

L890-40K00

Stem type LED with epoxy lens

L890-40K00 is AlGaAs LED mounted on TO-46 stem with epoxy resin lens, being designed for wide viewing angle.

On forward bias it emits a spectral band of radiation, which peaks at 890nm.

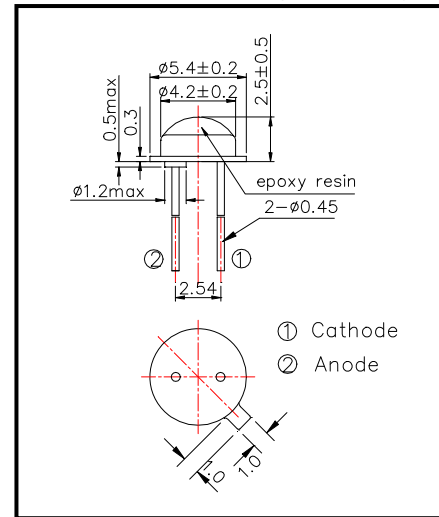
◆Features

- 1) High radiated intensity
- 2) High Reliability

◆Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L890-40K00
- 3) Chip Spec.
- (1) Material AlGaAs
- (2) Peak Wavelength 890nm
- 4) Package
- (1) Type TO-46 stem
- (2) Lens Epoxy resin

◆Outer dimension (Unit: mm)



◆Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	160	mW	$T_a=25^\circ\text{C}$
Forward Current	I_F	100	mA	$T_a=25^\circ\text{C}$
Pulse Forward Current	I_{FP}	1000	mA	$T_a=25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a=25^\circ\text{C}$
Junction Temperature	T_J	100	$^\circ\text{C}$	
Thermal Resistance	R_{thja}	300	K/W	
Operating Temperature	T_{OPR}	-30 ~ +80	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-30 ~ +100	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	265	$^\circ\text{C}$	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 265 $^\circ\text{C}$

‡Thermal resistance: junction – ambient, leads 7mm, soldered on PCB.

◆Electro-Optical Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F=50\text{mA}$		1.40	1.60	V
	V_{FP}	$I_F=1000\text{mA}$		3.50	4.30	
Reverse Current	I_R	$V_R=5\text{V}$			10	μA
Total Radiated Power	P_O	$I_F=50\text{mA}$	8	14		mW
Radiant Intensity	I_E	$I_F=50\text{mA}$		6		mW/sr
Peak Wavelength	λ_P	$I_F=50\text{mA}$	880	890	900	nm
Half Width	$\Delta\lambda$	$I_F=50\text{mA}$		50		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F=50\text{mA}$		± 65		deg.
Rise Time	t_r	$I_F=50\text{mA}$		800		ns
Fall Time	t_f	$I_F=50\text{mA}$		400		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.