

L1450-03

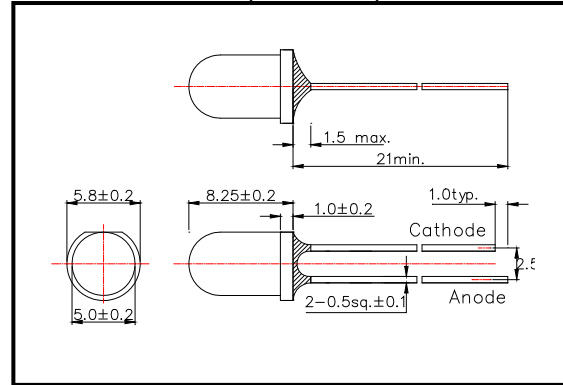
Infrared LED Lamp

L1450-03 is an InGaAsP LED mounted on a lead frame with a clear epoxy lens. On forward bias, it emits a spectral band of radiation, which peaks at 1450nm.

◆ Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L1450-03
3) Chip	
(1) Chip Material	InGaAsP
(2) Peak Wavelength	1450nm typ.
4) Package	
(1) Type	Φ5mm clear molding
(2) Epoxy Resin	Epoxy Resin
(3) Lead Frame	Soldered

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings [Ta=25°C]

Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	P _D	130	mW
Forward Current	I _F	100	mA
Pulse Forward Current	I _{FP}	500	mA
Reverse Voltage	V _R	5	V
Thermal Resistance	R _{thja}	250	K/W
Junction Temperature	T _j	100	°C
Operating Temperature	T _{OPR}	-40 ~ +85	°C
Storage Temperature	T _{STG}	-40 ~ +100	°C
Soldering Temperature	T _{SOL}	265	°C

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

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

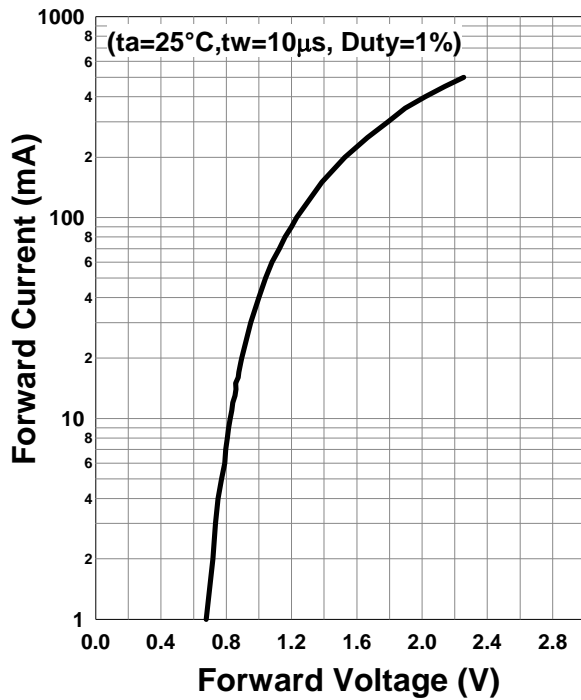
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.0	1.3	V
	V _{FP}	I _{FP} =500mA		2.3		
Radiated Power	P _O	I _F =50mA		3		mW
		I _{FP} =500mA		12		
Radiant Intensity	I _E	I _F =50mA		27		mW/sr
		I _{FP} =500mA		108		
Peak Wavelength	λ _P	I _F =50mA	1400	1450	1500	nm
Half Width	Δλ	I _F =50mA		110		nm
Viewing Half Angle	θ 1/2	I _F =50mA		±12		deg.

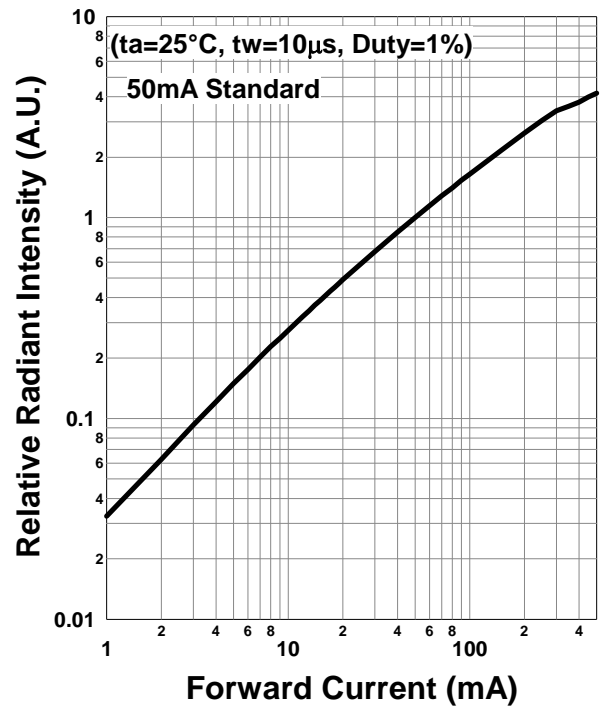
‡Radiated Power is measured by G8370-85.

