

L1050G-04

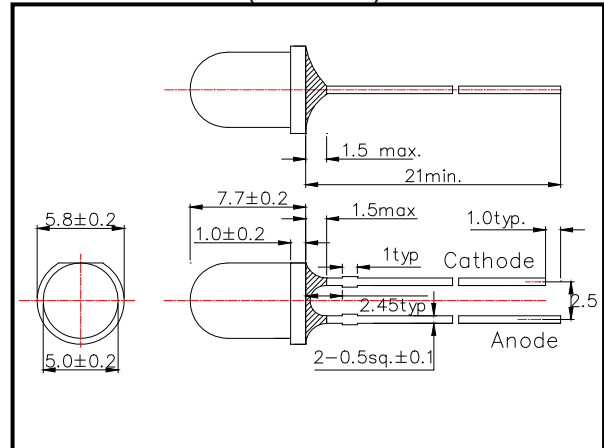
Infrared LED Lamp

L1050G-04 is a GaAs LED mounted on a lead frame with a clear epoxy lens. On forward bias it emits a spectral band of radiation, which peaks at 1050nm.

◆ Specifications

- 1) Product Name Infrared LED Lamp
- 2) Type No. L1050G-04
- 3) Chip
- (1) Chip Material GaAs
- (2) Peak Wavelength 1050nm typ.
- 4) Package
- (1) Type Φ5mm clear molding
- (2) Resin Material Epoxy Resin
- (3) Lead Frame Soldered (Lead Frame)

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings [Ta=25°C]

Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	P _D	140	mW
Forward Current	I _F	100	mA
Pulse Forward Current	I _{FP}	1000	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

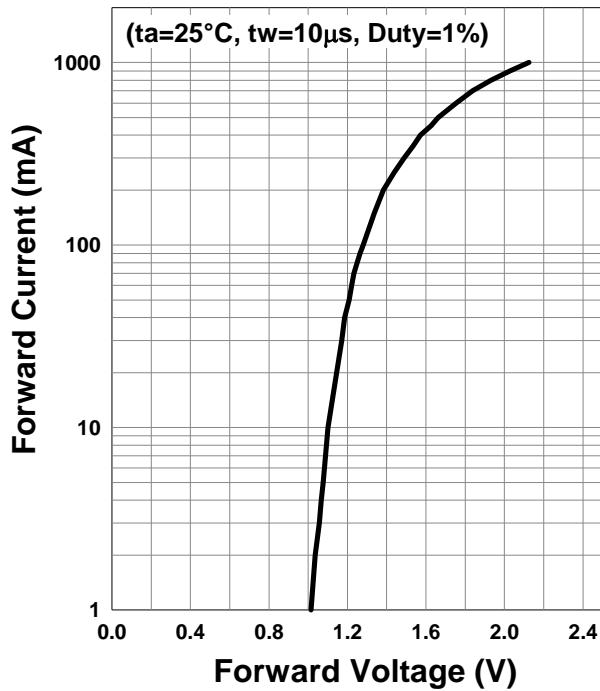
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =50mA		1.2	1.4	V
Radiated Power	P _O	I _F =50mA		19		mW
Radiant Intensity	I _E	I _F =50mA		43		mW/sr
Peak Wavelength	λ _P	I _F =50mA		1050		nm
Half Width	Δλ	I _F =50mA		33		nm
Viewing Half Angle	θ _{1/2}	I _F 50mA		±22		deg.
Rise Time	t _r	I _F 50mA		40		ns
Fall Time	t _f	I _F 50mA		30		ns

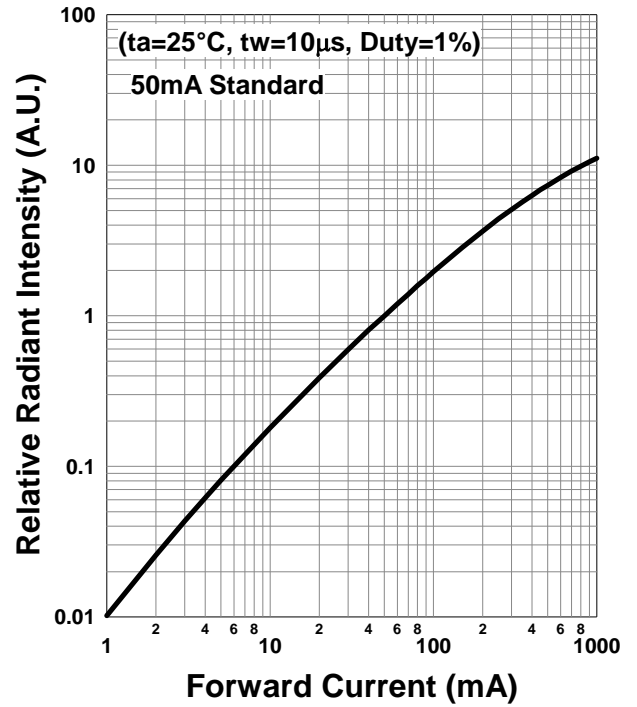
‡Radiated Power is measured by G8370-85.

