

Description

The IGA1000-VT covers a wide spectral response from 0.4 μm to 1.7 μm . While a standard InGaAs PIN photodiode has a spectral response ranging from 0.8 μm to 1.7 μm , the IGA1000-VT has a sensitivity extending to 0.4 μm at the short wavelength end.

Custom chip sizes and package styles are available upon request.

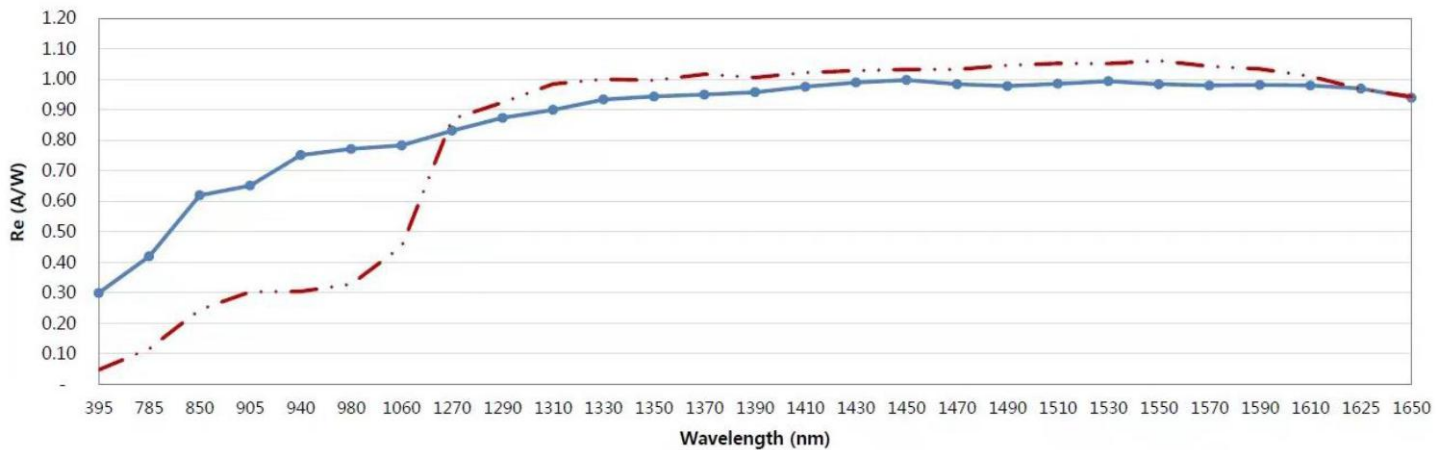
Features

- Wide spectral response range
- Low noise, low dark current
- Large active area available

