

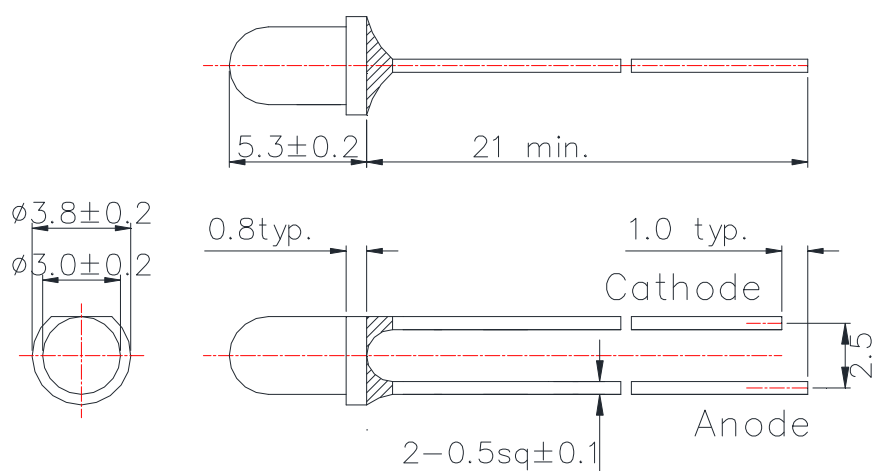
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PRELIMINARY

L1050GD-33

Infrared LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

- Chip Material : GaAs
- Chip Dimension : 350um * 350um
- Number of Chips : 1pce
- Peak Wavelength : 1050nm typ.
- Package Type : $\phi 3$ mm clear molding
- Lead Frame : Soldered (Lead Free)
- Lens : Epoxy Resin

Application

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	160	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthjs	200	K/W
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Soldering Temperature	TSOL	265	°C

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

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

Optical and Electrical Characteristics (Tc=25°C)

(*: 100% testing, **: reference value)

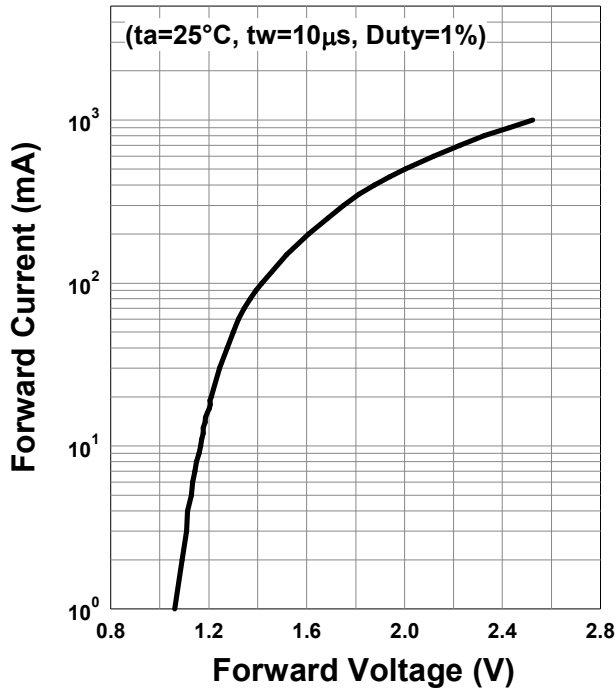
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.3	(1.6)	V	IF=50mA*
	VFP		2.5			IFP=1A**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	21	30		mW	IF=50mA**
			420			IFP=1A**
Radiant Intensity	IE		95		mW/sr	IF=50mA**
			1300			IFP=1A**
Peak Wavelength	λ_p	1000		1100	nm	IF=50mA**
Half Width	$\Delta\lambda$		50		nm	IF=50mA**
Viewing Half Angle	$\theta_{1/2}$		± 19		deg.	IF=50mA**
Rise Time	tr		10		ns	IF=50mA**
Fall Time	tf		10		ns	IF=50mA**

‡ Radiated Power is measured by G8370-85.

