

Spectrolab

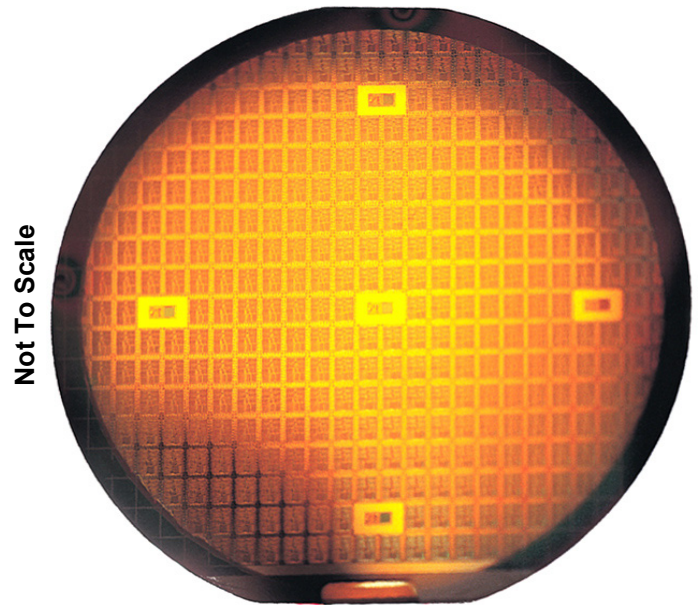
ILLUMINATION & SENSOR PRODUCTS

www.spectrolab.com

2.5 Gb/s & Monitor InGaAs P-I-N Photodetector Die

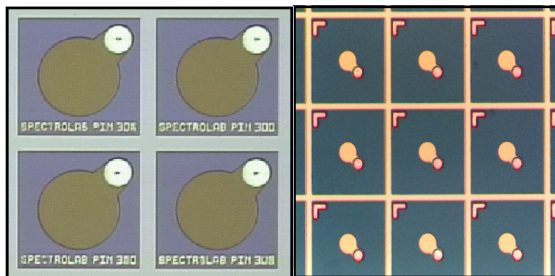
General Description & Features

- Spectrolab offers Telcordia qualified InGaAs P-I-N photodetector device dies for the Telecommunication markets.
- Active area sizes: 75 μm and 300 μm . Custom designs available.
- Planar structures.
- AR coating and SiN passivated structures.
- Typical device die characteristics: low dark current, low capacitance and high quantum efficiency.
- Wafer capability: 2", 3" and 4" on InP substrates
- High volume and low cost production.
- Custom development services available for unique applications.



Not To Scale

InGaAs P-I-N Photodetector

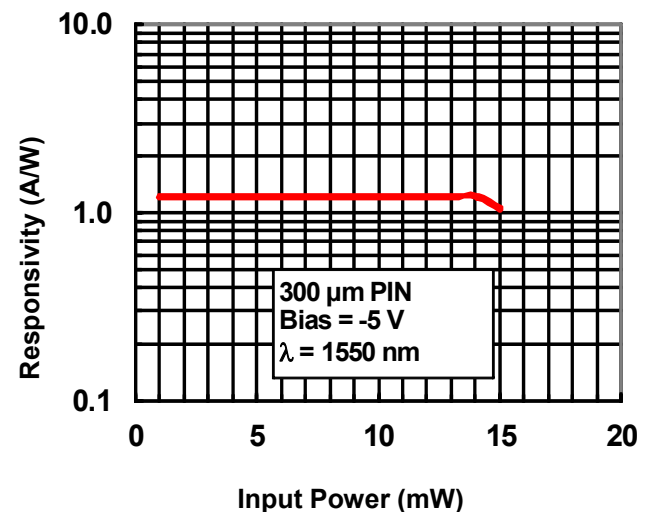


300 μm and 75 μm Device Dies

InGaAs P-I-N Photodetectors: Optical and Electrical Characteristics @ 25°C

Active Area (Diameter in μm)	75	300
Contact Pad (μm diameter)	40	100
Die Size (mils)	14 x 14	20 x 20
Dark Current (nA @ -5 V)	<0.1 (typical) 0.5 max	<0.1 (typical) 0.5 max
Responsivity (A/W @ 1550nm)	1.0 (typical) 0.9 min	1.0 (typical) 0.9 min
Capacitance (pF @ -5 V)	0.4 (typical) 0.5 max	4.0 (typical) 6.0 max
Breakdown Voltage (V @ 10 μA)	>20	> 20
Frequency Response (GHz @ $R_L = 50 \Omega$)	>2.0	N/A

Linearity Plot for 300 μm InGaAs Detector



The information contained on this sheet is for reference only. Actual specifications for delivered products may vary. Rev. A 5/24/12



