

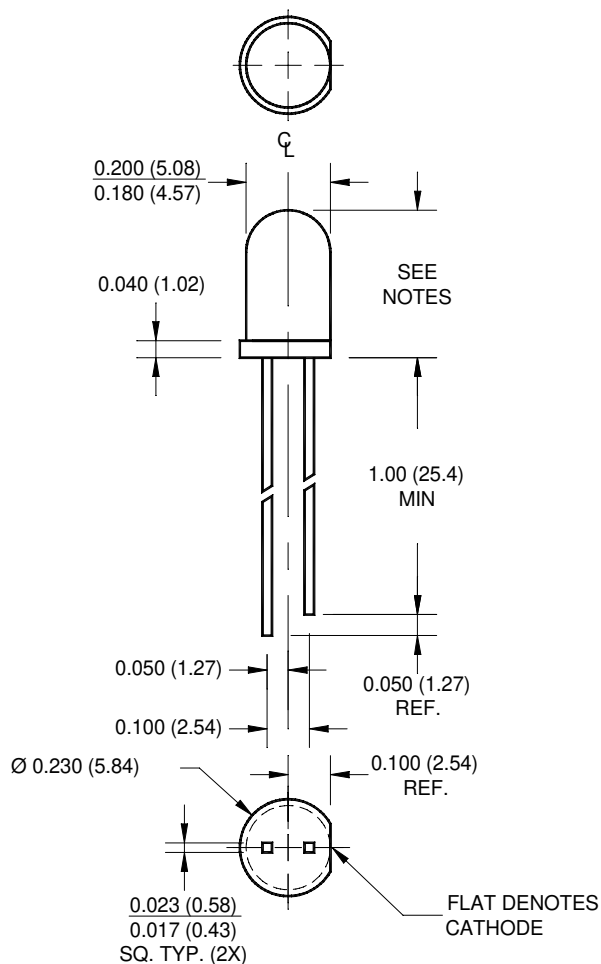
HIGH EFF. RED  
HIGH EFF. RED

HLMP-3300  
HLMP-3301

HIGH EFF. RED  
HIGH EFF. RED  
STANDARD RED

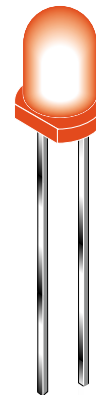
HLMP-3315  
HLMP-3316  
FLV110

## 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  $\pm 0.010$ " 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)

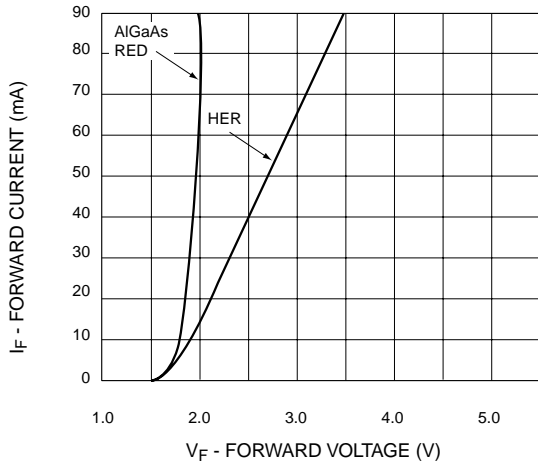
## ABSOLUTE MAXIMUM RATING (T<sub>A</sub> = 25°C)

Parameter	HLMP33XX	FLV110	UNITS
Power Dissipation	135	135	mW
Average Forward Current	30	30	mA
Peak Forward Current (1 $\mu$ S 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

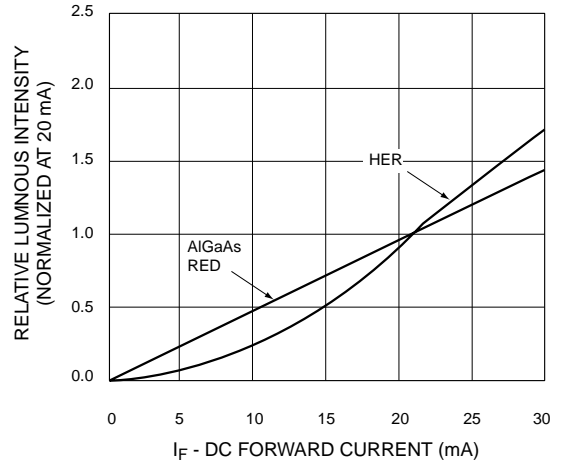
<b>ELECTRICAL / OPTICAL CHARACTERISTICS</b> (T <sub>A</sub> =25°C)						
<b>Part Number</b>	<b>HLMP-3300</b>	<b>HLMP-3301</b>	<b>HLMP-3315</b>	<b>HLMP-3316</b>	<b>FLV110</b>	<b>Condition</b>
Luminous Intensity (mcd)						I <sub>F</sub> = 10mA
Minimum	2.0	4.0	12	20	0.8*	
Typical	3.5	7.0	18	35	3.0*	
Forward Voltage (V)						I <sub>F</sub> = 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 <sub>F</sub> = 10mA
Reverse Voltage (V)	5	5	5	5	5	I <sub>R</sub> = 100μA
Viewing Angle (°)	65	65	35	35	70	I <sub>F</sub> = 10mA

