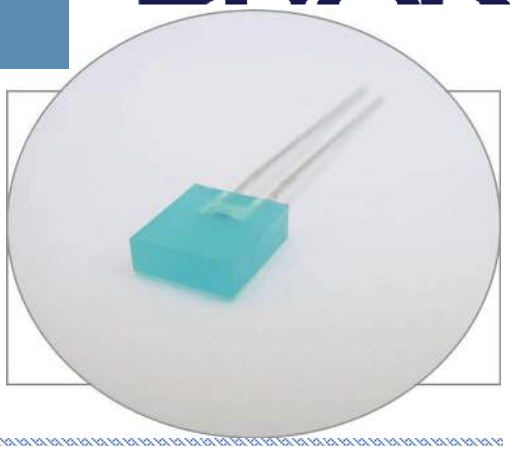
Rectangular Package Discrete LED BLUE, 2 x 7 mm

R7BWX

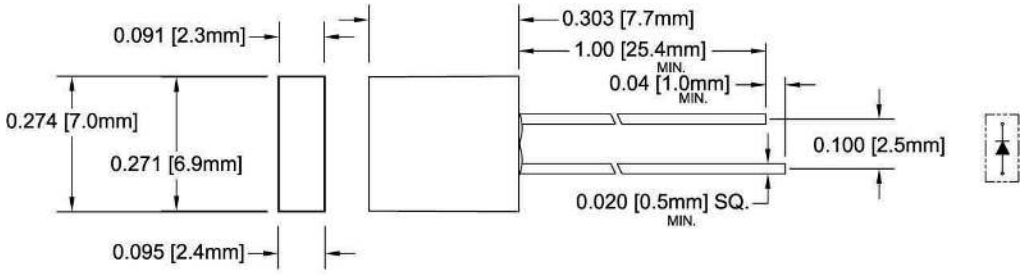
- **Rectangular Package**
- **RoHS Compliant**
- **Water Clear (C), Diffused (D), and Tinted (T) Lenses**
- **Available in Standard Lead Frame style**
- **Ideal for Status Indication and Bar Graph Displays**



Bivar Rectangular 2 x 7mm Package LED may be used in almost any application requiring greater indication visibility and is ideal for creating bar graph displays when arranged in linear LED arrays. Bivar offers water clear LED lens for maximum light output, diffused LED lens for uniform light output, and tinted lens to identify the color of the LED. The Standard Lead frame LED is ideal for vertical spacer assemblies and Right Angle Holder assemblies that require lead bends.

Part Number	Material	Emitted Color	Peak. Wavelength λp(nm) TYP.	Lens Appearance	Viewing Angle
R7BWC	GaN/SiC	BLUE	430nm	Water Clear	100°
R7BWD				Blue Diffused	120°
R7BWT				Blue Tinted	100°

Outline Dimensions



Standard "R7XX" LED

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

R 7 X X

- R 7 → LED Body, mm
- X → Emitted Color
- X → Lens Appearance

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	150 mW
Forward Current (DC)	25 mA
Peak Forward Current [1]	70 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 = 20 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
R7BWC	/	4.0	4.5	/	20	/	100	/	/	/	/	6	/	100
R7BWD								/	/	/	/	4	/	120
R7BWT								/	/	/	/	6	/	100