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

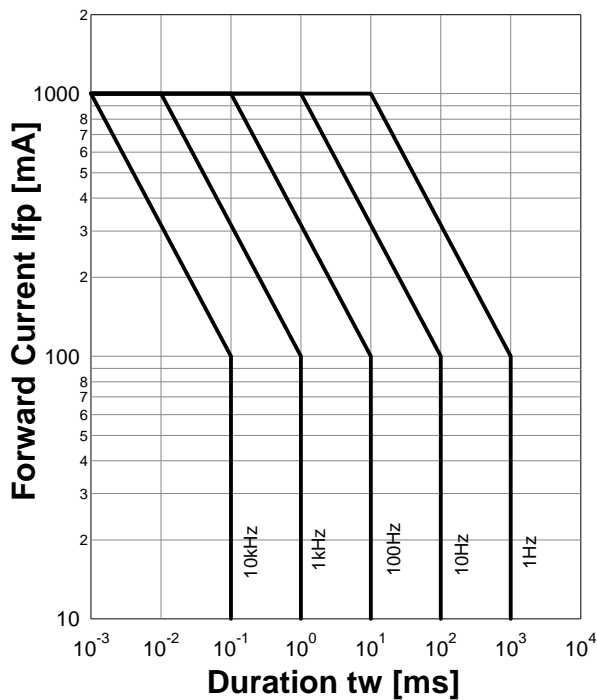
Forward Current - Forward Voltage



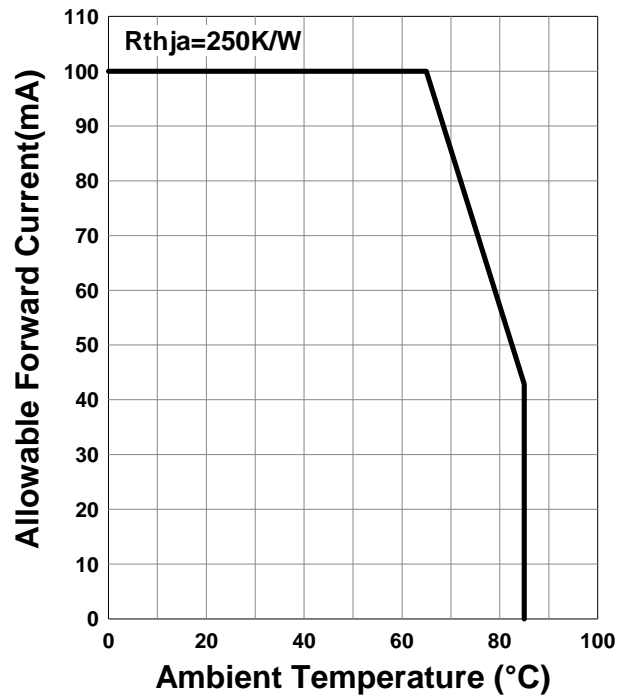
Relative Radiant Intensity - Forward Current