\* For FLV110 Test I<sub>F</sub> = 20mA

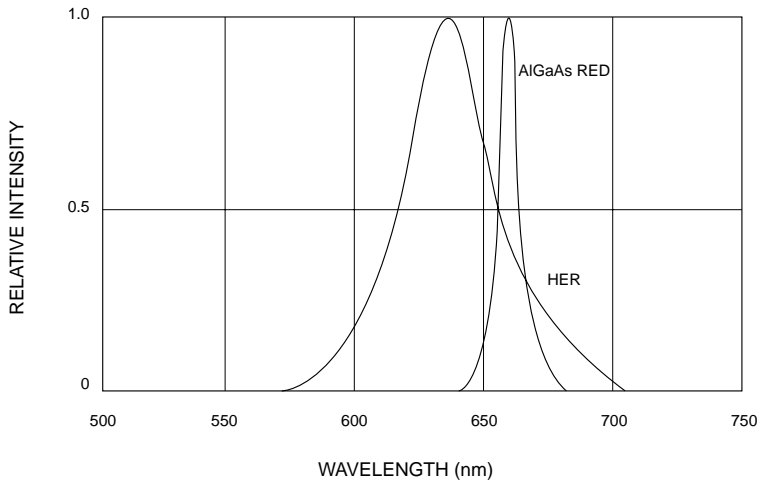
**TYPICAL PERFORMANCE CURVES (T<sub>A</sub> = 25°C)**



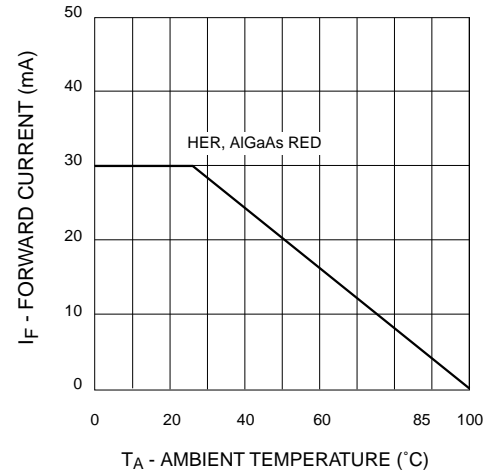
**Fig. 1 Forward Current vs. Forward Voltage**



**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



**Fig. 3 Relative Intensity vs. Peak Wavelength**



**Fig. 4 Current Derating Curve**

## **DISCLAIMER**

FAIRCHILD SEMICONDUCTOR RESERVES THE 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 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.

find products

[Home](#) >> [Find products](#) >>

[Products groups](#)

[Analog and Mixed](#)

[Signal](#)

[Discrete](#)

[Interface](#)

[Logic](#)

[Microcontrollers](#)

[Non-Volatile](#)

[Memory](#)

[Optoelectronics](#)

[Markets and](#)

[applications](#)

[New products](#)

[Product selection and](#)

[parametric search](#)

[Cross-reference](#)

[search](#)

FLV110

Standard Red T-1 3/4 (5 mm) Solid State Lamp

Contents

[General description](#) | [Features](#) | [Testing conditions](#) | [Product status/pricing/packaging](#)

General 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°.

[back to top](#)

Features

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

[back to top](#)

Testing conditions

- $V_F @ I_F = 10 \text{ mA}; I_V @ I_F = 10 \text{ mA}$

[back to top](#)

Product status/pricing/packaging

Product	Product status	Pricing*	Package type	Packing method
FLV110	Full Production	\$0.056	T-1 3/4	BULK

Related Links

[Request samples](#)

[Dotted line](#)

[How to order products](#)

[Dotted line](#)

[Product Change Notices](#)

[\(PCNs\)](#)

[Dotted line](#)

[Support](#)

[Dotted line](#)

[Distributor and field sales](#)

[representatives](#)

[Dotted line](#)

[Quality and reliability](#)

[Dotted line](#)

[Design tools](#)

Datasheet

[Download this](#)

[datasheet](#)

[PDF](#)

[e-mail this datasheet](#)

[\[E-](#)

This page

[Print version](#)

FLV110A34R0	Full Production	N/A	T-1 3/4	BULK
-------------	-----------------	-----	---------	------

\* 1,000 piece Budgetary Pricing

[back to top](#)

[Home](#) | [Find products](#) | [Technical information](#) | [Buy products](#) |  
[Support](#) | [Company](#) | [Contact us](#) | [Site index](#) | [Privacy policy](#)

---

[© Copyright 2002 Fairchild Semiconductor](#)

---