

L870F-03-55

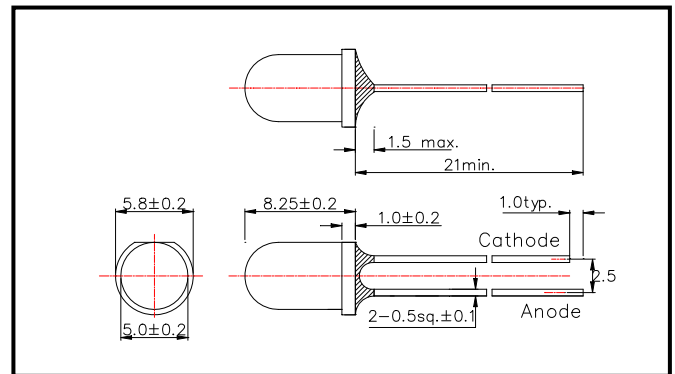
Infrared LED Lamp for High Current Drive

L870F-03-55 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 2A under maximum 4.3V.

◆ Specifications

1)Product Name	Infrared LED Lamp
2)Type No.	L870F-03-55
3)Chip	
(1)Chip Material	AlGaAs
(2)Chip Dimension	550umx550um
(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	P _D	150	mW	T _a =25°C
Forward Current	I _F	100	mA	T _a =25°C
Pulse Forward Current	I _{FP}	2000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Junction Temperature	T _J	100	°C	
Thermal Resistance	R _{thjp}	230	K/W	
Operating Temperature	T _{OPR}	-40 ~ +85	°C	
Storage Temperature	T _{STG}	-40 ~ +100	°C	
Soldering Temperature	T _{SOL}	265	°C	

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

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

◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F /V _{FP}	I _F =50mA		1.42	1.50	V
		I _{FP} =2A		3.6	4.3	
Total Radiated Power	P _O	I _F =50mA	18.0	20.0		mW
Radiant Intensity	I _E	I _F =50mA	50	70		mW/sr
Peak Wavelength	λ _P	I _F =50mA	860	870	880	nm
Half Width	Δλ	I _F =50mA		40		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±15		
Rise Time	t _r	I _F =50mA		15		ns
Fall Time	t _f	I _F =50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.