

L830-33UP

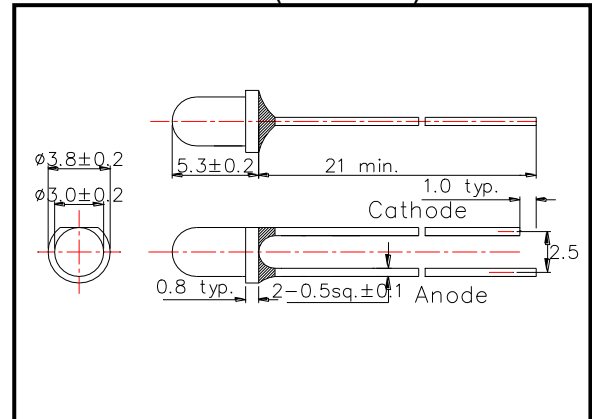
Infrared LED Lamp

L830-33UP 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 830nm.

◆ Specifications

- | | |
|---------------------|-----------------------|
| 1) Product Name | Infrared LED Lamp |
| 2) Type No. | L830-33UP |
| 3) Chip | |
| (1) Chip Material | AlGaAs |
| (2) Peak Wavelength | 830nm typ. |
| 4) Package | |
| (1) Type | Φ3mm clear molding |
| (2) Resin Material | Epoxy Resin |
| (3) Lead Frame | Soldered (Lead Frame) |

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings [Ta=25°C]

Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	180	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	500	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	250	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	TOPR	-40 ~ +100	°C
Storage Temperature	TSTG	-40 ~ +100	°C
Soldering Temperature	TSOL	250	°C

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

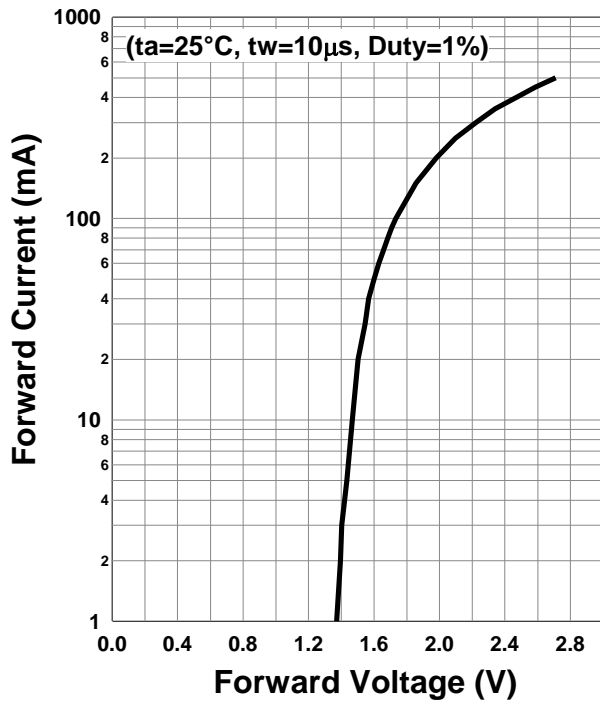
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.6	1.8	V
		IF=100mA t=20ms		1.7		
	VFP	I _{FP} =500mA		2.7		
Radiated Power	PO	IF=50mA		25		mW
		IF=100mA t=20ms		50		
		I _{FP} =500mA		245		
Radiant Intensity	IE	IF=50mA		55		mW/sr
		IF=100mA t=20ms		110		
		I _{FP} =500mA		540		
Peak Wavelength	λ _P	IF=50mA	820	830	840	nm
Half Width	Δλ	IF=50mA		33		nm
Viewing Half Angle	θ 1/2	IF=50mA		±16		deg.
Rise Time	tr	IF=50mA		50		ns
Fall Time	tf	IF=50mA		50		ns

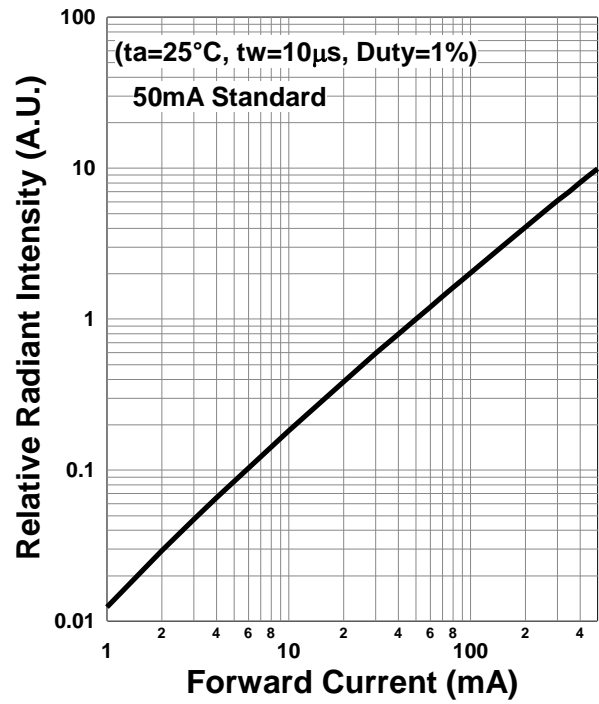
‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by CIE127-2007 Condition B.

