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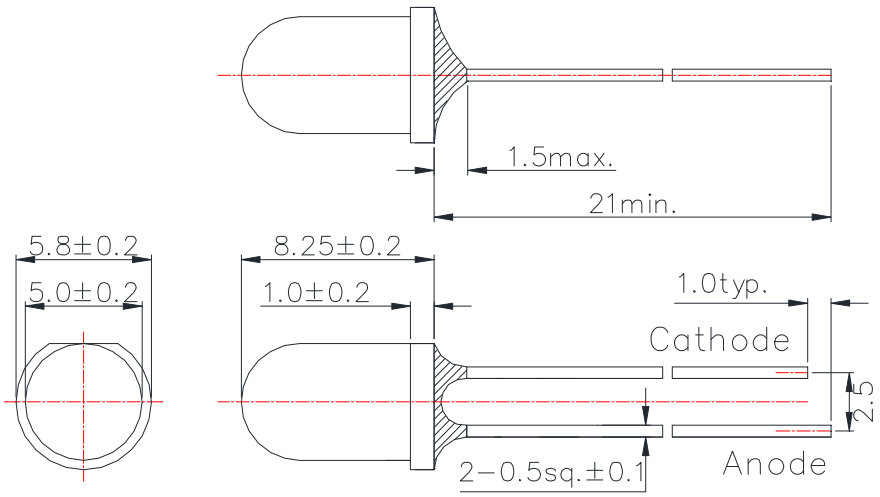
Data Sheet

PRELIMINARY

L1300S-03

Infrared LED Lamp

Outline and Internal Circuit



(Unit : mm)

Features

- Chip Material : InGaAsP
- Chip Dimension : 300um *300um
- Number of Chips : 1pce
- Peak Wavelength : 1300nm typ.
- Package Type : ϕ5mm clear molding
- Lead Frame : Soldered (Lead Free)
- Lens : Epoxy Resin

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Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Power Dissipation	PD	130	mW
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Thermal Resistance	Rthja	250	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)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.0	1.3	V	IF=50mA
	VFP		1.7			IFP=1A
Total Radiated Power	PO		9.0		mW	IF=50mA
			58			IFP=1A
Radiant Intensity	IE		64		mW/sr	IF=50mA
			410			IFP=1A
Peak Wavelength	λp	1250		1350	nm	IF=50mA
Half Width	Δλ		80		nm	IF=50mA
Viewing Half Angle	θ1/2		±13		deg.	IF=50mA
Rise Time	tr		30		ns	IF=50mA
Fall Time	tf		70		ns	IF=50mA

‡ Radiated Power is measured by G8370-85.

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

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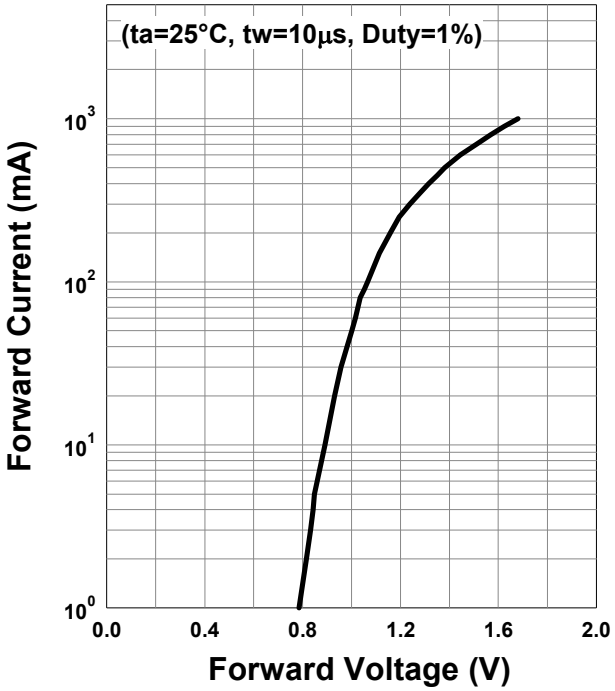
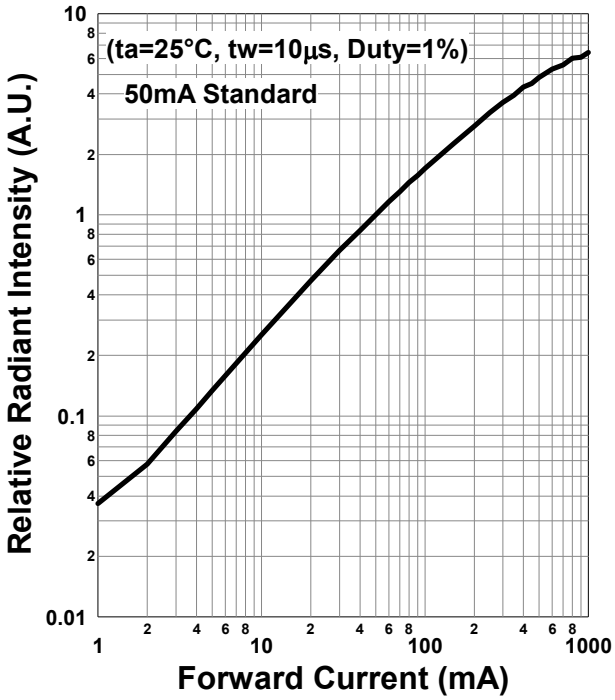
Typical Characteristic Curves

