

## Description

The MSL-194TG, a TRUE GREEN source Chip LED device, is designed in an industry standard package suitable for SMT assembly method. It utilizes InGaN on SiC LED chip technology and water clear epoxy package.

## Applications

- Small Size
- Industry Standard Footprint(0603)
- Compatible with IR Solder process
- Available in 8 mm Tape on 7"(178mm)

Diameter Reels

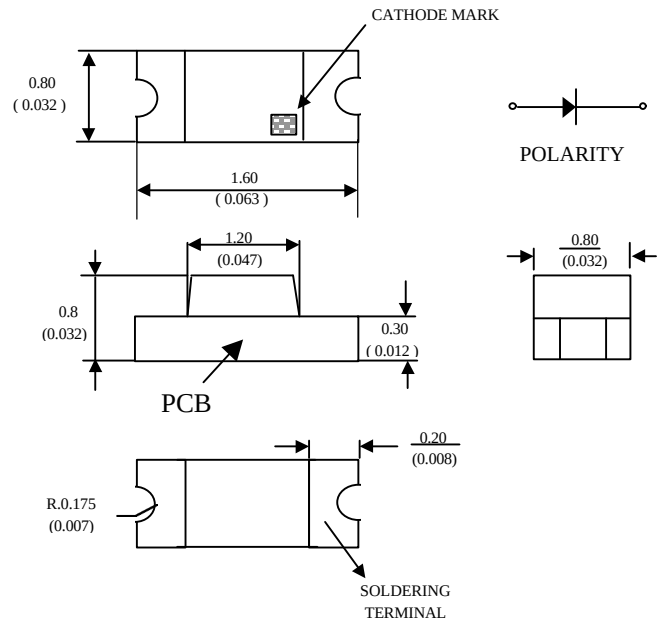
## Features

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

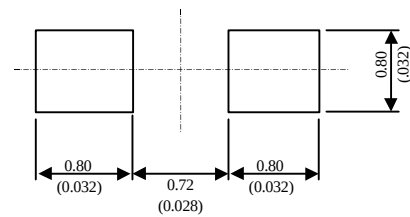
## Absolute Maximum Ratings

| Parameter                                   | Symbol    | Maximum Rating  | Unit |
|---------------------------------------------|-----------|-----------------|------|
| Peak Forward Current(1/10 Duty Cycle@1KHz ) | $I_{FP}$  | 100             | mA   |
| DC Forward Current                          | $I_F$     | 30              | mA   |
| Power Dissipation                           | $P_D$     | 126             | mW   |
| Reverse Voltage                             | $V_R$     | 5               | V    |
| Operating Temperature Range                 | $T_{OPR}$ | -20°C to +80°C  |      |
| Storage Temperature Range                   | $T_{STG}$ | -30°C to +100°C |      |
| Electrostatic Discharge Threshold           | $E_{OT}$  | 1000            | V    |

## 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.

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

## Optical-Electrical Characteristics

@ T<sub>A</sub>=25°C

| Parameter                | Test Conditions      | Symbol                         | Min . | Typ .   | Max . | Unit . |
|--------------------------|----------------------|--------------------------------|-------|---------|-------|--------|
| Luminous Intensity       | I <sub>F</sub> =20mA | I <sub>V</sub>                 | 5     | 12      | -     | mcd    |
| Forward Voltage          | I <sub>F</sub> =20mA | V <sub>F</sub>                 | -     | 3.5     | 4.0   | V      |
| Reverse Current          | V <sub>R</sub> =5V   | I <sub>R</sub>                 | -     | -       | 10    | μA     |
| Peak/Dominant Wavelength | I <sub>F</sub> =20mA | λ <sub>p</sub> /λ <sub>d</sub> | -     | 523/525 | -     | nm     |
| Spectral Linewidth       | I <sub>F</sub> =20mA | Δλ                             | -     | 36      | -     | nm     |
| Viewing Angle            | I <sub>F</sub> =20mA | 2θ <sub>1/2</sub>              | -     | 130     | -     | deg.   |