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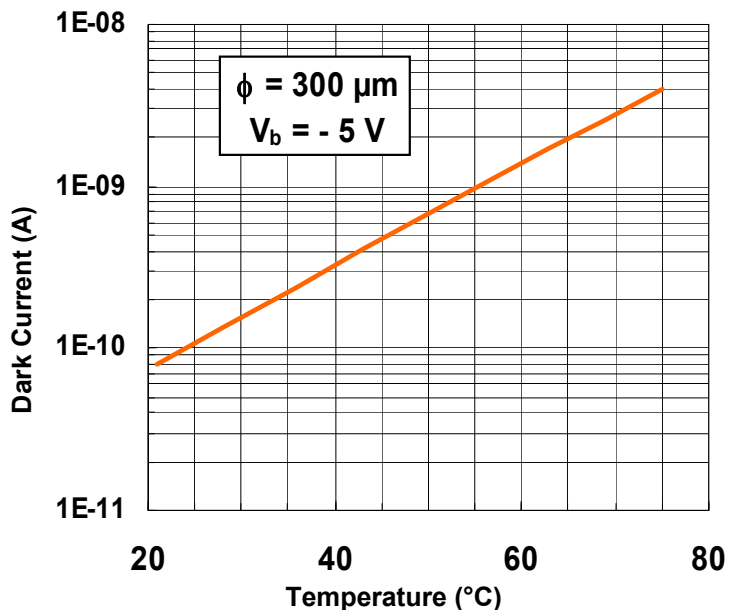
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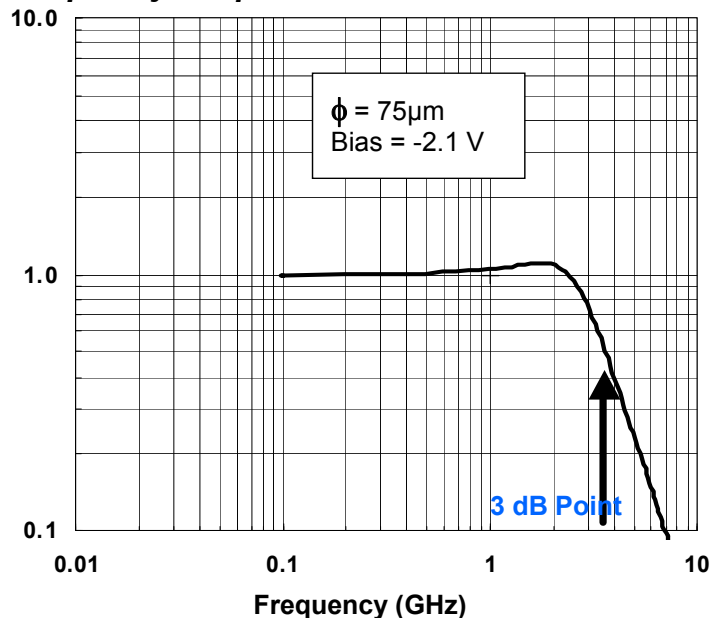
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2.5 Gb/s & Monitor InGaAs P-I-N Photodetector Die

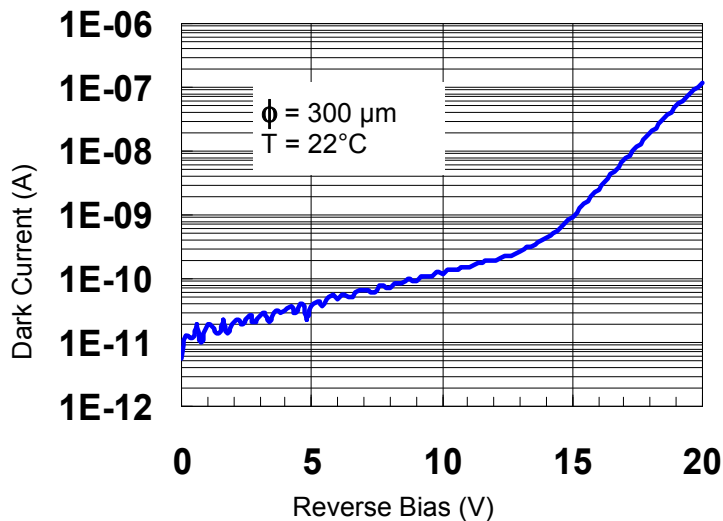
InGaAs P-I-N Dark Current vs. Temp. Data



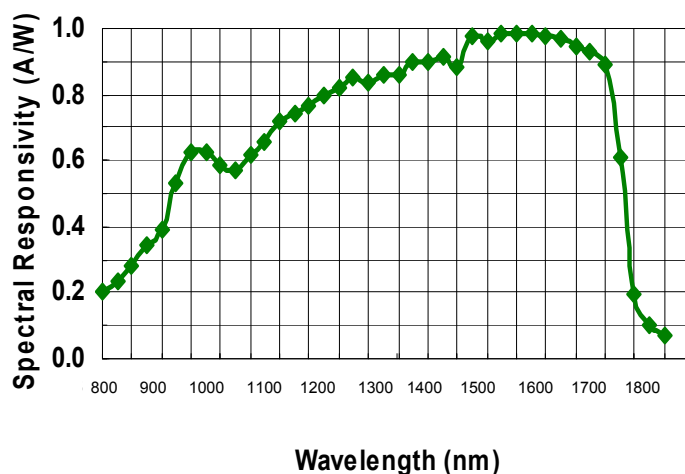
Frequency Response



Device Dark Currents



InGaAs P-I-N Typical Spectral Responsivity



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