

# L830-02UP

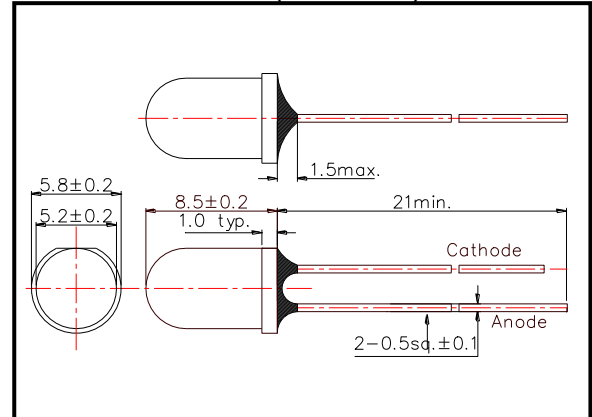
## Infrared LED Lamp

L830-02UP 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.	L830-02UP
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 (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

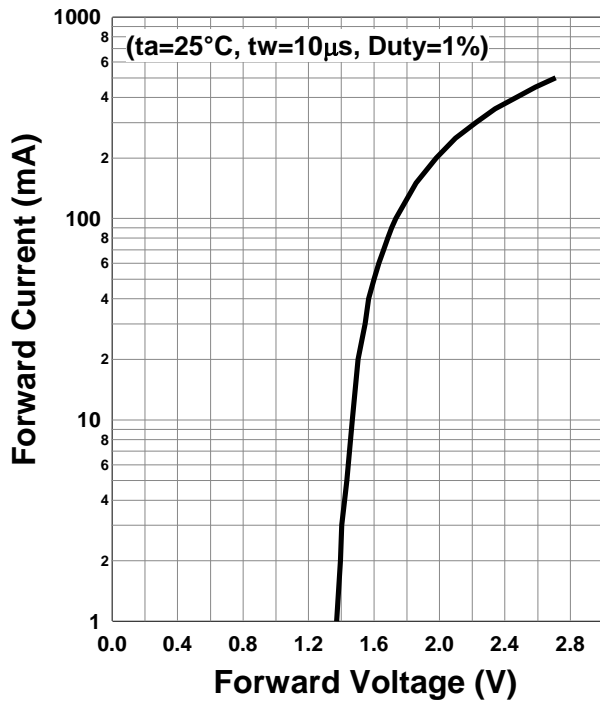
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.6	1.8	V
		IF=100mA t=20ms		1.7		
	VFP	IFP=500mA		2.7		
Radiated Power	PO	IF=50mA		25		mW
		IF=100mA t=20ms		50		
		IFP=500mA		245		
Radiant Intensity	IE	IF=50mA		130		mW/sr
		IF=100mA t=20ms		260		
		IFP=500mA		1270		
Peak Wavelength	$\lambda_P$	IF=50mA	820	830	840	nm
Half Width	$\Delta\lambda$	IF=50mA		33		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		±8		deg.
Rise Time	tr	IF=50mA		50		ns
Fall Time	tf	IF=50mA		50		ns

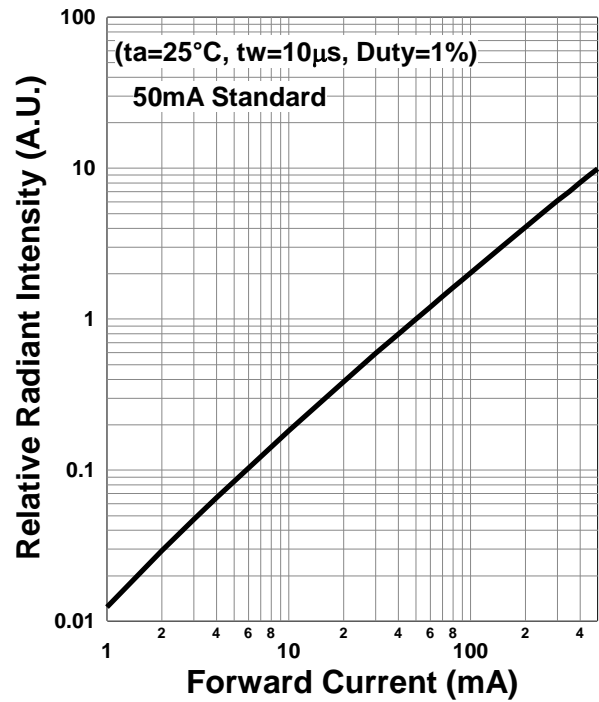
‡Radiated Power is measured by S3584-08.

