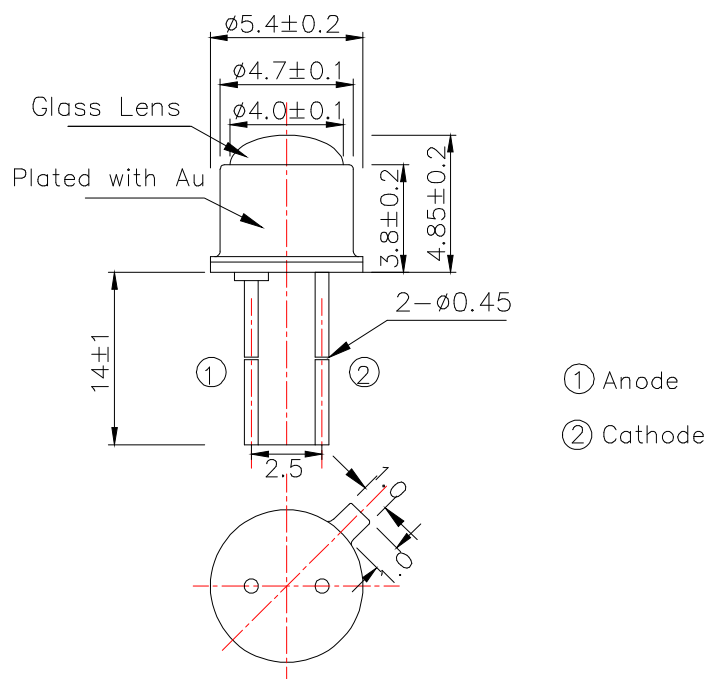


# L1 450D-35K42

## 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

**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)

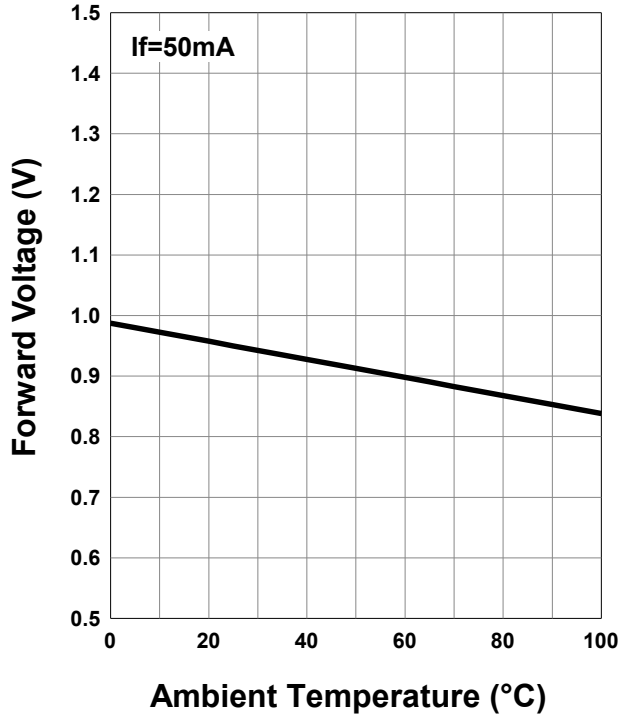
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		0.95	1.3	V	IF=50mA*
	VFP		2.2			IFP=1A**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	2.2	3.3		mW	IF=50mA*
			17			IFP=1A**
Radiant Intensity	IE		58		mW/sr	IF=50mA**
			310			IFP=1A**
Peak Wavelength	$\lambda_p$	1420		1480	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.

