

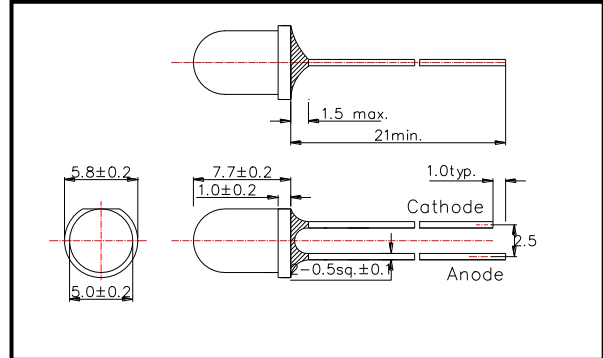
L830-04UP Infrared LED Lamp

L830-04UP is an AlGaAs LED mounted on a lead frame with a clear epoxy lens and is 48mW typ. of output power and 100mW/sr typ. of radiant intensity. On forward bias it emits a spectral band of radiation, which peaks at 830nm.

◆ Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L830-04UP
- 3) Chip
- (1) Chip Material AlGaAs
- (2) Peak Wavelength 830nm 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	170	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
Junction Temperature	T _J	100	°C	
Thermal Resistance	R _{thjp}	240	K/W	
Operating Temperature	T _{OPR}	-30 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	265	°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

◆ Electro-Optical Characteristics

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA DC		1.50	1.70	V
		I _F =1A, tp=10us		3.6	4.3	
Reverse Current	I _R	V _R =5V			10	uA
Total Radiated Power	P _O	I _F =50mA DC	18.0	24.0		mW
		I _F =100mA, tp=20ms		48.0		
Radiant Intensity	I _E	I _F =50mA DC	30	50		mW/sr
		I _F =100mA, tp=20ms		100		
Peak Wavelength	λ _P	I _F =50mA	820	830	840	nm
Half Width	Δλ	I _F =50mA		35		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±19		deg.
Rise Time	t _r	I _F =50mA		20		ns
Fall Time	t _f	I _F =50mA		15		ns

‡Total Radiated Power is measured by Photodyne #500

‡Radiant Intensity is measured by Tektronix J-6512