

## Surface Mount Chip LEDs

## MSL-154UYL

### Description

The MSL-154UYL, a AMBER source Chip LED device, is designed in an indnstry standard package suitable for SMT assembly method. It utilizes AlGaInP on GaAs LED chip technology and water clear epoxy package.

### Applications

- Small Size
- Industry Standard Footprint(1206)
- Compatible with IR Solder process
- Availalble in 8 mm Tape on 7"(178mm)

Diameteer Reels

### Features

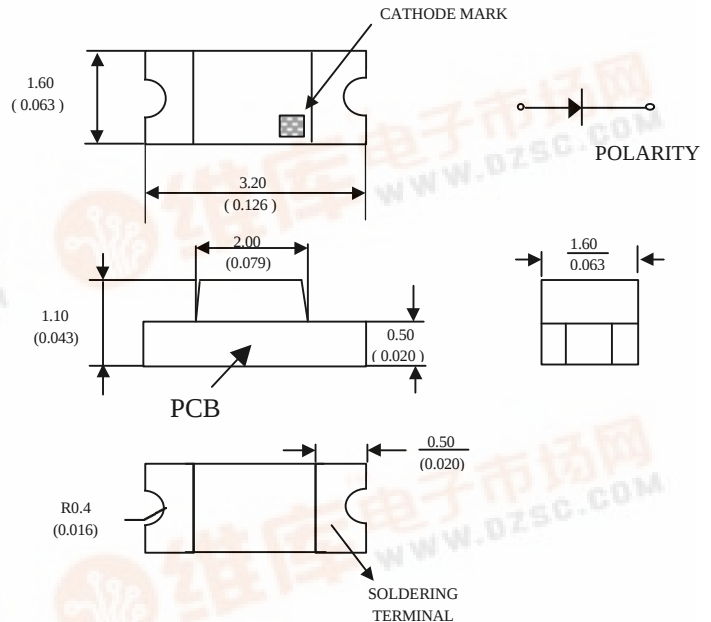
- Push-Button Backlighting
- LCD Backlighting
- Symbol Backlighting
- Front Panel Indicator

### Absolute Maximum Ratings

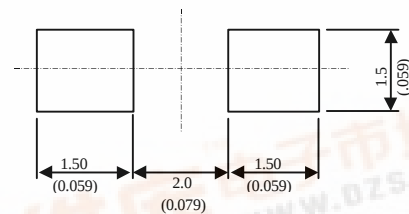
@ T<sub>A</sub>=25°C

| Parameter                                   | Symbol           | Maximum Rating  | Unit |
|---------------------------------------------|------------------|-----------------|------|
| Peak Forward Current(1/10 Duty Cycle@1KHz ) | I <sub>FP</sub>  | 100             | mA   |
| DC Forward Current                          | I <sub>F</sub>   | 25              | mA   |
| Power Dissipitas                            | P <sub>D</sub>   | 65              | mW   |
| Reverse Voltage                             | V <sub>R</sub>   | 5               | V    |
| Operating Temperature Range                 | T <sub>OPR</sub> | -20°C to +80°C  |      |
| Storage Temperature Range                   | T <sub>STG</sub> | -30°C to +100°C |      |

### Package Dimensions



### Recommended Solder Patterns



#### NOTE:

1. All dimensions are in millimeter (inches)
2. Tolerance is  $\pm 0.1\text{mm}$  (.004") unless otherwise specified.

## Optical-Electrical Characteristics

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

| Parameter                | Test Conditions   | Symbol                | Min . | Typ .   | Max . | Unit .        |
|--------------------------|-------------------|-----------------------|-------|---------|-------|---------------|
| Luminous Intensity       | $I_F=20\text{mA}$ | $I_V$                 | 30    | 80      | -     | mcd           |
| Forward Voltage          | $I_F=20\text{mA}$ | $V_F$                 | -     | 2.1     | 2.4   | V             |
| Reverse Current          | $V_R=5\text{V}$   | $I_R$                 | -     | -       | 10    | $\mu\text{A}$ |
| Peak/Dominant Wavelength | $I_F=20\text{mA}$ | $\lambda_p/\lambda_d$ | -     | 592/590 | -     | nm            |
| Spectral Linewidth       | $I_F=20\text{mA}$ | $\Delta\lambda$       | -     | 20      | -     | nm            |
| Viewing Angle            | $I_F=20\text{mA}$ | $2\theta_{1/2}$       | -     | 130     | -     | deg.          |

