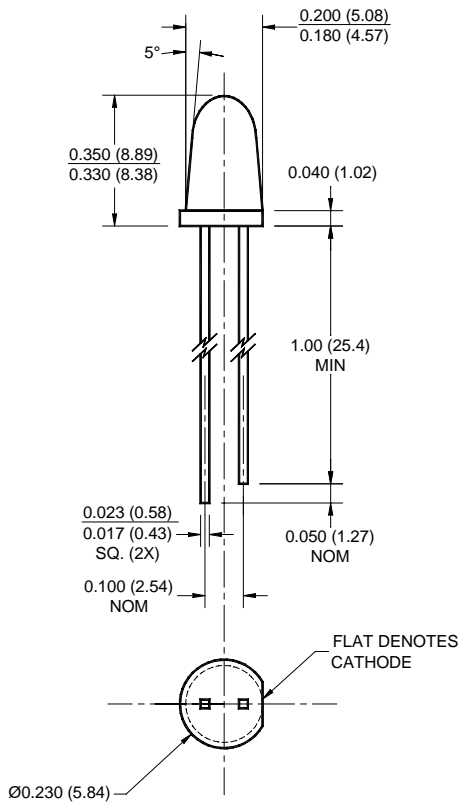


# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

## PACKAGE DIMENSIONS



### NOTES:

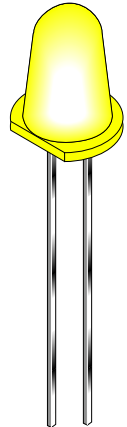
1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

**SUPER YELLOW**  
**MV8313 MV8314**  
**MV8315 MV8316**  
**MV8317**

**MV831X**

## 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 MV831X series is made with an AlInGaP LED that emits yellow light at 590 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

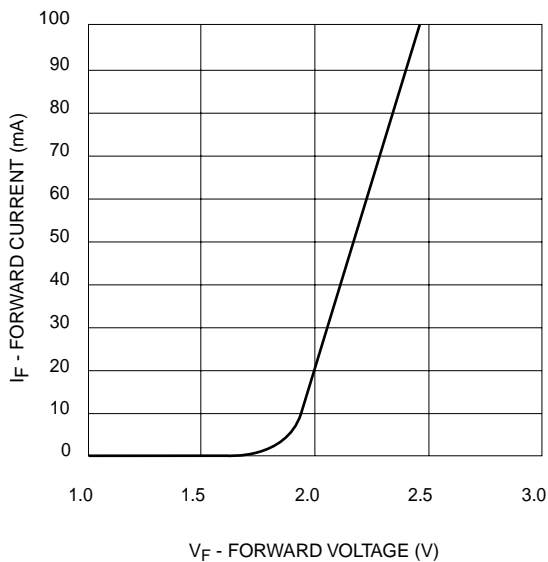
# SUPER BRIGHT T-1 3/4 (5 mm) LED LAMP - Water Clear

<b>SUPER YELLOW</b>	<b>MV831X</b>
<b>MV8313 MV8314</b>	
<b>MV8315 MV8316</b>	
<b>MV8317</b>	

