1.8mm Package Discrete LED BLUE, Low Current

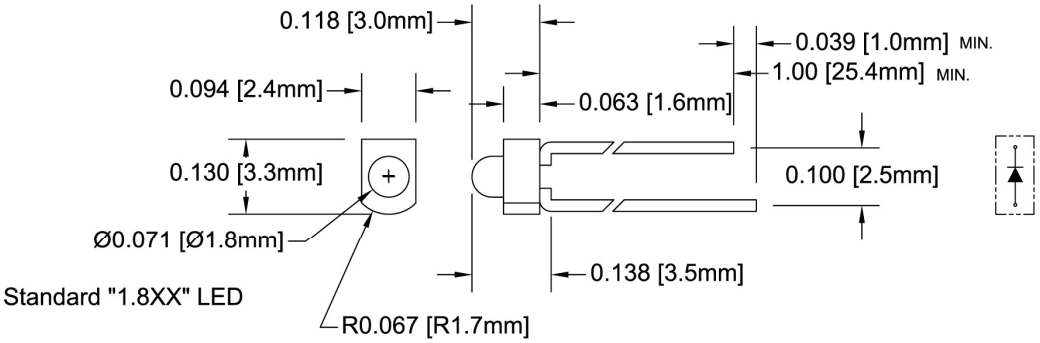
1.8BWXL

- **1.8mm Small Footprint Package**
- **RoHS Compliant**
- **Water Clear (C) and Diffused (D) Lenses**
- **Available in a Shouldered Lead Frame style**
- **2 mA Low Operating Current**
- **Ideal for Status Indication and Display**
- **Recommended for Bivar H-381C and H-485C holder assemblies**

Bivar 1.8mm Package 2 mA Low Current LED is special binned at 2 mA and is ideal for those applications where lower power budget and smaller indication lighting are required such as solar panel or battery-powered portable devices. Bivar offers water clear LED lens for maximum light output and diffused LED lens for uniform light output, The Shouldered Lead frame LED has a built in strain relief feature which is ideal for Right Angle Holder assemblies that require lead bends.

Part Number	Material	Emitted Color	Peak. Wavelength λp(nm) TYP.	Lens Appearance	Viewing Angle
1.8BWCL	GaN/SiC	BLUE	430nm	Water Clear	35°
1.8BWDL				Blue Diffused	50°

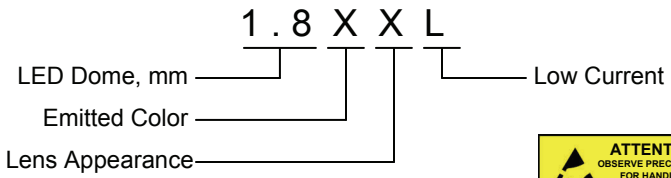
Outline Dimensions



Recommended Mounting Hole Size = $Ø.032^{+.003}_{-.002}$

Outline Drawings Notes:
1. All dimensions are in inches [millimeters].
2. Standard tolerance: ±0.010" unless otherwise noted.
3. Tolerance of overall epoxy outline: ±0.020" unless otherwise noted.
4. Epoxy meniscus may extend to 0.060" max.

Part Number Designation



ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

RoHS Compliant

Moisture Sensitivity Levels 1

Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	20 mW
Forward Current (DC)	7 mA
Peak Forward Current [1]	/ mA
Reverse Voltage	5 V
Operating Temperature Range	-25 ~ +85°C
Storage Temperature Range	-30 ~ +100°C
Lead Soldering Temperature (3 mm from the base of the epoxy bulb) [2]	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°C & I_F = 2 mA unless otherwise noted

Part Number	Forward Voltage (V)[1]			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm)[2]			Luminous Intensity Iv (mcd)			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
1.8BWCL	/	3.8	4.2	/	2	/	100	/	/	/	/	2	/	35
1.8BWDL								/	/	/	/	1	/	50

