

**KEL3002A**

The KEL3002A is GaAlAs infrared emitting diode that is designed for high power, low forward voltage. This device is optimized for speed and efficiency at emission wavelength 940nm and has a high radiant efficiency over a wide range of forward current.

**Features**

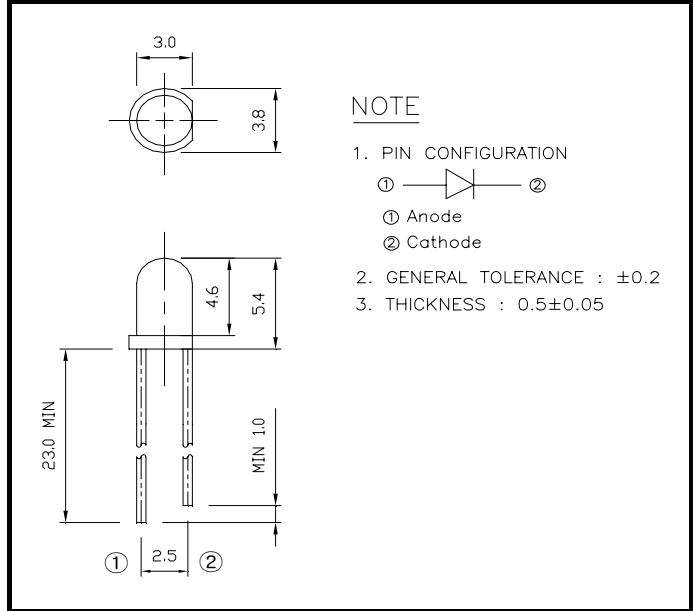
- 940nm wavelength
- Low forward voltage
- High power and high reliability
- Available for pulse operating

**Applications**

- IR Audio and Telephone
- IR Communication
- Optical switch
- Available for Wireless Digital Data Transmission

**Dimensions**

[Unit : mm]



**Absolute Maximum Ratings**

[T<sub>A</sub> = 25°C ]

| Parameter                | Symbol            | Rating    | Unit |
|--------------------------|-------------------|-----------|------|
| Power dissipation        | P <sub>D</sub>    | 70        | mW   |
| Forward current          | I <sub>F</sub>    | 50        | mA   |
| Pulse forward current *1 | I <sub>FP</sub>   | 0.5       | A    |
| Reverse voltage          | V <sub>R</sub>    | 5.0       | V    |
| Operating temp.          | T <sub>opr.</sub> | -25 ~ +85 | °C   |
| Storage temp.            | T <sub>stg.</sub> | -30 ~ +85 | °C   |
| Soldering temp. *2       | T <sub>sol.</sub> | 240       | °C   |

\*1. Duty ratio=1/100, pulse width=0.1ms

\*2. Lead Soldering Temperature (3mm from case for 5sec).

**ELECTRO- OPTICAL CHARACTERISTICS**

| Description              | Symbol         | Condition            | Min. | Typ. | Max. | Unit  |
|--------------------------|----------------|----------------------|------|------|------|-------|
| Forward voltage          | V <sub>F</sub> | I <sub>F</sub> =50mA | -    | 1.4  | 1.7  | V     |
| Reverse current          | I <sub>R</sub> | V <sub>R</sub> =5V   | -    | -    | 10   | μA    |
| Capacitance              | C <sub>J</sub> | f=1MHz, V=0V         | -    | 20   | -    | pF    |
| Radiant intensity        | P <sub>o</sub> | I <sub>F</sub> =50mA | 18   | 20   | -    | mW/sr |
| Peak emission wavelength | λ <sub>p</sub> | I <sub>F</sub> =50mA | -    | 940  | -    | nm    |
| Spectral bandwidth 50%   | Δλ             | -                    | -    | 45   | -    | nm    |
| Half angle               | e/2            | -                    | -    | ±20  | -    | deg.  |

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**DYNAMIC CHARACTERISTICS**

