

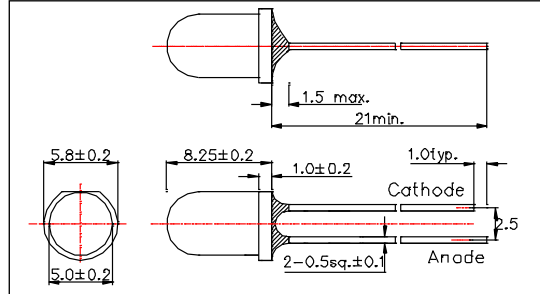
## L970D-03 Infrared LED Lamp

L970D-03 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 970nm.

<Specifications>

1. Product Name: Infrared LED Lamp
2. Type Number: L970D-03
3. Chip:
  - Chip material: AlGaAs
  - Peak Wavelength: 970nm typ.
4. Package
  - Type: Φ5mm Clear Molding
  - Resin Material: Epoxy Resin
  - Lead Frame: Soldered (Lead Free)

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	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	120	°C
Thermal Resistance	Rthja	200	K/W
Operating Temperature	TOPR	-40 ~ +100	°C
Storage Temperature	TSTG	-40 ~ +100	°C
Soldering Temperature**	TSOL	250	°C

\* Duty=1% and Pulse Width=10us.

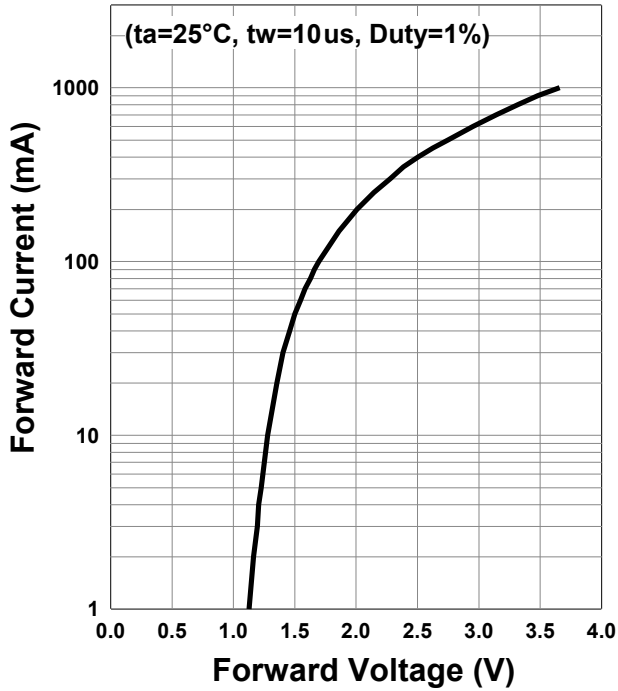
\*\* Soldering condition must be completed within 5 second at 250 °C.

Electro-Optical Characteristics[Ta=25°C]						
Item	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF	IF=50mA		1.5	(1.8)	V
		IF=100mA t=20ms		1.7		
	VFP	IPF=1A		3.7		
Total Radiated Power*	PO	IF=50mA		29		mW
		IF=100mA t=20ms		57		
		IPF=1A		320		
Radiant Intensity**	IE	IF=50mA		205		mW/sr
		IF=100mA t=20ms		405		
		IPF=1A		2250		
Peak Wavelength	λP	IF=50mA	960	970	980	nm
Half Width	Δλ	IF=50mA		55		nm
Viewing Half Angle	θ 1/2	IF=50mA		±14		deg.
Rise Time	tr	IF=50mA		25		ns
Fall Time	tf	IF=50mA		25		ns

