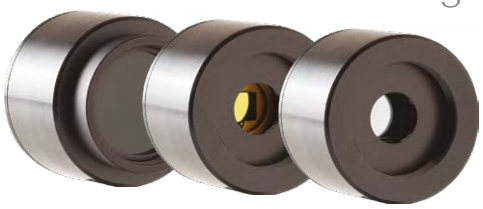
POWER DETECTORS

Low power measurement

Available with integra



PH: PHOTODETECTORS

- Photodetectors for measurements up to 750 mW
- Available from UV to IR
- Silicon, UV-silicon and germanium sensors
- OD.3/OD1/OD2 attenuators available

FAST RESPONSE POWER DETECTORS

PRONTO-SI: ALL-IN-ONE PHOTODETECTOR + METER

- Compact laser power meter up to 800 mW
- 10 x 10 mm aperture
- Integrated OD1 slide-in attenuator
- Color touchscreen display

PORTABLE & EASY TO USE

UM: BROADBAND PYROELECTRIC DETECTORS

Our pyroelectric power detectors have the noise level of a photodetector, but with the large bandwidth of a pyroelectric sensor. They have everything you need to accurately measure extremely low powers from the DUV to the FIR.

- 9 mm Ø aperture
- Broadband, flat spectral response
- Very low noise, down to 5 nW

MEASURE LOW POWER AT ANY WAVELENGTH

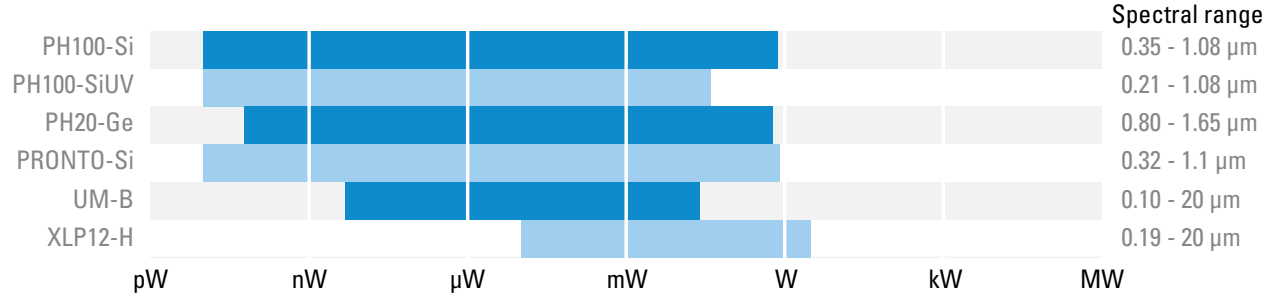
Available with integra

XLP12: LOW-POWER THERMOPILES

- Low noise level: only ±0.5 µW
- IR filter available
- Available with volume absorber for short pulses

THERMAL POWER DETECTORS WITH LOW NOISE

COMPARISON TABLE - LOW POWER MEASUREMENT



POWER DETECTORS

General use power detectors

Available with integra blu

UP-H: BROADBAND THERMAL DETECTORS

Our standard absorber offers high damage thresholds and a flat spectral response, making this series of power detectors a versatile solution that can cover most of your laser power measurement needs.

- Available in 6 sizes:

  10 mm Ø 12 mm Ø
  17 mm Ø 19 mm Ø
  25 mm Ø 55 mm Ø

- Available with 5 cooling modules:

  Convection (S)
  Small heatsink (H)
  Large heatsink (L)
  Fan (F)
  Water (W)

■ THE WIDEST RANGE OF LASER MEASUREMENTS

PRONTO-250-EZ

- Compact laser power meter up to 250 W
- Three measurement modes :

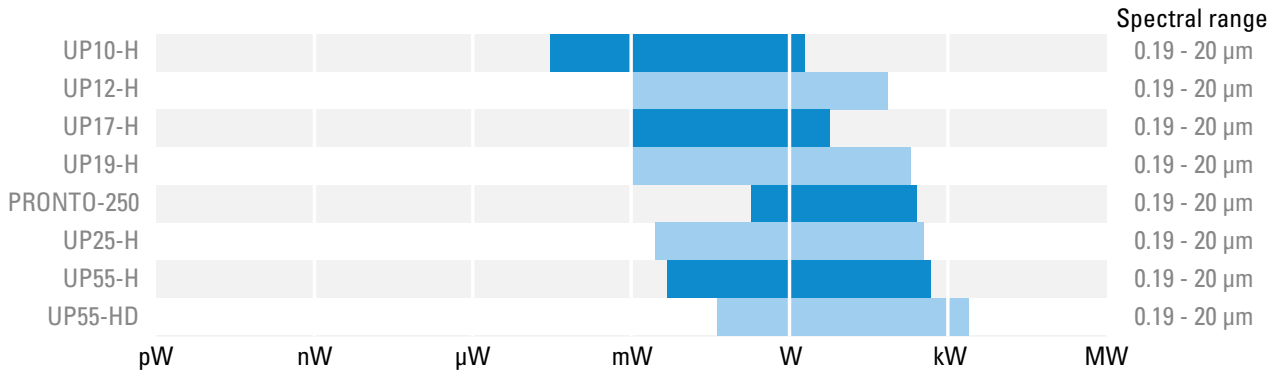
  Single-Shot Power (SSP): up to 250 W
  Continuous Power (CWP): up to 8 W
  Single Shot Energy (SSE): up to 25 J

- The FLEXibility to pick only the calibrations you need:

  Default calibration "Y": for visible to NIR wavelengths (248 nm to 2.5 µm)
  Additional calibration "C": for CO_2 lasers (10.6 µm)
  Additional calibration "E": for energy measurements with ± 5 % accuracy

■ PORTABLE & EASY TO CLEAN

COMPARISON TABLE - GENERAL USE POWER DETECTORS



T 418.651.8003 | info@gentec-eo.com

POWER DETECTORS

High performance power detectors

Available with integra blu

UP-W

Our "W" absorber can handle tightly focused beams thanks to its extremely high damage threshold for average power density. It can be used to measure up to 50 W, from the UV to IR.

- Available in 2 sizes: 19 mm or 55 mm Ø aperture
- High damage threshold absorber (100 kW/cm²)
- Our highest maximum average power density

■ IDEAL FOR UV LASERS & TIGHTLY FOCUSED BEAMS

Available with integra blu

UP-QED

The UP-QED series are power detectors for lasers with extreme power and energy density, such as laser micromachining systems. Thanks to a proprietary absorber that diffuses the measured beam and absorbs it in a larger volume, these detectors have the highest damage thresholds on the market.

- Available in 2 sizes: 16 mm or 52 mm Ø aperture
- Our highest maximum average power density
- Our highest maximum energy density
- Not suitable for UV lasers

■ THE HIGHEST DAMAGE THRESHOLDS ON THE MARKET!

