

5mm (T1 3/4) Package Discrete LED BLUE

BIVAR

5BW~~X~~-~~X~~

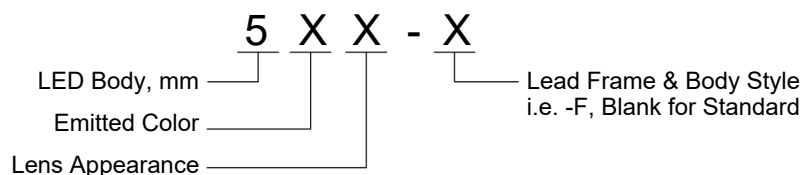
- ◆ Industry Standard 5mm (T1 3/4) Package
- ◆ RoHS Compliant
- ◆ Water Clear (**C**) and Diffused (**D**) Lenses
- ◆ Available in Flange (**F**) and Standard (**Blank**) Lead Frame styles
- ◆ Ideal for Status Indication and Display



Bivar 5mm T1 3/4 Package LED may be used in almost any application. Bivar offers water clear LED lens for maximum light output and diffused LED lens for uniform light output. The Flange LED is ideal for Panel Mount Clip & Ring assemblies and the Standard Lead frame LED is ideal for vertical spacer assemblies without lead bends.

Part Number	Material	Emitted Color	Peak Wavelength λ_p (nm) TYP.	Lens Appearance	Viewing Angle
5BWD-F	InGaN/SiC	BLUE	460	Blue Diffused	50°
5BWC			460	Water Clear	18°
5BWD			425	Blue Diffused	30°

Part Number Designation

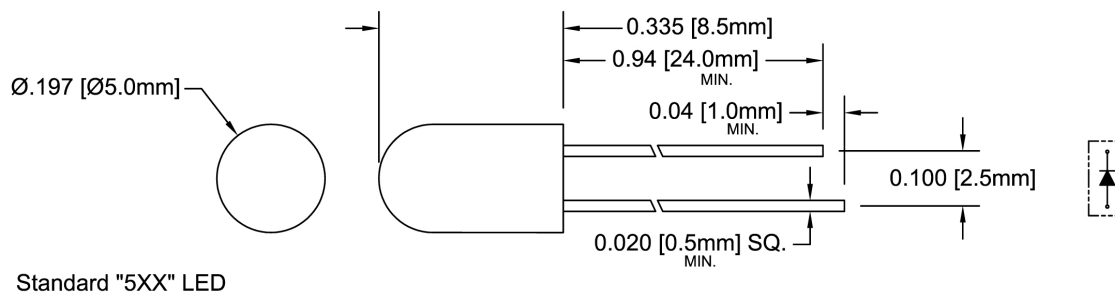
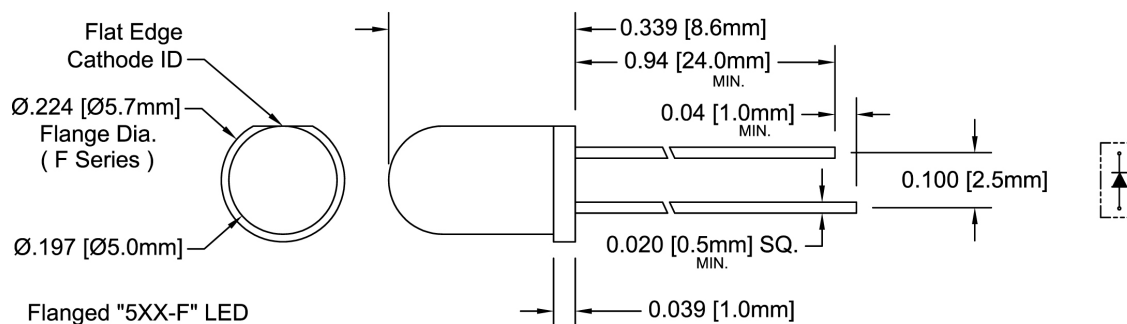


Bivar reserves the right to make changes at any time without notice.

