

L940-33V

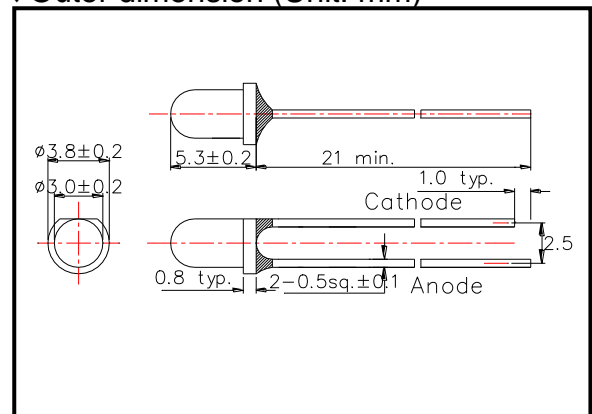
Infrared LED Lamp

L940-33V 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 940nm.

◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L940-33V
3) Chip	
(1) Chip Material	AlGaAs
(2) Peak Wavelength	940nm typ.
4) Package	
(1) Type	Φ3 mm 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	150	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	260	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

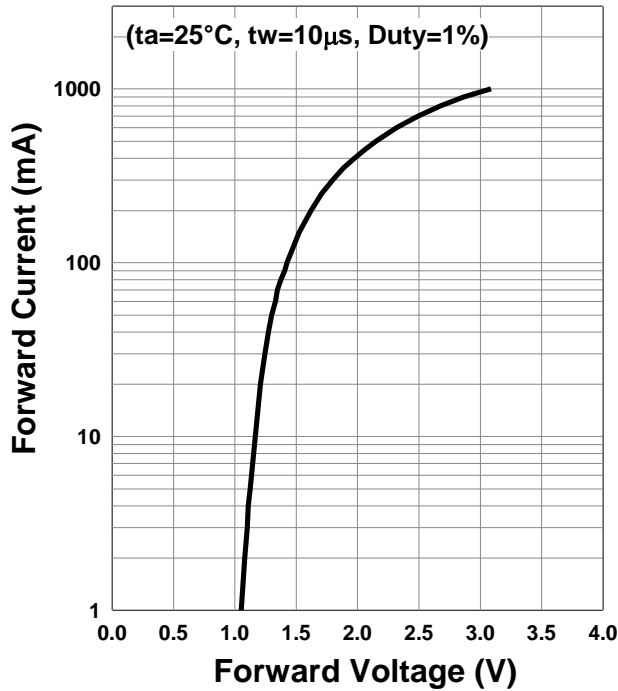
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.3	1.5	V
	VFP	IFP=1A		3.1		
Radiated Power	PO	IF=50mA		16		mW
		IFP=1A		270		
Radiant Intensity	IE	IF=50mA		35		mW/sr
		IFP=1A		590		
Peak Wavelength	λ_P	IF=50mA	930	940	950	nm
Half Width	$\Delta\lambda$	IF=50mA		56		nm
Viewing Half Angle	$\theta_{1/2}$	IF=50mA		±23		deg.
Rise Time	tr	IF=50mA		1600		ns
Fall Time	tf	IF=50mA		1900		ns

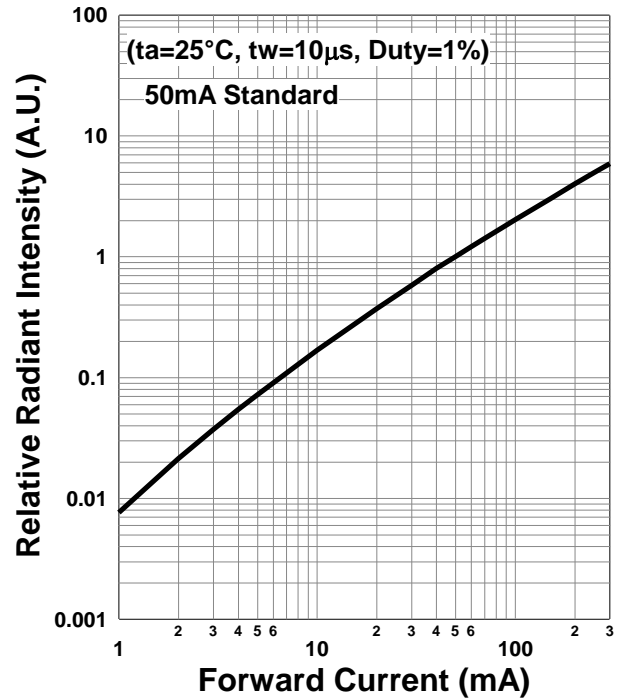
‡Radiated Power is measured by S3584-08.