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

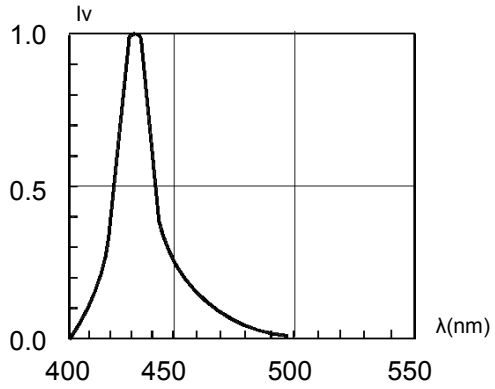


Fig. 1 Relative Luminous Intensity vs. Wavelength @ 20mA

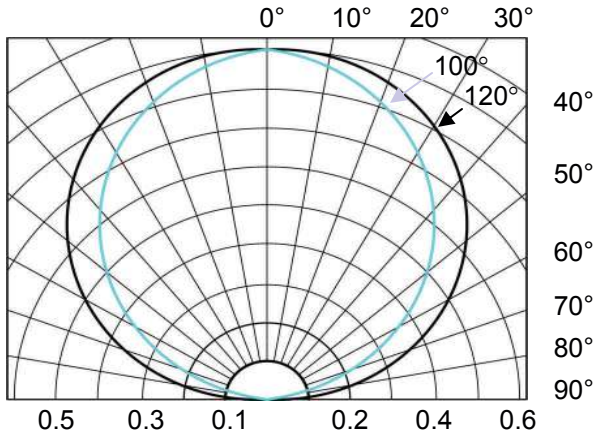


Fig. 2 Directivity Radiation Diagram

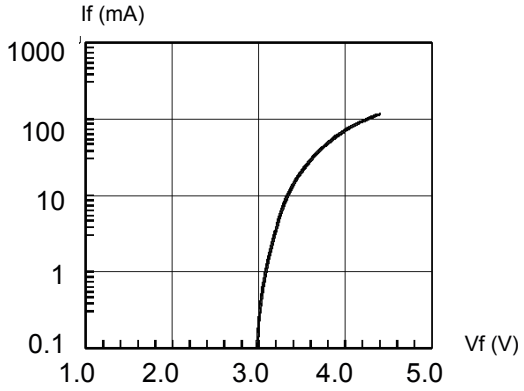


Fig. 3 Forward Current vs. Forward Voltage

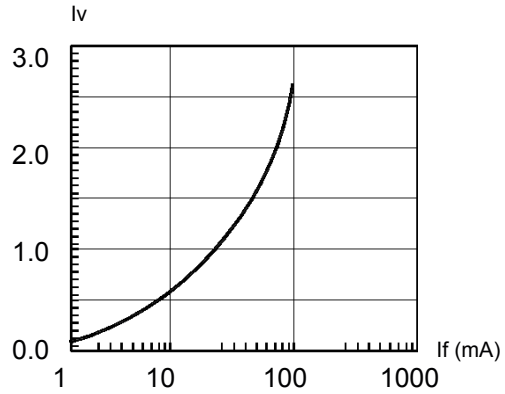


Fig. 4 Relative Luminous Intensity vs. Forward Current Normalize @ 20 mA

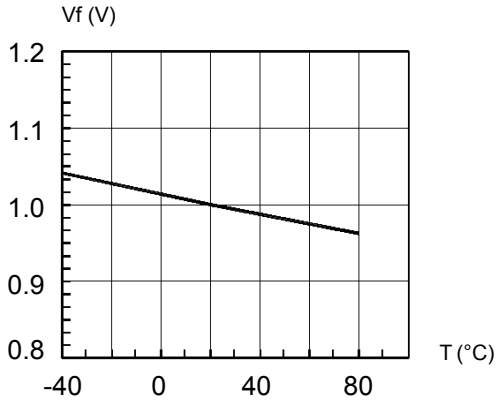


Fig. 5 Forward Voltage vs. Temperature

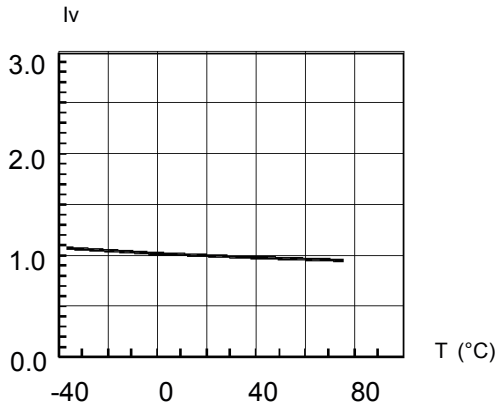
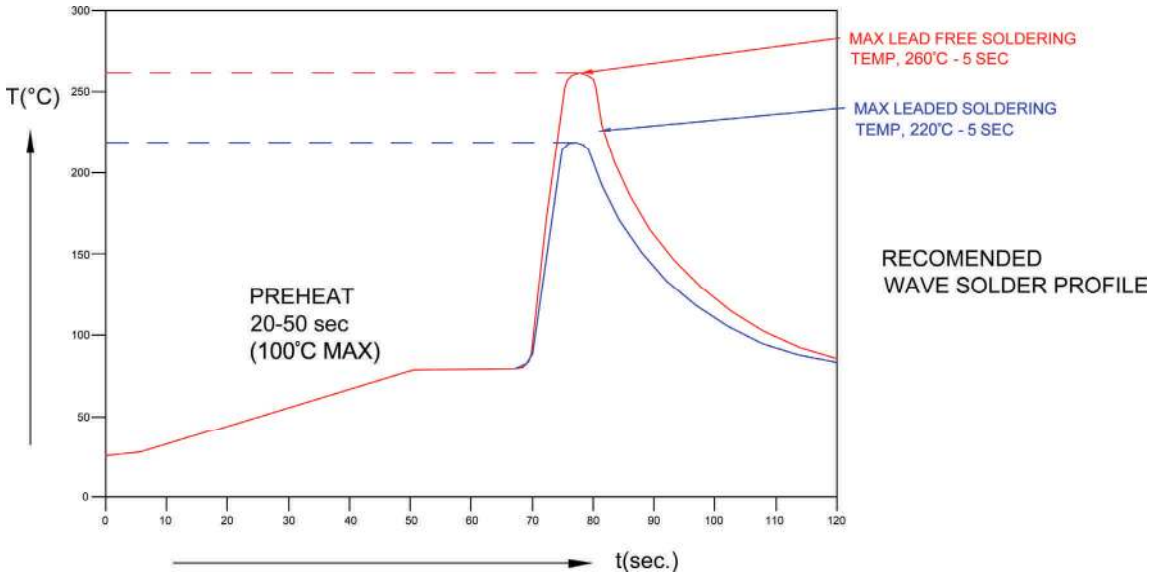


