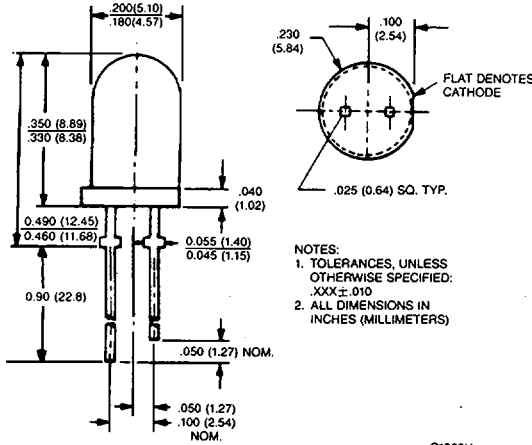


ULTRABRIGHT

**HLMP-3X50 SERIES
MV3X50 SERIES**

PACKAGE DIMENSIONS



DESCRIPTION

The Ultrabright HLMP-3X50 Series are direct, pin-for-pin replacements for the Hewlett-Packard devices with the same part numbers.

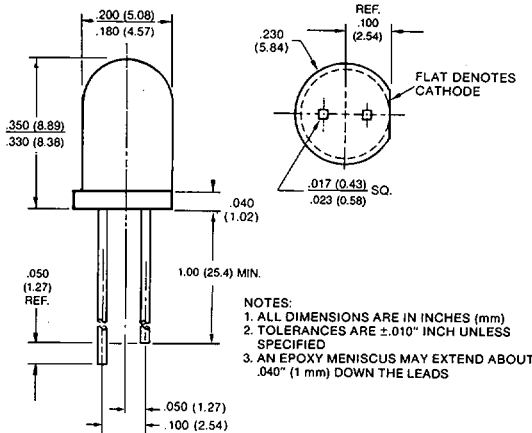
HLMP-3X50 in High Efficiency Red, Yellow and High Efficiency Green are very narrow viewing angle Clear lamps in a standard T-1³/₄ package.

By using more efficient LED chips, these lamps are superior in Luminous Intensity compared to other lamps.

Lamps have Pale Tinted package to aid identification.

FEATURES

- Minimum 80 mcd
- All three colors
- Pale Tint avoids mix problems
- Sturdy leads with or without stand-off on T-1³/₄
- Excellent for small area backlighting
- High Efficiency Red
HLMP-3750
MV3750
- High Efficiency Green
HLMP-3950
MV3450
- Yellow
HLMP-3850
MV3350



ELECTRO-OPTICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ Unless Otherwise Specified)							
PARAMETER		SYMBOL	MV3750 HLMP-3750	MV3350 HLMP-3850	MV3450 HLMP-3950	UNITS	TEST CONDITIONS
Luminous Intensity	min.	I_V	80	80	80	mcd	$I_F=20\text{ mA}$
	typ.		150	150	150	mcd	$I_F=20\text{ mA}$
Forward voltage	max.	V_F	3.0	3.0	3.0	V	$I_F=20\text{ mA}$
	typ.		2.2	2.2	2.2	V	$I_F=20\text{ mA}$
Peak wavelength	typ.	λ_P	635	585	585	nm	$I_F=10\text{ mA}$
Capacitance	typ.	C	45	45	20	pF	$V_F=0, f=1\text{ MHz}$
Reverse breakdown voltage	min.	BV_R	5	5	5	V	$I_R=100\ \mu\text{A}$
Total viewing angle between half Luminous Intensity points	typ.		20 $\frac{1}{2}$	24	24	degrees	

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ Unless Otherwise Specified)					
PARAMETER	HI. EFF. RED	YELLOW	HI. EFF. GREEN	UNITS	NOTES
Power dissipation	135	85	135	mW	1
Peak forward current	90	60	90	mA	
Average forward current	25	20	25	mA	
Continuous DC forward current	30	20	30	mA	2
Lead soldering time at 260°C	5	5	5	seconds	3
Operating and storage temperature	-55 to +100°C				

NOTES

1. For High Efficiency Red and High Efficiency Green, derate power linearly from 25°C at 1.8 mW/°C. For Yellow derate power linearly from 50°C at 1.6 mW/°C.
2. For High Efficiency Red and High Efficiency Green derate linearly from 50°C at 0.5 mA/°C. For Yellow derate linearly from 50°C at 0.2 mA/°C.
3. To a point of minimum 1/16 inch (1.6 mm) from the bottom of the lamp.

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

(25°C Free Air Temperature Unless Otherwise Specified)

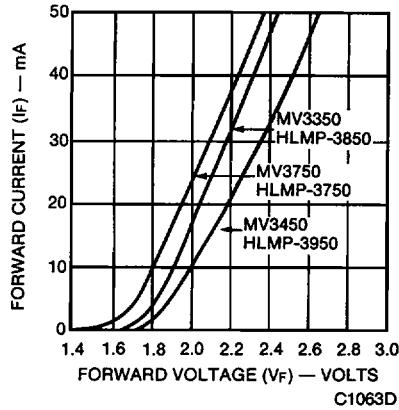


Fig. 1. Forward Voltage/
Forward Current

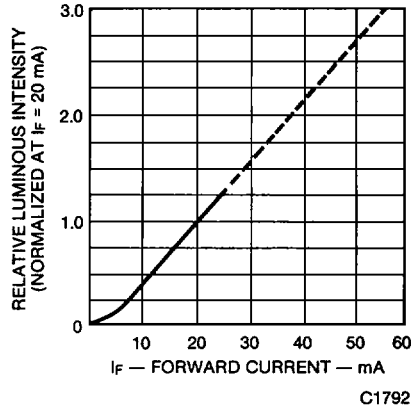


Fig. 2. Relative Luminous Intensity vs.
DC Forward Current

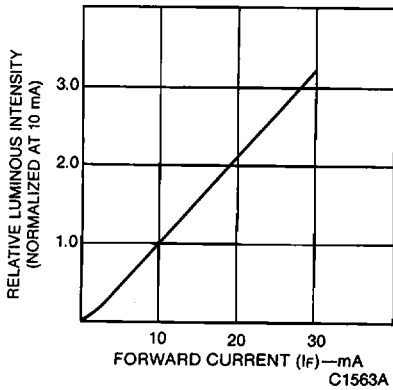


Fig. 3. Spatial Distribution

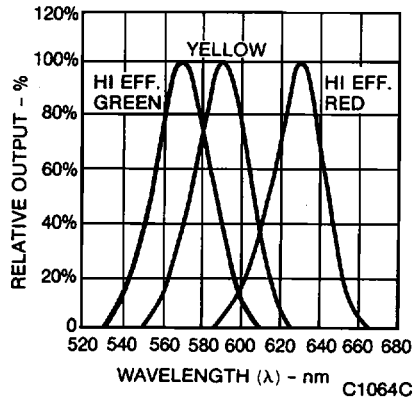


Fig. 4. Spectral Distribution