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

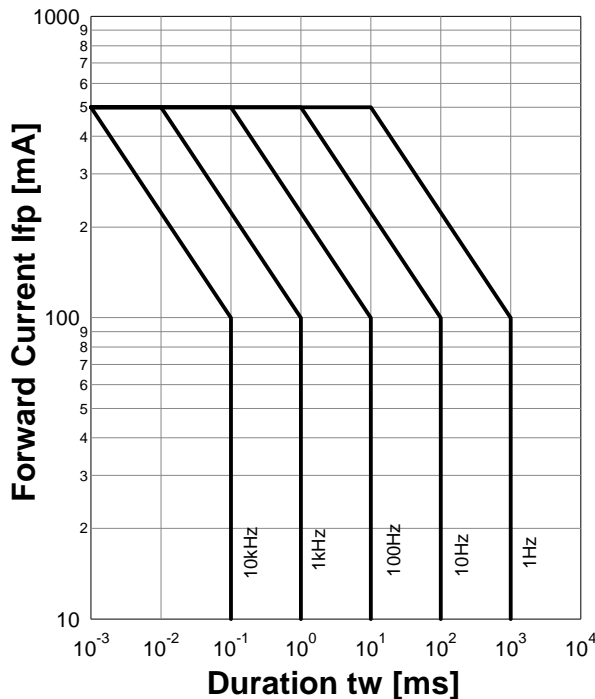
Forward Current - Forward Voltage



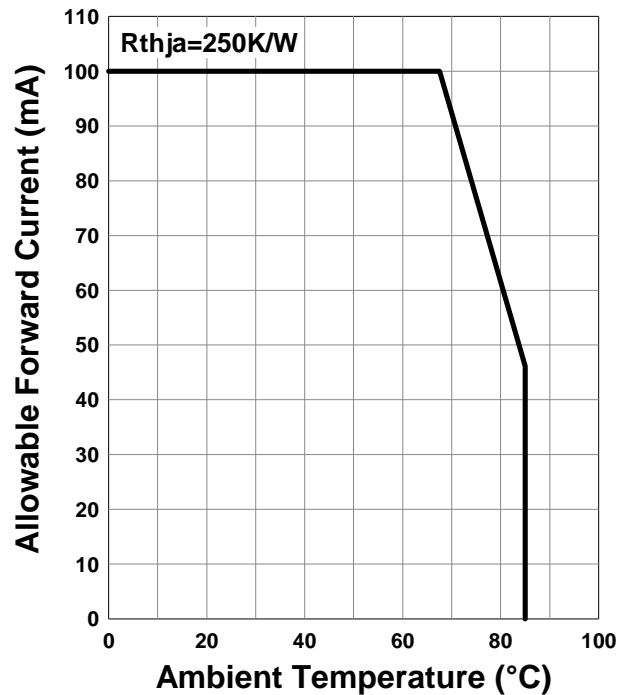
Relative Radiant Intensity - Forward Current



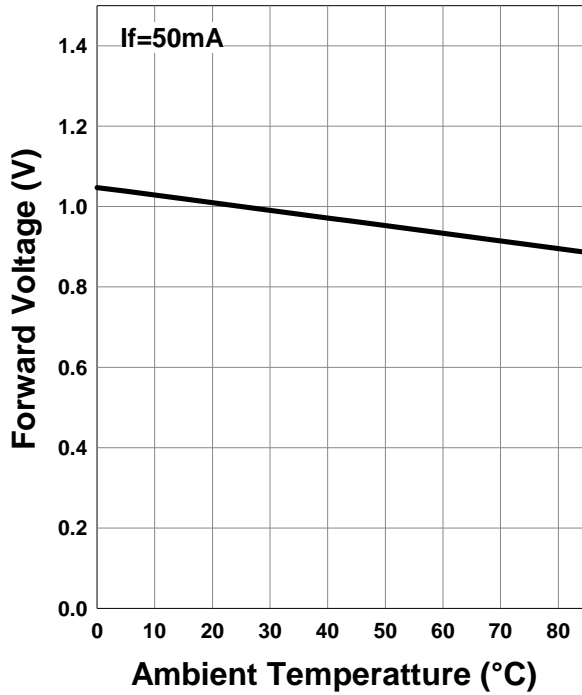
Forward Current - Pulse Duration



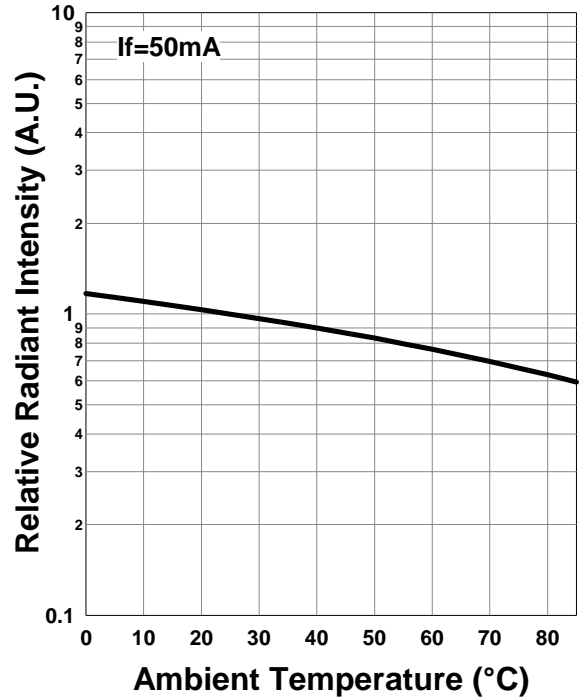
Allowable Forward Current - Ambient Temperature



