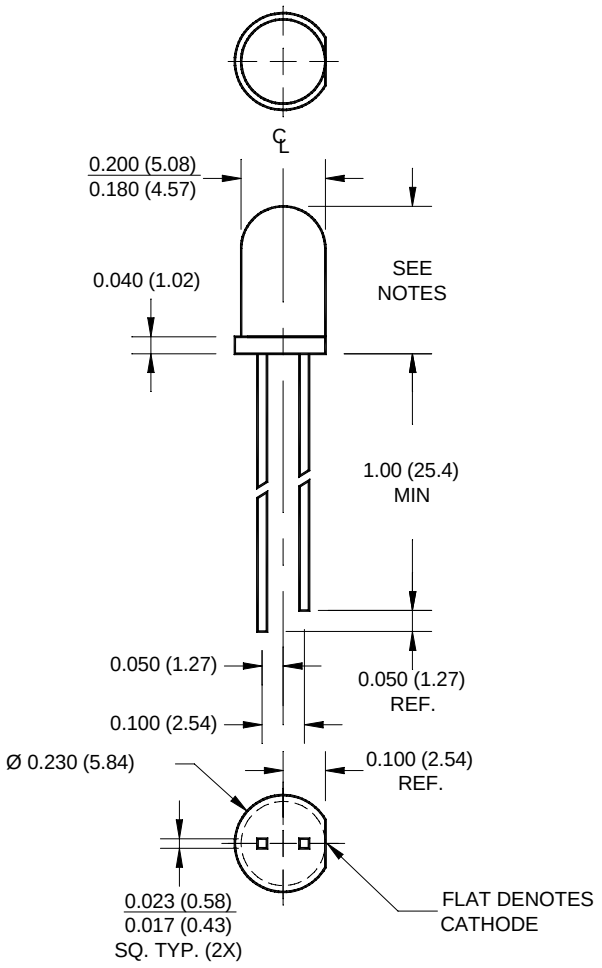
FAIRCHILD
SEMICONDUCTOR™

T-1 3/4 (5 mm)
SOLID STATE LAMPS

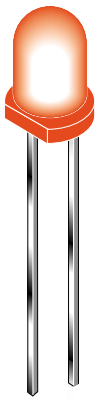
HIGH EFF. RED	**HLMP-3300**	**HIGH EFF. RED**	**HLMP-3315**
HIGH EFF. RED	**HLMP-3301**	**HIGH EFF. RED**	**HLMP-3316**
		STANDARD RED	**FLV110**

PACKAGE DIMENSIONS



FEATURES

- Popular, general purpose lamps
- Wide and narrow viewing angle devices for direct view or backlighting
- Solid state reliability
- Sturdy leads for easy assembly



DESCRIPTION

The HLMP-33XX series consists of high efficiency red T-1 3/4 lamps with a viewing angle of 35° or 65°. FLV110 is a low profile standard red T-1 3/4 lamp with a diffused lens, providing a viewing angle of 70°.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES (mm).
2. TOLERANCES ARE ±.010" INCH UNLESS SPECIFIED.
3. AN EPOXY MENISCUS MAY EXTEND ABOUT .040" (1 mm) DOWN THE LEADS.
4. DIMENSIONS X.
   PACKAGE HEIGHT HLMP = .330 (8.38)/.350 (8.89)
   FLV = .275 (6.98)/.295 (7.49)
5. FLV FLANGE HEIGHT = 0.040 (1.02) / 0.060 (1.53)

ABSOLUTE MAXIMUM RATING (T_A =25°C)

Parameter	HLMP33XX	FLV110	UNITS
Power Dissipation	135	135	mW
Average Forward Current	30	30	mA
Peak Forward Current (1 µS pulsewidth, 0.3% duty cycle)(FLV110 1 amp)	90	90	mA
Reverse Voltage	5	5	V
Lead Soldering Time at 260° C	5	5	sec
Operating Temperature	-55 to +100	-55 to +100	°C
Storage Temperature	-55 to +100	-55 to +100	°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	HLMP-3300	HLMP-3301	HLMP-3315	HLMP-3316	FLV110	Condition
Luminous Intensity (mcd)						I_F = 10mA
Minimum	2.0	4.0	12	20	0.8*	
Typical	3.5	7.0	18	35	3.0*	
Forward Voltage (V)						I_F = 10mA
Maximum	3.0	3.0	3.0	3.0	2.0	
Typical	2.2	2.2	2.2	2.2	1.6	
Peak Wavelength (nm)	635	635	635	635	660	I_F = 10mA
Reverse Voltage (V)	5	5	5	5	5	I_R = 100µA
Viewing Angle (°)	65	65	35	35	70	I_F = 10mA