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

Typical Electrical / Optical Characteristics

T_A = 25°C unless otherwise noted

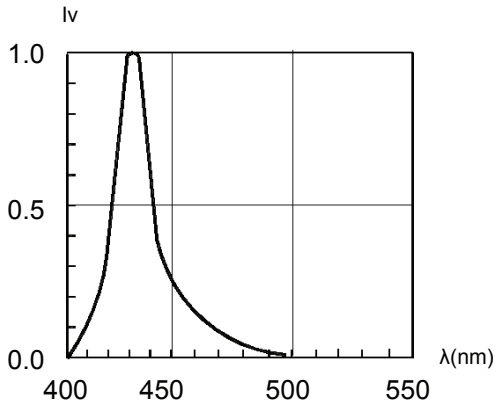


Fig. 1 Relative Luminous Intensity vs. Wavelength

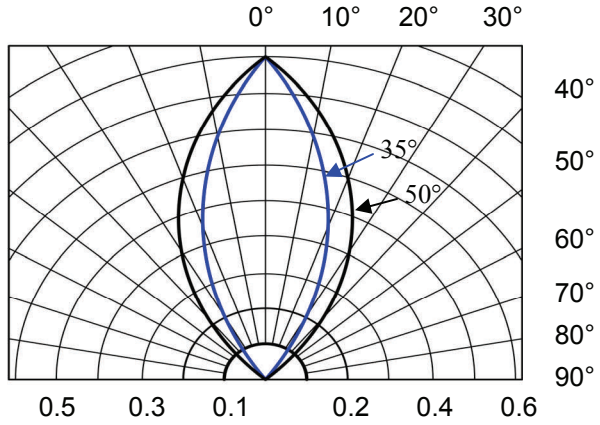


Fig. 2 Directivity Radiation Diagram

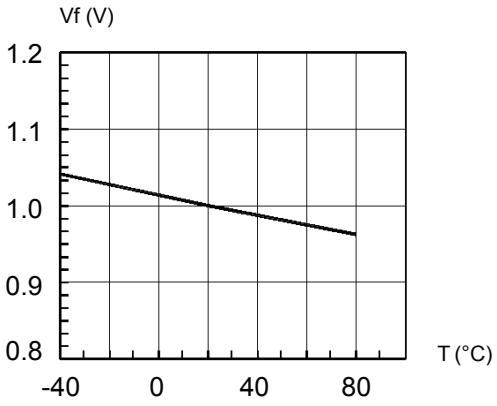


Fig. 3 Forward Voltage vs. Temperature

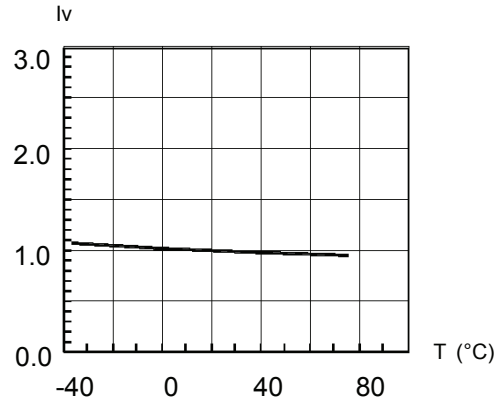
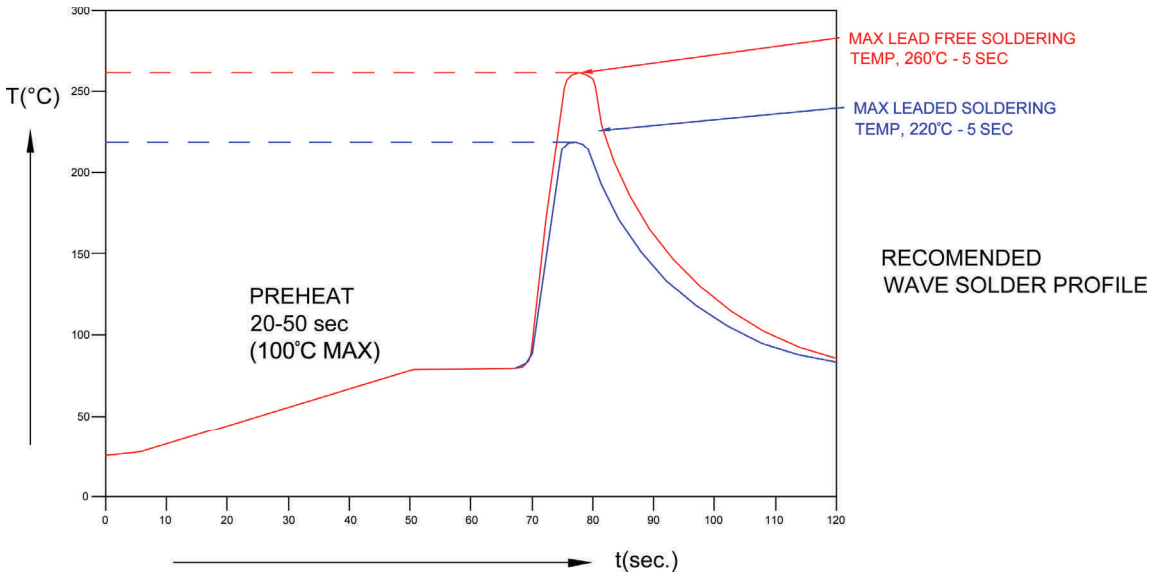