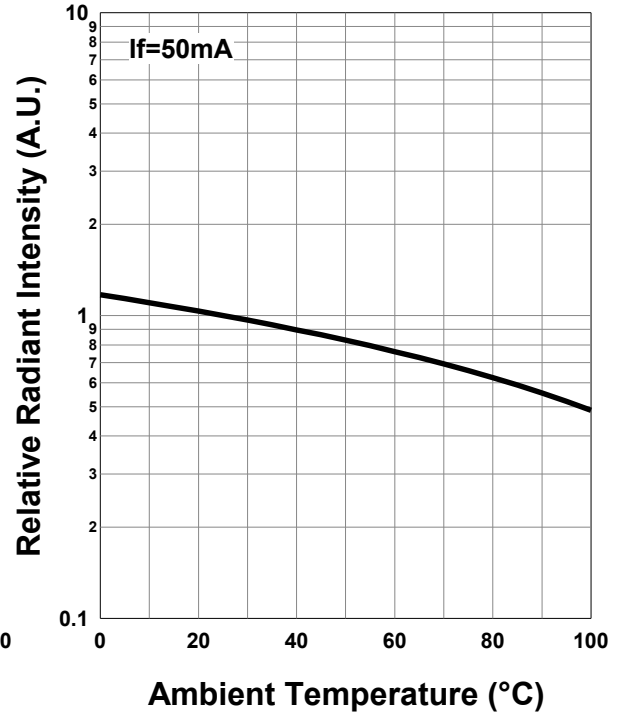
‡ Radiant Intensity is measured by ANDO Optical Multi Meter AQ2140 & AQ2743.



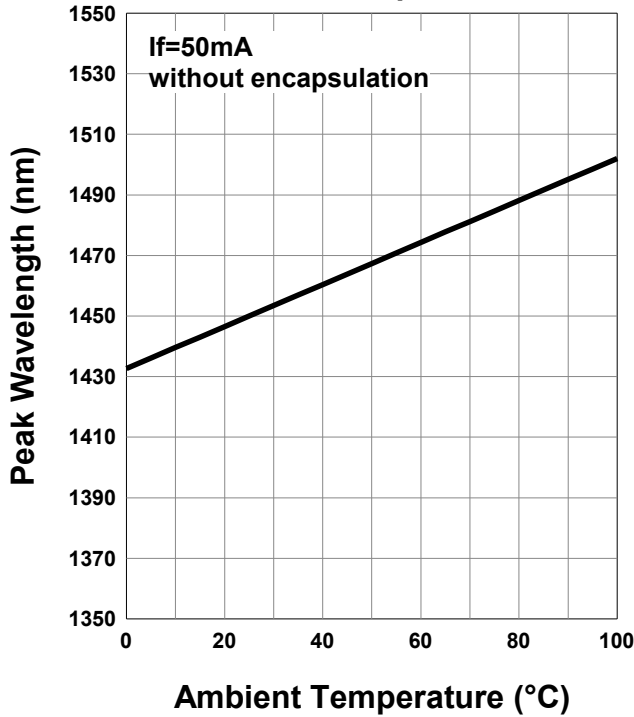
**Forward Voltage - Ambient Temperature**



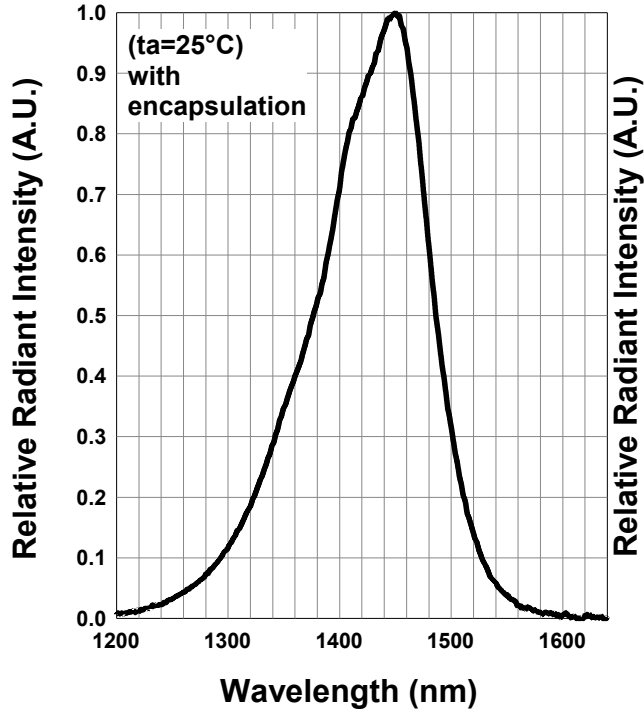
**Relative Radiant Intensity - Ambient Temperature**



