

SMS1105YC

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

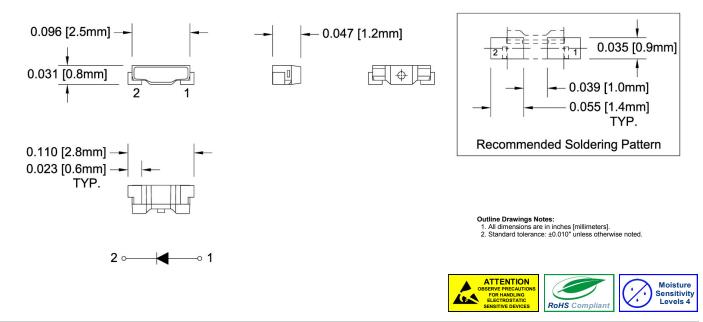


Bivar SMS1105 LED is offered in a side viewing PLCC2 package exhibiting high luminous intensity and wide viewing angles. The miniature package is ideal for small scale applications such as displays, general indication, and backlighting. Low power consumption and excellent long life reliability are suitable 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 |
|-------------|----------|---------------|----------------|-------------|---------------|
| SMS1105YC | AlGaInP | Yellow | 250 | Water Clear | 120° |

Outline Dimensions







Absolute Maximum Ratings

 $T_A = 25^{\circ}C$ 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/°C |
| Operating Temperature Range | -30 ~ +85°C |
| Storage Temperature Range | -40 ~ +100°C |
| Soldering Temperature | 260°C |

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

2. Solder time less than 5 seconds at temperature extreme.

Electrical Characteristics

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

| Emitting Color | | | - | Recommend Forward Current (mA) | Reverse Current (μA) V _R =5V Dominant Wavelength (nm) ² | | Luminous Intensity (mcd) ³ | | Viewing Angle 2 ⊖ ½ (deg) | |
|-------------------|-----|-----|-----|--------------------------------------|---|-----|--|-----|---------------------------------|-----|
| | MIN | ТҮР | MAX | ТҮР | MAX | MIN | MAX | MIN | MAX | ТҮР |
| Yellow | 1.8 | 2.2 | 2.6 | 20 | 10 | 587 | 596 | 100 | 400 | 120 |

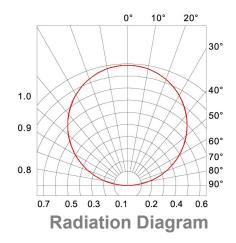
Notes: 1. Tolerance of Forward Voltage : ±0.05V.

2. Tolerance of Dominant Wavelength : ±0.1nm.

3. Tolerance of Luminous Intensity : ±15%.

Directivity Radiation

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





Typical Electrical / Optical Characteristics Curves

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

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

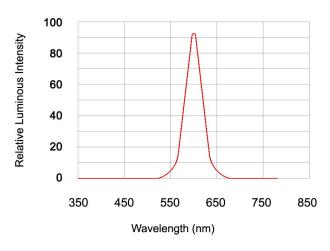
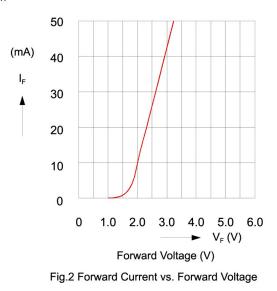


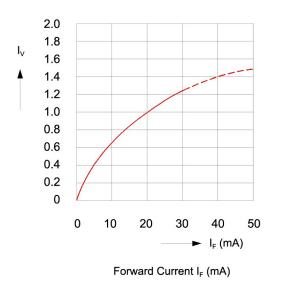
Fig.1 Relative Luminous Intensity vs. Wavelength

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

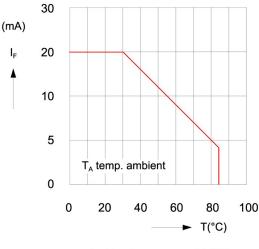


Ambient Temperature vs. Allowable Forward Current

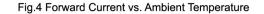
Relative Luminous Intensity I_v/I_v (20mA) = f (I_F) $T_A = 25^{\circ}C$





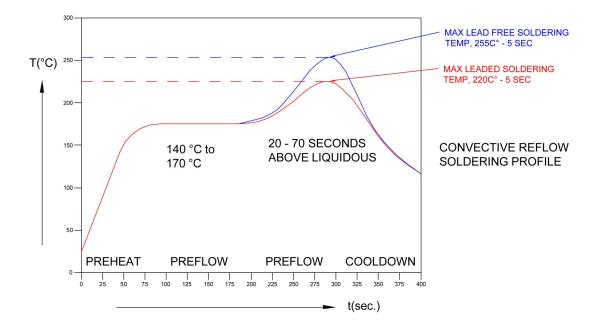


Ambient Temperature T_A (°C)



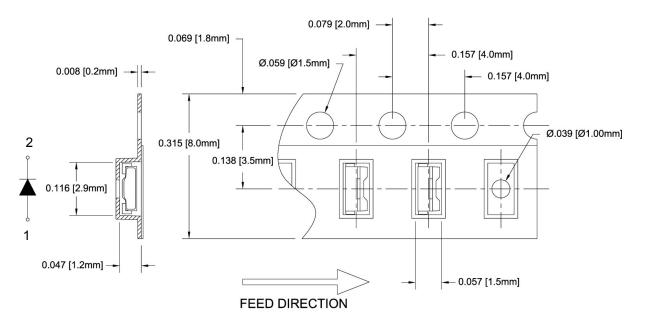


Recommended Soldering Conditions

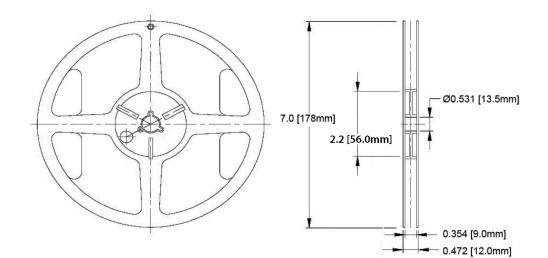


Tape and Reel Dimensions

Note: 3000 pcs/Reel







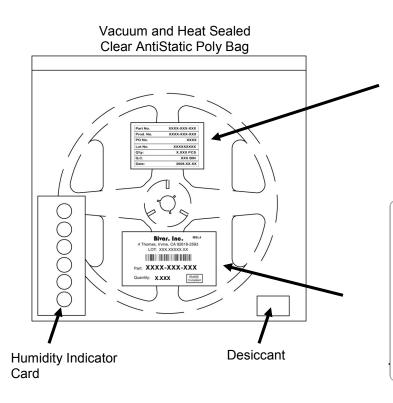
Outline Drawings Notes:

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

X.X ± 0.1"

Packaging and Labeling Plan

Note: 1 Reel / Bag



| XXXX-XXX-XXX | |
|--------------|--|
| XXXX-XXX-XXX | |
| ХХХХ | |
| XXXXXXXXX | |
| X.XXX PCS | |
| XXX BIN | |
| 2008.XX.XX | |
| | |

Internal Quality Control Label

| Bivar. Inc. | MSL4 | | | | | |
|---------------------------------|-------------------|--|--|--|--|--|
| 4 Thomas, Irvine, CA 92618-2593 | | | | | | |
| LOT: XXX.XXXXX.X | Х | | | | | |
| | | | | | | |
| Part: XXXX-XXX-XXX | | | | | | |
| Quantity: X.XXX | RoHS Compliant | | | | | |

Bivar Standard Packaging Label

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

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