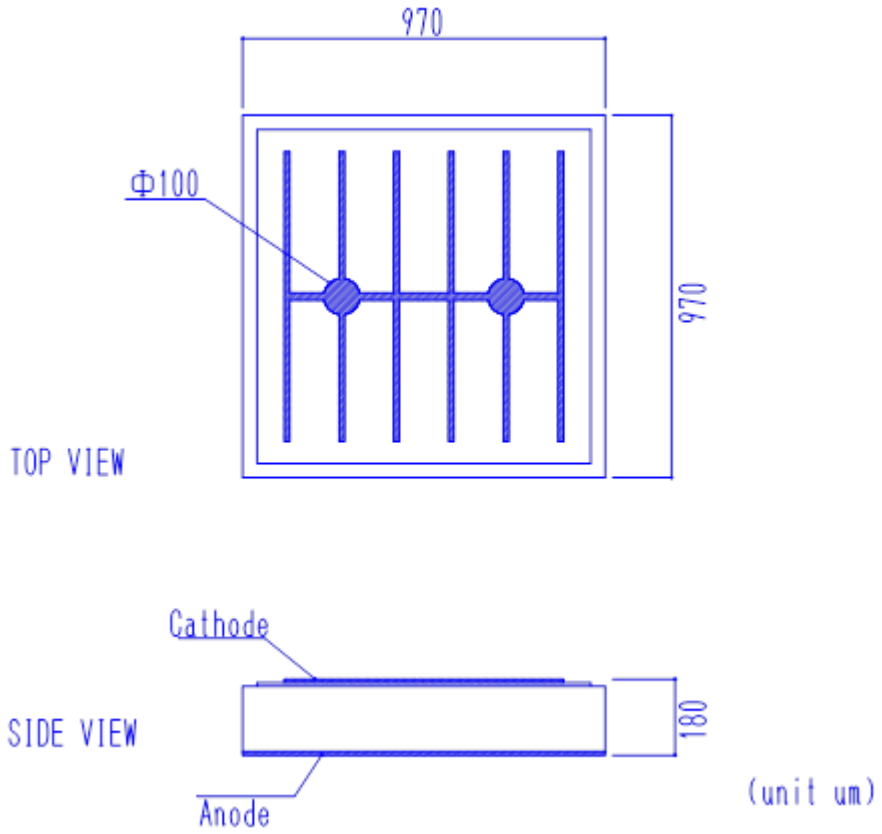
Data Sheet

2020.04

C1200D-100P

InGaAsP IR LED Chip

Outline



Characteristics

- Materials: InGaAsP
- Dimension
  - Chip Size: 970 +/-30μm x 970 +/-30μm
  - Chip thickness: 180 +/-25μm
  - P bonding pad: ϕ100 +/-10μm
- Bonding pad: Au

Absolute Maximum Ratings

Item	Symbol	Condition	Ratings	Unit
Forward Current	IF	Ta=25 °C	1000	mA
Pulse Forward Current	IFP	Ta=25 °C Duty 1%, Pulse Width 10us	2000	mA
Reverse Voltage	VR	Ta=25 °C	5	V
Junction Temperature	Tj	-	120	°C
Operating Temperature	Topr	-	-40 ~ +100	°C
Storage Temperature	Tstg	Chip	-40 ~ +100	°C
		Chip on Tape	+5 ~ +30	°C

‡ Maximum Ratings are dependent on package.

Optical and Electrical Characteristics (Tc=25°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	VF1	IF=100mA (3)		1.0	1.3	V
	VF2	IF=500mA (3)		1.2		
	VFP	IFP=2A Duty 1%, Pulse Width 10us		1.9		
Total Radiated Power(2)	PO1	IF=100mA (3)	14	20		mW
	PO2	IF=500mA (3)		71		
	POp	IFP=2A Duty 1%, Pulse Width 10us		240		
Peak Wavelength	λp	IF=50mA (3)	1170	1200	1230	nm
Spectral Half Width	Δλ	IF=50mA (3)		60		nm
Rise Time	tr	IF=500mA		90		ns
Fall Time	tf	IF=500mA		30		ns

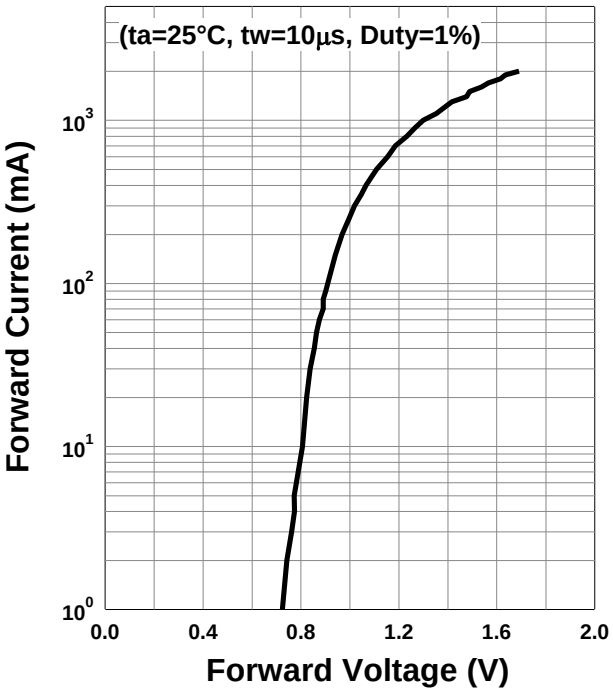
(1) Die shall be mounted on TO-18 gold header without resin coated.

