AVALANCHE PHOTODIODE DETECTOR MODULE

Hinds' detection systems are specifically designed for use with high frequency optical signals including those generated in Photoelastic Modulator (PEM) applications.

Hinds' detector features include:

- Frequency response. DC to several times the PEM operating frequency.
- Dark-current and/or background DC null.
- Preamplification for current to voltage conversion and buffering for impedance matching to signal cables.
- Separate lowpass or DC signals and wide-band AC signals derived from the detector output.

APD Detector Module

Features

- Power, bipolar, ± 12 volts
- Operating Temperature Range, -10° to 50° C
- High sensitivity, large active area (19.6 mm^2) Si APD
- Detects optical signals from fixed DC light to 450 kHz
- Easy access potentiometer allows user gain adjustment for varying light intensity and to zero offset voltage
- Choice of side or back mounting holes for mounting
- Compact, self-contained, and lightweight
- Power supply and post mount included

These detectors are supplied in rectangular housings 4" x 3" x 1.4", with 2 ¼-20 tapped holes for post mounting.

APD-100 DETECTION CHARACTERISTICS

Model	Type	Spectral Range (nm)	Peak Sensitivity Wavelength, λ	Photodiode Diameter	Effective Active Area	Frequency Bandwidth (3dB)
001	Si-APD	200 - 1000nm	620 nm	5 mm	19.6 mm^2	DC to 450 kHz

Maximum light input power for linear response, (632.8nm laser)

Minimum Gain	Maximum Gain
250 µW	5 µW

Detector DC output (into a 5.6 k load @ Maximum light input)

Minimum Gain	Maximum Gain
1.3 V_{DC}	8.5 V_{DC}

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