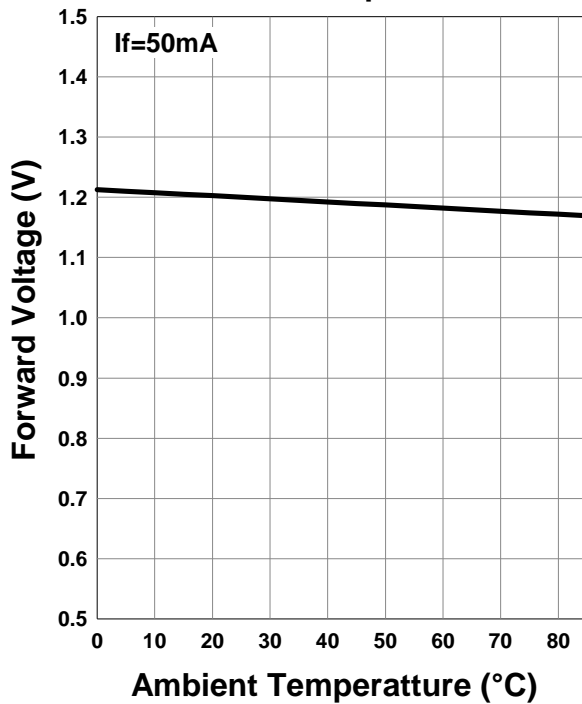
Forward Current - Pulse Duration



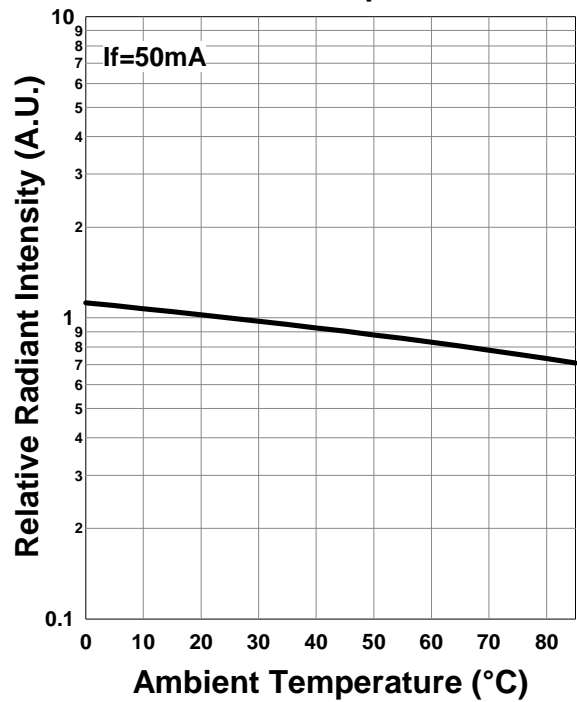
Allowable Forward Current - Ambient Temperature



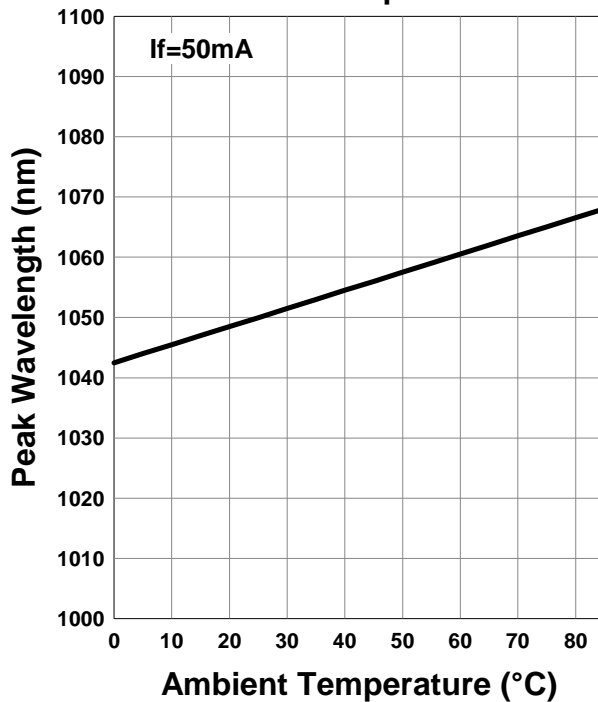
Forward Voltage - Ambient Temperature



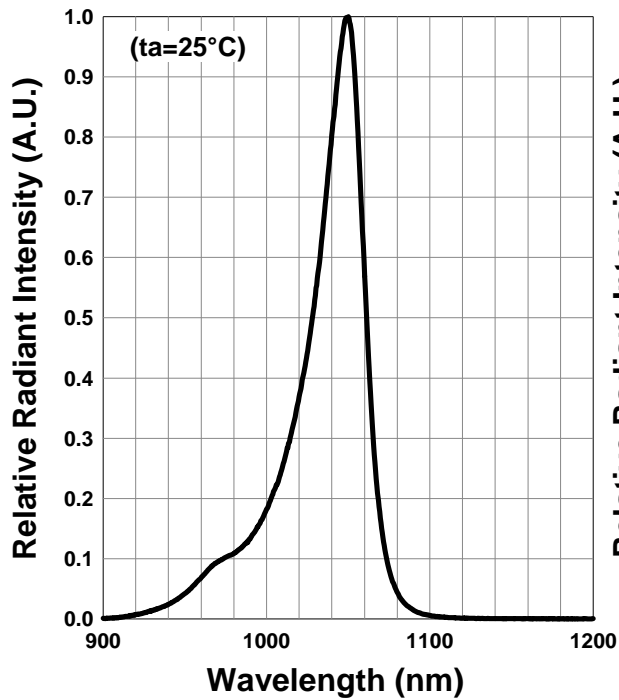
Relative Radiant Intensity - Ambient Temperature



