

# PACKAGE DIMENSIONS 0.200 (5.08) 0.180 (4.57) 0.350 (8.89) 0.330 (8.38) 0.040 (1.02) 1.00 (25.4) 0.050 (1.27) 0.050 (1.27) 0.100 (2.54) -0.100 (2.54) Ø 0.230 (5.84) 0.023 (0.58) FLAT DENOTES 0.017 (0.43) SQ. TYP. (2X)

SUPER YELLOW MV830X MV8303 MV8304 MV8305 MV8306

#### **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



#### 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.

#### DESCRIPTION

This T-1 3/4 super bright LED has a moderate viewing angle of 20° for concentrated light output. The MV830X series is made with an AllnGaP LED that emits yellow light at 590 nm. It is encapsulated in a water clear epoxy lens package.

Parameter	Symbol	Rating	Unit °C	
Operating Temperature	T <sub>OPR</sub>	-40 to +100		
Storage Temperature	T <sub>STG</sub>	-40 to +100	°C	
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec 30	°C mA	
Continuous Forward Current	į <sub>F</sub>			
Peak Forward Current	ř.	160	mA	
(f = 1.0 KHz, Duty Factor = 1/10)	l lF			
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

SUPER YELLOW MV830X MV8303 MV8304 MV8305 MV8306

Part Number	MV8303	MV8304	MV8305	MV8306	Condition
Luminous Intensity (mcd)					$I_F = 20 \text{ mA}$
Minimum	630	1000	1600	2500	
Typical	940	1500	2400	3500	
Forward Voltage (V)					I <sub>F</sub> = 20 mA
Maximum	2.8	2.8	2.8	2.8	
Typical	2.1	2.1	2.1	2.1	
Peak Wavelength (nm)	590	590	590	590	$I_F = 20 \text{ mA}$
Spectral Line Half Width (nm)	15	15	15	15	$I_F = 20 \text{ mA}$
Viewing Angle (°)	20	20	20	20	$I_F = 20 \text{ mA}$

### TYPICAL PERFORMANCE CURVES

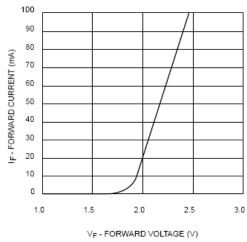


Fig. 1 Forward Current vs. Forward Voltage

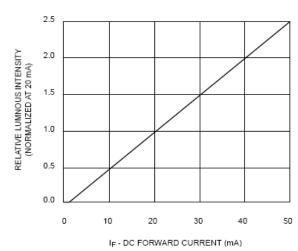


Fig. 2 Relative Luminous Intensity vs. DC Forward Current



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

SUPER YELLOW MV8303 MV8304 MV8305 MV8306 **MV830X** 

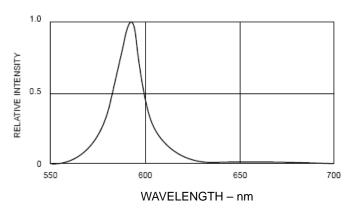
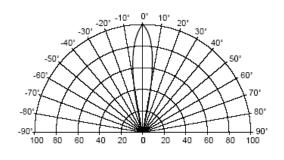


Fig. 3 Relative Intensity vs Peak Wavelength



EL. LUMINOUS INTENSITY (%)

Fig. 4 Radiation Diagram

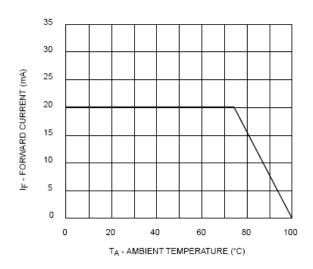


Fig. 5 Current Derating Curve



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