Data Sheet

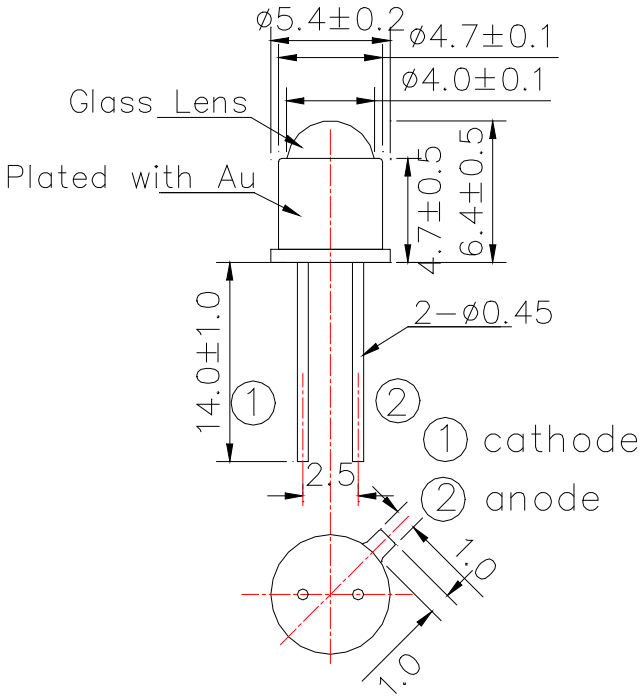
PRELIMINARY

L1200S-35M32 rev. B

Infrared LED Lamp

USHIO

Outline and Internal Circuit



(Unit : mm)

Features

- Non-hermetic package
- Chip Material : InGaAsP
- Chip Dimension : 300um *300um
- Number of Chips : 1pce
- Peak Wavelength : 1200nm typ.
- Stem: TO-18 type
- Lens : Glass Ball Lens
- CAP : Gold plated

Application

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	130	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	260	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	250	°C

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

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C and is allowed in the area apart 3mm from the bottom of the lamp.

Optical and Electrical Characteristics (Tc=25°C)

(*: 100% testing, **: reference value)

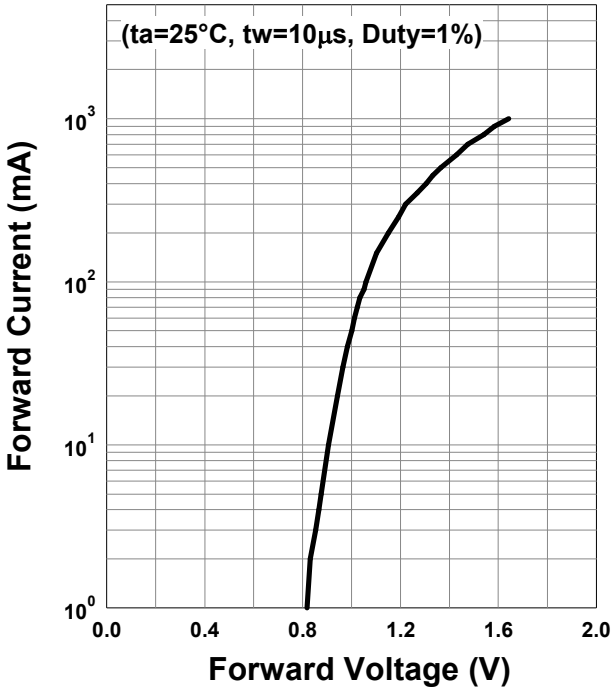
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.0	1.3	V	IF=50mA*
	VFP		1.6			IFP=1000mA**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO		8.5		mW	IF=50mA*
			64			IFP=1000mA**
Radiant Intensity	IE		52		mW/sr	IF=50mA**
			390			IFP=1000mA**
Peak Wavelength	λp	1150		1250	nm	IF=50mA*
Half Width	Δλ		90		nm	IF=50mA**
Viewing Half Angle	θ1/2		±9		deg.	IF=50mA**
Rise Time	tr		30		ns	IF=50mA**
Fall Time	tf		70		ns	IF=50mA**

‡ Radiated Power is measured by G8370-85.

