



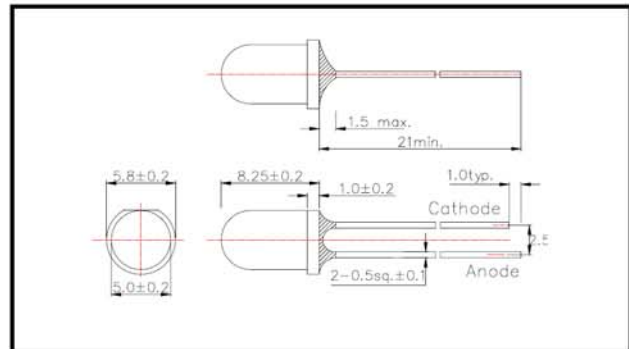
LED870F-03U Infrared LED Lamp

LED870F-03U 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.

◆ Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. LED870F-03U
- 3) Chip
 - (1) Chip Material AlGaAs
 - (2) Chip Dimension 0.4mm*0.4mm
 - (3) Peak Wavelength 870nm typ.
- 4) Package
 - (1) Type Φ5mm clear molding
 - (2) Resin Material Epoxy Resin

◆ 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}	1000	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	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 [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	IF=50mA DC		1.45	1.55	V
		IF=100mA, tp=20ms		1.50	1.75	
Pulsed Forward Voltage	V _{FP}	IF=1A		3.5	4.0	V
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	IF=50mA DC	18.0	24.0		mW
		IF=100mA, tp=20ms		48.0		
Radiant Intensity	I _E	IF=50mA DC	50	70		mW/sr
		IF=100mA, tp=20ms		140		
Peak Wavelength	λ _P	IF=50mA DC	860	870	880	nm
Half Width	Δλ	IF=50mA DC		40		nm
Viewing Half Angle	θ 1/2	IF=50mA DC		±15		deg.
Rise Time	t _r	IF=50mA DC		15		ns
Fall Time	t _f	IF=50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.