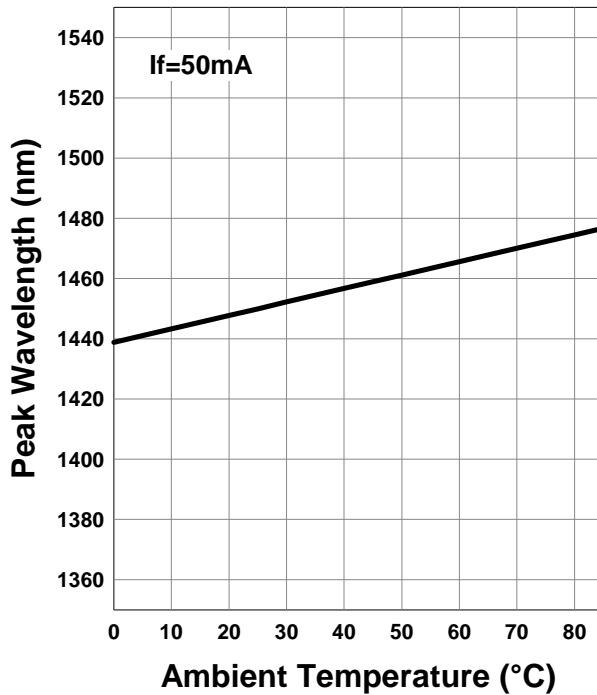
Forward Voltage - Ambient Temperature



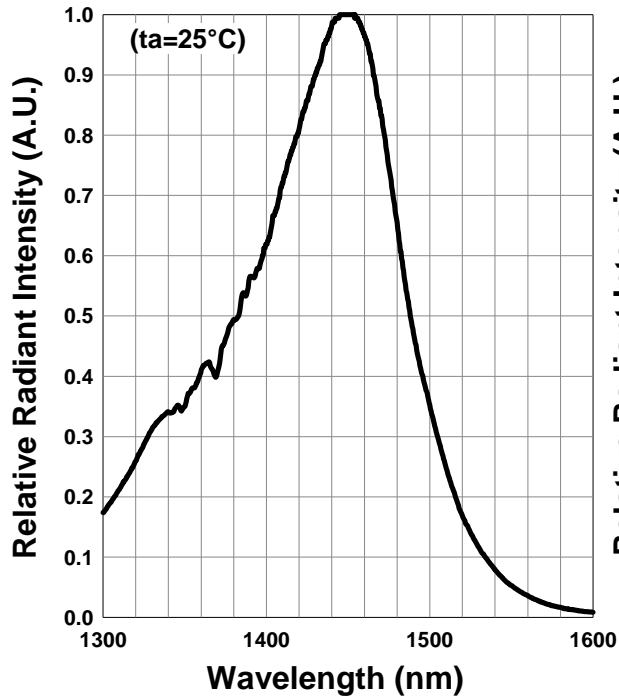
Relative Radiant Intensity - Ambient Temperature



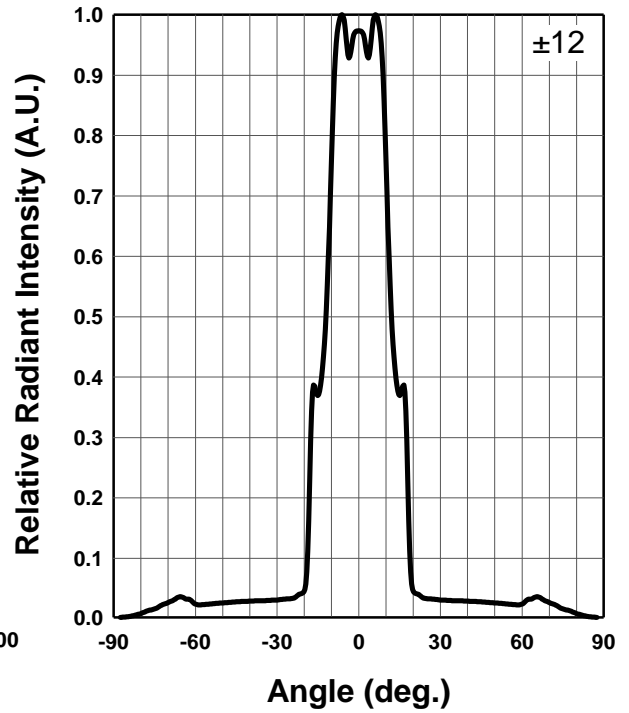
Peak Wavelength - Ambient Temperature



Relative Spectral Emission



Radiation Characteristics



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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