

# PH

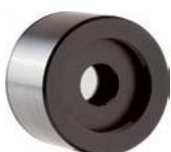
10 pW to 750 mW, Si and Ge Sensors



## KEY FEATURES

1. **LARGE APERTURES**  
10 mm Ø for the Silicon sensors
2. **3 VERSIONS**
  - Silicon: 350 - 1080 nm, up to 750 mW
  - Silicon-UV: 210 - 1080 nm, up to 38 mW
  - Germanium: 800 - 1650 nm, up to 500 mW
3. **CHOICE OF ATTENUATORS**
  - OD0.3: 50 % Transmission (for PH100-Si<sup>UV</sup> only)
  - OD1: 10 % Transmission
  - OD2: 1 % Transmission
4. **HIGH ACCURACY**  
The new PH100-Si-HA presents the lowest calibration uncertainty to date
5. **PRECISE CALIBRATION**  
Wavelength selection in 1 nm steps
6. **SMART INTERFACE**  
Containing all the calibration data
7. **integra OPTIONS**
  - Standard: USB Output (-INT)
  - In Option: RS-232 Output (-IDR)

## AVAILABLE MODELS



PH100-Si-HA  
(10 mm - Silicon)



PH100-Si<sup>UV</sup>  
(10 mm - UV-Silicon)



PH20-Ge  
(5 mm - Germanium)



PH Series Detector  
With OD Attenuator

## OD ATTENUATORS

OD Attenuators sold in option. When bought together, the detector is calibrated with and without the attenuator.

## ACCESSORIES



Stand with Delrin Post  
(Model Number: 200428)



Extension Cables  
(4, 15, 20 or 25 m)



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



OD Attenuators



Pelican Carrying Case

## SEE ALSO

TECHNICAL DRAWINGS	<b>122</b>
SENSITIVITY CURVES	<b>124</b>
COMPATIBLE MONITORS	
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## APPLICATION NOTE

CALIBRATION UNCERTAINTY  
OF PHOTO DETECTORS

[202174](#)

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

PH



\*Also traceable to NRC-CNRC

## SPECIFICATIONS

	PH100-Si-HA	PH100-Si <sup>UV</sup>	PH20-Ge			
<b>MAX AVERAGE POWER* (ALONE / WITH MAX ATTENUATION)</b>	36 mW / 750 mW	4 mW / 38 mW	30 mW / 500 mW			
<b>EFFECTIVE APERTURE</b>	10 mm Ø	10 mm Ø	5 mm Ø			
<b>MEASUREMENT CAPABILITY</b>						
Spectral Range	350 – 1080 nm	210 – 1080 nm	800 – 1650 nm			
With OD0.3	---	210 – 1080 nm	---			
With OD1	420 – 1080 nm	400 – 1080 nm	900 – 1650 nm			
With OD2	630 – 1080 nm	---	950 – 1650 nm			
Maximum Measurable Power*	36 mW @ 1064 nm	4 mW @ 532 nm	30 mW @ 1064 nm			
With OD0.3	---	11 mW @ 300 nm	---			
With OD1	300 mW @ 1064 nm	38 mW @ 532 nm	300 mW @ 1064 nm			
With OD2	750 mW @ 1064 nm	---	500 mW @ 1064 nm			
Noise Equivalent Power <sup>a</sup>	10 pW @ 980 nm	10 pW @ 850 nm	60 pW @ 1550 nm			
Rise Time (nominal)	0.2 sec (0.45 sec INTEGRA)	0.2 sec (0.45 sec INTEGRA)	0.2 sec (0.45 sec INTEGRA)			
Peak Sensitivity	0.5 A/W @ 980 nm	0.45 A/W @ 850 nm	0.98 A/W @ 1550 nm			
Calibration Uncertainty	±6.0 % (350 - 399 nm)	±8 % (200 - 219 nm)	±3.5 % (800 - 1650 nm)			
	±2.0 % (400 - 449 nm)	±6.5 % (220 - 399 nm)	---			
	±1.5 % (450 - 940 nm)	±2.5 % (400 - 899 nm)	---			
	±2.0 % (941 - 980 nm)	±3.5 % (900 - 999 nm)	---			
	±5.0 % (981 - 1049 nm)	±5 % (1000 - 1049 nm)	---			
	±7.0 % (1050 - 1080 nm)	±7 % (1050 - 1080 nm)	---			
Calibration Uncertainty (with OD filters)	±4.0 % (420 - 980 nm)	±5 % (210 - 1049 nm)	±5 %			
	±5.0 % (981 - 1049 nm)	±7 % (1050 - 1080 nm)				
	±7.0 % (1050 - 1080 nm)					
<b>DAMAGE THRESHOLDS</b>						
Maximum Average Power Density	100 W/cm <sup>2</sup>	100 W/cm <sup>2</sup>	100 W/cm <sup>2</sup>			
<b>PHYSICAL CHARACTERISTICS</b>						
Effective Aperture	10 mm Ø	10 mm Ø	5 mm Ø			
Distance to Sensor Face	13.7 mm	13.7 mm	10.5 mm			
Sensor	Silicon	UV-Silicon	Germanium			
Dimensions	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm			
Weight (head only)	130 g	130 g	130 g			
<b>ORDERING INFORMATION</b>						
	Standard	Add Ext. for INTEGRA (USB) (RS-232)	Standard	Add Ext. for INTEGRA (USB) (RS-232)	Standard	Add Ext. for INTEGRA (USB) (RS-232)
Product Name	PH100-Si-HA	-INT -IDR	PH100-SiUV	-INT -IDR	PH20-Ge	-INT -IDR
Product Number (Including stand)	202682	202781	202806	202787	202807	202793
Product Name (with OD0.3)			PH100-SiUV-OD.3	-INT		
Product Number (Including stand)			202680	202791		
Product Name (with OD1)	PH100-Si-HA-OD1	-INT -IDR	PH100-SiUV-OD1	-INT -IDR	PH20-Ge-OD1	-INT -IDR
Product Number (Including stand)	202684	202783	202809	202789	202810	202795
Product Name (with OD2)	PH100-Si-HA-OD2	-INT -IDR			PH20-Ge-OD2	-INT -IDR
Product Number (Including stand)	202686	202785			202813	202797
Specifications are subject to change without notice						

\* See curves (p. 126-128) for maximum power at other wavelengths

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