

L940-31-2C

Infrared LED Lamp

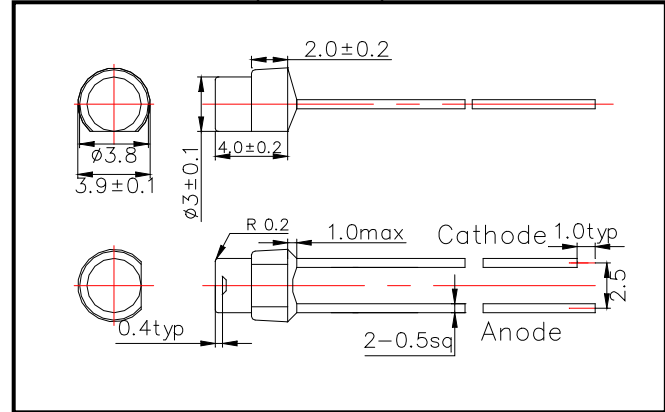
L940-31-2C is an AlGaAs LED mounted on a lead frame with a clear epoxy lens.

On forward bias it emits a spectral band of radiation, which peaks at 940nm.

◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L940-31-2C
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 / cup	0.35mm depth
(3) Lead Frame	Soldered(Lead Free)

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	160	mW	$T_a = 25^\circ\text{C}$
Forward Current	I_F	100	mA	$T_a = 25^\circ\text{C}$
Pulse Forward Current	I_{FP}	1000	mA	$T_a = 25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a = 25^\circ\text{C}$
Thermal Resistance	R_{thja}	280	K/W	
Junction Temperature	T_j	100	$^\circ\text{C}$	
Operating Temperature	T_{OPR}	-40 ~ +85	$^\circ\text{C}$	
Storage Temperature	T_{STG}	-40 ~ +100	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	265	$^\circ\text{C}$	

‡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.

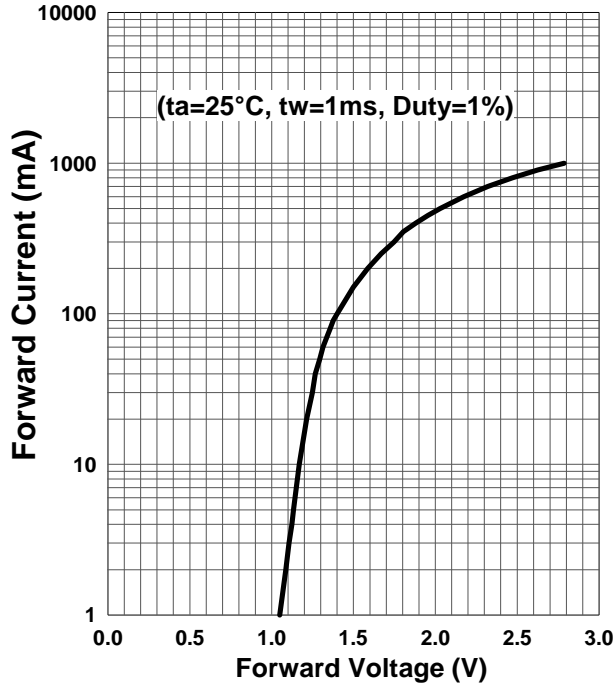
◆ Electro-Optical Characteristics [$T_a = 25^\circ\text{C}$]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F = 50 \text{ mA}$				V
Radiated Power	P_O	$I_F = \text{mA}$				mW
Radiant Intensity	I_E	$I_F = \text{mA}$				mW/sr
Peak Wavelength	λ_P	$I_F = \text{mA}$				nm
Half Width	$\Delta\lambda$	$I_F = \text{mA}$				nm
Viewing Half Angle	$\theta_{1/2}$	$I_F = \text{mA}$				deg.
Rise Time	t_r	$I_F = \text{mA}$				ns
Fall Time	t_f	$I_F = \text{mA}$				ns

