

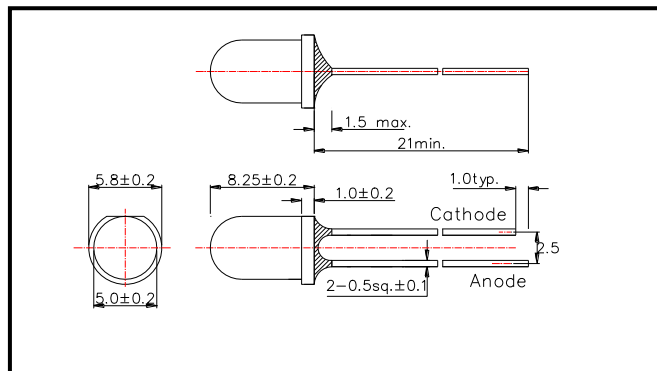
L850-03UP Infrared LED Lamp

L850-03UP 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. L850-03UP
 3) Chip
 (1) Chip Material AlGaAs
 (2) Peak Wavelength 850nm 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	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
Junction Temperature	T _J	100	°C	
Thermal Resistance	R _{thjp}	240	K/W	
Operating Temperature	T _{OPR}	-40 ~ +85	°C	
Storage Temperature	T _{STG}	-40 ~ +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

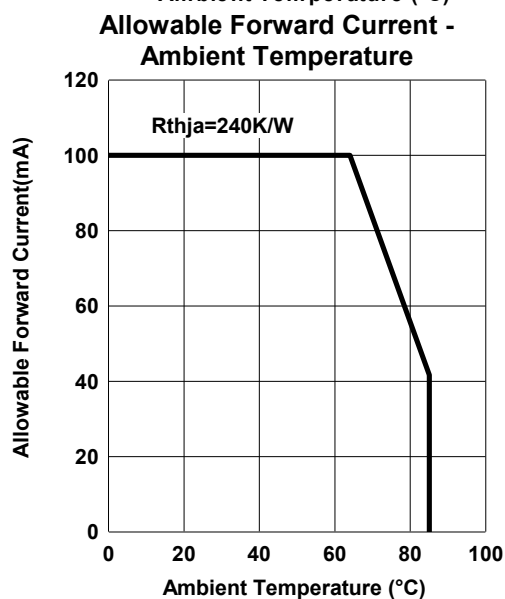
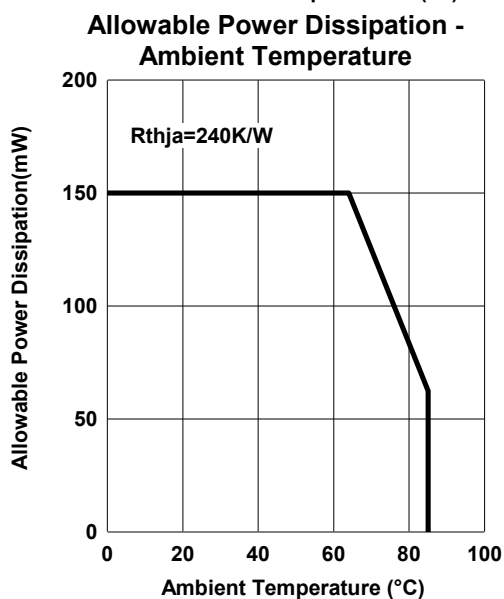
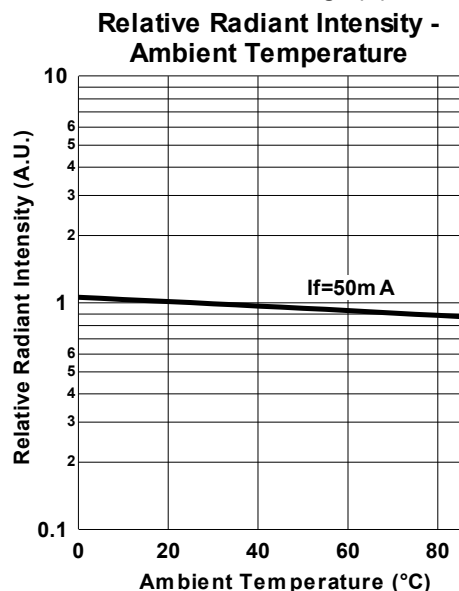
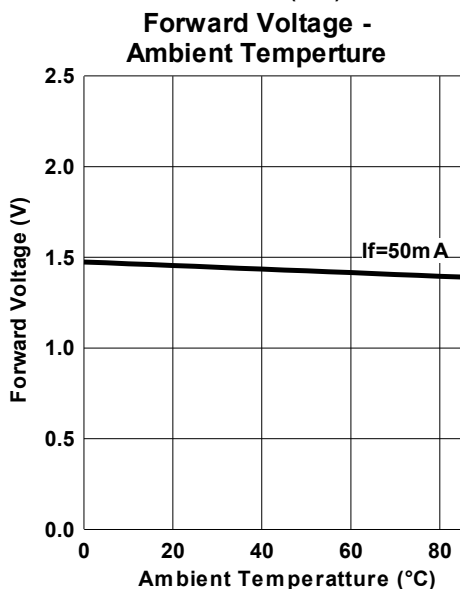
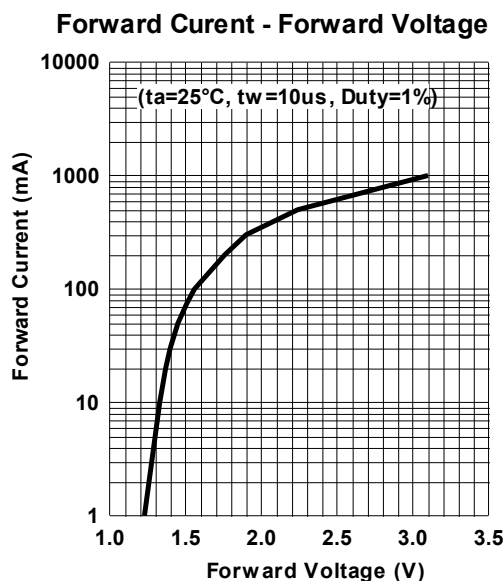
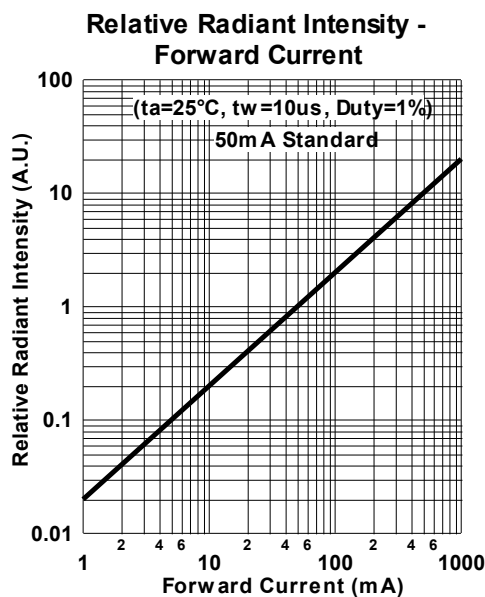
‡ Thermal resistance: junction – ambient, leads 7mm, soldered on PCB.