(2) Radiated Power is measured by G8370-85.

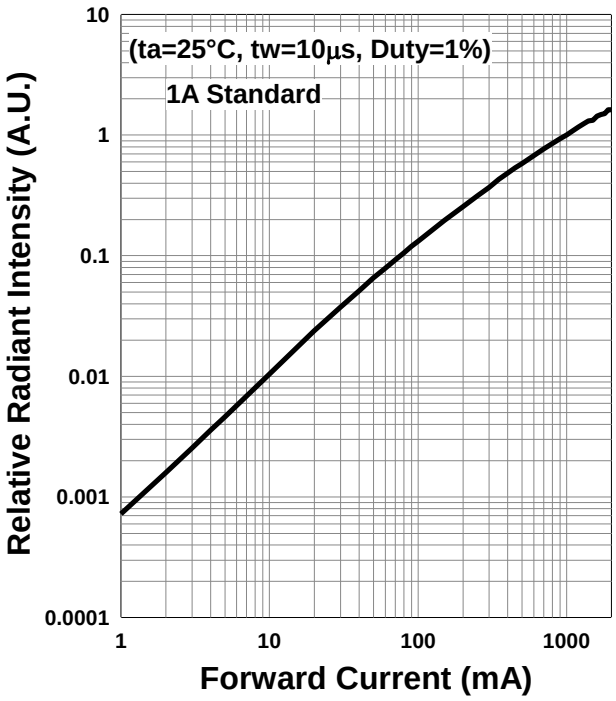
(3) Applied time is 10msec.

Typical Characteristic Curves

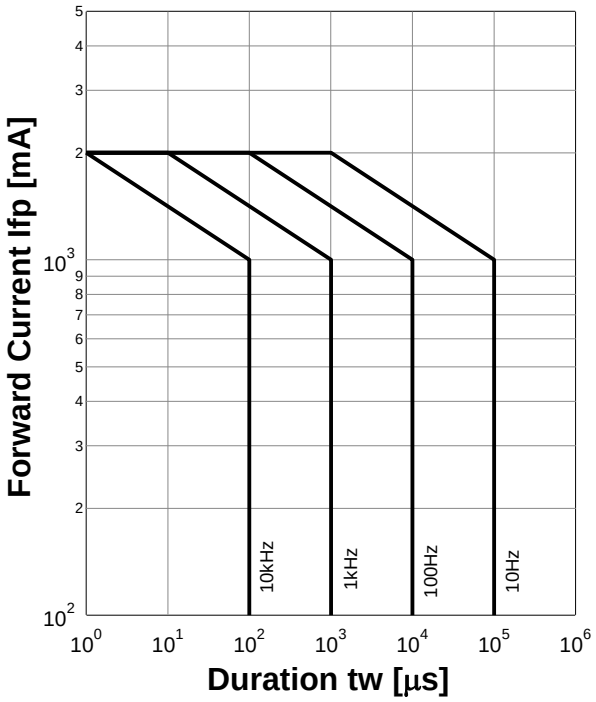
Forward Current - Forward Voltage



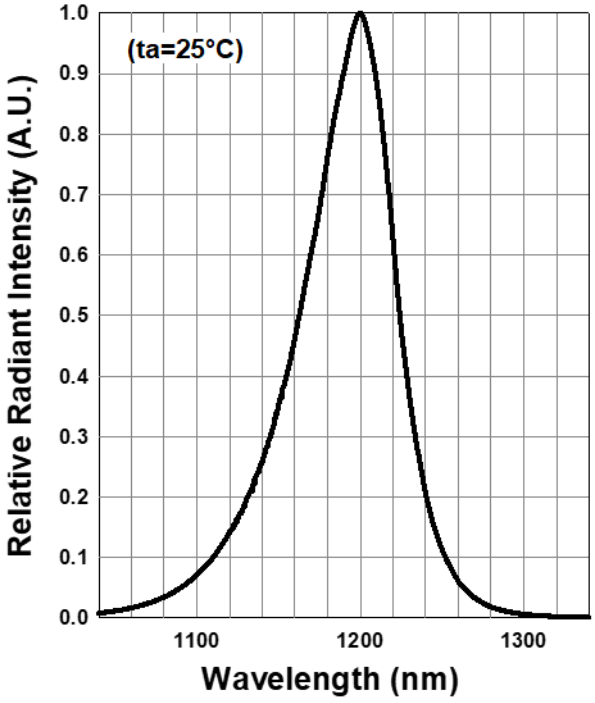
Relative Radiant Intensity - Forward Current

