

PH

10 pW to 750 mW, Si and Ge sensors



KEY FEATURES

- > **LARGE APERTURES**
10 mm Ø for the silicon sensors
- > **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
- > **CHOICE OF ATTENUATORS**
Models with attenuators include a calibration both with and without the removable filter
- > **HIGH ACCURACY**
The PH100-SI-HA presents the lowest calibration uncertainty to date
- > **PRECISE CALIBRATION**
Wavelength selection in 1 nm steps

OD ATTENUATORS

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



PH series detector with OD attenuator

OUTPUT OPTIONS

- > **SMART DB15 CONNECTOR**
Contains all the calibration data
- > **integra ALL-IN-ONE-METER**
Connects directly to a PC
Two models available:
 - USB output (-INT)
 - RS-232 output (-IDR)

COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



MAESTRO



TUNER



UNO



U-LINK and P-LINK



M-LINK

ACCESSORIES



Stand with delrin post



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



Fiber adaptors & connectors
(FC, SC, ST and SMA)



ND filters (attenuators)



Pelican carrying case



Isolation tube



	PH100-SI-HA-D0	PH100-SIUV-D0	PH20-GE-D0	IS12L-9S-RS1
MAX AVERAGE POWER* (ALONE / WITH MAX ATTENUATION)	36 mW / 750 mW	4 mW / 38 mW	30 mW / 500 mW	9 W
EFFECTIVE APERTURE	10 mm ϕ	10 mm ϕ	5 mm ϕ	12 mm ϕ
MEASUREMENT CAPABILITY				
Calibrated spectral range	350 - 1080 nm	210 - 1080 nm	800 - 1650 nm	400 - 1070 nm
With OD0.3	---	210 - 1080 nm	---	
With OD1	400 - 1080 nm	400 - 1080 nm	900 - 1650 nm	
With OD2	630 - 1080 nm	---	950 - 1650 nm	
Maximum measurable power*	36 mW at 1064 nm	4 mW at 532 nm	30 mW at 1064 nm	9 W
With OD0.3	---	16 mW at 300 nm	---	
With OD1	300 mW at 1064 nm	38 mW at 532 nm	300 mW at 1064 nm	
With OD2	750 mW at 1064 nm	---	500 mW at 1064 nm	
Noise equivalent power ^a	10 pW at 980 nm	10 pW at 850 nm	60 pW at 1550 nm	1 μ W at 1070 nm
Rise time (nominal)	0.2 s	0.2 s	0.2 s	0.2 s
Calibration uncertainty	$\pm 5.0\%$ (350 - 399 nm)	$\pm 18\%$ (210 - 229 nm)	$\pm 5.0\%$ (800 - 1049 nm)	$\pm 5.0\%$ (400 - 499 nm)
	$\pm 2.0\%$ (400 - 449 nm)	$\pm 8.0\%$ (230 - 254 nm)	$\pm 3.5\%$ (1050 - 1559 nm)	$\pm 3.5\%$ (500 - 1069 nm)
	$\pm 1.5\%$ (450 - 809 nm)	$\pm 6.5\%$ (255 - 399 nm)	$\pm 7.0\%$ (1560 - 1629 nm)	$\pm 2.5\%$ (1070 nm)
	$\pm 2.0\%$ (810 - 899 nm)	$\pm 2.5\%$ (400 - 899 nm)	$\pm 10\%$ (1630 - 1650 nm)	
	$\pm 4.0\%$ (900 - 1009 nm)	$\pm 4.0\%$ (900 - 1009 nm)	---	
	$\pm 7.5\%$ (1010 - 1080 nm)	$\pm 7.5\%$ (1010 - 1080 nm)	---	
Calibration uncertainty (with OD filters)	$\pm 5.0\%$ (400 - 419 nm)	Same as without attenuator	$\pm 5.0\%$ (900 - 1559 nm)	N/A
	$\pm 4.0\%$ (420 - 899 nm)	---	$\pm 7.0\%$ (1560 - 1629 nm)	
	$\pm 5.0\%$ (900 - 1009 nm)	---	$\pm 10\%$ (1630 - 1650 nm)	
	$\pm 7.5\%$ (1010 - 1080 nm)	---	---	
Minimum repetition rate	155 kHz	155 kHz	155 kHz	N/A
DAMAGE THRESHOLDS				
Maximum average power density	100 W/cm ²	100 W/cm ²	100 W/cm ²	2 kW/cm ²
PHYSICAL CHARACTERISTICS				
Effective aperture	10 mm ϕ	10 mm ϕ	5 mm ϕ	12 mm ϕ
Distance to sensor face	13.7 mm	13.7 mm	10.5 mm	N/A
Sensor	Silicon	UV-Silicon	Germanium	Silicon
Dimensions	38.1 ϕ x 27.4D mm	38.1 ϕ x 27.4D mm	38.1 ϕ x 27.4D mm	66H x 78W x 66D mm
Weight (head only)	130 g	130 g	130 g	0.75 kg
ORDERING INFORMATION				
Available output options	DB15, USB or RS-232	DB15, USB or RS-232	DB15, USB or RS-232	USB or RS-232
Compatible stand	STAND-D-233 or STAND-D-233-M	STAND-D-233 or STAND-D-233-M	STAND-D-233 or STAND-D-233-M	STAND-S-443
Product page				

* See curves (p. 60-61) for maximum power at other wavelengths

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