5mm (T1 3/4) Package Discrete LED BLUE



Outline Dimensions



Recommended Mounting
Hole Size = $\text{Ø}0.032^{+.003}_{-.002}$

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.

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

5mm (T1 3/4) Package Discrete LED BLUE



Absolute Maximum Ratings

T_A = 25°C unless otherwise noted

Power Dissipation	170 mW
Forward Current (DC)	25 mA
Peak Forward Current ¹	100 mA
Reverse Voltage	5 V
Operating Temperature Range	-40 ~ +80°C
Storage Temperature Range	-40 ~ +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 = 20 mA unless otherwise noted

Part Number	Forward Voltage (V) ¹			Recommend Forward Current (mA)			Reverse Current (μA)	Dominant Wavelength (nm) ²			Luminous Intensity I _v (mcd)			Viewing Angle 2 Θ ½ (deg)
	MIN	TYP	MAX	MIN	TYP	MAX	MAX	MIN	TYP	MAX	MIN	TYP	MAX	TYP
5BWD-F	3.1	3.8	4.5	/	20	/	20	460	465	470	10	20	35	50
5BWC	3.5	4.0	4.5	/	20	/	10	460	465	470	60	150	300	18
5BWD								425	430	435	6	15	25	30

Notes: 1. Tolerance of forward voltage: ±0.05V.
2. Tolerance of dominant wavelength: -1.0nm of MIN & +1.0nm of MAX.

