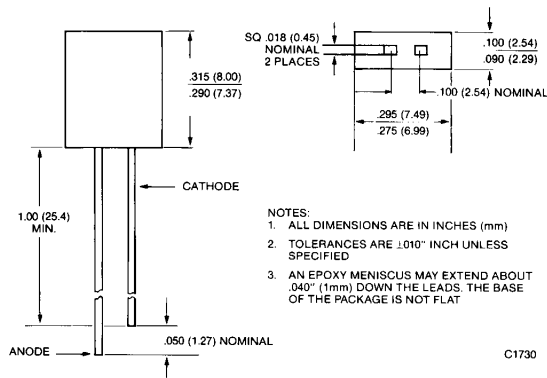




RECTANGULAR SOLID STATE LAMPS

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

PACKAGE DIMENSIONS



DESCRIPTION

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

FEATURES

- 3 High Efficiency colors
- Rectangular light area
- Inexpensive panel indicators

PHYSICAL CHARACTERISTICS

| DEVICE | SOURCE COLOR | LENS COLOR | LENS EFFECT | I _v MIN. AT 20 mA |
|-----------|-----------------------|-----------------|----------------|------------------------------|
| HLMP-0300 | High Efficiency Red | Red Diffused | Very Wide Beam | 1.0 |
| HLMP-0301 | High Efficiency Red | Red Diffused | Very Wide Beam | 2.5 |
| HLMP-0400 | Yellow | Yellow Diffused | Very Wide Beam | 1.5 |
| HLMP-0401 | Yellow | Yellow Diffused | Very Wide Beam | 3.0 |
| HLMP-0503 | High Efficiency Green | Green Diffused | Very Wide Beam | 1.5 |
| HLMP-0504 | High Efficiency Green | Green Diffused | Very Wide Beam | 3.0 |



RECTANGULAR SOLID STATE LAMPS

| ELECTRO-OPTICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ Unless Otherwise Specified) | | | | | | | | | | |
|---|--------|-------------------|------|--------|------|----------------|------|-------|-----------------|-------------------------|
| PARAMETER | SYMBOL | HLMP- | | | | | | UNITS | TEST CONDITIONS | |
| | | HI. EFF. RED | | YELLOW | | HI. EFF. GREEN | | | | |
| | | 0300 | 0301 | 0400 | 0401 | 0503 | 0504 | | | |
| Luminous Intensity | min. | I_v | 1.0 | 2.5 | 1.5 | 3.0 | 1.5 | 2.5 | mcd | $I_f=20\text{ mA}$ |
| | typ. | | 2.5 | 5.0 | 2.5 | 5.0 | 3.0 | 5.0 | mcd | $I_f=20\text{ mA}$ |
| Forward voltage | max. | V_f | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | V | $I_f=20\text{ mA}$ |
| | typ. | | 2.1 | 2.1 | 2.2 | 2.2 | 2.3 | 2.3 | V | $I_f=20\text{ mA}$ |
| Peak wavelength | typ. | λ_p | 635 | 635 | 585 | 585 | 565 | 565 | nm | $I_f=20\text{ mA}$ |
| Spectral line half width | typ. | $\Delta\lambda/2$ | 45 | 45 | 35 | 35 | 35 | 35 | nm | $I_f=20\text{ mA}$ |
| Capacitance | typ. | C | 45 | 45 | 45 | 45 | 20 | 20 | pF | $V_f=0, f=1\text{ MHz}$ |
| Reverse breakdown voltage | min. | BV_r | 5 | 5 | 5 | 5 | 5 | 5 | V | $I_r=100\ \mu\text{A}$ |
| Total viewing angle between half Luminous Intensity points | typ. | $2\theta_{1/2}$ | 100 | 100 | 100 | 100 | 100 | 100 | degrees | |

| ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ Unless Otherwise Specified) | |
|--|-----------------|
| Power dissipation at 25°C ambient (HLMP-040X=85 mA) | 135 mW |
| Derate linearly from 25°C | 1.6 mW/°C |
| Storage and operating temperatures | -55°C to +100°C |
| Lead soldering time at 260°C (See Note 1) | 5 sec. |
| Continuous forward current at 25°C (HLMP-040X=20 mA) | 30 mA |
| Peak forward current (1 μsec pulse, 0.3% DC) (HLMP-040X=60 mA) | 90 mA |

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ Unless Otherwise Specified)

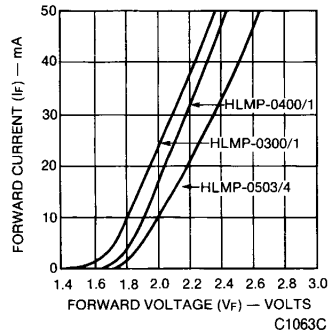


Fig. 1. Forward Current vs. Forward Voltage

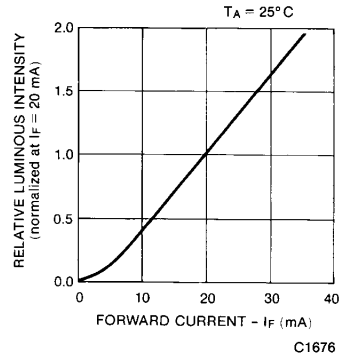


Fig. 2. Luminous Intensity vs. Forward Current

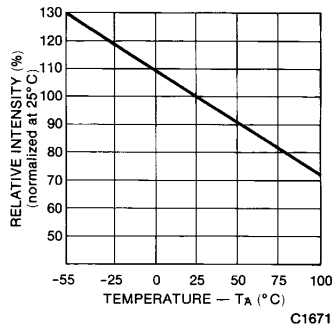


Fig. 3. Relative Luminous Intensity vs. Temperature

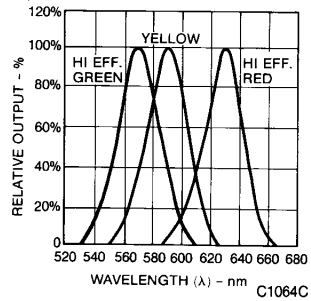


Fig. 4. Spectral Distribution

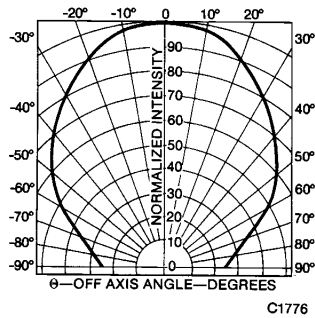


Fig. 5. Spatial Distribution

NOTES

1. The leads of the device immersed in molten solder, at 260°C , to a point 1/16 inch (1.6 mm) from the body of the device per MIL-S-750, with dwell time of 5 seconds.