



## PDC-85A25G 25Gbps GaAs PIN Photodiode Chip

### Overview

The Lasermate PDC-85A25G is a GaAs photodiode chip with high responsivity at 850nm, low dark current and low capacitance. PDC-85A25G is designed for use in 25Gbps fiber optic data communication applications.

### Features

- GaAs PIN photodiode chip
- Data rate: 25Gbps
- High responsivity at 850nm
- Optimized for fiber optic application
- Low dark current and low capacitance
- Planarized and non-hermetic design

### Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

### 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> = 2V, λ = 850nm
Dark current	I <sub>D</sub>		0.1	1	nA	V <sub>R</sub> = 5V
Breakdown voltage	V <sub>BD</sub>	30			V	I <sub>R</sub> = 10μA
Capacitance	C		0.1	0.12	pF	V <sub>R</sub> = 2V, f = 1MHz
Bandwidth	BW		17		GHz	V <sub>R</sub> = 2V

## Typical Characteristics

Fig 1. Typical Dark Current vs. Forward Current

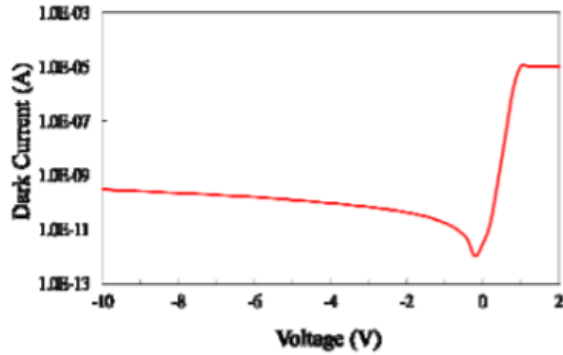


Fig 2. Typical Photo-Current

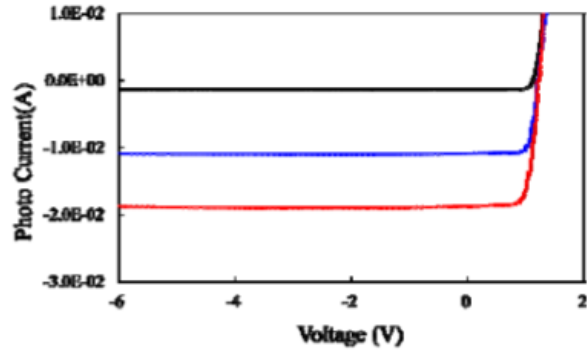


Fig 3. Typical Breakdown Curve

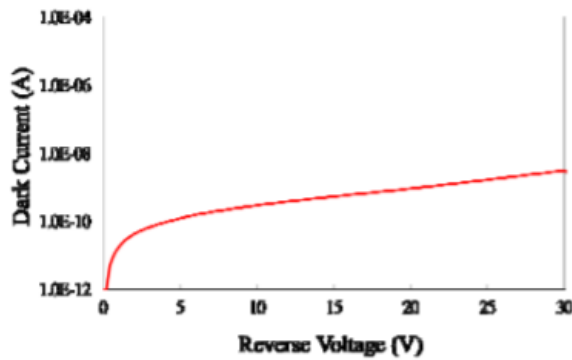
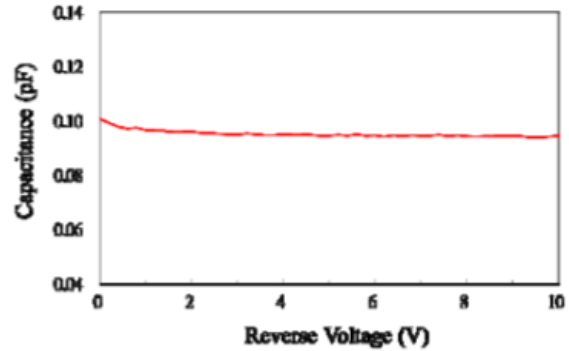
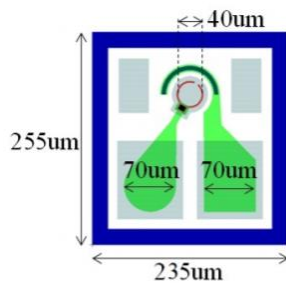


Fig 4. Typical C-V Curve



## Outline Diagram



- Chip size: 235µm x 255µm typical
- Chip thickness: 150µm ±12.5µm
- Sensitive area: Typical 40µm in diameter

Note: Specifications are subject to change without notice.