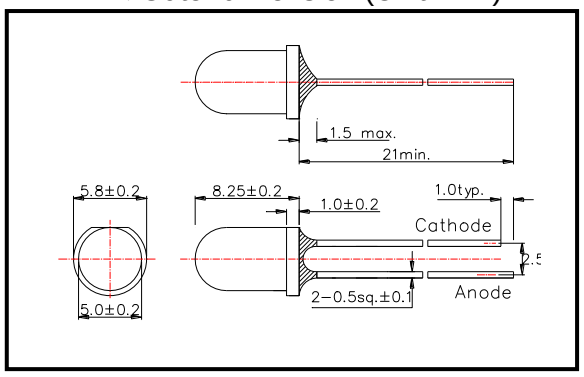
L1070-03 Infrared LED Lamp

L1070-03 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 1070nm.

♦Specifications

1) Product Name	Infrared LED Lamp
2) Type No.	L1070-03
3) Chip	
(1) Chip Material	InGaAsP
(2) Peak Wavelength	1070nm typ.
4) Package	
(1) Type	Φ5mm epoxy molding
(2) Resin Color	Clear color
(3) Lead Frame	Soldered (Lead Free)

♦Outer dimension (Unit: mm)



♦Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P_D	140	mW	Ta=25°C
Forward Current	I_F	100	mA	Ta=25°C
Pulse Forward Current	I_{FP}	1000	mA	Ta=25°C
Reverse Voltage	V_R	5	V	Ta=25°C
Junction Temperature	T_J	100	°C	
Thermal Resistance	Rthjp	340	K/W	
Operating Temperature	T_{OPR}	-30 ~ +85	°C	
Storage Temperature	T_{STG}	-30 ~ +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
‡Thermal resistance: junction – ambient, leads 7mm, soldered on PCB.

♦Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V_F	I_F=20mA		1.05	1.25	V
		I_F=50mA		1.15	1.35	
Radiated Power	P_O	I_F=20mA	1.7	3.2		mW
		I_F=50mA	4.0	7.5		
Radiant Intensity	I_E	I_F=20mA		1.5		mW/sr
		I_F=50mA		3.5		
Peak Wavelength	λ_P	I_F=50mA	(1050)	1070	(1090)	nm
Half Width	$\Delta\lambda$	I_F=50mA		50		nm
Centroid Wavelength	λ_C	I_F=50mA		1060		
Viewing Half Angle	$\theta_{1/2}$	I_F=50mA		±15		deg.
Rise Time	tr	I_F=50mA		10		ns
Fall Time	tf	I_F=50mA		10		ns

‡Total Radiated Power is measured by G8370-85
‡Radiated Power is measured by Ando Optical Multi Meter AQ2140 & AQ2743
‡ ( ) means target spec on QC wavelength

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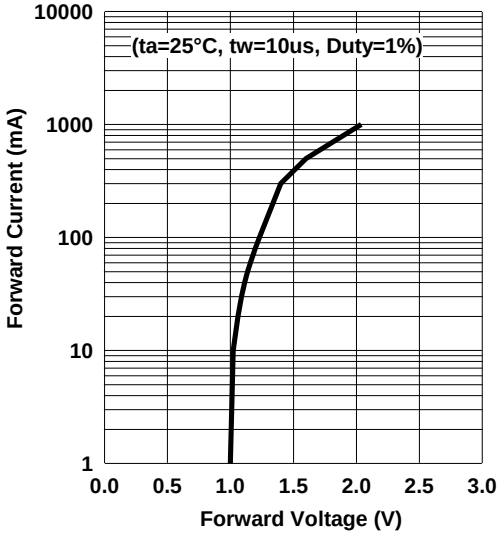
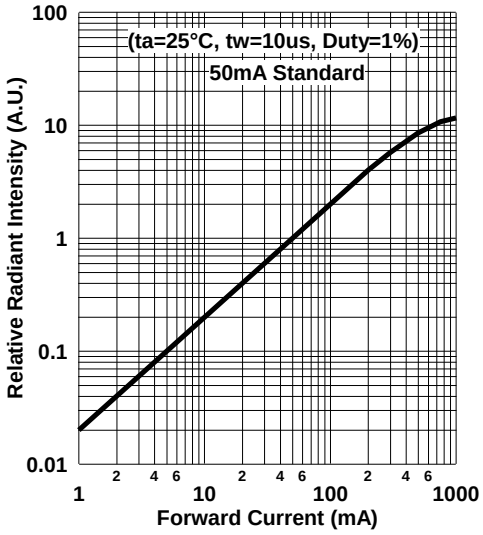
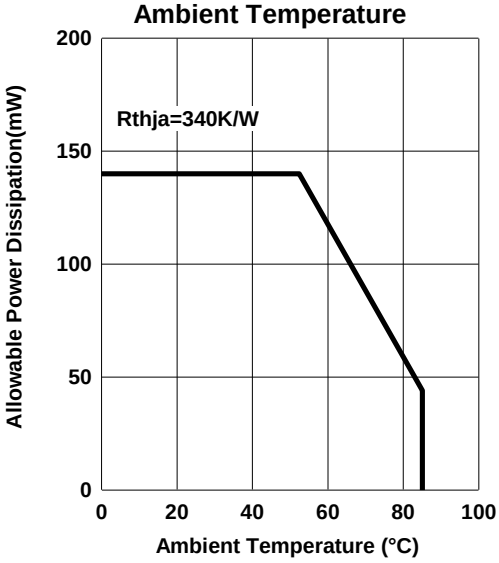
Forward Curent - Forward Voltage