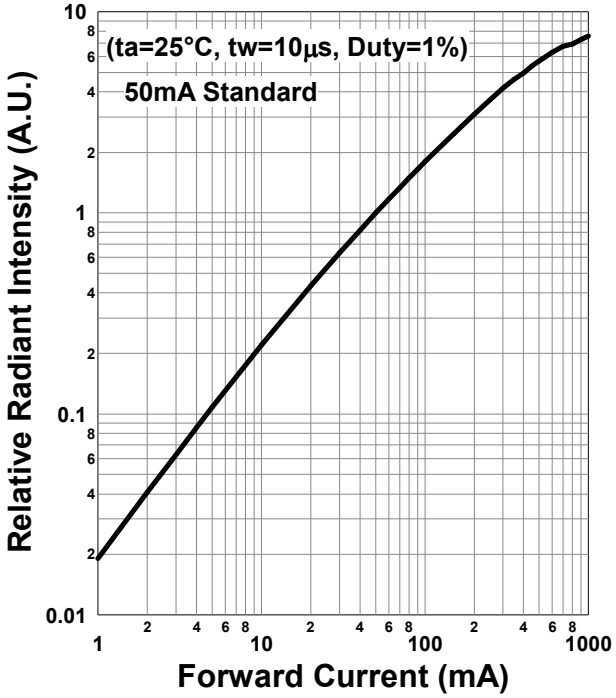
‡ Radiant Intensity is measured by Ando Optical Multi Meter AQ2140 & AQ2742.

Typical Characteristic Curves

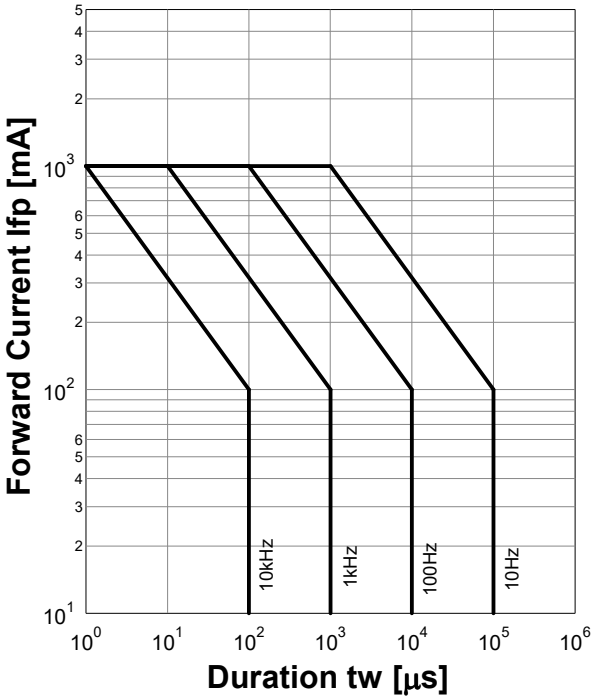
Forward Current - Forward Voltage



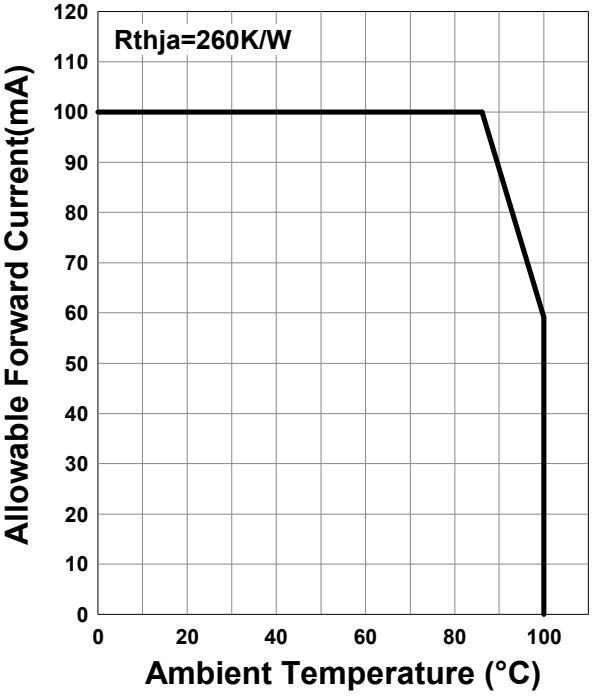
Relative Radiant Intensity - Forward Current



