



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 25 mW
 - Germanium: 800 - 1650 nm, up to 500 mW
3. **CHOICE OF ATTENUATORS**
 - OD0.3: 50 % Transmission (for PH100-Si^{UV} 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

AVAILABLE MODELS



PH100-Si-HA
(10 mm - Silicon)



PH100-Si^{UV}
(10 mm - UV-Silicon)



PH20-Ge
(5 mm - Germanium)

OD ATTENUATORS

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



PH Series Detector
With OD Attenuator

ACCESSORIES



Stand with Delrin Post
(Model Number: 200428)



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



OD Attenuators



Pelican Carrying Case

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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 ^{UV}	PH20-Ge			
MAX AVERAGE POWER (ALONE / WITH OD2)	36 mW / 750 mW	4 mW / 30 mW	30 mW / 500 mW			
EFFECTIVE APERTURE	10 mm Ø	10 mm Ø	5 mm Ø			
MEASUREMENT CAPABILITY						
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 ^a	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 ^b	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)					
DAMAGE THRESHOLDS						
Maximum Average Power Density	100 W/cm ²	100 W/cm ²	100 W/cm ²			
PHYSICAL CHARACTERISTICS						
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			
ORDERING INFORMATION						
Product Name	Standard	Add Ext. for INTEGRA	Standard	Add Ext. for INTEGRA	Standard	Add Ext. for INTEGRA
Product Name	PH100-Si-HA	-INT	PH100-SiUV	-INT	PH20-Ge	-INT
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	PH100-SiUV-OD1	-INT	PH20-Ge-OD1	-INT
Product Number (Including stand)	202684	202783	202809	202789	202810	202795
Product Name (with OD2)	PH100-Si-HA-OD2	-INT			PH20-Ge-OD2	-INT
Product Number (Including stand)	202686	202785			202813	202797

Specifications are subject to change without notice

a. Maximum value depends on the monitor.

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