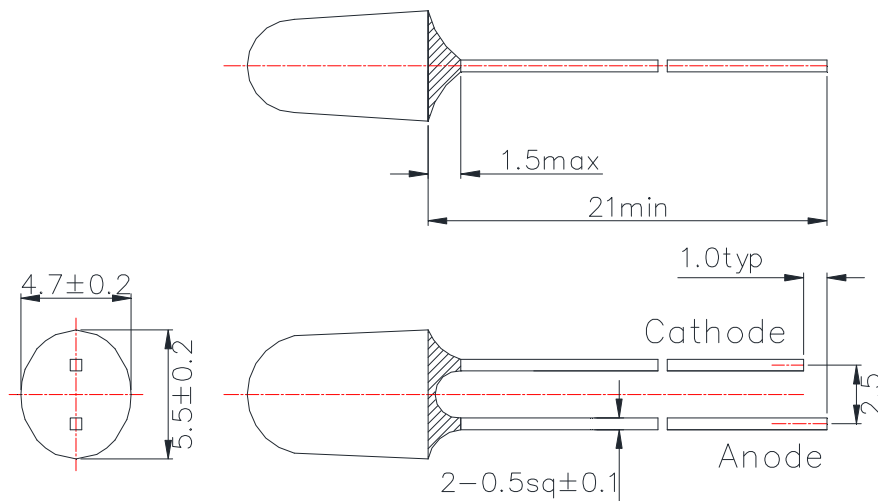


L780D-09

Infrared LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

- Chip Material : AlGaAs
- Chip Dimension : 350um * 350um
- Number of Chips : 1pce
- Peak Wavelength : 780nm typ.
- Package Type : .5mm clear oval-type molding
- Lead Frame : Soldered (Lead Free)
- Lens : Epoxy Resin

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	220	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	500	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthjs	300	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C

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

‡Soldering condition : Refer to technical support information on the website.

