

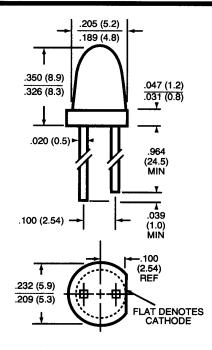
# SUPER BRIGHT T-1 ¾ (5mm) LED LAMP – Water Clear

SUPER BLUE

**MV8B11** 

**MV8B12** 

### PACKAGE DIMENSIONS



### **DESCRIPTION**

These T-1 ¾ super-bright blue LEDs have a narrow viewing angle of 10° for concentrated light output. The blue diode chip is constructed with GaN/SiC technology and emits a peak wavelength of 430 nm.

### **FEATURES**

- Popular T-1 ¾ package
- Low drive current
- Solid state reliability
- Super high brightness
- Water clear optics
- Standard 100 mil. lead spacing

Note: 1) All dimensions are in inches (mm).

- Lead spacing is measured where the leads emerge from the package.
- 3) Protruded resin under the flange is 1.5mm (0.059") max.

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

DC Forward Current (I <sub>F</sub> )	30 mA		
Peak Forward Current (I <sub>F</sub> ) @ f = 1.0 KHz, Duty factor = 1/10	100 mA		
Power Dissipation (P <sub>d</sub> )	115 mW		
Reversed Voltage (V <sub>R</sub> ) I <sub>R</sub> = 10 µA	5		
Operating Temperature Range	-40°C to +100°C		
Storage Temperature Range	-40°C to +100°C		
Lead Soldering Time	5 secs @ 260°C for wave solder;		
_	10 secs @ 260°C for IR reflow		



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## ELECTRO-OPTICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise specified)

Part Number:		MV8B11	MV8B12	Test Condition
Luminous Intensity (mcd)				$I_F = 20 \text{ mA}$
	Minimum	400	630	
	Typical	600	940	
Forward Voltage (V <sub>F</sub> )				$I_F = 20 \text{ mA}$
	Typical	3.8	3.8	
	Maximum	4.5	4.5	
Peak Wavelength (nm)		430	430	$I_F = 20 \text{ mA}$
Spectral Line Half Width (nm)		65	65	$I_F = 20 \text{ mA}$
Viewing Angle (degrees)		10	10	$I_F = 20 \text{ mA}$

### TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

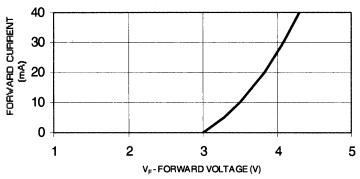


Fig 1. Foward Current vs. Forward Voltage

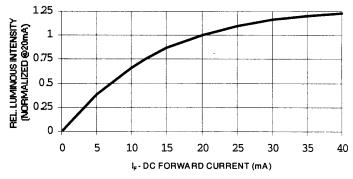


Fig 2. Rel. Luminous Intensity vs. DC Forward Current

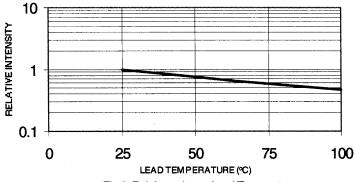


Fig 3. Rel. Intensity vs. Lead Temperature (Pulsed 20 mA; 300 us pulse, 10 ms period)

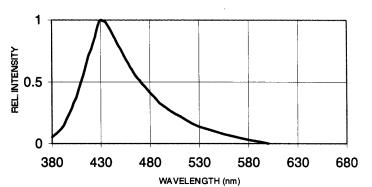


Fig. 4 Rel. Intensity vs. Wavelength



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### TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

 $(T_A = 25^{\circ}C)$ 

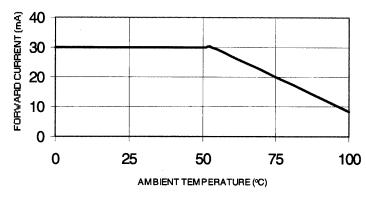


Fig 5. Forward Current vs. Ambient Temperature

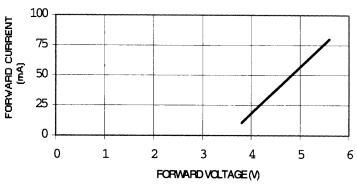


Fig. 6 Peak Forward Voltage vs. Forward Current (100 us test pulse, 1% duty cycle)

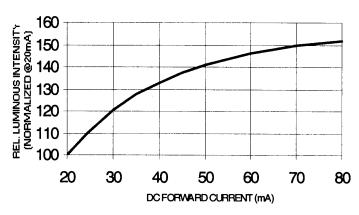


Fig. 7 Rel. Luminous Intensity vs. Peak Forward Current (300 us pulse width; 10 ms period)

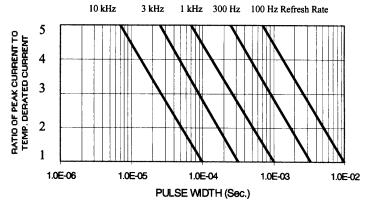


Fig. 8 Pulse Derating Curve



# SUPER BRIGHT T-1 3/4 (5mm) LED LAMP - Water Clear

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