Available with integra

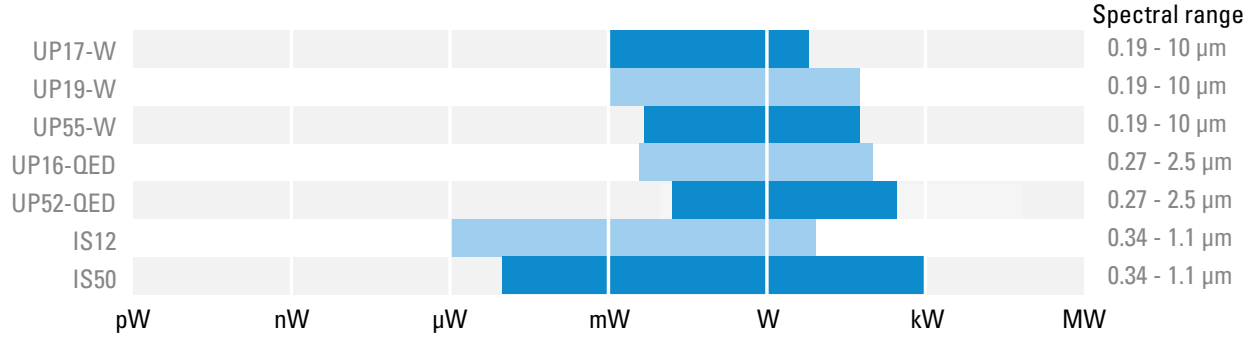
IS: INTEGRATING SPHERE POWER METER

Get the best of both worlds with our new integrating sphere power meters. This technology offers the fast risetime of photodetectors with the high average power of thermal detectors.

- Fast risetime: 0-95 % in less than 0.2 seconds
- Measures up to 1000 W of continuous power
- Available in 2 sizes: 12 mm or 50 mm Ø aperture
- Integrated signal processing with USB or RS-232 output

■ FAST AND ROBUST POWER MEASUREMENT

COMPARISON TABLE - HIGH PERFORMANCE POWER DETECTORS



POWER DETECTORS

High power measurement

HP60: HIGH POWER, LOW BACK-REFLECTIONS

The gold reflector cone of the HP60 series is specifically designed to handle the high intensities of very small beams. By reflecting the incident light on the sides of the aperture, the cone effectively spreads the intensity on a larger area, thus raising the damage threshold to 10 kW/cm² at the full power (15 kW).

- FOR SMALL BEAMS UP TO 15 KW

HP100/125: LARGE APERTURE, COMPACT DEVICE

The HP100A and HP125A are the smallest in our HP series of high-power detectors. They are versatile high-power detectors that measure up to 15 kW of continuous power with a noise level of only a few watts. These models feature a very large aperture of 100 or 125 mm Ø.

- CONTINUOUS POWER MEASUREMENT UP TO 15 KW

SUPER HP: CUSTOM, HIGH-POWER MEASUREMENT

Our unique high-power design allows for infinite customization capabilities. Do not hesitate to contact us with your specific needs. Our Super HP models feature a USB output for direct measurements on a PC as well as our standard DB15 connector. RS-232 output is also available.

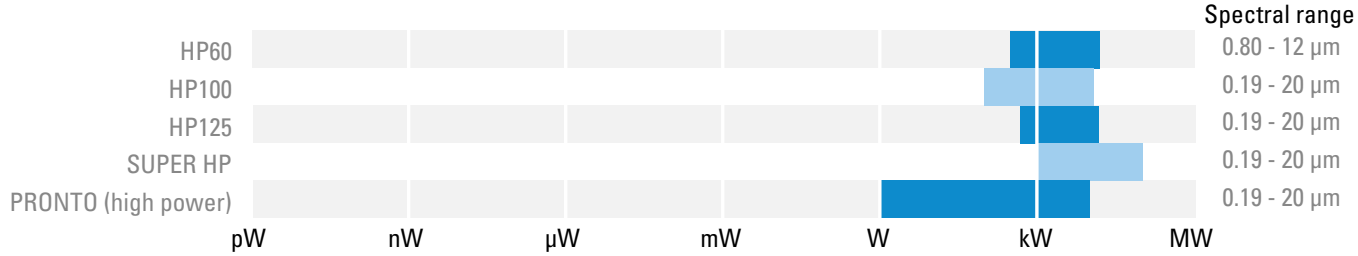
- CUSTOM SOLUTIONS FOR UP TO 150 KW

PRONTO: PORTABLE HIGH-POWER PROBES

When you are on the go and water cooling is not easily accessible, the PRONTO high-power probes are the best solution. These all-in-one power meters with touchscreen controls come in 4 models: 500 W, 3 kW, 6 kW and 10 kW. Their integrated display is encased in a rugged metallic casing to withstand the harshest of environments.

- UP TO 10 KW WITHOUT WATER COOLING

COMPARISON TABLE - HIGH POWER MEASUREMENT



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



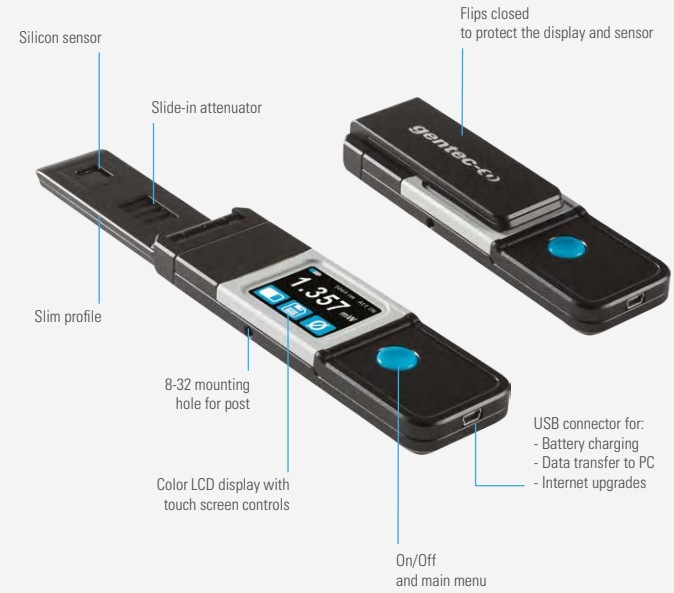

	PH100-SI-HA-D0	PH100-SIUV-D0	PH20-GE-D0	IS12L-9S-RSI
MAX AVERAGE POWER* (ALONE / WITH MAX ATTENUATION)	36 mW / 750 mW	4 mW / 38 mW	30 mW / 500 mW	9 W
EFFECTIVE APERTURE	10 mm Ø	10 mm Ø	5 mm Ø	12 mm Ø
MEASUREMENT CAPABILITY				
Calibrated spectral range	350 - 1080 nm	210 - 1080 nm	800 - 1650 nm	400 - 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.

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.

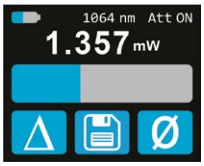
USER INTERFACE

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

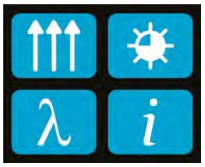
Min/Max display

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

CE NIST* Traceable WEEE/RoHS COMPLIANT

*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*

UM-B

5 nW - 25 mW, radiometer for utra-low power measurements

KEY FEATURES

VERY LOW NOISE LEVEL

Noise levels of a photodetector, but with the large bandwidth of a pyroelectric:

- Down to 5 nW when using the analog power module (APM)

VERY HIGH RESPONSIVITY

Up to 20 000 V/W when using the analog power module (APM)

VERY LARGE BANDWIDTH

From DUV to FIR thanks to pyroelectric technology

INCLUDES AN ISOLATING TUBE TO BLOCK UNDESIRED NOISE FROM THE ENVIRONMENT.

