

# L850-40K42

 stem type LED with high beam

L850-40K42 is an AlGaAs LED mounted on TO-46 stem with unspherical glass ball lens, being designed for high beam uses.

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

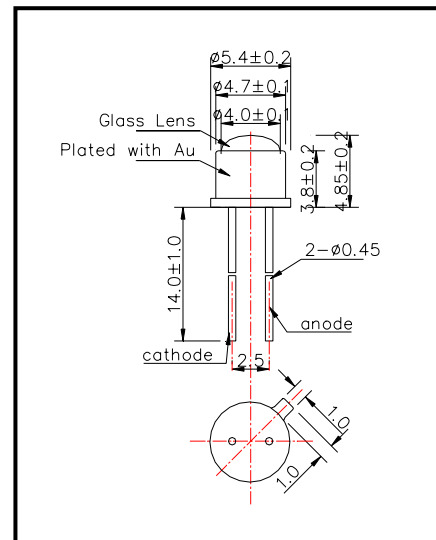
◆ Outer dimension (Unit:mm)

◆ Features

- 1) High radiated intensity
- 2) High Reliability

◆ Specifications

- |                     |                        |
|---------------------|------------------------|
| 1) Product Name     | Infrared LED Lamp      |
| 2) Type No.         | L850-40K42             |
| 3) Chip Spec.       |                        |
| (1) Material        | AlGaAs                 |
| (2) Peak Wavelength | 850nm                  |
| 4) Package          |                        |
| (1) Type            | TO-46 stem             |
| (2) Lens            | Unspherical glass lens |
| (3) Cap             | Gold plated            |



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P <sub>D</sub>	160	mW	T <sub>a</sub> =25°C
Forward Current	I <sub>F</sub>	100	mA	T <sub>a</sub> =25°C
Pulse Forward Current	I <sub>FP</sub>	1000	mA	T <sub>a</sub> =25°C
Reverse Voltage	V <sub>R</sub>	5	V	T <sub>a</sub> =25°C
Operating Temperature	T <sub>OPR</sub>	-30 ~ +80	°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

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.55	1.70	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V			10	uA
Total Radiated Power	P <sub>O</sub>	I <sub>F</sub> =50mA	8	13		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA		80		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	835	850	865	nm
Half Width	Δλ	I <sub>F</sub> =50mA		40		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±6		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		25		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		15		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.