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

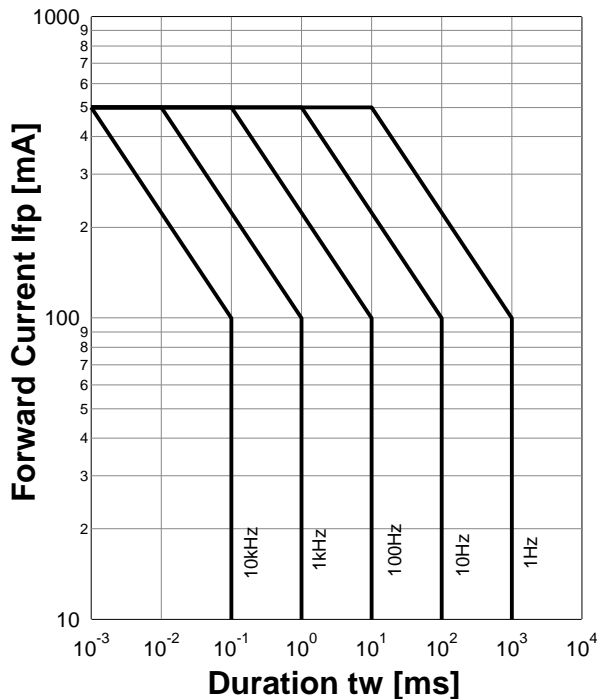
**Forward Current - Forward Voltage**



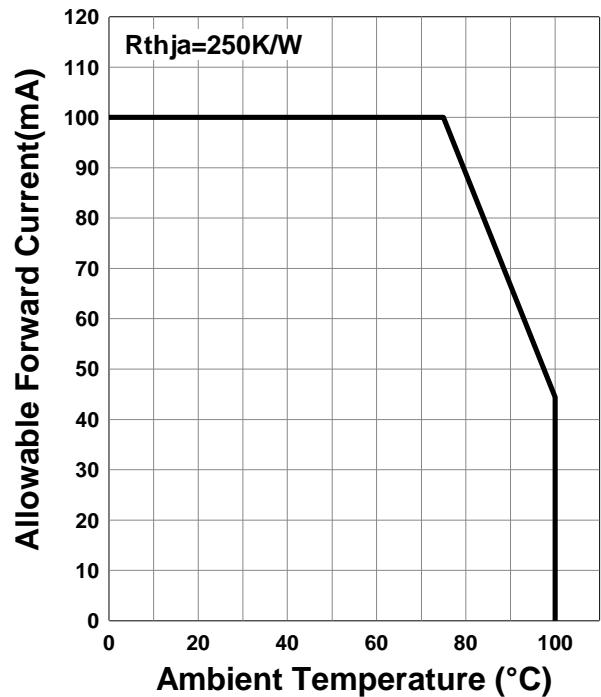
**Relative Radiant Intensity - Forward Current**