OUTPUT OPTIONS

SMART DB15 CONNECTOR

Contains all the calibration data
Included in UM9B-BL-D0 model only

ANALOG OUTPUT

When used with APM (D) analog power supply

COMPATIBLE DISPLAYS & PC INTERFACES

MAESTRO

U-LINK

APM (D) analog power supply (for UM9B-BL-L-D0)

ACCESSORIES

Stand with delrin post

SDC-500 digital optical chopper

Extra isolation tube

Fiber adaptors & connectors (FC, ST and SMA)

Pelican carrying case

UM-B
Specifications

*Also traceable to NRC-CNRC

	UM9B-BL-L-D0	UM9B-BL-D0
MAX AVERAGE POWER	200 µW	20 mW (MAESTRO), 25 mW (U-LINK)
EFFECTIVE APERTURE	9 mm Ø	9 mm Ø
COMPATIBLE DISPLAYS & PC INTERFACES	APM (D)	MAESTRO and U-LINK
MEASUREMENT CAPABILITY		
Spectral range	0.1 - 20 µm	0.1 - 20 µm
Calibrated spectral range	633 nm[b]	0.248 - 2.1 µm[a]
Maximum measurable power	200 µW	20 mW (MAESTRO), 25 mW (U-LINK)
Noise equivalent power (RMS)	5 nW	300 nW
Rise time (0-100%)	≤ 0.2 s	≤ 0.2 s
Calibration uncertainty	± 4% at 1064 nm	± 4% at 1064 nm
Chopper frequency	5 ± 1 Hz	10 ± 1 Hz
DAMAGE THRESHOLDS		
Maximum average power density (1064 nm)	50 mW/cm²	50 mW/cm²
PHYSICAL CHARACTERISTICS		
Effective aperture	9 mm Ø	9 mm Ø
Sensor	Pyroelectric	Pyroelectric
Absorber	BL	BL
Dimensions	38.1Ø X 79D mm	38.1Ø X 79D mm
Weight	91 g	91 g
ORDERING INFORMATION		
Available output options	DB15 only	DB15 only
Compatible stand	STAND-D-233 or STAND-D-233-M	STAND-D-233 or STAND-D-233-M
Product page		

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Typical wavelength correction factors are provided for 0.19 to 2.1 µm.

XLP12

12 mm Ø, 0.5 µW - 3 W, low power thermopile

KEY FEATURES

- **LOW POWER THERMOPILE**
  Noise level of a photodetector with the large bandwidth and high power capacity of a thermal device
- **MINIMAL THERMAL DRIFT**
  Only 6 µW/°C (with the IR filter)
- **HIGH SENSITIVITY**
- **SPECIAL MODEL FOR ULTRASHORT PULSES**
  VP (volume absorber) version is perfect for low power lasers with ultrashort pulses (ps and fs)
- **IR FILTER (XLPF12 MODEL)**
  Removes unwanted IR interference
- **ISOLATION TUBE**
  Eliminates power fluctuations created by air turbulence

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

S-LINK and M-LINK

ACCESSORIES

Stand with steel post

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

IR filter
(Mounted)

Fiber adaptors & connectors
(FC, ST and SMA)

Pelican carrying case

Extra isolation tube

XLP12
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC



	XLP12-3S-H2-D0	XLPF12-3S-H2-D0	XLP12-3S-VP-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	3 W / 3 W Broadband absorber	3 W / 3 W Broadband absorber, with IR filter	3 W / 3 W Volume absorber
EFFECTIVE APERTURE	12 mm Ø	12 mm Ø	12 mm Ø
COOLING METHOD	Convection	Convection	Convection
MEASUREMENT CAPABILITY			
Spectral range	0.19 - 20 µm	0.28 - 2.1 µm	0.248 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.308 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	0.5 µW	0.5 µW	0.5 µW
Thermal drift [c]	12 µW/°C	6 µW/°C	12 µW/°C
Rise time (nominal) [d]	2.5 s	2.5 s	3 s
Calibration uncertainty [e]	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%
Energy mode			
Maximum measurable energy [f]	5 J	5 J	---
Noise equivalent energy [b]	12 µJ	12 µJ	---
Minimum repetition period	16 s	16 s	---
Maximum pulse width	300 ms	300 ms	---
Accuracy with energy calibration option	± 5%	± 5%	---
DAMAGE THRESHOLDS			
Maximum average power density [g]	1 kW/cm²	1 kW/cm²	30 W/cm² at 1064 nm 8 W/cm² at 532 nm 4 W/cm² at 355 nm
Maximum energy density			
1064 nm, 360 µs, 5 Hz	5 J/cm²	5 J/cm²	---
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	4 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	3 J/cm²
355 nm, 7 ns, 10 Hz	---	---	1 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	---
PHYSICAL CHARACTERISTICS			
Effective aperture	12 mm Ø	12 mm Ø	12 mm Ø
Absorber (high damage threshold)	H2	H2	VP (Volume absorber)
Dimensions	73H x 73W x 20D mm (72D mm with tube)	73H x 73W x 20D mm (80D mm with tube)	73H x 73W x 20D mm (72D mm with tube)
Weight (head only)	0.31 kg	0.32 kg	0.32 kg
ORDERING INFORMATION			
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-233	STAND-S-233	STAND-S-233
Product page			

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With Gentec-EO MAESTRO.
d. With anticipation.
e. Including linearity with power.
f. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
g. At 1064 nm, 1 W CW.

UP10-H

10 mm Ø, 0.1 mW - 2 W, fast & low power thermopile

KEY FEATURES

- **LOW POWER THERMOPILE**
  Noise level of a photodetector with the large bandwidth and high power capacity of a thermal device
- **HIGH PERFORMANCE**
  Fast rise time (1.4 s)
  High damage threshold (36 kW/cm²)
- **COMPACT DESIGN**
  Only 13 mm thick (UP10P model)
- **ENERGY MODE**
  Measure single shot energy up to 3 J

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

S-LINK and M-LINK

ACCESSORIES

Stand with steel post

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

IR Filter
(Mounted)

Isolation tube

Fiber adaptors & connectors
(FC, ST and SMA)

Pelican carrying case

UP10-H
Specifications

*Also traceable to NRC-CNRC

	UP10P-2S-H5-L-D0	UP10K-2S-H5-L-D0
MAX AVERAGE POWER	2 W	2 W
EFFECTIVE APERTURE	10 mm Ø	10 mm Ø
COOLING METHOD	Convection	Convection
MEASUREMENT CAPABILITY		
Spectral range	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	100 µW without anticipation 30 µW with anticipation and 2 s moving average	100 µW without anticipation 30 µW with anticipation and 2 s moving average
Rise time (nominal) [c]	1.4 s	1.1 s
Calibration uncertainty [d]	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%
Energy mode		
Maximum measurable energy [e]	3 J	3 J
Noise equivalent energy [b]	5 mJ	5 mJ
Minimum repetition period	2 s	2 s
Maximum pulse width	63 ms	63 ms
Accuracy with energy calibration option	± 5%	± 5%
DAMAGE THRESHOLDS		
Maximum average power density [f]	36 kW/cm²	36 kW/cm²
Maximum energy density		
1064 nm, 360 µs, 5 Hz	5 J/cm²	5 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS		
Effective aperture	10 mm Ø	10 mm Ø
Absorber (high damage threshold)	H5	H5
Dimensions	46H x 46W x 13D mm	50H x 50W x 21.5D mm
Weight (head only)	0.13 kg	0.19 kg
ORDERING INFORMATION		
Available output options	DB15, USB or RS-232	DB15, USB, RS-232
Compatible stand	STAND-S-233	STAND-S-233
Product page		

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. At 1064 nm, 10 W CW.