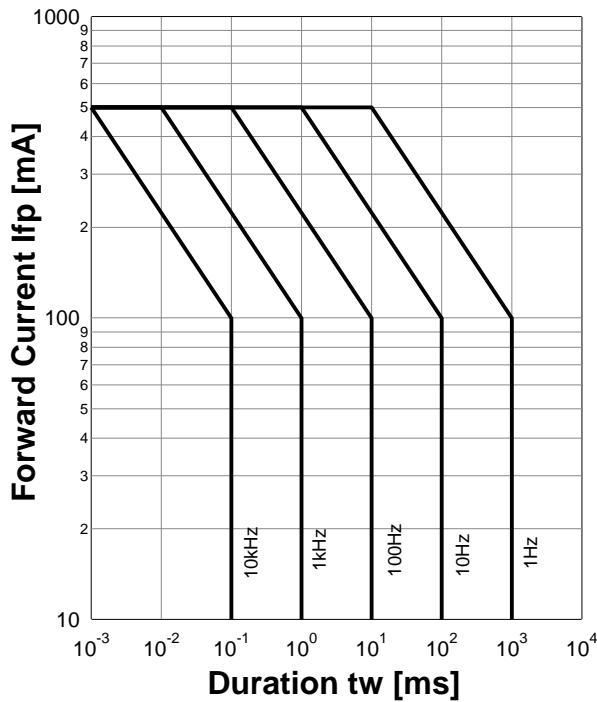
Forward Current - Forward Voltage



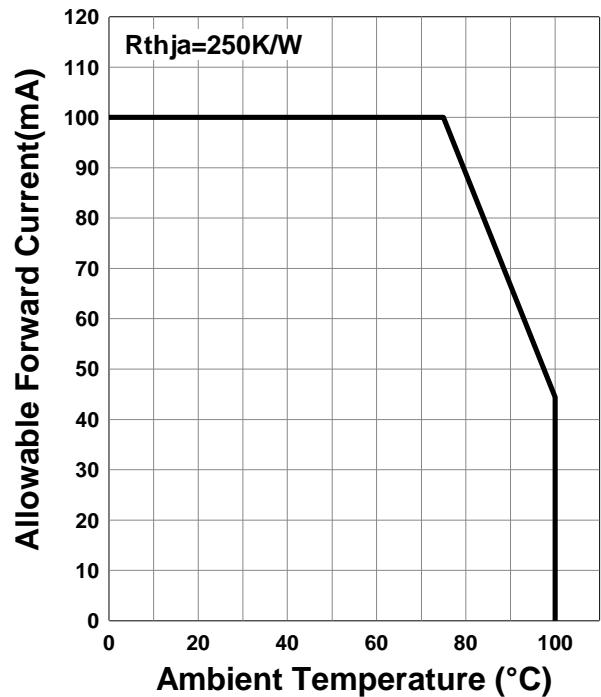
Relative Radiant Intensity - Forward Current



