

SMS1105UWDN

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

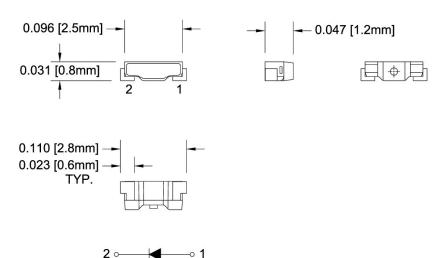


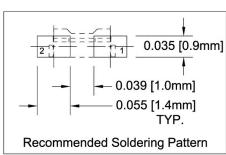
Bivar SMS1105 LED is offered in a side viewing PLCC2 package exhibiting high luminous intensity and wide viewing angles. The miniature package is ideal for small scale applications such as displays, general indication, and backlighting. Low power consumption and excellent long life reliability are suitable 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
SMS1105UWDN	InGaN	Neutral White	1500	Diffused	120°

Outline Dimensions







Outline Drawings Notes: 1. All dimensions are in inches [millimeters].

- 2. Standard tolerance: ±0.010" unless otherwise noted









Absolute Maximum Ratings

 $T_A = 25$ °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 ~ +90°C
Soldering Temperature	260°C

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

Electrical Characteristics

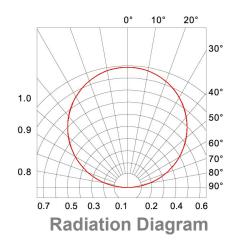
 $T_A = 25$ °C & $I_F = 20$ mA unless otherwise noted

Emitting Color	Forward Voltage (V) ¹		Recommend Forward Current (mA)	Reverse Current (µA) V _R =5V	Chromaticity Coordinates (XY) ²	Luminous Intensity (mcd) ³		Viewing Angle 2 Θ ½ (deg)	
	MIN	TYP	MAX	TYP	MAX	TYP	MIN	MAX	TYP
Neutral White	2.8	3.2	3.5	20	10	X=0.35 , Y=0.35	1200	1800	120

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

Directivity Radiation

 $T_A = 25$ °C unless otherwise noted



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

^{2.} Solder time less than 5 seconds at temperature extreme.

^{2.} Tolerance of Chromaticity Coordinates: ±0.02.

^{3.} Tolerance of Luminous Intensity: ±15%.



Typical Electrical / Optical Characteristics Curves

 $T_A = 25$ °C unless otherwise noted

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

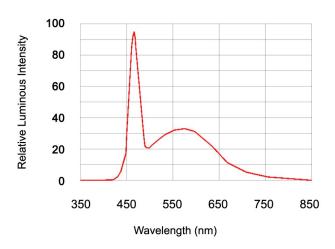


Fig.1 Relative Luminous Intensity vs. Wavelength

Forward Current $I_F = f(V_F)$ $T_A = 25$ °C

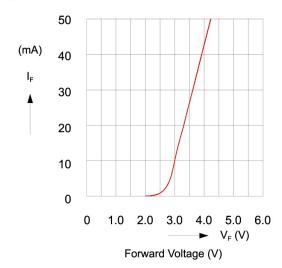


Fig.2 Forward Current vs. Forward Voltage

Relative Luminous Intensity I_V/I_V (20mA) = f (I_F) T_A = 25°C

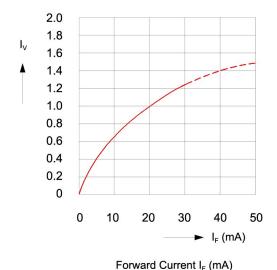
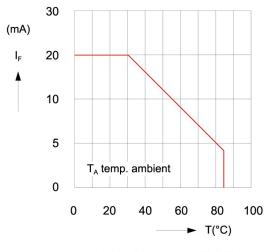


Fig.3 Relative Luminous Intensity vs. Forward Current

Ambient Temperature vs. Allowable Forward Current



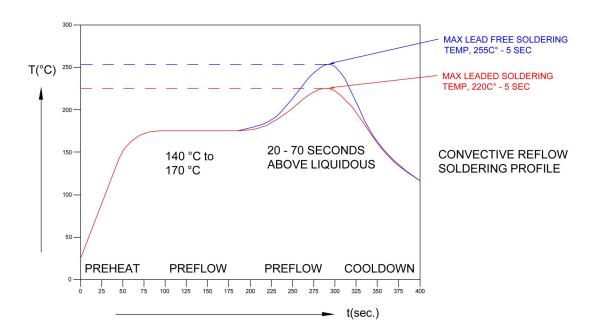
Ambient Temperature T_A (°C)

Fig.4 Forward Current vs. Ambient Temperature

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

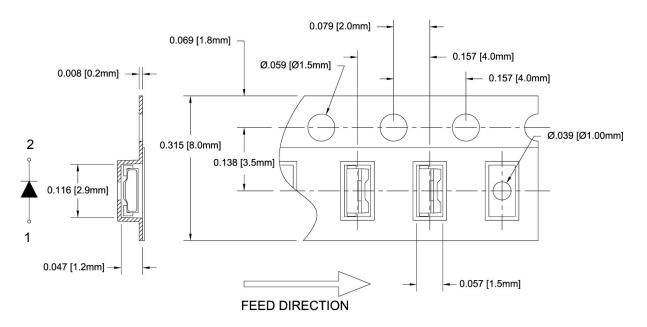


Recommended Soldering Conditions



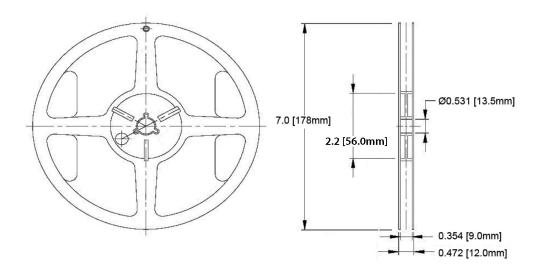
Tape and Reel Dimensions

Note: 3000 pcs/Reel



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





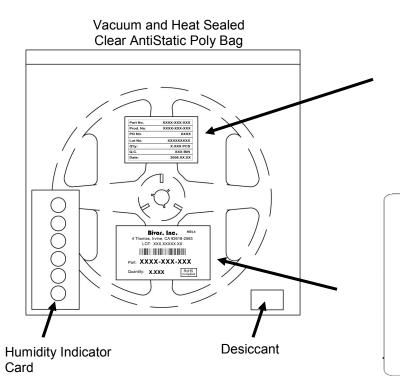
Outline Drawings Notes:

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

 $X.XXX \pm 0.010''$ $X.X \pm 0.1''$

Packaging and Labeling Plan

Note: 1 Reel / Bag



Part No.	XXXX-XXX-XXX		
Prod. No.	XXXX-XXX-XXX		
PO No.	XXXX		
Lot No.	XXXXXXXX		
Q'ty:	X.XXX PCS		
Q.C.	XXX BIN		
Date:	2008.XX.XX		

Internal Quality Control Label

Bivar, Inc.

MSL4

4 Thomas, Irvine, CA 92618-2593 LOT: XXX.XXXXXXXX



Part: XXXX-XXX

Quantity: X.XXX

RoHS Compliant

Bivar Standard Packaging Label