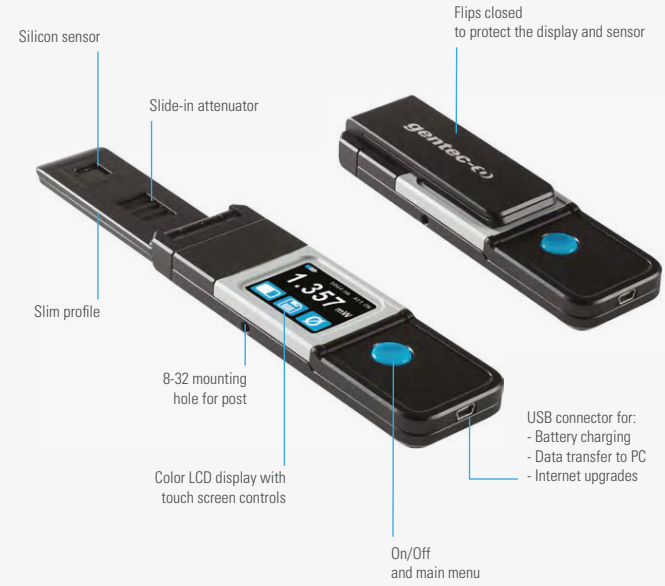
PRONTO-SI

0.3 nW - 800 mW power probe with touchscreen controls



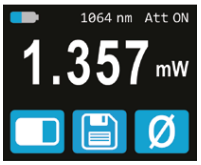
KEY FEATURES

- **POCKET-SIZE**
  This low power laser probe is so compact it fits in your pocket!
- **SLIM PROFILE**
  The sensor part is only 6 mm thick, allowing it to fit into tight spaces
- **EASY TO USE**
  The color LCD touchscreen allows for a friendly user interface. You can make a measurement with just the touch of a button!
- **VERY LOW POWER MEASUREMENTS**
  Thanks to its very low noise level of only 10 pW, the PRONTO-Si measures powers as low as 0.3 nW
- **SLIDE-IN ATTENUATOR**
  Just slide the OD1 integrated filter to the ON position and you can measure up to 800 mW of continuous power at 532 nm (maximum power varies with wavelength)
- **DATA LOGGING**
  Save your data to the internal memory and then transfer them to your PC over the USB connection
- **OPTIONAL FIBER OPTICS ADAPTOR**
  The fiber optics adaptor is held securely in place with a set screw and is compatible with OD attenuators
- **SERIAL COMMANDS**
  Serial commands are available to let you take full control of your PRONTO from your PC.

USER INTERFACE

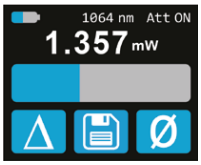
3 Displays for the measurements

Real-time display



Displays the measured value with large digits so you can see them from a distance

Bargraph display

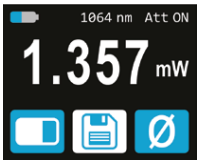


Adds a bargraph below the measured value, for an intuitive understanding of the trend of your laser

Min/Max display

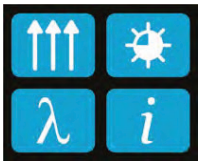
In addition to the real time value, the device displays the lowest and highest values

Save your data and transfer it to your PC



Adjust the wavelength

Set the brightness and orientation



DATA TRANSFER TO PC

ACCESSORIES

Threaded adaptor for PRONTO-Si

Fiber adaptors

PRONTO-SI
Specifications

NIST* Traceable
*Also traceable to NRC-CNRC

	PRONTO-SI
MAX AVERAGE POWER* (ATTENUATOR OFF / ATTENUATOR ON)	88 mW / 800 mW
EFFECTIVE APERTURE	10 x 10 mm
INTERFACE	Touchscreen color LCD display
MEASUREMENT CAPABILITY	
Calibrated spectral range	
Attenuator OFF	320 - 1100 nm
Attenuator ON	400 - 1100 nm
Power range*	
Attenuator OFF	0.3 nW - 88 mW at 532 nm
Attenuator ON	3 nW - 800 mW at 532 nm
Noise equivalent power	10 pW at 980 nm
Response time	0.2 s
Measurement accuracy	From ± 1.5% to ± 7.5% (wavelength-dependent)
Display resolution	1 pW
DAMAGE THRESHOLDS	
Maximum average power density	100 W/cm²
Maximum average power	800 mW (with attenuator ON)
USER INTERFACE	
Displays	Real-time, bar graph and min/max
Measurement controls	Zero offset, wavelength selection and reset data
Data acquisition and transfer	Yes
GENERAL SPECIFICATIONS	
Display type	Touchscreen Color LCD
Display size	28.0 x 35.0 mm (128 x 160 pixels)
Data storage	50 000 pts
Battery type	Rechargeable Li-ion
Battery life	17 hours (with brightness set at 25%)
Battery recharge via	USB port
PHYSICAL CHARACTERISTICS	
Effective aperture	10 x 10 mm
Sensor	Silicon
Attenuator	Integrated slide-in OD1 attenuator
Mounting hole (for post)	1 x 8-32
Dimensions (Open)	41W x 216.2L x 15.8D mm (Sensor part is only 6.0D mm)
Dimensions (Closed)	41W x 136L x 22.1D mm
Weight	150 g
ORDERING INFORMATION	
Compatible stand	STAND-S-233
Product page	

