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Fairchild Semiconductor
MV8B11

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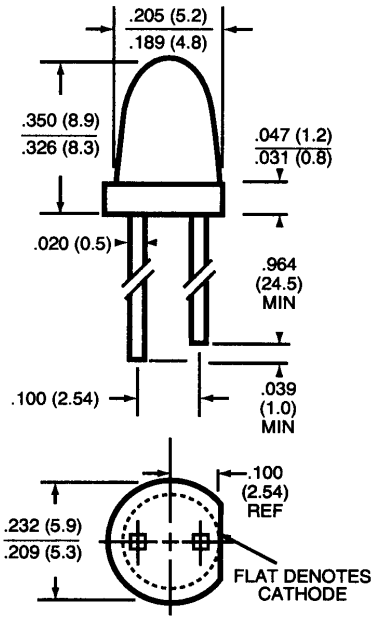
FAIRCHILD
SEMICONDUCTOR™

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

SUPER BLUE **MV8B11** **MV8B12**

PACKAGE DIMENSIONS



Note: 1) All dimensions are in inches (mm).
2) Lead spacing is measured where the leads emerge from the package.
3) Protruded resin under the flange is 1.5mm (0.059") max.

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**

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

DC Forward Current (I_F)	30 mA
Peak Forward Current (I_F) @ f = 1.0 KHz, Duty factor = 1/10	100 mA
Power Dissipation (P_d)	115 mW
Reversed Voltage (V_R) I_R = 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_A=25°C unless otherwise specified)

Part Number:		MV8B11	MV8B12	Test Condition
Luminous Intensity (mcd)				I_F = 20 mA
	Minimum	400	630	
	Typical	600	940	
Forward Voltage (V_F)				I_F = 20 mA
	Typical	3.8	3.8	
	Maximum	4.5	4.5	
Peak Wavelength (nm)		430	430	I_F = 20 mA
Spectral Line Half Width (nm)		65	65	I_F = 20 mA
Viewing Angle (degrees)		10	10	I_F = 20 mA

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (T_A = 25°C)

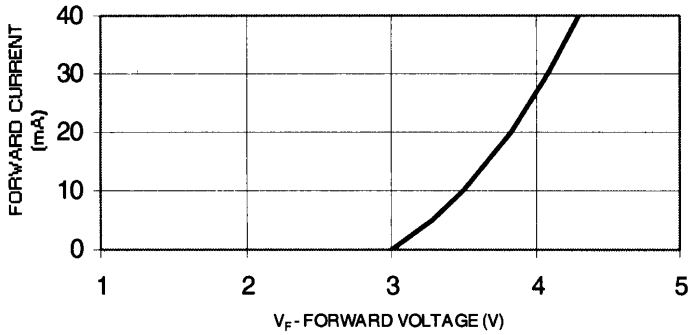

Fig 1. Foward Current vs. Forward Voltage

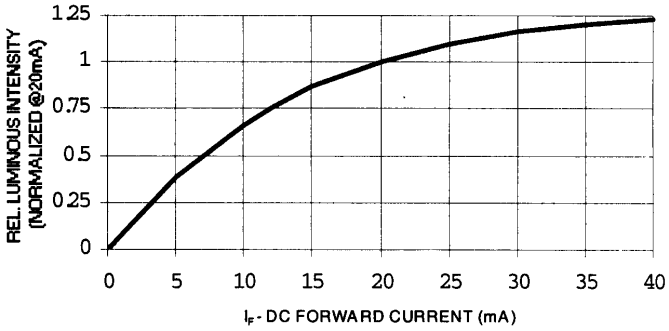

Fig 2. Rel. Luminous Intensity vs. DC Forward Current

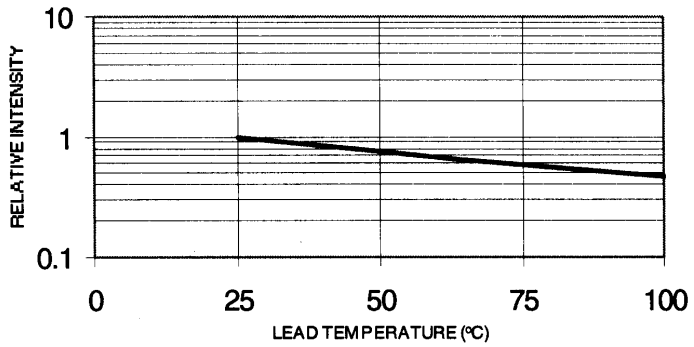

Fig 3. Rel. Intensity vs. Lead Temperature
(Pulsed 20 mA; 300 us pulse, 10 ms period)

