

FAIRCHILD

SEMICONDUCTOR™

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

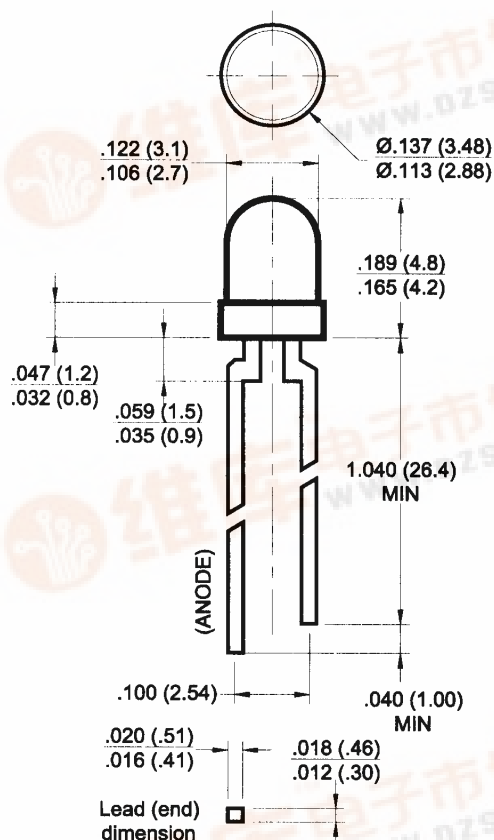
AlInGaP Orange Red

MV7842

MV7843

MV7844

PACKAGE DIMENSIONS



Note: 1) All dimensions are in inches (mm).

2) Lead spacing is measured where the leads emerge from the package.

3) Protruded resin under the flange is 1.5mm (0.059") max.

DESCRIPTION

These T-1 LEDs have a wide viewing angle of 60° and are encapsulated in an epoxy package with a water clear lens. They are constructed with AlInGaP LEDs and emit a peak wavelength of 630 nm.

FEATURES

- Popular T-1 package.
- Low drive current.
- Solid State reliability.
- Super high brightness suitable for outdoor applications.
- Water clear optics.
- Standard 100 mil. Lead spacing.

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

DC forward current (I _F)	30 mA
Peak forward current (I _F) @ f = 1.0 KHz, Duty factor = 1/10	160 mA
Power dissipation (P _d)	85 mW
Reversed voltage (V _R) I _R = 10 μ A	5 V
Operating temperature range	-40°C to +100°C
Storage temperature range	-40°C to +100°C
Lead soldering time	5 secs @ 260°C

ELECTRO-OPTICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Part Number:	<u>MV7842</u>	<u>MV7843</u>	<u>MV7844</u>	<u>Test Condition</u>
Luminous intensity (mcd)				I _F = 20 mA
Minimum	100	160	250	
Typical	150	240	375	
Forward voltage (V _F)				I _F = 20 mA
Typical	2.1	2.1	2.1	
Maximum	2.8	2.8	2.8	
Peak Wavelength	630	630	630	I _F = 20 mA
Spectral line half width (nm)	35	35	35	I _F = 20 mA
Viewing angle	60	60	60	I _F = 20 mA

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES (T_A = 25°C)

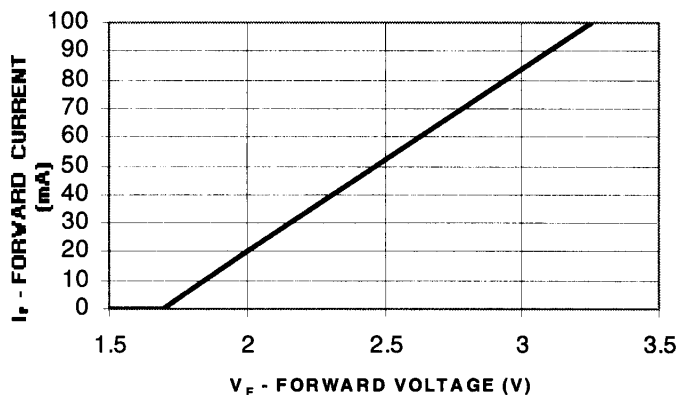


Fig 1. Forward Current vs. Forward Voltage

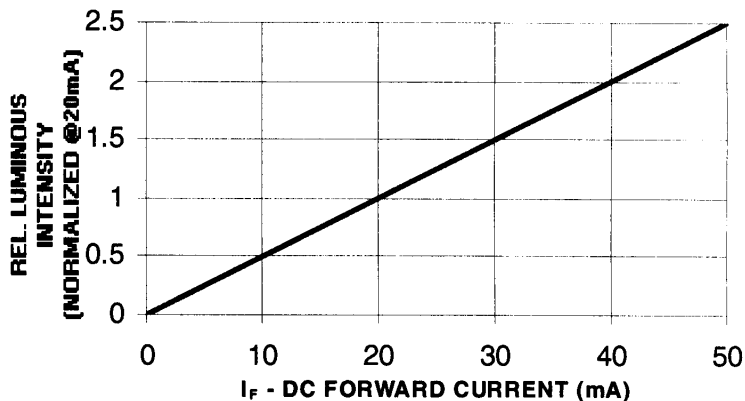


Fig 2. Rel. Luminous Intensity vs. DC Forward Current

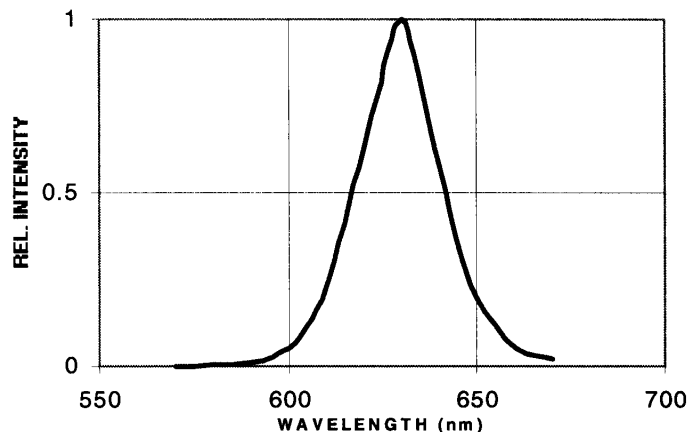


Fig 3. Rel. Intensity vs. Wavelength

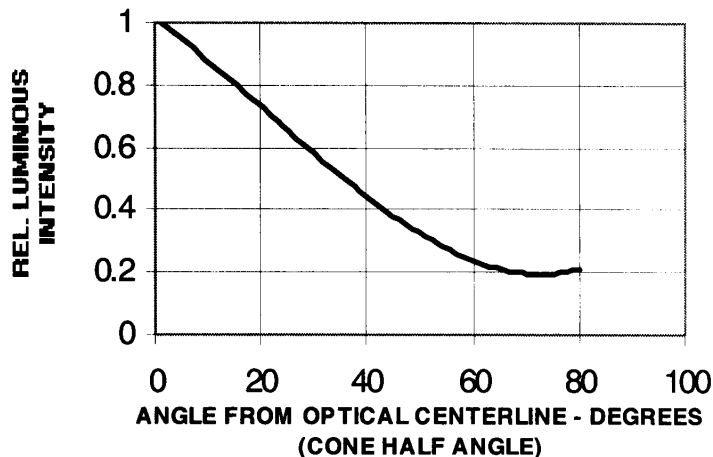


Fig 4. Rel. Luminous Intensity vs. Angular Displacement



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