

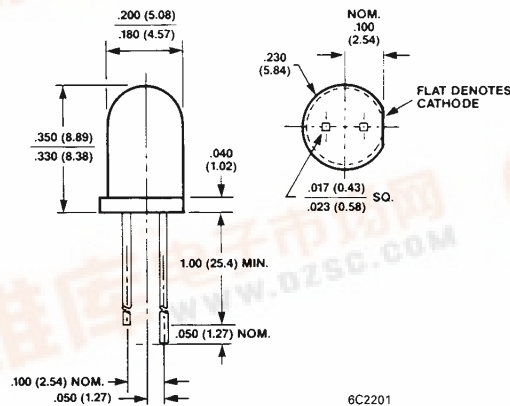


## STANDARD RED T-1<sup>3</sup>/<sub>4</sub> SOLID STATE LAMPS

**MV5052**  
**MV5053/6053**

**MV5054A-1/2/3**  
**MV5055**

### PACKAGE DIMENSIONS



### DESCRIPTION

The MV505X Series of industry standard solid state indicators is made with gallium arsenide phosphide light emitting diodes encapsulated in epoxy lenses. Various lens effects give different design possibilities.

### FEATURES

- Standard Red light source with various lens colors and effects
- Versatile mounting on PC board or panel
- Snap in mounting grommet MP52
- Long life—solid state reliability
- Low power requirements
- Compact, rugged, lightweight

### PHYSICAL CHARACTERISTICS

| CATHODE LONG | SOURCE COLOR | LENS TYPE    | LENS EFFECT    | APPLICATION  |
|--------------|--------------|--------------|----------------|--------------|
| MV5052       | Standard Red | Red Tint     | Point Source   | Backlighting |
| MV5053*      | Standard Red | Red Diffused | Wide Beam      | Direct View  |
| MV5054A-1    | Standard Red | Red Diffused | Narrow Beam    | Direct View  |
| MV5054A-2    | Standard Red | Red Diffused | Narrow Beam    | Direct View  |
| MV5054A-3    | Standard Red | Red Diffused | Narrow Beam    | Direct View  |
| MV5055       | Standard Red | Red Diffused | Very Wide Beam | Direct View  |

\*MV6053 – Anode Long also available.



## STANDARD RED T-1<sup>3/4</sup> SOLID STATE LAMPS

| ELECTRO OPTICAL CHARACTERISTICS (T <sub>A</sub> =25°C Unless Otherwise Specified) |                                                |      |              |         |         |         |      |            |
|-----------------------------------------------------------------------------------|------------------------------------------------|------|--------------|---------|---------|---------|------|------------|
| PARAMETER                                                                         | TEST COND.                                     | 5052 | 6053<br>5053 | 5054A-1 | 5054A-2 | 5054A-3 | 5055 | UNIT       |
| Luminous Intensity<br>I <sub>v</sub> min.                                         | I <sub>F</sub> =20 mA<br>I <sub>F</sub> =10 mA | 0.7  | 0.5          | 1.0     | 2.0     | 3.0     | 0.1  | mcd<br>mcd |
| Forward voltage<br>V <sub>F</sub> mcd                                             | I <sub>F</sub> =20 mA<br>I <sub>F</sub> =10 mA | 2.2  | 2.2          | 2.2     | 2.2     | 2.2     | 2.2  | V<br>V     |
| Peak wavelengths<br>λ <sub>p</sub> typical                                        | I <sub>F</sub> =20 mA                          | 660  | 660          | 660     | 660     | 660     | 660  | nm         |
| Spectral line<br>half width typical                                               | I <sub>F</sub> =20 mA                          | 20   | 20           | 20      | 20      | 20      | 20   | nm         |
| Capacitance<br>typical                                                            | V=0<br>f=1 MHz                                 | 30   | 30           | 30      | 30      | 30      | 30   | pF         |
| Reverse current<br>I <sub>R</sub> max.                                            | V <sub>R</sub> =5.0 V                          | 100  | 100          | 100     | 100     | 100     | 100  | μA         |
| Viewing angle<br>typical, See Figures                                             |                                                | 72   | 80           | 24      | 24      | 24      | 150  | degrees    |

| ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> =25°C Unless Otherwise Specified) |                 |
|----------------------------------------------------------------------------|-----------------|
| Power dissipation                                                          | 180 mW          |
| Derate linearly from 25°                                                   | 2.0 mW/° C      |
| Storage and operating temperatures                                         | -55°C to +100°C |
| Lead soldering time at 260°C (See Note 2)                                  | 5 sec.          |
| Continuous forward current                                                 | 100 mA          |
| Peak forward current (1μsec pulse, 0.3% duty cycle)                        | 1.0 A           |
| Reverse voltage                                                            | 5.0 V           |

| NOTES |                                                                                                                                                                    |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.    | The axis of spatial distribution are typically within a 10° cone with reference to the central axis of the device.                                                 |
| 2.    | The leads of the device were immersed in molten solder at 260°C to a point 1/16(1.6 mm) from the body of the device per MIL-S-750, with a dwell time of 5 seconds. |

