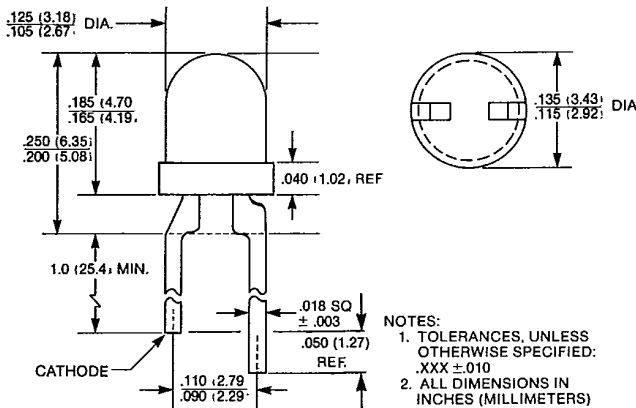


GENERAL INSTRUMENT

DIFFUSED T-100 SOLID STATE LAMPS

RED MV50640
YELLOW MV5364X
HIGH EFFICIENCY GREEN MV5464X/HLMP-15X3
HIGH EFFICIENCY RED MV5764X/HLMP-130X

PACKAGE DIMENSIONS



NOTES:
 1. TOLERANCES, UNLESS OTHERWISE SPECIFIED: .XXX ±.010
 2. ALL DIMENSIONS IN INCHES (MILLIMETERS)

C1533G

DESCRIPTION

These solid state indicators offer a variety of color selection. The High Efficiency Red and Yellow devices are made with gallium arsenide phosphide on gallium phosphide. The High Efficiency Green utilizes an improved gallium phosphide light emitting diode. All are encapsulated in epoxy packages with diffused lenses. Their small size, wide viewing angle, and small square leads contribute to their versatility as all-purpose indicators.

FEATURES

- Replacement for the HLMP-1300 and -1500 product series
- 100 mil lead spacing T-1
- High efficiency GaP light
- Versatile mounting on PC board or panel
- Wide viewing angle
- Diffused tinted lens

PHYSICAL CHARACTERISTICS

TYPE	SOURCE COLOR	LENS EFFECT	LUMINOUS INTENSITY at 25° C (mcd)		TEST CONDITIONS
			MIN.	TYP.	
MV50640	Standard Red	Red Diffused	0.5	1.5	I _F = 20 mA
MV53640			1.0	2.0	
MV53641			1.5	3.0	
MV53642	Yellow	Yellow Diffused	2.5	4.5	I _F = 10 mA
MV54643 (HLMP-1503)	High Efficiency Green	Green Diffused	2.0	5.0	I _F = 20 mA
MV54644 (HLMP-1523)			6.0	10.0	
MV57640 (HLMP-1300)			1.0	2.0	
MV57641 (HLMP-1301)	High Efficiency Red	Red Diffused	2.0	2.5	I _F = 10 mA
MV57642 (HLMP-1302)			3.0	4.0	

Lamps

ABSOLUTE MAXIMUM RATINGS (T_A = 25° C Unless Otherwise Specified)

Power dissipation at 25° C ambient	ALL BUT GREEN 120 mW	GREEN 120 mW
Derate linearly from 50° C	1.6 mA/° C	1.6 mA/° C
Storage and operating temperatures	-55° C to +100° C	-55° C to +100° C
Lead soldering time at 260° C (1/16 inch from body)	5 sec.	5 sec.
Continuous forward current at 25° C	30 mA	30 mA
Peak forward current (1 μsec pulse, 0.3% duty cycle)	1.0 A	90 mA
Reverse voltage	5.0 V	5.0 V

ELECTRO-OPTICAL CHARACTERISTICS (25° C Free Air Temperature Unless Otherwise Specified)

PARAMETER	SYMBOL	TEST COND.	UNITS	MV50640*	MV5364X	MV5464X	MV5764X
				RED	YELLOW	HI. EFF. GREEN	HI. EFF. RED
Forward voltage	typ. V _F	I _F = 10 mA	V	1.6	2.1	2.2*	2.0
	max.			2.0	3.0	3.0*	3.0
Peak wavelength	λ	I _F = 10 mA	nm	660	585	562	635
Spectral line half width		I _F = 10 mA	nm	20	35	30	45
Capacitance	typ. C	V = 0, f = 1 MHz,	pF	23	45	20	45
Reverse voltage	min. V _{BR}	I _F = 100 μA	V	5.0	5.0	5.0	5.0
Viewing angle (total)	typ. 2θ½	See Fig. 3	degrees	90	90	90	90

*I_F = 20 mA

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES
(25° C Free Air Temperature Unless Otherwise Specified)

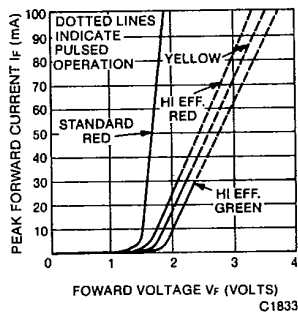


Fig. 1. Forward Current vs. Forward Voltage

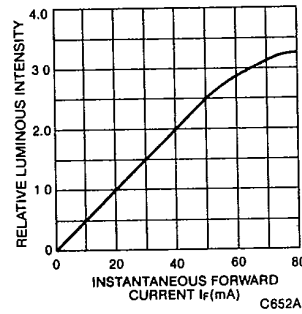


Fig. 2. Luminous Intensity vs. Forward Current

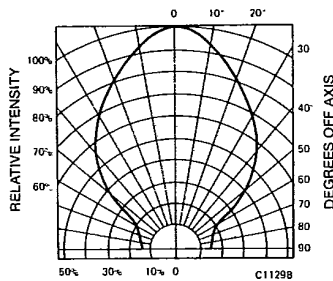


Fig. 3. Spatial Distribution

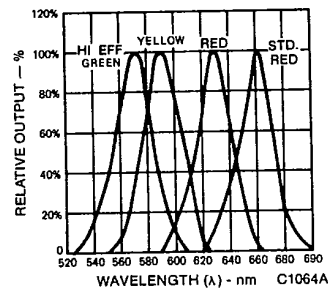


Fig. 4. Spectral Distribution