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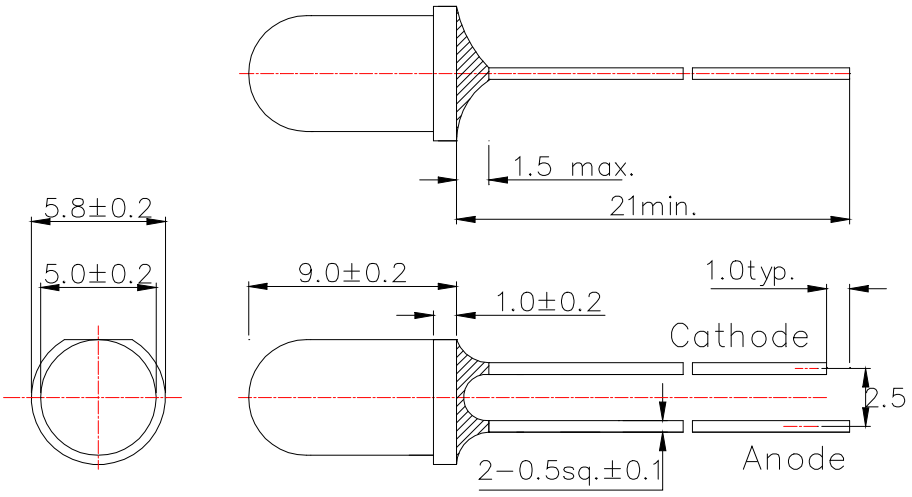
Data Sheet

PRELIMINARY

L940D-01

Infrared LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

· Chip Material : AlGaAs

· Chip Dimension : 350um * 350um

· Number of Chips : 1pce

· Peak Wavelength : 940nm typ.

· Package Type : ·5mm clear molding

· Lead Frame : Soldered (Lead Free)

· Lens : Epoxy Resin

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	170	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	170	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	265	°C

‡Pulse Forward Current condition : Duty 1% and Pulse Width=10us.

‡Soldering condition : Soldering condition must be completed with 3 seconds at 265°C.

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.4	1.7	V	IF=50mA
	VFP		2.1			IFP=1A
Total Radiated Power	PO		30		mW	IF=50mA
			480			IFP=1A
Radiant Intensity	IE		110		mW/sr	IF=50mA
			1700			IFP=1A
Peak Wavelength	λp	930		955	nm	IF=50mA
Half Width	Δλ		40		nm	IF=50mA
Viewing Half Angle	θ1/2		±11		deg.	IF=50mA
Rise Time	tr		10		ns	IF=50mA
Fall Time	tf		15		ns	IF=50mA

‡ Radiated Power is measured by S3584-08.

