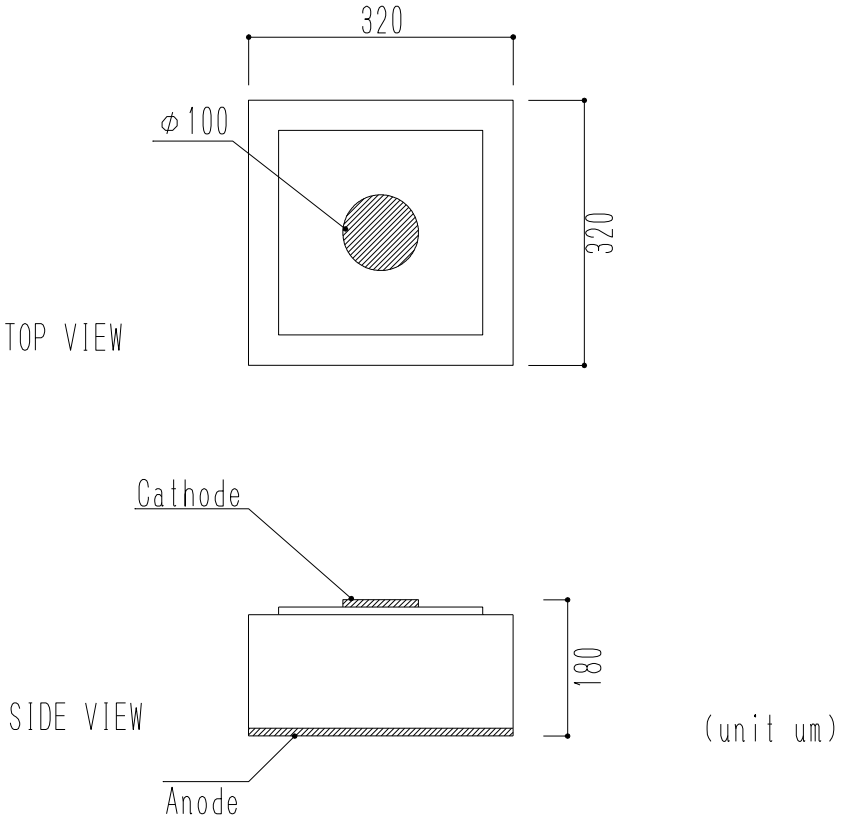
2020.07

C1750D-35P

PRELIMINARY

InGaAsP IR LED Chip

Outline



Characteristics

- Materials: InGaAsP
- Dimension
  - Chip Size: 320 +/-30μm x 320 +/-30μm
  - Chip thickness: 180 +/-25μm
  - N bonding pad: ϕ100 +/-10μm
- Bonding pad: Au

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Absolute Maximum Ratings

Item	Symbol	Condition	Ratings	Unit
Forward Current	IF	Ta=25 °C	100	mA
Pulse Forward Current	IFP	Ta=25 °C Duty 1%, Pulse Width 10us	1000	mA
Reverse Voltage	VR	Ta=25 °C	3	V
Junction Temperature	Tj	-	120	°C
Operating Temperature	Topr	-	-40 ~ +85	°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)(1)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Forward Voltage	V_{F1}	IF=50mA (3)		1.0	1.3	V
	V_{FP}	IFP=1A Duty 1%, Pulse Width 10us		2.6		
Total Radiated Power(2)	P_{O1}	IF=50mA (3)		2.6		mW
	P_{Op}	IFP=1A Duty 1%, Pulse Width 10us		12		
Peak Wavelength	λ_p	IF=50mA (3)	1720	1750	1780	nm
Spectral Half Width	$\Delta\lambda$	IF=50mA (3)		185		nm
Rise Time	tr	IF=50mA		60		ns
Fall Time	tf	IF=50mA		30		ns

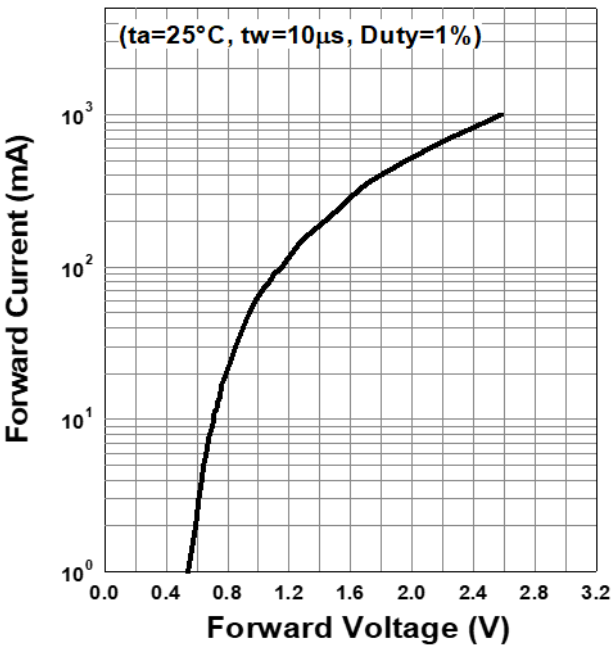
(1) Die shall be mounted on TO-18 gold header without resin coated.

