

L1450-03 Infrared LED Lamp

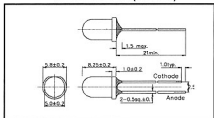
L1450-03 is an InGaAsP LED mounted on a lead frame with a clear epoxy lens.

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 $\phi 5\text{mm}$ clear molding
 - (2) Resin Material Epoxy Resin
 - (3) Lead Frame Soldered

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	120	mW	$T_a = 25^\circ\text{C}$
Forward Current	I_F	100	mA	$T_a = 25^\circ\text{C}$
Pulse Forward Current	I_{FP}	1000	mA	$T_a = 25^\circ\text{C}$
Reverse Voltage	V_R	5	V	$T_a = 25^\circ\text{C}$
Operating Temperature	T_{OPR}	$-30 \sim +85$	$^\circ\text{C}$	
Storage Temperature	T_{STG}	$-30 \sim +100$	$^\circ\text{C}$	
Soldering Temperature	T_{SOL}	260	$^\circ\text{C}$	

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

‡Soldering condition: Soldering condition must be completed within 3 seconds at 260 $^\circ\text{C}$

◆ Electro-Optical Characteristics [$T_a = 25^\circ\text{C}$]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	$I_F = 50\text{mA}$		0.8	1.3	V
Reverse Current	I_R	$V_R = 5\text{V}$			10	μA
Radiated Power	P_O	$I_F = 50\text{mA}$		1.0		mW
Peak Wavelength	λ_P	$I_F = 50\text{mA}$	1400	1450	1400	nm
Half Width	$\Delta\lambda$	$I_F = 50\text{mA}$		100		nm
Viewing Half Angle	$\theta_{1/2}$	$I_F = 50\text{mA}$		± 15		deg.
Rise Time	t_r	$I_F = 50\text{mA}$		10		ns
Fall Time	t_f	$I_F = 50\text{mA}$		10		ns

‡Total Radiated Power is measured by Photodyne #500

(‡Radiated Power is measured by Ando Optical Multi Meter AQ2140 & AQ2742)