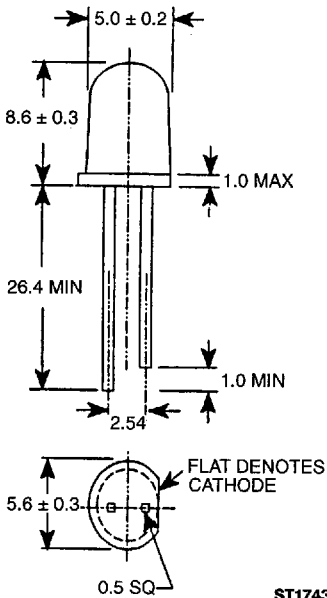


SUPER RED MV8132 CLEAR
SUPER RED MV8133 CLEAR
SUPER YELLOW MV8332 CLEAR
SUPER YELLOW MV8333 CLEAR

PACKAGE DIMENSIONS



- NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 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

These T-1¼ super bright LEDs have a moderate 30° viewing angle. The MV8332/3 are made with an InGaAlP LED on a GaAs substrate and the MV8132/3 are made with a GaAlAs LED on a GaAlAs substrate. They are encapsulated in an epoxy package and have water clear lenses.

FEATURES

- Popular T-1¼ package
- Low drive current
- Solid state reliability
- Super high brightness suitable for outdoors applications
- Outstanding material efficiency

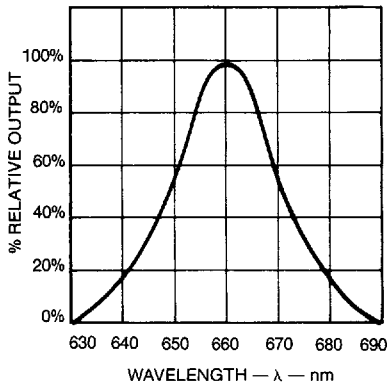
ABSOLUTE MAXIMUM RATING (T_A = 25°C Unless Otherwise Specified)

DC forward current (I _f)	
MV813X	40 mA
MV833X	30 mA
Operating temperature range	-40°C to +85°C
Storage temperature range	-40°C to +100°C
Lead soldering time (at 1/16 inch from the bottom of lamp)	5 seconds @ 260°C
Peak forward current (I _p) (at f=1.0 KHz, Duty factor= 1/10)	
MV813X	200 mA
MV813X	160 mA
Power dissipation (P _d)	
MV813X	110 mW
MV813X	85 mW
Recommended operating current (I _r , Rec)	20 mA

ELECTRO-OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)					
PART NUMBER	MV8132	MV8133	MV8332	MV8333	TEST CONDITIONS
Luminous intensity (mcd)					$I_F = 20\text{ mA}$
minimum	630	1000	630	1000	
typical	940	1500	940	1500	
maximum					
Forward voltage (V_F)					$I_F = 20\text{ mA}$
minimum	1.5	1.5	1.7	1.7	
typical	1.7	1.7	2.1	2.1	
maximum	2.4	2.4	2.8	2.8	
Peak wavelength (nm)	660	660	590	590	$I_F = 20\text{ mA}$
Spectral line half width (nm)	40	40	13	13	$I_F = 20\text{ mA}$
Reverse breakdown voltage (V_R)	5	5	5	5	$I_F = 10\ \mu\text{A}$
Viewing angle ($^\circ$)	30	30	30	30	$I_F = 20\text{ mA}$

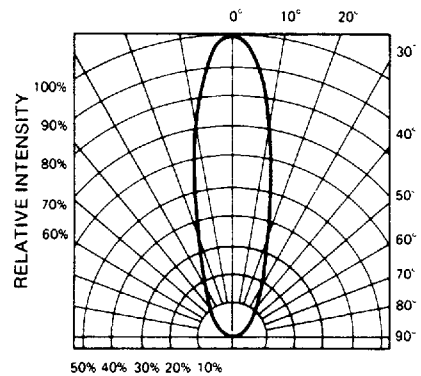
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