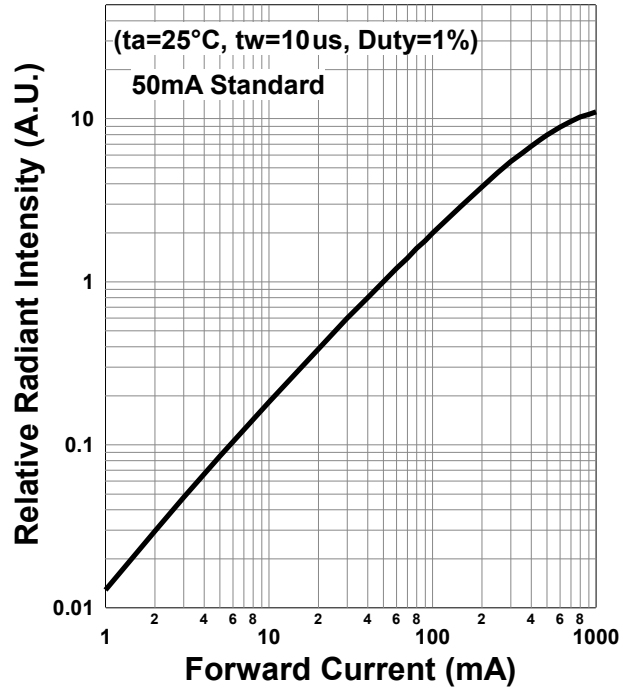
\* Measured by S3584-08

\*\* Measured by CIE127-2007 Condition B

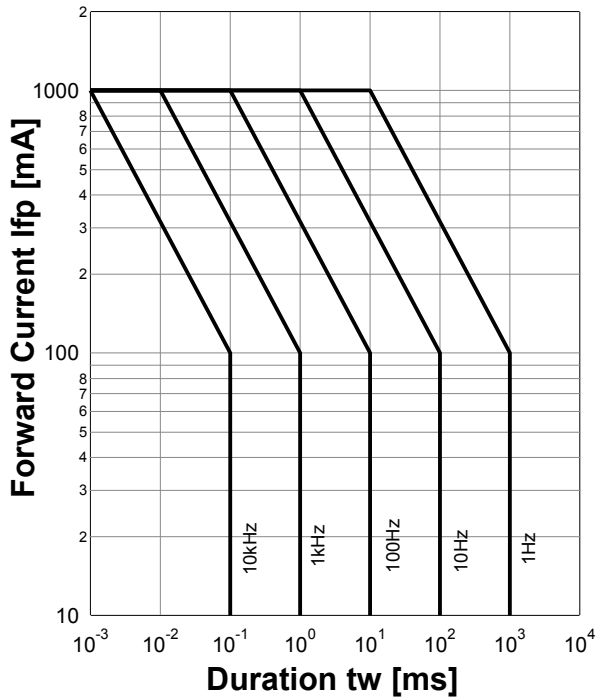
**Forward Current - Forward Voltage**



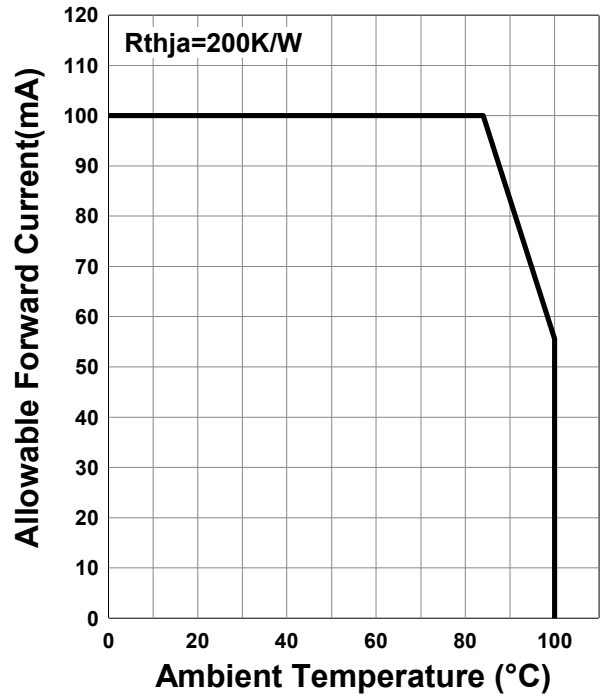
**Relative Radiant Intensity - Forward Current**