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

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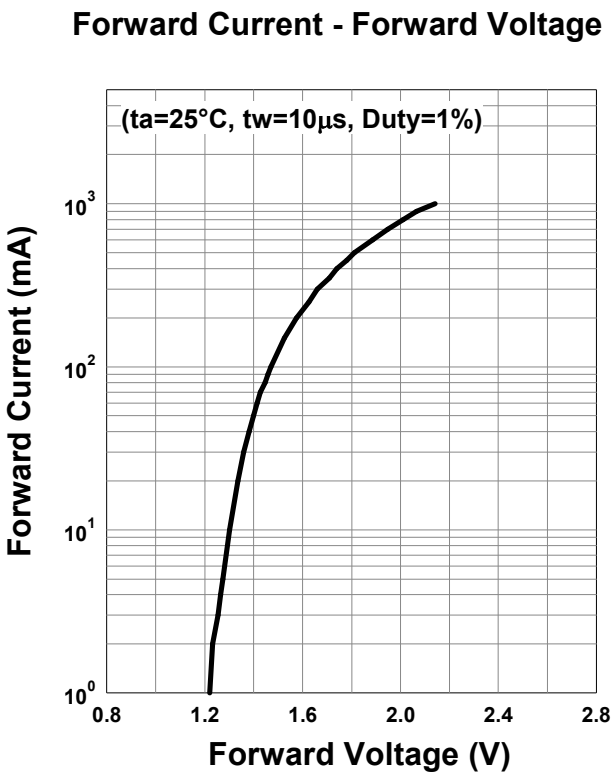
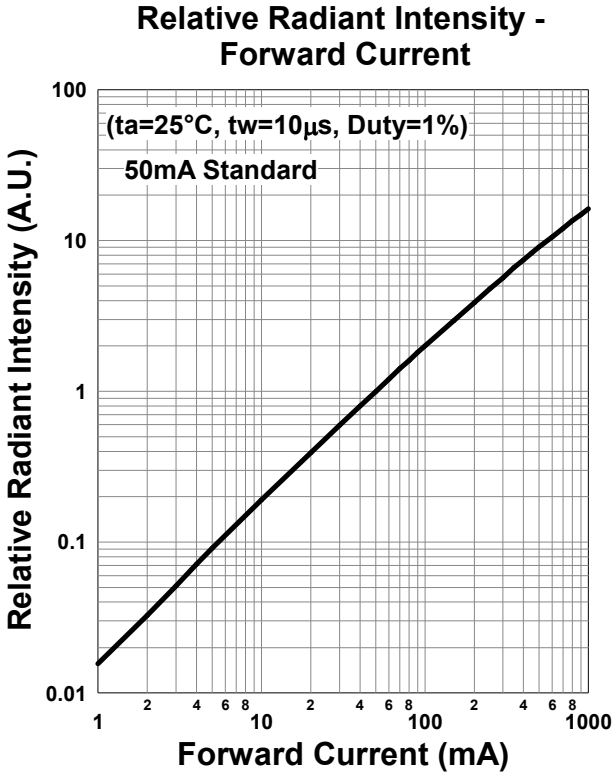
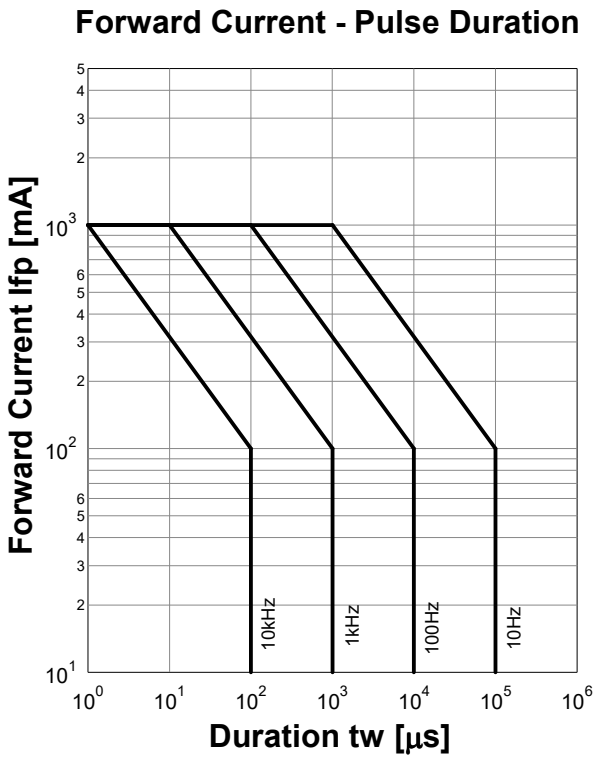
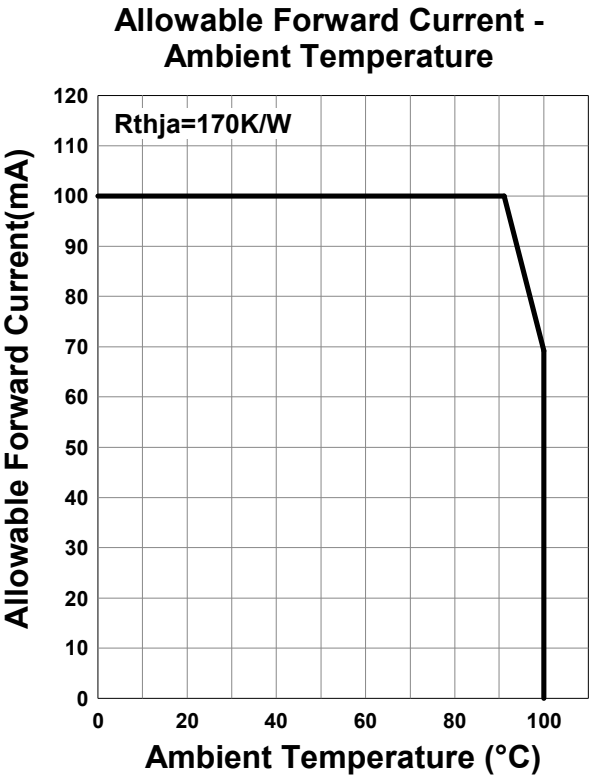
Typical Characteristic Curves

