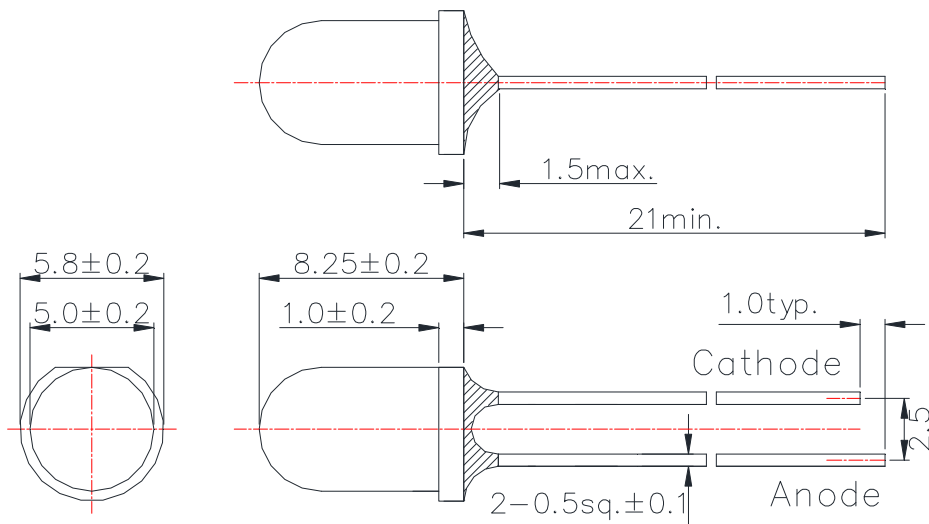


## L1050GD-03

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 :  $\phi 5$ mm clear molding
- Lead Frame : Soldered (Lead Free)
- Lens : Epoxy Resin

## 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)

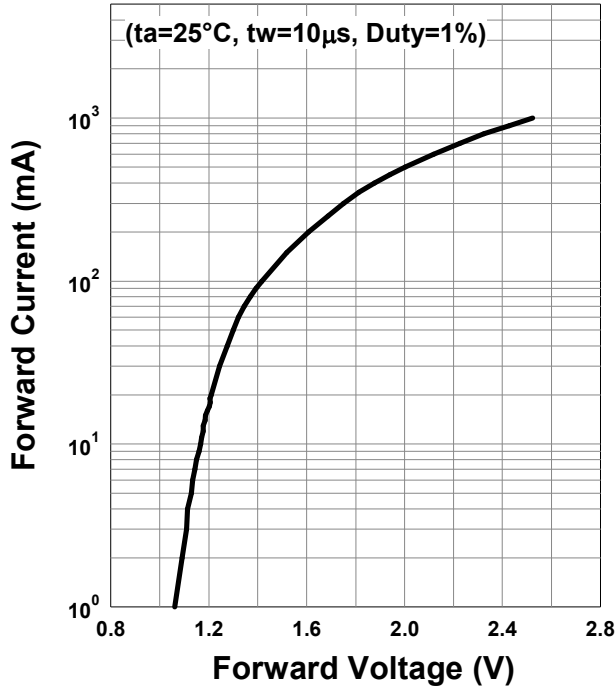
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.3	(1.6)	V	IF=50mA*
	VFP		2.5			IFP=1A**
Reverse Current	IR			10	uA	VR=5V*
Total Radiated Power	PO	21	30		mW	IF=50mA**
			420			IFP=1A**
Radiant Intensity	IE		120		mW/sr	IF=50mA**
			1600			IFP=1A**
Peak Wavelength	$\lambda_p$	1000		1100	nm	IF=50mA**
Half Width	$\Delta\lambda$		50		nm	IF=50mA**
Viewing Half Angle	$\theta_{1/2}$		$\pm 13$		deg.	IF=50mA**
Rise Time	tr		10		ns	IF=50mA**
Fall Time	tf		10		ns	IF=50mA**

‡ Radiated Power is measured by G8370-85.

