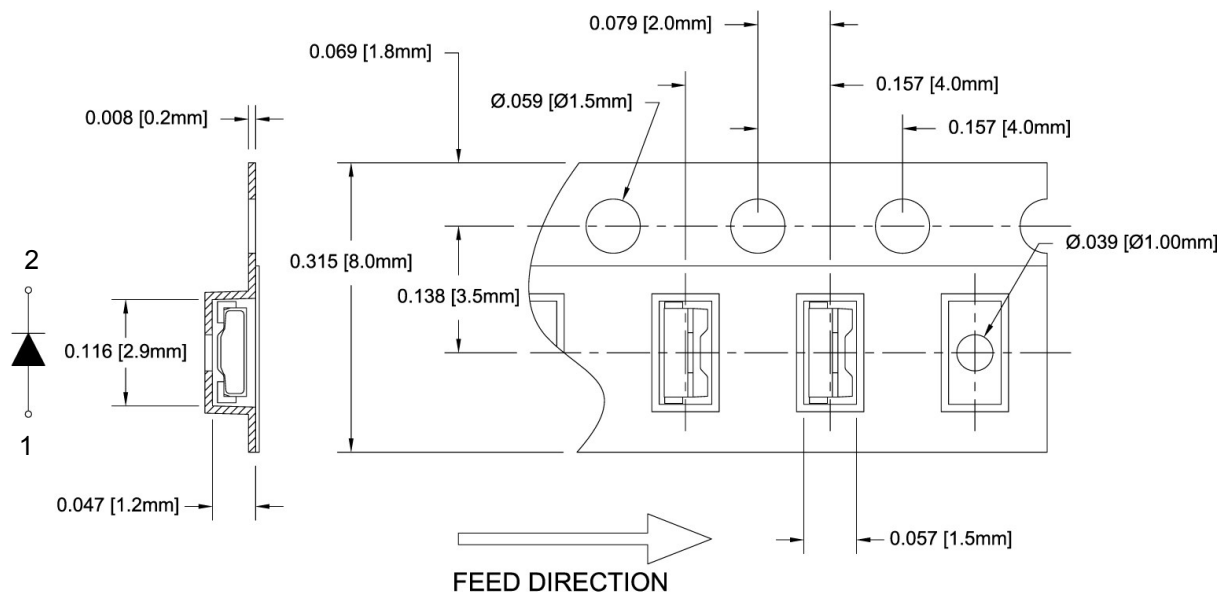


## Recommended Soldering Conditions



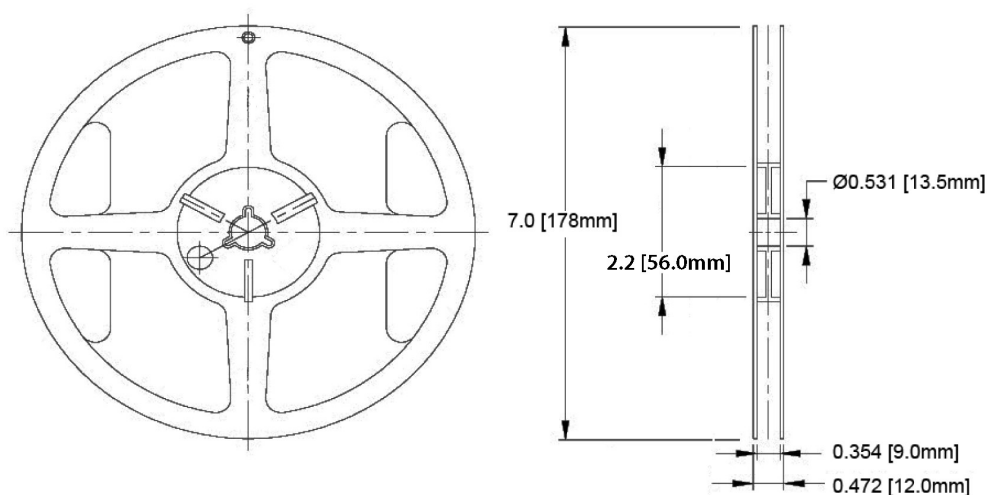
## Tape and Reel Dimensions

Note: 4000 pcs/Reel



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# PLCC2 SMD Side View Package LED SMS1105BWC, BLUE

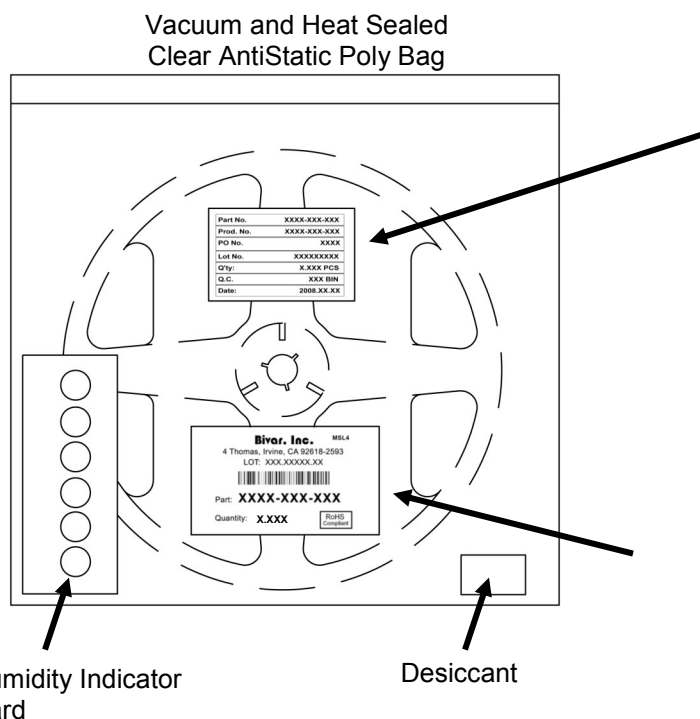


## Outline Drawings Notes:

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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