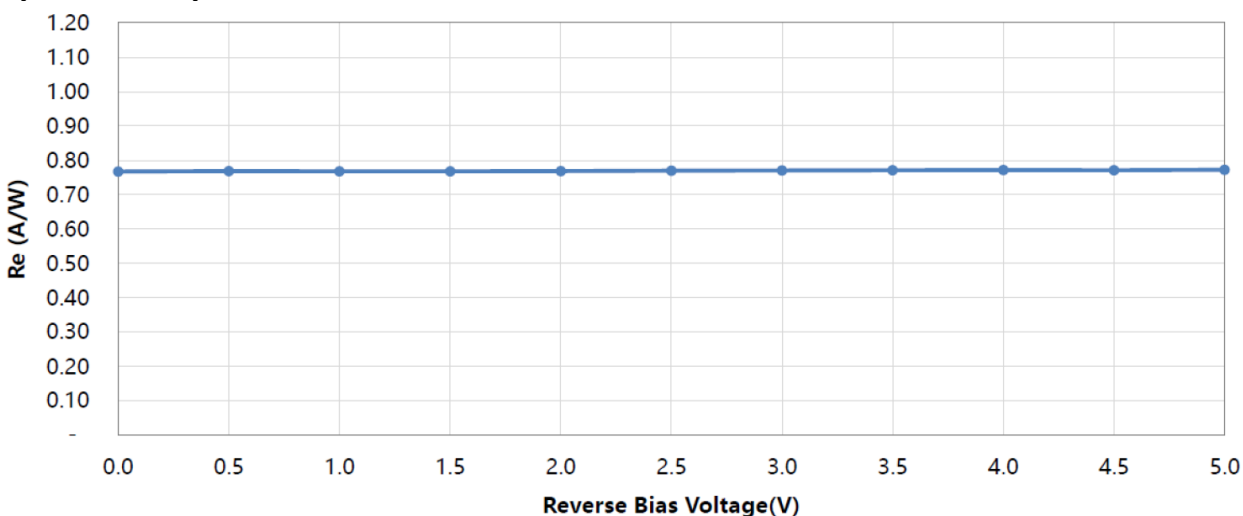
Application

- Optical Instrumentation
- NIR Sensing
- Laser Power Measurement
- Power meters

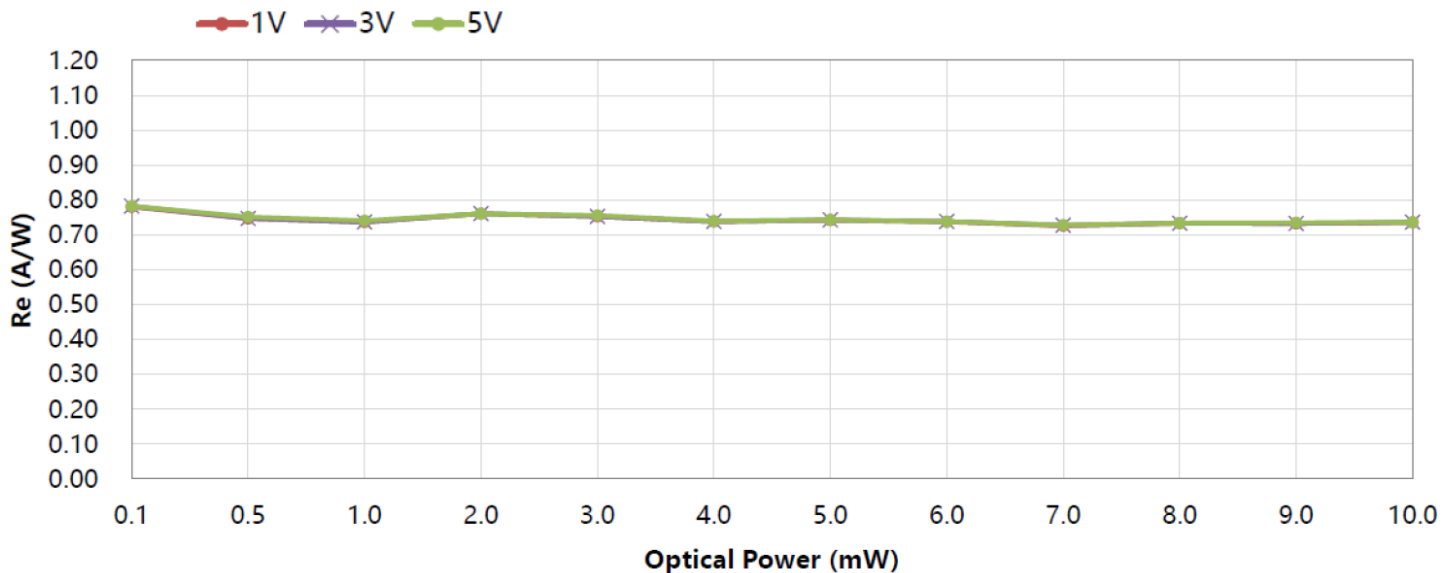
Spectral Response, $P_{in} = -3\text{dBm}$, $V_r = 5\text{V}$