MV813X



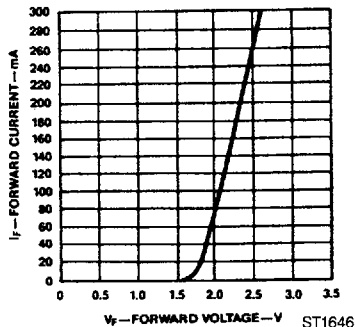
C618

Figure 1. Relative Intensity vs. Wavelength



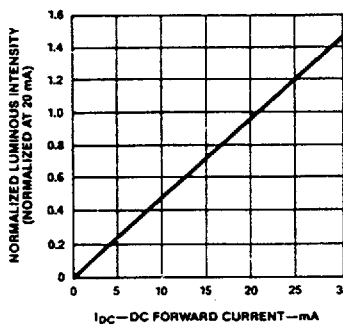
C620A

Figure 2. Relative Luminous Intensity vs. Angular Displacement



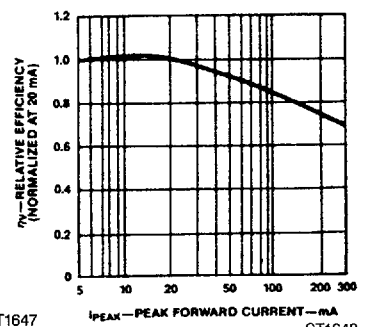
ST1646

Figure 3. Forward Current vs. Forward Voltage



ST1647

Figure 4. Relative Luminous Intensity vs. DC Forward Current

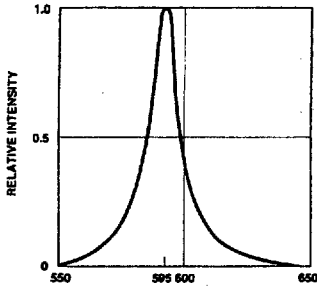


ST1648

Figure 5. Relative Efficiency vs. Peak Forward Current

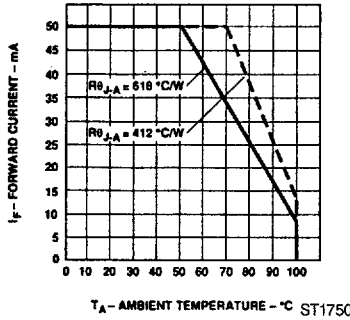
TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES ($T_A = 25^\circ\text{C}$)

MV833X



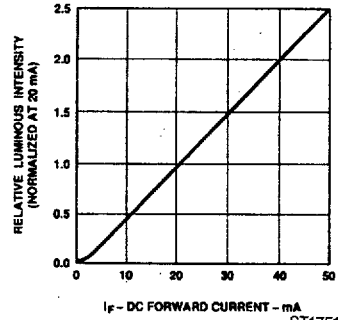
λ - WAVELENGTH - nm ST1749

Fig. 1. Relative Intensity vs. Wavelength



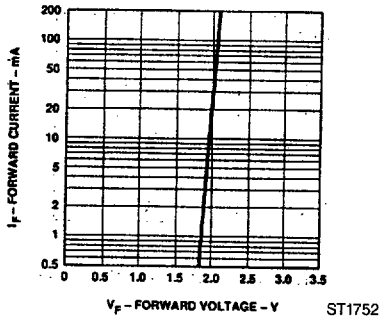
T_A - AMBIENT TEMPERATURE - $^\circ\text{C}$ ST1750

Fig. 2. Maximum Forward DC Current vs. Ambient Temperature Derating based on $T_{j\text{Max}} = 110^\circ$



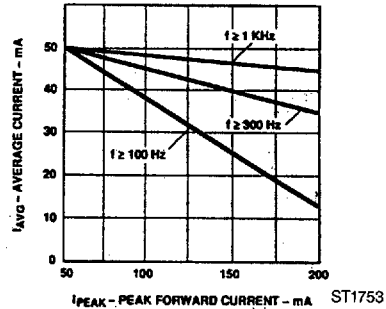
I_F - DC FORWARD CURRENT - mA ST1751

Fig. 3. Relative Luminous Intensity vs. DC Forward Current



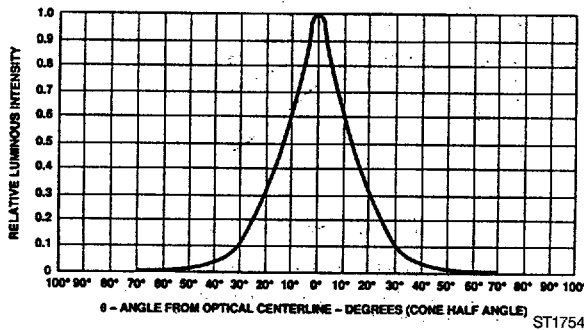
V_F - FORWARD VOLTAGE - V ST1752

Fig. 4. Forward Current vs. Forward Voltage



$I_{\text{PEAK-PEAK}}$ - PEAK-PEAK FORWARD CURRENT - mA ST1753

Fig. 5. Maximum Average Current vs. Forward Current



θ - ANGLE FROM OPTICAL CENTERLINE - DEGREES (CONE HALF ANGLE) ST1754

Fig. 6. Relative Luminous Intensity vs. Angular Displacement

6

MV8132 MV8133 MV8332 MV8133