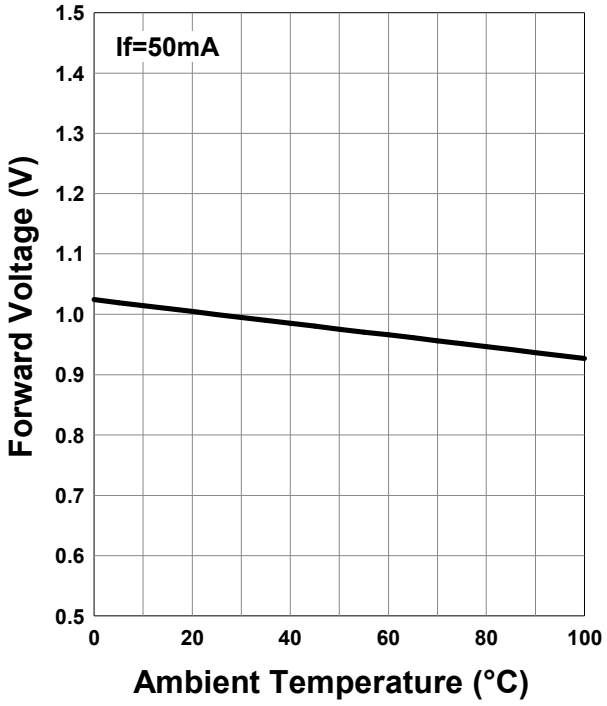
Forward Current - Pulse Duration



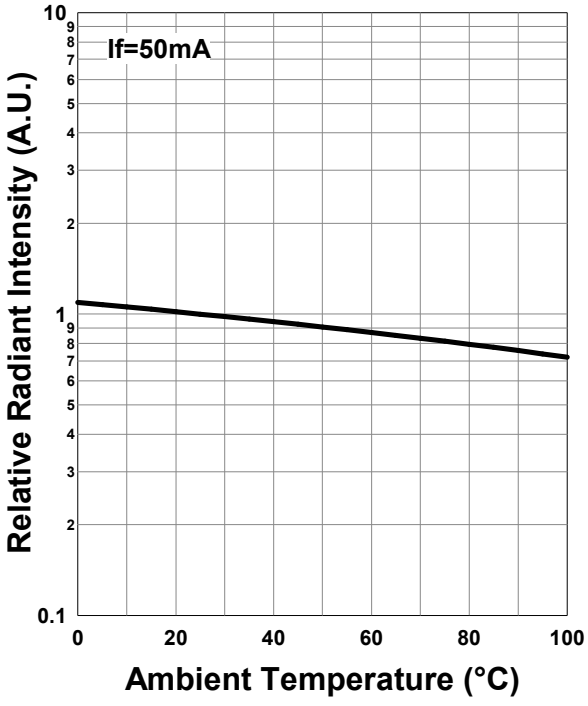
Allowable Forward Current - Ambient Temperature