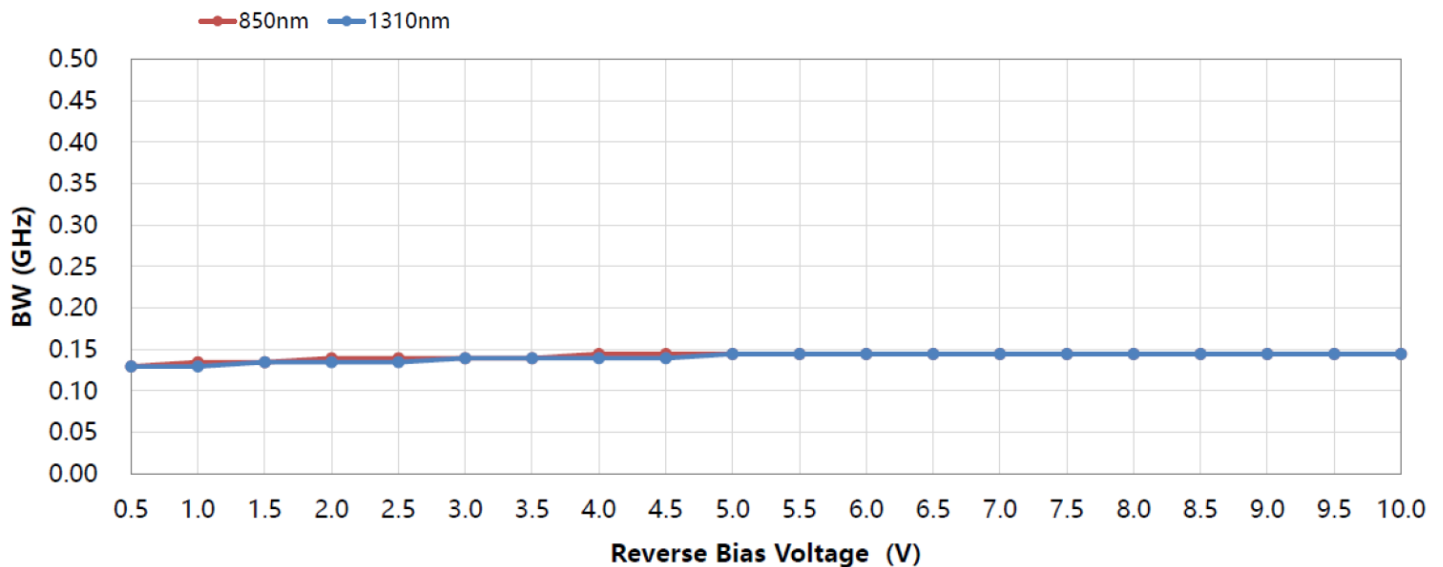
Spectral Response versus V_r $T_a = 22 \pm 3^\circ\text{C}$, $\lambda = 940\text{nm}$, $P_{in} = -3\text{dBm}$



Spectral Response versus Optical Power $T_a = 22 \pm 3^\circ\text{C}$, $\lambda = 940\text{nm}$

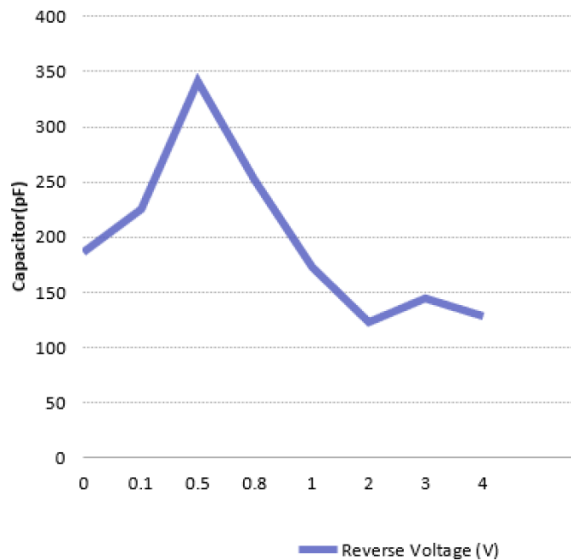


Bandwidth versus Vr $T_a = 22 \pm 3^\circ\text{C}$, $\lambda = 940\text{nm}$, $\text{Pin} = -3\text{dBm}$, $\text{RL} = 50$, Cut-off: -3dB