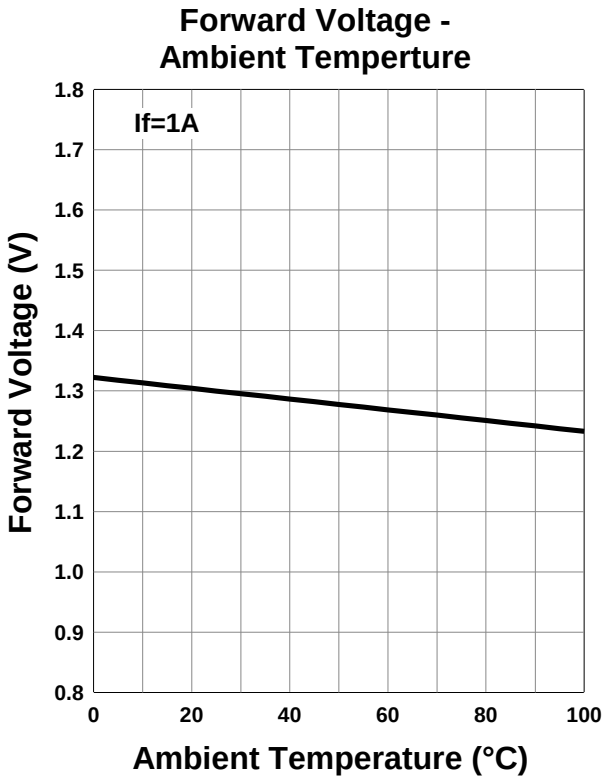


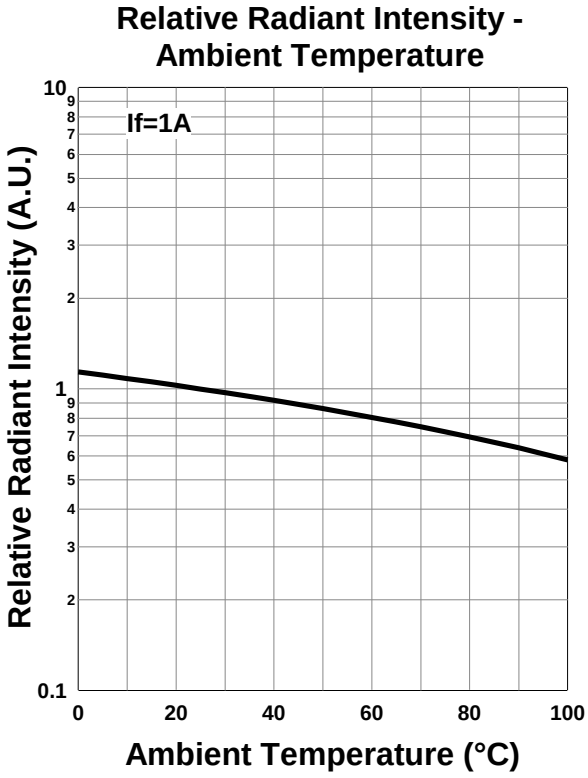
Forward Current - Pulse Duration

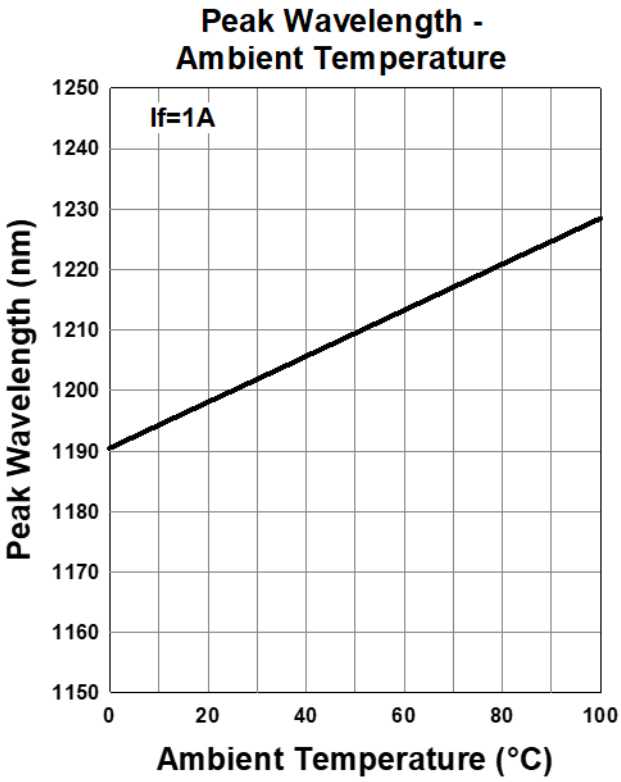


Relative Spectral Emission




Forward Voltage -
Ambient Temperture
If=1A
Forward Voltage (V)
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0
20
40
60
80
100
Ambient Temperature (°C)


Relative Radiant Intensity -
Ambient Temperature
If=1A
Relative Radiant Intensity (A.U.)
10
1
0.1
0
20
40
60
80
100
Ambient Temperature (°C)


Peak Wavelength -
Ambient Temperature
If=1A
Peak Wavelength (nm)
1250
1240
1230
1220
1210
1200
1190
1180
1170
1160
1150
0
20
40
60
80
100
Ambient Temperature (°C)

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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