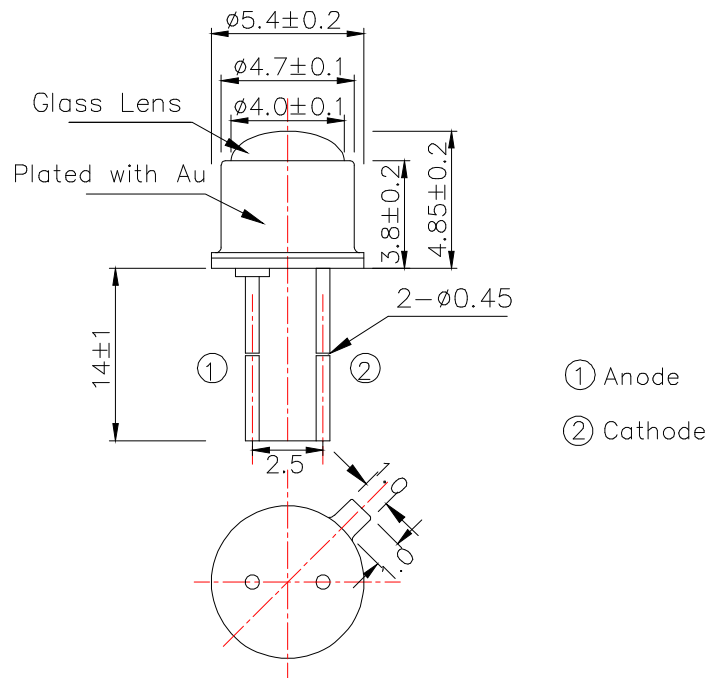


PRELIMINARY

L1 450D-35K42

Stem Type LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

- Non-hermetic package
- Chip Material : InGaAsP
- Chip Dimension : 350um * 350um
- Number of Chips : 1pce
- Peak Wavelength : 1450nm typ.
- Stem: TO-46 type
- Lens : Unspherical Glass
- 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	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)

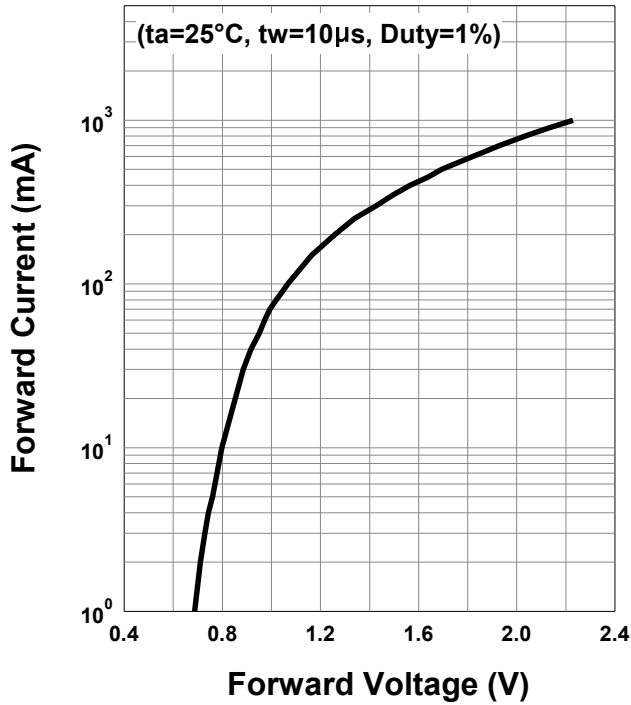
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		0.95	1.3	V	IF=50mA*
	VFP		2.2			IFP=1A**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	2.2	3.3		mW	IF=50mA*
			17			IFP=1A**
Radiant Intensity	IE		58		mW/sr	IF=50mA**
			310			IFP=1A**
Peak Wavelength	λ_p	1420		1480	nm	IF=50mA*
Half Width	$\Delta\lambda$		110		nm	IF=50mA**
Viewing Half Angle	$\theta_{1/2}$		± 6		deg.	IF=50mA**
Rise Time	tr		60		ns	IF=50mA**
Fall Time	tf		30		ns	IF=50mA**

‡ Radiated Power is measured by G8370-85.

