

L940D-33

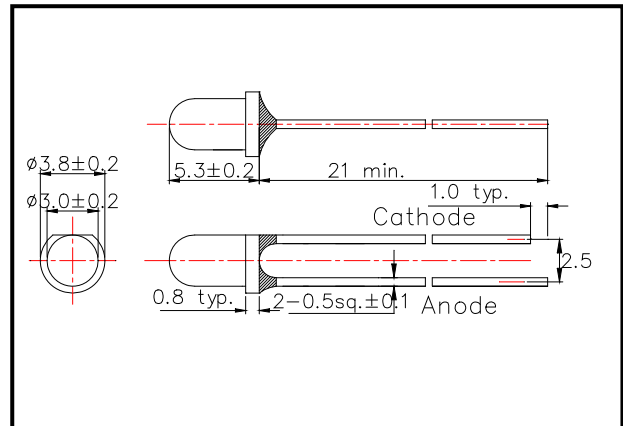
Infrared LED Lamp

L940D-33 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. L940D-33
- 3) Chip
- (1) Chip Material AlGaAs
- (2) Peak Wavelength 940nm 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	P _D	170	mW
Forward Current	I _F	100	mA
Pulse Forward Current	I _{FP}	1000	mA
Reverse Voltage	V _R	5	V
Thermal Resistance	R _{thja}	180	K/W
Junction Temperature	T _j	120	°C
Operating Temperature	T _{OPR}	-40 ~ +100	°C
Storage Temperature	T _{STG}	-40 ~ +100	°C
Soldering Temperature	T _{SOL}	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

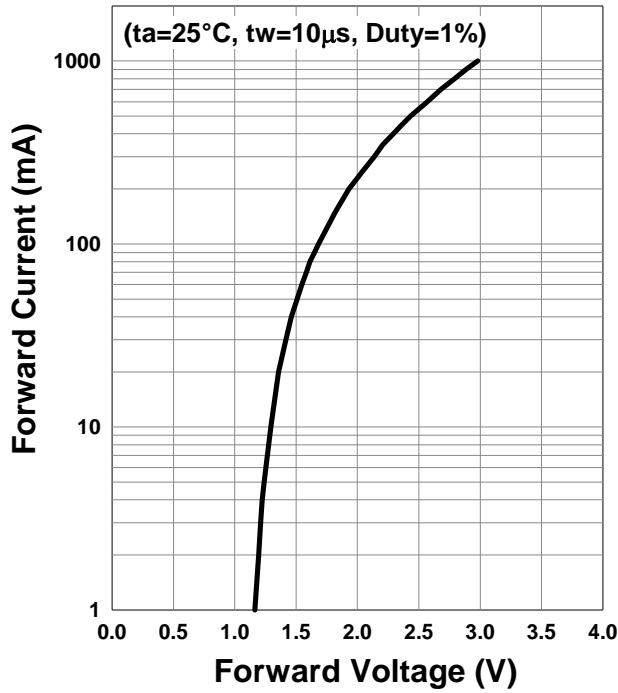
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.5	1.7	V
Radiated Power	P _o	I _F =50mA		25		mW
Total Radiated Power	I _E	I _F =50mA		60		mcd
Peak Wavelength	λ _P	I _F =50mA		940		nm
Half Width	Δλ	I _F =50mA		40		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±17		deg.
Rise Time	t _r	I _F =50mA		22		ns
Fall Time	t _f	I _F =50mA		25		ns

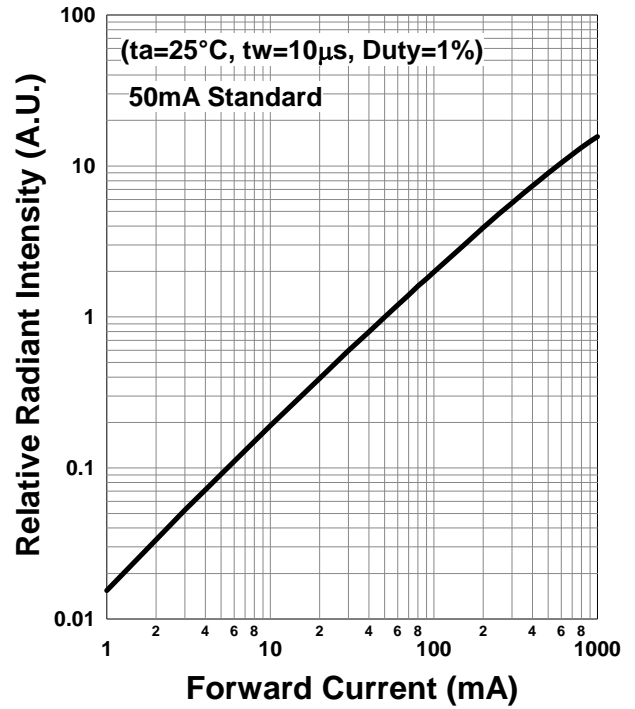
‡Radiated Power is measured by S3584-08.