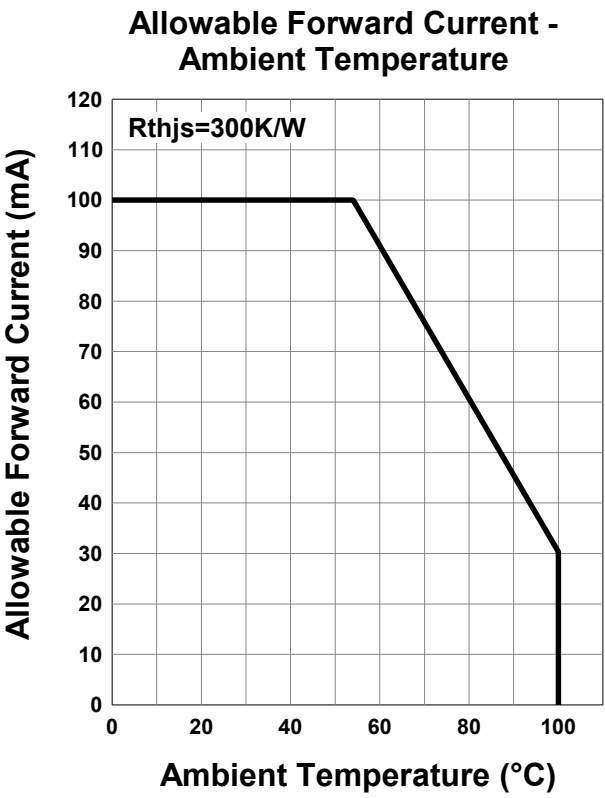
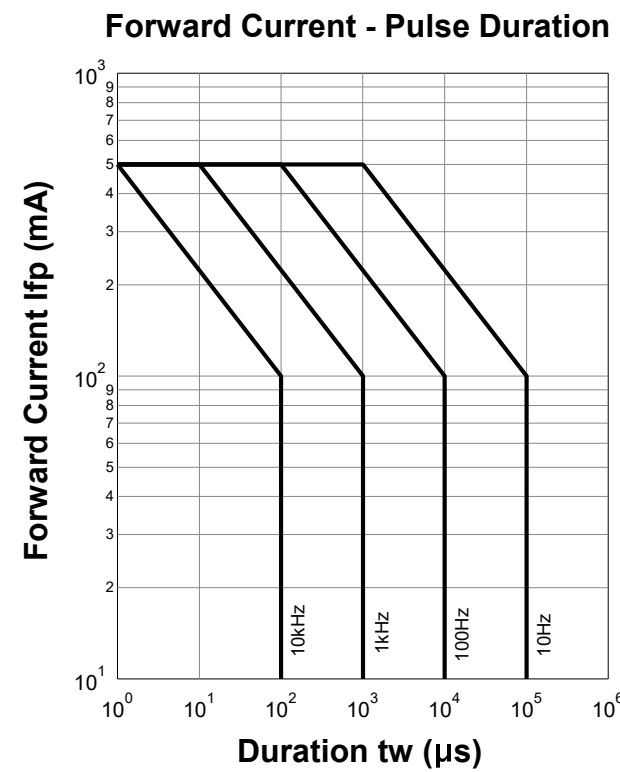
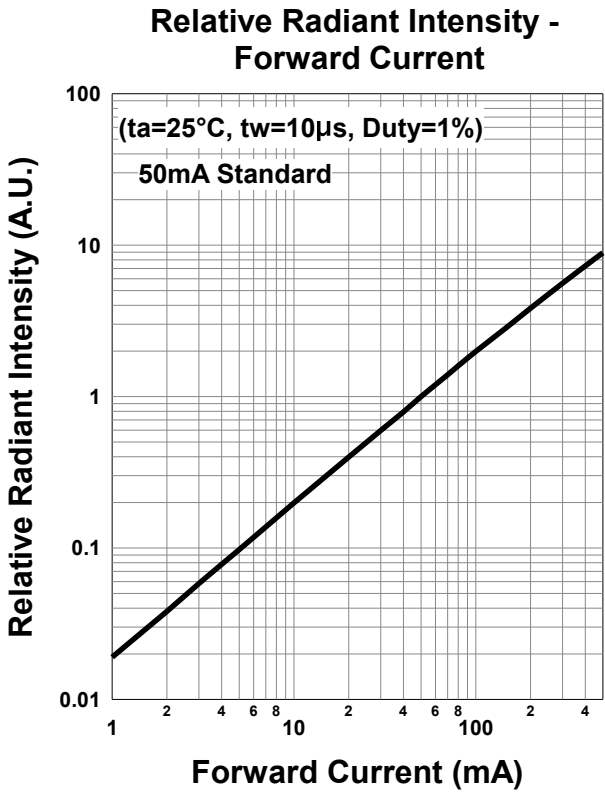
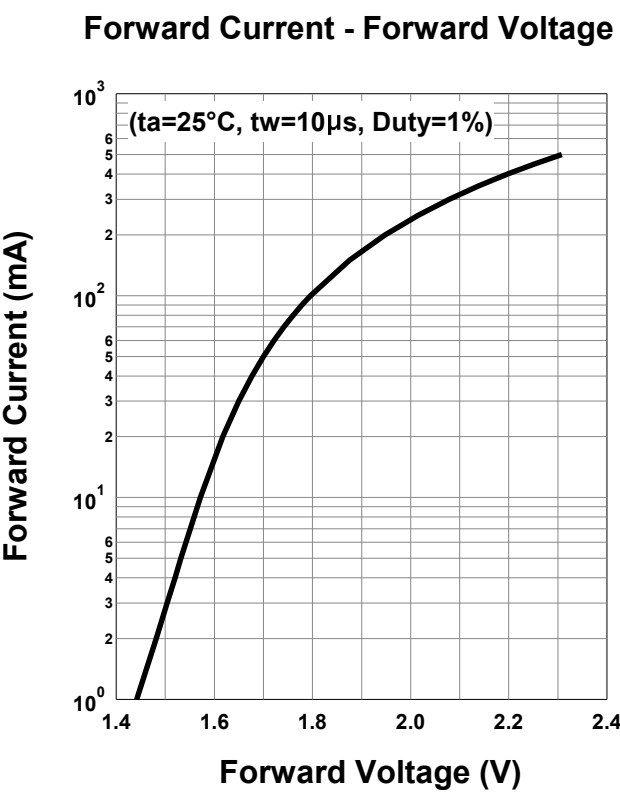
Optical and Electrical Characteristics (Tc=25°C) (*: 100% testing, **: reference value)