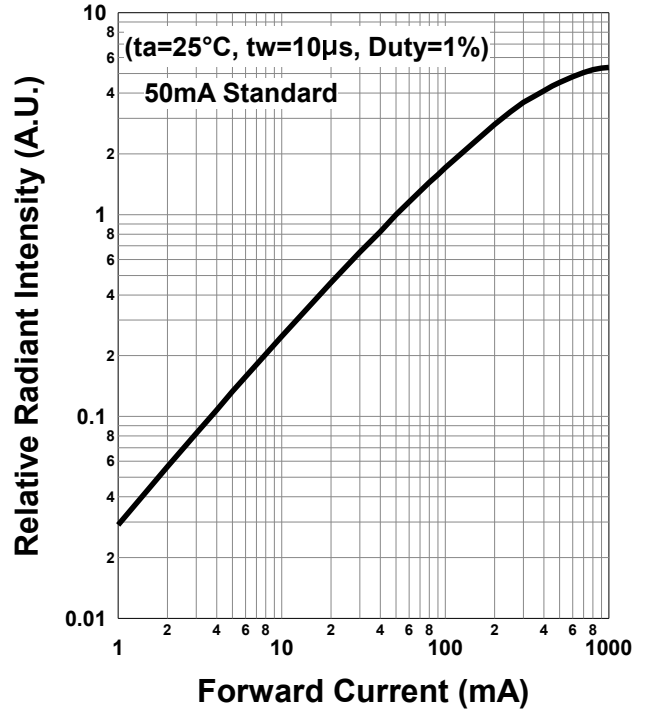
‡ Radiant Intensity is measured by ANDO Optical Multi Meter AQ2140 & AQ2743.

Typical Characteristic Curves

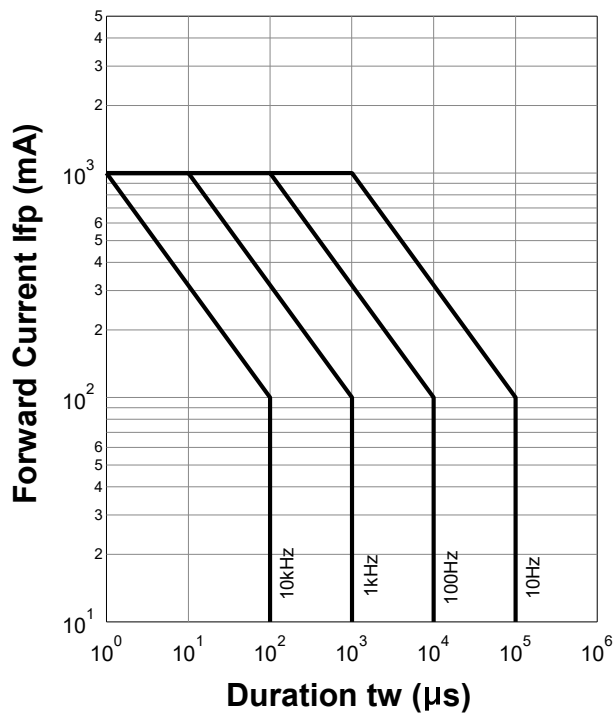
Forward Current - Forward Voltage



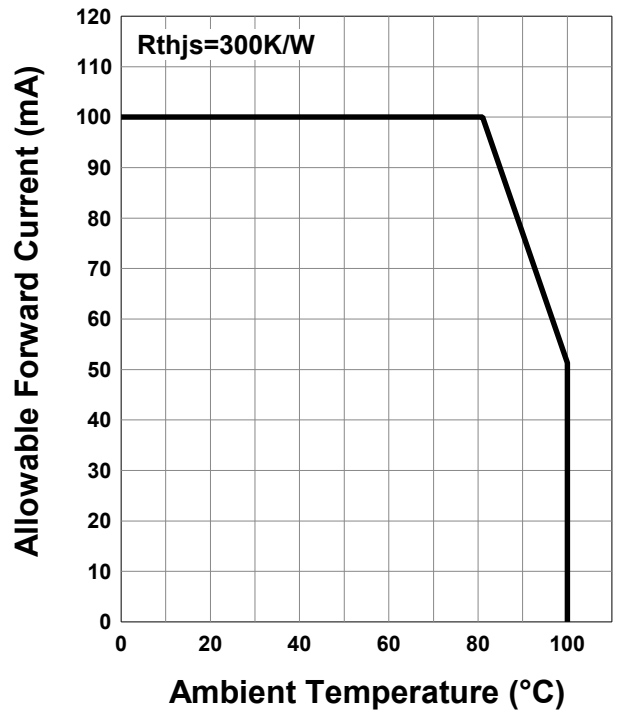
Relative Radiant Intensity - Forward Current



