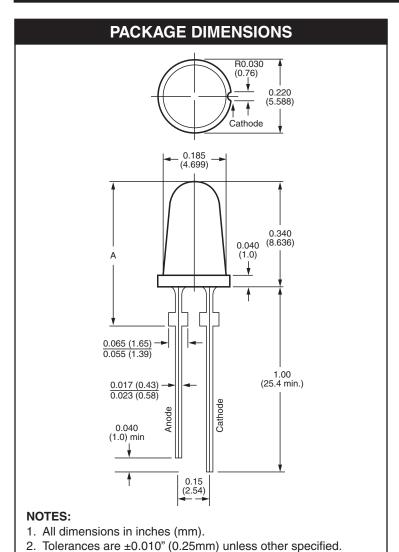


# TAPERED PACKAGE T-1<sup>3</sup>/4 SOLID STATE LAMPS

MV502XA Standard Red



### **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 indicators applications.

### **FEATURES**

- Tapered barrel T-1<sup>3</sup>/<sub>4</sub>
- 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

PHYSICAL CHARACTERISTICS								
Туре	A	Lens Color	Lens Effect					
MV5021A		White Diffused	Soft					
MV5022A	0.430 ±0.015 (10.92 ±0.381)	Transparent Red	Point					
MV5023A		Red Diffused	Soft					
MV5024A		Red Diffused	Soft					
MV5025A	0.460 ±0.015 (11.60 ±0.381)	Red Diffused	Flooded					
MV5026A		Dark Red Diffused	Flooded					



# TAPERED PACKAGE T-13/4 SOLID STATE LAMPS

MV502XA Standard Red

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> = 25°C unless otherwise specified)								
Parameter	Rating	Unit						
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 (1µsec pulse, 0.3% duty cycle)	1.0	Α						
Reverse voltage	5.0	V						

#### **Notes**

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

ELECTRICAL / OPTICAL CHARACTERISTICS (T <sub>A</sub> =25°C)												
Part Number		Test Conditions	Units	5021A	5022A	5023A	5024A	5025A	5026A			
Luminous Intensity	min.	I <sub>F</sub> = 20 mA	mcd	0.5	0.6	0.4	0.9	0.1	0.1			
	typ.	I <sub>F</sub> = 20 mA	mcd	1.6	1.6	1.6	3.0	0.4	0.6			
Peak Wavelength		I <sub>F</sub> = 20 mA	nm	660	660	660	660	660	660			
Spectral line half width		I <sub>F</sub> = 20 mA	nm	20	20	20	20	20	20			
Forward voltage V <sub>F</sub>	typ.	I <sub>F</sub> = 20 mA	V	1.65	1.65	1.65	1.65	1.65	1.65			
	max.	I <sub>F</sub> = 20 mA	V	2.0	2.0	2.0	2.0	2.0	2.0			
Reverse current In	max.	V <sub>R</sub> = 5.0V	μΑ	100	100	100	100	100	100			
Reverse voltage V <sub>R</sub>	min.	I <sub>R</sub> = 100 μA	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		10%-90% 50Ω system	nsec	50	50	50	50	50	50			
and fall time typ.		90%-10% 50Ω system	nsec	50	50	50	50	50	50			



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MV502XA Standard Red

## TYPICAL PERFORMANCE CURVES

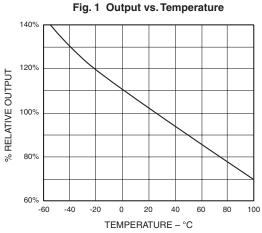


Fig. 3 Radiated Output Power vs. Peak Forward Current

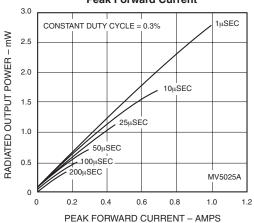


Fig. 2 Forward Current vs. Forward Voltage

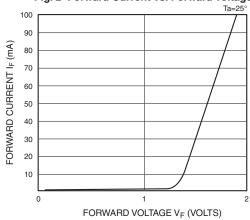


Fig. 4. Spatial Distribution

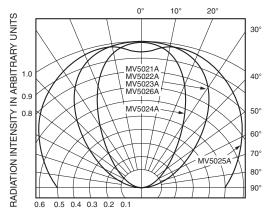
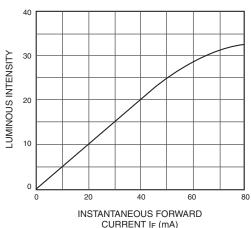


Fig. 5 Forward Intensity vs. Forward Current





# TAPERED PACKAGE T-13/4 SOLID STATE LAMPS

MV502XA Standard Red

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