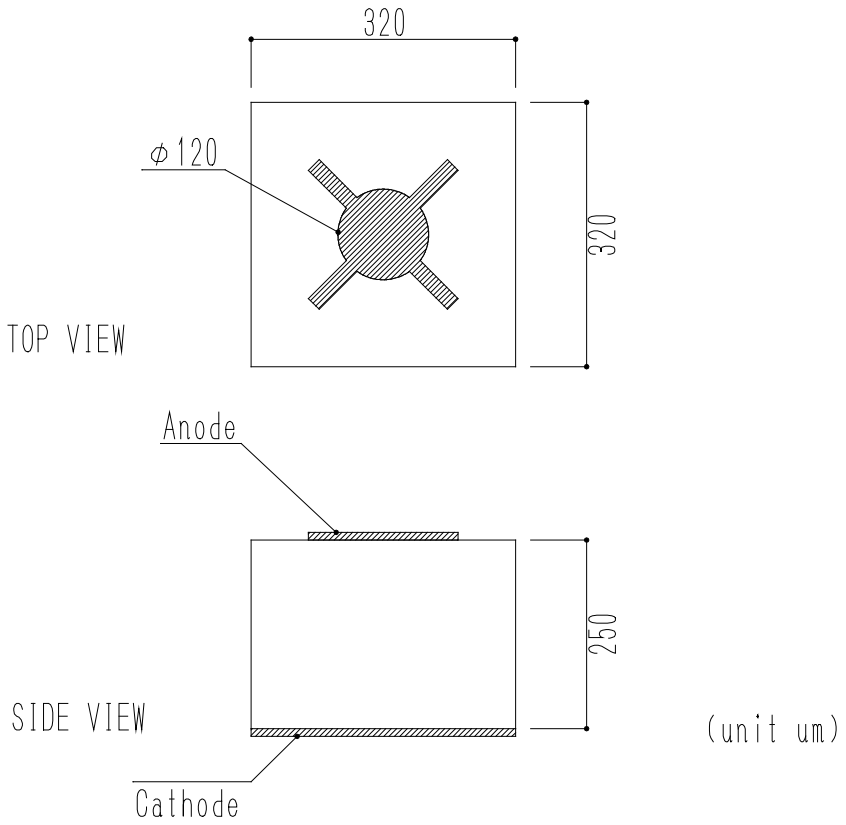
C1050S-35P

SWIR LED Chip

Outline



Characteristic

- Materials: InGaAsP
- Dimension
  - Chip Size: 320 +/-30μm x 320 +/-30μm
  - Chip thickness: 250 +/-50μm
  - P bonding pad: Φ120 +/-10μm
- Bonding pad: Au alloy
- Structure: Refer to drawing

Absolute Maximum Ratings (Tc=25°C)

Item	Symbol	Ratings	Unit
Forward Current	IF	100	mA
Pulse Forward Current	IFP	1000	mA
Reverse Voltage	VR	5	V
Junction Temperature	Tj	120	°C
Operating Temperature	Topr	-40 ~ +100	°C
Storage Temperature	Tstg	-40 ~ +100	°C

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

‡Storage Temperature (On Blue sheets): relative humidity is less than 70%.

Optical and Electrical Characteristics (Tc=25°C)

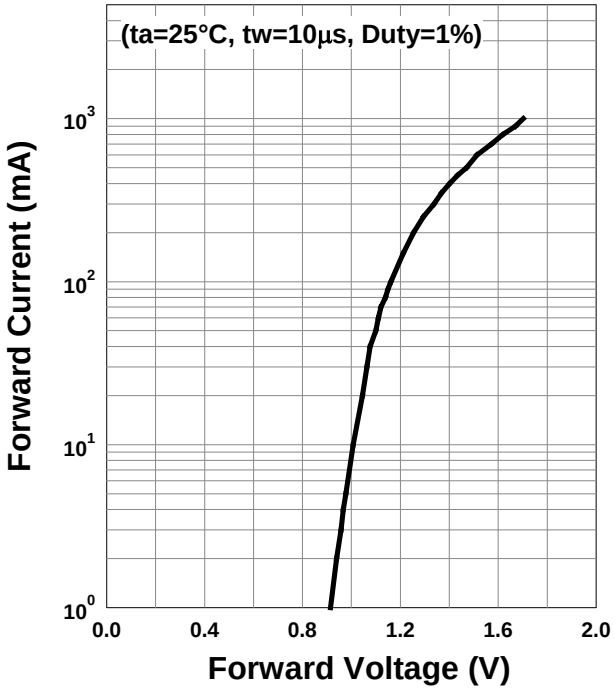
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Forward Voltage	VF		1.1	1.3	V	IF=50mA
	VFP		1.7			IFP=1A
Total Radiated Power	PO	2.7	4.5		mW	IF=50mA
			29			IFP=1A
Peak Wavelength	λp	1000	1050	1100	nm	IF=50mA
Half Width	Δλ		50		nm	IF=50mA
Rise Time	tr		30		ns	IF=50mA
Fall Time	tf		70		ns	IF=50mA