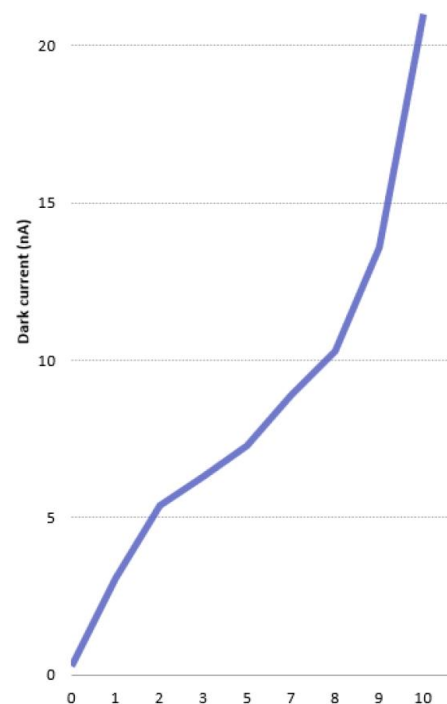


Capacitor vs. Reverse Voltage

Ta 22+,- 3°C, f = 1 MHz



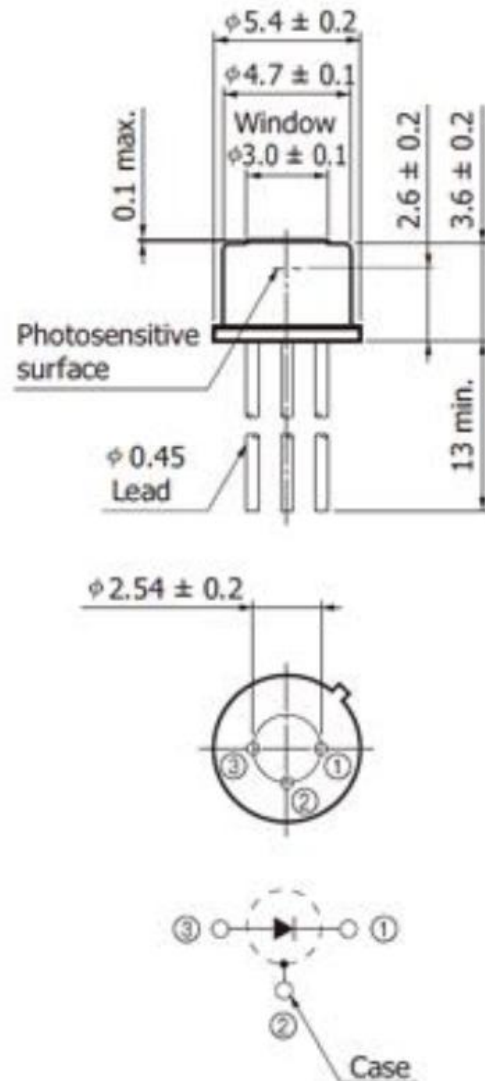
Dark Current versus Vr, Ta = 22+,-3°C, Vr = 5V



Electro-optical Parameters and absolute Maximum Ratings $T_a = +25^\circ\text{C}$

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Chip size	s	1.2*1.2				um
Active area	A	$\Phi 1000$				um
Forward current	I_F	10				mA
Reverse current	I_R	10				mA
Dark current	I_D	$V_R=0V$		0.30		nA
		$V_R=1V$		3.0		
Rise time	t_R	$V_R=0V; R_L=50\Omega, f=1\text{MHz}$		25	35	ns
Forward Voltage	V_F	$I_F=1\text{mA}$			1	V
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=10\mu\text{A } E_v=0\text{lX}$	2		30	V
Junction Capacitance	C_J	$V_R=5V f=1\text{MHz}$		40		pF
Photo sensitivity	S_R	$V_R=0.1V, \lambda=650\text{nm}$	0.35			A/W
		$V_R=0.1V, \lambda=850\text{nm}$	0.65			
		$V_R=0.1V, \lambda=1310\text{nm}$	0.90			
Spectral Application Range	λ_{range}		300		1700	nm
Spectral Response-Peak	λ_p			1550		nm
Shunt resistance	R_{sh}	$V_R=10\text{mV}$		2.0		M Ω
-3dB Bandwidth	BW	$V_R=0.1V; R_L=50\Omega$		5		MHz
		$V_R=1V; R_L=50\Omega$		8	10	
Angular Resp 50% Resp Pt	$\theta_{1/2}$			± 35		Degrees
Noise Equivalent Power	NEP	$V_R=5V \lambda=1550\text{nm}$		2.16×10^{-14}		W/Hz ^{1/2}

Package TO18 3-PIN



All dimensions in "mm"

The information in this data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omissions. The specifications are subject to change without notice.