

# EL - 305

The EL - 305 a high - power GaAs IRED mounted in a clear sidelooking package, is compact, low profile, and easy to mount.

## FEATURES

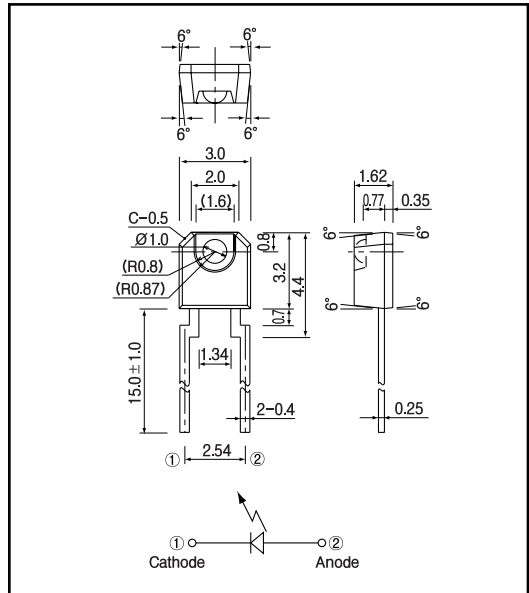
- Compact
- Low profile package
- Low - cost
- Sidelooking plastic package

## APPLICATIONS

- Photointerrupters
- Optical switches
- Toys

## DIMENSIONS

(Unit : mm)



### MAXIMUM RATINGS

( $T_a = 25^\circ\text{C}$ )

| Item                                | Symbol   | Rating     | Unit |
|-------------------------------------|----------|------------|------|
| Reverse voltage                     | $V_R$    | 5          | V    |
| Forward current                     | $I_F$    | 50         | mA   |
| Pulse forward current <sup>*1</sup> | $I_{FP}$ | 0.5        | A    |
| Power dissipation                   | $P_D$    | 75         | mW   |
| Operating temp.                     | Topr.    | - 25 ~ +85 | °C   |
| Storage temp.                       | Tstg.    | - 30 ~ +85 | °C   |
| Soldering temp. <sup>*2</sup>       | Tsol.    | 240        | °C   |

\*1. pulse width :  $t_w \leq 100 \mu\text{sec.}$  period :  $T = 10\text{msec.}$

\*2. For MAX.5 seconds at the position of 2 mm from the package

## ELECTRO-OPTICAL CHARACTERISTICS

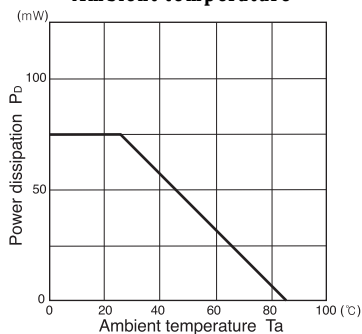
( $T_a = 25^\circ\text{C}$ )

| Item                     | Symbol           | Conditions          | Min. | Typ.     | Max. | Unit.         |
|--------------------------|------------------|---------------------|------|----------|------|---------------|
| Forward voltage          | $V_F$            | $I_F = 20\text{mA}$ |      | 1.2      | 1.5  | V             |
| Reverse current          | $I_R$            | $V_R = 5\text{V}$   |      |          | 10   | $\mu\text{A}$ |
| Capacitance              | $C_t$            | $f = 1\text{MHz}$   |      | 25       |      | pF            |
| Radiant intensity        | $P_o$            | $I_F = 20\text{mA}$ |      | 1.0      |      | mW/sr         |
| Peak emission wavelength | $\lambda_p$      | $I_F = 20\text{mA}$ |      | 940      |      | nm            |
| Spectral bandwidth 50%   | $\Delta \lambda$ | $I_F = 20\text{mA}$ |      | 50       |      | nm            |
| Half angle               | $\Delta \theta$  |                     |      | $\pm 20$ |      | deg.          |

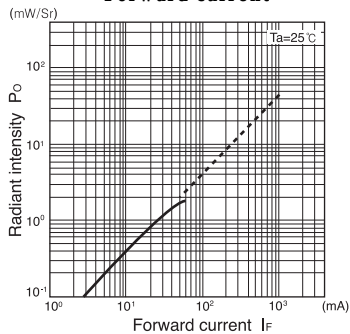
# Infrared Emitting Diodes(GaAs)

**EL - 305**

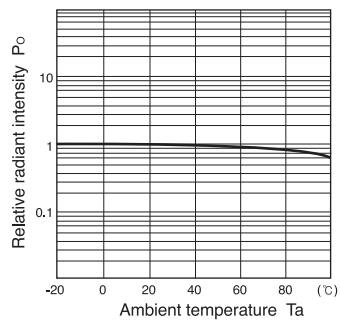
**Power dissipation Vs. Ambient temperature**



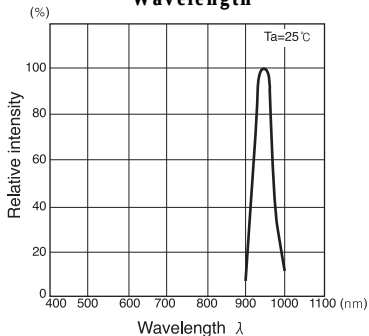
**Radiant intensity Vs. Forward current**



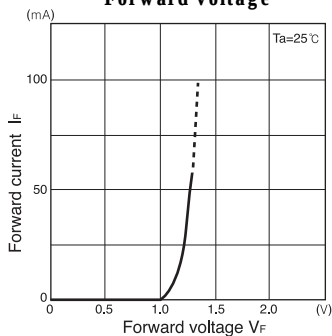
**Relative radiant intensity Vs. Ambient temperature**



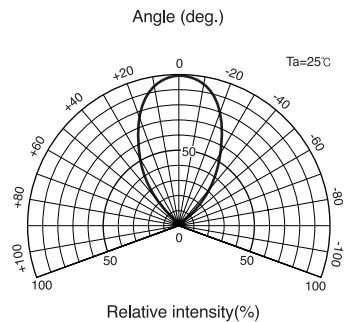
**Relative intensity Vs. Wavelength**



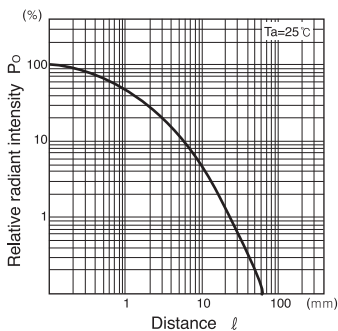
**Forward current vs. Forward voltage**



**Radiant Pattern**



**Relative radiant intensity Vs. Distance**



**Relative radiant intensity Vs. Distance test method**

