



## 10Gbps 1260-1620nm InGaAs PIN Photodiode Chip

Part No. PDC-13B10G

### Features

- 1260nm~1620nm InGaAs PIN photodiode chip
- Data rate: 10Gbps
- Optimized for fiber optic application
- Low capacitance and dark current
- Non-hermetic application



### Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Forward current		10	mA	
Reverse current		2	mA	
Reverse voltage		20	V	
Optical power		2	mW	

Electro-Optical Characteristics (T = 25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity	R	0.9	1.1		A/W	V <sub>R</sub> =1.5V, λ=1550nm@25°C
		0.8	0.9			V <sub>R</sub> =1.5V, λ=1310nm@25°C
Dark current	I <sub>D</sub>		0.2	1	nA	V <sub>R</sub> =5V
Breakdown voltage	V <sub>BD</sub>	25	40		V	I <sub>R</sub> =10μA
Capacitance	C		0.25	0.27	pF	V <sub>R</sub> =1.5V, f=1MHz
			0.20			V <sub>R</sub> =5V, f=1MHz
Bandwidth	BW		9		GHz	V <sub>R</sub> =1.5V



## Typical Characteristics

Fig. 1 Typical Dark Current vs. Forward Current

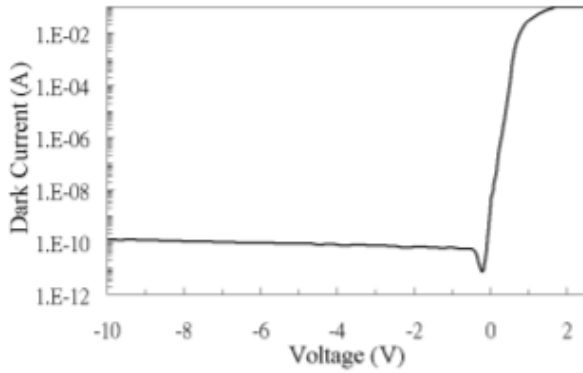


Fig. 2 Typical Photo-Current

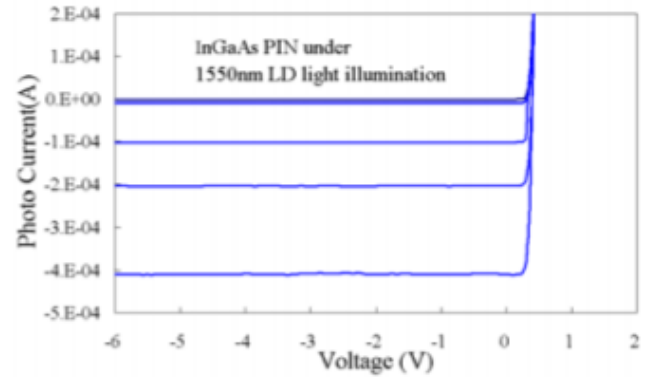


Fig. 3 Typical Breakdown Curve

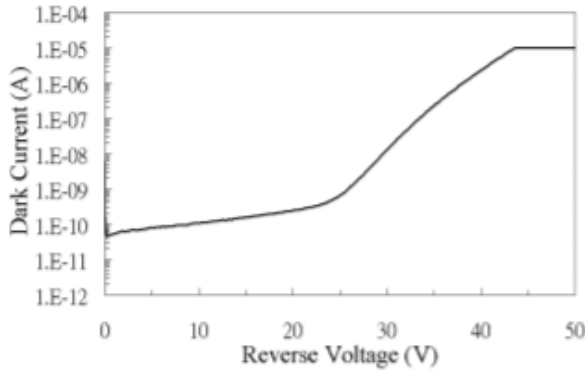
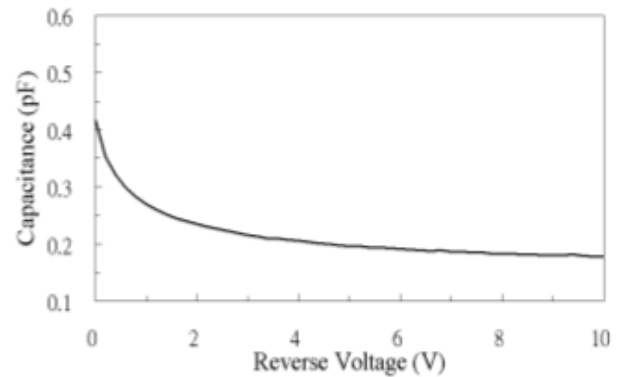
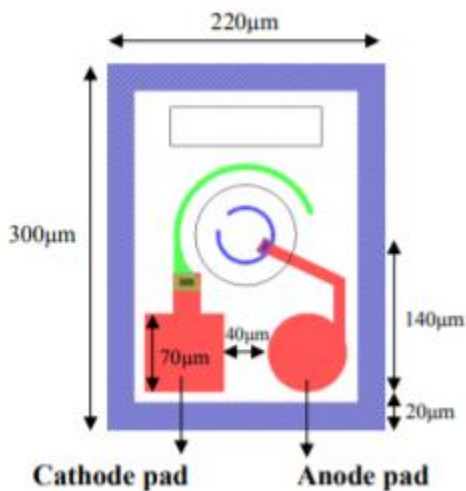


Fig. 4 Typical C-V Curve



## Outline Diagram



- Chip size: 220µm x 300µm typical
- Chip thickness: 200µm ±12.5µm
- Sensitive area: Typical 50µm in diameter

Note: Specifications are subject to change without notice.

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