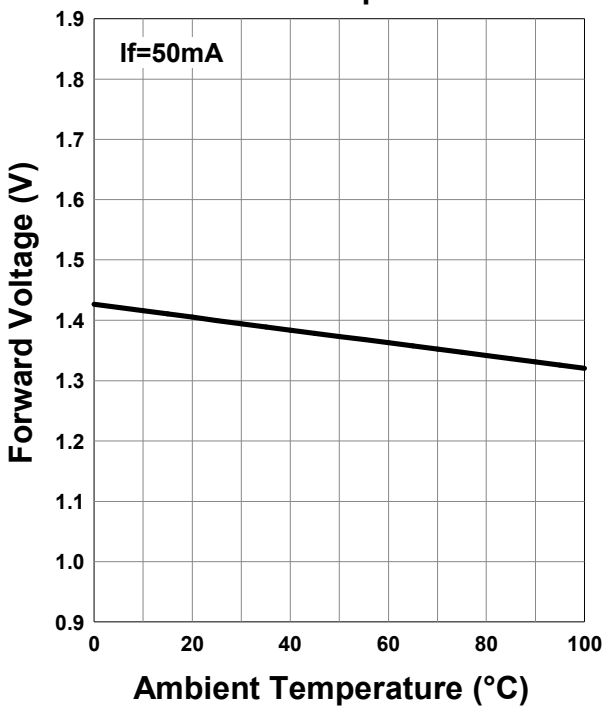




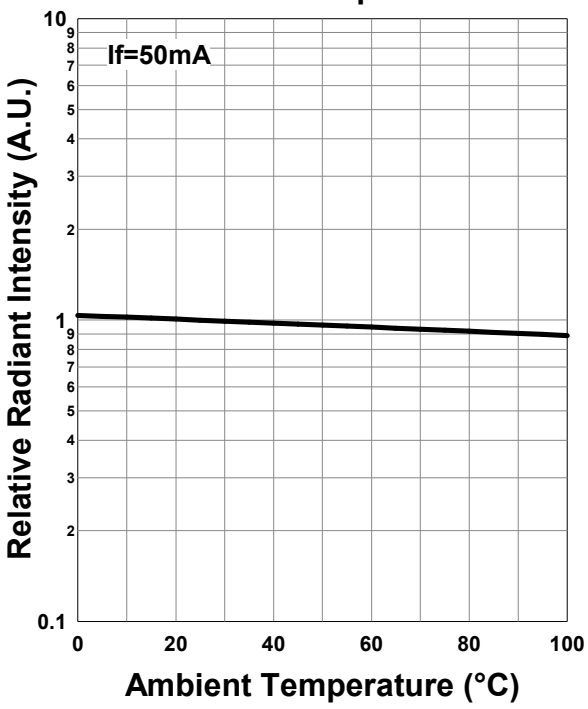




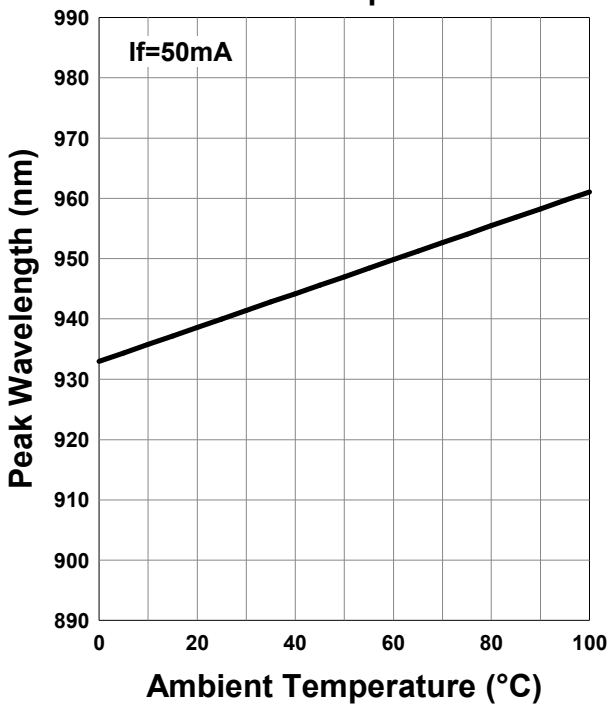
Forward Voltage - Ambient Temperture



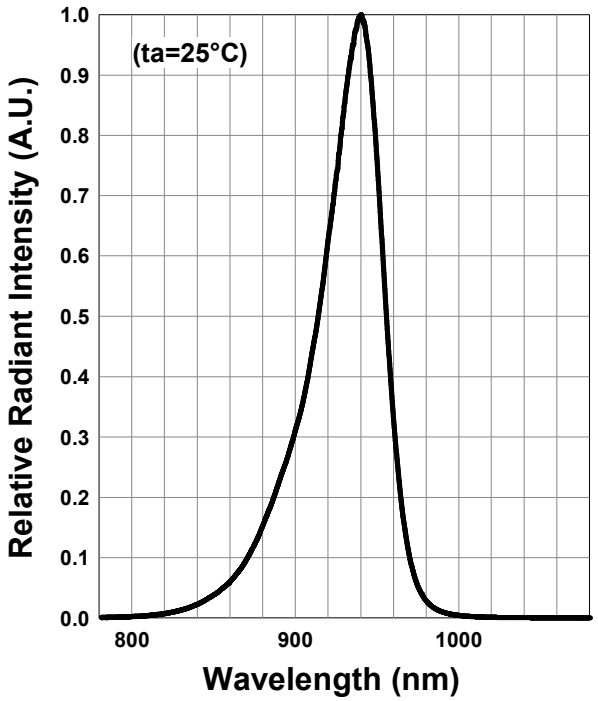
Relative Radiant Intensity - Ambient Temperature



