

# L870-40M00 (LN870-40M00) Stem type LED with epoxy lens

L870-40M00 is an AlGaAs LED mounted on TO-18 stem with epoxy resin lens, being designed for wide viewing angle.

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

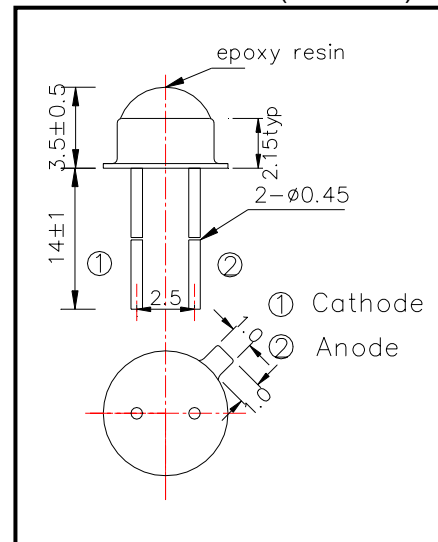
## ◆ Features

- 1) Wide viewing angle
- 2) High Reliability

## ◆ Specifications

- |                     |                   |
|---------------------|-------------------|
| 1) Product Name     | Infrared LED Lamp |
| 2) Type No.         | L870-40M00        |
| 3) Chip Spec.       |                   |
| (1) Material        | AlGaAs            |
| (2) Peak Wavelength | 870nm             |
| 4) Package          |                   |
| (1) Type            | TO-18 stem        |
| (2) Lens            | Epoxy resin       |

## ◆ Outer dimension (Unit: mm)



## ◆ 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	13	22		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA		12		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	850	870	880	nm
Half Width	Δλ	I <sub>F</sub> =50mA		35		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±40		deg.
Rise Time	t <sub>r</sub>	I <sub>F</sub> =50mA		15		ns
Fall Time	t <sub>f</sub>	I <sub>F</sub> =50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.