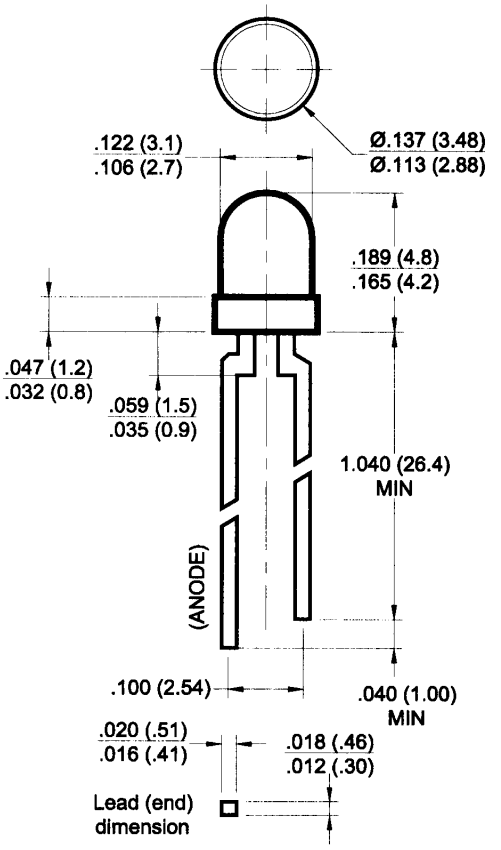
FAIRCHILD
SEMICONDUCTOR™

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

AlInGaP Orange **MV7742** **MV7743** **MV7744**

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 620 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 µA	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

FAIRCHILD
SEMICONDUCTOR™

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

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

Part Number:	MV7742	MV7743	MV7744	Test Condition
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	620	620	620	I_F = 20 mA
Spectral line half width (nm)	25	25	25	I_F = 20 mA
Viewing angle	60	60	60	I_F = 20 mA

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

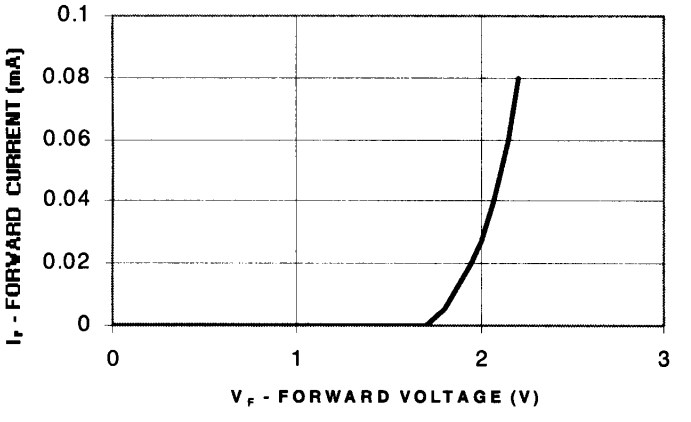


Fig 1. Foward Current vs. Forward Voltage

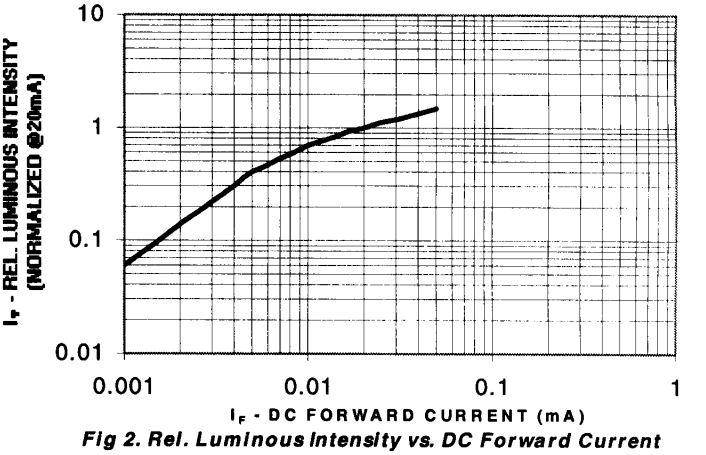


Fig 2. Rel. Luminous Intensity vs. DC Forward Current

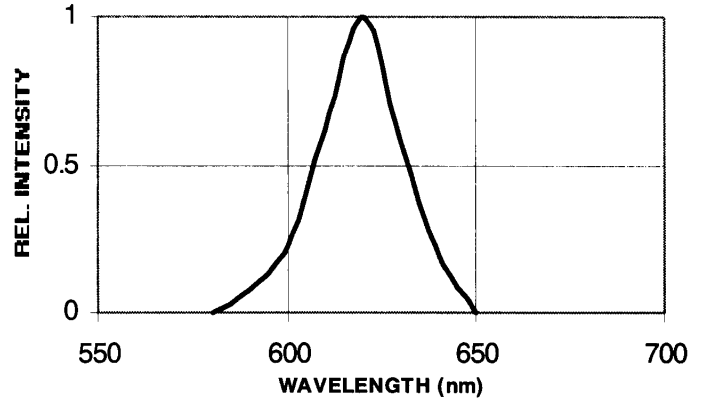


Fig 3. Rel. Intensity vs. Wavelength

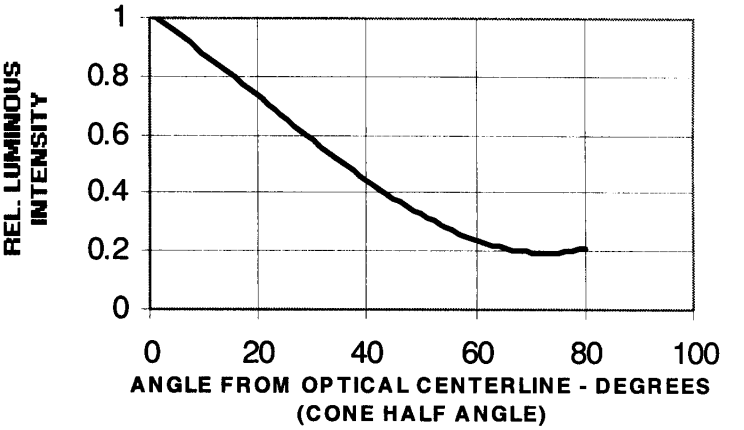


Fig 4. Rel. Luminous Intensity vs. Angular Displacement

FAIRCHILD
SEMICONDUCTOR™

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

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

© 2000 Fairchild Semiconductor Corporation