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

5mm (T1 3/4) Package Discrete LED BLUE

BIVAR

Typical Electrical / Optical Characteristics For 5BWD-F

T_A = 25°C unless otherwise noted

Fig1.Forward Current vs.Forward Voltage

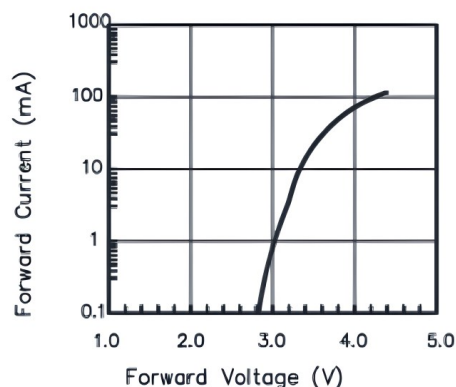


Fig2.Relative Intensity vs. Forward Current

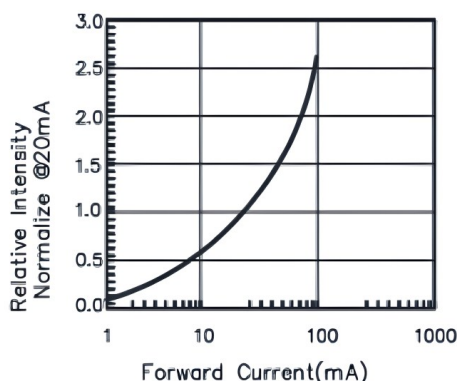


Fig3.Forward Voltage vs. Temperature

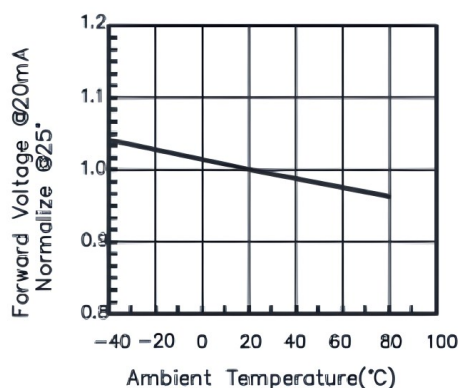


Fig4.Relative Intensity vs. Temperature

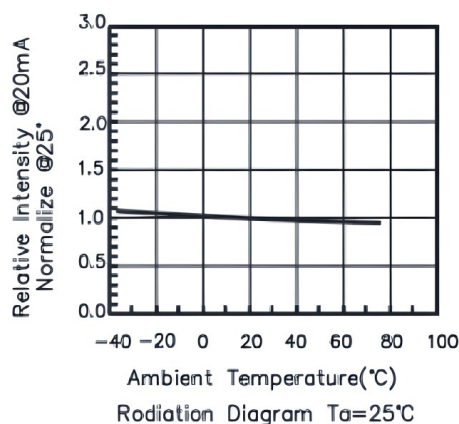
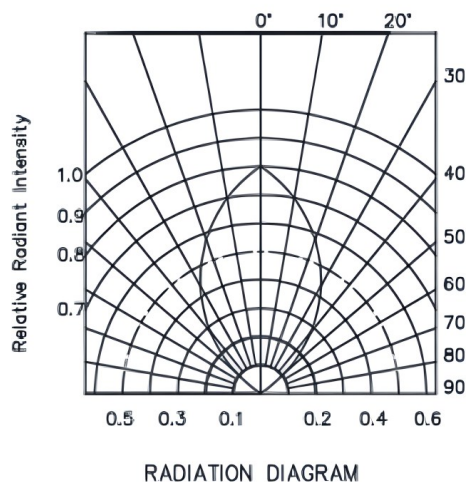
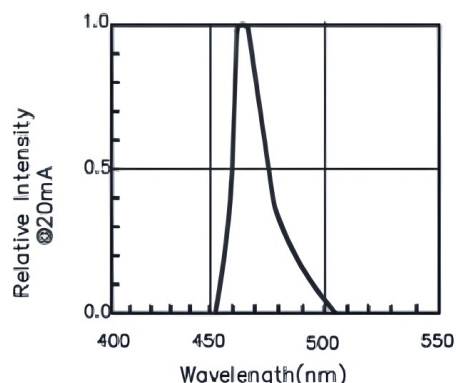