UP12-H

12 mm Ø, 1 mW - 110 W

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector: 3 different cooling modules
- **HIGH PERFORMANCE**
  Fast rise time (0.3 s)
  High damage threshold (36 kW/cm²)
- **COMPACT DESIGN**
  Only 14 mm thick (10S model)
- **ENERGY MODE**
  Measure single shot energy up to 5 J

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


S-LINK and M-LINK

ACCESSORIES

Stand with steel post


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


Replacement cover
for fiber adaptors


Pelican carrying Case

UP12-H
Specifications

*Also traceable to NRC-CNRC



	UP12E-10S-H5-D0	UP12E-20H-H5-D0	UP12E-70W-H5-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	10 W / 20 W	20 W / 40 W	70 W [f] / 110 W [f]
EFFECTIVE APERTURE	12 mm Ø	12 mm Ø	12 mm Ø
COOLING METHOD	Convection	Heatsink	Water-cooled
MEASUREMENT CAPABILITY			
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	1 mW	1 mW	1 mW
Rise time (nominal) [c]	0.3 s	0.3 s	0.3 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%
Energy mode			
Maximum measurable energy [e]	5 J	5 J	5 J
Noise equivalent energy [b]	0.02 J	0.02 J	0.02 J
Minimum repetition period	1.5 s	1.5 s	1.5 s
Maximum pulse width	50 ms	50 ms	50 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS			
Maximum average power density [g]	36 kW/cm²	36 kW/cm²	36 kW/cm²
Maximum energy density			
1064 nm, 360 µs, 5 Hz	5 J/cm²	5 J/cm²	5 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS			
Effective aperture	12 mm Ø	12 mm Ø	12 mm Ø
Absorber (high damage threshold)	H5	H5	H5
Dimensions	38H x 38W x 14D mm	38H x 38W x 45D mm	38H x 38W x 32D mm
Weight (head only)	0.13 kg	0.15 kg	0.19 kg
ORDERING INFORMATION			
Available output options	DB15, USB or RS-232	DB15, USB or RS-232	DB15, USB or RS-232
Compatible stand	STAND-S-233	STAND-S-233	STAND-S-233
Product page			

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 0.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.
g. At 1064 nm, 10 W CW.

UP17-H/W

17 mm Ø, 1 mW - 7 W, ultra thin casing

KEY FEATURES

ULTRA THIN CASING
Only 10.7 mm thick!

CHOICE BETWEEN 2 ABSORBERS

- H5: 36 kW/cm²
- W5: unequalled 100 kW/cm²

HIGH POWER TO SIZE RATIO
6 W continuous reading

ENERGY MODE
Measure single shot energy up to 200 J (with the W5 version)

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


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


Pelican carrying case

UP17-H/W
Specifications

*Also traceable to NRC-CNRC

	UP17P-6S-H5-D0	UP17P-6S-W5-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	6 W / 7 W	6 W / 7 W
EFFECTIVE APERTURE	17 mm Ø	17 mm Ø
COOLING METHOD	Convection	Convection
MEASUREMENT CAPABILITY		
Spectral range	0.19 - 20 µm	0.19 - 10.0 µm
Calibrated spectral range	0.248 - 2.1 µm [a]	0.248 - 2.1 µm [b]
Noise equivalent power [c]	1 mW	1 mW
Rise time (nominal) [d]	0.8 s	1.4 s
Calibration uncertainty [e]	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%
Energy mode		
Maximum measurable energy [f]	15 J	200 J
Noise equivalent energy [c]	0.02 J	0.02 J
Minimum repetition period	4 s	5 s
Maximum pulse width	88 ms	133 ms
Accuracy with energy calibration option	± 5%	± 5%
DAMAGE THRESHOLDS		
Maximum average power density [g]	36 kW/cm²	100 kW/cm²
Maximum energy density		
1064 nm, 360 µs, 5 Hz	5 J/cm²	100 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1.1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	1.1 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.7 J/cm²
PHYSICAL CHARACTERISTICS		
Effective aperture	17 mm Ø	17 mm Ø
Absorber (high damage threshold)	H5	W5
Dimensions	46H x 46W x 10.7D mm	46H x 46W x 10.7D mm
Weight (head only)	0.1 kg	0.1 kg
ORDERING INFORMATION		
Available output options	DB15, USB or RS-232	DB15, USB or RS-232
Compatible stand	STAND-S-233	STAND-S-233
Product page		

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Calibration at 2.1 to 2.5 µm is available on special request.
c. Nominal value, actual value depends on electrical noise in the measurement system.
d. With anticipation.
e. Including linearity with power.
f. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
g. At 1064 nm, 10 W CW.

UP19-H

19 mm Ø, 1 mW - 200 W

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector: 5 different cooling modules
- **HIGH PERFORMANCE**
  Fast rise time (0.6 s)
  High damage threshold (45 kW/cm²)
- **COMPACT DESIGN**
  Only 20.6 mm thick (15S model)
- **ENERGY MODE**
  Measure single shot energy up to 25 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


Isolation tube


Fiber adaptors and connectors
(FC, SC or SMA)


12V power supply


Pelican carrying case

UP19-H
Specifications

NIST* Traceable
*Also traceable to NRC-CNRC





	UP19K-15S-H5-D0	UP19K-30H-H5-D0	UP19K-50L-H5-D0	UP19K-110F-H9-D0	UP19K-200W-H9-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	15 W / 30 W	30 W/ 60 W	50 W / 90 W	110 W / 150 W	200 W [f] / 200 W [f]
EFFECTIVE APERTURE	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
COOLING METHOD	Convection	Heatsink	Large heatsink	Fan-cooled	Water-cooled
MEASUREMENT CAPABILITY					
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	1 mW	1 mW	1 mW	3 mW	3 mW
Rise time (nominal) [c]	0.6 s	0.6 s	0.6 s	1.5 s	1.5 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
Energy mode					
Maximum measurable energy [e]	15 J	15 J	15 J	25 J	25 J
Noise equivalent energy [b]	0.02 J	0.02 J	0.02 J	0.06 J	0.06 J
Minimum repetition period	4 s	4 s	4 s	4 s	4 s
Maximum pulse width	88 ms	88 ms	88 ms	88 ms	88 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS					
Maximum average power density [g]	36 kW/cm²	36 kW/cm²	36 kW/cm²	45 kW/cm²	45 kW/cm²
Maximum energy density					
1064 nm, 360 µs, 5 Hz	5 J/cm²	5 J/cm²	5 J/cm²	5 J/cm²	5 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS					
Effective aperture	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
Absorber (high damage threshold)	H5	H5	H5	H9	H9
Dimensions	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm	76.2H x 76.2W x 73.6D mm	50H x 50W x 63D mm	50H x 50W x 33D mm
Weight (head only)	0.16 kg	0.21 kg	0.48 kg	0.25 kg	0.24 kg
ORDERING INFORMATION					
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB or RS-232	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-233	STAND-S-233	STAND-S-233	STAND-S-233	STAND-S-233
Product page					

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 0.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.
g. At 1064 nm, 10 W CW.

PRONTO-250

0.5 W - 250 W power probes with touchscreen controls

KEY FEATURES

POCKET-SIZE
This mid to high power laser probe is so compact it fits in your pocket!

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!

DATA LOGGING
Save your data to the internal memory and then transfer them to your PC over the USB connection.

FROM LOW TO HIGH POWERS
Thanks to a low noise level and high damage threshold, the PRONTO can measure powers from 0.5 W to 250 W.