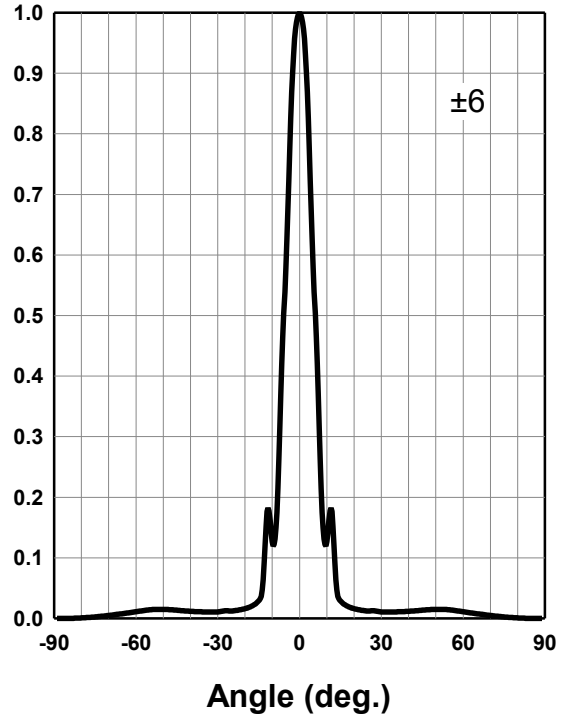
**Peak Wavelength - Ambient Temperature**