Fig5.Relative Intensity vs. Wavelength



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

5mm (T1 ¾) Package Discrete LED BLUE



Typical Electrical / Optical Characteristics For 5BWC

T_A = 25°C unless otherwise noted

Fig1.Forward Current vs.Forward Voltage

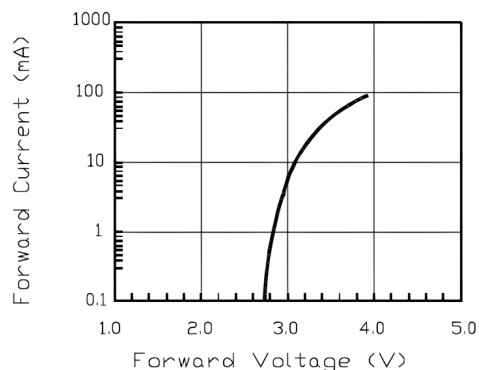


Fig2.Relative Intensity vs. Forward Current

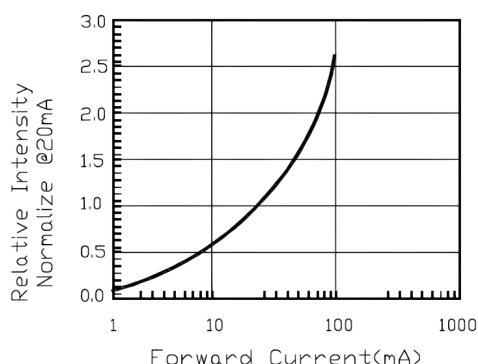


Fig3.Forward Voltage vs. Temperature

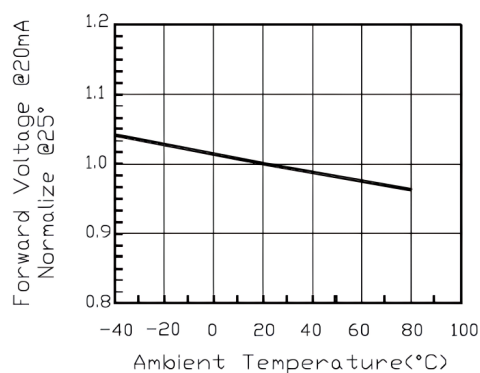


Fig4.Relative Intensity vs. Temperature

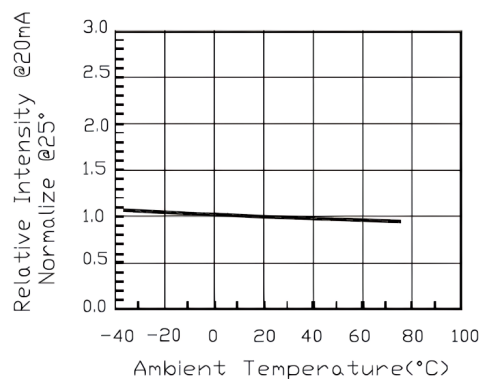
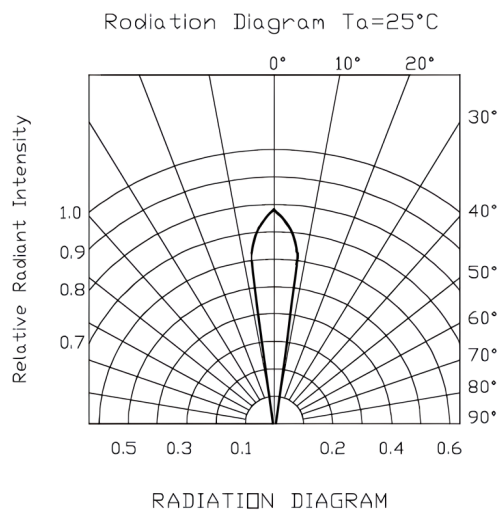
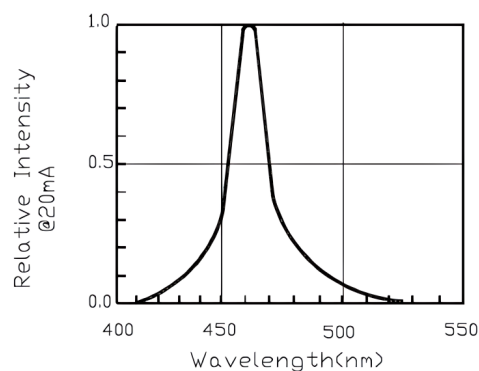


