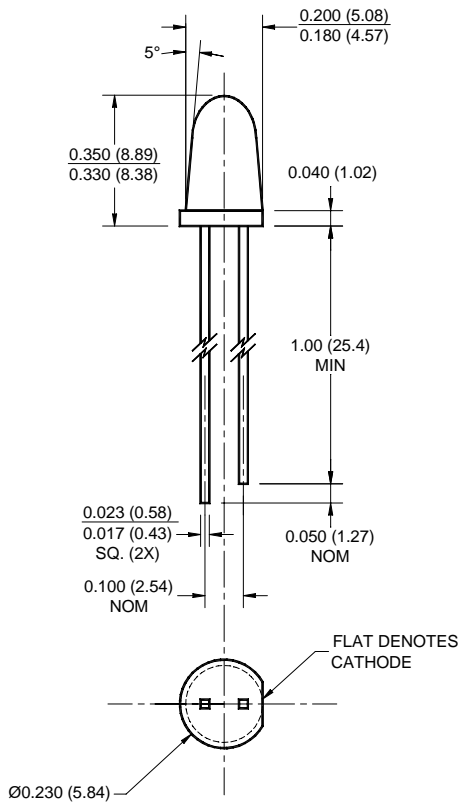


# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

## PACKAGE DIMENSIONS



### NOTES:

1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

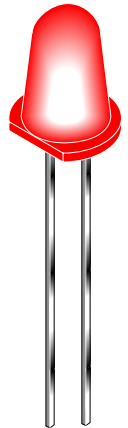
## SUPER RED

## MV801X

**MV8013 MV8014**  
**MV8015 MV8016**

## FEATURES

- Popular T-1 3/4 package
- Super high brightness suitable for outdoor applications
- Solid state reliability
- Water clear optics
- Standard 100 mil. lead spacing



## DESCRIPTION

This T-1 3/4 super bright LED has a narrow viewing angle of 12° for concentrated light output. The MV801X series is made with an AlInGaP LED that emits red light at 640 nm. It is encapsulated in a water clear epoxy lens package.

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

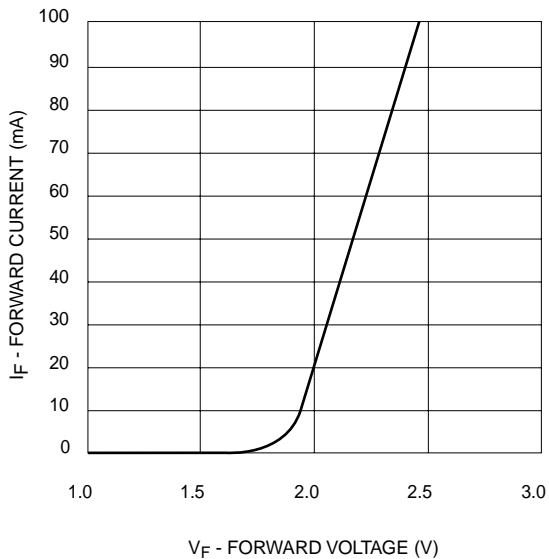
Parameter	Symbol	Rating	Unit
Operating Temperature	T <sub>OPR</sub>	-40 to +100	°C
Storage Temperature	T <sub>STG</sub>	-40 to +100	°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec	°C
Continuous Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>F</sub>	160	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	85	mW

<b>SUPER RED</b>	<b>MV801X</b>
<b>MV8013 MV8014</b>	
<b>MV8015 MV8016</b>	

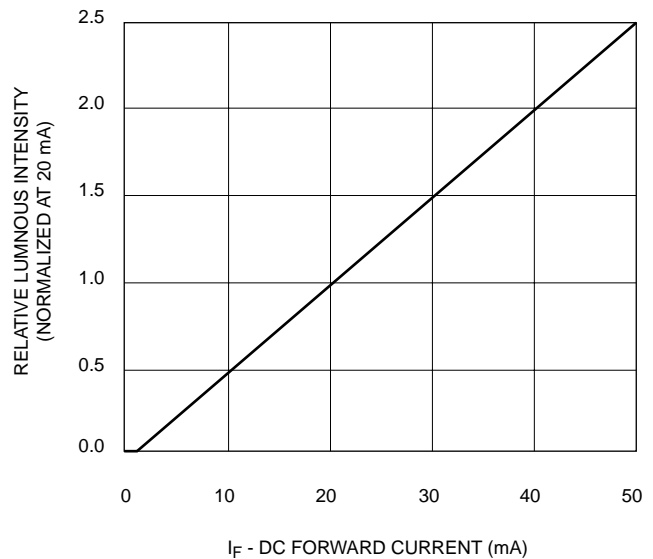
## ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> =25°C)