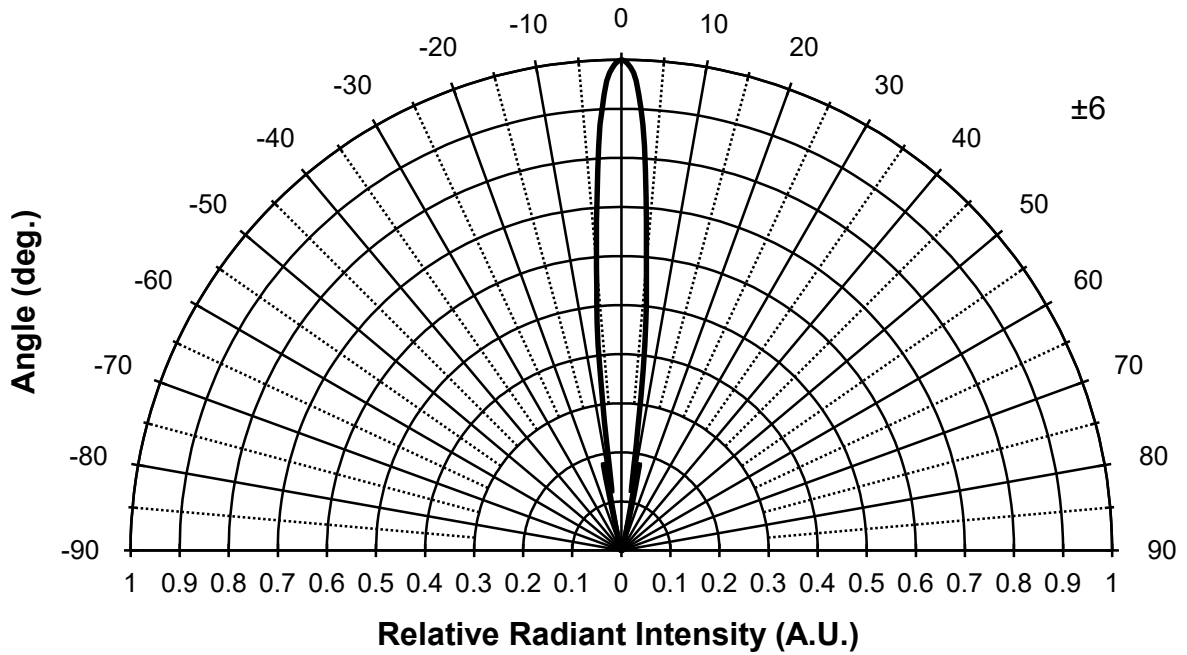
Relative Spectral Emission



Radiation Characteristics

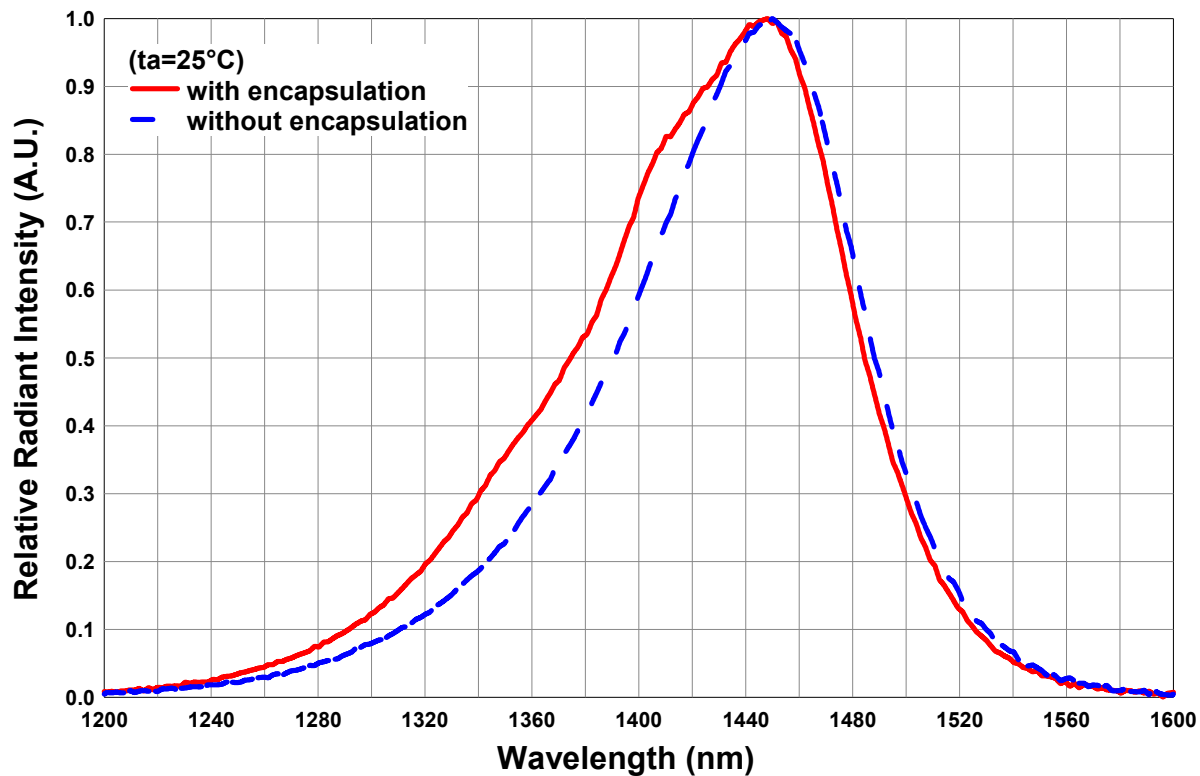


Radiation Characteristics



\*The absorption of lens resin changes spectral emission.

Relative 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.