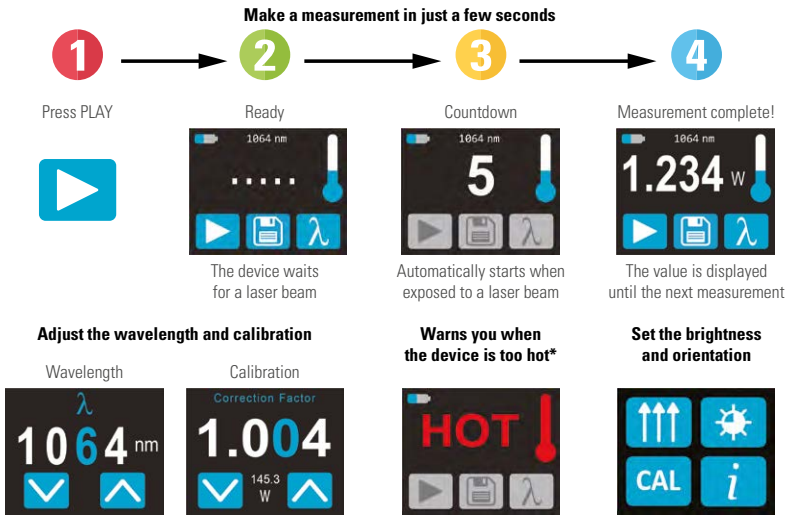
THE FLEXIBILITY TO PICK THE CALIBRATIONS YOU NEED
The PRONTO-250-FLEX offers three calibration options so you only pay for what you need:

- Default calibration "Y": for visible to NIR wavelengths (248 nm to 2.5 µm)
- Additional calibration "C": for CO_2 lasers (10.6 µm)
- Additional calibration "E": for energy measurements with ± 5 % accuracy

HANDS-FREE OPERATION
Place it on a flat surface or use one of the 2 threaded holes for safe use with optical stands.

SERIAL COMMANDS
Serial commands are available to let you take full control of your PRONTO from your PC.

USER INTERFACES (SSP MODE)



** Device may get hot, it is not recommended for handheld use when making a measurement*

3 MODELS FOR ALL YOUR MEASUREMENT NEEDS

PRONTO-250-EZ
Adapted to dirty environments, the PRONTO-250-EZ offers the same performance as PRONTO-250-FLEX, with the added advantage that it can be cleaned on-the-go.

- Perfect for field use

PRONTO-250-FLEX
PRONTO-250-FLEX comes with 3 measurement modes and can be used in a variety of applications:

- Single shot power (SSP): up to 250 W
- Continuous power (CWP): up to 8 W
- Single shot energy (SSE): up to 25 J

PRONTO-50-W5
This model has our proprietary absorber with extremely high damage thresholds to handle tightly focused beams without damaging the absorber.

- Single shot power (SSP): up to 50 W

CONNECTIVITY

HANDS-FREE

DATA TRANSFER TO PC

PRONTO-250
Specifications

*Also traceable to NRC-CNRC

	PRONTO-250-FLEX & PRONTO-250-EZ			PRONTO-50-W5
	SSP Mode Measures in 5 s	CWP Mode Measures power continuously	SSE Mode Measures single-shot energy	
MAX AVERAGE POWER/ENERGY	250 W	8 W	25 J (up to 150 J for pulses >1 ms)	50 W
EFFECTIVE APERTURE	19 mm Ø			19 mm Ø
INTERFACE	Touchscreen color LCD display			Touchscreen color LCD display
MEASUREMENT CAPABILITY				
Spectral range	0.19 - 20 µm			0.19 - 10 µm
Calibrated spectral range	0.248 - 2.5 µm (default) 10.6 µm available with calibration option "C"			0.248 - 2.5 µm
Noise equivalent power/energy	10 mW	10 mW	60 mJ	4 mW
Minimum measurable power/energy	0.5 W	0.2 W	N/A	0.5 W
Exposure time	5 s	1.5 s response time	0.26 s	5 s
Measurement accuracy	± 3%	± 2.5%	± 5 % with additional calibration "E" Typical value as default	± 3%
Min repetition period (Max pulse width)	N/A	N/A	4 s (88 ms)	N/A
Display resolution	1 mW	1 mW	10 mJ	1 mW
DAMAGE THRESHOLDS				
Maximum average power density [a]	45 kW/cm² (at 1064 nm, 10 W, CW) 14 kW/cm² (at 10.6 µm, 10 W, CW)			100 kW/cm² (at 1064 nm, 10 W, CW)
Maximum exposure time [b]	6 s	N/A	N/A	6 s
Maximum device temperature [b]	65°C	40°C	40°C	65°C
USER INTERFACE				
Measurement controls	Wavelength selection and user calibration			Wavelength selection and user calibration
Measurement modes	Single Shot Power (SSP), Continuous Power (CWP) and Single Shot Energy (SSE)			Single Shot Power (SSP)
Data acquisition and transfer	Yes			Yes
GENERAL SPECIFICATIONS				
Display type	Touchscreen color LCD			Touchscreen color LCD
Display size	28.0 x 35.0 mm (128 x 160 pixels)			28.0 x 35.0 mm (128 x 160 pixels)
Data storage	50 000 pts			50 000 pts
Battery type	Rechargeable Li-ion			Rechargeable Li-ion
Battery life	17 hours or 4 200 measurements (with brightness set at 25%)			17 hours or 4 200 measurements (with brightness set at 25%)
Battery recharge via	USB port			USB port
PHYSICAL CHARACTERISTICS				
Effective aperture	19 mm Ø			19 mm Ø
Absorber	H9 (FLEX) or EZ (easy to clean)			W5
Mounting holes (for post)	2 x 8-32			2 x 8-32
Dimensions	59W x 181.4L x 17D			59W x 181.4L x 17D
Weight	210 g			210 g
ORDERING INFORMATION				
Compatible stand	STAND-S-233			STAND-S-233
Product page				

a. To get all the damage thresholds, see User Manual.
b. At maximum power.

UP25-H

25 mm Ø, 3 mW - 350 W

KEY FEATURES

- **NEW!** IMPROVED MECHANICS
  The aperture thread is now compatible with SM1-threaded accessories.
- MODULAR CONCEPT
  Increase the power capability of your detector: 4 different cooling modules
- HIGH PERFORMANCE
  Fast rise time (1.3 s)
  High damage threshold (45 kW/cm²)
- ENERGY MODE
  Measure single shot energy up to 40 J

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)
- BLU WIRELESS METER
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES

Stand with steel post


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


Fiber adaptors and connectors
(FC, SC or SMA)


12V power supply


Pelican carrying case

UP25-H
Specifications

*Also traceable to NRC-CNRC




	UP25N-40S-H9-D0	UP25N-100H-H9-D0	UP25N-250F-H12-D0	UP25M-350W-H12-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	40 W / 80 W	100 W / 200 W	250 W / 300 W	350 W [f] / 350 W [f]
EFFECTIVE APERTURE	25 mm Ø	25 mm Ø	25 mm Ø	25 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-cooled	Water-cooled
MEASUREMENT CAPABILITY				
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	3 mW	3 mW	10 mW	10 mW
Rise time (nominal) [c]	1.3 s	1.3 s	1.3 s	1.3 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%	±0.5%
Energy mode				
Maximum measurable energy [e]	40 J	40 J	40 J	40 J
Noise equivalent energy [b]	0.2 J	0.2 J	0.2 J	0.2 J
Minimum repetition period	4.6 s	4.6 s	11.5 s	11.5 s
Maximum pulse width	123 ms	123 ms	390 ms	390 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS				
Maximum average power density				
1064 nm, 10 W, CW	45 kW/cm²	45 kW/cm²	45 kW/cm²	45 kW/cm²
10.6 µm, 10 W, CW	14 kW/cm²	14 kW/cm²	14 kW/cm²	14 kW/cm²
Maximum energy density				
1064 nm, 360 µs, 5 Hz	9 J/cm²	9 J/cm²	9 J/cm²	9 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	25 mm Ø	25 mm Ø	25 mm Ø	25 mm Ø
Absorber (high damage threshold)	H9	H9	H12	H12
Dimensions	89H x 89W x 32D mm	89H x 89W x 106D mm	92H x 92W x 117D mm	89H x 89W x 40D mm
Weight (head only)	0.68 kg	0.99 kg	1.44 kg	0.87 kg
ORDERING INFORMATION				
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-443	STAND-S-443	STAND-S-443	STAND-S-443
Product page				