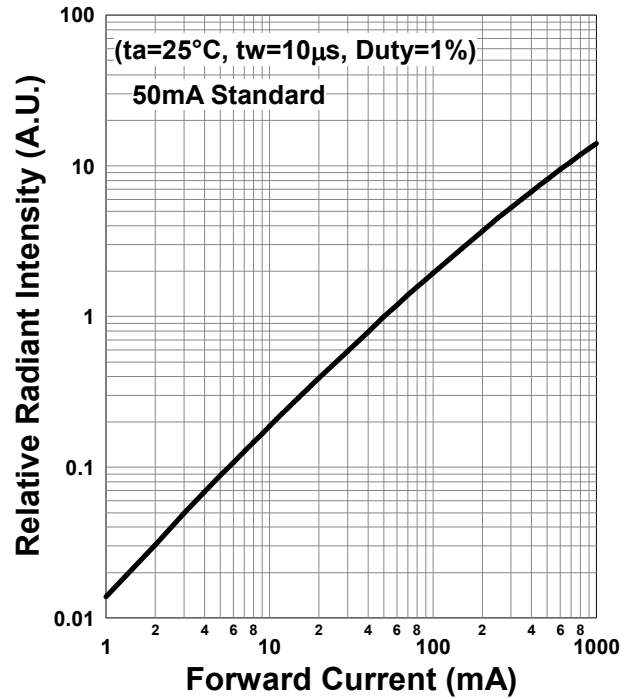
‡ Radiant Intensity is measured by Ando Optical Multi Meter AQ2140 & AQ2742.

Typical Characteristic Curves

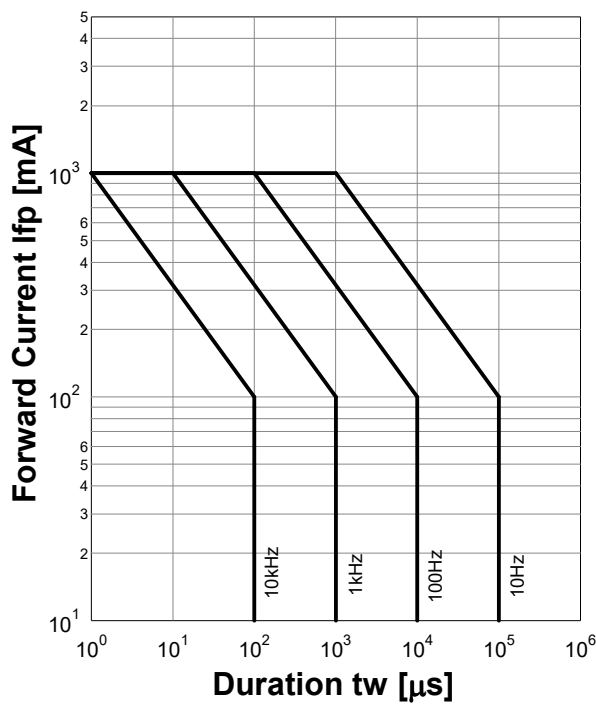
Forward Current - Forward Voltage



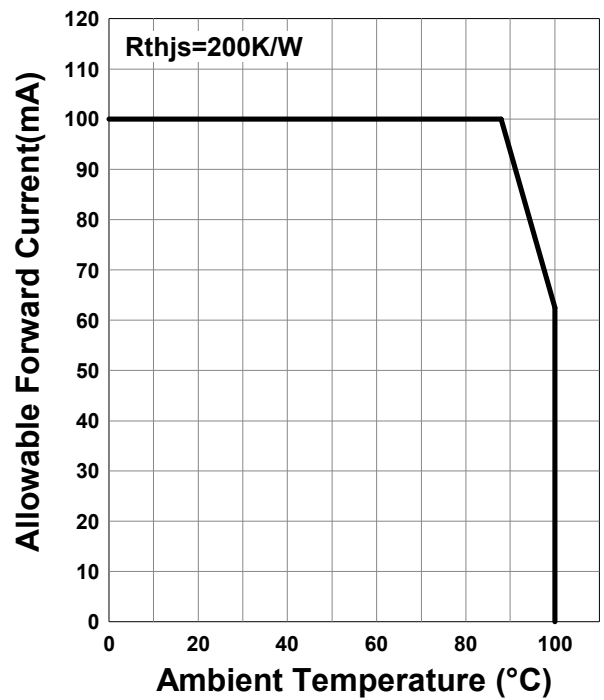
Relative Radiant Intensity - Forward Current



