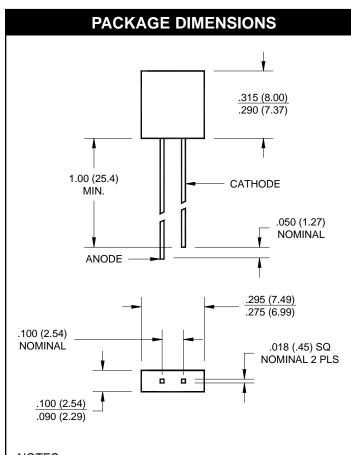


HIGH EFFICIENCY RED HLMP- 0300/1 YELLOW HLMP- 0400/1 HIGH EFFICIENCY GREEN HLMP- 0503/4



### **FEATURES**

- Wide viewing angle
- · Solid state reliability
- · Perfect for panel indicators



#### **DESCRIPTION**

The HLMP-0X0X series of rectangular lamps are direct replacements for Agilent's series with the same part numbers. The series is similar to MV5X123 except for the larger lens size. Like the MV5X123, the HLMP-0X0X is stackable. The lamps are tinted and diffused.

### NOTES:

- 1. ALL DIMENSIONS ARE IN INCHES (mm).
- 2. TOLERANCES ARE ± 0.010" INCH UNLESS SPECIFIED.
- 3. AN EPOXY MENISCUS MAY EXTEND ABOUT 0.040" (1mm) DOWN THE LEADS.

ABSOLUTE MAXIMUM RATING (TA =25°C)					
Parameter	HER	YELLOW	HEG	UNITS	
Power Dissipation (HLMP-040X=85mA)	135	135	135	mW	
Peak Forward Current (1µsec pluse, 0.3% DC)	90	90	60	mA	
Continuous DC Forward Current	30	20	30	mA	
Lead Soldering Time at 260° C	5	5	5	sec	
Operating Temperature	-55 to +100	-55 to +100	-50 to +100	°C	
Storage Temperature	-55 to +100	-55 to +100	-50 to +100	°C	



Parameter	HE	HER		YELLOW		EG	
	HLMP-	0300/1	HLMP-	0400/1	HLMP-	0503/4	Condition
Luminous Intensity (mcd)							$I_F = 20mA$
Minimum	1.0	2.5	1.5	3.0	1.5	2.5	
Typical	2.5	5.0	2.5	5.0	3.0	5.0	
Forward Voltage (V)							$I_F = 20mA$
Maximum	3.0	3.0	3.0	3.0	3.0	3.0	
Typical	2.1	2.1	2.2	2.2	2.3	2.3	
Peak Wavelength (nm)	635	635	585	585	565	565	$I_F = 20mA$
Spectral Line Half Width (nm)	45	45	35	35	35	35	I <sub>F</sub> = 20mA
Reverse Voltage (V)	5	5	5	5	5	5	$I_R = 100 \mu A$
Viewing Angle (°)	100	100	100	100	100	100	

www.fairchildsemi.com 2 OF 4 2/27/01 DS300002



#### TYPICAL PERFORMANCE CURVES (TA =25°C) 90 2.5 80 RELATIVE LUMNOUS INTENSITY (NORMALIZED AT 20 mA) 2.0 IF - FORWARD CURRENT (mA) 70 HER YELLOW HER 60 1.5 50 YELLOW 1.0 30 20 0.5 10 **GREEN** 0.0 1.0 2.0 4.0 5.0 0 15 20 25 30 3.0 10 V<sub>F</sub> - FORWARD VOLTAGE (V) IF - DC FORWARD CURRENT (mA) Fig. 1 Forward Current vs. Forward Voltage Fig. 2 Relative Luminous Intensity vs. **DC Forward Current** 50 1.0 IF - FORWARD CURRENT (mA) HER GREEN YFI I OW 40 RELATIVE INTENSITY HER, GREEN 30 0.5 YELLOW 20 10 0 0 60 40 85 500 550 650 700 600 750 T<sub>A</sub> - AMBIENT TEMPERATURE (°C) WAVELENGTH (nm) Fig. 3 Current Derating Curve Fig. 4 Relative Intensity vs. Peak Wavelength -20° -10° 10° 20° -30 30° 0.9 0.8 0.7 -40° 0.6 0.5 -50 50° -60 60° -70° 70° -80 80° -90° OFF AXIS ANGLE

Fig. 5 Spatial Distribution



#### **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:

- 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.
- 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.