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

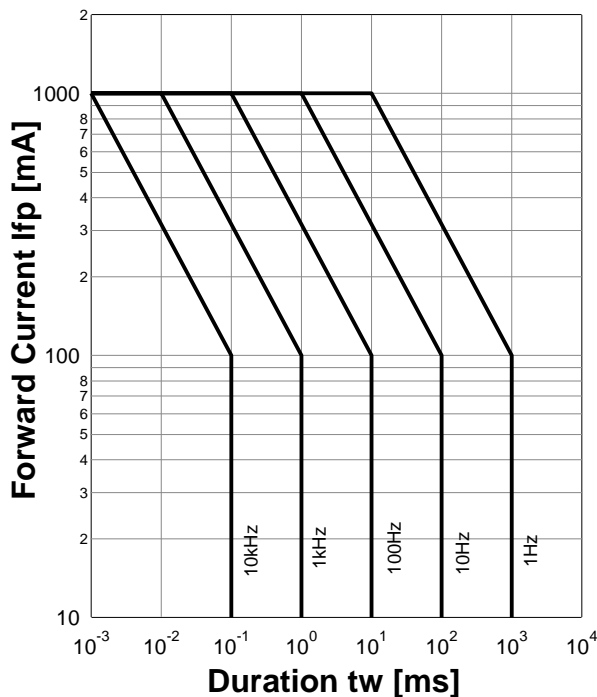
Forward Current - Forward Voltage



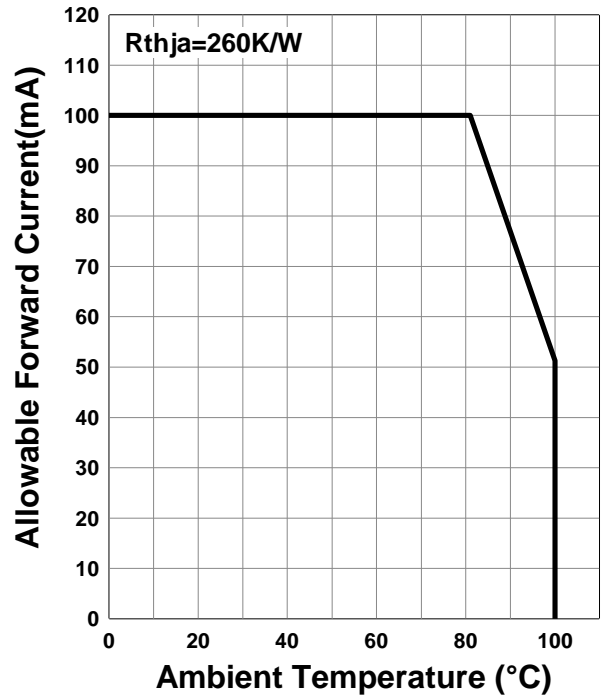
Relative Radiant Intensity - Forward Current