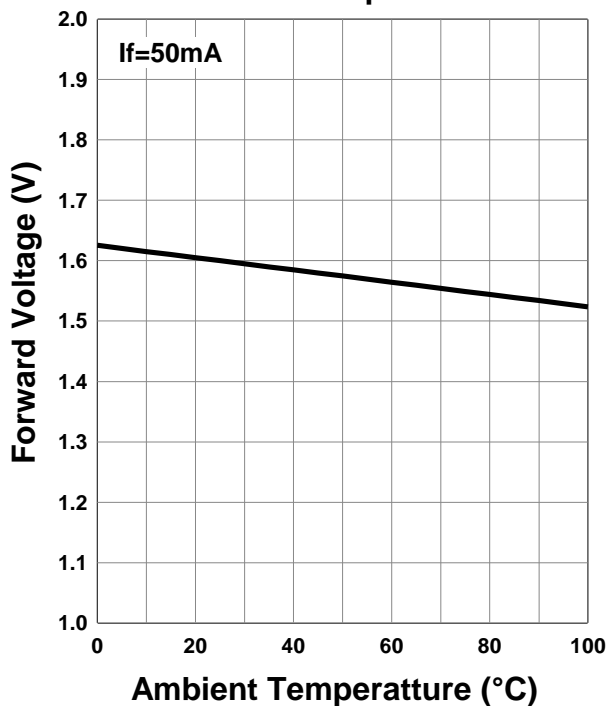
**Forward Current - Pulse Duration**



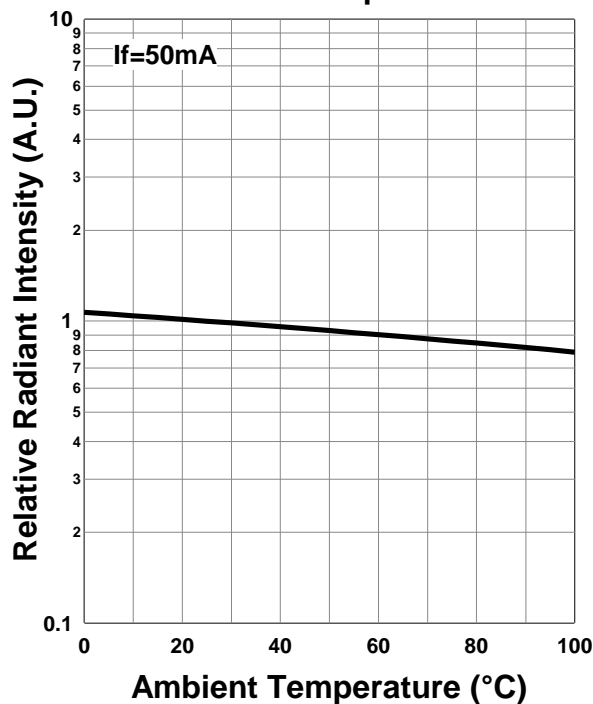
**Allowable Forward Current - Ambient Temperature**



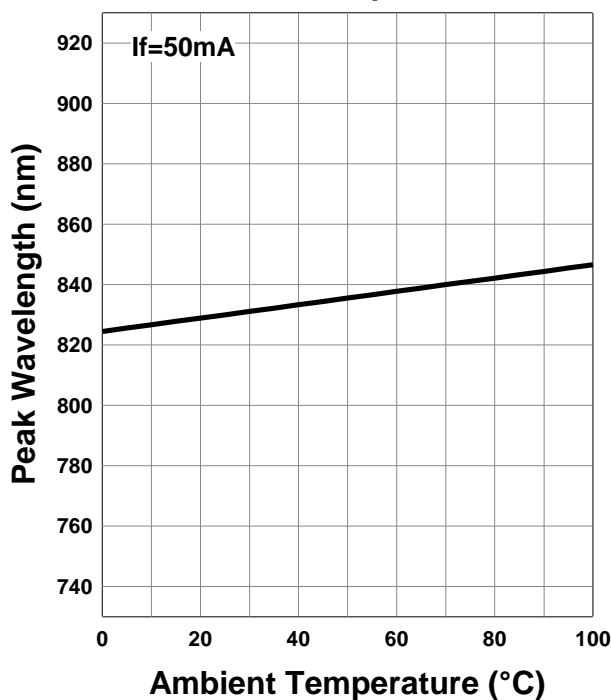
**Forward Voltage - Ambient Temperature**



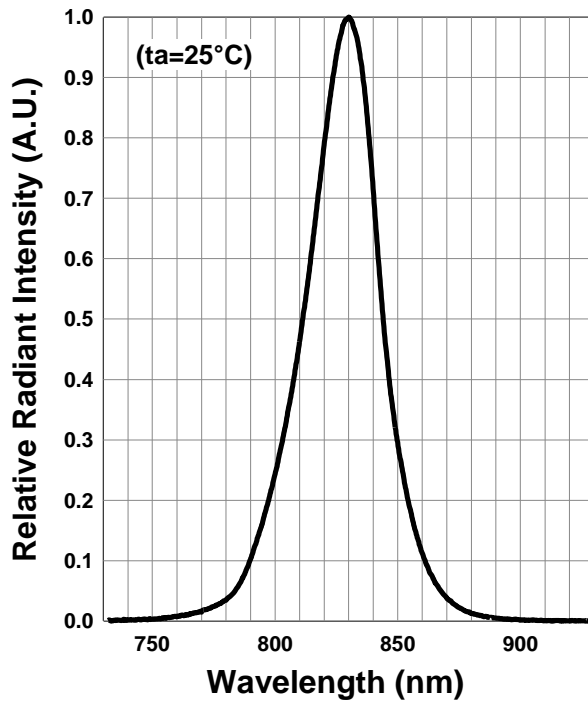
**Relative Radiant Intensity - Ambient Temperature**