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 1.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

UP55-H

55 mm Ø, 5 mW - 500 W

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector:
  4 different cooling modules
- **HIGH PERFORMANCE**
  Fast rise time (2 s)
  High damage threshold (45 kW/cm²)
- **COMPACT DESIGN**
  Only 32 mm thick (40S model)
- **ENERGY MODE**
  Measure single shot energy up to 200 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES

Stand with steel post


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


Fiber adaptors and connectors
(FC, SC or SMA)


3-Port fiber cylinder with
adaptors and plug


12V power supply


Pelican carrying case

UP55-H
Specifications

*Also traceable to NRC-CNRC




	UP55N-40S-H9-D0	UP55N-100H-H9-D0	UP55N-300F-H12-D0	UP55M-500W-H12-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	40 W / 80 W	100 W / 200 W	300 W / 300 W	500 W [f] / 500 W [f]
EFFECTIVE APERTURE	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-cooled	Water-cooled
MEASUREMENT CAPABILITY				
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	5 mW	5 mW	15 mW	15 mW
Rise time (nominal) [c]	2 s	2 s	2 s	2 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%	±0.5%
Energy mode				
Maximum measurable energy [e]	200 J	200 J	200 J	200 J
Noise equivalent energy [b]	0.25 J	0.25 J	0.25 J	0.25 J
Minimum repetition period	11.1 s	11.1 s	12 s	12 s
Maximum pulse width	433 ms	433 ms	430 ms	430 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS				
Maximum average power density				
1064 nm, 10 W, CW	45 kW/cm²	45 kW/cm²	45 kW/cm²	45 kW/cm²
10.6 µm, 10 W, CW	14 kW/cm²	14 kW/cm²	14 kW/cm²	14 kW/cm²
Maximum energy density				
1064 nm, 360 µs, 5 Hz	9 J/cm²	9 J/cm²	9 J/cm²	9 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	55 mm Ø	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (high damage threshold)	H9	H9	H12	H12
Dimensions	89H x 89W x 32D mm	89H x 89W x 106D mm	92H x 92W x 117D mm	89H x 89W x 40D mm
Weight (head only)	0.62 kg	0.93 kg	1.41 kg	0.81 kg
ORDERING INFORMATION				
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-443	STAND-S-443	STAND-S-443	STAND-S-443
Product page				

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 1.5 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

UP55-HD

55 mm Ø, 45 mW - 2500 W

KEY FEATURES

HIGH DENSITY ABSORBER

The HD absorber is the strongest on the market for use at high powers, presenting both high average power handling and high power density capabilities

UP55G-600F-HD - NO NEED FOR WATER COOLING

Unique on the market, measure 600 W of continuous power WITHOUT THE NEED FOR WATER COOLING. Just plug the fan and you are ready to go!

UP55M-700W-HD - FAST AND COMPACT

A very compact detector that measures up to 700 W of continuous power.

UP55C-2.5KW-HD - PERFORMANCE AND SPEED AT A LOW PRICE

Measures both very low and very high powers (up to 2500W) with a fast response time. A compact and versatile detector that is more affordable than any other high power solution on the market.

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)

BLU WIRELESS METER

Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


Fiber adaptors and connectors (FC, SC or SMA)


3-Port fiber cylinder with adaptors and plug


12V power supply


Pelican carrying case

UP55-HD
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC



	UP55G-600F-HD-D0	UP55M-700W-HD-D0	UP55C-2.5KW-HD-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	600 W / 600 W	700 W [f] / 700 W [f]	2500 W [f] / 2500 W [f]
EFFECTIVE APERTURE	55 mm Ø	55 mm Ø	55 mm Ø
COOLING METHOD	Fan-cooled	Water-cooled	Water-cooled
MEASUREMENT CAPABILITY			
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	45 mW	45 mW	200 mW
Rise time (nominal) [c]	2,8 s	2.8 s	3.5 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%
Energy mode			
Maximum measurable energy [d]	200 J	200 J	---
Noise equivalent energy [b]	0.25 J	0.25 J	---
Minimum repetition period	12 s	12 s	---
Maximum pulse width	430 ms	430 ms	---
Accuracy with energy calibration option	± 5%	± 5%	---
DAMAGE THRESHOLDS			
Maximum average power density			
1064 nm, 10 W, CW	45 kW/cm²	45 kW/cm²	45 kW/cm²
1064 nm, 500 W, CW	8 kW/cm²	8 kW/cm²	9 kW/cm²
1064 nm, 2500 W, CW	---	---	6 kW/cm²
10.6 µm, 500 W, CW	---	---	4.5 kW/cm²
10.6 µm, 1500 W, CW	---	---	3.5 kW/cm²
10.6 µm, 2500 W, CW	---	---	3.0 kW/cm²
Maximum energy density			
1064 nm, 360 µs, 5 Hz	9 J/cm²	9 J/cm²	9 J/cm²
1064 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²
532 nm, 7 ns, 10 Hz	0.6 J/cm²	0.6 J/cm²	0.6 J/cm²
266 nm, 7 ns, 10 Hz	0.3 J/cm²	0.3 J/cm²	0.3 J/cm²
PHYSICAL CHARACTERISTICS			
Effective aperture	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (high damage threshold)	HD	HD	HD
Dimensions	120H x 120W x 135D mm	89H x 89W x 40D mm	116H x 116W x 37D mm
Weight (head only)	2.75 kg	0.90 kg	3.3 kg
ORDERING INFORMATION			
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-443-C	STAND-S-443-C	STAND-S-443-C
Product page			

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 1.5 l/m (UP55M-700W-HD) or 3 l/m (UP55C-2.5KW-HD), water temperature ≤22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.

