

L870F-04-50 Infrared LED Lamp for High Current Drive

L870F-04-50 is an AlGaAs LED mounted on a lead frame with a clear epoxy lens.

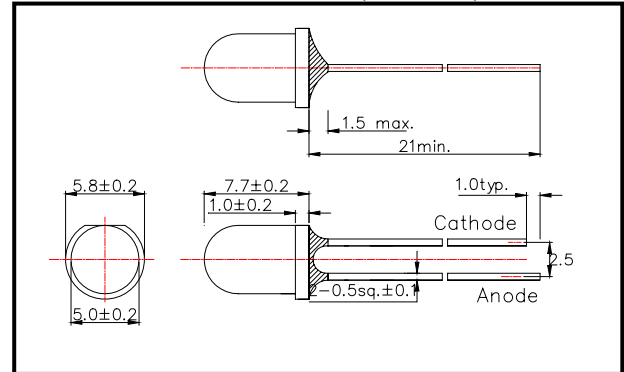
On forward bias it emits a spectral band of radiation, which peaks at 870nm.

These devices are intended to be operated at pulsed current of 1A under typical 3.4V for stable long life.

◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L870F-04-50
3) Chip	
(1) Chip Material	AlGaAs
(2) Chip Dimension	500umx500um
(3) Peak Wavelength	870nm typ.
4) Package	
(1) Type	Φ5mm clear molding
(2) Resin Material	Epoxy Resin
(3) Lead Frame	Soldered

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	PD	150	mW	Ta=25°C
Forward Current	IF	100	mA	Ta=25°C
Pulse Forward Current	IFP	1500	mA	Ta=25°C
Reverse Voltage	VR	10	V	Ta=25°C
Operating Temperature	TOPR	-30 ~ +85	°C	
Storage Temperature	TSTG	-30 ~ +100	°C	
Soldering Temperature	TSOL	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	VF/VFP	IF=50mA DC		1.43	1.50	V
		IFP=1A		2.6	4.0	
		IFP=1.5A		3.3	4.3	
Reverse Current	IR	VR=10V			10	uA
Total Radiated Power	PO	IF=50mA DC	18.0	22.0		mW
		IF=100mA, tp=20ms		44.0		
Radiant Intensity	IE/IEP	IF=50mA DC	25	50		mW/sr
		IF=100mA, tp=20ms		100		
		IFP=1.5A		1500		
Peak Wavelength	λP	IF=50mA DC	860	870	880	nm
Half Width	Δλ	IF=50mA DC		40		nm
Viewing Half Angle	θ 1/2	IF=50mA DC		±23		deg.
Rise Time	tr	IF=50mA DC		15		ns
Fall Time	tf	IF=50mA DC		10		ns

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

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.