

### PACKAGE DIMENSIONS SUPER RED **MV800X** MV8003 MV8004 MV8005 0.200 (5.08) 0.180 (4.57) 0.350 (8.89) 0.040 (1.02) 0.330 (8.38) **FEATURES** • Popular T-1 3/4 package · Super high brightness suitable for outdoor applications 1.00 (25.4) MIN · Solid state reliability Water clear optics · Standard 100 mil. lead spacing 0.050 (1.27) -0.050 (1.27) RFF 0.100 (2.54) -0.100 (2.54) Ø 0.230 (5.84) REF. FLAT DENOTES 0.023 (0.58) 0.017 (0.43) SQ. TYP. (2X) CATHODE

### 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 MV800X series is made with an AllnGaP 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	1	160	~^^		
(f = 1.0 KHz, Duty Factor = 1/10)	I IF	100	mA		
Reverse Voltage	V <sub>R</sub>	5	V		
Power Dissipation	P <sub>D</sub>	85	mW		

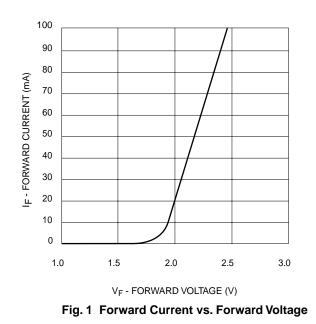


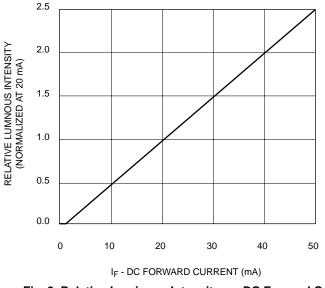
## SUPER RED MV8003 MV8004 MV8005

# MV800X

ELECTRICAL / OPTICAL CHARACTERISTICS (T <sub>A</sub> =25°C)					
Part Number	MV8003	MV8004	MV8005	Condition	
Luminous Intensity (mcd)				$I_F = 20 \text{mA}$	
Minimum	630	1000	1600		
Typical	940	1500	2400		
Forward Voltage (V)				$I_F = 20 \text{mA}$	
Maximum	2.8	2.8	2.8		
Typical	2.1	2.1	2.1		
Peak Wavelength (nm)	640	640	640	$I_F = 20 \text{mA}$	
Spectral Line Half Width (nm)	20	20	20	I <sub>F</sub> = 20mA	
Viewing Angle (°)	20	20	20	I <sub>F</sub> = 20mA	

## TYPICAL PERFORMANCE CURVES









 SUPER RED
 MV800X

 MV8003
 MV8004

 MV8005

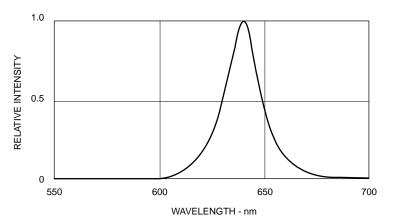
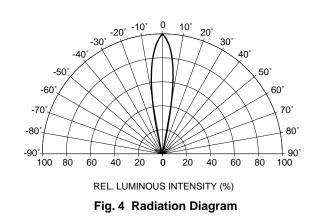


Fig. 3 Relative Intensity vs Peak Wavelength



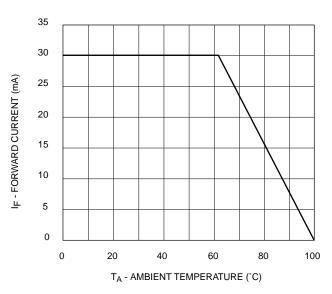


Fig. 5 Current Derating Curve



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