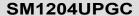
# BIVAR



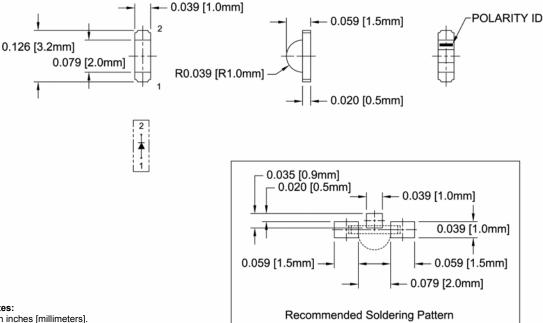
- ♦ Industry Standard 1204 Package
- **♦** RoHS Compliant
- **♦** Right Angle Mounting
- **♦** Water Clear Lens
- **♦ Wide Viewing Angle**
- ♦ Ideal for Status Indication and Display



Bivar Surface Mount 1204 package LED may be used in nearly any lighting or indication application. The right angle package is ideal for small scale applications such as edge lighting or general indication. Low power consumption and excellent long life reliability are ideal for battery powered equipment. Wide variety of wavelength and intensity combinations are available to meet any illumination need. Bivar offers water clear LED lens for maximum luminous intensity. The SM1204 LED is packaged in standard tape and reels for pick and place assemblies.

Part Number	Material	Emitted Color	Peak Wavelength λp(nm) TYP.	Lens Appearance	Luminous Intensity (mcd) TYP.	Viewing Angle
SM1204UPGC	InGaN/GaN	GREEN	510	Water Clear	285	110°

#### **Outline Dimensions**



#### Outline Drawings Notes:

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







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



### **Absolute Maximum Ratings**

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

Power Dissipation	100 mW
Forward Current ( DC )	25 mA
Peak Forward Current <sup>1</sup>	100 mA
Reverse Voltage	5 V
Operating Temperature Range	-30 ~ +80°C
Storage Temperature Range	-40 ~ +85°C
Lead Soldering Temperature ( 3 mm from the base of the epoxy bulb ) <sup>2</sup>	260°C

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

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

#### **Electrical / Optical Characteristics**

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

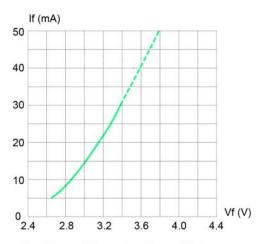
Part Number	Forward Voltage (V) <sup>1</sup>			Recommend Forward Current (mA)		Reverse Current (µA)	Dominant		Luminous Intensity Iv (mcd)			Viewing Angle 2 Θ ½ (deg)		
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
SM1204UPGC	/	3.3	4.2	/	20	/	10	/	515	/	180	285	/	110

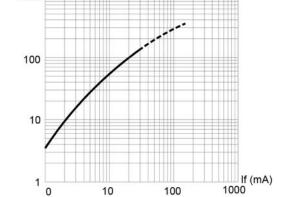
Notes: 1. Tolerance of forward voltage: ±0.05V. 2. Tolerance of dominant wavelength: ±1.0nm.



# **Typical Electrical / Optical Characteristics**

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

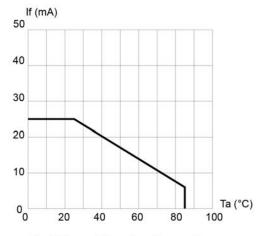




1000

Fig. 1 Forward Current vs. Forward Voltage

Fig. 2 Relative Luminous Intensity vs. Forward Current



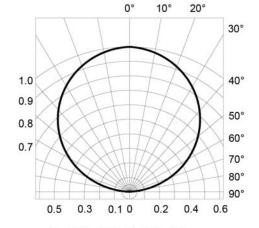
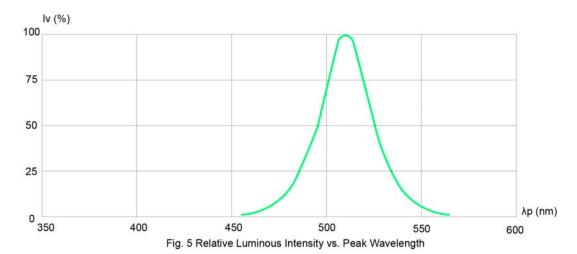


Fig. 3 Forward Current vs. Temperature

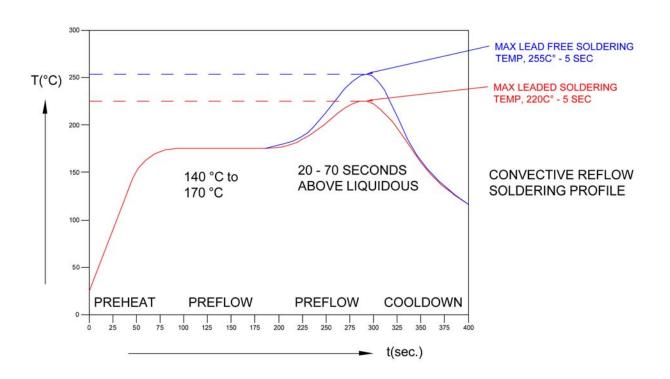
Fig. 4 Directivity Radiation Diagram



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

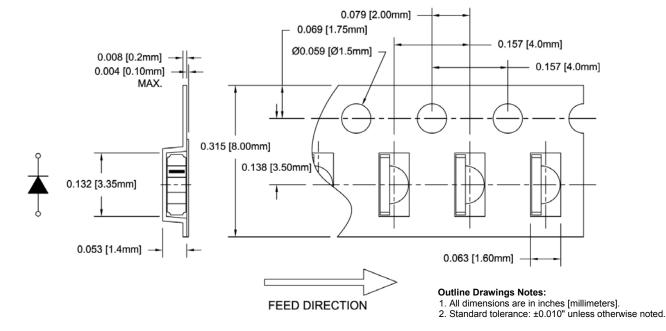


#### **Recommended Soldering Conditions**



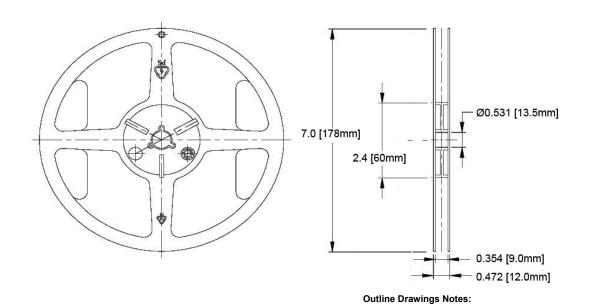
### **Tape and Reel Dimensions**

Note: 3000 PCS/Reel



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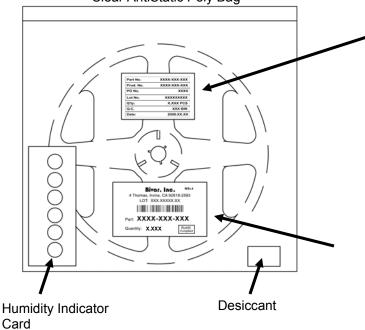




### **Packaging and Labeling Plan**

Note: 1 Reel / Bag

Vacuum and Heat Sealed Clear AntiStatic Poly 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

1. All dimensions are in inches [millimeters].

2. Standard tolerance unless otherwise noted: X.XXX ± 0.010"

Internal Quality Control

#### Bivar. Inc.

MSL4

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



Part: XXXX-XXX

Quantity: XXXX

RoHS Compliant

Bivar Standard Packaging Label

### **Mouser Electronics**

**Authorized Distributor** 

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

BIVAR: SM1204UPGC