## Typical Optical-Electrical Characteristic Curves

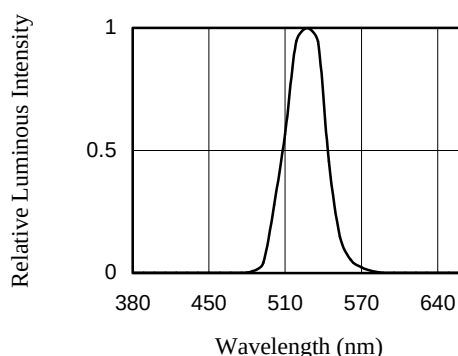


FIG.1 RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

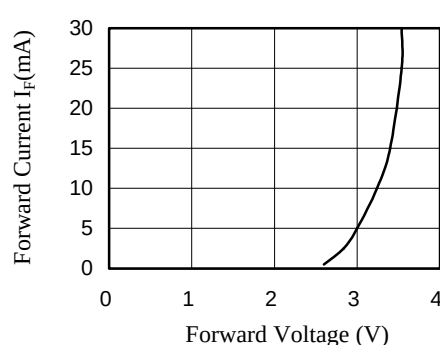


FIG.2 FORWARD CURRENT VS. FORWARD VOLTAGE

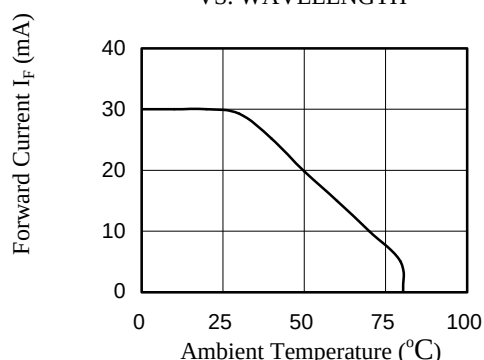


FIG.3 FORWARD CURRENT VS. AMBIENT TEMPERATURE

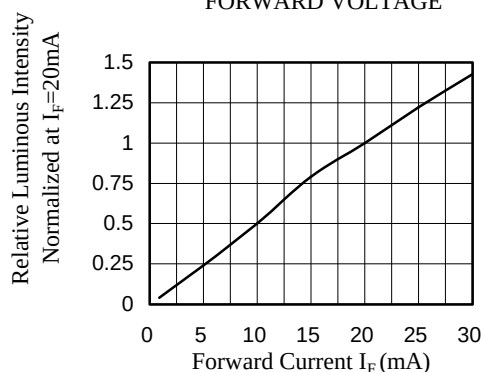


FIG.4 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

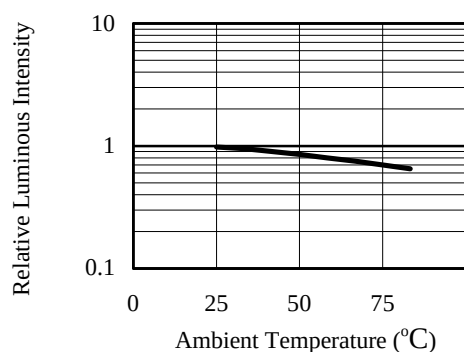


FIG.5 LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

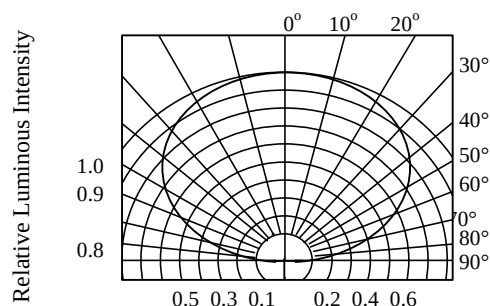


FIG.6 RADIATION DIAGRAM