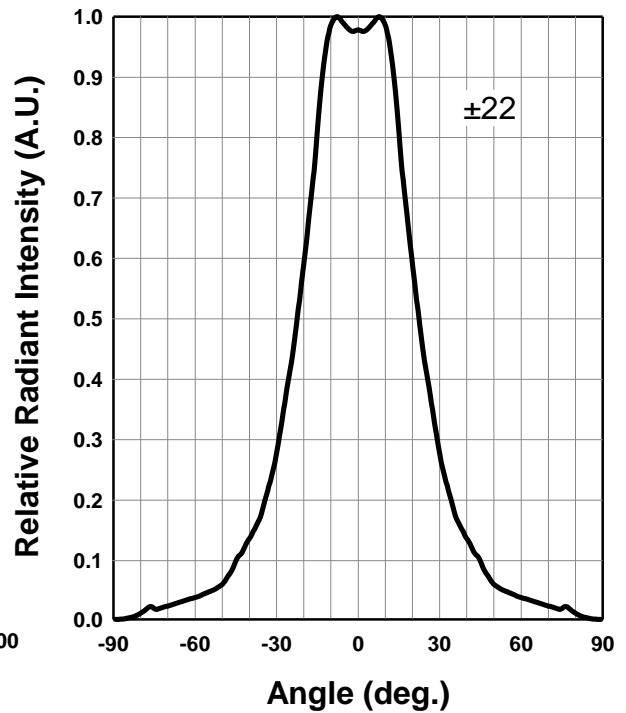
Peak Wavelength - Ambient Temperature



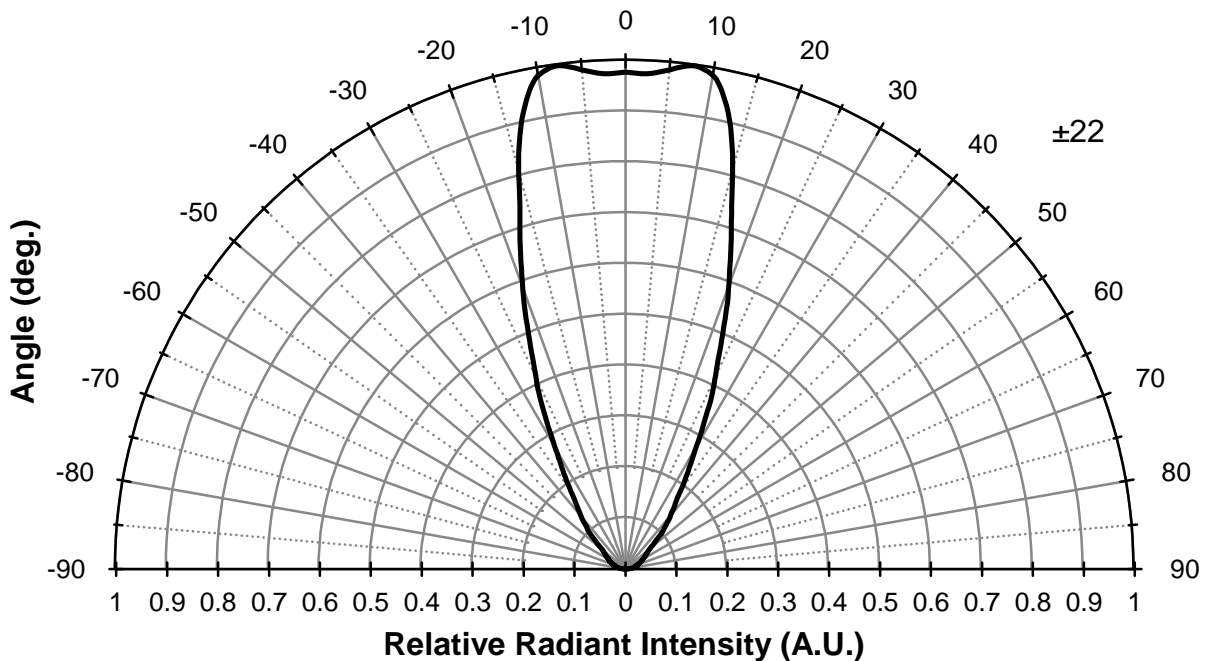
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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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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