

Distributed by:

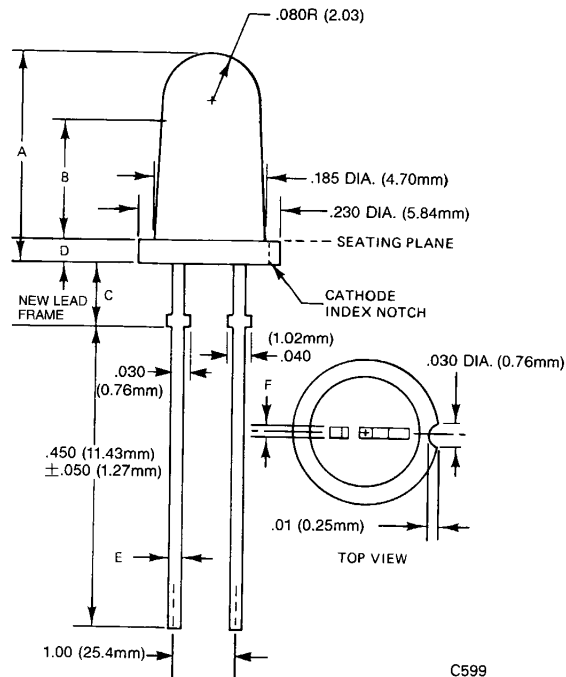
JAMECO[®]
ELECTRONICS

www.Jameco.com ♦ 1-800-831-4242

The content and copyrights of the attached
material are the property of its owner.

Jameco Part Number 1870032

PACKAGE DIMENSIONS



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 $\frac{3}{4}$
- High Intensity Red light source with various lens colors and effects
- T-1 $\frac{3}{4}$ 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 |

| ELECTRO-OPTICAL CHARACTERISTICS (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. | $V_R = 5.0 \text{ V}$ | μA | 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 Ω system | nsec | 50 | 50 | 50 | 50 | 50 | 50 |
| | typ. | 90%-10% 50 Ω system | nsec | 50 | 50 | 50 | 50 | 50 | 50 |

| ABSOLUTE MAXIMUM RATINGS | |
|---|-----------------|
| 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 μsec pulse, 0.3% duty cycle) | 1.0 A |
| Reverse voltage | 5.0 V |

| NOTES | |
|---|--|
| 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

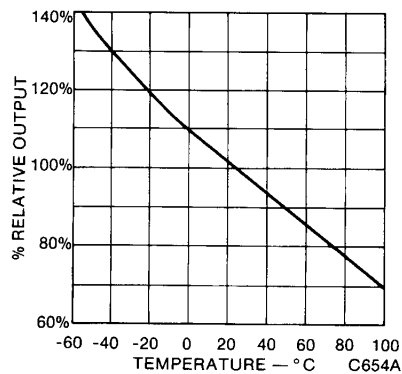


Fig. 1. Output vs. Temperature

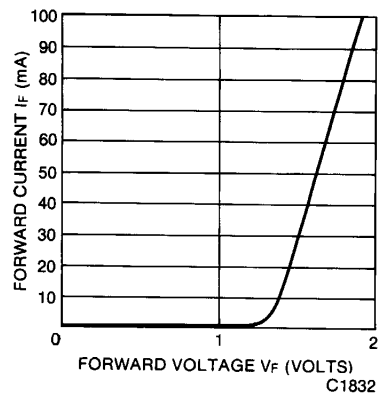


Fig. 2. Forward Current vs. Forward Voltage

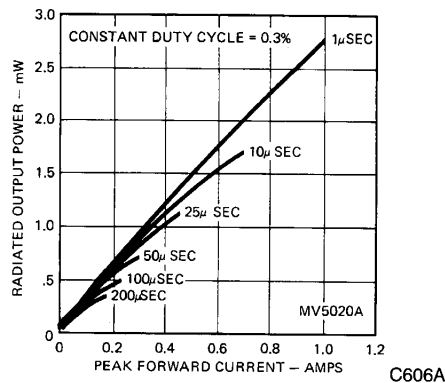


Fig. 3. Radiated Output Power vs. Peak Forward Current

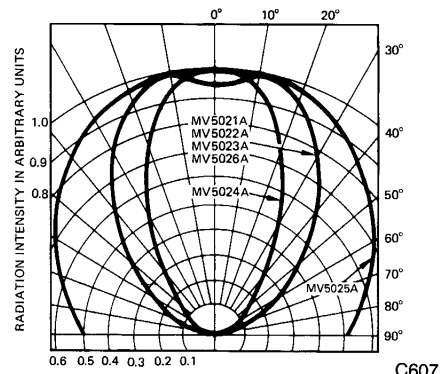


Fig. 4. Spatial Distribution

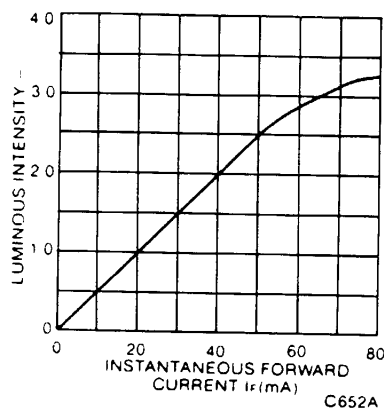


Fig. 5. Luminous Intensity vs. Forward Current



TAPERED PACKAGE T-1 3/4 SOLID STATE LAMPS

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

This datasheet has been download from:

www.datasheetcatalog.com

Datasheets for electronics components.