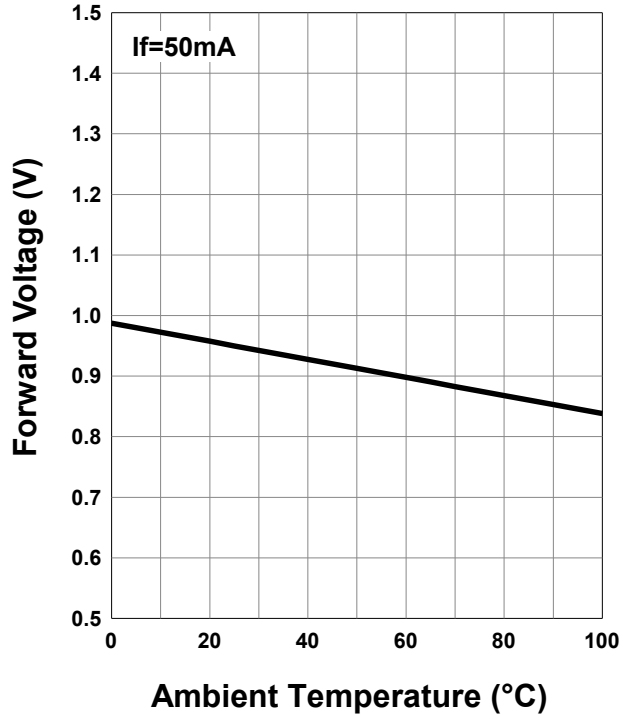
Forward Current - Pulse Duration



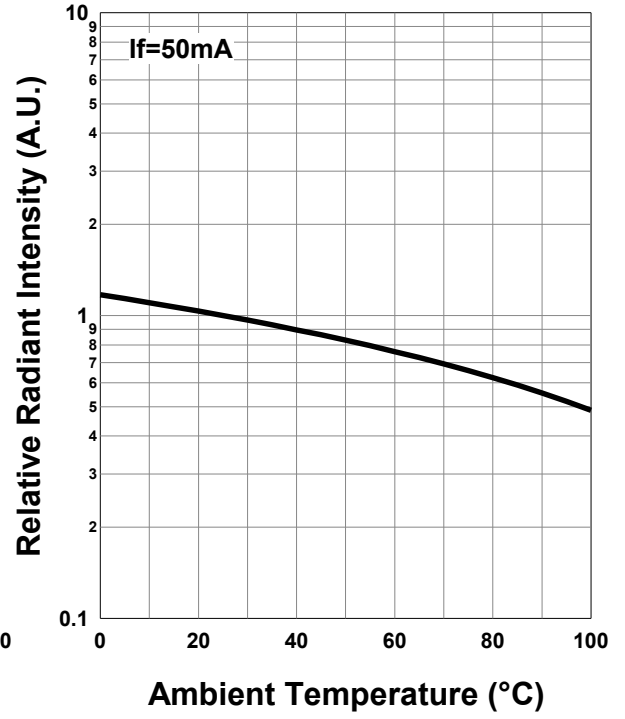
Allowable Forward Current - Ambient Temperature