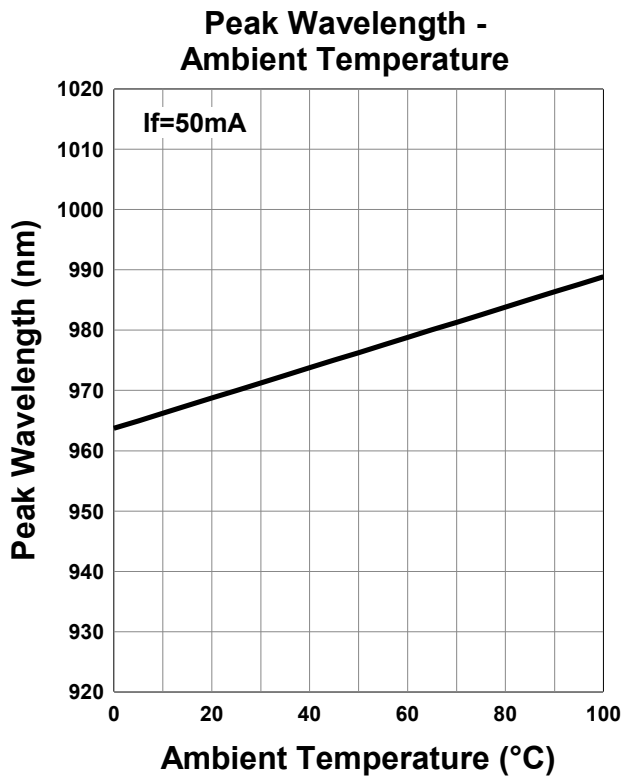
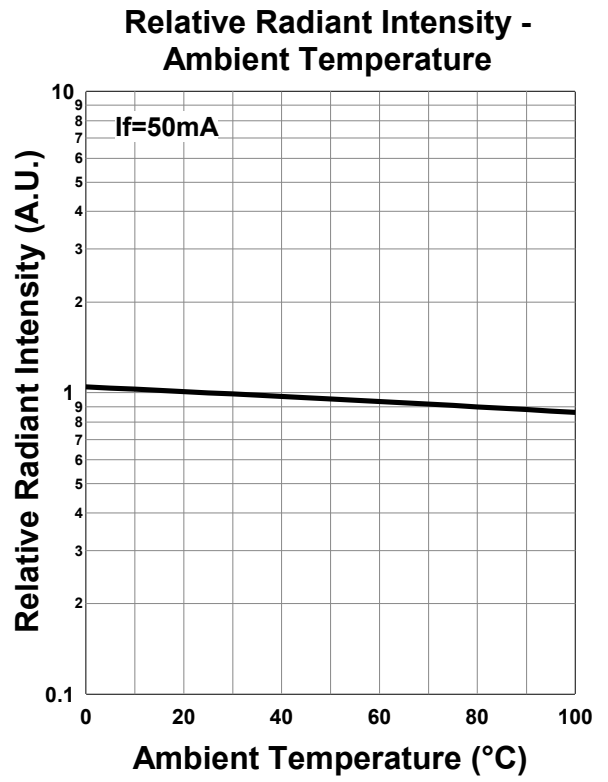
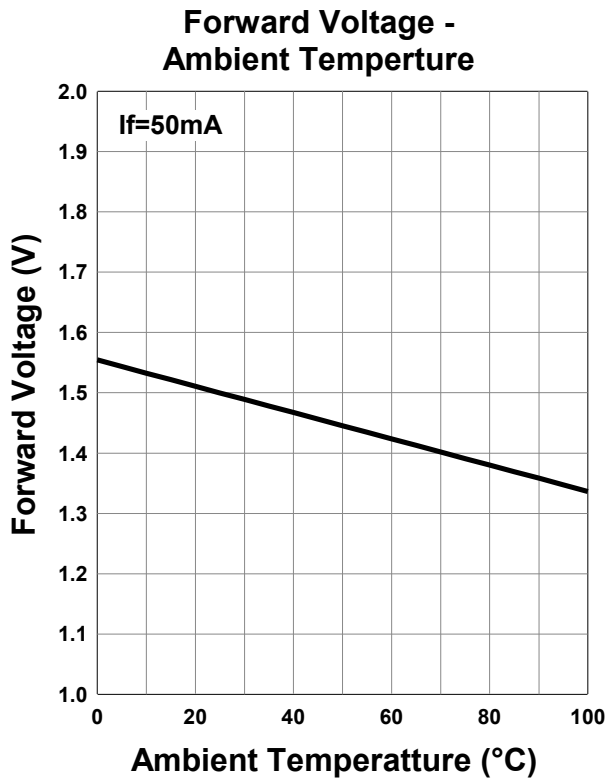