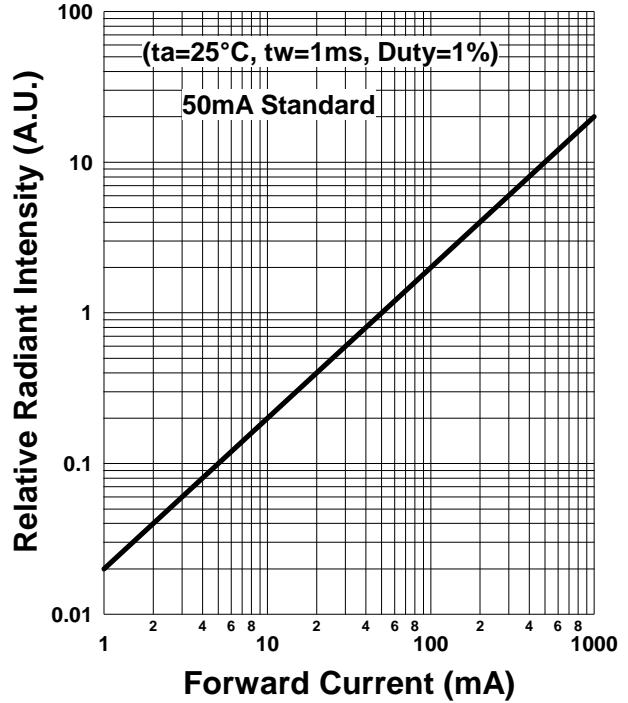
‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by Tektronix J-6512.

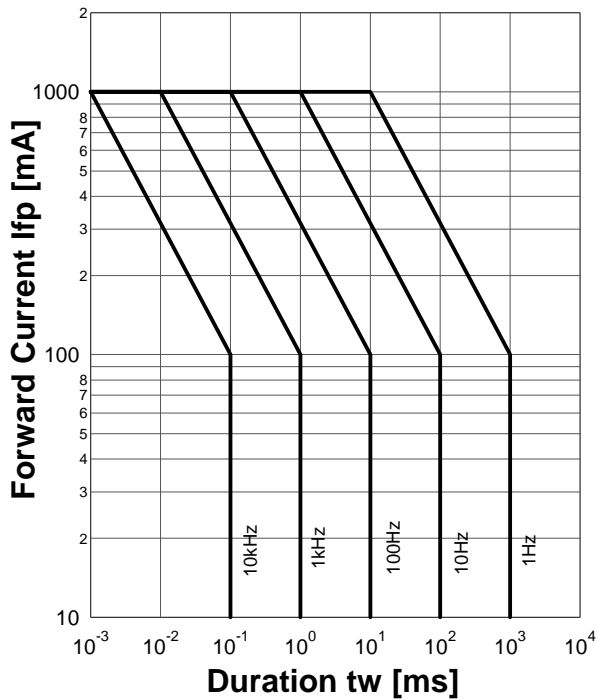
Forward Current - Forward Voltage



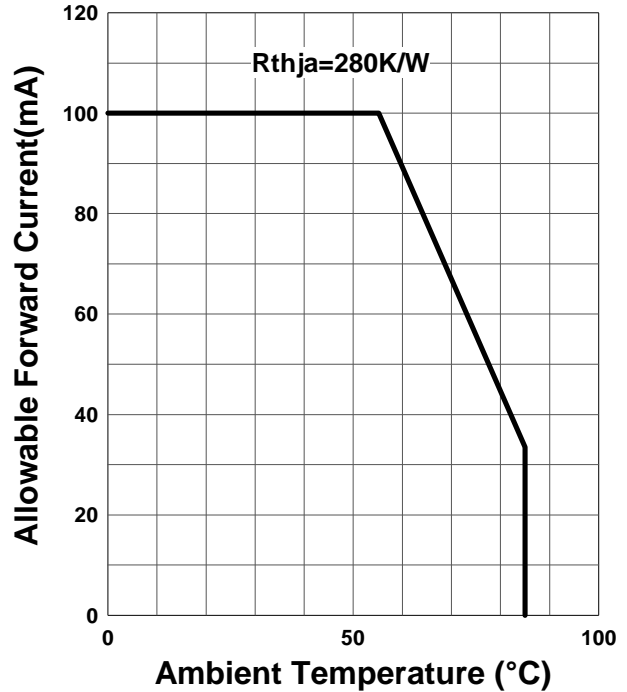
Relative Radiant Intensity - Forward Current