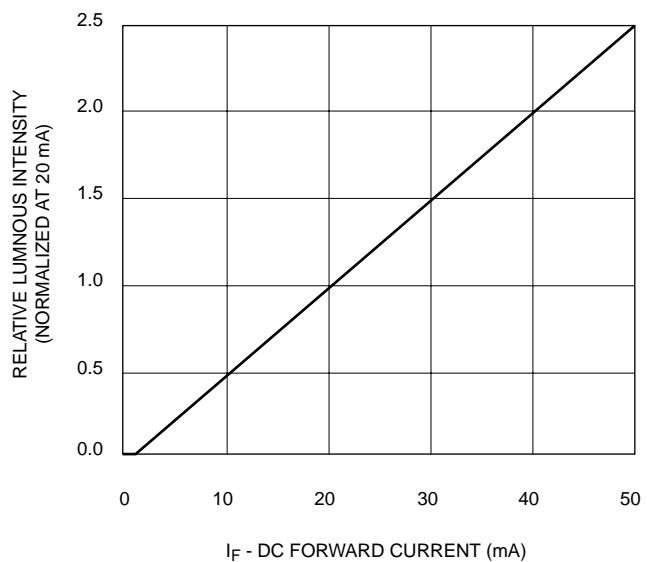
## ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Part Number	MV8313	MV8314	MV8315	MV8316	MV8317	Condition
Luminous Intensity (mcd)						I <sub>F</sub> = 20 mA
Minimum	630	1000	1600	2500	4500	
Typical	940	1500	2400	3500	5500	
Forward Voltage (V)						I <sub>F</sub> = 20 mA
Maximum	2.8	2.8	2.8	2.8	2.8	
Typical	2.1	2.1	2.1	2.1	2.1	
Peak Wavelength (nm)	590	590	590	590	590	I <sub>F</sub> = 20 mA
Spectral Line Half Width (nm)	15	15	15	15	15	I <sub>F</sub> = 20 mA
Viewing Angle (°)	12	12	12	12	12	I <sub>F</sub> = 20 mA

## TYPICAL PERFORMANCE CURVES



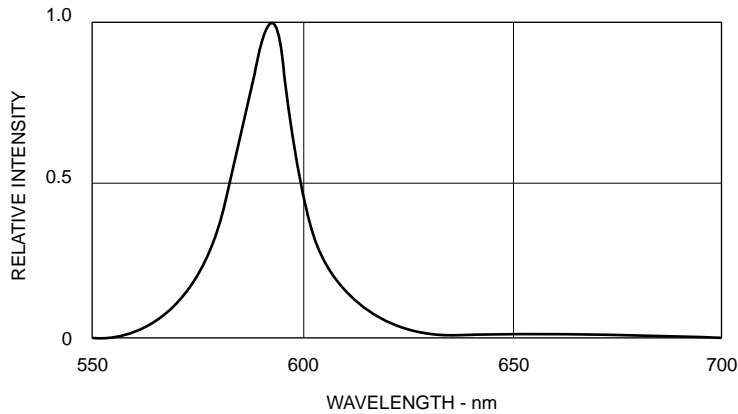
**Fig. 1 Forward Current vs. Forward Voltage**



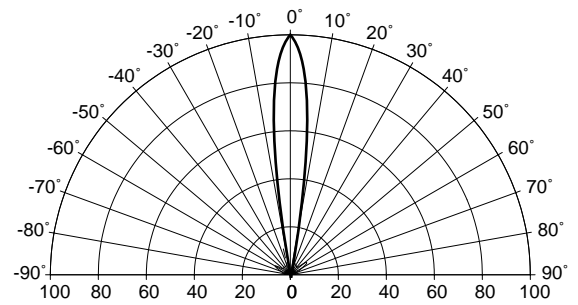
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**

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

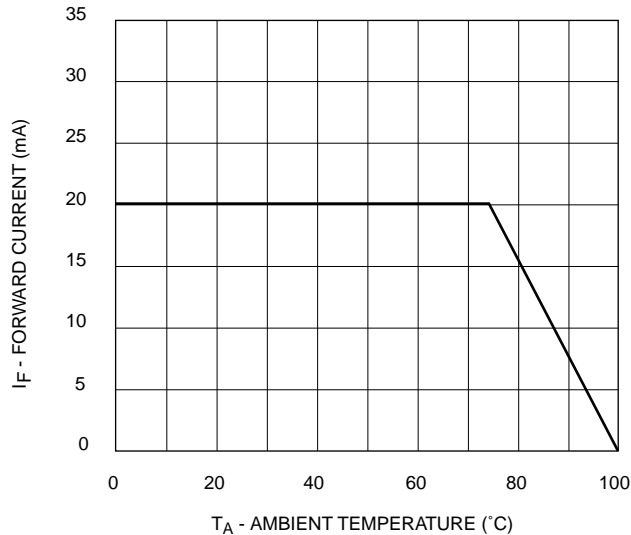
**SUPER YELLOW**                      **MV831X**  
**MV8313** **MV8314**  
**MV8315** **MV8316**  
**MV8317**



**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.