

# L940-40

## High Power Metal Stem LED Lamp

The series of L940-40 \_\_ \_\_ is an GaAlAs LED mounted on a metal stem and covered with epoxy resin or hermetically sealed with f5 glass-lens can.

On forward bias it emits a high power radiation, which peaks at 940nm.

### Absolute Maximum Ratings

| Item                  | Symbol           | Maximum Rated Value | Unit | Ambient Temperature |
|-----------------------|------------------|---------------------|------|---------------------|
| Power Dissipation     | P <sub>D</sub>   | 160                 | mW   | Ta=25°C             |
| Forward Current       | I <sub>F</sub>   | 100                 | mA   | Ta=25°C             |
| Pulse Forward Current | I <sub>FP</sub>  | 500                 | mA   | Ta=25°C             |
| Reverse Voltage       | V <sub>R</sub>   | 5                   | V    | Ta=25°C             |
| Operating Temperature | T <sub>OPR</sub> | -30 ~ +90           | °C   | Ta=25°C             |
| Storage Temperature   | T <sub>STG</sub> | -30 ~ +100          | °C   |                     |
| Soldering Temperature | T <sub>SOL</sub> | 260                 | °C   |                     |

‡ Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡ Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

### Electro-Optical Characteristics [Ta=25°C]

| Item            | Symbol         | Condition            | Minimum | Typical | Maximum | Unit |
|-----------------|----------------|----------------------|---------|---------|---------|------|
| Forward Voltage | V <sub>F</sub> | I <sub>F</sub> =50mA |         | 1.45    | 1.70    | V    |
| Reverse Current | I <sub>R</sub> | V <sub>R</sub> =5V   |         |         | 10      | uA   |
| Peak Wavelength | λ <sub>P</sub> | I <sub>F</sub> =50mA | 895     | 910     | 925     | nm   |
| Half Width      | Δλ             | I <sub>F</sub> =50mA |         | 60      |         | nm   |
| Rise Time       | t <sub>r</sub> | I <sub>F</sub> =50mA |         | 1000    |         | ns   |
| Fall Time       | t <sub>f</sub> | I <sub>F</sub> =50mA |         | 400     |         | ns   |

### Total Radiant Power and Radiant Intensity at I<sub>F</sub>=50mA [Ta=25°C]

| Type No.   | Total Radiant Power unit:mW |         |         | Radiant Intensity unit:mW/sr |         |         | Viewing Half Angle |
|------------|-----------------------------|---------|---------|------------------------------|---------|---------|--------------------|
|            | Minimum                     | Typical | Maximum | Minimum                      | Typical | Maximum |                    |
| L940-40K00 | 5                           | 8       |         |                              | 2       |         | ±40°               |
| L940-40K42 | 3                           | 5       |         |                              | 35      |         | ±6°                |
| L940-40M00 | 6                           | 9.5     |         |                              | 4       |         | ±40°               |
| L940-40M32 | 4.5                         | 7.5     |         |                              | 35      |         | ±10°               |
| L940-40T52 | 2                           | 3.5     |         |                              | 2       |         | ±55°               |

‡ Radiant Intensity is measured by Tektronix J6512

‡ Total Radiated Power is measured by Photodyne #500

### Outer dimension (Unit: mm)