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

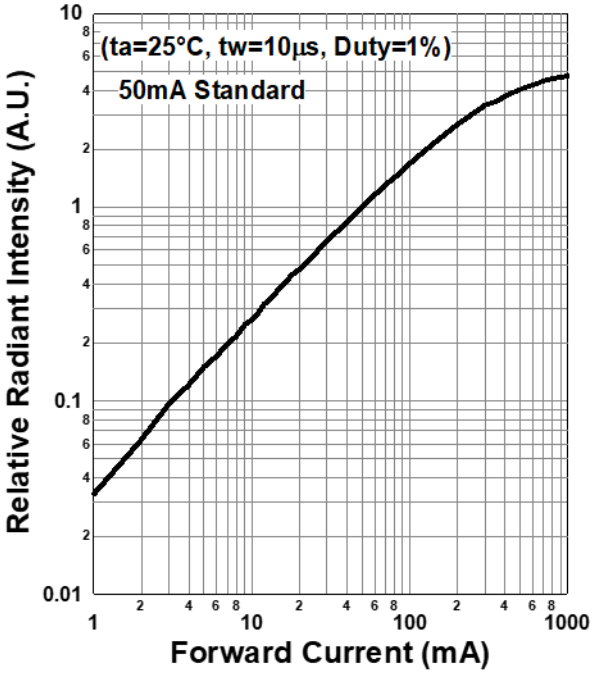
(3) Applied time is 10msec.

Typical Characteristic Curves

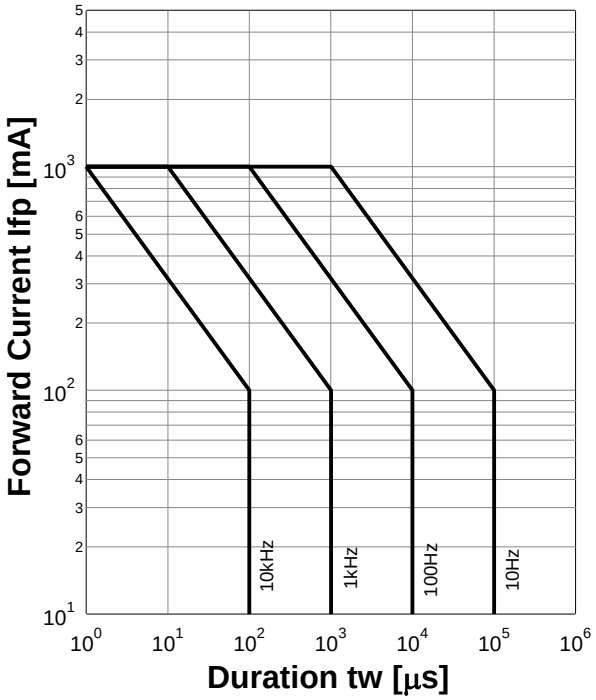
Forward Current - Forward Voltage



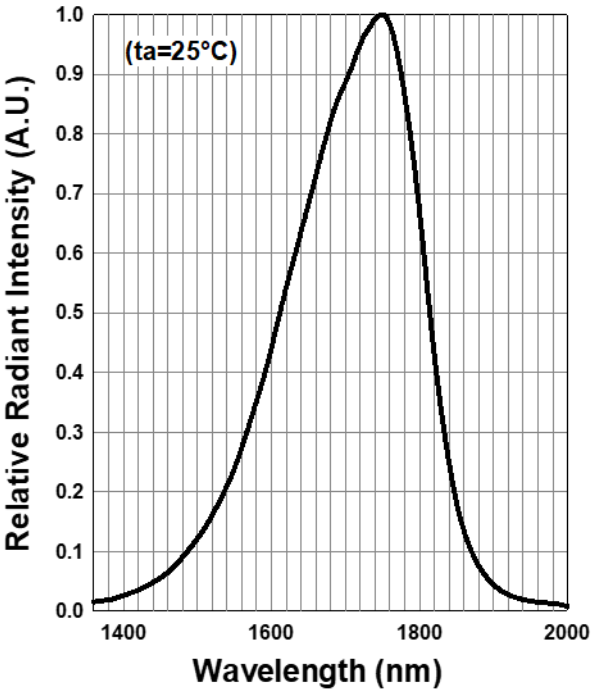
Relative Radiant Intensity - Forward Current



Forward Current - Pulse Duration



Relative Spectral Emission



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.

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.

The product is manufactured by USHIO Inc. and the spec information is also from USHIO Inc.