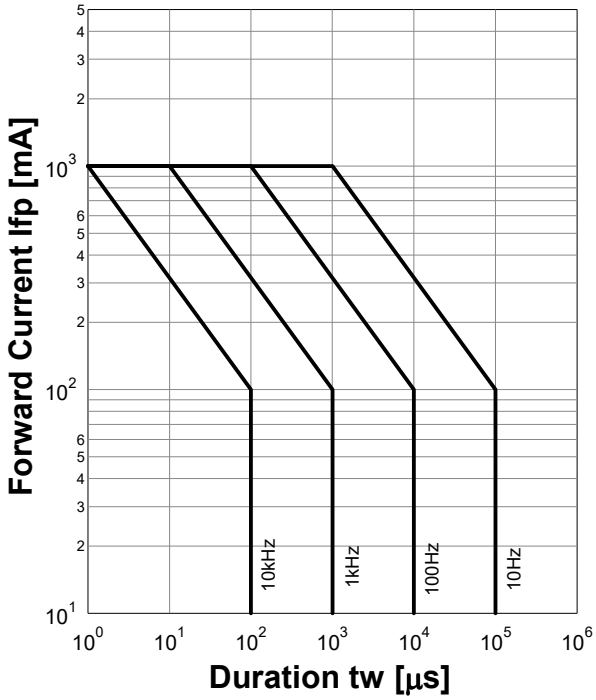
Forward Current - Forward Voltage



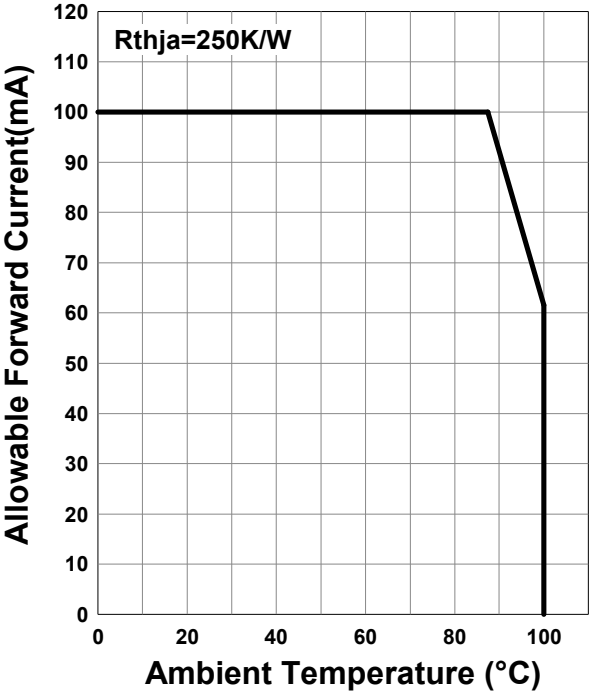
Relative Radiant Intensity - Forward Current