**Forward Current - Pulse Duration**

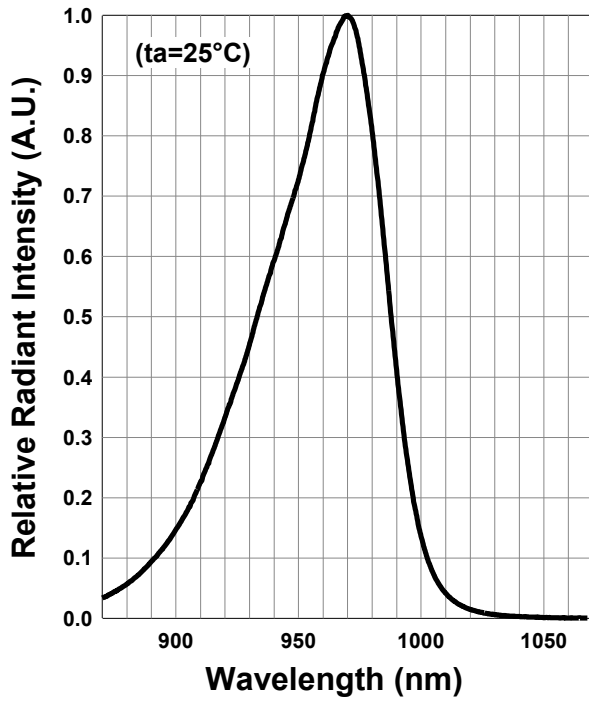


**Allowable Forward Current - Ambient Temperature**

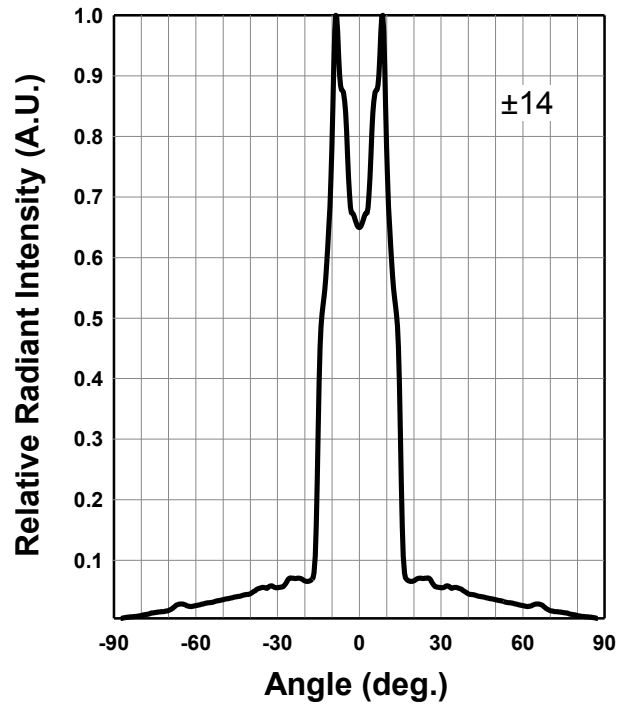




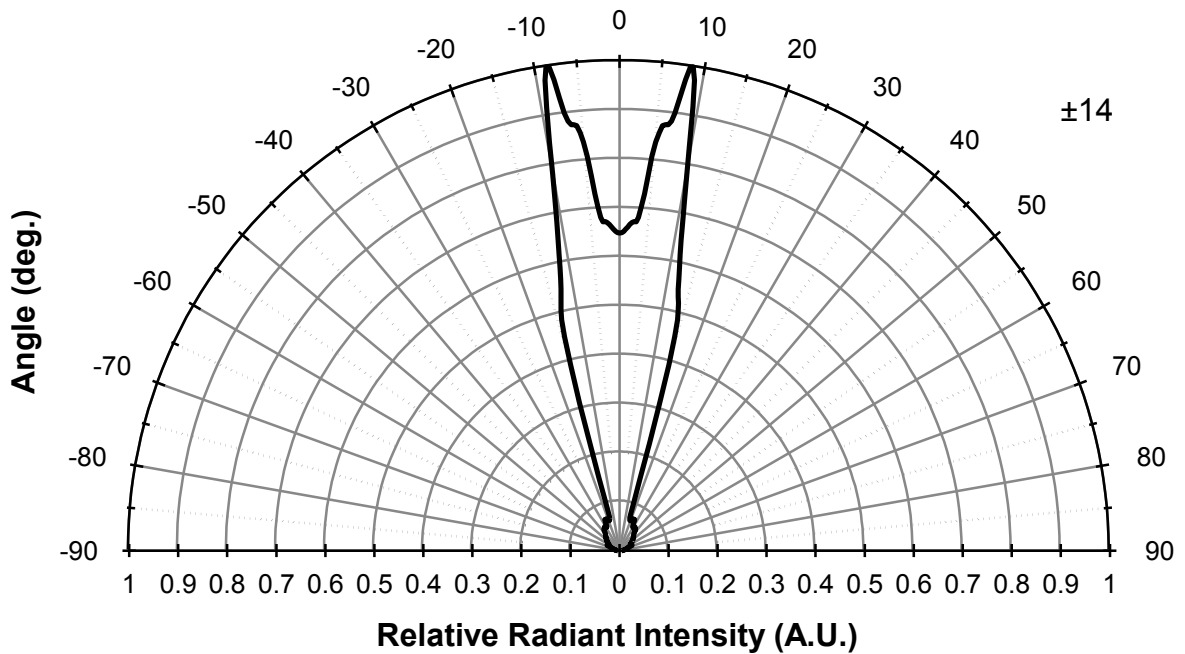
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



**Disclaimer**

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

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.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.

2014.10