

Position Sensing Detector

CONEX-PSD SERIES



The CONEX-PSD position sensing detectors provide accurate XY position information of laser beams and are ideally suited for laser beam stabilization, laser tracking and general beam diagnostics. Unlike quadrant detectors, the improved tetra-lateral effect diode of the CONEX-PSD is highly linear over the full sensor size, and delivers a third signal that is proportional to the beam power.

Compared to many detectors that are tweaked for high bandwidth, the CONEX-PSD's have been optimized for stability and compatibility with pulsed laser beams. An analog input filters with 319 Hz (Si) and 136Hz(Ge) cut-off frequencies suppress high frequency noise and undesired signal ringing when used with pulsed lasers. An additional digital low pass filter can be set by software in a frequency range from 0 Hz to 1,000 Hz to further improve signal homogeneity.

The 883-OH adapter allows mounting additional optics in front of the detector for stray light reduction or beam attenuation. The CONEX-PSD's are post mountable with metric and imperial screw interfaces.

- Measures laser beam position and power
- Sensor Size: 9 x 9 mm (Si), 10 x 10 mm (Ge)
- Wavelength Range: 320–1,100 nm (Si), 800-1700 nm (Ge)
- Analog and adjustable digital filters to reduce noise
- Compatible with pulsed laser sources

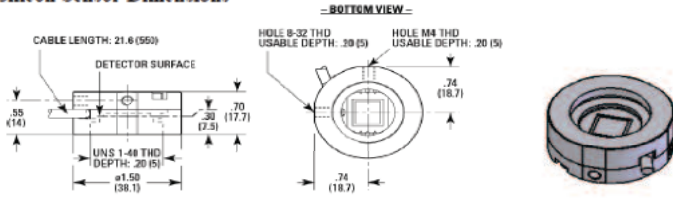
SPECIFICATIONS - CONEX-PSD9

CONEX-PSD10GE

Wavelength range	320–1,100 nm	800-1700 nm
Sensor size	9 x 9 mm	10 x 10 mm
Peak responsivity	0.6 A/W @ 960 nm	0.85 A/W @1550nm
Maximum photocurrent	500 μ A (0.5mA)	1000 μ A (1mA)
Recommended spot size	BSx = 9 mm – Δ X and BSY = 9 mm – Δ Y	BSx = 10 mm – Δ X and BSY = 10 mm – Δ Y
Minimum spot size		>0.2mm
A/D resolution		12 Bit
Position sensitivity	1.5 μ m at maximum power and with 20 Hz digital filter	5 μ m at maximum power and with 20 Hz digital filter
Recommended power range	10–80% of max. power, see graph for details	
Computer interface	USB2.0, 1.8 m long USB-A to Mini-B cable included	
Programming	20+ intuitive, 2 letter ASCII commands	
Filters	Analog input filter, 319 Hz cut-off frequency, fixed Digital low-pass filter, 0–1,000 Hz, set by software	Analog input filter, 136 Hz cut-off frequency, fixed Digital low-pass filter, 0–1,000 Hz, set by software
Status display	Two-color LED	
Input power requirements	Powered through USB interface	
Sensor Dimensions	38.1 mm diameter, 17.7mm (H)	38.1 mm diameter, 22.9mm (H)
Controller Dimensions	3.67" x 2.09" x 0.91" (93.2 x 53 x 23 mm)	
Cable length (detector to electronic)	1.6 ft (0.5 m)	

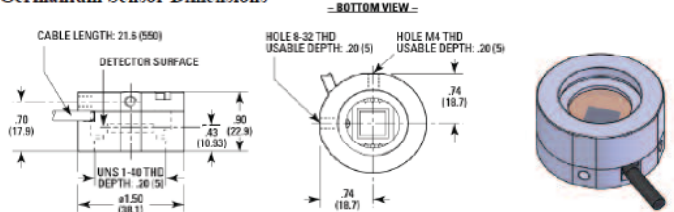
CONEX-PSD9

Silicon Sensor Dimensions

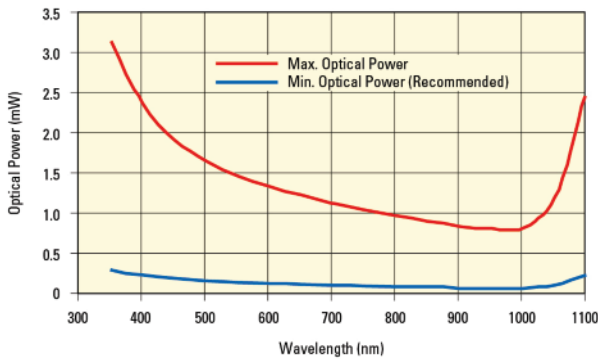


CONEX-PSD10GE

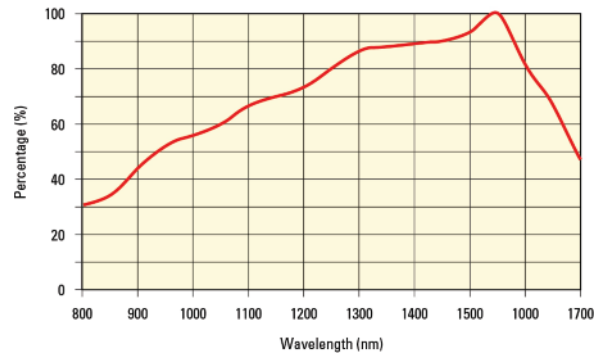
Germanium Sensor Dimensions



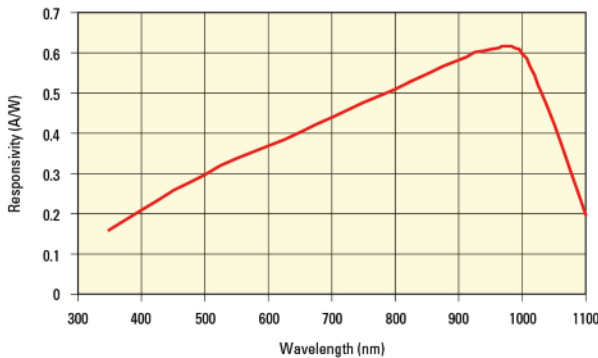
CONEX-PSD Optical Power



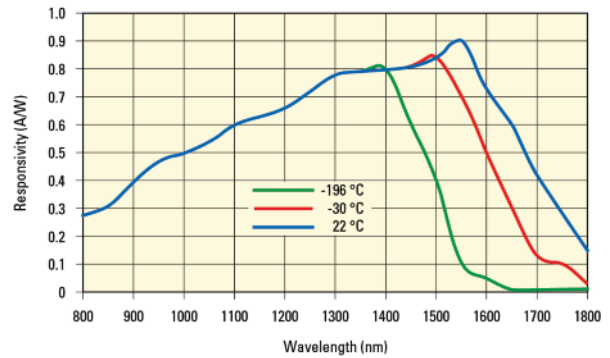
CONEX-PSD Maximum Percentage Returned by the GP Command for a 1 mW Beam



CONEX-PSD Responsivity



CONEX-PSD Typical Spectral Response



ORDERING INFORMATION

Model	Description
CONEX-PSD9	CONEX position sensing detector
883-OH	1" filter holder for CONEX-PSD9

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CONEX-PSD10GE	CONEX position sensing detector
883-OH	1" filter holder for CONEX-PSD10GE



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