Part Number	MV8013	MV8014	MV8015	MV8016	Condition
Luminous Intensity (mcd)					I <sub>F</sub> = 20mA
Minimum	630	1000	1600	2500	
Typical	940	1500	2400	3500	
Forward Voltage (V)					I <sub>F</sub> = 20mA
Maximum	2.4	2.4	2.4	2.4	
Typical	2.1	2.1	2.1	2.1	
Peak Wavelength (nm)	640	640	640	640	I <sub>F</sub> = 20mA
Spectral Line Half Width (nm)	20	20	20	20	I <sub>F</sub> = 20mA
Viewing Angle (°)	12	12	12	12	I <sub>F</sub> = 20mA

## TYPICAL PERFORMANCE CURVES



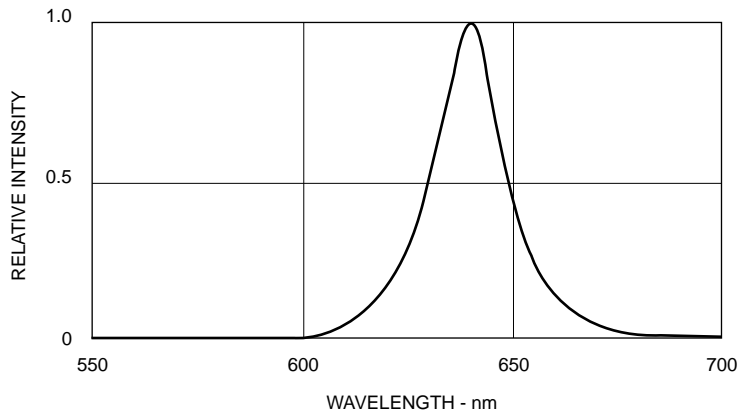
**Fig. 1 Forward Current vs. Forward Voltage**



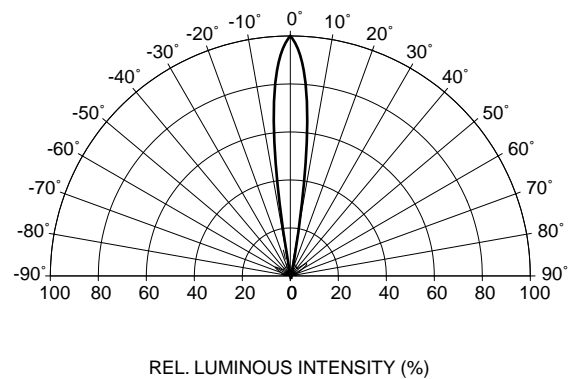
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**

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

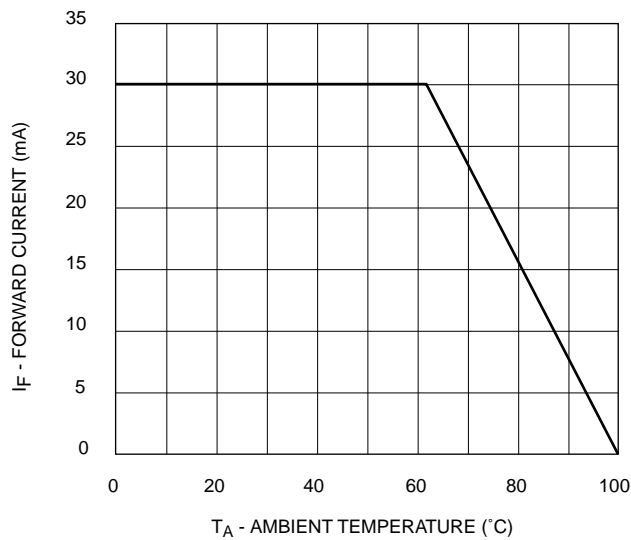
**SUPER RED** **MV801X**  
**MV8013 MV8014**  
**MV8015 MV8016**



**Fig. 3 Relative Intensity vs Peak Wavelength**



**Fig. 4 Radiation Diagram**



**Fig. 5 Current Derating Curve**

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.