

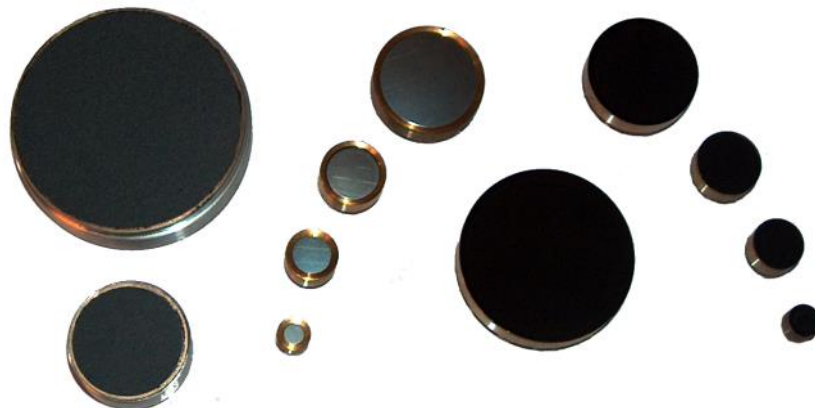
OEM PES

The main application for this type of sensor is energy monitoring of high repetition rate lasers. The co-axially built sensors have a high sensitivity and can be applied in a wide spectral range.

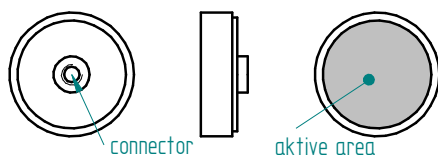
Detector diameters between 4 mm and 45 mm are available. The maximum repetition rate depends on the sensor diameter and the load resistor; values up to 3000 pps. are possible. For these sensors 3 absorber coatings are available:

- organic black, flat spectral behaviour
- Metallic coating for high repetition rates
- Ceramic coating for highest peak powers

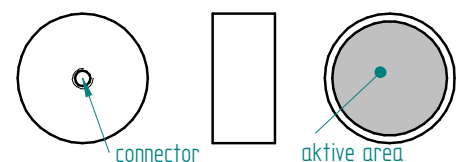
The sensors can easily be combined with own electronics. Additionally we offer our OEM-Pyrobox with RS232 or USB-output.



	PES	PES HR	PES K
Max. energy density:	150 mJ/cm ²	100 mJ/cm ²	up to 1 J/cm ²
Max. power density:	150 mW/cm ²	150 mW/cm ²	500 mW/cm ²
Max. peak power density: (10 ns—pulse)	8 MW/cm ²	8 MW/cm ²	70 MW/cm ²
Temperature range:	0 .. 40°C	0 .. 40°C	0 .. 70°C
Spectral range	190 nm .. 25 µm		
Max. pulse duration	2 ms		
Accuracy	±3%		

