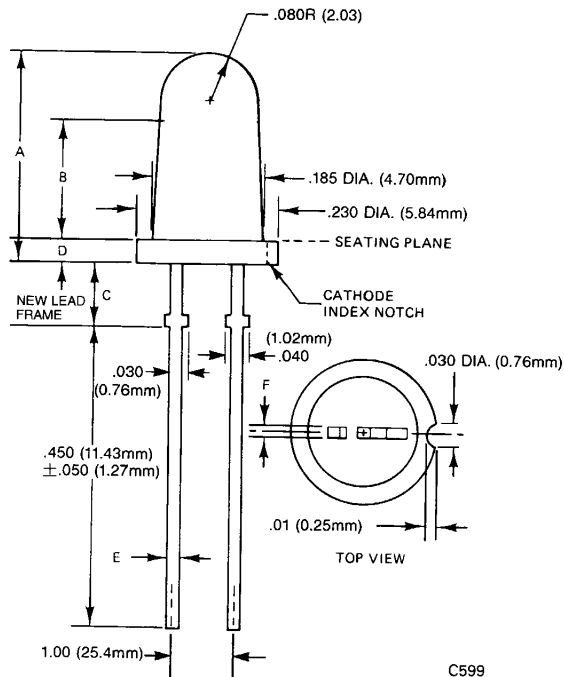


**PACKAGE DIMENSIONS**



C599

**DESCRIPTION**

The MV502X Series of solid state indicators is made with gallium arsenide phosphide light emitting diodes. Encapsulation and lens is epoxy. Various lens effects are available for many indicator applications.

**FEATURES**

- Tapered barrel T-1<sup>3</sup>/<sub>4</sub>
- High Intensity Red light source with various lens colors and effects
- T-1<sup>3</sup>/<sub>4</sub> with stand-off
- Versatile mounting on PC board or panel
- Snap in panel mounting clip available (See MP22 for clip detail)

**PHYSICAL CHARACTERISTICS**

TYPE	A	B	C	D	E & F	SOURCE COLOR	LENS COLOR	LENS EFFECT	POP-IN MOUNTING	CIRCUIT BOARD MOUNTING
MV5021A	.340	.190	.100	.040	.020	Red	White Diffused	Soft	X	X
MV5022A	.340	.190	.100	.040	.020	Red	Transparent Red	Point	X	X
MV5023A	.340	.190	.100	.040	.020	Red	Red Diffused	Soft	X	X
MV5024A	.340	.160	.130	.040	.020	Red	Red Diffused	Soft	X	X
MV5025A	.340	.160	.130	.040	.020	Red	Red Diffused	Flooded	X	X
MV5026A	.340	.160	.130	.040	.020	Red	Dark Red Diffused	Flooded	X	X

<b>ELECTRO-OPTICAL CHARACTERISTICS</b> (25°C Free Air Temperature Unless Otherwise Specified)									
PARAMETER	TEST CONDITIONS		UNITS	5021A	5022A	5023A	5024A	5025A	5026A
Luminous Intensity	min.	$I_f = 20 \text{ mA}$	mcd	0.5	0.6	0.4	0.9	0.1	0.1
	typ.	$I_f = 20 \text{ mA}$	mcd	1.6	1.6	1.6	3.0	0.4	0.6
Peak wavelength	$I_f = 20 \text{ mA}$		nm	660	660	660	660	660	660
Spectral line half width	$I_f = 20 \text{ mA}$		nm	20	20	20	20	20	20
Forward voltage $V_f$	typ.	$I_f = 20 \text{ mA}$	V	1.65	1.65	1.65	1.65	1.65	1.65
	max.	$I_f = 20 \text{ mA}$	V	2.0	2.0	2.0	2.0	2.0	2.0
Reverse current $I_r$	max.	$V_r = 5.0 \text{ V}$	$\mu\text{A}$	100	100	100	100	100	100
Reverse voltage $V_r$	min.	$I_r = 100 \mu\text{A}$	V	5.0	5.0	5.0	5.0	5.0	5.0
Capacitance	typ.	$V = 0$	pF	35	35	35	35	35	35
Viewing angle	Between 50% Points		degrees	90	90	90	60	180	90
Rise time and fall time	10%-90% 50 $\Omega$ system		nsec	50	50	50	50	50	50
	typ. 90%-10% 50 $\Omega$ system		nsec	50	50	50	50	50	50