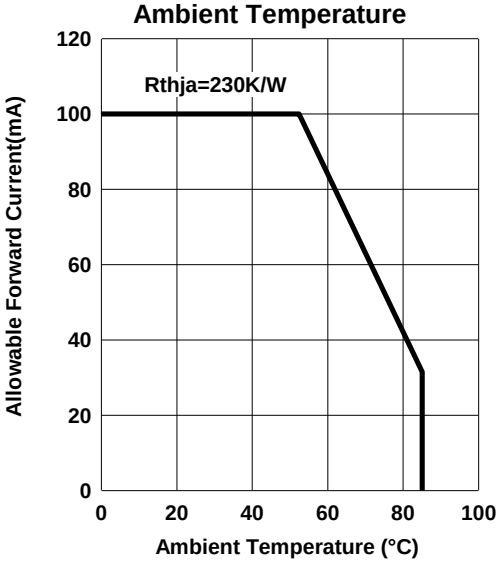
Relative Radiant Intensity - Forward Current



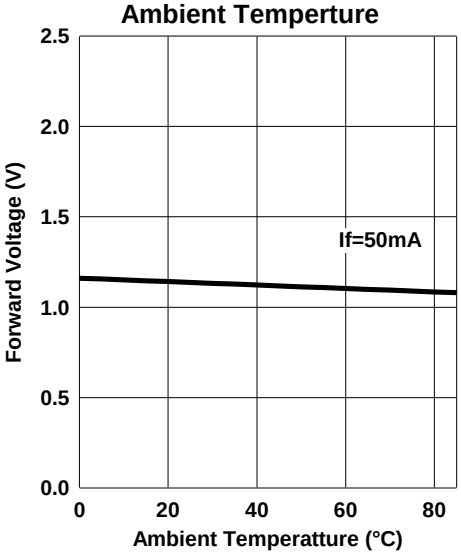
Allowable Power Dissipation - Ambient Temperature



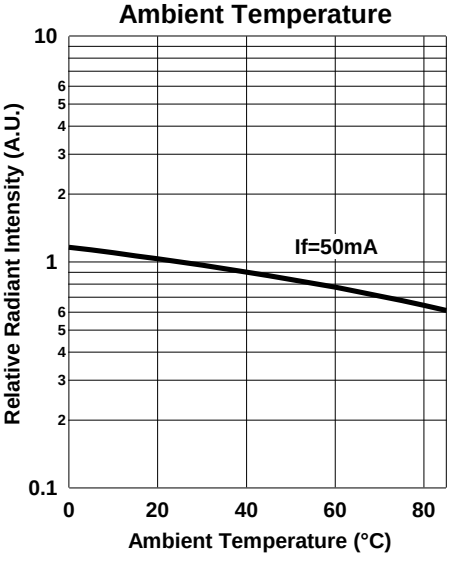
Allowable Forward Current - Ambient Temperature



Forward Voltage - Ambient Temperture



Relative Radiant Intensity - Ambient Temperature



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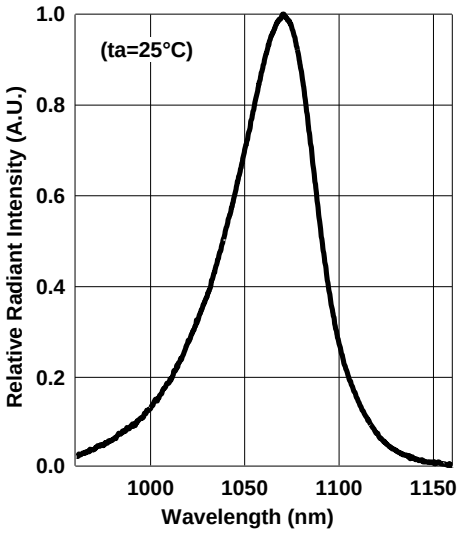
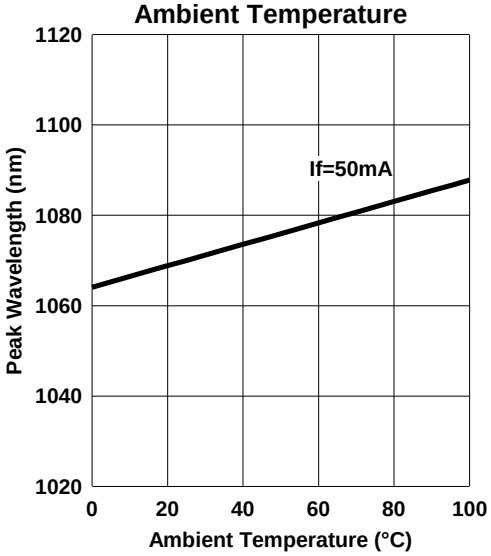
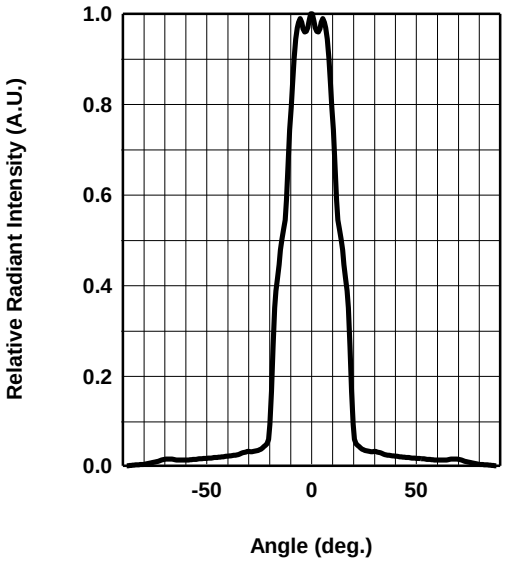
Relative Spectral Emission



Peak Wavelength - Ambient Temperature



Radiation Characteristics



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