

# T-1 3/4 ( $\phi$ 5mm)PACKAGE

## HIGH POWER AlInGaP LED Lamps

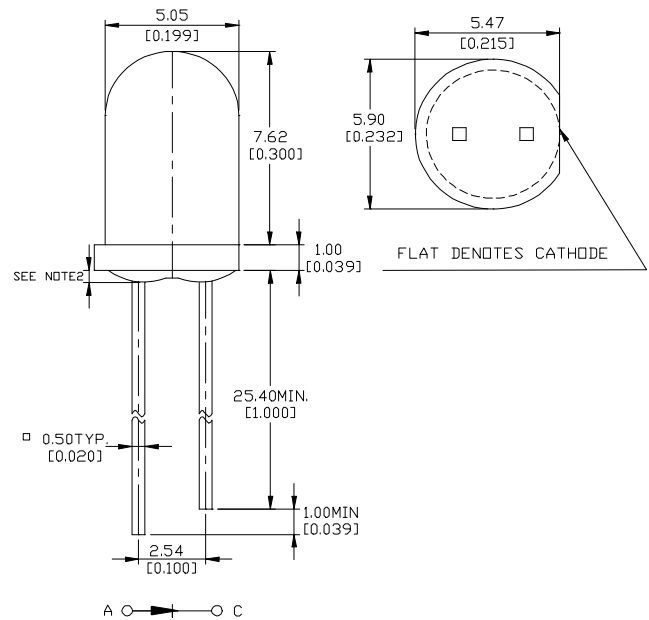
**MVL-514TUOL**

### Description

The MVL-514TUOL , utilizes the latest transparent substrate Aluminum Indium Gallium Phosphide (AlInGaP) LED technology. This LED material has outstanding light output efficiency over a wide range of drive current. The package is T-1 3/4 ( $\phi$ 5mm) water clear standard type.

### Package Dimensions

Unit : mm ( inches )



Notes :

1. Tolerance is  $\pm 0.25$  mm (.010") unless otherwise noted.
2. Protruded resin under flange is 1.5 mm (.059") max.
3. Lead spacing is measured where the leads emerge from the package.

### Features

- Ultra - brightness
- Low power consumption
- TTL compatible
- Reliable

### Absolute Maximum Ratings

@  $T_A = 25^\circ\text{C}$

| Parameter                                                          | Symbol           | Maximum Rating   | Unit |
|--------------------------------------------------------------------|------------------|------------------|------|
| Power Dissipation                                                  | P <sub>ad</sub>  | 125              | mW   |
| Peak Forward Current (1/10 Duty Cycle 100μs pulse width )          | I <sub>pf</sub>  | 100              | mA   |
| Continuous Forward Current                                         | I <sub>af</sub>  | 50               | mA   |
| Reverse Voltage                                                    | V <sub>R</sub>   | 5                | V    |
| Operating Temperature Range                                        | T <sub>opr</sub> | -40°C to + 100°C |      |
| Storage Temperature Range                                          | T <sub>stg</sub> | -40°C to + 100°C |      |
| Lead Soldering Temperature 1.6 mm from body for 5 seconds at 260°C |                  |                  |      |

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## Optical-Electrical Characteristics

@  $T_A = 25^\circ\text{C}$

| Parameter                | Test Conditions     | Symbol          | Min . | Typ . | Max . | Unit .        |
|--------------------------|---------------------|-----------------|-------|-------|-------|---------------|
| Luminous Intensity       | $I_F = 20\text{mA}$ | $I_V$           | 1000  | 2000  | -     | mcd           |
| Forward Voltage          | $I_F = 20\text{mA}$ | $V_F$           | -     | 2.3   | 2.8   | V             |
| Reverse Current          | $V_R = 5\text{V}$   | $I_R$           | -     | -     | 100   | $\mu\text{A}$ |
| Dominant Wavelength      | $I_F = 20\text{mA}$ | $\lambda_d$     | -     | 625   | -     | nm            |
| Spectral Line Half Width | $I_F = 20\text{mA}$ | $\Delta\lambda$ | -     | 23    | -     | nm            |
| Viewing Angle            | $I_F = 20\text{mA}$ | $2\theta_{1/2}$ | -     | 30    | -     | deg.          |

## Typical Optical-Electrical Characteristic Curves

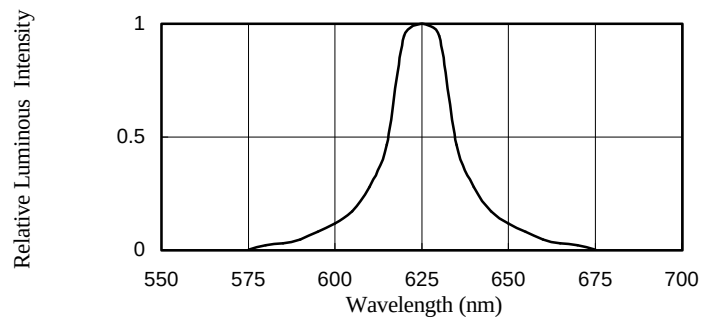


FIG.1 SPECTRAL DISTRIBUTION

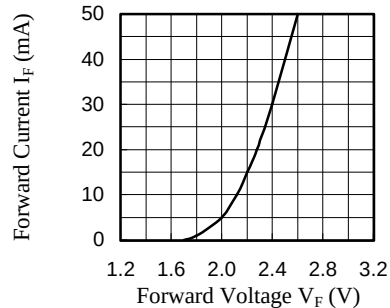


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

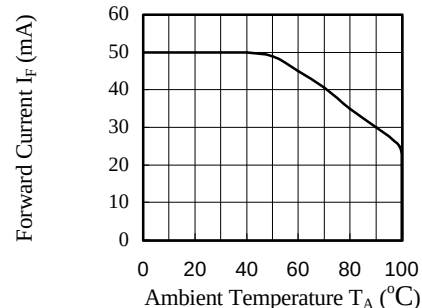


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

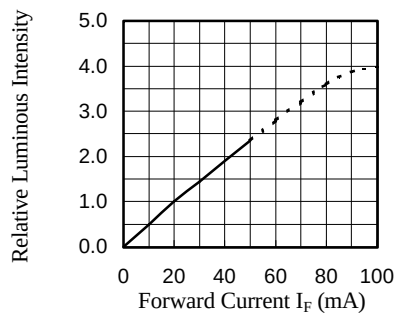


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

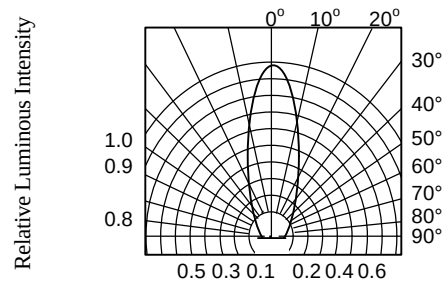


FIG.5 RADIATION DIAGRAM