Monsanto

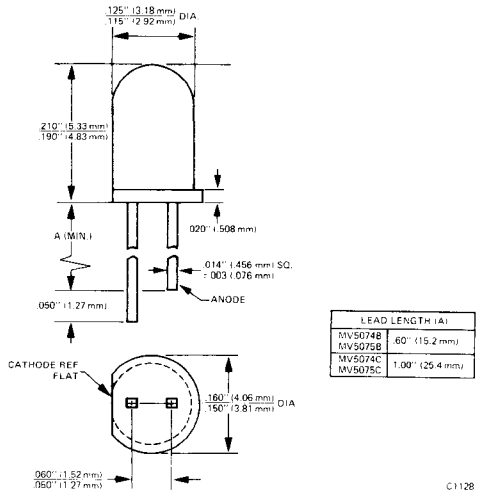
RED SOLID STATE LAMP

MV5074B/C MV5075B/C

PRODUCT DESCRIPTION

The MV5074B/C and MV5075B/C are red (GaAsP) light emitting diodes mounted in a red epoxy package. Their small size (approximately T-1 size), good viewing angle, and small square leads contribute to their versatility as all purpose indicators.

PACKAGE DIMENSIONS



LEAD LENGTH (A)	
MV5074B MV5075B	.60" (15.2 mm)
MV5074C MV5075C	1.00" (25.4 mm)

FEATURES

- Square leads (will fit into .020" (.508 mm) diameter hole)
- Compact size
- Bright (typically 2.0 mcd at 20 mA)
- Long life, rugged
- MV5074B and MV5075B have .6" (15.2 mm) minimum lead length
- MV5074C and MV5075C have 1" (25.4 mm) minimum lead length
- Mount on approximately 3/16" (4.72 mm) centers
- Direct replacement for Texas Instruments TIL-209A (MV5074B)

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C	100 mW
Derate Linearly from 25°C	−1.27 mW/°C
Maximum Storage Temperature	−55°C to +100°C
Maximum Operating Temperature	−55°C to +100°C
Maximum Currents	
Continuous Forward Current (25°C)	50 mA
Peak Forward Current (1 μsec Pulse Width, 0.1% Duty Cycle)	4 A
Maximum Reverse Voltage	5.0 Volts
Maximum Lead Solder Time (230°C, 1/16" from body)	5 sec

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS

CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
Optical					
Luminous Intensity (I) (Note 1)					
MV5074B/C		2.0		mcd	I_F = 20 mA
MV5075B/C		1.0		mcd	I_F = 20 mA
Wavelength (λpk)	640	660	700	nm	
Spectral Half Width		20		nm	
Viewing Angle					
MV5074B/C		70		degrees	Between 50% points
MV5075B/C		90		degrees	Between 50% points
Radiated Output Power (ROP)		30		μW	I_F = 20 mA
Electrical					
Forward Voltage (V_F)		1.68	2.0	Volts	I_F = 20 mA
Reverse Voltage (V_R)	5.0	15.0		Volts	I_R = 100 μA
Dynamic Resistance (R_D)		7.0		Ω	
Capacitance		23		pF	V = 0

TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES

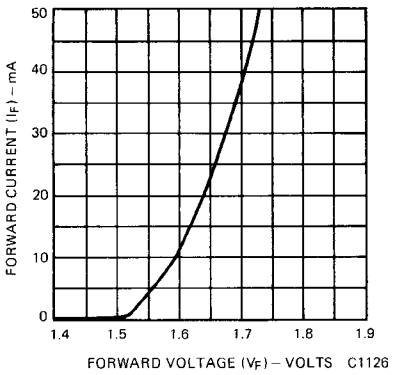


Fig. 1. Forward Current vs. Forward Voltage

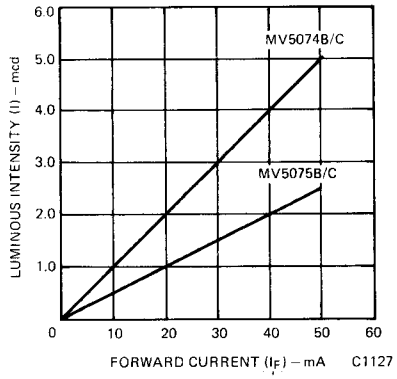


Fig. 2. Luminous Intensity vs. Forward Current

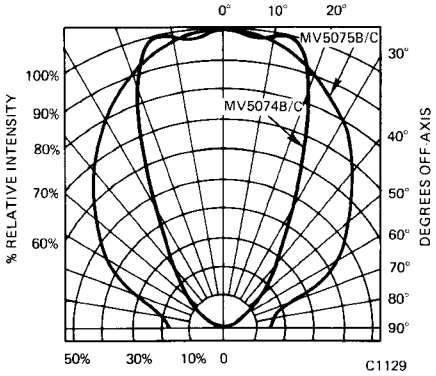


Fig. 3. Spatial Distribution

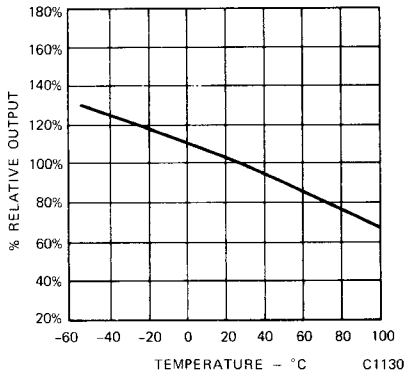


Fig. 4. Percent Relative Response vs. Temperature

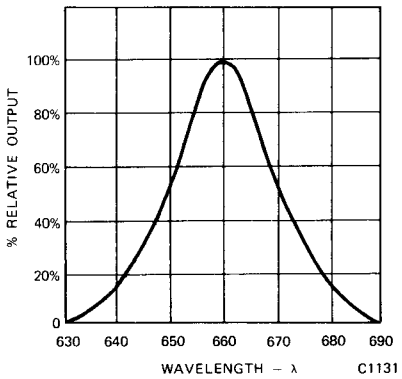


Fig. 5. Spectral Response

NOTES

1. *Luminous Intensity measurements are taken with a Photo Research Corp., "SPECTRA" Microcandela Meter No. 2341.*

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