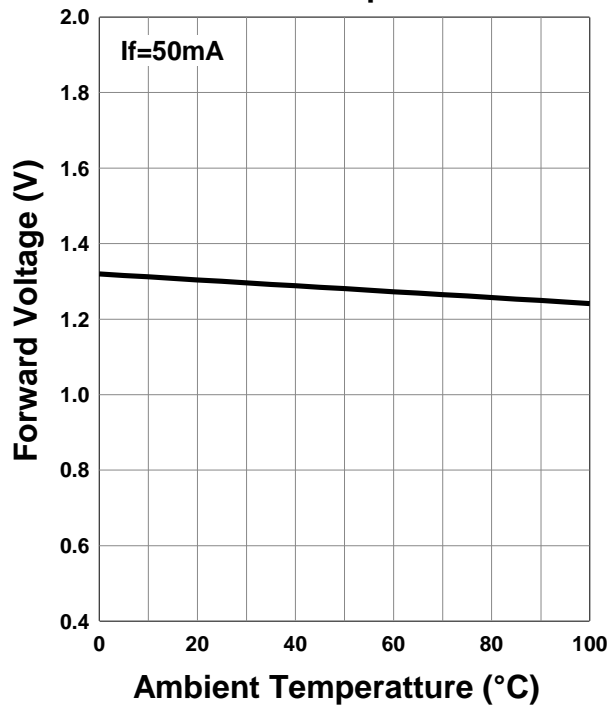
Forward Current - Pulse Duration



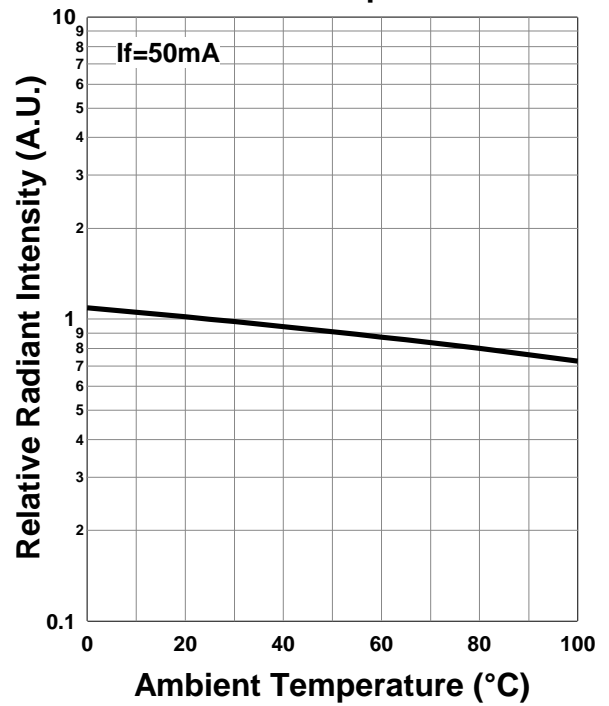
Allowable Forward Current - Ambient Temperature



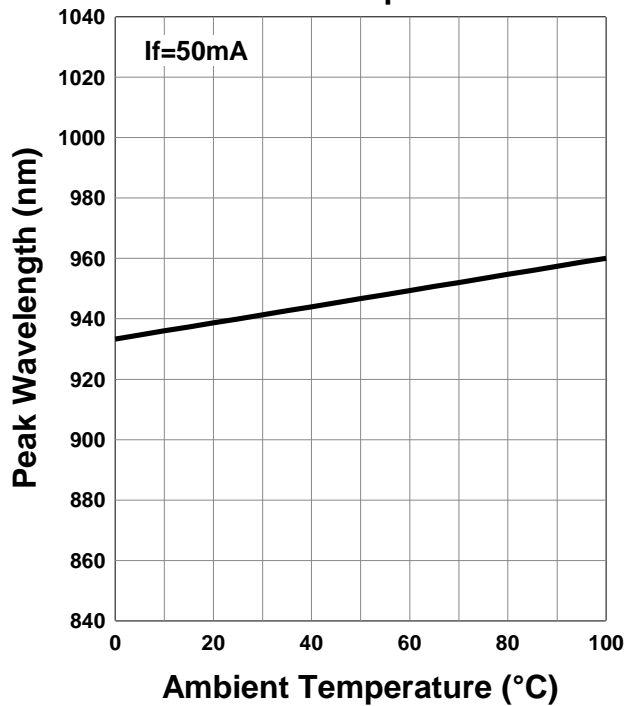
Forward Voltage - Ambient Temperature



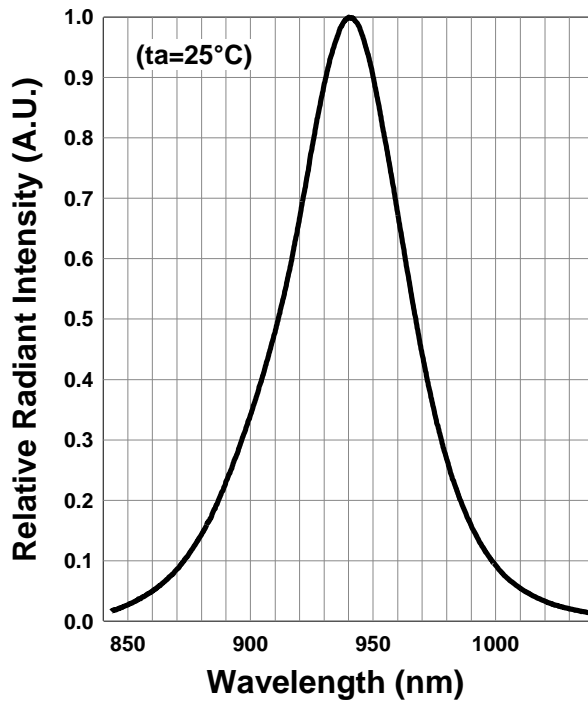
Relative Radiant Intensity - Ambient Temperature