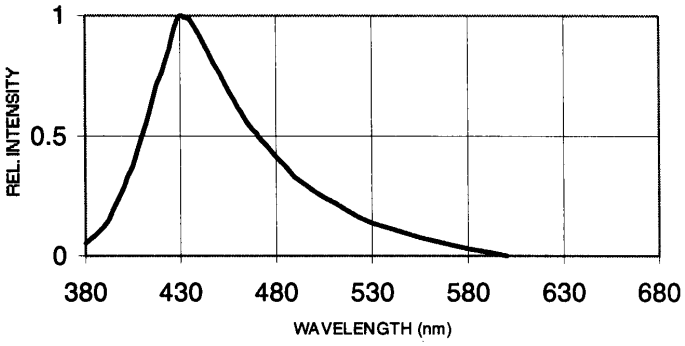

Fig. 4 Rel. Intensity vs. Wavelength

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TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (T_A = 25°C)

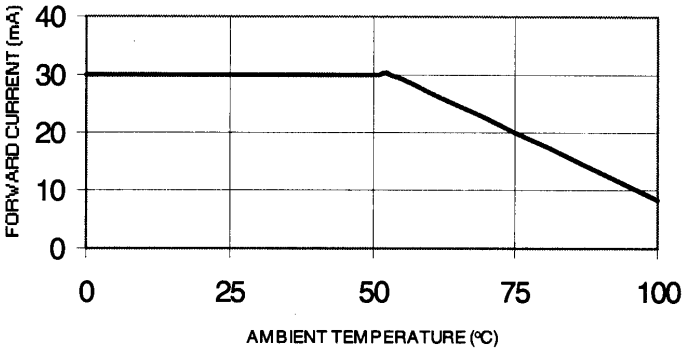

Fig 5. Forward Current vs. Ambient Temperature

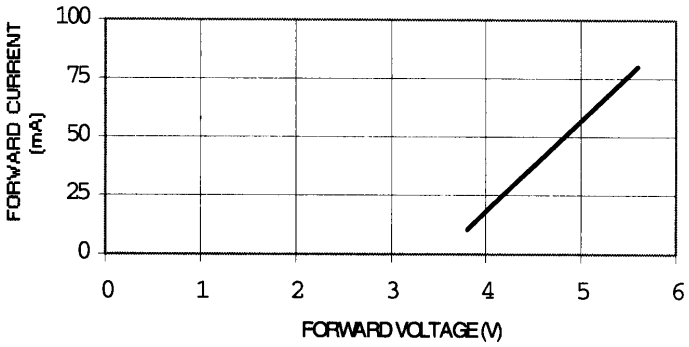

Fig. 6 Peak Forward Voltage vs. Forward Current (100 us test pulse, 1% duty cycle)

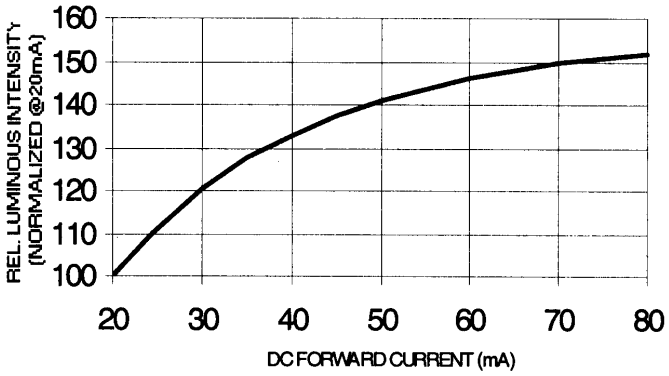

Fig. 7 Rel. Luminous Intensity vs. Peak Forward Current (300 us pulse width; 10 ms period)

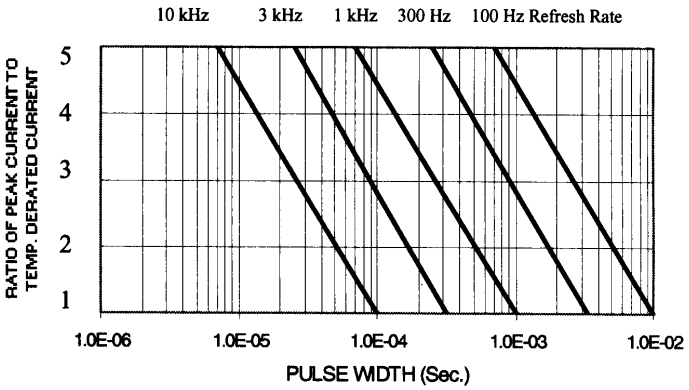

Fig. 8 Pulse Derating Curve

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