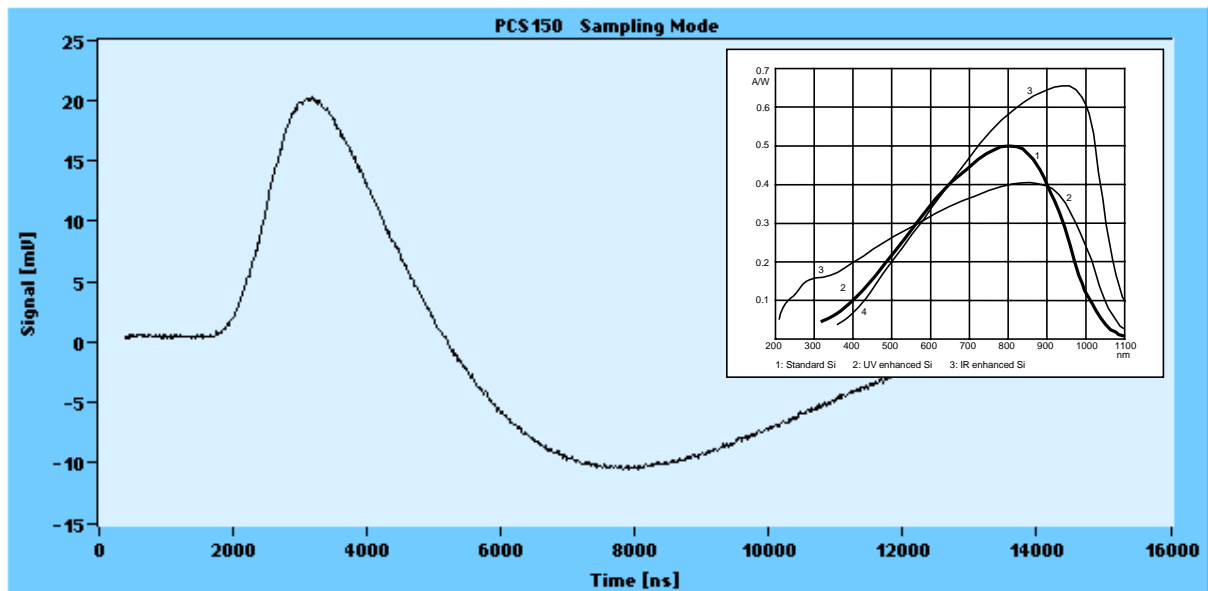
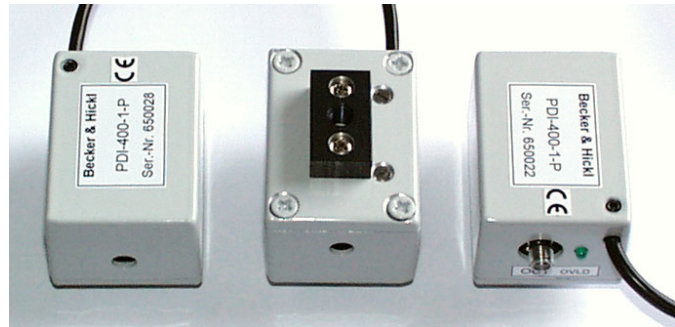


# PDI-400

## Integrating Photodiode Module

- Pulse Energy Measurement
- Low Noise
- High Dynamic Range
- Sensitivity in the fJ Range



The PDI-400 is an integrating detector for pulsed light signals. The PDI-400 includes a high performance photodiode, a low noise charge sensitive amplifier and an active high pass filter. Due to filtering, most of the amplifier noise and low frequency background signals are rejected and the PDI-400 is insensitive to roomlight. Its high sensitivity, low noise and wide dynamic range makes it extremely useful in all applications where accurate and reproducible measurements of light pulse energies are essential. When used in conjunction with our Boxcar devices PCS-150, PCI-200 or BCI-150 the PDI-400 does not require a special power supply.

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intelligent  
measurement  
and  
control systems

# PDI-400

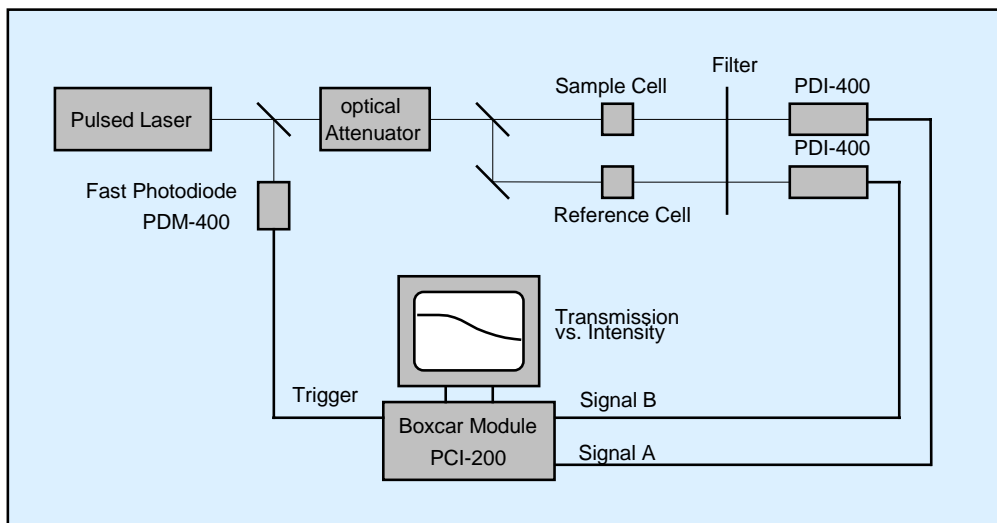
## Specification

(typical values, Si standard versions)

	PDI-400/0.25	PDI-400/1.0	PDI-400-7.5	
Active Area	0.25	1.0	7.5	mm <sup>2</sup>
Output Voltage Range ( $R_f=1k\Omega$ , $V_{suppl} = \pm 15V$ )	10	10	10	V
Output Impedance	50	50	50	$\Omega$
Output Noise (mV, rms, typ.)	0.2	0.5	10	mV
Noise Limited Sensitivity	2	5	100	fJ
Output Voltage at 1pJ, 650nm (typ.)	100	100	100	mV
Supply Voltages		$\pm 5$ to $\pm 15$		V

Also available: Special versions with other detector areas, UV enhanced and IR enhanced versions, UV versions with SiC photodiode, negative output versions. To record the signals of the PDI detectors we recommend our Boxcar devices PCI-200. Please contact Becker & Hickl.

## Application: Measurement of Nonlinear Optical Absorption



## Maximum Ratings

Power Supply Voltage	$V_{ccmin} = -0.3V$ , $V_{ccmax} = +16V$ $V_{eemin} = -16V$ , $V_{eemax} = +0.3V$
Light Pulse Power	< 100 kW (Duration < 2 ns)
Average Light Power	< 100 mW
Operating Temperature	0°C ... +70°C

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