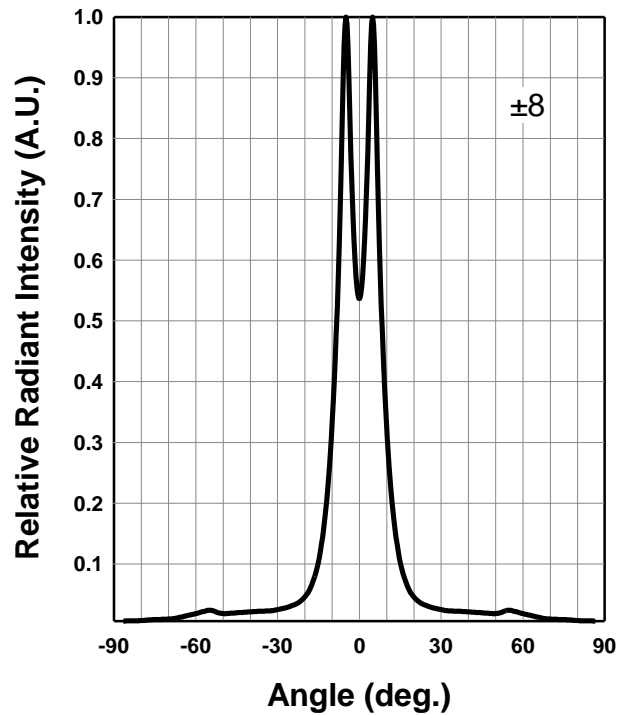
**Peak Wavelength - Ambient Temperature**



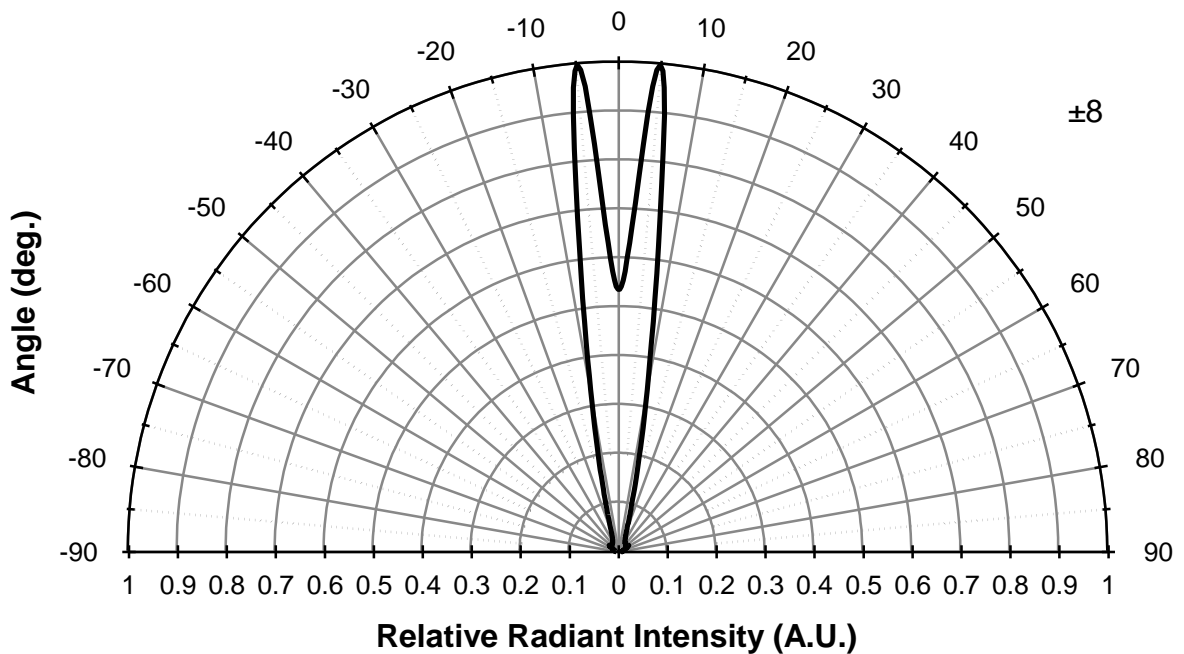
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

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