UP19-W

19 mm Ø, 1 mW - 85 W, 100 kW/cm²

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector:
  4 different cooling modules
- **VERY HIGH DAMAGE THRESHOLD**
  100 kW/cm² in average power density
- **COMPACT DESIGN**
  Only 21 mm thick (15S model)
- **ENERGY MODE**
  Measure single shot energy up to 200 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


12V power supply


Pelican carrying case


Isolation tube


Fiber adaptors & connectors
(FC, ST and SMA)

UP19-W
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC




	UP19K-15S-W5-D0	UP19K-30H-W5-D0	UP19K-50L-W5-D0	UP19K-50F-W5-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	15 W / 30 W	30 W / 60 W	50 W / 85 W	50 W / 85 W
EFFECTIVE APERTURE	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
COOLING METHOD	Convection	Heatsink	Large heatsink	Fan-cooled
MEASUREMENT CAPABILITY				
Spectral range	0.19 - 10.0 µm	0.19 - 10.0 µm	0.19 - 10.0 µm	0.19 - 10.0 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	1 mW	1 mW	1 mW	1 mW
Rise time (nominal) [c]	1.4 s	1.4 s	1.4 s	1.4 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%	±0.5%
Energy mode				
Maximum measurable energy [e]	200 J	200 J	200 J	200 J
Noise equivalent energy [b]	0.02 J	0.02 J	0.02 J	0.02 J
Minimum repetition period	5 s	5 s	5 s	5 s
Maximum pulse width	133 ms	133 ms	133 ms	133 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS				
Maximum average power density [f]	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²
Maximum energy density				
1064 nm, 150 µs, 10 Hz	100 J/cm²	100 J/cm²	100 J/cm²	100 J/cm²
1064 nm, 7 ns, 10 Hz	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²
532 nm, 7 ns, 10 Hz	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²
248 nm, 26 ns, 10 Hz	0.7 J/cm²	0.7 J/cm²	0.7 J/cm²	0.7 J/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	19 mm Ø	19 mm Ø	19 mm Ø	19 mm Ø
Absorber (high damage threshold)	W5	W5	W5	W5
Dimensions	50H x 50W x 20.6D mm	50H x 50W x 56.3D mm	76.2H x 76.2W x 73.6D mm	50H x 50W x 63D mm
Weight (head only)	0.16 kg	0.21 kg	0.48 kg	0.25 kg
ORDERING INFORMATION				
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB or RS-232	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-233	STAND-S-233	STAND-S-233	STAND-S-233
Product page				

a. Calibration at 2.1 to 2.5 µm is available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 150 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. At 1064 nm, 10 W CW.

UP55-W

55 mm Ø, 5 mW - 85 W, 100 kW/cm²

New product

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector:
  3 different cooling modules
- **VERY HIGH DAMAGE THRESHOLD**
  100 kW/cm² in average power density
- **VERY LARGE APERTURE**
  55 mm Ø effective aperture, perfect for large beams
- **HIGHEST ENERGY READINGS IN THE SERIES**
  Measure single shot energy up to 500 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


Fiber adaptors and connectors
(FC, SC or SMA)

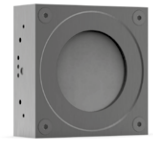

3-Port fiber cylinder with
adaptors and plug


12V power supply


Pelican carrying case

UP55-W
Specifications

*Also traceable to NRC-CNRC



	UP50N-40S-W9-D0	UP50N-50H-W9-D0	UP50N-50F-W9-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	40 W / 80 W	50 W / 85 W	50 W / 85 W
EFFECTIVE APERTURE	55 mm Ø	55 mm Ø	55 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-cooled
MEASUREMENT CAPABILITY			
Spectral range	0.19 - 10.0 µm	0.19 - 10.0 µm	0.19 - 10.0 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	5 mW	5 mW	5 mW
Rise time (nominal) [c]	3.5 s	3.5 s	3.5 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%
Energy mode			
Maximum measurable energy [e]	500 J	500 J	500 J
Noise equivalent energy [b]	0.25 J	0.25 J	0.25 J
Minimum repetition period	11.1 s	11.1 s	11.1 s
Maximum pulse width	467 ms	467 ms	467 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS			
Maximum average power density [f]	100 kW/cm²	100 kW/cm²	100 kW/cm²
Maximum energy density			
1064 nm, 150 µs, 5 Hz	100 J/cm²	100 J/cm²	100 J/cm²
1064 nm, 7 ns, 10 Hz	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²
532 nm, 7 ns, 10 Hz	1.1 J/cm²	1.1 J/cm²	1.1 J/cm²
248 nm, 26 ns, 10 Hz	0.7 J/cm²	0.7 J/cm²	0.7 J/cm²
PHYSICAL CHARACTERISTICS			
Effective aperture	55 mm Ø	55 mm Ø	55 mm Ø
Absorber (high damage threshold)	W9	W9	W9
Dimensions	89H x 89W x 38D mm	89H x 89W x 109D mm	92H x 92W x 116D mm
Weight (head only)	0.62 kg	0.93 kg	1.38 kg
ORDERING INFORMATION			
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-443	STAND-S-443	STAND-S-443
Product page			

a. Calibration at 2.1 to 2.5 µm is available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. At 1064 nm, 10 W CW.

UP16-QED

16 mm Ø, 4 mW - 100 W, volume absorber

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector:
  3 different cooling modules
- **HIGH PEAK POWER VOLUME ABSORBER**
  Perfect for pulsed beams with high energy density
- **COMPACT DESIGN**
  Only 24 mm thick (15S model)
- **ENERGY MODE**
  Measure single shot energy up to 500 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


Pelican carrying case

UP16-QED
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC



	UP16K-15S-QED-D0	UP16K-30H-QED-D0	UP16K-100W-QED-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	15 W / 20 W	30 W / 35 W	100 W / 100 W
EFFECTIVE APERTURE	16 mm Ø	16 mm Ø	16 mm Ø
COOLING METHOD	Convection	Heatsink	Water-cooled
MEASUREMENT CAPABILITY			
Spectral range	0.266 - 2.5 µm	0.266 - 2.5 µm	0.266 - 2.5 µm
Calibrated spectral range [a]	0.532 - 2.1 µm	0.532 - 2.1 µm	0.532 - 2.1 µm
Noise equivalent power [b]	4 mW	4 mW	4 mW
Rise time (nominal) [c]	2.5 s	2.5 s	2.5 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%
Energy mode			
Maximum measurable energy [e]	500 J	500J	500 J
Noise equivalent energy [b]	60 mJ	60 mJ	60 mJ
Minimum repetition period	4 s	4 s	4 s
Maximum pulse width	61 ms	61 ms	61 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS			
Maximum average power density [f]	100 kW/cm²	100 kW/cm²	100 kW/cm²
Maximum energy density			
1064 nm, 360 µs, 5 Hz	300 J/cm²	300 J/cm²	300 J/cm²
1064 nm, 7 ns, 10 Hz	8 J/cm²	8 J/cm²	8 J/cm²
532 nm, 7 ns, 10 Hz	6 J/cm²	6 J/cm²	6 J/cm²
266 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²
PHYSICAL CHARACTERISTICS			
Effective aperture	16 mm Ø	16 mm Ø	16 mm Ø
Absorber (volume absorber)	QED	QED	QED
Dimensions	50H x 50W x 23.6D mm	50H x 50W x 59D mm	50H x 50W x 38D
Weight (head only)	0.16 kg	0.21 kg	0.24 kg
ORDERING INFORMATION			
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-233	STAND-S-233	STAND-S-233
Product page			

a. Calibration at 2.1 to 2.5 µm is available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. At 1064 nm, 10 W CW.