Fig5.Relative Intensity vs. Wavelength



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

5mm (T1 3/4) Package Discrete LED BLUE



Typical Electrical / Optical Characteristics For 5BWD

T_A = 25°C unless otherwise noted

Fig1.Forward Current vs.Forward Voltage

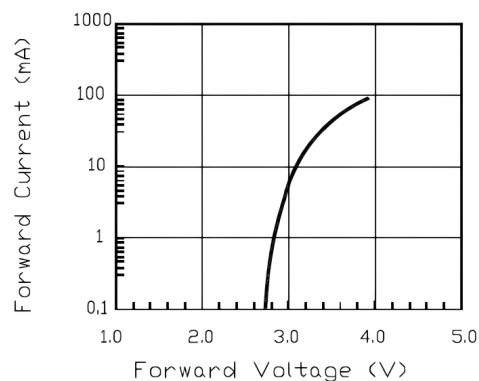


Fig2.Relative Intensity vs. Forward Current

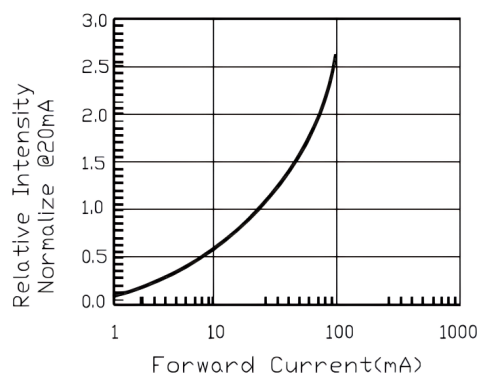


Fig3.Forward Voltage vs. Temperature

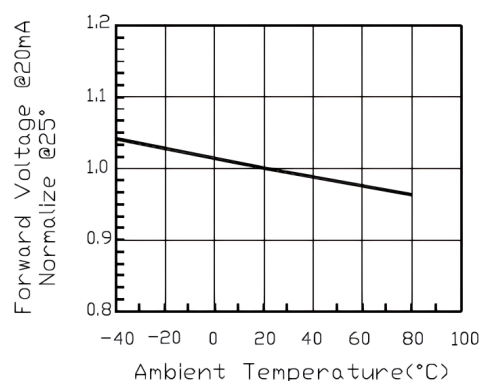


Fig4.Relative Intensity vs. Temperature

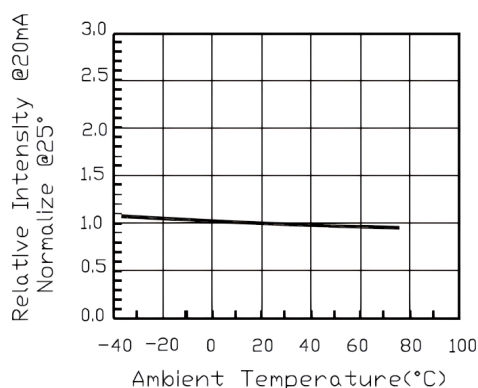
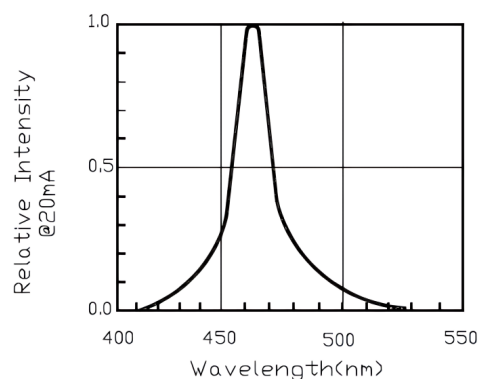
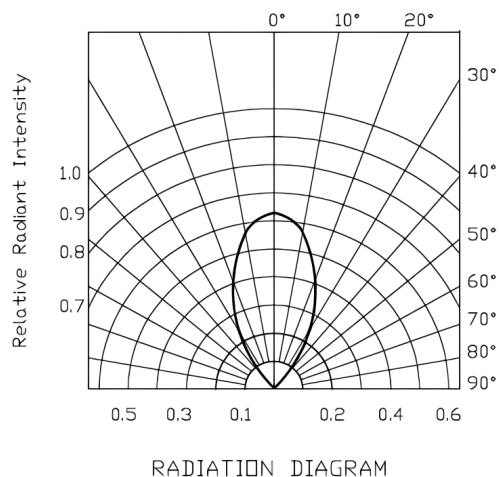


Fig5.Relative Intensity vs. Wavelength



Rodlation Diagram Ta=25°C

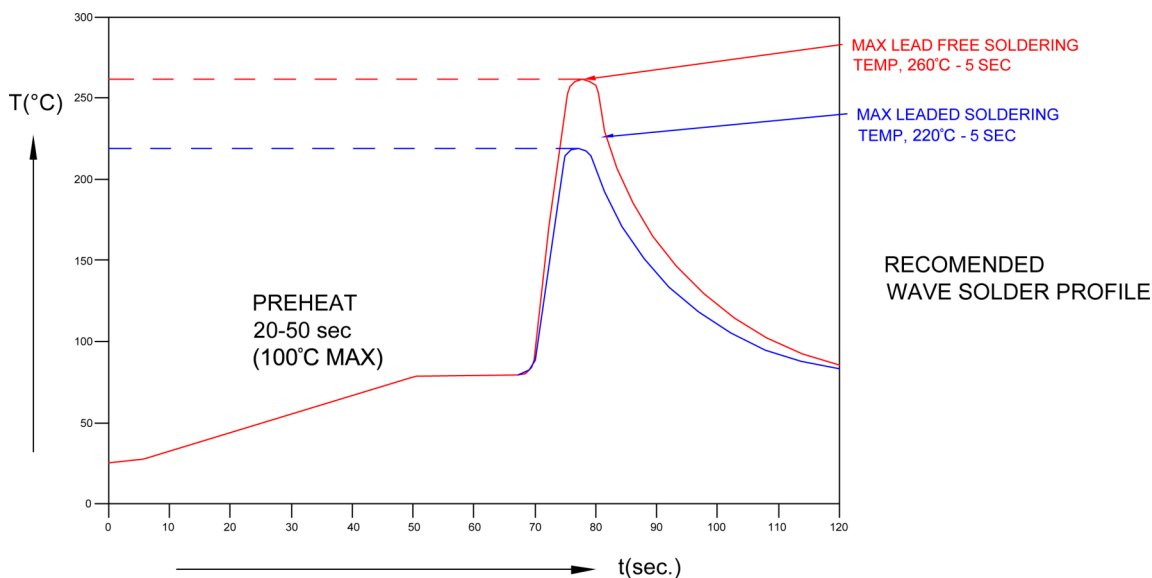


Bivar reserves the right to make changes at any time without notice.

