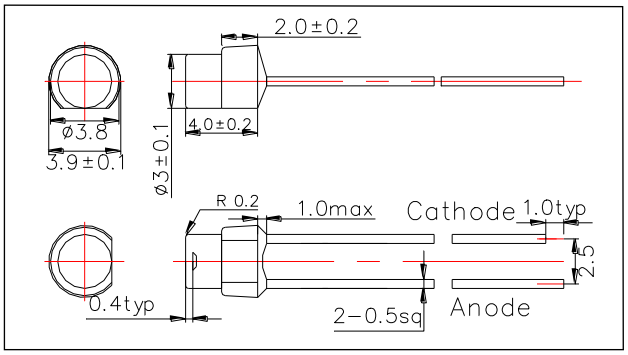
L940-31-2C
Infrared LED Lamp

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 Number: L940-31-2C
3. Chip:
   - Chip material: AlGaAs
   - Peak Wavelength: 940nm typ.
4. Package
   - Type: Φ3mm Clear Molding
   - Resin Material: Epoxy Resin
   - Lead Frame/cup: 0.35mm depth
   - Lead Frame: Soldered (Lead Free)

Outer Dimension (Unit:mm)



Absolute Maximum Ratings[Ta=25℃]			
Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	PD	160	mW
Forward Current	IF	100	mA
Pulse Forward Current*	IFP	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	100	℃
Thermal Resistance**	Rthja	280	K/W
Operating Temperature	TOPR	-40 ~ +85	℃
Storage Temperature	TSTG	-40 ~ +100	℃
Soldering Temperature***	TSOL	265	℃

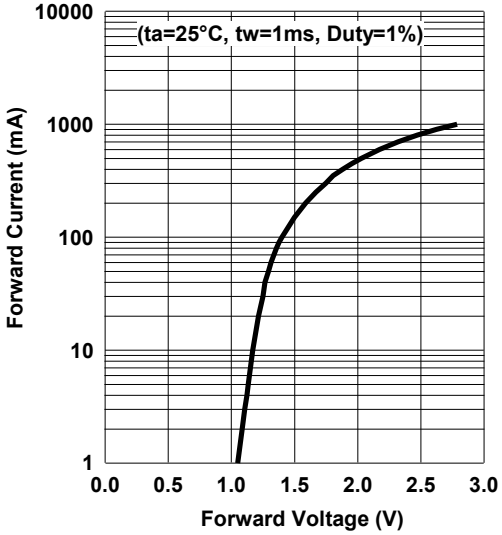
* Duty=1% and Pulse Width=10us.
** Junction - ambient, leads 7mm, soldered on PCB.
*** Soldering condition must be completed within 3 second at 265℃.

Electro-Optical Characteristics [Ta=25℃]						
Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	VF	IF=50mA		1.3	1.4	V
Total Radiated Power*	PO	IF=50mA	10	14		mW
Radiant Intensity**	IE	IF=50mA		5.5		mW/sr
Peak wavelength	λP	IF=50mA	930	940	955	nm
Half Width	Δλ	IF=50mA		50		nm
Viewing Half Angle	θ1/2	IF=50mA		±52		deg
Rise Time	tr	IF=50mA		1000		ns
Fall Time	tf	IF=50mA		500		ns

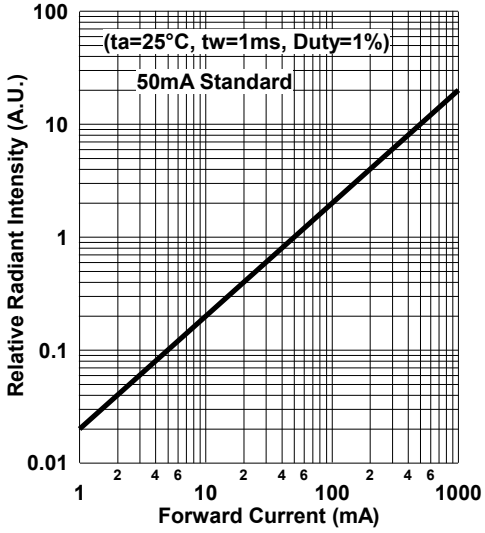
* Measured by Photodyne #500
** Measured by Tektronix J-6512

RoHS Compliant

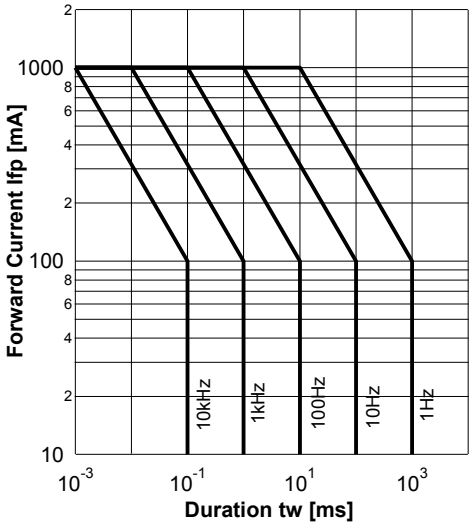
Forward Curent - Forward Voltage



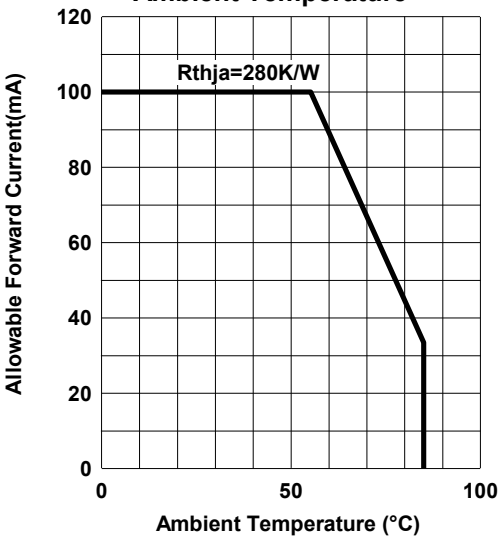
Relative Radiant Intensity - Forward Current



