

## END-LOOK PACKAGE LIGHT EMITTING DIODE

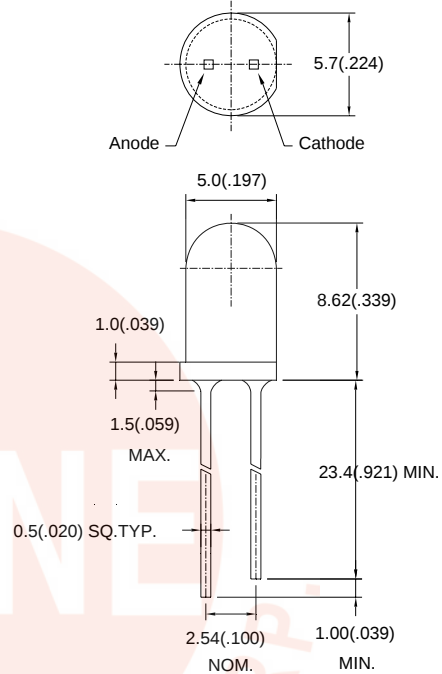
### ● Features:

1. High radiant power and high radiant intensity.
2. Standard T-1 3/4(5mm)package.
3. Peak wavelength  $\lambda_p=850\text{nm}$ .
4. Good spectral matching to si-photodetector.
5. Radiant angle:  $35^\circ$
6. Lens Appearance: Water Clear.
7. This product doesn't contain restriction substance, comply RoHS standard

### ● Applications:

1. Remote Control.
2. Automatic Control System.

### ● Package Dimensions:



#### NOTES:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25\text{mm}$  (0.01") unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

### ● Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                          | Symbol    | Rating                                    | Unit |
|------------------------------------|-----------|-------------------------------------------|------|
| Power Dissipation                  | $P_d$     | 180                                       | mW   |
| Continuous Forward Current         | $I_F$     | 100                                       | mA   |
| Peak Forward Current <sup>*1</sup> | $I_{FP}$  | 1                                         | A    |
| Reverse Voltage                    | $V_R$     | 5                                         | V    |
| Operating Temperature              | $T_{opr}$ | $-40^\circ\text{C} \sim 85^\circ\text{C}$ | -    |
| Storage Temperature                | $T_{stg}$ | $-45^\circ\text{C} \sim 85^\circ\text{C}$ | -    |

<sup>\*1</sup>  
(300pps 10us pulse)

● **Optical- Electrical Characteristics (@T<sub>A</sub>=25°C)**

| Parameter                 | Symbol            | Test Conditions      | Min   | TYP | Max | Unit  |
|---------------------------|-------------------|----------------------|-------|-----|-----|-------|
| Radiant Intensity         | I <sub>e</sub>    | I <sub>F</sub> =50mA | 19.42 | 50  | -   | mW/sr |
| Forward Voltage           | V <sub>F</sub>    | I <sub>F</sub> =50mA | -     | 1.5 | 1.8 | V     |
| Reverse Current           | I <sub>R</sub>    | V <sub>R</sub> =5V   | -     | -   | 100 | μA    |
| Peak Wavelength           | λ <sub>p</sub>    | I <sub>F</sub> =50mA | -     | 850 | -   | nm    |
| Spectral Line Half- Width | Δλ                | I <sub>F</sub> =50mA | -     | 50  | -   | nm    |
| Viewing Angle             | 2θ <sub>1/2</sub> | I <sub>F</sub> =20mA | -     | 35  | -   | deg   |

● **Typical Optical-Electrical Characteristic Curves**

Fig.1 Spectral Distribution

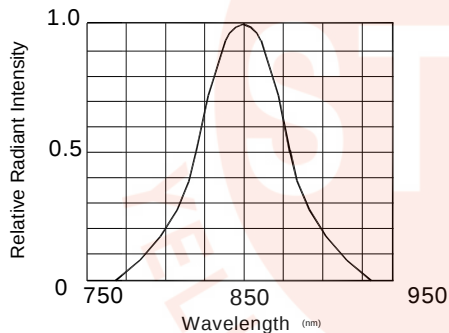
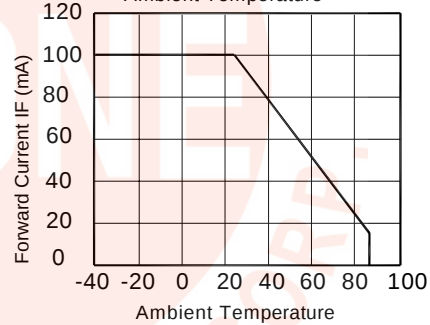