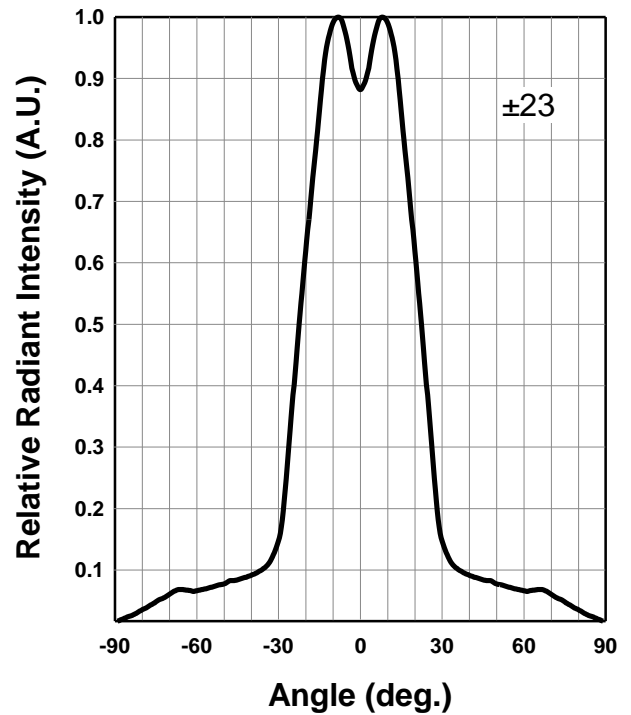
Peak Wavelength - Ambient Temperature



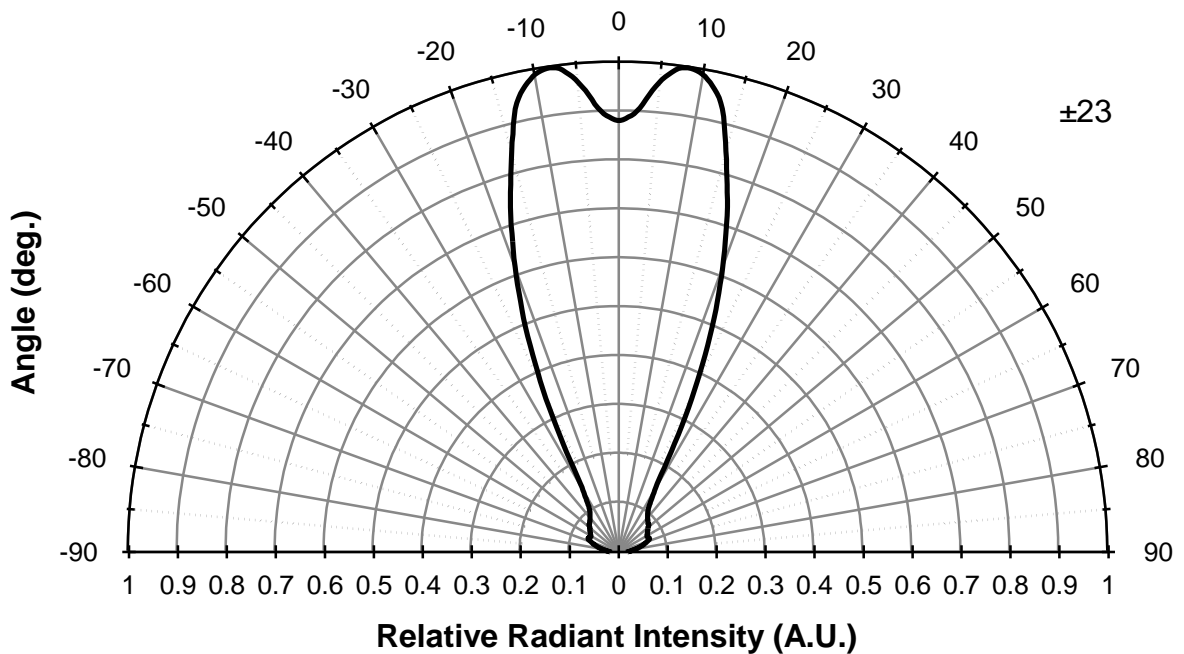
Relative Spectral Emission



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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