



## 10Gbps 850nm GaAs PIN Photodiode Chip

Part No. PDC-85B10G

### Features

- 850nm GaAs PIN photodiode chip
- Data rate: 10Gbps
- High responsivity at 850nm
- Optimized for fiber optic application
- Low dark current and low capacitance
- Planarized and non-hermetic design



### Specifications

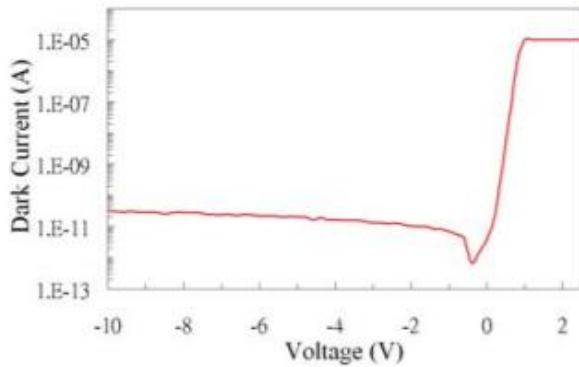
Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Reverse current		2	mA	T = 25°C
Forward current		10	mA	T = 25°C
Reverse voltage		20	V	T = 25°C

Electro-Optical Characteristics (T = 25°C)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity	R	0.55	0.65		A/W	V <sub>R</sub> = 1.5V, λ = 850nm
Dark current	I <sub>D</sub>		0.1	1	nA	V <sub>R</sub> = 5V
Breakdown voltage	V <sub>BD</sub>	50			V	I <sub>R</sub> = 10μA
Capacitance	C		0.22	0.25	pF	V <sub>R</sub> = 1.5V, f = 1MHz
			0.20	0.23		V <sub>R</sub> = 5V, f = 1MHz
Bandwidth	BW		10		GHz	V <sub>R</sub> = 5V

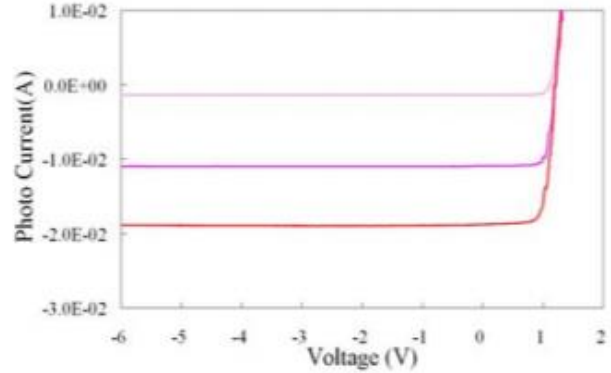


## Typical Characteristics

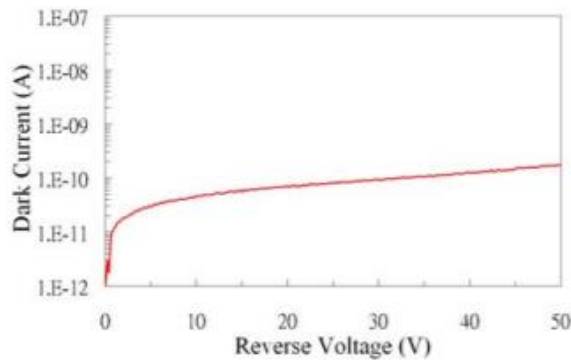
Typical Dark Current vs. Forward Current



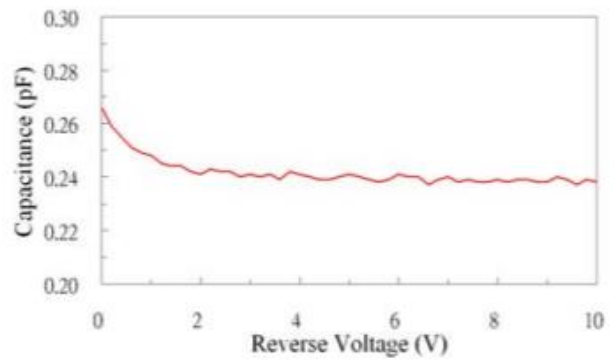
Typical Photo-Current



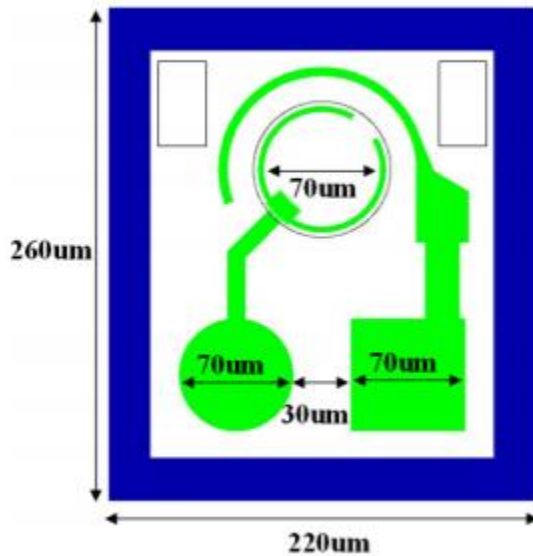
Typical Breakdown Curve



Typical C-V Curve



## Outline Diagram



- Chip size: 260 $\mu$ m x 220 $\mu$ m typical
- Chip thickness: 200 $\mu$ m  $\pm$ 12.5 $\mu$ m
- Sensitive area: Typical 70 $\mu$ m in diameter

Note: Specifications are subject to change without notice.