* For FLV110 Test I_F = 20mA

TYPICAL PERFORMANCE CURVES (T_A =25°C)

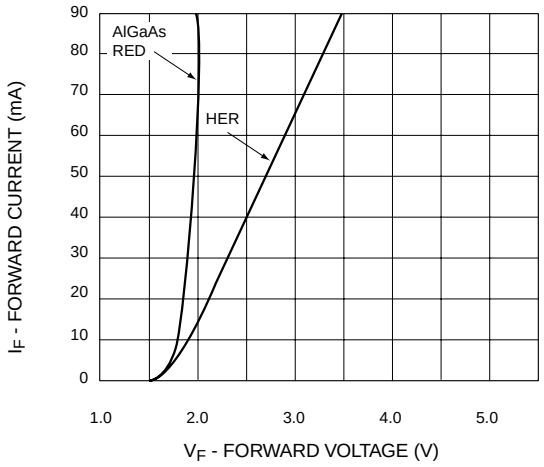


Fig. 1 Forward Current vs. Forward Voltage

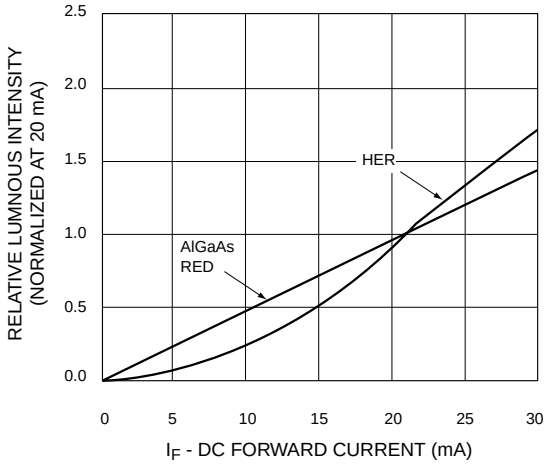


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

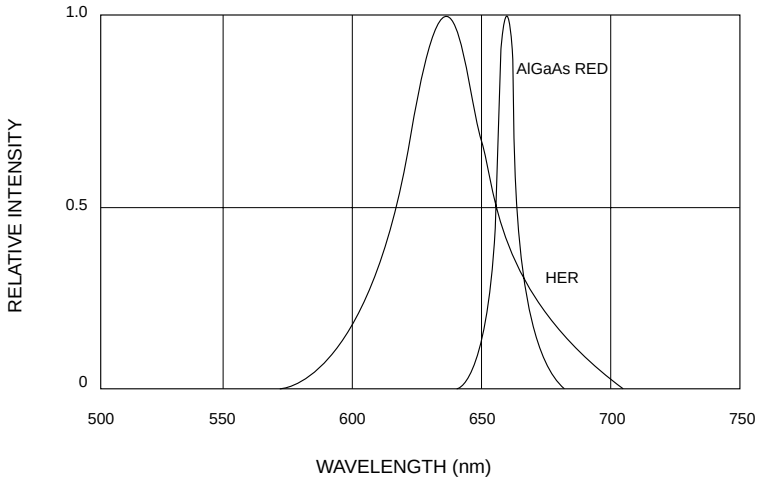


Fig. 3 Relative Intensity vs. Peak Wavelength

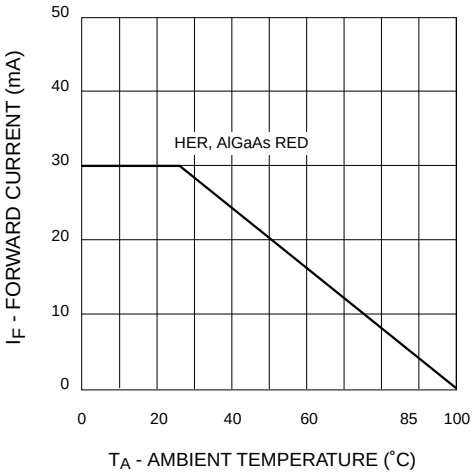


Fig. 4 Current Derating Curve

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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.