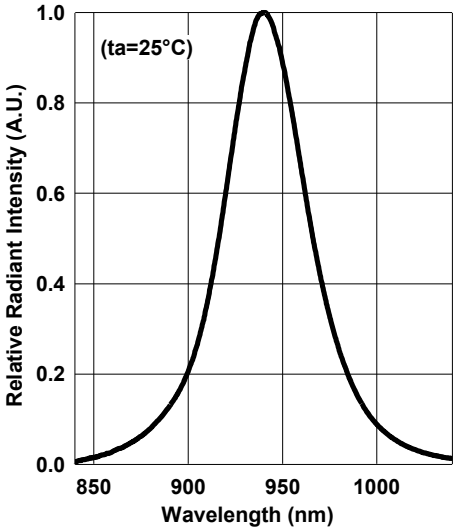
Forward Current - Pulse Duration



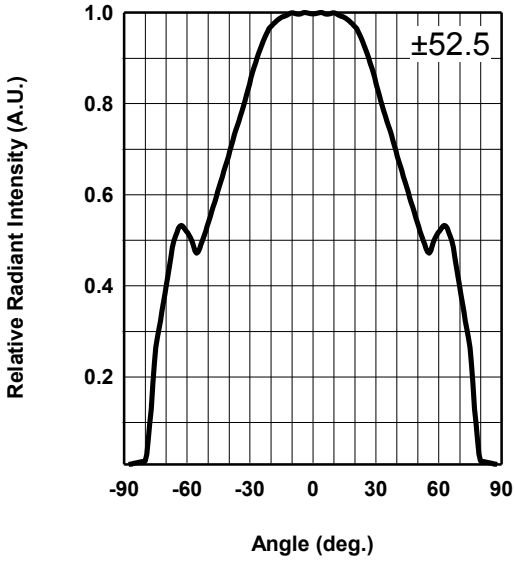
Allowable Forward Current - Ambient Temperature

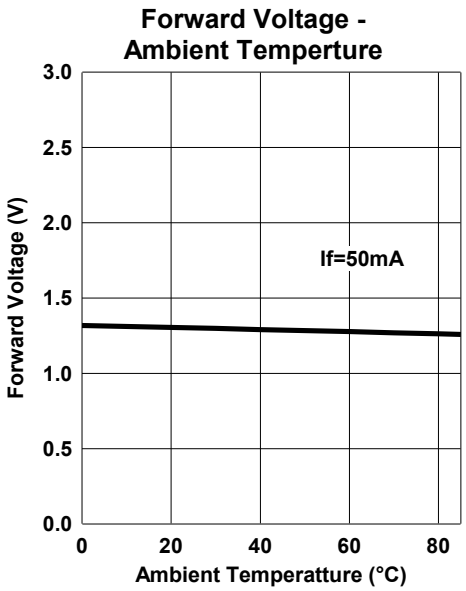


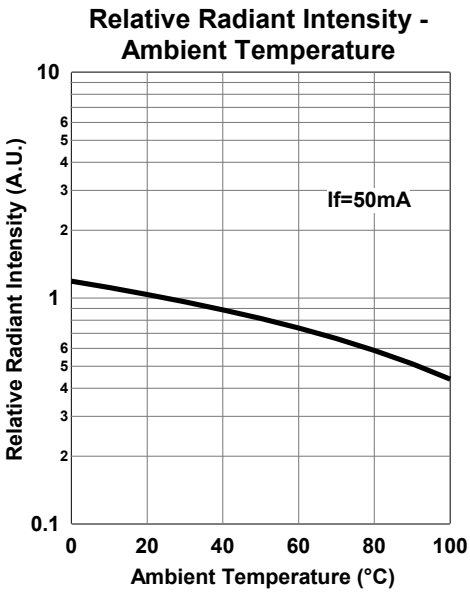
Relative Spectral Emission

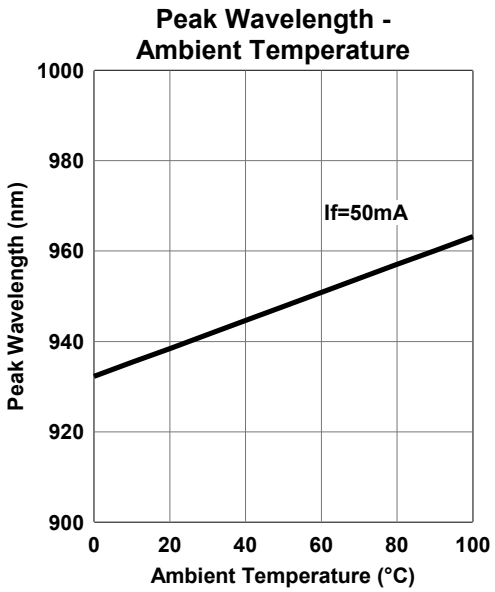


Radiation Characteristics




Forward Voltage -
Ambient Temperture
Forward Voltage (V)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
If=50mA
0
20
40
60
80
Ambient Temperatture (°C)


Relative Radiant Intensity -
Ambient Temperature
Relative Radiant Intensity (A.U.)
10
6
5
4
3
2
1
6
5
4
3
2
0.1
If=50mA
0
20
40
60
80
100
Ambient Temperature (°C)


Peak Wavelength -
Ambient Temperature
Peak Wavelength (nm)
1000
980
960
940
920
900
If=50mA
0
20
40
60
80
100
Ambient Temperature (°C)