<b>ABSOLUTE MAXIMUM RATINGS</b>	
Power dissipation at 25°C ambient	180 mW
Derate linearly from 25°C	2 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	100 mA
Peak forward current (1 $\mu$ sec pulse, 0.3% duty cycle)	1.0 A
Reverse voltage	5.0 V

<b>NOTES</b>
1. The leads of the device were 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 a dwell time of 5 seconds.

**TYPICAL ELECTRO-OPTICAL CHARACTERISTIC CURVES**

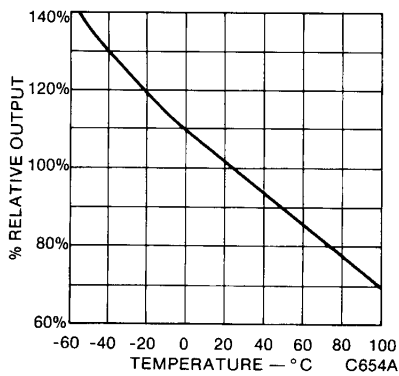


Fig. 1. Output vs. Temperature

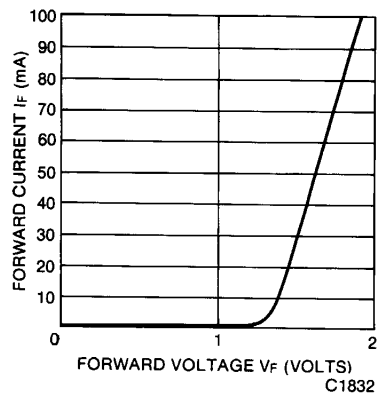


Fig. 2. Forward Current vs. Forward Voltage

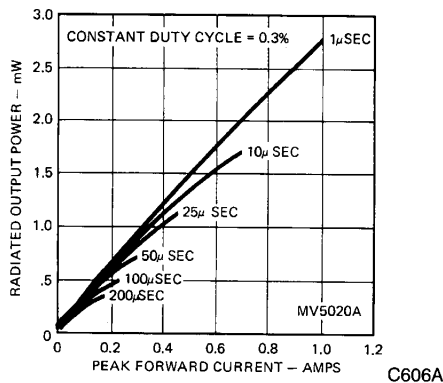


Fig. 3. Radiated Output Power vs. Peak Forward Current

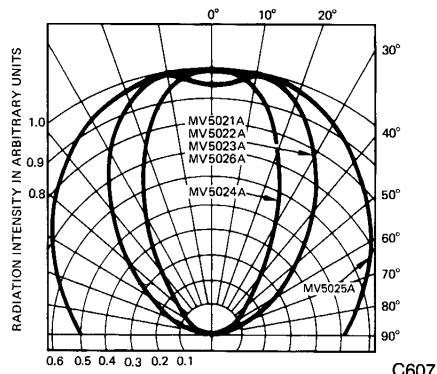


Fig. 4. Spatial Distribution

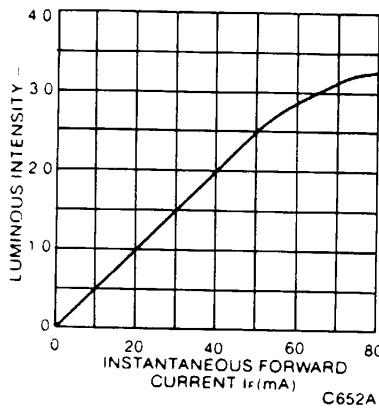


Fig. 5. Luminous Intensity vs. Forward Current



## TAPERED PACKAGE T-1 $\frac{3}{4}$ SOLID STATE LAMPS

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