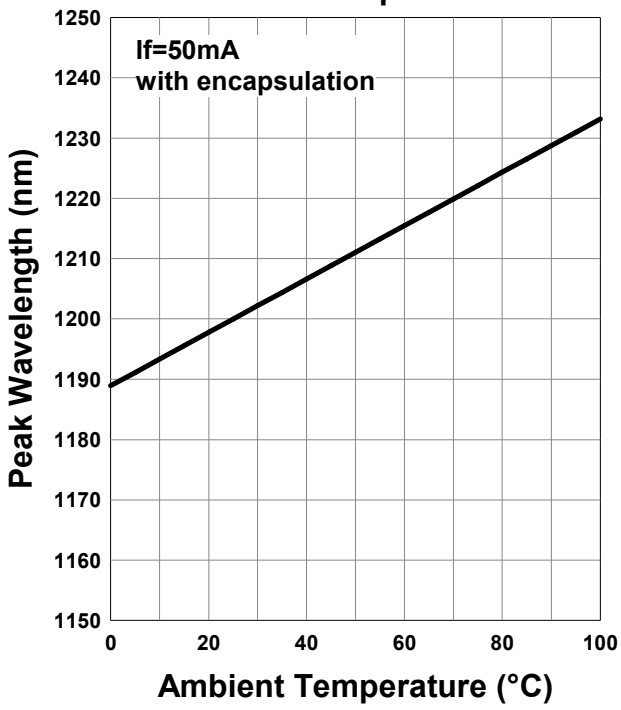
Forward Voltage - Ambient Temperture



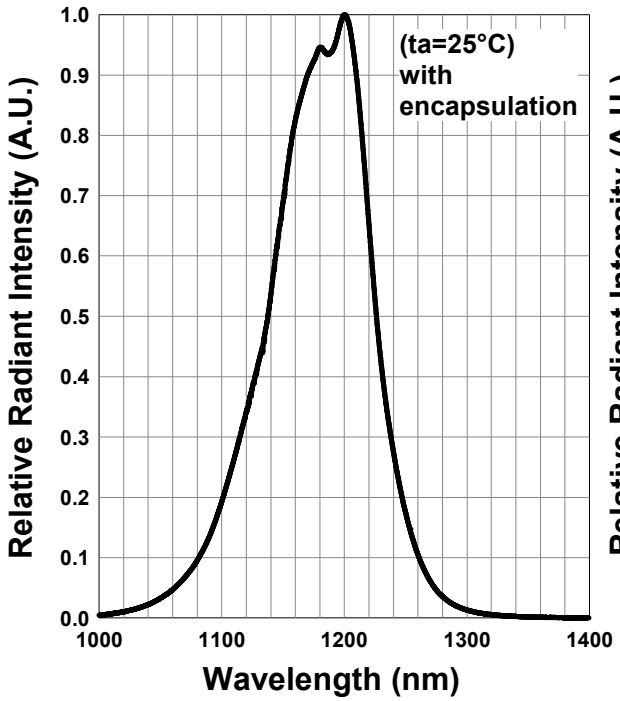
Relative Radiant Intensity - Ambient Temperature



