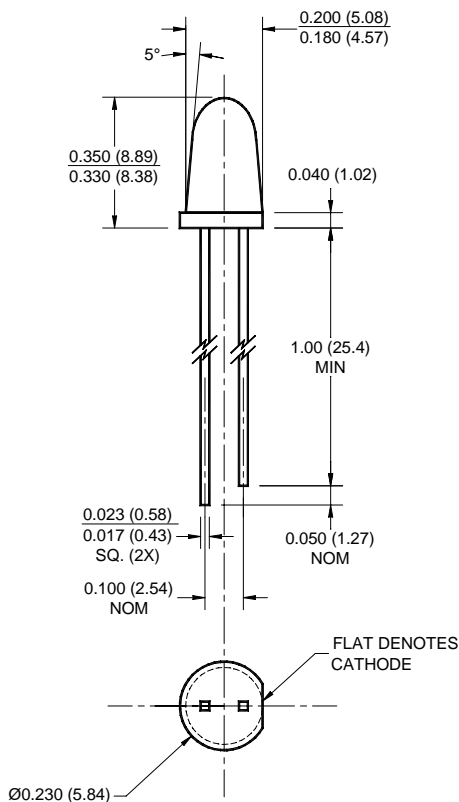


SUPER BRIGHT T-1 3/4 (5 mm)

LED LAMP - Water Clear

PACKAGE DIMENSIONS



NOTES:

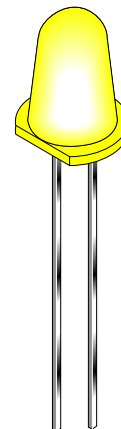
1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 1.5 mm (0.059") max.

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 ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Lead Soldering Time	T_{SOL}	260 for 5 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	30	mA
Peak Forward Current ($f = 1.0 \text{ KHz}$, Duty Factor = 1/10)	I_F	160	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	85	mW

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

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

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

Part Number	MV8313	MV8314	MV8315	MV8316	MV8317	Condition
Luminous Intensity (mcd)						$I_F = 20 \text{ mA}$
Minimum	630	1000	1600	2500	4500	
Typical	940	1500	2400	3500	5500	
Forward Voltage (V)						$I_F = 20 \text{ mA}$
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	$I_F = 20 \text{ mA}$
Spectral Line Half Width (nm)	15	15	15	15	15	$I_F = 20 \text{ mA}$
Viewing Angle ($^\circ$)	12	12	12	12	12	$I_F = 20 \text{ mA}$