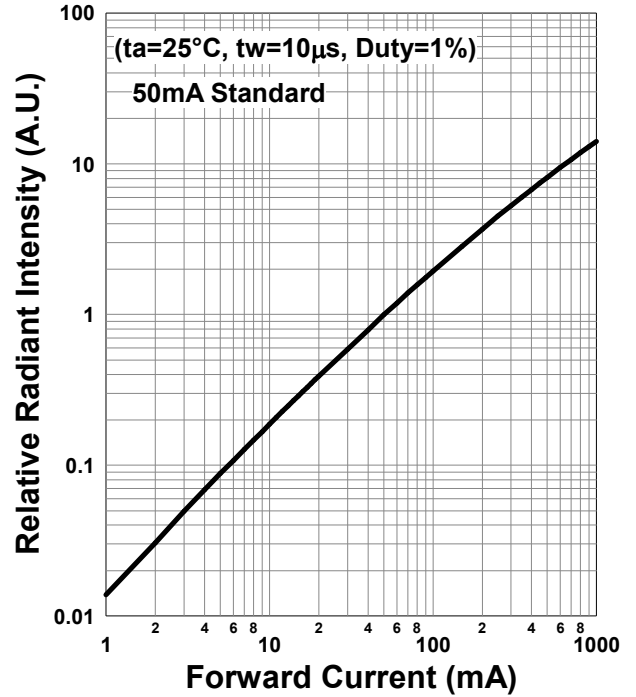
‡ Radiant Intensity is measured by Ando Optical Multi Meter AQ2140 & AQ2742.

## Typical Characteristic Curves

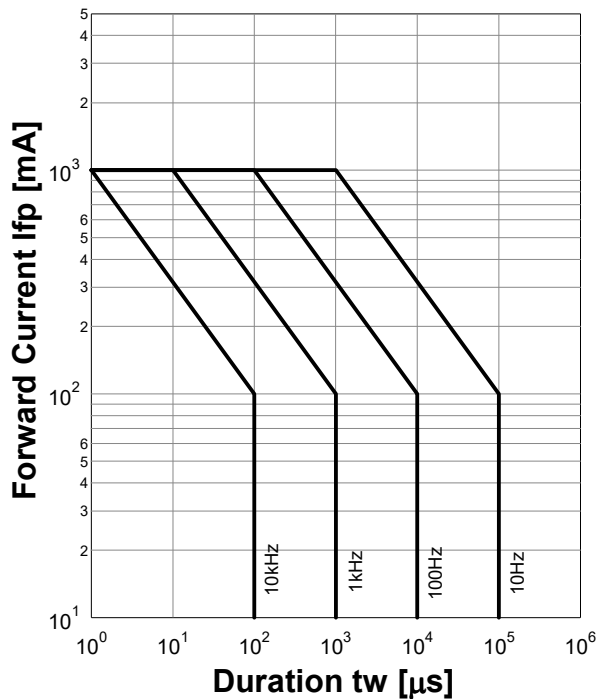
### Forward Current - Forward Voltage



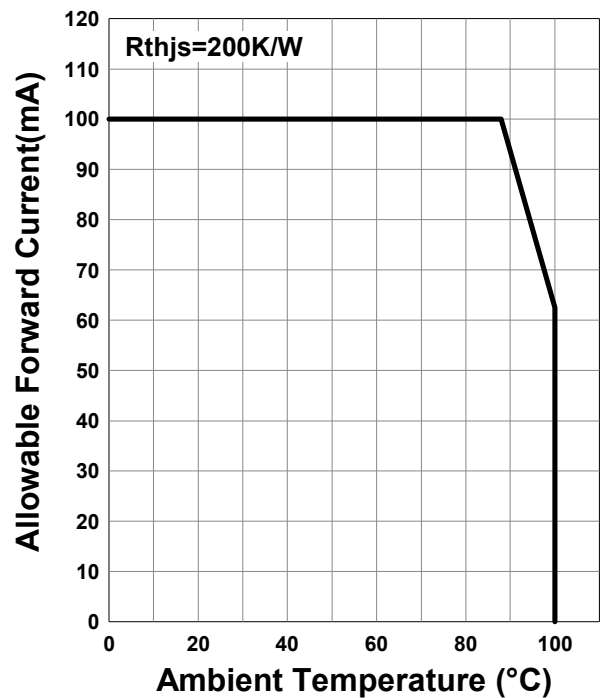
### Relative Radiant Intensity - Forward Current