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

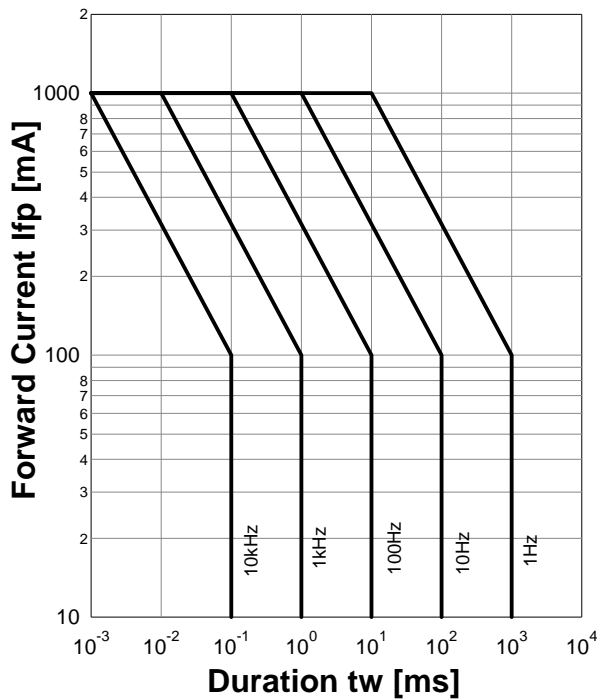
Forward Current - Forward Voltage



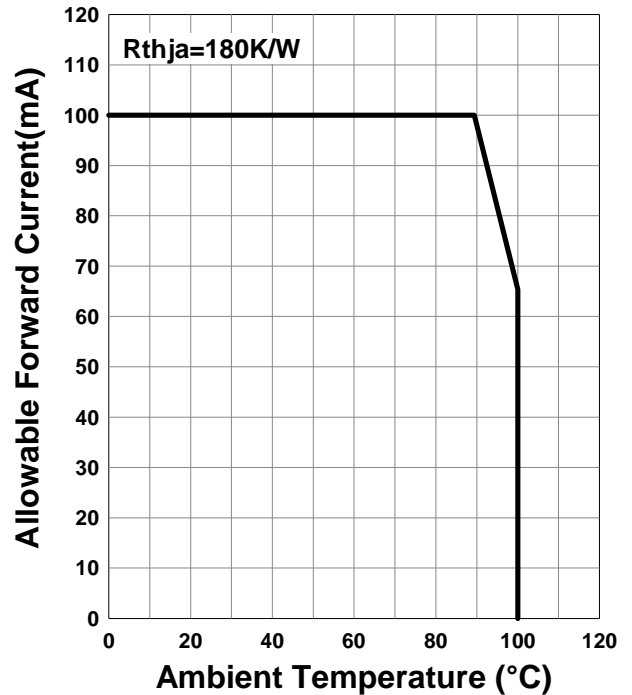
Relative Radiant Intensity - Forward Current