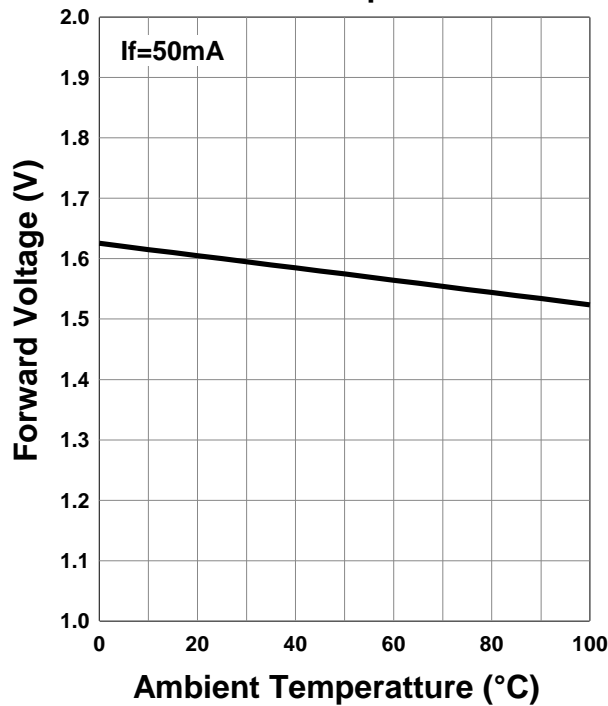
Forward Current - Pulse Duration



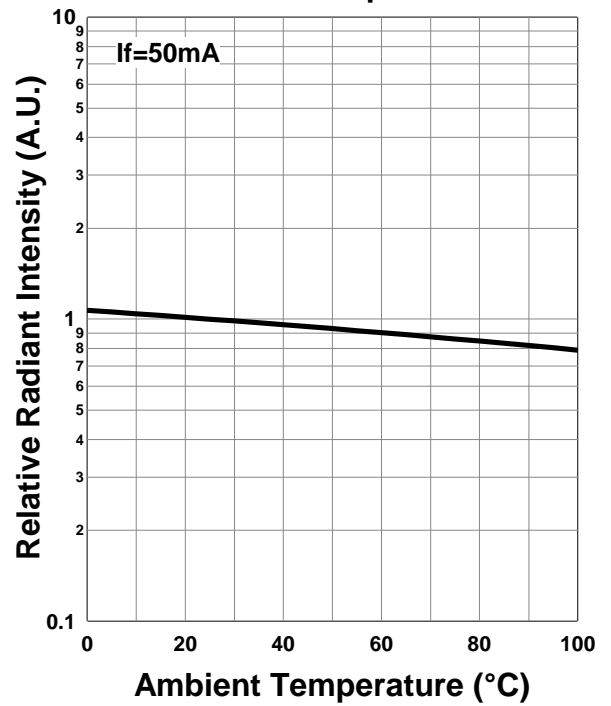
Allowable Forward Current - Ambient Temperature



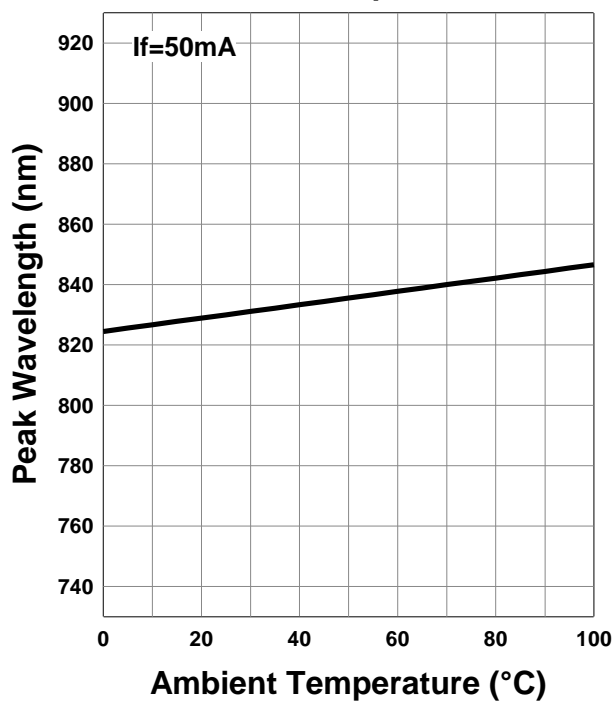
Forward Voltage - Ambient Temperature



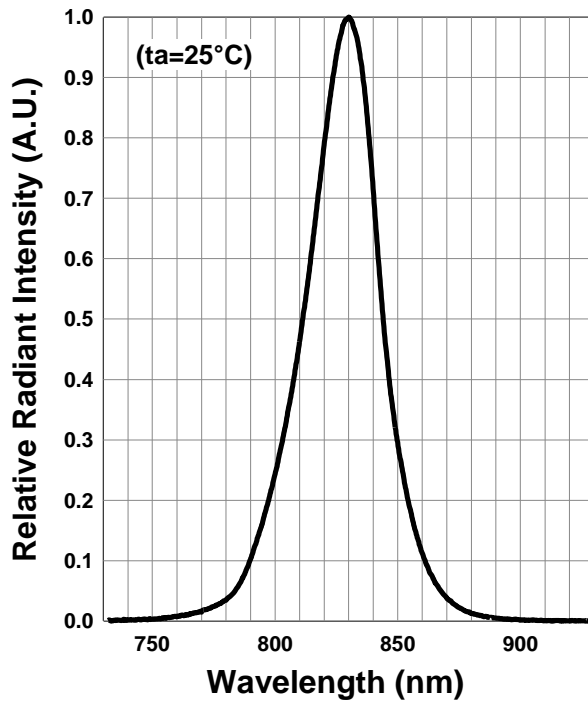
Relative Radiant Intensity - Ambient Temperature