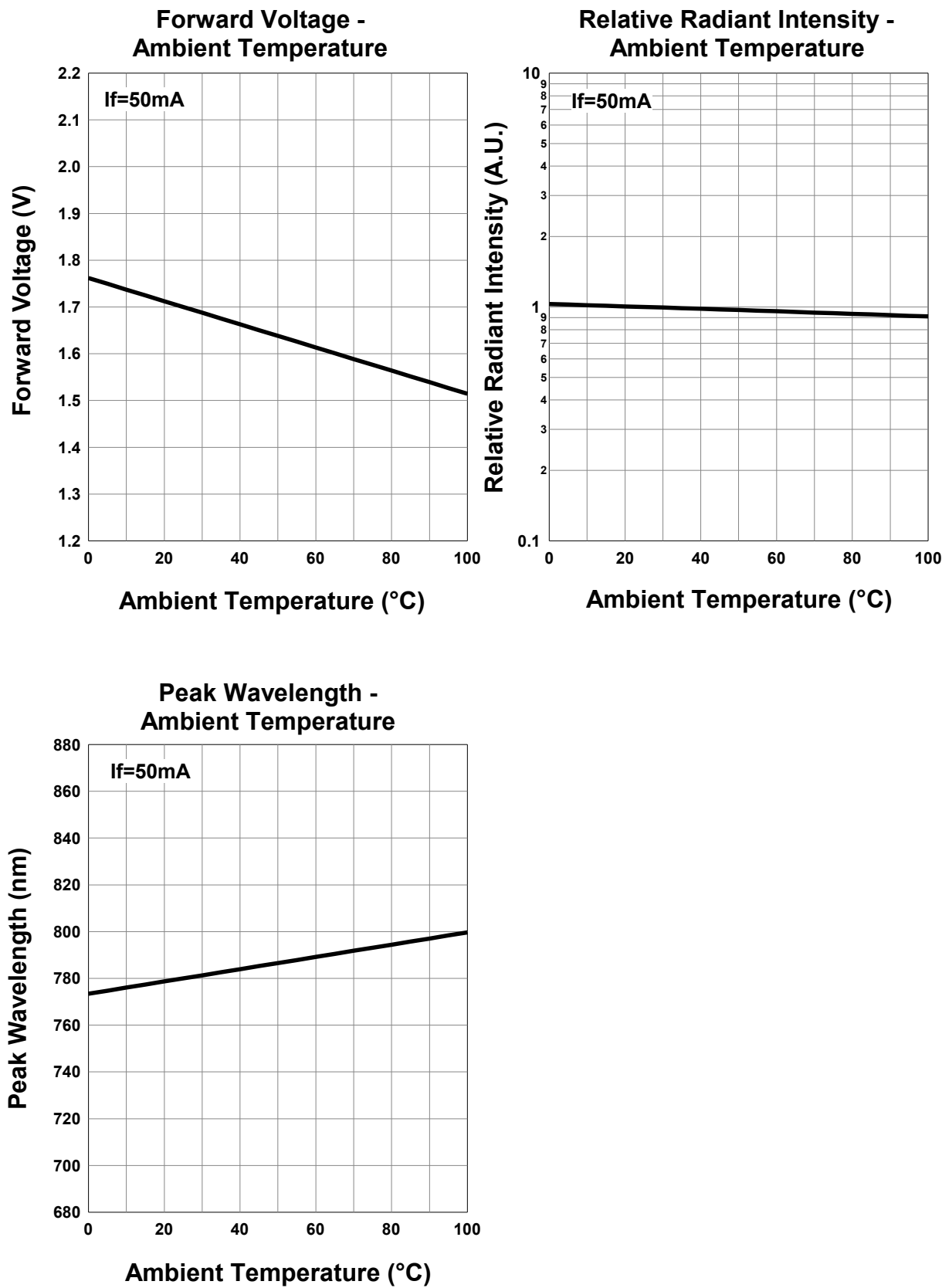
Parameter		Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage		VF		1.7	2.2	V	IF=50mA*
		VFP		2.3			IFP=500mA**
Reverse Current		IR			10	uA	VR=5V*
Total Radiated Power		PO	25	35		mW	IF=50mA*
				310			IFP=500mA**
Radiant Intensity		IE		44		mW/sr	IF=50mA**
				390			IFP=500mA**
Peak Wavelength		λp	770		790	nm	IF=50mA*
Half Width		Δλ		20		nm	IF=50mA**
Viewing Half Angle	Long	θ1/2		±26		deg.	IF=50mA**
	Short			±16			
Rise Time		tr		50		ns	IF=50mA**
Fall Time		tf		25		ns	IF=50mA**

‡ Radiated Power is measured by S3584-08.

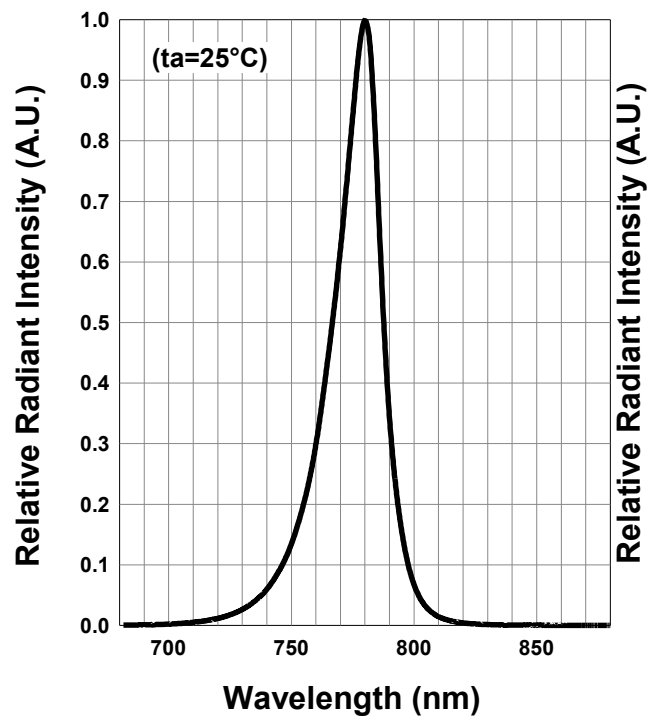
‡ Radiant Intensity is measured by CIE127-2007 Condition B. (used the updated measurement jig in 2024)

