

# PE-B

8 fJ - 150 nJ, Our Lowest Energy Measurements

AVAILABLE WITH

**integra**



See page 36 for details

## KEY FEATURES

### 1. VERY LOW NOISE LEVEL

Take measurements with a noise level as low as 8 fJ with the M-LINK, MAESTRO and S-LINK monitors

### 2. 3 SENSORS AVAILABLE

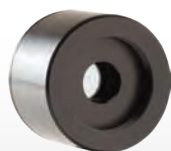
- PE-B-Si family: 3 and 10 mm Ø Silicon sensors for 0.21 to 1.08 μm
- PE5B-Ge: 5 mm Ø, Germanium sensor for 0.8 to 1.65 μm
- PE3B-In: 3 mm Ø, InGaAs sensor for 0.9 to 1.7 μm

### 3. SMART INTERFACE

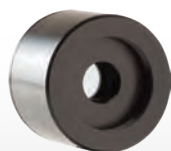
Containing all the calibration data



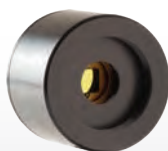
## AVAILABLE MODELS



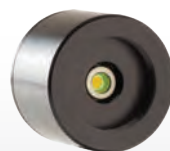
PE3B-Si  
(3 mm - UV-Silicon)



PE10B-Si  
(10 mm - UV-Silicon)



PE5B-Ge  
(5 mm - Germanium)



PE3B-In  
(3 mm - InGaAs)

## ACCESSORIES



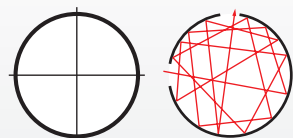
Stand with Delrin Post  
(Model Number: 200428)



Removable IR Windows  
(Various types available)



Fiber Adaptors & Connectors  
(FC, ST or SMA)



IR Alignment Aide, Crosshairs  
and Integrating Sphere



APM Analog Power Supply  
(Model Number: 201848)



Pelican Carrying Case

## SEE ALSO

TECHNICAL DRAWINGS	112
ABSORPTION CURVES	113
COMPATIBLE MONITORS	
MAESTRO	20
S-LINK	28
M-LINK	32
LIST OF ALL ACCESSORIES	190

### APPLICATION NOTE

CALIBRATION UNCERTAINTY OF PHOTO DETECTORS	<a href="#">202174</a>
--	------------------------

# PE-B

## SPECIFICATIONS



\*Also traceable to NRC-CNRC

	PE3B-Si	PE10B-Si	PE5B-Ge	PE3B-In
<b>MAX MEASURABLE ENERGY</b>	30 pJ	150 nJ	3 nJ	300 pJ
<b>EFFECTIVE APERTURE</b>	3 mm Ø	10 mm Ø	5 mm Ø	3 mm Ø
<b>MEASUREMENT CAPABILITY</b>				
Spectral Range	0.21 - 1.08 µm	0.21 - 1.08 µm	0.8 - 1.65 µm	0.9 - 1.7 µm
Maximum Measurable Energy				
With M-LINK	30 pJ @ 634 nm	150 nJ @ 634 nm	3 nJ @ 1310 nm	300 pJ @ 1310 nm
With S-LINK	25 pJ @ 634 nm	130 nJ @ 634 nm	2.5 nJ @ 1310 nm	250 pJ @ 1310 nm
With MAESTRO	20 pJ @ 634 nm	110 nJ @ 634 nm	2 nJ @ 1310 nm	200 pJ @ 1310 nm
Noise Equivalent Energy <sup>a</sup>	8 fJ @ 634 nm	1.5 pJ @ 634 nm	1 pJ @ 1310 nm	30 fJ @ 1310 nm
Rise Time (0-100%)	15 µs	30 µs	25 µs	12 µs
Max Repetition Rate	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Max Pulse Width	10 µs	10 µs	10 µs	10 µs
Sensitivity	100 GV/J @ 634 nm	20 MV/J @ 634 nm	1 GV/J @ 1310 nm	10 GV/J @ 1310 nm
Calibration Uncertainty <sup>b</sup>	± 4% <sup>c</sup>	± 8% (210 - 219 nm) ± 6.5% (220 - 399 nm) ± 2.5% (400 - 899 nm) ± 3.5% (900 - 999 nm) ± 5% (1000 - 1049 nm) ± 7% (1050 - 1080 nm)	± 3.5%	± 4% <sup>d</sup>
<b>DAMAGE THRESHOLDS</b>				
Max Energy Density	1 nJ/cm <sup>2</sup> <sup>e</sup>	5 µJ/cm <sup>2</sup>	5 µJ/cm <sup>2</sup>	10 nJ/cm <sup>2</sup> <sup>e</sup>
Max Average Power Density	10 µJ/cm <sup>2</sup> @ 532 nm <sup>e</sup>	65 mW/cm <sup>2</sup> @ 532 nm	320 mW/cm <sup>2</sup> @ 1064 nm	100 µJ/cm <sup>2</sup> @ 1310 nm <sup>e</sup>
<b>PHYSICAL CHARACTERISTICS</b>				
Effective Aperture	3 mm Ø	10 mm Ø	5 mm Ø	3 mm Ø
Sensor	UV-Silicon	UV-Silicon	Germanium	InGaAs
Connector	DB-15	DB-15	DB-15	DB-15
Dimensions	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm
Weight	91 g	91 g	91 g	91 g
<b>ORDERING INFORMATION</b>				
Product Name	PE3B-Si-D0	PE10B-Si-D0	PE5B-Ge-D0	PE3B-In-D0
Product Number	202021	202019	202020	202143
INTEGRA Product Name		PE10B-Si-INT-D0	PE5B-Ge-INT-D0	

a. Nominal value. Depends on environmental electromagnetic interference and wavelength.

b. With Gentec-EO monitor.

c. This detector is NIST Traceable at the calibration wavelength of 634 nm. Typical values are used at other wavelengths.

d. This detector is NIST Traceable at the calibration wavelength of 1310 nm. Typical values are used at other wavelengths.

e. Estimated.

Specifications are subject to change without notice