

# L870-40D32-I

 stem type LED with glass ball lens

L870-40D32-I is AlGaAs LED mounted on TO-46 3pins stem with glass ball lens, and electrodes are isolated from case.

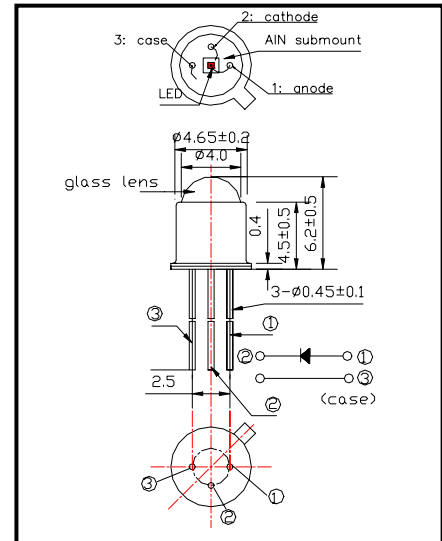
On forward bias it emits a spectral band of radiation, which peaks at 870nm.

#### ◆ Features

- 1) High Power
- 2) High Reliability

#### ◆ Specifications

- 1) Product Name LED Lamp
- 2) Type No. L870-40D32-I
- 3) Chip Spec.
  - (1) Material AlGaAs
  - (2) Chip dimension 400um\*400um
  - (3) Peak Wavelength 870nm
- 4) Package
  - (1) Type TO-46 3pins Stem
  - (2) Lens Glass Ball 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
Thermal Resistance	R <sub>thja</sub>	220	K/W	
Junction Temperature	T <sub>j</sub>	135	°C	
Operating Temperature	T <sub>OPR</sub>	-40 ~ +85	°C	
Storage Temperature	T <sub>STG</sub>	-40 ~ +100	°C	
Soldering Temperature	T <sub>SOL</sub>	265	°C	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265°C

#### ◆ Electro-Optical Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA		1.45	1.55	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		mW
Radiant Intensity	I <sub>E</sub>	I <sub>F</sub> =50mA		30		mW/sr
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> =50mA	860	870	870	nm
Half Width	Δλ	I <sub>F</sub> =50mA		40		nm
Viewing Half Angle	θ <sub>1/2</sub>	I <sub>F</sub> =50mA		±16		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

‡Radiated Power is measured by S3584-08

‡Radiant Intensity is measured by Tektronix J-6512.