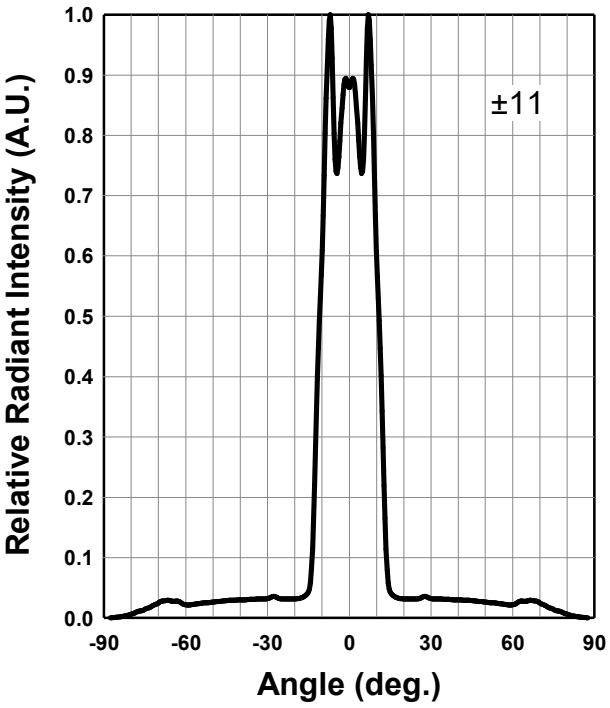
Peak Wavelength - Ambient Temperature



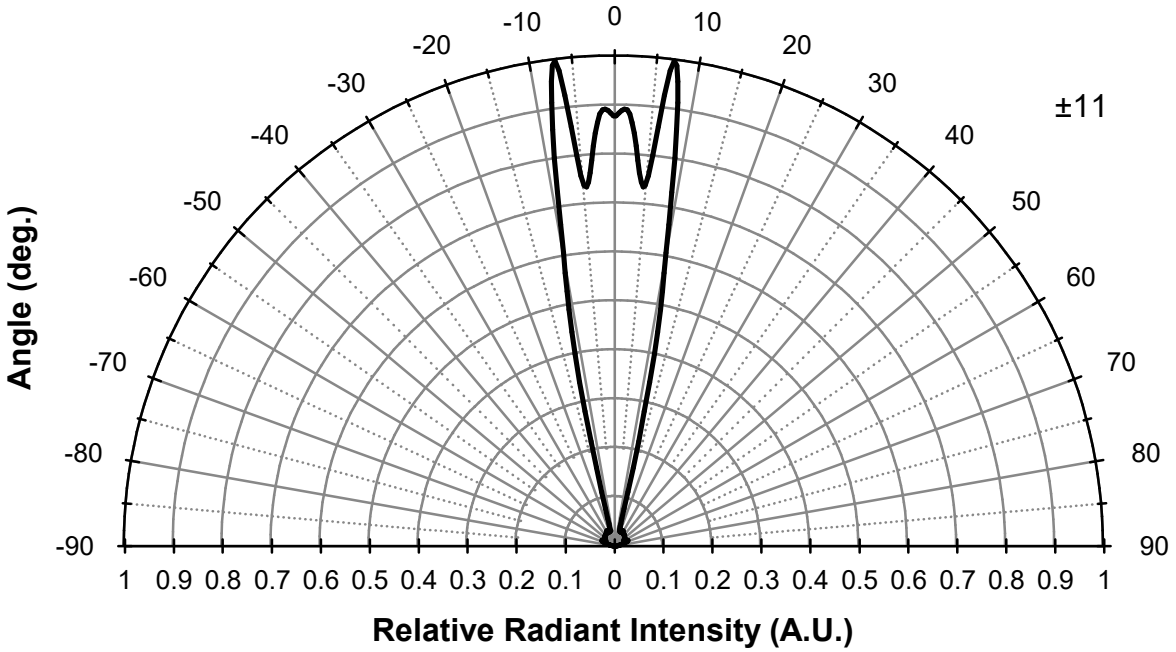
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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Disclaimer

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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.

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.

The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.

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