

# PE-B

2 fJ - 2  $\mu$ J, for Analog or Digital Module



## KEY FEATURES

### 1 Use with Both Analog or Digital Modules

The head can be connected to an oscilloscope using the analog power module (APM) or to a PC with the digital power module (DPM)

- DPM: USB Powered Digital Module (Includes Application Software)
- APM: Battery or AC Powered Analog Module

### 2 Very Low Noise Level

Take measurements down to 2 fJ with the PE3B-In and the digital power module (DPM)

### 3 3 Sensors Available

- PE-B-Si family: 3, 5 and 10 mm  $\varnothing$  Silicon sensors for 0.19 to 1.1  $\mu$ m
- PE5B-Ge: 5 mm  $\varnothing$ , Germanium sensor for 1 to 1.7  $\mu$ m
- PE3B-In: 3 mm  $\varnothing$ , InGaAs sensor for 0.9 to 1.6  $\mu$ m

## AVAILABLE MODELS



PE3B-Si  
(3 mm - Silicon)



PE5B-Si  
(5 mm - Silicon)



PE10B-Si  
(10 mm - Silicon)



PE5B-Ge  
(5 mm - Germanium)

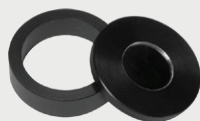


PE3B-In  
(3 mm - InGaAs)

## ACCESSORIES



Stand with Delrin Post



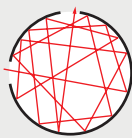
Removable IR Windows  
(Various types available)



Fiber Adaptors & Connectors  
(FC, SC, ST and SMA)



IR Alignment Aide  
and Crosshairs



Integrating Sphere



Pelican Carrying Case

## SEE ALSO

TECHNICAL DRAWINGS	126
COMPATIBLE MODULES	
APM	30
DPM	30



MONITORS

ENERGY DETECTORS

POWER DETECTORS

OPTICAL DETECTORS

THZ DETECTORS

OEM DETECTORS

CALORIMETERS

DIFFRACTIVE OPTICS

BEAM DIAGNOSTICS

# PE-B

## SPECIFICATIONS



Approved or in the process of being approved\*

MODELS	PE3B-Si	PE5B-Si	PE10B-Si	PE5B-Ge	PE3B-In
MAX ENERGY	2 nJ	20 nJ	2 $\mu$ J	20 nJ	2 nJ
EFFECTIVE APERTURE	3 mm $\emptyset$	5 mm $\emptyset$	10 mm $\emptyset$	5 mm $\emptyset$	3 mm $\emptyset$
COMPATIBLE MODULE(S)	DPM	APM and DPM	APM and DPM	APM and DPM	APM and DPM

MEASUREMENT CAPABILITY	With DPM	With APM	With DPM	With APM	With DPM	With APM	With DPM	With APM	With DPM
	Spectral Range	0.19 - 1.1 $\mu$ m	0.19 - 1.1 $\mu$ m	0.19 - 1.1 $\mu$ m	0.19 - 1.1 $\mu$ m	1 - 1.7 $\mu$ m	1 - 1.7 $\mu$ m	0.9 - 1.6 $\mu$ m	0.9 - 1.6 $\mu$ m
Max Measurable Energy	2 nJ	20 nJ	20 nJ	20 nJ	2 $\mu$ J	2 $\mu$ J	20 nJ	20 nJ	2 nJ
Noise Equivalent Energy	2 fJ	1 pJ	0.5 pJ	20 pJ	2 pJ	2 pJ	1 pJ	0.5 pJ	100 fJ
Rise Time (0-100%)	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s	15 $\mu$ s
Max Repetition Rate	1000 Hz	2000 Hz	1000 Hz	2000 Hz	1000 Hz	2000 Hz	1000 Hz	2000 Hz	1000 Hz
Max Pulse Width	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s	10 $\mu$ s
Sensitivity	N/A	1 GV/J	1 GV/J	20 MV/J	N/A	1 GV/J	N/A	10 GV/J	N/A
Calibration Uncertainty	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%	$\pm$ 5%
DAMAGE THRESHOLDS									
Max Energy Density	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>	5 $\mu$ J/cm <sup>2</sup>
Max Average Power Density (@ 1064nm)	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>	1 mW/cm <sup>2</sup>
PHYSICAL CHARACTERISTICS									
Effective Aperture	3 mm $\emptyset$	5 mm $\emptyset$	5 mm $\emptyset$	10 mm $\emptyset$	10 mm $\emptyset$	5 mm $\emptyset$	5 mm $\emptyset$	5 mm $\emptyset$	3 mm $\emptyset$
Sensor	Silicon	Silicon	Silicon	Silicon	Silicon	Germanium	Germanium	Germanium	InGaAs
Dimensions	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm	38.1 $\emptyset$ x 26.2D mm
Weight	91 g	91 g	91 g	91 g	91 g	91 g	91 g	91 g	91 g
ORDERING INFORMATION									
Full Product Name	PE3B-Si	PE5B-Si	PE5B-Si	PE10B-Si	PE10B-Si	PE5B-Ge	PE5B-Ge	PE5B-Ge	PE3B-In
Product Number	201531	201532	201532	201529	201529	201499	201499	201499	201504

Specifications are subject to change without notice

\* For details, contact your Gentec-EO representative