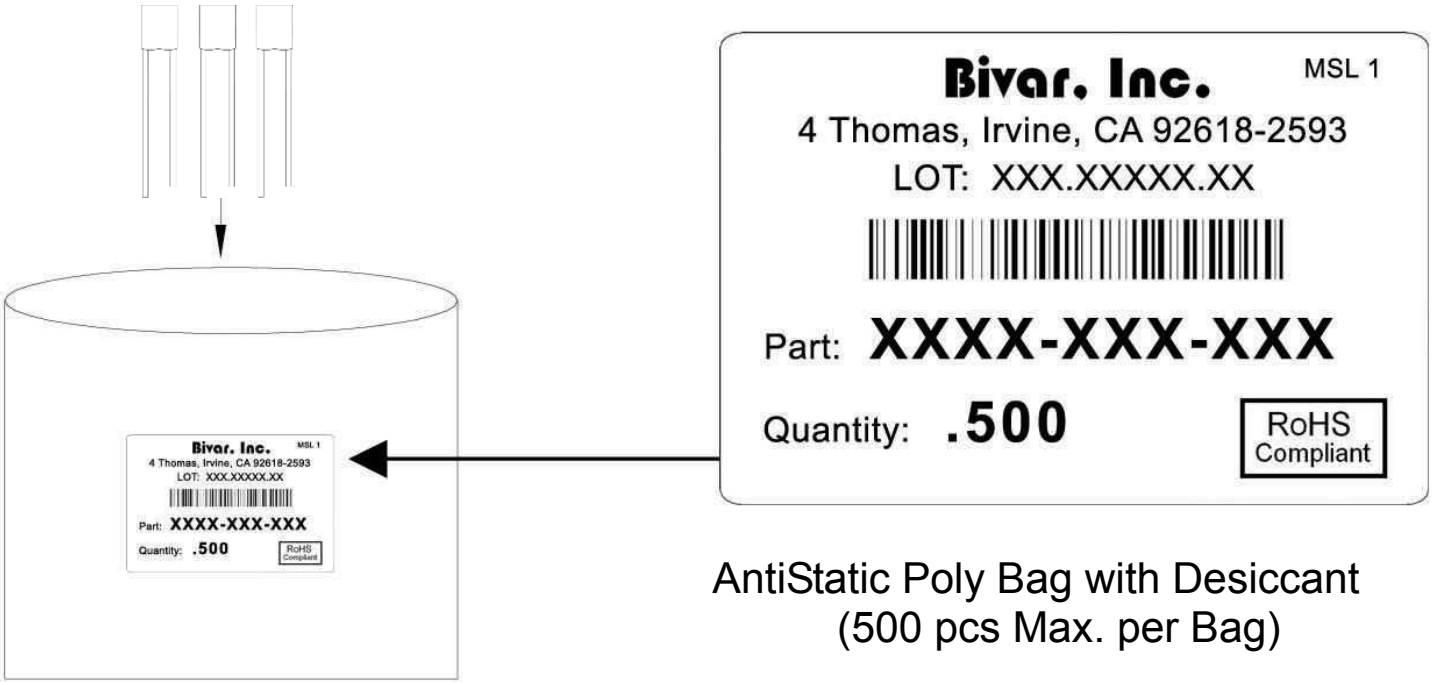
Fig. 6 Relative Luminous Intensity vs. Temperature

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)