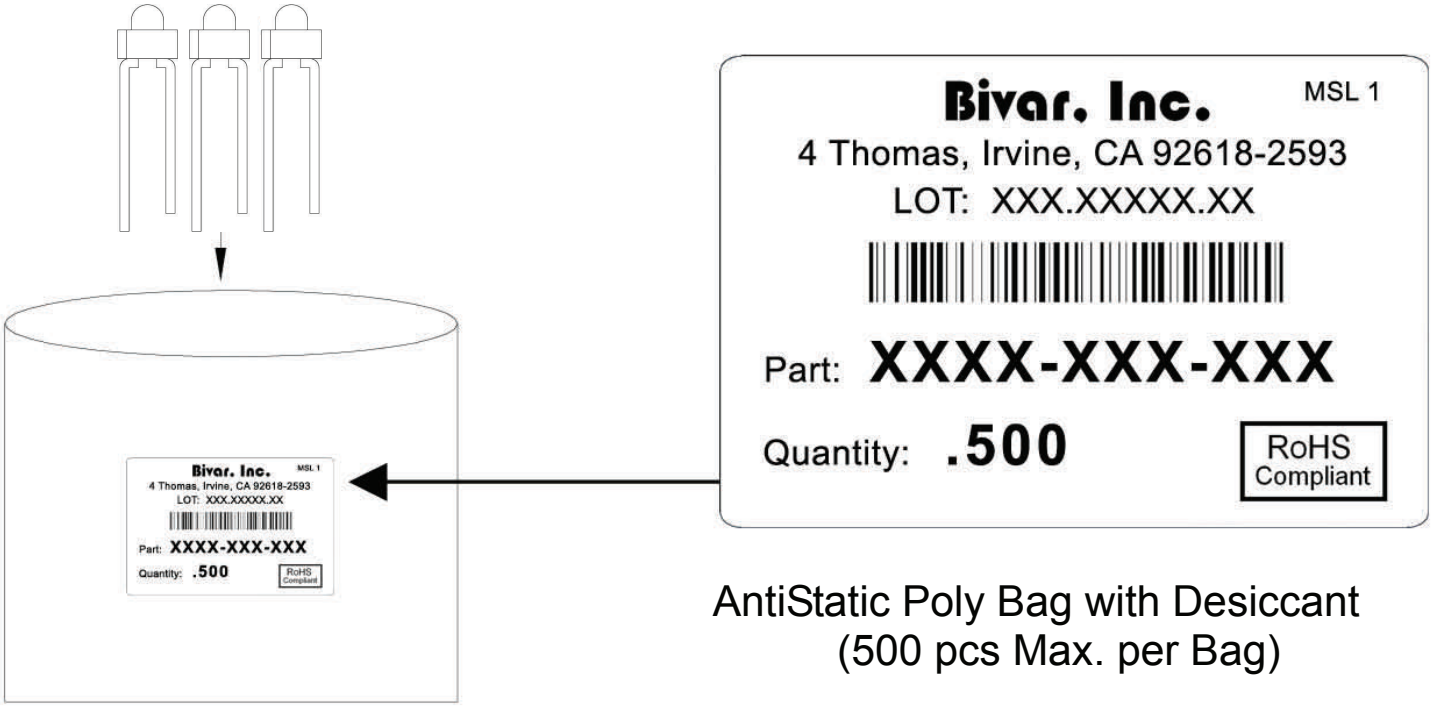
Fig. 4 Relative Luminous Intensity vs. Temperature

Recommended Soldering Conditions



Recommended Lead Free Wave Soldering Profile	
Preheat Temperature: 100ºC Max.	Peak Temperature: 260ºC Max.
Preheat Time: 20 ~ 50 Seconds	Solder Time Above 217ºC: 5 Seconds Max.
Note: Turn off top heater at preheat to prevent the lamp body directly exposed to the heat source.	

Packaging and Labeling Plan



AntiStatic Poly Bag with Desiccant
(500 pcs Max. per Bag)

Mouser Electronics

Authorized Distributor

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

BIVAR:

1.8BWCL 1.8BWDL