

Fast Si PIN photo diode IP-Si 106. IP-Si 106-A

Characteristics:

- Planar Front Incident Structure .
- Fast Response .
- Low Dark Current .
- High Responsivity .
- High Reliability .



Application:

- Distance measurement
- 0.4-1.1 μ m Transient Process
- Fast Physical and Chemical Process Optical detection
- Light Detection, YAG Pulse Power measurement, and
- Fiber Optical Communication Detection

Mechanism

The device is a compound Si-PIN structure. To reach high response, back side hole etching process is used for thinner I layer, when carrier go through the floating area, optical current will appear .Slow optical carrieIP are shorted for fast response purpose.

Technical Parameter(TA=23°C)

Parameter	Symbol	Test Conditions	Typical		Unit
			GT106	GT106-A	
Active Area	Φ		100	100 (GT106-A)	μ m
Optical Parameter	Spectrum Response Range	λ	500~1100		nm
	Responsivity	R_e $V_R=15V$ $\lambda=900nm$	0.3	0.3	A/W
	Response Time	t_r $V_R=15V$	0.7		nS
	Couple loss	η	1		db
Electrical Parameter	Dark Current	I_D $V_R=15V$	1	1	nA
	Reverse Break Down Voltage	V_{BR} $I_R=10\mu A$	40	40	V
	Capacitance	C_j $f=1MHz$ $V_R=40V$	0.8		pF
Operating Voltage	V_R	15		V	
Package		Coaxial II			
Saturation Power $\leq 0.1w/cm^2$					

Typical Operating Characteristics:

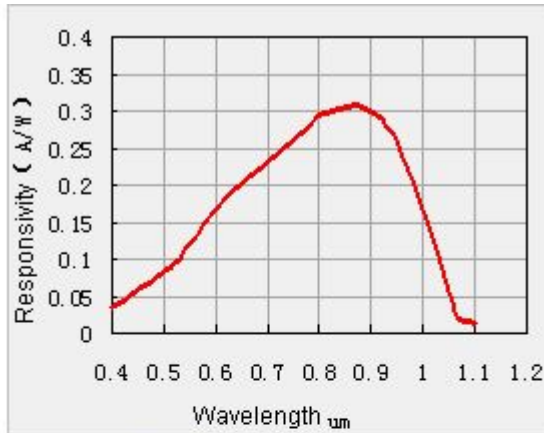


Fig.1 Spectrum response curve

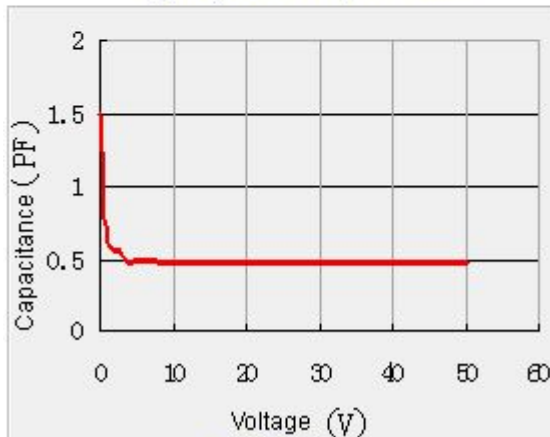
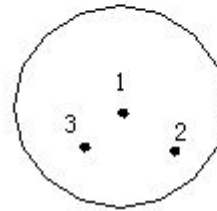
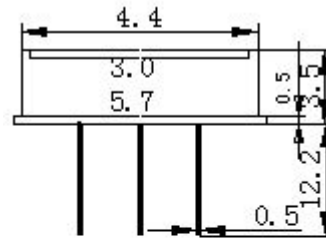
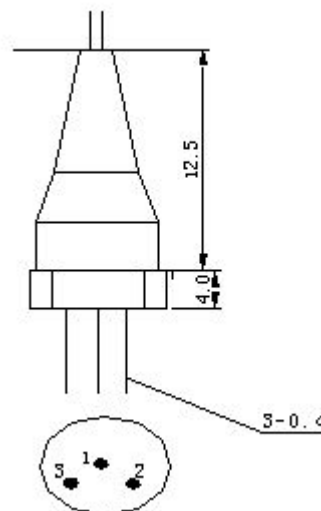


Fig.2 C-V curve

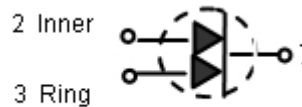
Package and the usage (Lead is numbered from the back side)



Coaxial II



Coaxial II with the fiber



Note:

ReveIpe Bias; No Vibration and shock when device operating; Static Charge Protection (Storage, Operating) ; Clean the fiber tip with degrease cotton and ethanol .