** See curves (page 61) for maximum power at other wavelengths*

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

PH
Specifications

*Also traceable to NRC-CNRC




	PH100-SI-HA-D0	PH100-SIUV-D0	PH20-GE-D0	IS12L-9S-RSI
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 Ø	10 mm Ø	5 mm Ø	12 mm Ø
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 µW at 1070 nm
Rise time (nominal)	0.2 s	0.2 s	0.2 s	0.2 s
Calibration uncertainty	± 5.0 % (350 - 399 nm)	± 18 % (210 - 229 nm)	± 5.0 % (800 - 1049 nm)	± 5.0 % (400 - 499 nm)
	± 2.0 % (400 - 449 nm)	± 8.0 % (230 - 254 nm)	± 3.5 % (1050 - 1559 nm)	± 3.5 % (500 - 1069 nm)
	± 1.5 % (450 - 809 nm)	± 6.5 % (255 - 399 nm)	± 7.0 % (1560 - 1629 nm)	± 2.5 % (1070 nm)
	± 2.0 % (810 - 899 nm)	± 2.5 % (400 - 899 nm)	± 10 % (1630 - 1650 nm)	
	± 4.0 % (900 - 1009 nm)	± 4.0 % (900 - 1009 nm)	---	
	± 7.5 % (1010 - 1080 nm)	± 7.5 % (1010 - 1080 nm)	---	
Calibration uncertainty (with OD filters)	± 5.0 % (400 - 419 nm)	Same as without attenuator	± 5.0 % (900 - 1559 nm)	N/A
	± 4.0 % (420 - 899 nm)	---	± 7.0 % (1560 - 1629 nm)	
	± 5.0 % (900 - 1009 nm)	---	± 10 % (1630 - 1650 nm)	
	± 7.5 % (1010 - 1080 nm)	---	---	
Minimum repetition rate	155 kHz	155 kHz	155 kHz	N/A
DAMAGE THRESHOLDS				
Maximum average power density	100 W/cm²	100 W/cm²	100 W/cm²	2 kW/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	10 mm Ø	10 mm Ø	5 mm Ø	12 mm Ø
Distance to sensor face	13.7 mm	13.7 mm	10.5 mm	N/A
Sensor	Silicon	UV-Silicon	Germanium	Silicon
Dimensions	38.1Ø x 27.4D mm	38.1Ø x 27.4D mm	38.1Ø 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.

PE

8 fJ - 150 nJ, our lowest energy measurements

KEY FEATURES

VERY LOW NOISE LEVEL

Take measurements with a noise level as low as 8 fJ (model PE3B-Si only) with the M-LINK, MAESTRO and S-LINK

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

OUTPUT OPTIONS

SMART INTERFACE

Containing all the calibration data

ANALOG OUTPUT

When used with APM (D) analog power supply

integra ALL-IN-ONE-METER

Connects directly to a PC
Three models available:

- USB output (-INT)
- RS-232 output (-IDR)
- USB with external trigger (-INE)

COMPATIBLE DISPLAYS & PC INTERFACES

MAESTRO

U-LINK

M-LINK

S-LINK

ACCESSORIES

Stand with delrin post

Fiber adaptors & connectors (FC, ST or SMA)

APM (D) analog power supply

Pelican carrying case

Isolation tube

This product cannot be used with DB15 extension cables

PE
Specifications

*Also traceable to NRC-CNRC




	PE3B-SI-D0	PE10B-SI-D0	PE5B-GE-D0	PE3B-IN-D0
MAX MEASURABLE ENERGY*	24 pJ	81 nJ	2.4 nJ	245 pJ
EFFECTIVE APERTURE	3 mm Ø	10 mm Ø	5 mm Ø	3 mm Ø
MEASUREMENT CAPABILITY				
Calibrated spectral range	210 - 1080 nm	210 - 1080 nm	800 - 1650 nm	900 - 1700 nm
Maximum measurable energy*				
With M-LINK	22 pJ at 634 nm	75 nJ at 634 nm	2.2 nJ at 1310 nm	223 pJ at 1310 nm
With S-LINK	24 pJ at 634 nm	81 nJ at 634 nm	2.4 nJ at 1310 nm	245 pJ at 1310 nm
With MAESTRO	20 pJ at 634 nm	69 nJ at 634 nm	2.0 nJ at 1310 nm	200 pJ at 1310 nm
With INTEGRA	24 pJ at 634 nm	81 nJ at 634 nm	2.4 nJ at 1310 nm	245 pJ at 1310 nm
Noise equivalent energy [a]	8 fJ at 634 nm	1.5 pJ at 634 nm	1 pJ at 1310 nm	30 fJ at 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
Calibration uncertainty [b]	± 4% [c]	± 18% (210 - 229 nm) ± 8.0% (230 - 254 nm) ± 6.5% (255 - 399 nm) ± 2.5% (400 - 899 nm) ± 4.0% (900 - 1009 nm) ± 7.5% (1010 - 1080 nm)	± 5% (800 - 1049 nm) ± 3.5% (1050 - 1559 nm) ± 7% (1560 - 1629 nm) ± 10% (1630 - 1650 nm)	± 4% [d]
DAMAGE THRESHOLDS				
Max energy density	N/A	5 µJ/cm²	5 µJ/cm²	N/A
Max average power density	N/A	65 mW/cm² at 532 nm	320 mW/cm² at 1064 nm	N/A
PHYSICAL CHARACTERISTICS				
Effective aperture	3 mm Ø	10 mm Ø	5 mm Ø	3 mm Ø
Distance to sensor face	13.7 mm	13.7 mm	10.5 mm	N/A
Sensor	UV-silicon	UV-silicon	Germanium	InGaAs
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
ORDERING INFORMATION				
Available output options	DB15, USB or RS-232	DB15, USB or RS-232	DB15, USB or RS-232	DB15, 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-D-233 or STAND-D-233-M
Product page				

** See curves (p. 102-103) for maximum energy at other wavelengths*

a. Nominal value. Depends on environmental electromagnetic interference and wavelength.
b. With Gentec-EO display or PC interface.
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.