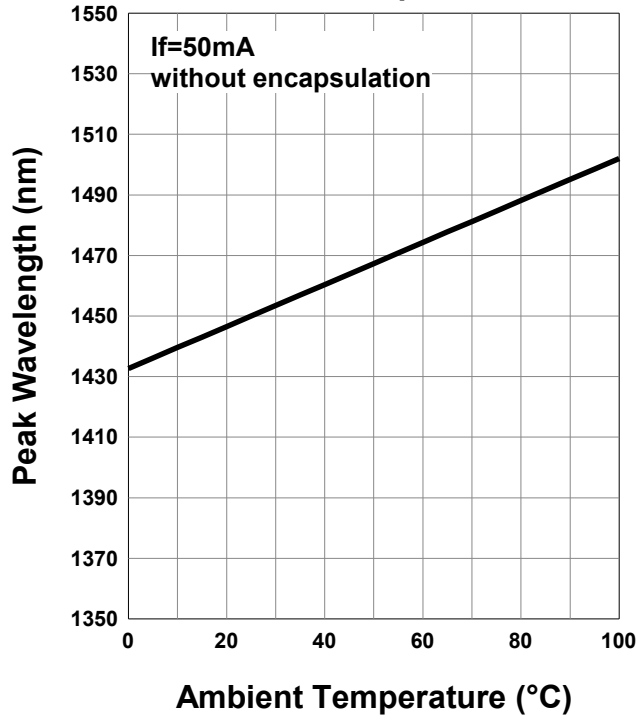
Forward Voltage - Ambient Temperature



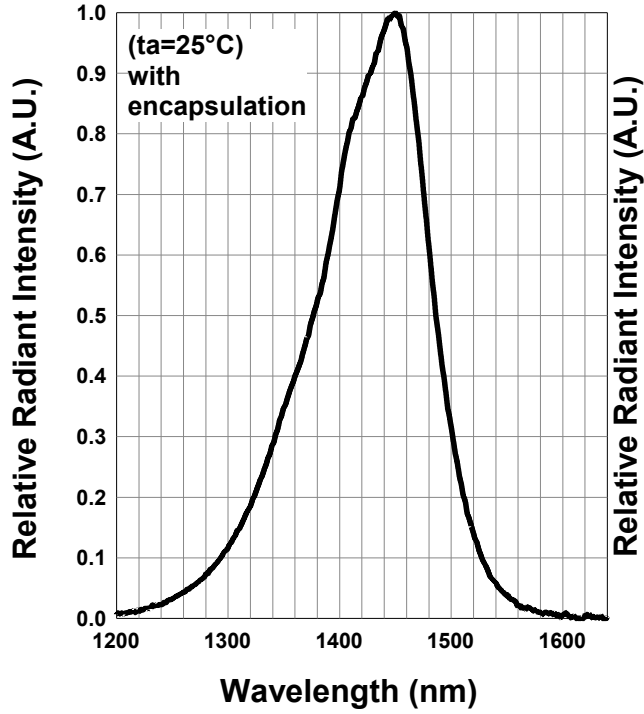
Relative Radiant Intensity - Ambient Temperature



