

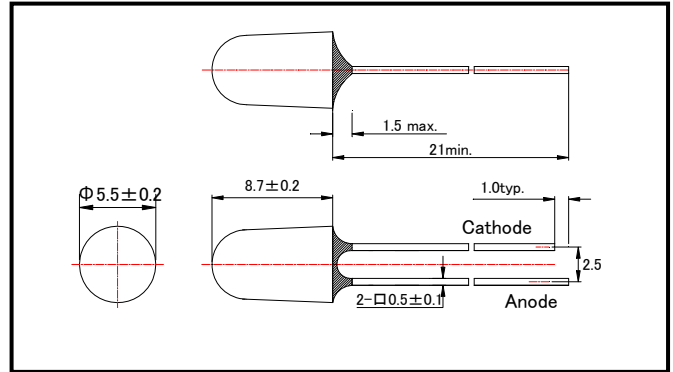
# L870F-06-55CU Infrared LED Lamp for High Current Drive

L870F-06-55CU is an AlGaAs LED mounted on a copper made 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-06-55CU
- 3)Chip
- (1)Chip Material      AlGaAs
- (2)Chip Dimension    550um\*550um
- (3)Peak Wavelength  870nm typ.
- 4)Package
- (1)Type                Φ5mm clear molding
- (2)Resin Material    Epoxy Resin
- (3)Lead Frame        Cu made

◆ Outer dimension(Unit: mm)



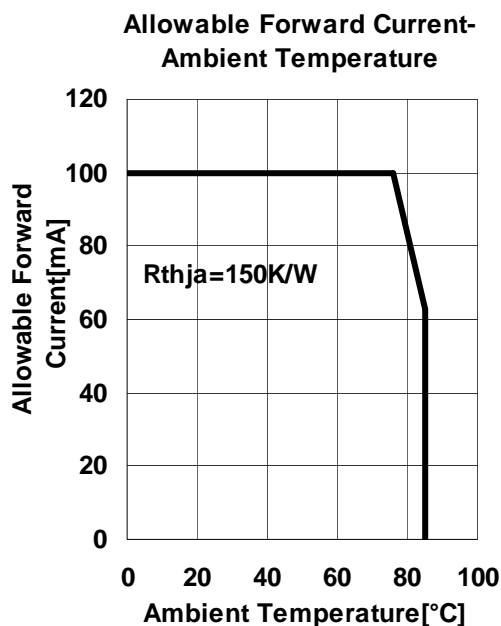
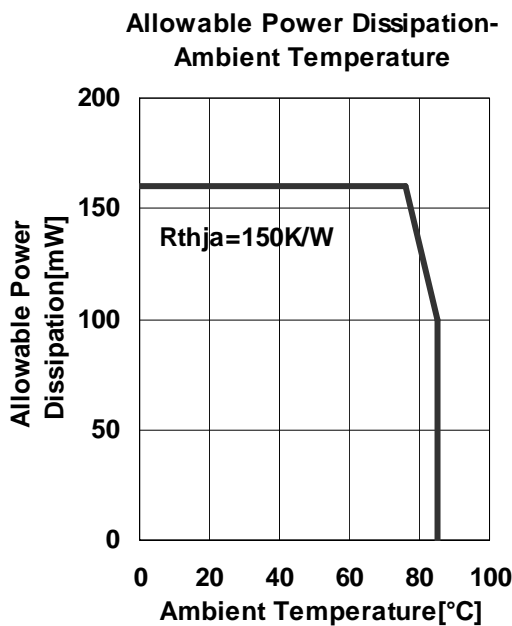
◆ Absolute Maximum Ratings

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	$I_{FP}$	2000	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	$R_{thja}$	150	K/W	
Operating Temperature	$T_{OPR}$	-30 ~ +85	$^\circ\text{C}$	
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°C

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



**Lead ( Pb ) Free Product – RoHS Compliant**
**◆ Electro-Optical Characteristics [Ta=25°C]**

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF/VFP	IF=50mA		1.48	1.60	V
		IF=100mA, tp=20ms		1.50	1.60	
Reverse Current	IR	IFP=2A		3.6	4.3	uA
		VR=5V			10	
Total Radiated Power	PO	IF=50mA	18.0	22.0		mW
		IF=100mA, tp=20ms	36.0	44.0		
Radiant Intensity	IE	IF=50mA	90	120		mW/sr
		IF=100mA, tp=20ms	180	240		
Peak Wavelength	λP	IF=50mA	860	870	880	nm
Half Width	Δλ	IF=50mA		40		nm
Viewing Half Angle	θ 1/2	IF=50mA		±8		
Rise Time	tr	IF=50mA		15		ns
Fall Time	tf	IF=50mA		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.