‡ Die shall be mounted on TO-18 gold header without resin coated. (Ta=25°C)

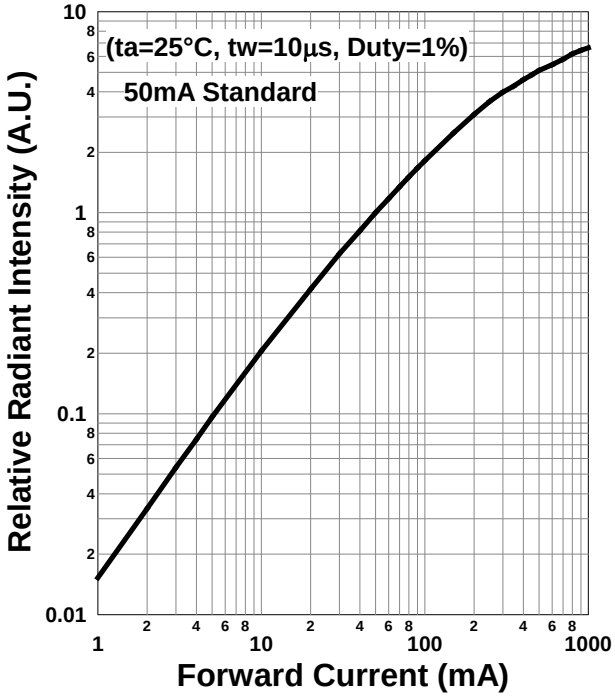
‡ Radiated Power is measured by G8370-85.

Typical Characteristic Curves

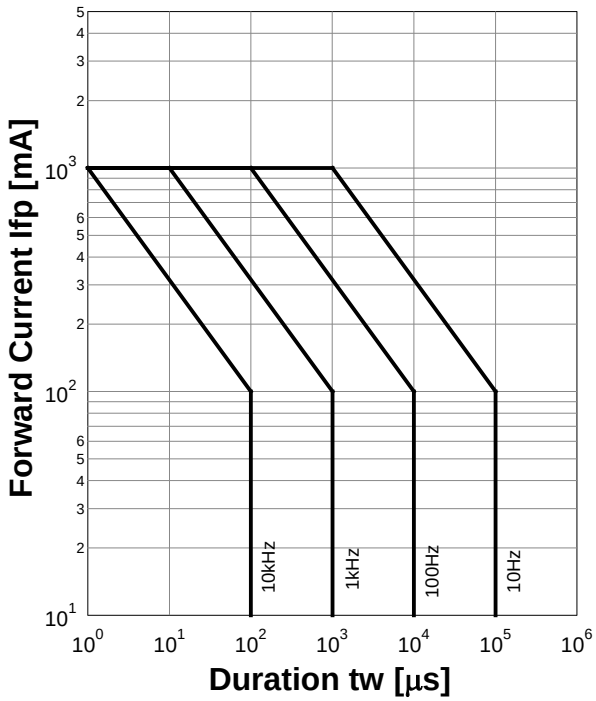
Forward Current - Forward Voltage



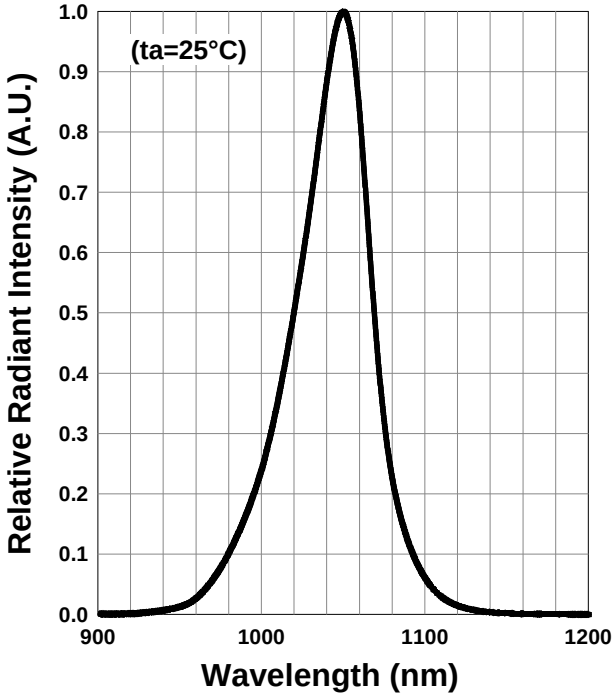
Relative Radiant Intensity - Forward Current