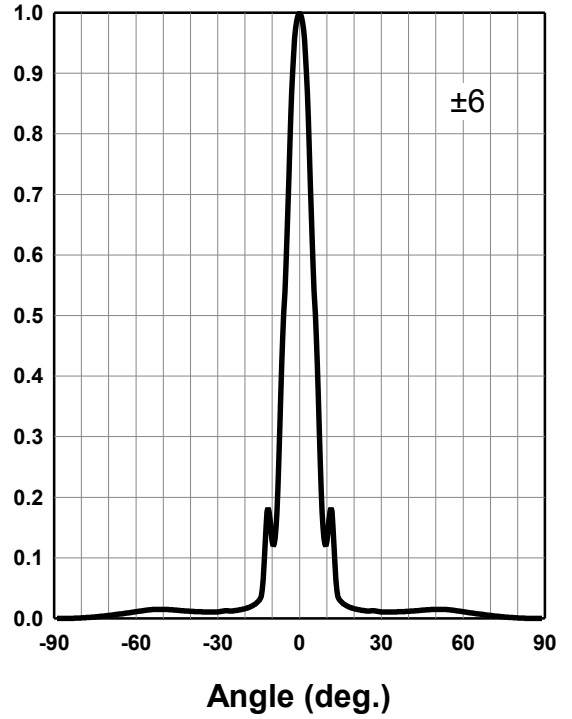
Peak Wavelength - Ambient Temperature



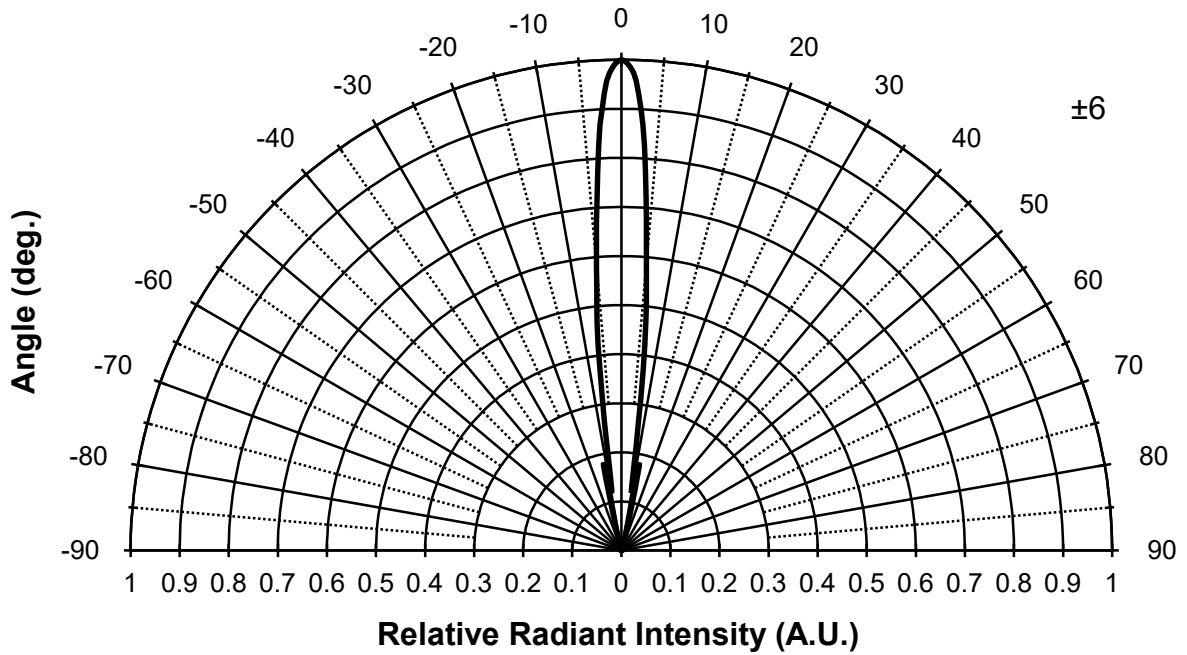
Relative Spectral Emission



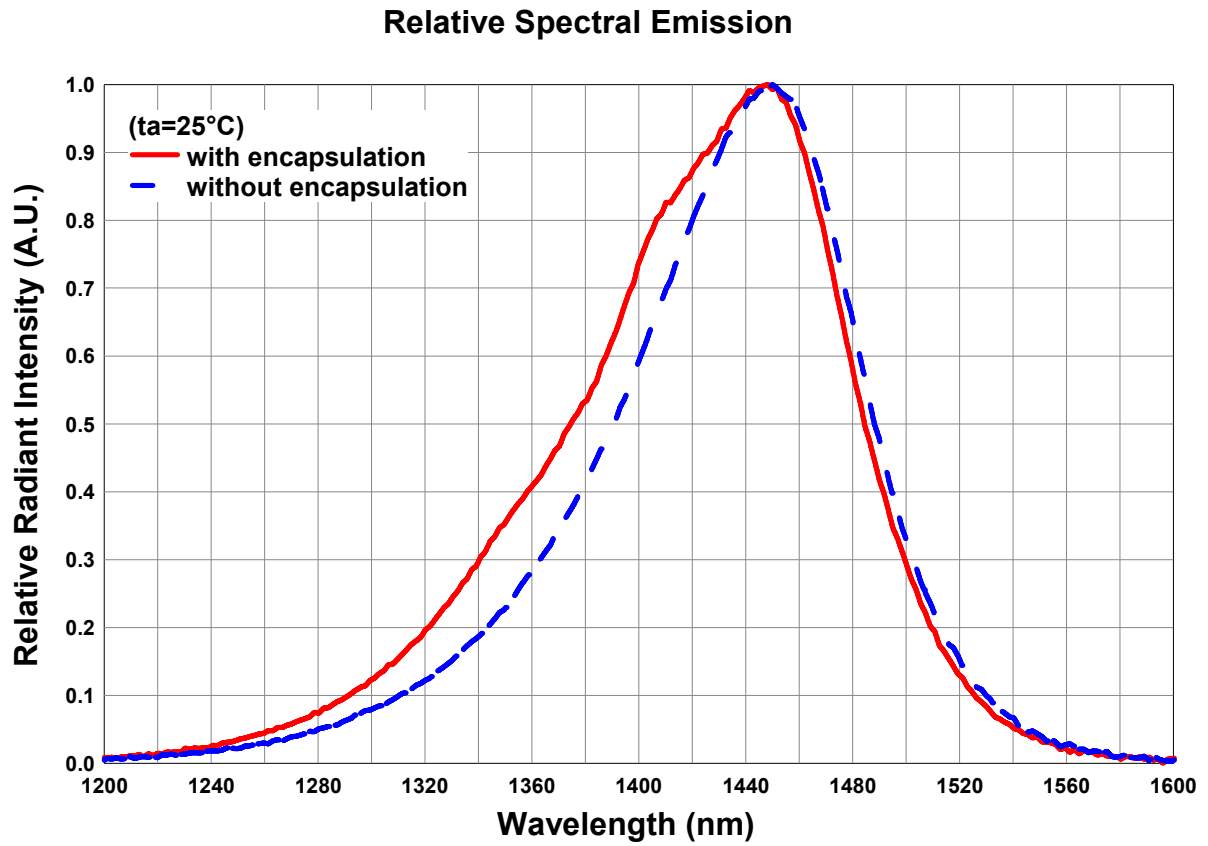
Radiation Characteristics



Radiation Characteristics



*The absorption of lens resin changes spectral emission.



Disclaimer

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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.

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Technical Support Information

<https://www.ushio.co.jp/en/led/technology/index.html>



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