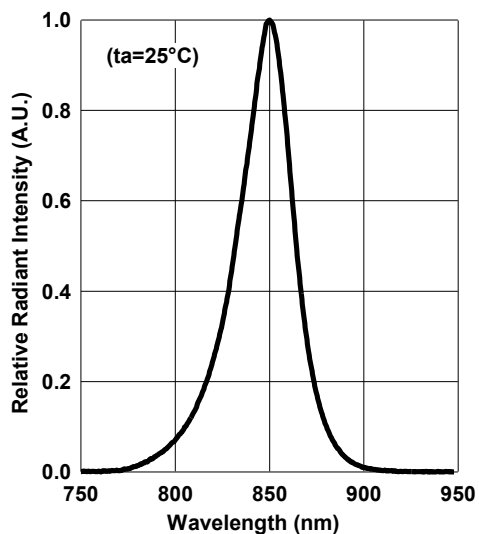
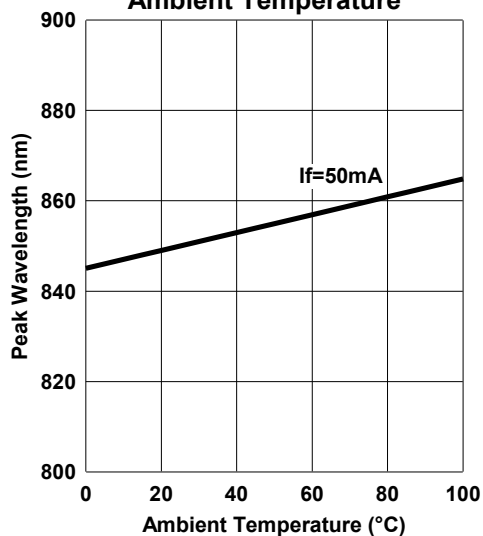
◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA DC		1.45	1.60	V
		I _F =100mA, t _p =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, t _p =20ms		48.0		
Radiant Intensity	I _E	I _F =50mA DC		115		mW/sr
		I _F =100mA, t _p =20ms	(160)	230		
Peak Wavelength	λ _P	I _F =50mA DC	835	850	865	nm
Half Width		I _F =50mA DC		40		nm
Viewing Half Angle		I _F =50mA DC		±13		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.



Relative Spectral Emission**Peak Wavelength - Ambient Temperature****Radiation Characteristics**