**TYPICAL ELECTRO-OPTICAL CHARACTERISTICS (25°C Free Air Temperature)**

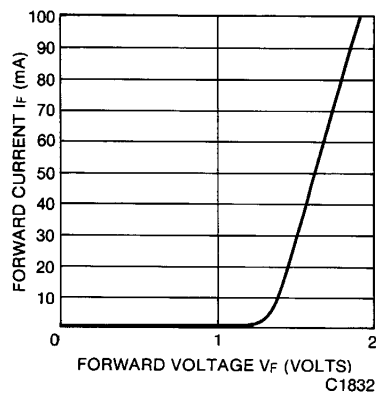


Fig. 1. Forward Current vs. Forward Voltage

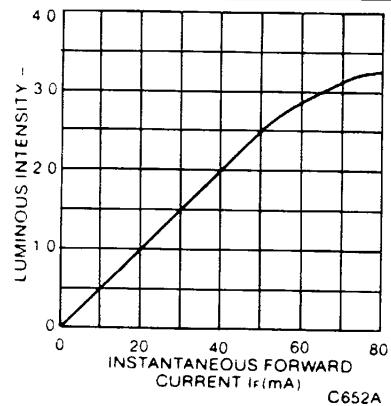


Fig. 2. Luminous Intensity vs. Forward Current

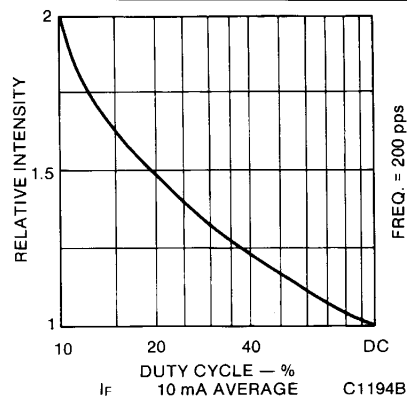


Fig. 3. Luminous Intensity vs. Duty Cycle

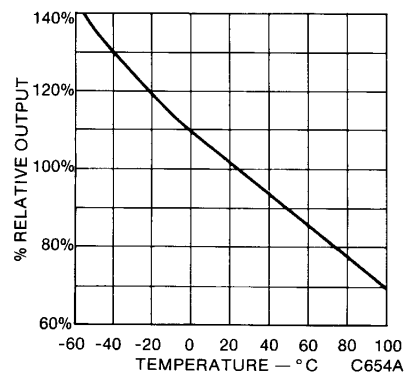


Fig. 4. Output vs. Temperature

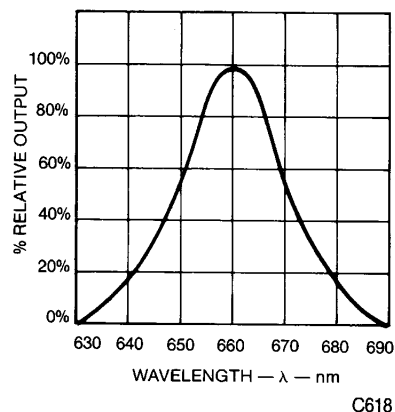


Fig. 5. Spectral Distribution

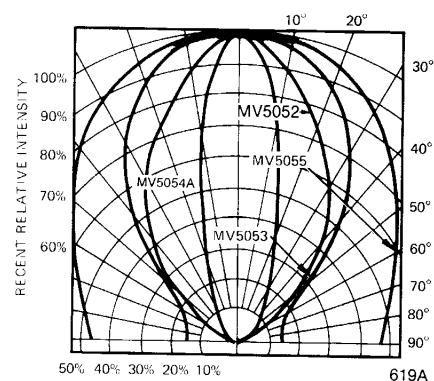


Fig. 6. Spatial Distribution (Note 1)



## STANDARD RED T-1 3/4 SOLID STATE LAMPS

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