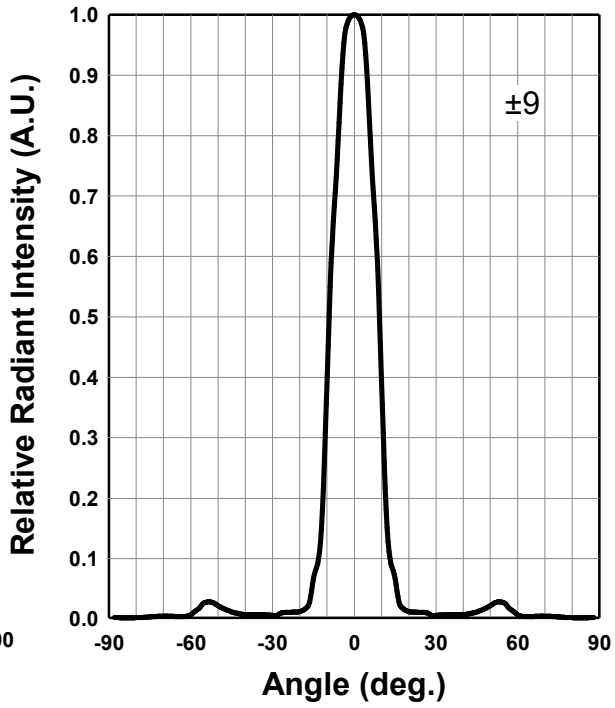
Peak Wavelength - Ambient Temperature



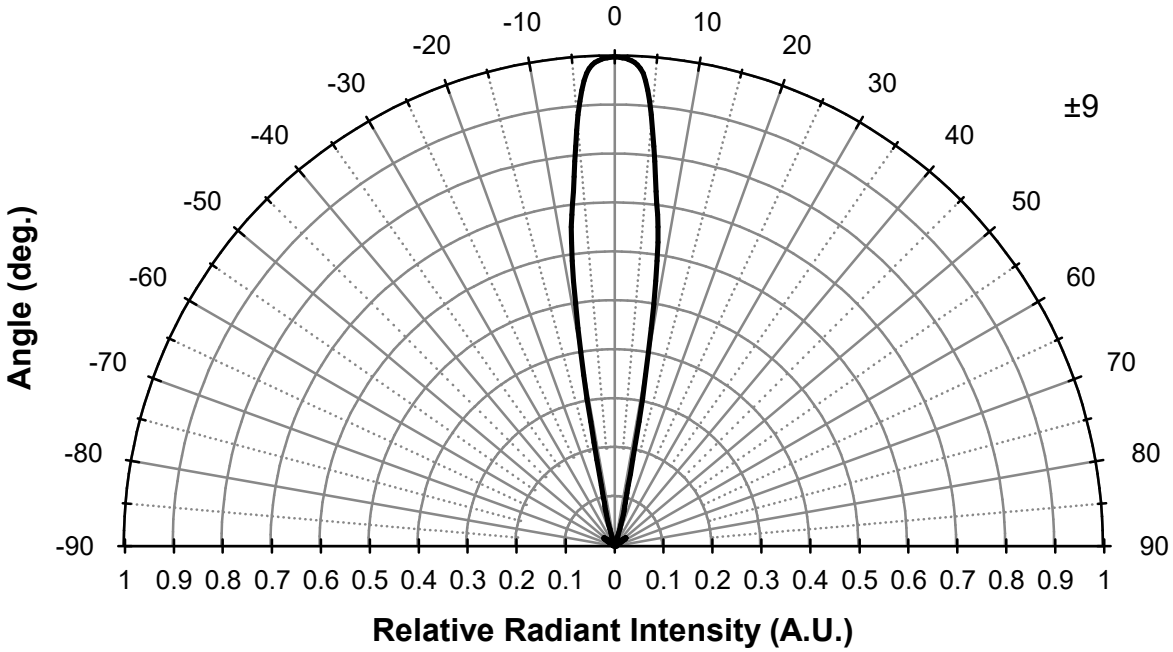
Relative Spectral Emission



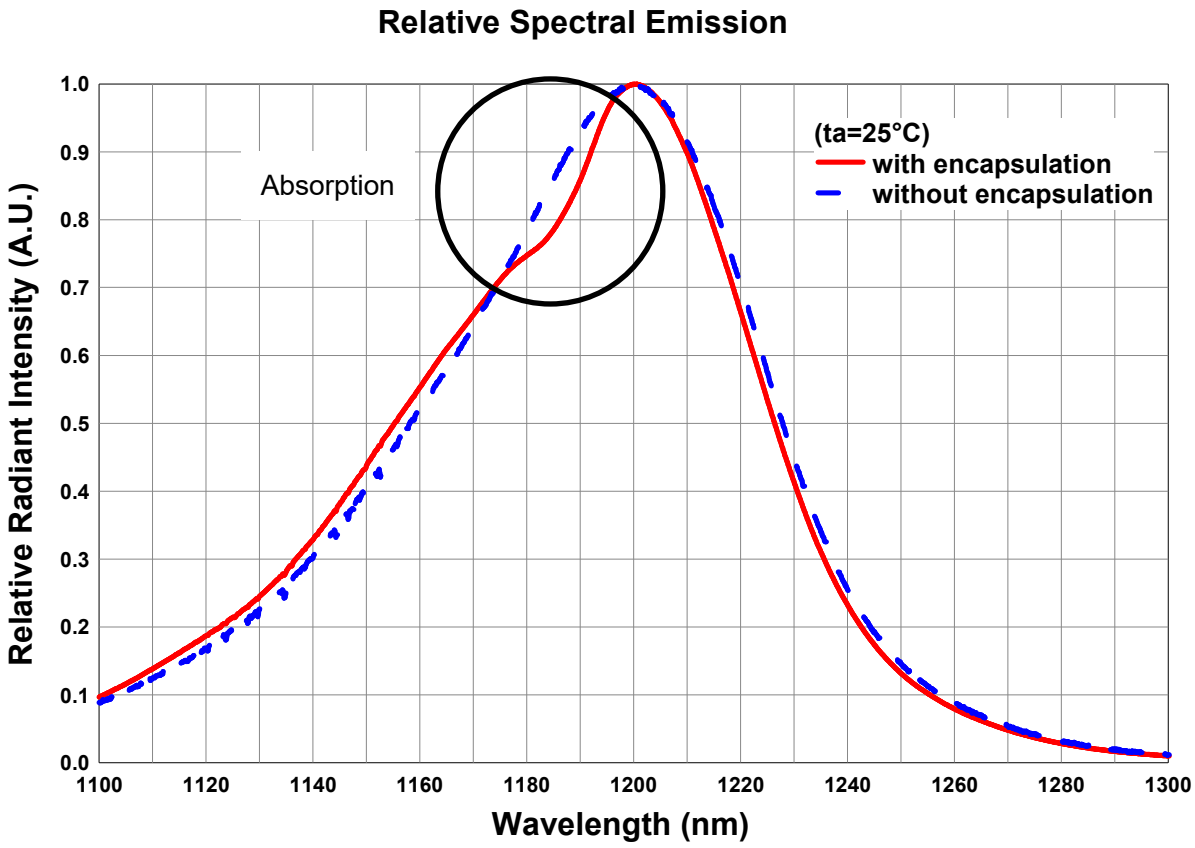
Radiation Characteristics



Radiation Characteristics



*The absorption of lens resin changes spectral emission.



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.

*Effective July 2016, Ushio Epitex Inc. is now USHIO OPTO SEMICONDUCTORS, INC.