Fig.2 Forward Current Vs Ambient Temperature



(mA) Fig.3 Forward Current Vs

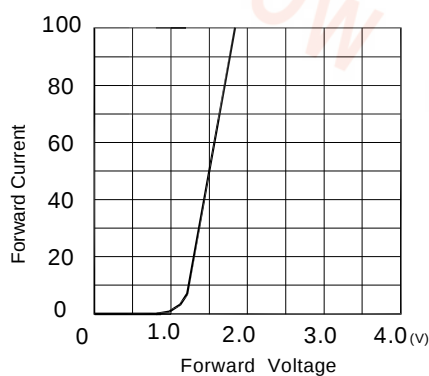


Fig.4 Relative Radiant Intensity Vs Ambient Temperature

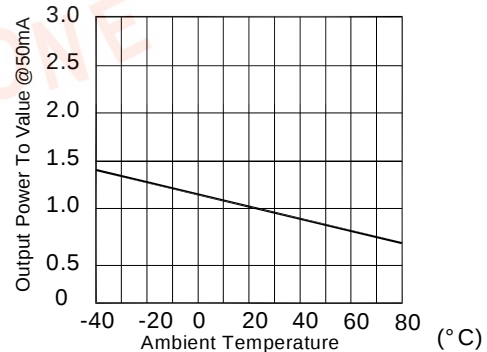


Fig.5 Relative Radiant Intensity Vs Forward Current

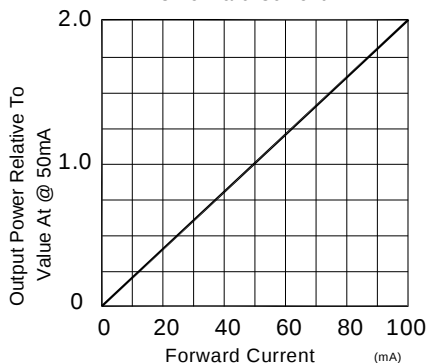
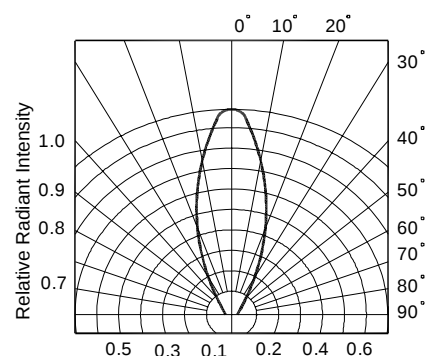
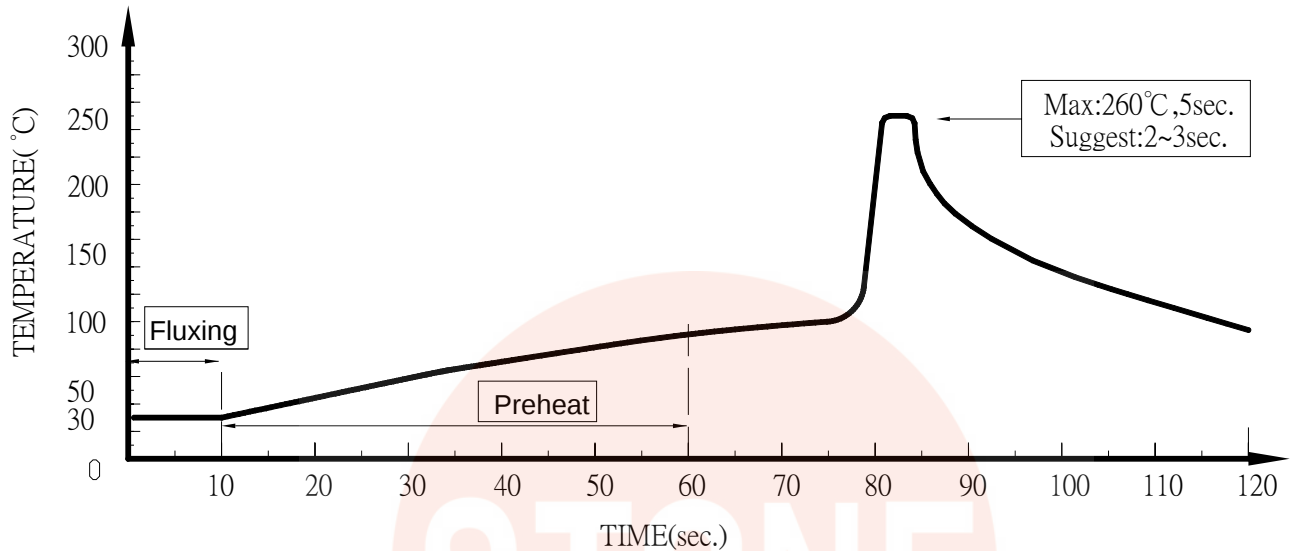


FIG.6 Radiant Diagram



## ● Dip Soldering

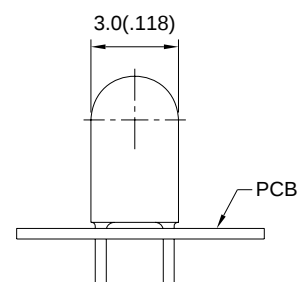


1. Please avoid any external stress applied to the lead-frames and epoxy while the LEDs are at high temperature, especially during soldering
2. DIP soldering and hand soldering should not be done more than one time.
3. After soldering, avoid the epoxy lens from mechanical shock or vibration until the LEDs are back to room temperature.
4. Avoid rapid cooling during temperature ramp-down process
5. Although the soldering condition is recommended above, soldering at the lowest possible temperature is feasible for the LEDs

## ● IRON Soldering

**A: Max: 350°C Within 3 sec. One time only.**

**B: The products of 3mm without flange, welding condition of flat plate PCB Max: 350°C Within 2 sec. One time only**





## Infrared Emitting Diode Specification

●Commodity: Infrared emitting diode

(Intensity Bin Limits (At 50mA))

| BIN CODE | Min.(mW/sr) | Max.( mW/sr) |
|----------|-------------|--------------|
| 13M      | 19.42       | 27.20        |
| 14N      | 27.20       | 38.08        |
| 15O      | 38.08       | 53.31        |
| 16P      | 53.31       | 74.63        |
| 17Q      | 74.63       | 104.48       |

NOTES:Tolerance of measurement of Radiant Intensity :±15%