## Typical Optical-Electrical Characteristic Curves

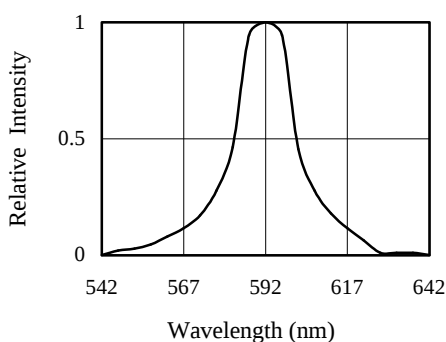


FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

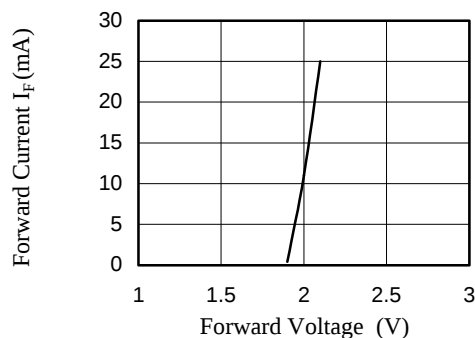


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE.

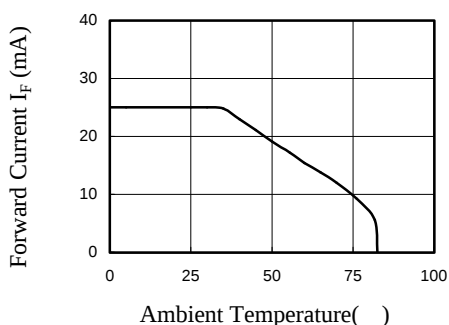


FIG. 3 FORWARD CURRENT VS. AMBIENT TEMPERATURE.

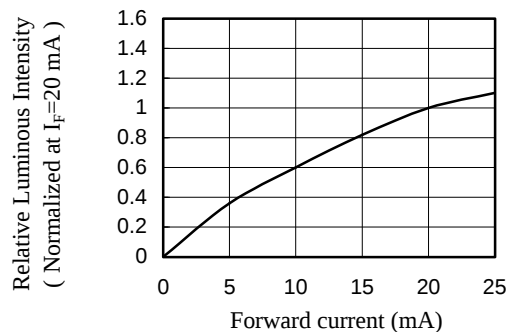


FIG. 4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT.

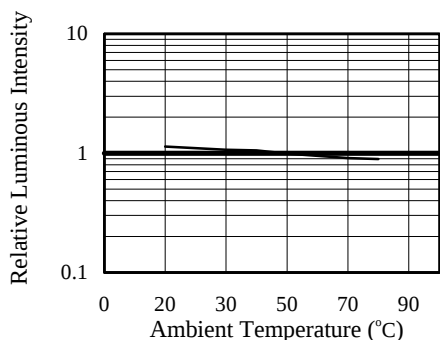


FIG.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

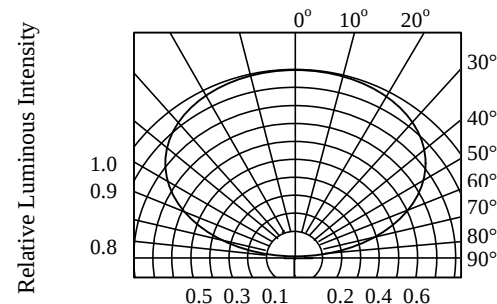


FIG.6 RADIATION DIAGRAM