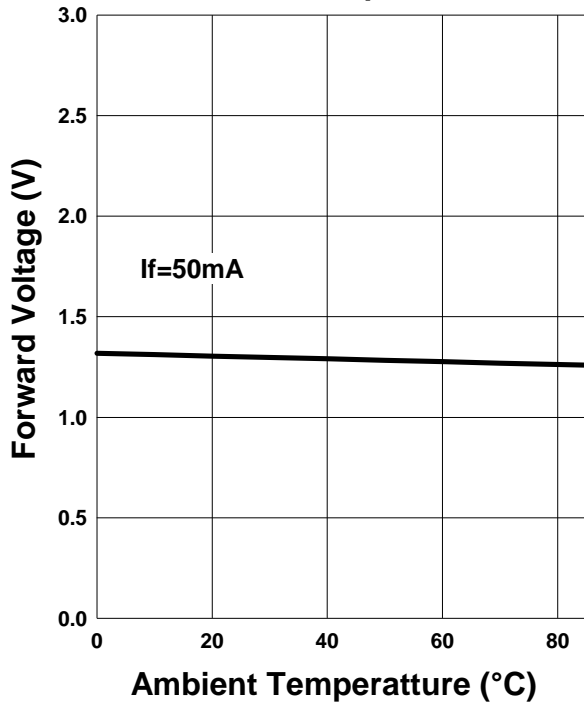
Forward Current - Pulse Duration



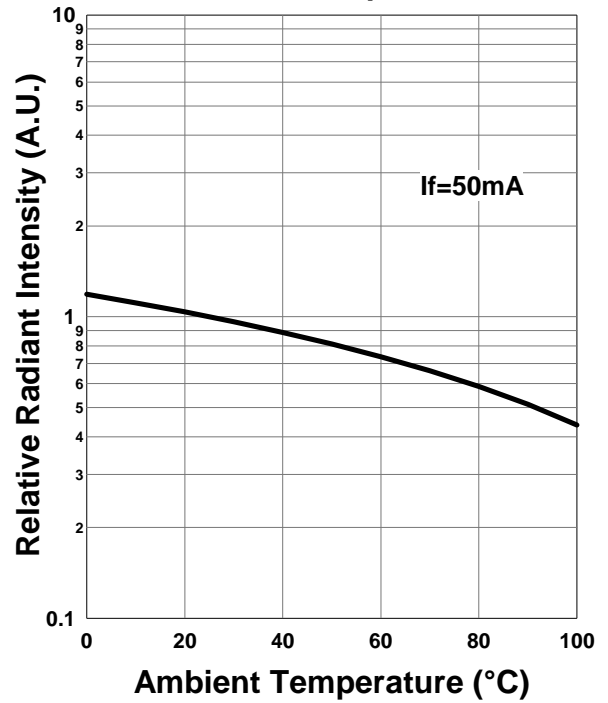
Allowable Forward Current - Ambient Temperature



