Lead (Pb) Free Product – RoHS Compliant

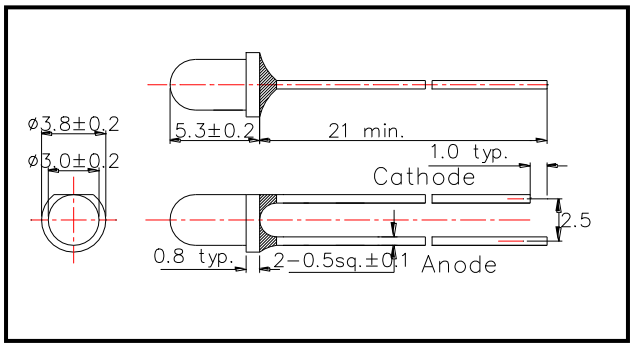
L850-33UP (LN850-33UP) Infrared LED Lamp

L850-33UP 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 850nm.

◆Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L850-33UP
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	850nm typ.
4) Package	
(1) Type	Φ3mm 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	160	mW	Ta=25°C
Forward Current	I_F	100	mA	Ta=25°C
Pulse Forward Current	I_{FP}	1000	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Junction Temperature	T_J	100	°C	
Thermal Resistance	Rthja	250	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		1.45	1.60	V
		I_F=100mA, tp=20ms		1.50	1.8	
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		50		mW/sr
		I_F=100mA, tp=20ms		100		
Peak Wavelength	λ_P	I_F=50mA DC	835	850	865	nm
Half Width	$\Delta\lambda$	I_F=50mA DC		45		nm
Viewing Half Angle	$\theta 1/2$	I_F=50mA DC		±15		deg.
Rise Time	tr	I_F=50mA DC		15		ns
Fall Time	tf	I_F=50mA DC		10		ns

‡Total Radiated Power is measured by Photodyne #500
‡Radiant Intensity is measured by Tektronix J-6512

The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.

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