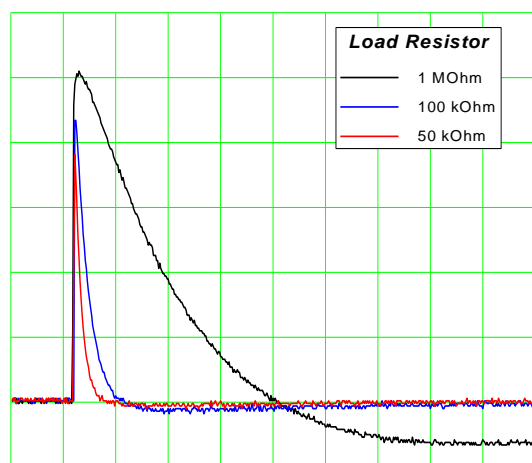


Type PES and PES HR

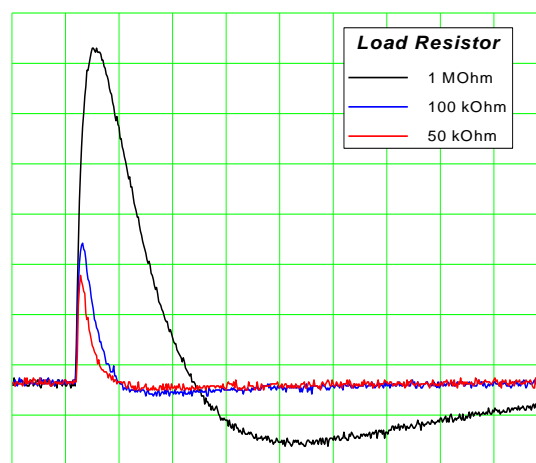


Type PES K and HP

	Aperture	Sensitivity	Rep Rate	Dimension (Dia x length Connector)
PES 4	4 mm	500..1000 V/J at 1 MΩ 130..250 V/J at 100 kΩ	80 Hz at 1 MΩ 120 Hz at 100 kΩ	7 x 9,5 mm ² M 3
PES 8	8 mm	200..500 V/J at 1 MΩ 50..200 V/J at 100 kΩ	40 Hz at 1 MΩ 100 Hz at 100 kΩ	11 x 9,5 mm ² M 3
PES 11	11 mm	100..400 V/J at 1 MΩ 50..150 V/J at 100 kΩ	40 Hz at 1 MΩ 80 Hz at 100 kΩ	14 x 9,5 mm ² M 3
PES 21	21 mm	50..150 V/J at 1 MΩ 30..80 V/J at 100 kΩ	25 Hz at 1 MΩ 50 Hz at 100 kΩ	24 x 9,5 mm ² M 4
PES 34	34 mm	40.. 70 V/J at 1 MΩ 10..40 V/J at 100 kΩ	25 Hz at 1 MΩ 80 Hz at 100 kΩ	37 x 10 mm ² M 4
PES 20 HP	20 mm	30.. 50 V/J at 1 MΩ 8..20 V/J at 100 kΩ	50 Hz at 1 MΩ 150 Hz at 100 kΩ	25 x 12 mm ² M 3
PES 45 HP	45 mm	8.. 15 V/J at 1 MΩ 4..8 V/J at 100 kΩ	25 Hz at 1 MΩ 100 Hz at 100 kΩ	50 x 13 mm ² M 4
HR 4	4 mm	1000..1500 V/J at 1 MΩ 900..1200 V/J at 100 kΩ 900..1100 V/J at 50 kΩ	250 Hz at 1 MΩ 2,5 kHz at 100 kΩ 3,3 kHz at 50 kΩ	7 x 9,5 mm ² M 3
HR 8	8 mm	700..900 V/J at 1 MΩ 400..500 V/J at 100 kΩ 300..400 V/J at 50 kΩ	150 Hz at 1 MΩ 2 kHz at 100 kΩ 2,5 kHz at 50 kΩ	11 x 9,5 mm ² M 3
HR 11	11 mm	400..600 V/J at 1 MΩ 400..500 V/J at 100 kΩ 300..400 V/J at 50 kΩ	250 Hz at 1 MΩ 1,5 kHz at 100 kΩ 2 kHz at 50 kΩ	14 x 9,5 mm ² M 3
HR 21	21 mm	150..250 V/J at 1 MΩ 100..250 V/J at 100 kΩ 100..200 V/J at 50 kΩ	50 Hz at 1 MΩ 200 Hz at 100 kΩ 1,4 kHz at 50 kΩ	24 x 9,5 mm ² M 4
PES 20 k	20 mm	7..15 V/J at 1 MΩ 1..8 V/J at 100 kΩ	50 Hz at 1 MΩ 50 Hz at 100 kΩ	25 x 12 mm ² M 3
PES 45K	45 mm	1.5..4.5 V/J at 1 MΩ 0.4..1.5 V/J at 100 kΩ	20 Hz at 1 MΩ 50 Hz at 100 kΩ	50 x 13 mm ² M 4



HR 11, 500 μs/div; 5 mV/div; 100 μJ



PEM 11, 1 ms/div; 5 mV/div; 100 μJ

Samples of the output signal of different sensors

Basics

Calibration

Displays

Energy Detectors

Power Detectors

THz Detectors

OEM

Amplifiers