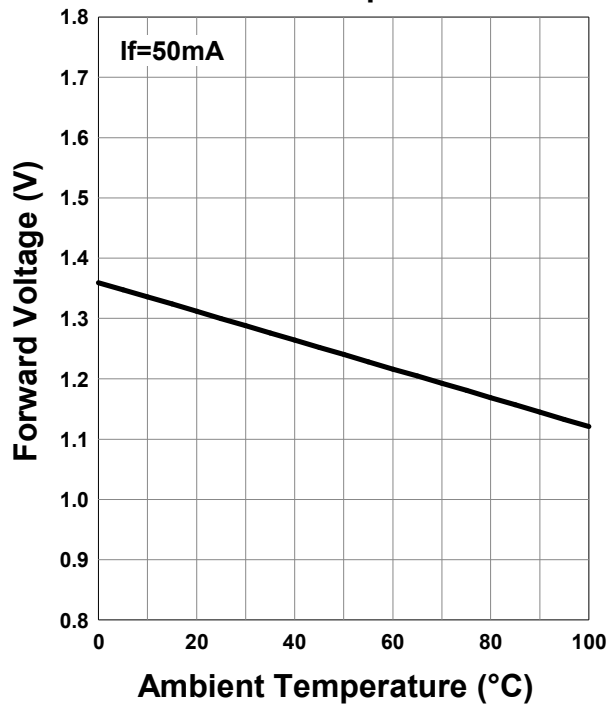
Forward Current - Pulse Duration



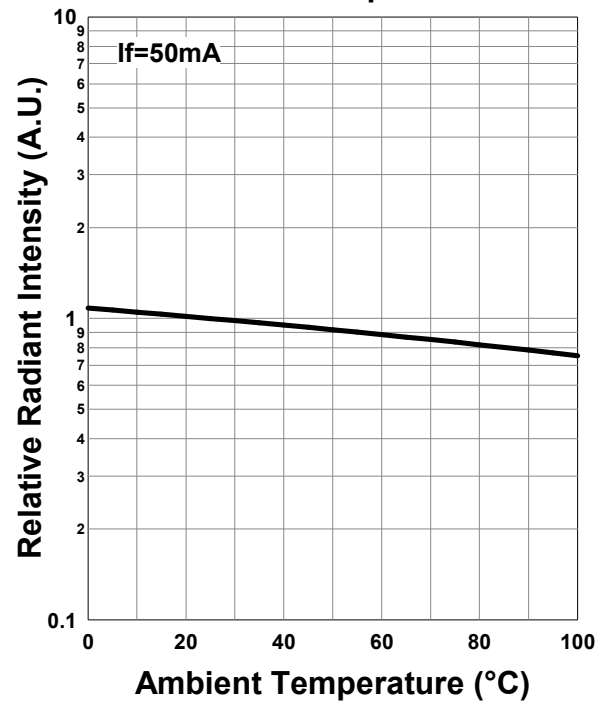
Allowable Forward Current - Ambient Temperature



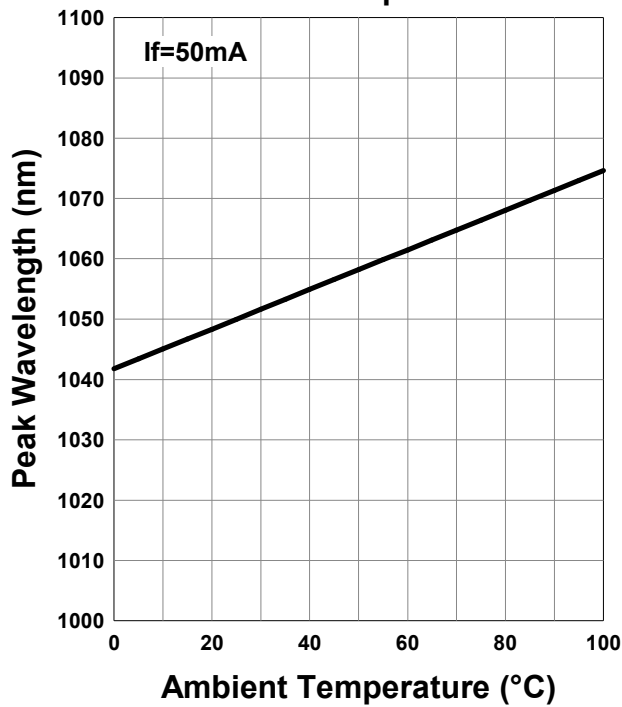
Forward Voltage - Ambient Temperature



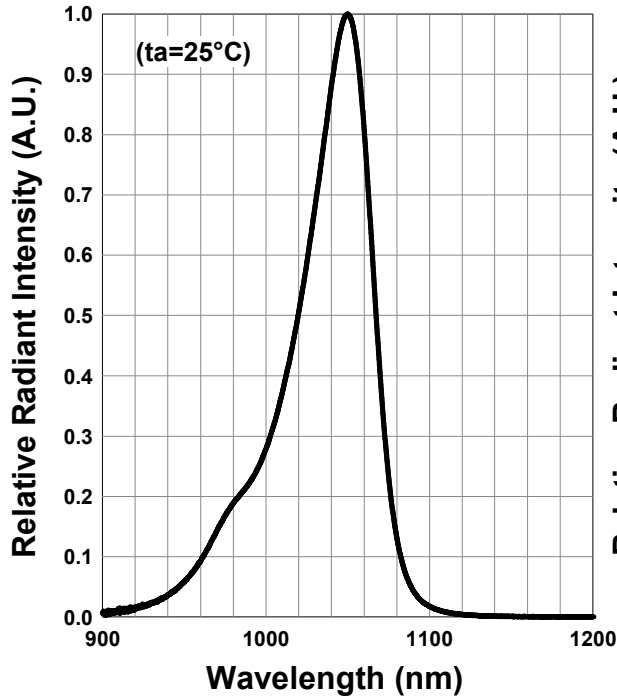
Relative Radiant Intensity - Ambient Temperature