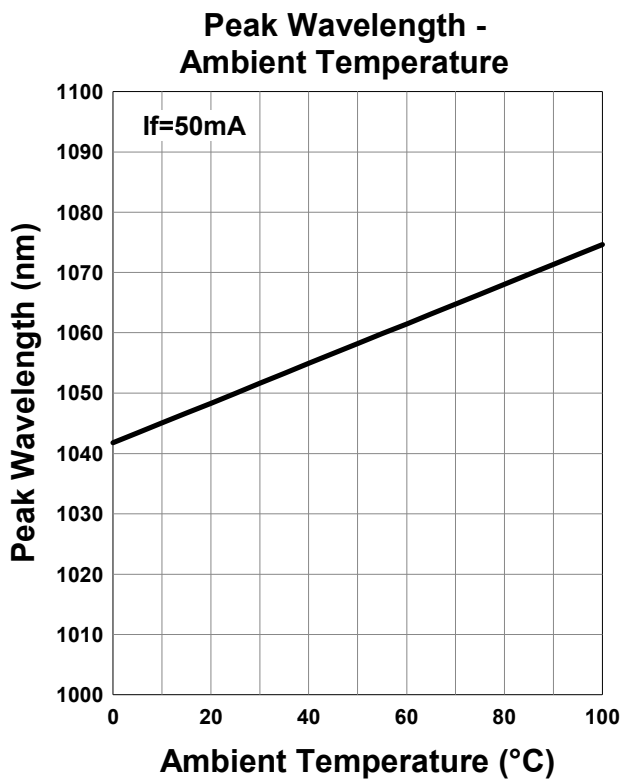
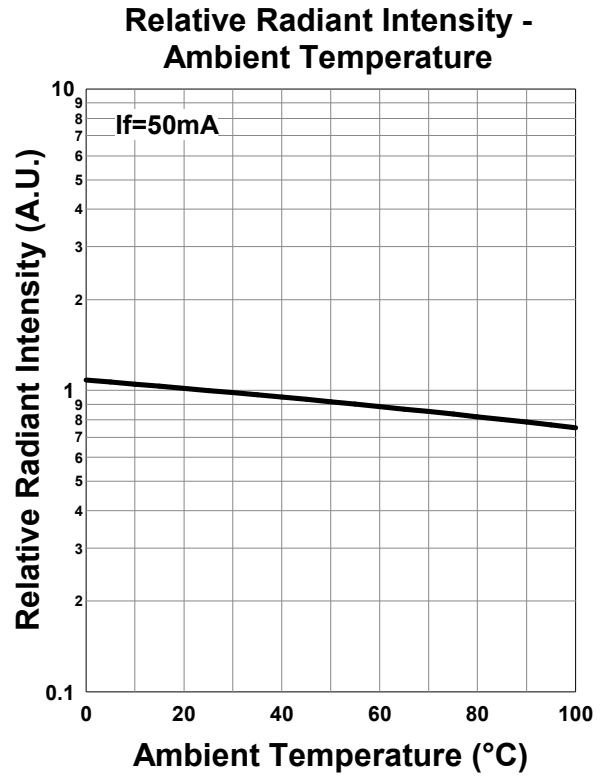
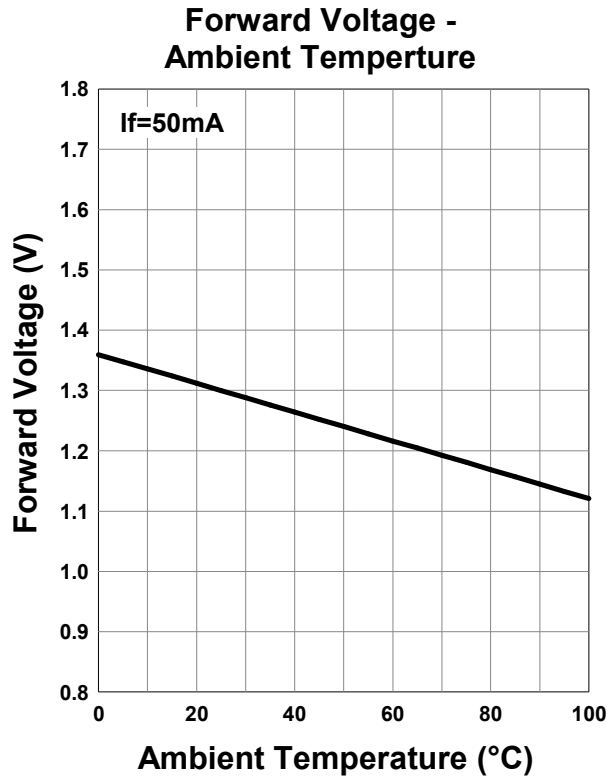