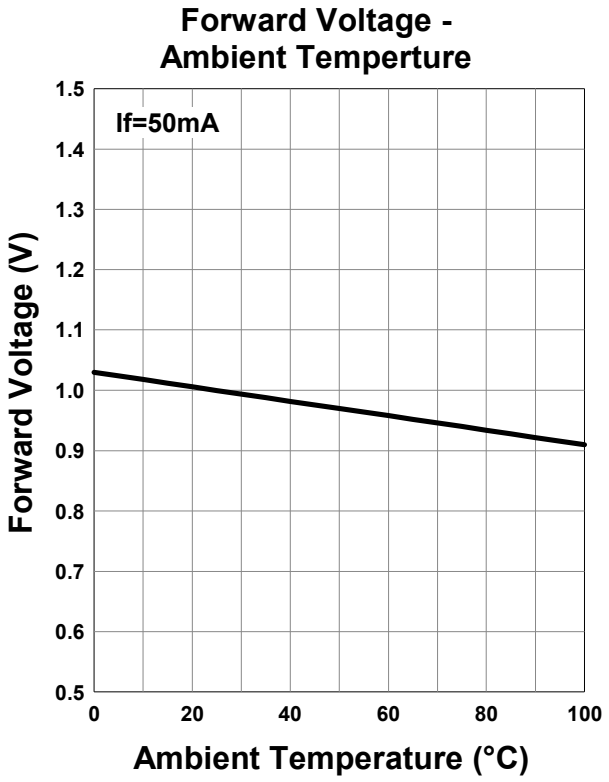


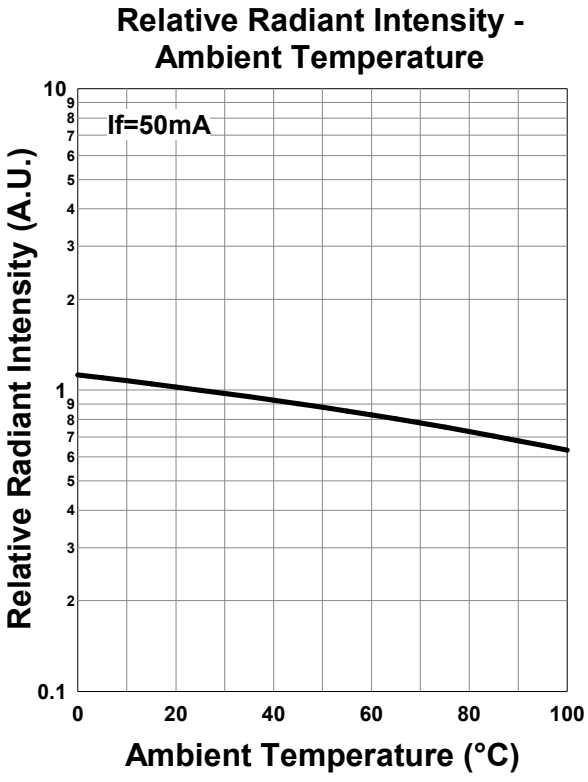
Forward Current - Pulse Duration

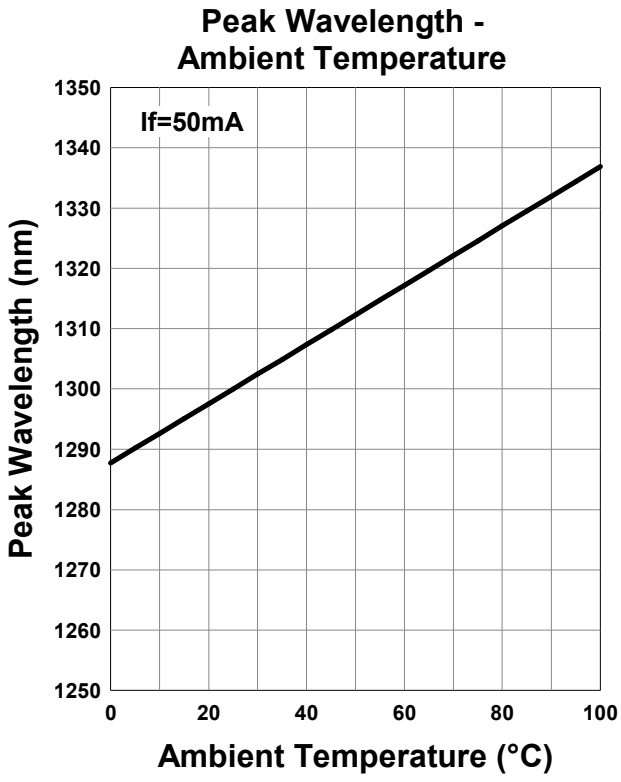


Allowable Forward Current - Ambient Temperature




Forward Voltage -
Ambient Temperture
If=50mA
Forward Voltage (V)
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0
20
40
60
80
100
Ambient Temperature (°C)


Relative Radiant Intensity -
Ambient Temperature
If=50mA
Relative Radiant Intensity (A.U.)
10
9
8
7
6
5
4
3
2
1
0.1
0
20
40
60
80
100
Ambient Temperature (°C)


Peak Wavelength -
Ambient Temperature
If=50mA
Peak Wavelength (nm)
1350
1340
1330
1320
1310
1300
1290
1280
1270
1260
1250
0
20
40
60
80
100
Ambient Temperature (°C)