Typical Characteristic Curves

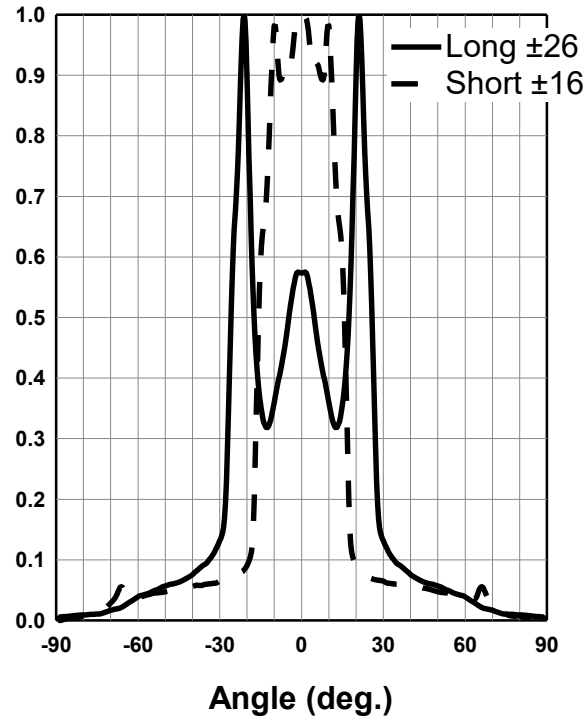




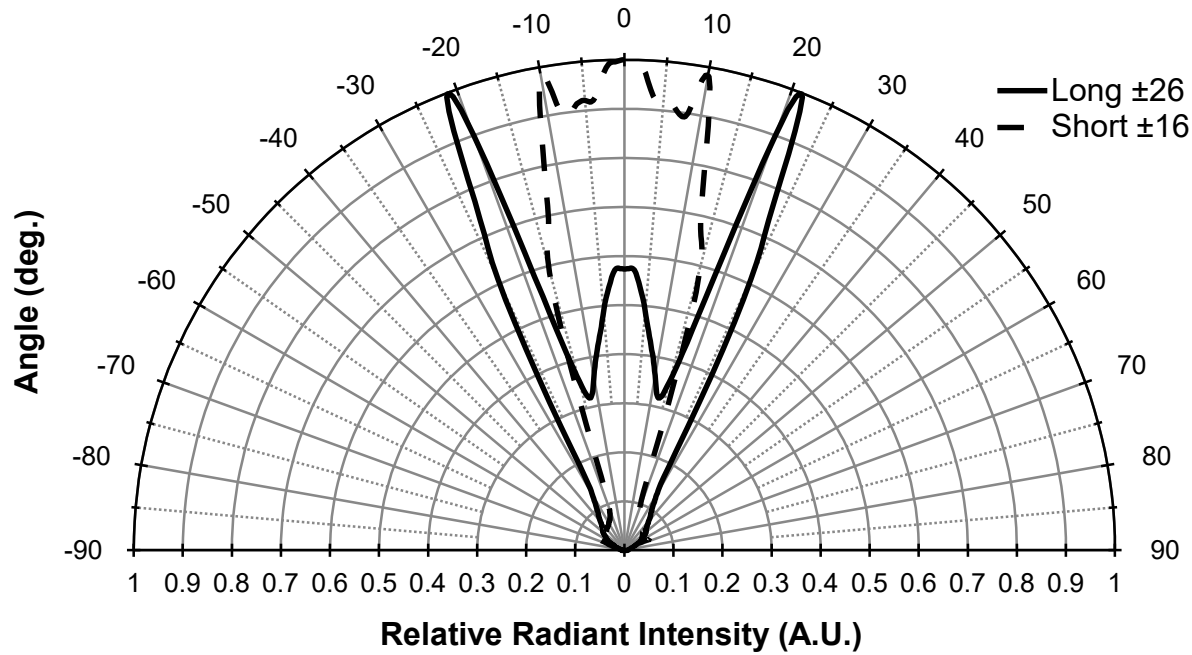
Relative Spectral Emission



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.

Technical Support Information

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

