

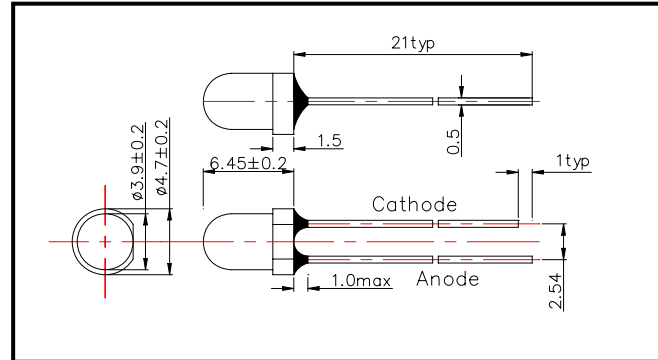
L870-42UP (LN870-42UP) Infrared LED Lamp

L870-42UP 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.	L870-42UP
3) Chip	
(1) Chip Material	AlGaAs
(2) Chip Size	0.4mm*0.4mm
(3) Peak Wavelength	870nm typ.
4) Package	
(1) Type	Φ4mm 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	160	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	I _F =50mA DC		1.50	1.70	V
		I _F =100mA, t _p =20ms		1.55	1.90	
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =50mA DC	18.0	22.0		mW
		I _F =100mA, t _p =20ms		44.0		
Radiant Intensity	I _E	I _F =50mA DC	50	90		mW/sr
		I _F =100mA, t _p =20ms		180		
Peak Wavelength	λ _P	I _F =50mA DC	860	870	880	nm
Half Width	Δλ	I _F =50mA DC		40		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA DC		±16		deg.
Rise Time	t _r	I _F =50mA DC		15		ns
Fall Time	t _f	I _F =50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512.