### Forward Current - Pulse Duration

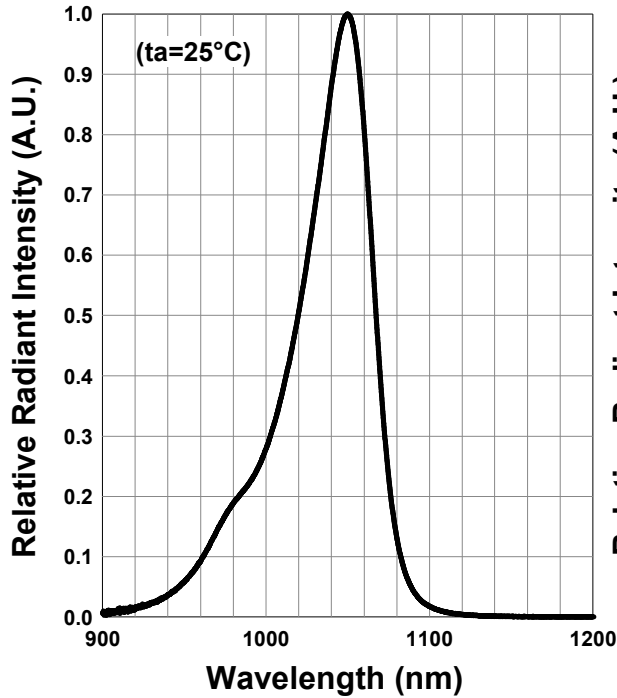


### Allowable Forward Current - Ambient Temperature

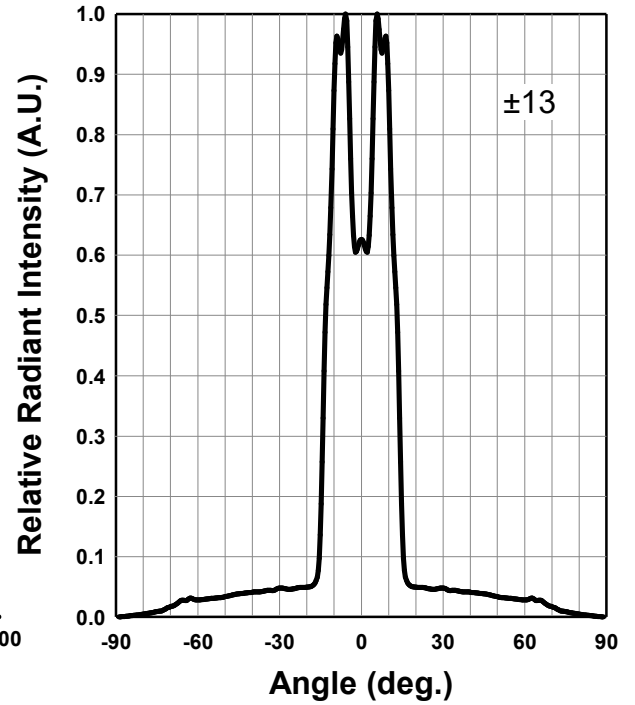




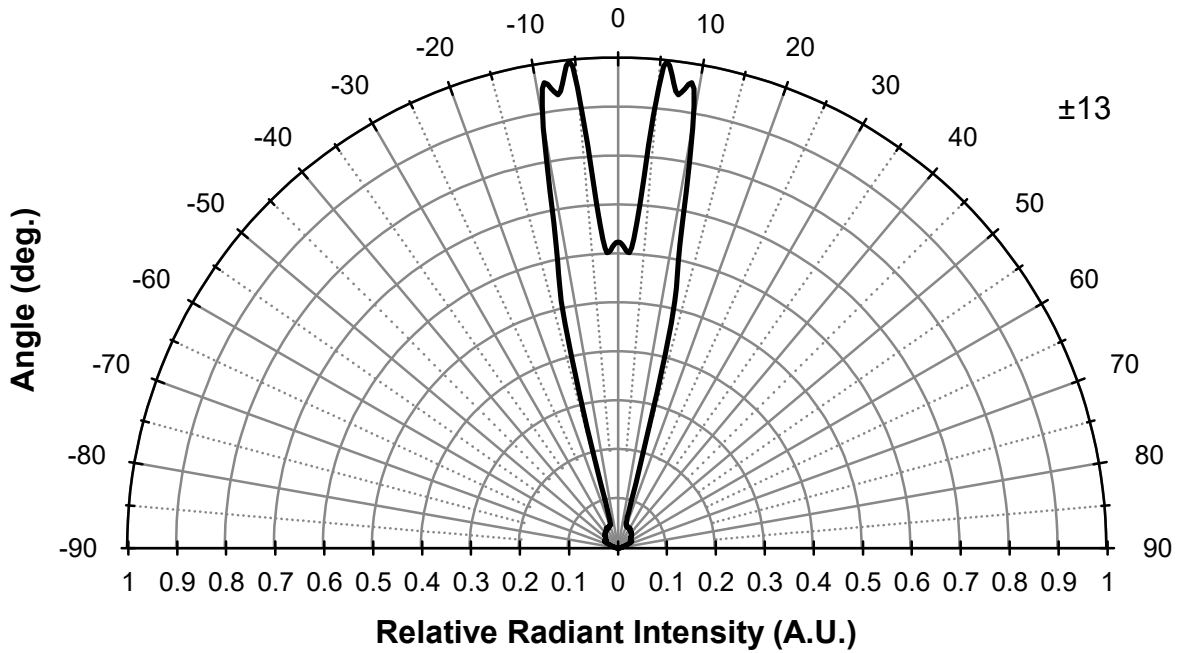
### Relative Spectral Emission



### Radiation Characteristics



### Radiation Characteristics



## 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.

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