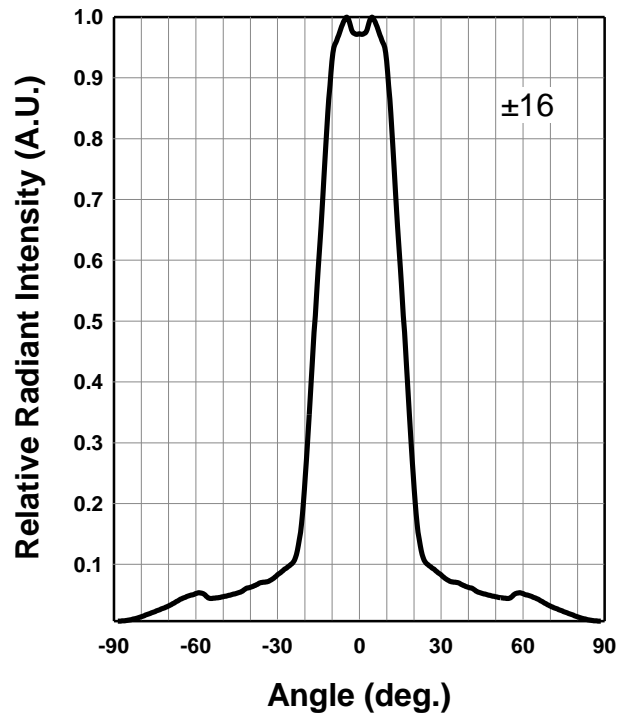
Peak Wavelength - Ambient Temperature



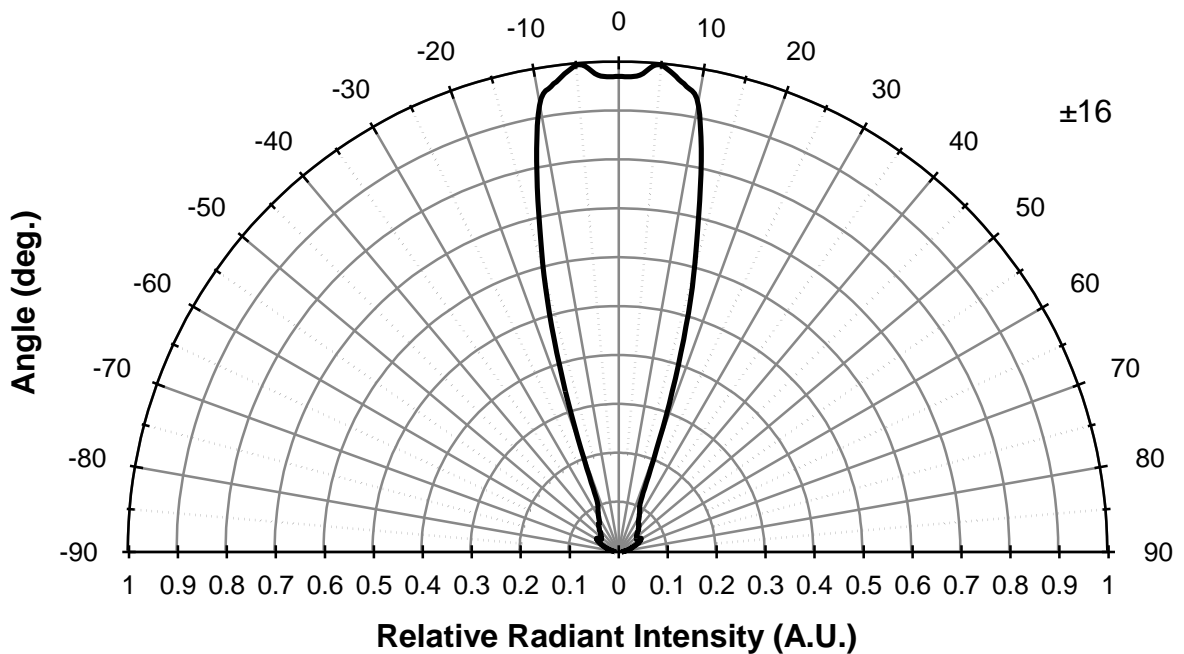
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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