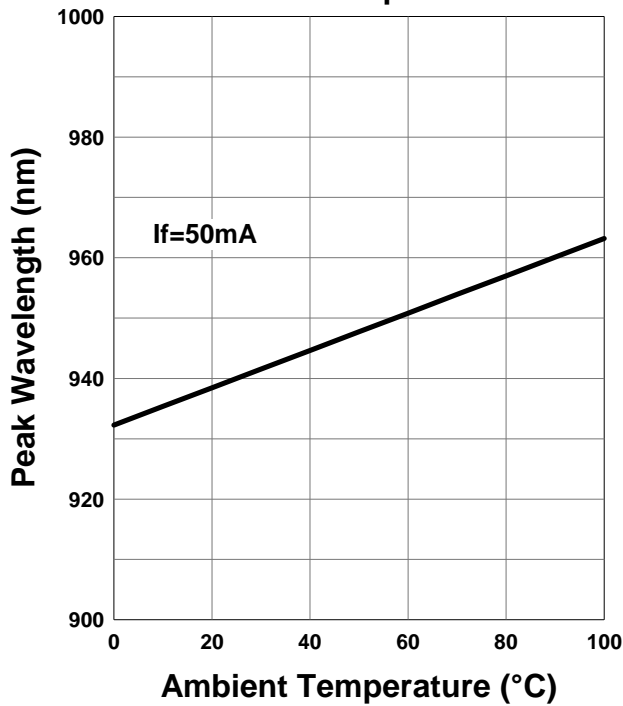
Forward Voltage - Ambient Temperature



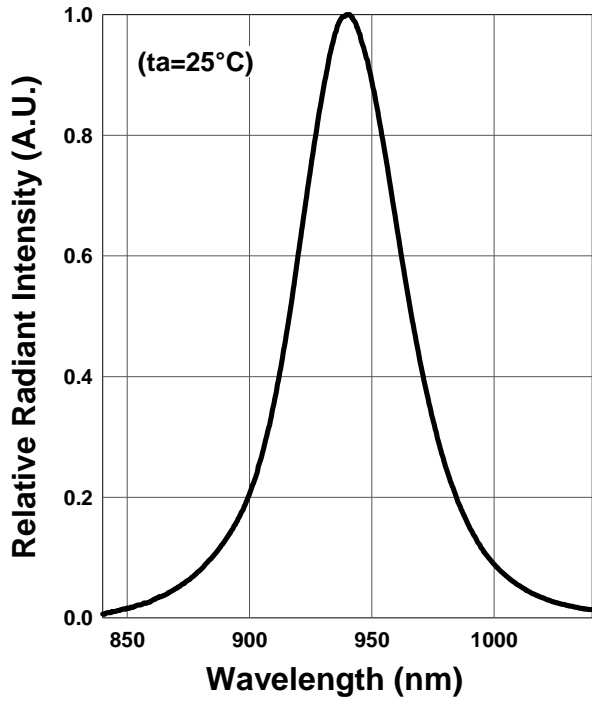
Relative Radiant Intensity - Ambient Temperature



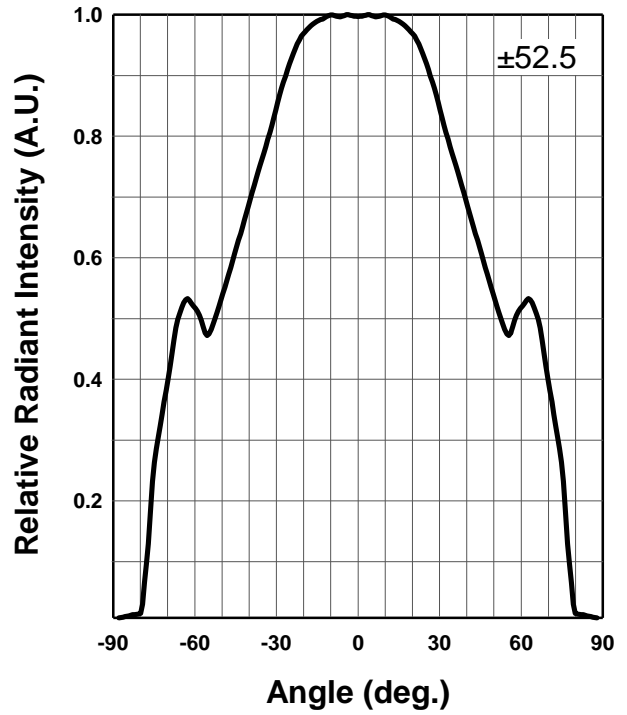
Peak Wavelength - Ambient Temperature



Relative Spectral Emission



Radiation Characteristics



Disclaimer

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