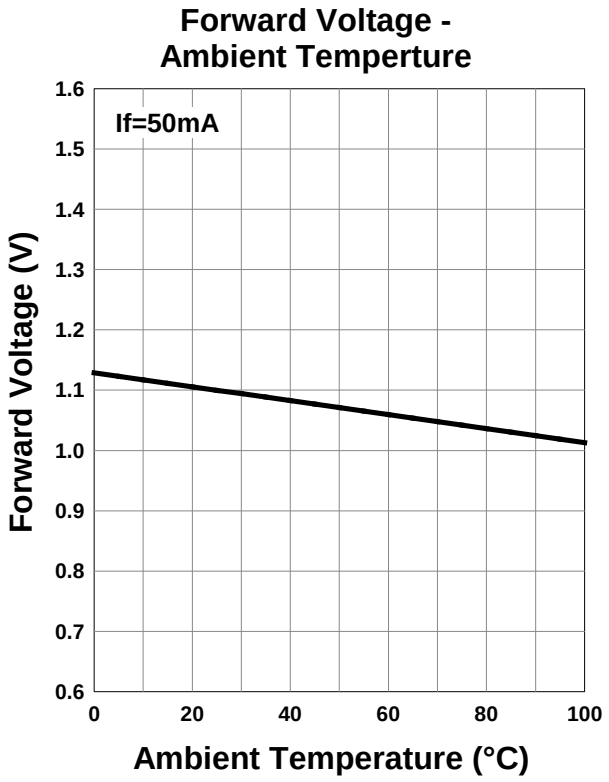


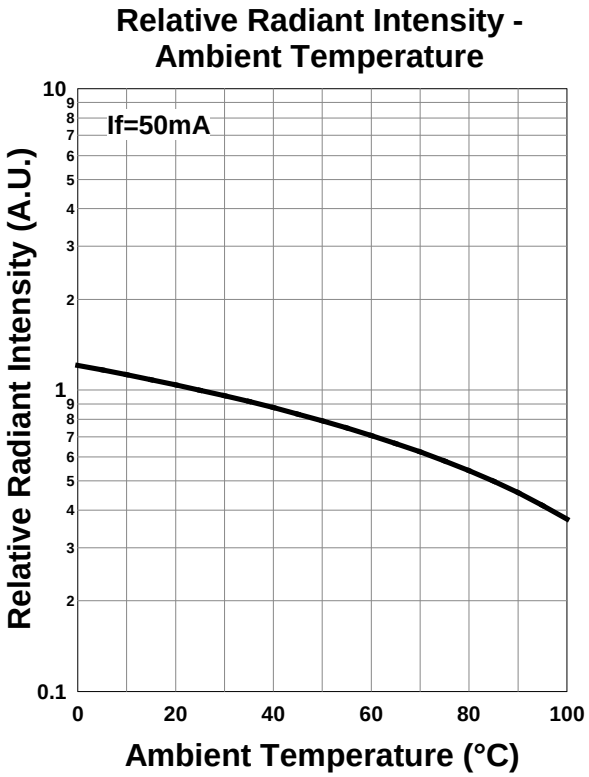
Forward Current - Pulse Duration

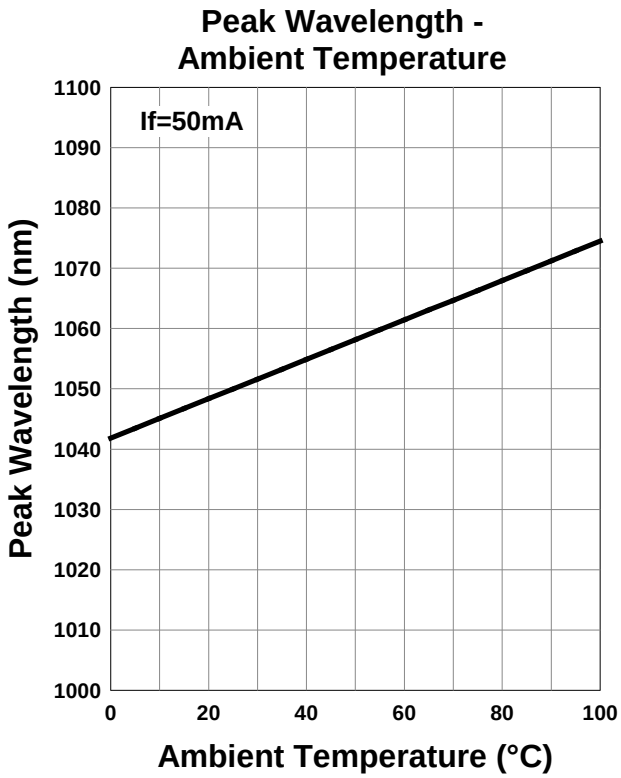


Relative Spectral Emission




Forward Voltage -
Ambient Temperture
If=50mA
Forward Voltage (V)
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0
20
40
60
80
100
Ambient Temperature (°C)


Relative Radiant Intensity -
Ambient Temperature
If=50mA
Relative Radiant Intensity (A.U.)
10
1
0.1
0
20
40
60
80
100
Ambient Temperature (°C)


Peak Wavelength -
Ambient Temperature
If=50mA
Peak Wavelength (nm)
1100
1090
1080
1070
1060
1050
1040
1030
1020
1010
1000
0
20
40
60
80
100
Ambient Temperature (°C)

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.

Products shown in this catalog are intended to be used for general electronic equipment. Products are not guaranteed for applications where product malfunction or failure may cause personal injury or death, including but not limited to life-supporting / saving devices, medical devices, safety devices, airplanes, aerospace equipment, automobiles, traffic control systems, and nuclear reactor control systems.

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