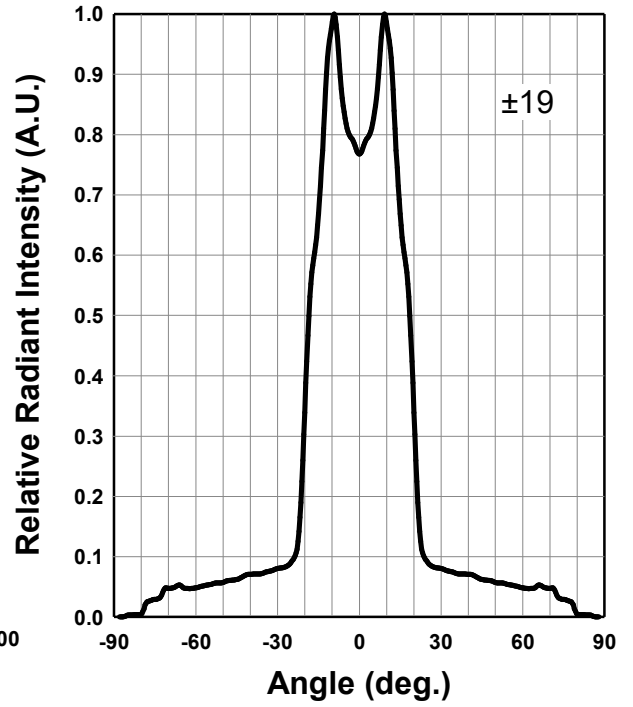
Peak Wavelength - Ambient Temperature



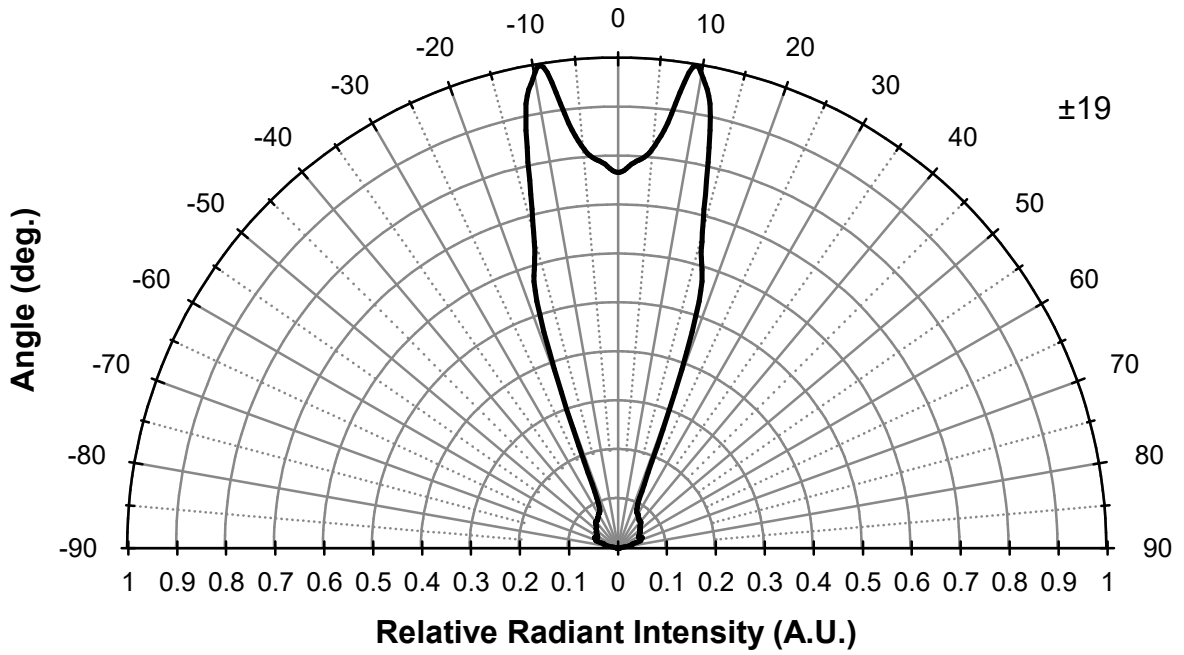
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



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