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PDA4-13A1G
1.5GHz InGaAs PIN Photodiode 1x4 Chip Array

Overview

The Lasermate PDA4-13A1G is an InGaAs photodiode chip, 1x4 array, with bandwidth >1.5GHz and designed for use in fiber optic data communication applications.

Features

- InGaAs PIN photodiode array
- 1x4 array bar with 250um pitch
- Sensitive area 70um
- Bandwidth >1.5GHz
- Optimized for fiber optic application

Applications

- High speed data communication
- Gigabit Ethernet
- Fiber channel

Specifications

Electro-Optical Characteristics (For each single PIN photodiode element)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity (1)	R		0.9		A/W	V_R=5V, λ=1300nm
Responsivity Uniformity (2)	DR			3	%	
Surface Reflectivity	R_S		1		%	λ=1300nm
Dark Current	I_D		0.1	1.0	nA	V_R=5V
Breakdown Voltage	V_{BD}	20	35		V	I_r=10mA
Capacitance	C		0.7	0.8	pF	V_R=5V, f=1MHz
Bandwidth	BW	1.5			GHz	V_R=5V

Notes:

1. AR coating optimized for specific 1300nm wavelength.
2. The difference of the maximum and minimum responsivity of each photodiode of an array should not exceed 3%.

Dimensions					
Parameters	Symbol	Min.	Typ.	Max.	Unit
Number of PIN photodiode elements	N		4		
Pitch	P		250		um
Chip length	L		1000		um
Chip width	w		250		um
Chip thickness	t		200		um
Diameter bond pads			80		um
Diameter sensitive area			70		um

Typical Characteristics

Fig. 1 Typical Forward Current and Dark Current

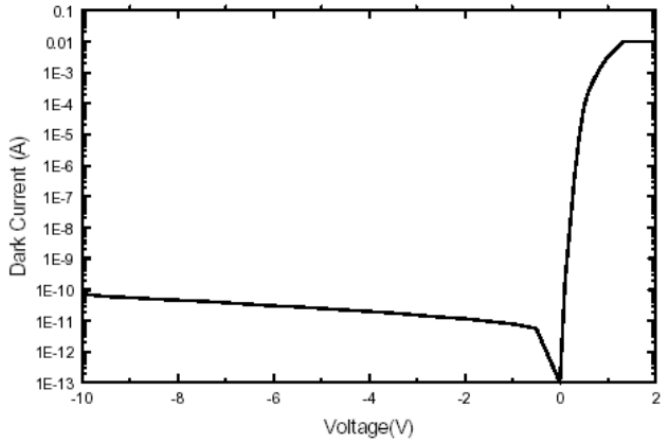


Fig. 2 Typical Photo-Current

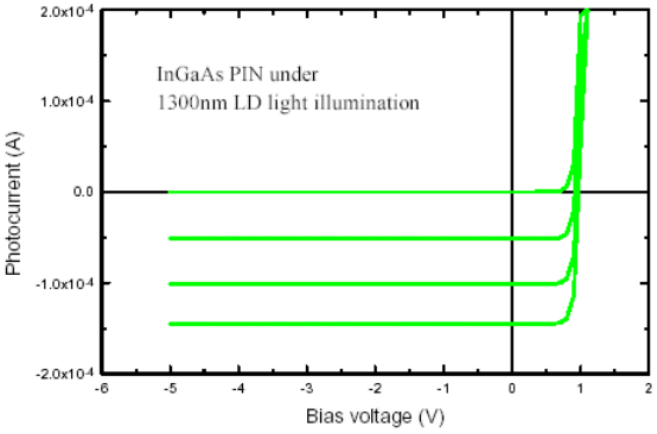


Fig. 3 Typical Breakdown Curve

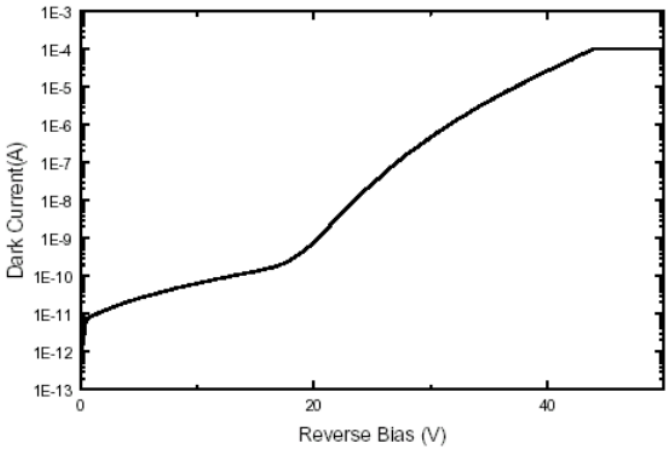
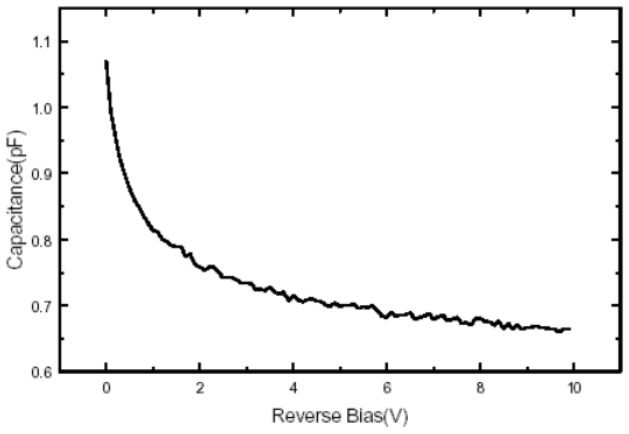
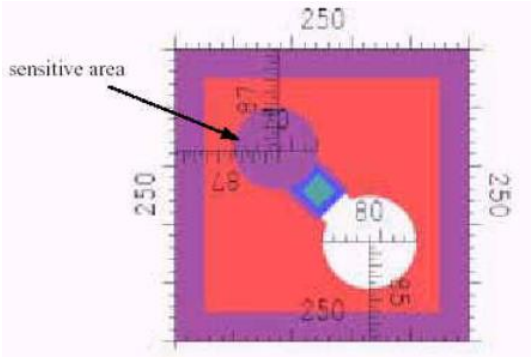


Fig. 4 Typical C-V Curve



Outline Diagram of Single Element (unit: um)



Note: Specifications are subject to change without notice.