

## L870-40K42

### Stem Type LED with High Beam

L870-40K42 is an AlGaAs LED mounted on a TO-46 stem with an unspherical glass lens. It is designed for high beam use.

On forward bias, it emits a spectral band of radiation which peaks at 870nm.

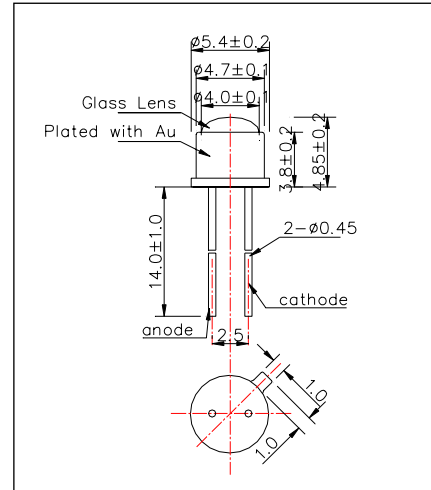
<Features>

- High Radiated Intensity
- High Reliability

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L870-40K42
3. Chip:
  - Chip material: AlGaAs
  - Peak Wavelength: 870nm
4. Package
  - Type: TO-46 Stem
  - Lens: Unspherical Glass Lens
  - Cap: Gold Plated

Outer Dimension (Unit:mm)



| Absolute Maximum Ratings |        |                     |      |                     |
|--------------------------|--------|---------------------|------|---------------------|
| Item                     | Symbol | Maximum Rated Value | Unit | Ambient Temperature |
| Power Dissipation        | PD     | 160                 | mW   | Ta=25°C             |
| Forward Current          | IF     | 100                 | mA   | Ta=25°C             |
| Pulse Forward Current*   | IFP    | 1000                | mA   | Ta=25°C             |
| Reverse Voltage          | VR     | 5                   | V    | Ta=25°C             |
| Operating Temperature    | TOPR   | -30 ~ +80           | °C   |                     |
| Storage Temperature      | TSTG   | -30 ~ +100          | °C   |                     |
| Soldering Temperature**  | TSOL   | 260                 | °C   |                     |

\* Duty=1% and Pulse Width=10μs.

\*\* Soldering condition must be completed within 3 second at 260 °C.

| Electro-Optical Characteristics [Ta=25°C] |        |           |         |         |         |       |
|---|--------|-----------|---------|---------|---------|-------|
| Item                                      | Symbol | Condition | Minimum | Typical | Maximum | Unit  |
| Forward Voltage                           | VF     | IF=50mA   |         | 1.50    | 1.70    | V     |
| Reverse Current                           | IR     | VR=5V     |         |         | 10      | uA    |
| Total Radiated Power*                     | PO     | IF=50mA   | 8       | 13      |         | mW    |
| Radiant Intensity**                       | IE     | IF=50mA   |         | 80      |         | mW/sr |
| Peak Wavelength                           | λP     | IF=50mA   | 850     | 870     | 880     | nm    |
| Half Width                                | Δλ     | IF=50mA   |         | 35      |         | nm    |
| Viewing Half Angle                        | θ1/2   | IF=50mA   |         | ±6      |         | deg   |
| Rise Time                                 | tr     | IF=50mA   |         | 15      |         | ns    |
| Fall Time                                 | tf     | IF=50mA   |         | 10      |         | ns    |

\* Measured by Photodyne #500

\*\* Measured by Tektronix J-6512