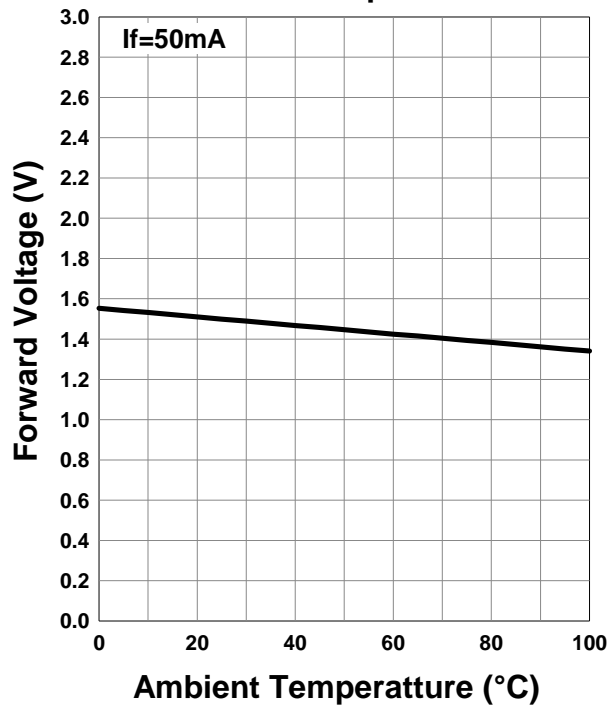
Forward Current - Pulse Duration



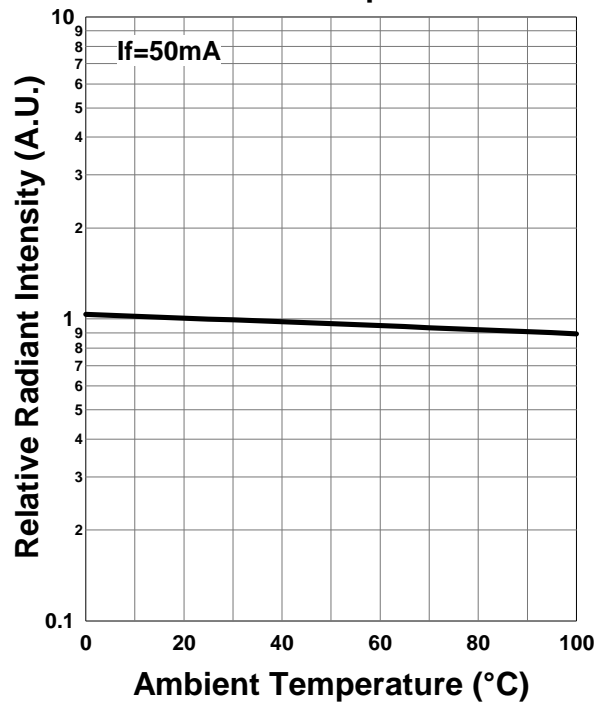
Allowable Forward Current - Ambient Temperature



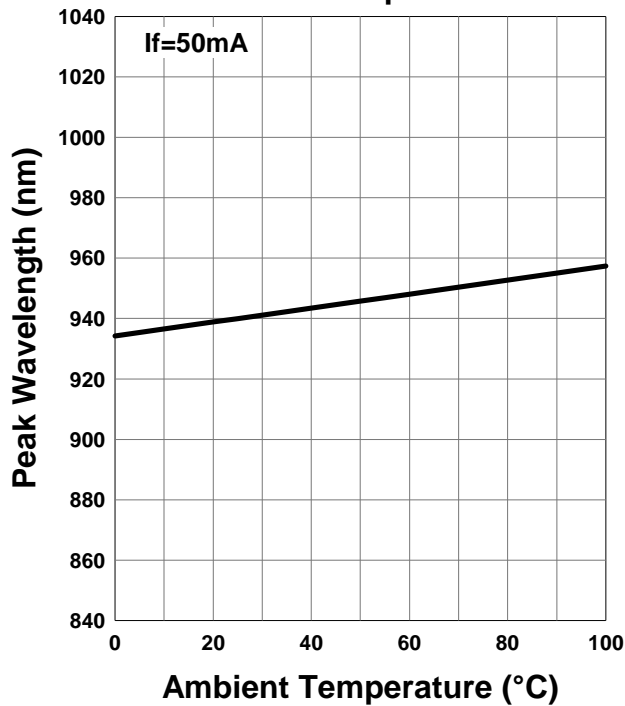
Forward Voltage - Ambient Temperature



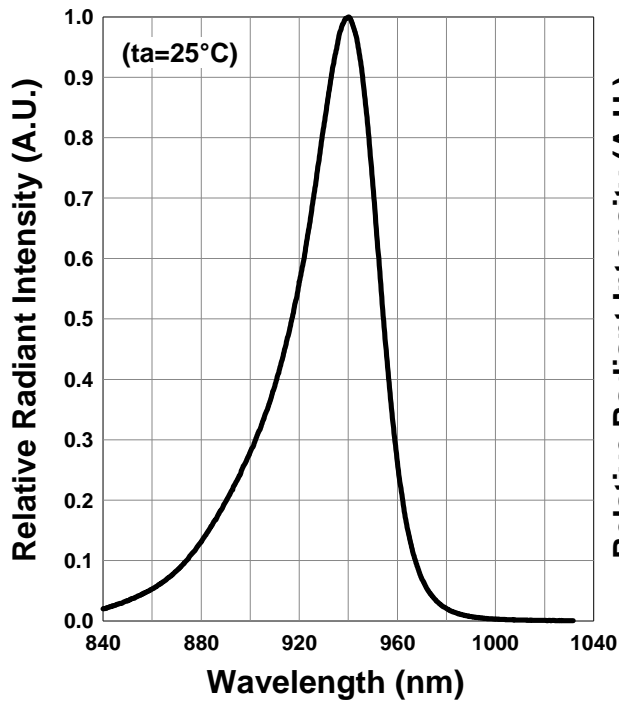
Relative Radiant Intensity - Ambient Temperature



