



## Avalanche Photodiodes

### Ultra High Gain Silicon Photodetectors

#### Features

- High Speed Responsivity / QE
- High Bandwidth / Fast Response
- Low Noise
- Low Bias Voltage
- Hermetically Sealed TO-Packages

#### Applications

- High Speed Optical Communications
- Laser Range Reader
- Bar Code Readers
- Optical Remote Control
- Medical Equipment
- High Speed Photometry

Silicon Avalanche Photodiodes make use of internal multiplication to achieve gain due to impact ionization. The result is the optimized series of high Responsivity devices, exhibiting excellent sensitivity. OSI Optoelectronics offers several sizes of detectors that are available with flat windows or ball lenses for optical fiber applications.



OEC



Opto-Electronic  
Components



## Typical Electro-Optical Specifications

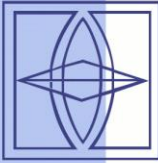
Model Number	Active Area		Peak Responsivity Wavelength (nm) $\lambda_p$	Responsivity (A/W)	Dark Current (nA)	Capacitance (pF)
				850nm, G=100	G=100	1MHz, G=100
	Area (mm <sup>2</sup> )	Dimensions (mm)	Typ	Typ	Typ	Typ
<b>Silicon Avalanche Photodiodes</b>						
APD-300 APD-300L	0.07	0.3 $\phi$	820	42	1.0	1.5
APD-500 APD-500L	0.20	0.5 $\phi$			1.8	2.5
APD-900	0.64	0.9 $\phi$			2.5	7
APD-1500	1.8	1.5 $\phi$			7.0	12
APD-3000	7.1	3.0 $\phi$			15	40

Model Number	Rise Time (ns)	Operating Bias Voltage Range (V)	Temp. Range (°C)		Package Style
	850nm, G=100, 50 $\Omega$		G = 100	Operating	
	Typ	Operating		Storage	
<b>Silicon Avalanche Photodiodes</b>					
APD-300 APD-300L	0.4	130 - 280	-40 ~ +70	-40 ~ +85	68/ TO-18 Flat Window
APD-500 APD-500L	0.5				69/ TO-18 Ball Lens
APD-900	1.0				70/ TO-5
APD-1500	2.0				70/ TO-5
APD-3000	5.0				70/ TO-5

For mechanical drawings please refer to "Mechanical Drawings".

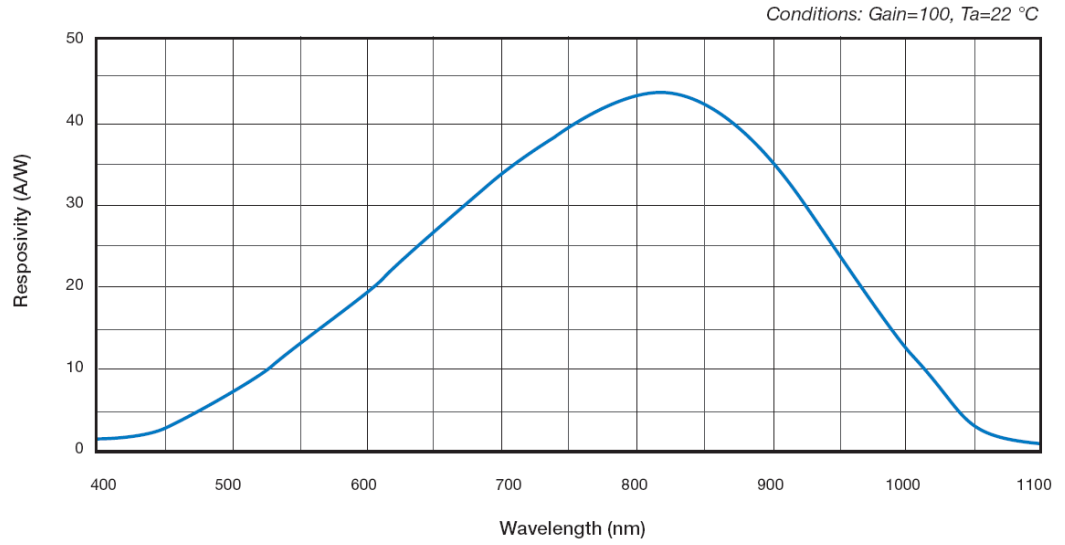
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### Typical Spectral Response



### Typical Gain vs. Bias Voltage

