Spectrolab

Optoelectronic Products

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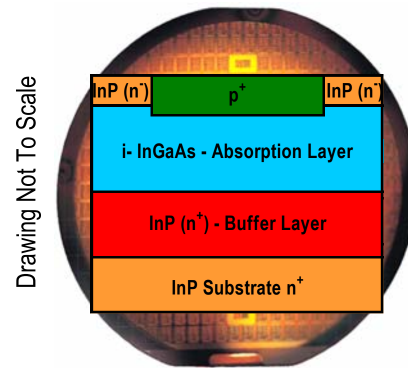
10 Gb/s InGaAs P-I-N Photodetector Die

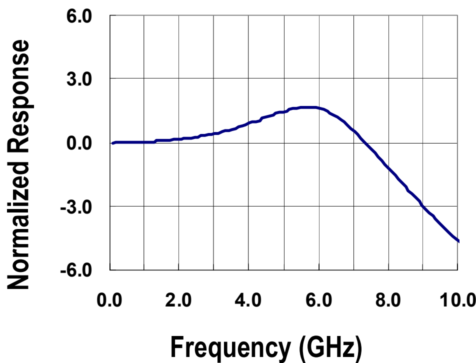
General Description & Features

- InGaAs P-I-N photodetectors offered in die form for 10Gb/s telecommunication applications.
- Robust Metal Organic Vapor Phase Epitaxially grown planar structure with in-situ p+ Zn doping.
- SiN passivated device with AR coating optimized for 1550/ 1310 applications.
- Very low dark currents for highest receiver sensitivity.
- Tight control of device characteristics: capacitance, responsivity, reverse leakage, contact resistance.
- Available in large volume.



10 Gb/s InGaAs P-I-N Photodetector Die Structure

Frequency Response

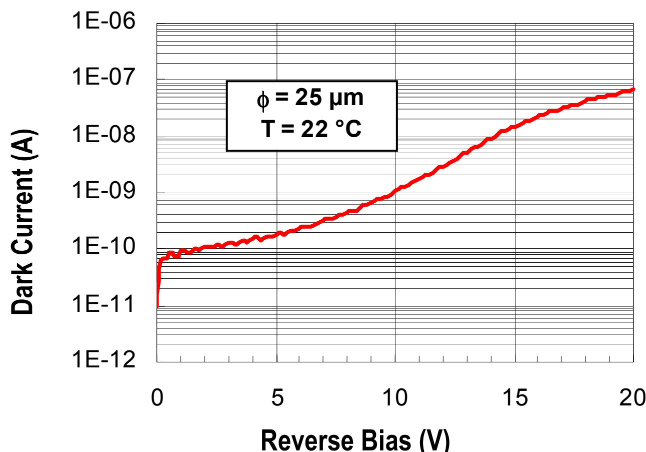


InGaAs P-I-N Photodetectors:

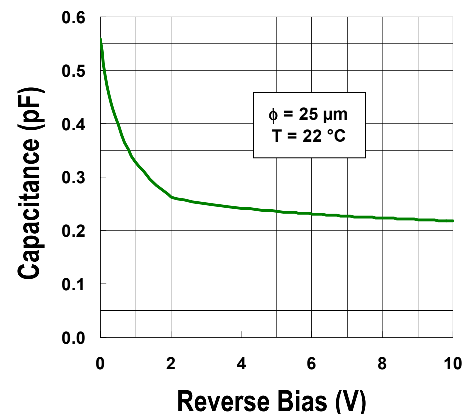
Optical and Electrical Characteristics @ 22°C

Parameter	Value
Active Area (Diameter in µm)	25
Contact Pad (µm diameter)	40
Die Size (mils)	14 x 14
Dark Current (nA @ -5 V)	<0.1 (Typ.) 0.2 (Max.)
Responsivity (A/W @ 1550 nm)	1.0 (Typ.) 0.90 (Min.)
Typical Capacitance (pF @ -5 V)	0.2 (Typ.) 0.30 (Max.)
Breakdown Voltage (V @ 10 µA)	>20
Frequency Response (GHz @ R_L = 50 Ω)	9.0

Device Dark Currents



InGaAs P-I-N Typical Capacitance



The information contained on this sheet is for reference only. Actual specifications for delivered products may vary. 10/18/02

ISO9001:2000 REGISTERED

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