TYPICAL PERFORMANCE CURVES

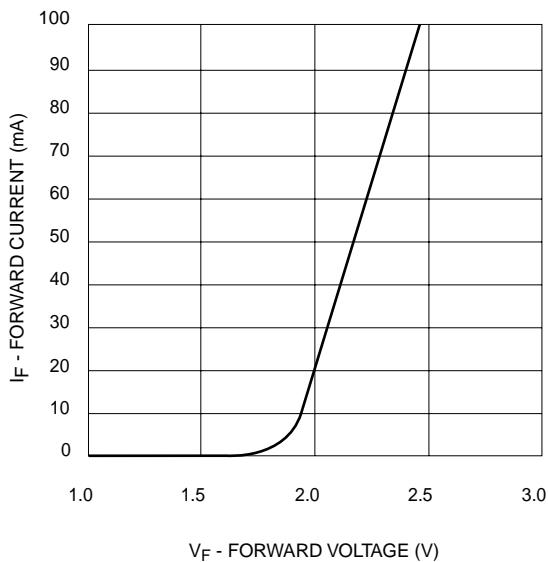


Fig. 1 Forward Current vs. Forward Voltage

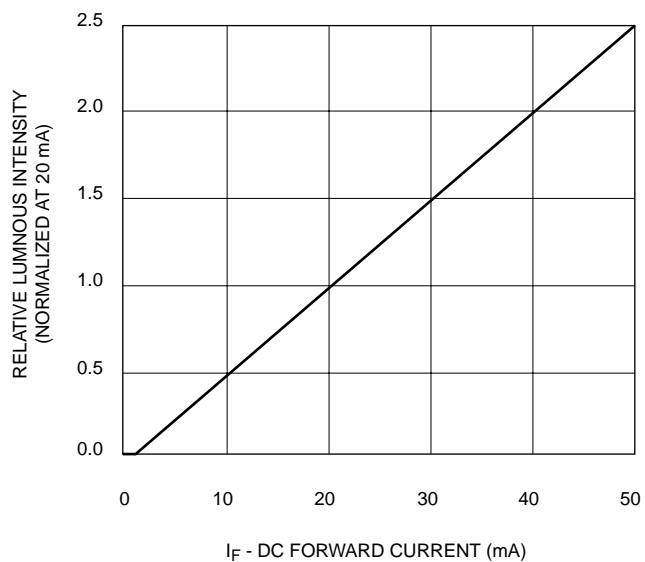


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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

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

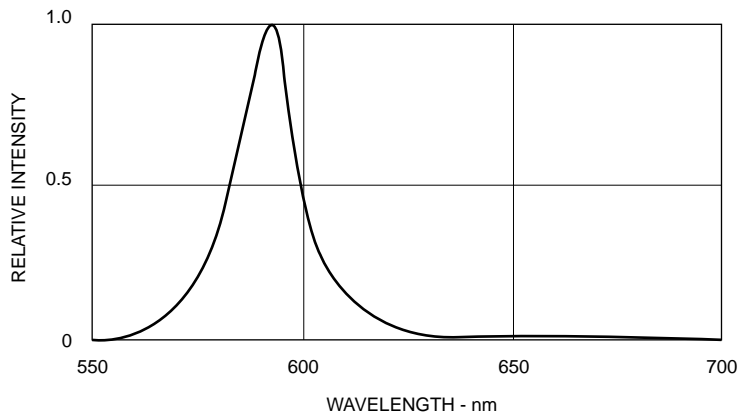
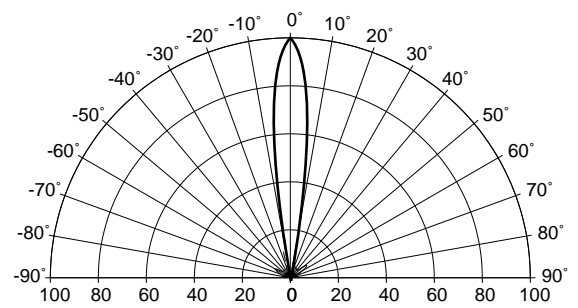


Fig. 3 Relative Intensity vs Peak Wavelength



REL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram

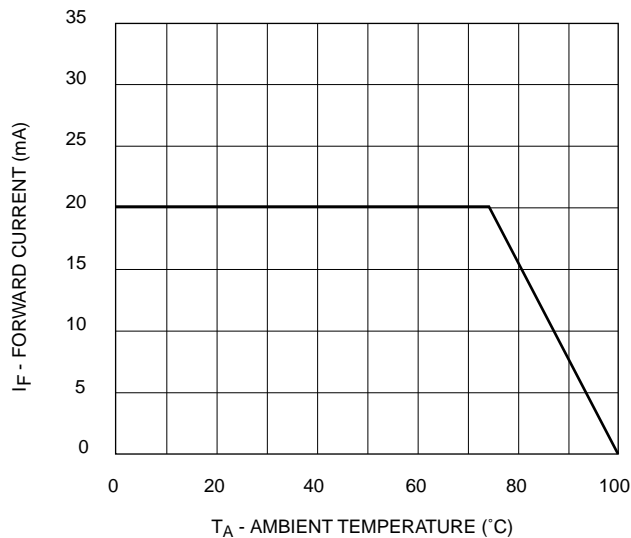


Fig. 5 Current Derating Curve