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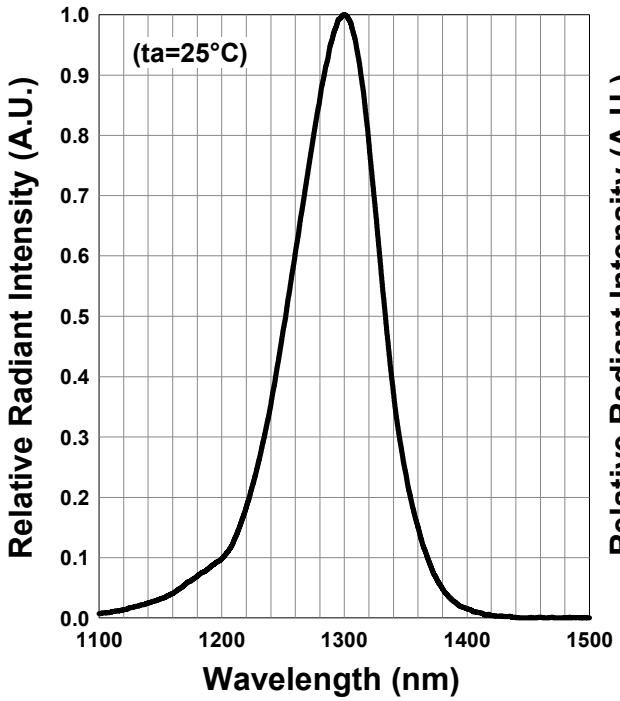
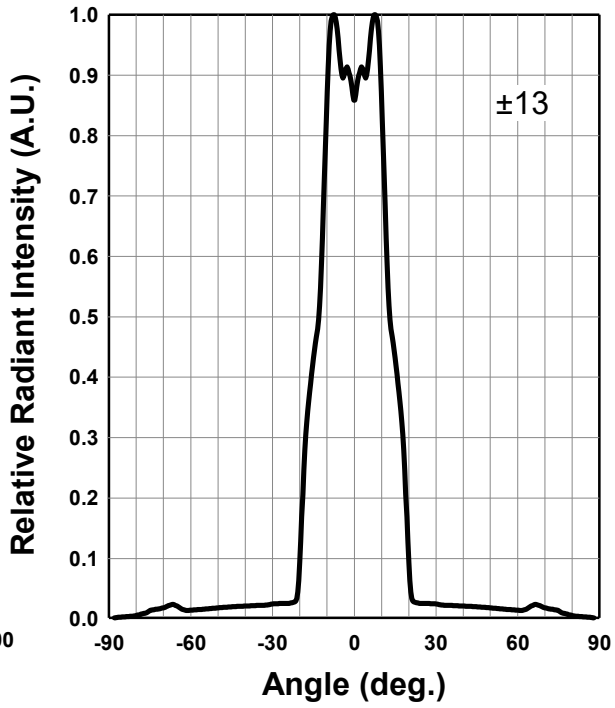
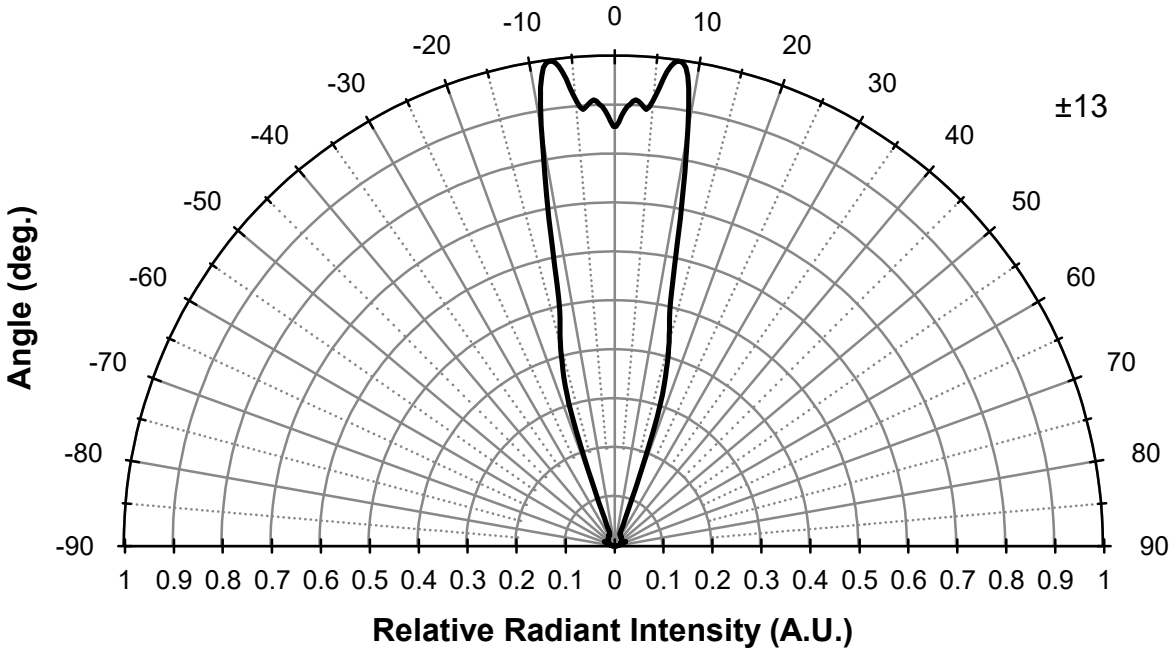
Relative Spectral Emission



Radiation Characteristics



Radiation Characteristics



Disclaimer

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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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