5mm (T1 3/4) Package Discrete LED BLUE

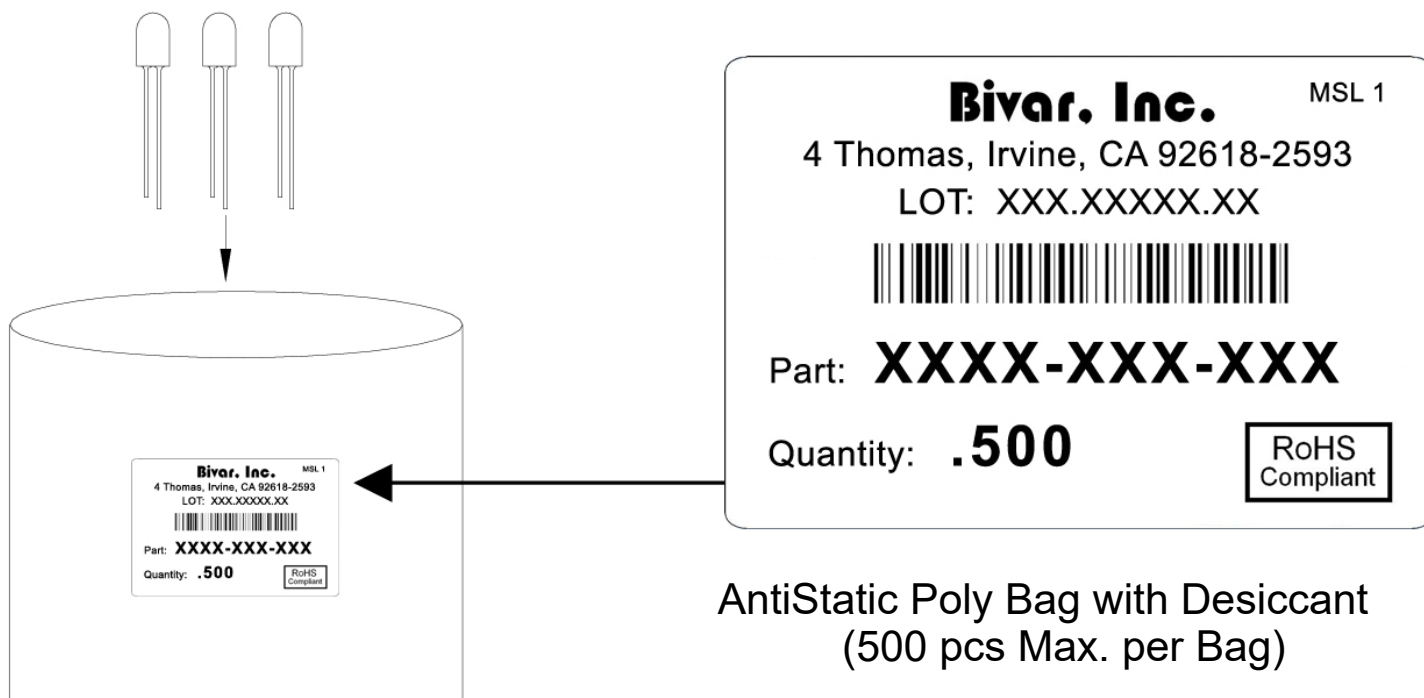


Recommended Soldering Conditions



Recommended Lead Free Wave Soldering Profile	
Preheat Temperature: 100°C Max.	Peak Temperature: 260°C Max.
Preheat Time: 20 ~ 50 Seconds	Solder Time Above 217°C: 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



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