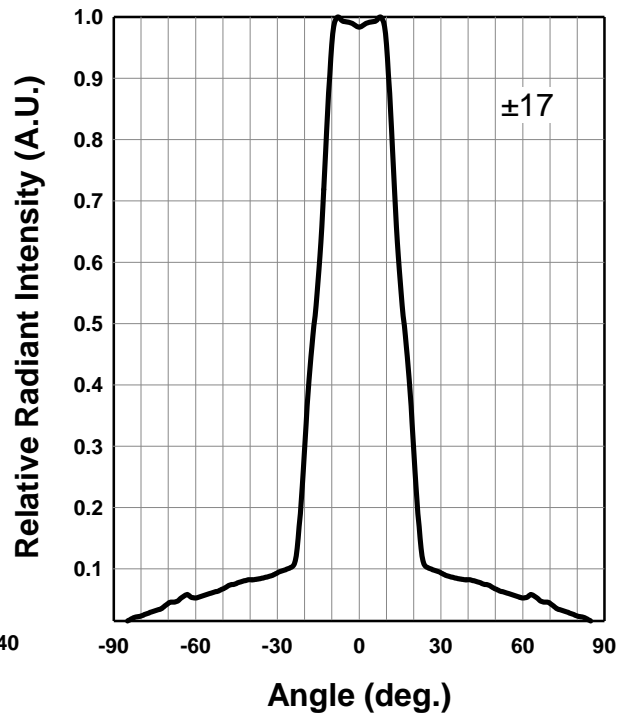
Peak Wavelength - Ambient Temperature



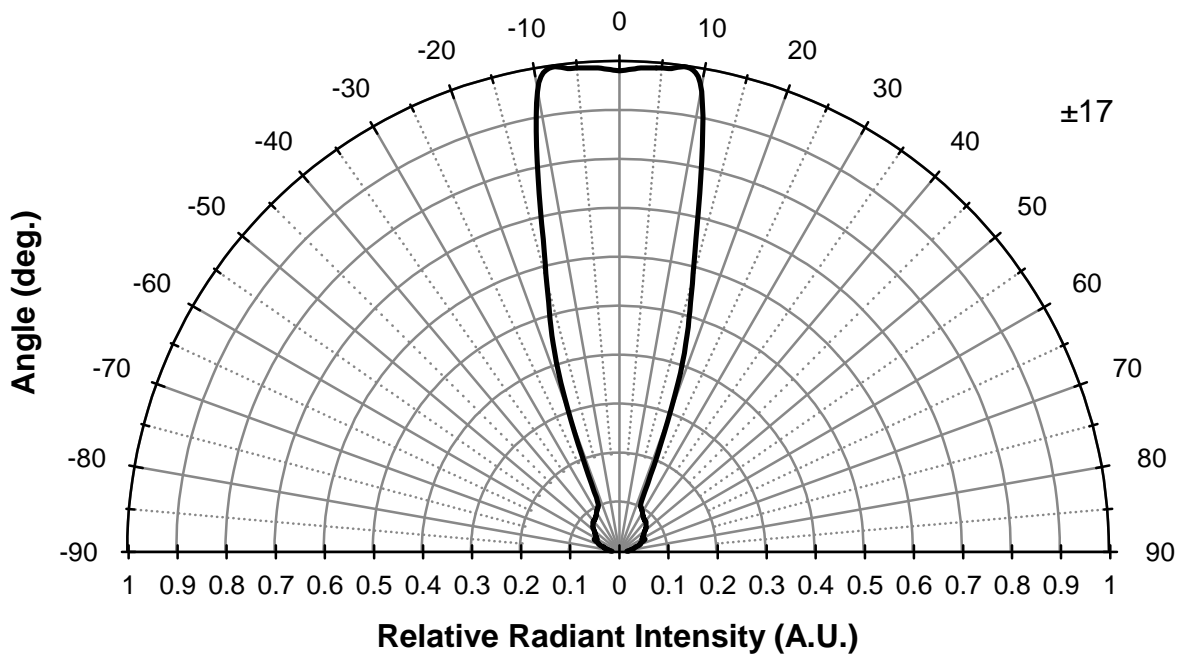
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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