UP52-QED

52 mm Ø, 15 mW - 300 W, volume absorber

KEY FEATURES

- **MODULAR CONCEPT**
  Increase the power capability of your detector:
  4 different cooling modules
- **HIGH PEAK POWER VOLUME ABSORBER**
  Perfect for pulsed beams with high energy density
- **LARGE APERTURE**
  52 mm Ø aperture accomodates large beams
- **HIGH AVERAGE POWER**
  Up to 300 W of continuous power with the water-cooled unit
- **ENERGY MODE**
  Measure single shot energy up to 1000 J

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)
- **BLU WIRELESS METER**
  Connects via Bluetooth® to a smartphone, tablet or PC

COMPATIBLE DISPLAYS & PC INTERFACES


MIRO ALTITUDE


MAESTRO


TUNER


UNO


U-LINK and P-LINK


S-LINK and M-LINK

ACCESSORIES


Stand with steel post


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


12V power supply


Pelican carrying case

UP52-QED
Specifications

NIST* Traceable
*Also traceable to NRC-CNRC




	UP52N-50S-QED-D0	UP52N-100H-QED-D0	UP52N-150F-QED-D0	UP52M-300W-QED-D0
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	50 W / 50 W	100 W / 100 W	150 W / 150 W	300 W [f] / 300 W [f]
EFFECTIVE APERTURE	52 mm Ø	52 mm Ø	52 mm Ø	52 mm Ø
COOLING METHOD	Convection	Heatsink	Fan-cooled	Water-cooled
MEASUREMENT CAPABILITY				
Spectral range	0.266 - 2.5 µm	0.266 - 2.5 µm	0.266 - 2.5 µm	0.266 - 2.5 µm
Calibrated spectral range [a]	0.300 - 2.1 µm	0.300 - 2.1 µm	0.300 - 2.1 µm	0.300 - 2.1 µm
Noise equivalent power [b]	15 mW	15 mW	15 mW	15 mW
Rise time (nominal) [c]	4 s	4 s	4 s	4 s
Calibration uncertainty [d]	± 2.5%	± 2.5%	± 2.5%	± 2.5%
Repeatability	±0.5%	±0.5%	±0.5%	±0.5%
Energy mode				
Maximum measurable energy [e]	1000 J	1000 J	1000 J	1000 J
Noise equivalent energy [b]	250 mJ	250 mJ	250 mJ	250 mJ
Minimum repetition period	9 s	9 s	9 s	9 s
Maximum pulse width	371 ms	371 ms	371 ms	371 ms
Accuracy with energy calibration option	± 5%	± 5%	± 5%	± 5%
DAMAGE THRESHOLDS				
Maximum average power density [g]	100 kW/cm²	100 kW/cm²	100 kW/cm²	100 kW/cm²
Maximum energy density				
1064 nm, 360 µs, 5 Hz	300 J/cm²	300 J/cm²	300 J/cm²	300 J/cm²
1064 nm, 7 ns, 10 Hz	8 J/cm²	8 J/cm²	8 J/cm²	6 J/cm²
532 nm, 7 ns, 10 Hz	6 J/cm²	6 J/cm²	6 J/cm²	6 J/cm²
266 nm, 7 ns, 10 Hz	1 J/cm²	1 J/cm²	1 J/cm²	1 J/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	52 mm Ø	52 mm Ø	52 mm Ø	52 mm Ø
Absorber (volume absorber)	QED	QED	QED	QED
Dimensions	89H x 89W x 32D mm	89H x 89W x 106D mm	89H x 89W x 116D mm	89H x 89W x 43D mm
Weight (head only)	0.62 kg	0.93 kg	1.41 kg	0.84 kg
ORDERING INFORMATION				
Available output options	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth	DB15, USB, RS-232 or Bluetooth
Compatible stand	STAND-S-443	STAND-S-443	STAND-S-443	STAND-S-443
Product page				

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. With anticipation.
d. Including linearity with power.
e. For 360 µs pulses. Higher pulse energy possible for long pulses (ms), less for short pulses (ns).
f. Minimum cooling flow 1 liters/min, water temperature ≤ 22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.
g. At 1064 nm, 10 W CW.

IS

Integrating sphere detector for laser power measurement up to 1 kW

KEY FEATURES

FASTEST RESPONSE
With its silicon sensor, the integrating sphere is as fast as a photodiode.

WIDE POWER RANGE
Very low noise level = wide power range with just one device

HIGH AVERAGE POWER
Measure up to 1500 W of continuous power.

RESISTANT COATING
Our proprietary coating is designed to be strong. Its damage thresholds are orders of magnitude higher than any other "white" coatings on the market.

PRECISE CALIBRATION
The IS detectors have a NIST-traceable calibration for the entire calibrated spectral range.

OUTPUT OPTIONS

integra ALL-IN-ONE-METER
Connects directly to a PC
Two models available:
- USB output (-INT)
- RS-232 output (-IDR)

COMPATIBLE PC INTERFACES

INTEGRA

ACCESSORIES

Stand with delrin post

Fiber adaptors & connectors (for IS12L only)

Pelican carrying case

Isolation tube (for IS12L only)

IS
Specifications

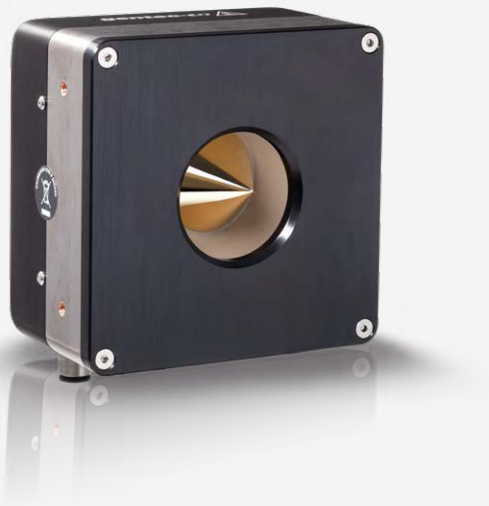
*Also traceable to NRC-CNRC

	IS12L-9S-RSI-INT-D0	IS50A-1KW-RSI-INT-D0
MAXIMUM AVERAGE POWER	9 W	1000 W (continuous) / 1500 W (for max 10 s)
EFFECTIVE APERTURE	12 mm Ø	50 mm Ø
COOLING METHOD	Convection	Water
MEASUREMENT CAPABILITY		
Spectral range	340 - 1100 nm	340 - 1100 nm
Calibrated spectral range	400 - 1070 nm	400 - 1070 nm
Maximum average power	9 W	1000 W (continuous) / 1500 W (for max 10 s)
Noise equivalent power [a]	1 µW at 1070 nm	10 µW at 1070 nm
Maximum divergence	10° (half-angle)	10° (half-angle)
Maximum incidence angle	± 10°	± 25° for beam diameter < Ø 12mm ± 5° for beam diameter > Ø 12mm
Typical rise time	< 0.2 s	< 0.2 s
Sampling rate	15 Hz	15 Hz
Calibration uncertainty	± 5.0% (400 - 499 nm) ± 3.5% (500 - 1069 nm) ± 2.5% (1070 nm)	± 5.0% (400 - 499 nm) ± 3.5% (500 - 1069 nm) ± 2.5% (1070 nm)
Back reflections [b]	6%	12%
Linearity with power	± 1%	± 1%
DAMAGE THRESHOLDS		
Maximum average power density [c]	2 kW/cm²	5 kW/cm²
Maximum energy density [d]	400 mJ/cm²	400 mJ/cm²
PHYSICAL CHARACTERISTICS		
Effective aperture	12 mm Ø	50 mm Ø
Mounting thread	SM1	SM2
Sphere inner diameter	50 mm Ø	100 mm Ø
Sensor	Silicon	Silicon
Dimensions	66H x 78W x 66D mm	127H x 140W x 115D mm
Weight	0.75 kg	4 kg
ORDERING INFORMATION		
Available output options	USB or RS-232	USB or RS-232
Compatible stand	STAND-S-443	STAND-S-443-C
Product page		

a. Nominal value. Actual value depends on environmental electromagnetic interference and wavelength.
b. The backscattered power (also known as back reflections) is concentrated in a cone with an apex located at the back of the sphere. For IS12, the cone has a 7.5-degree half-angle. For IS50, the cone has a 15-degree half-angle.
c. At 1064 - 1070 nm, CW.
d. At 1064 - 1070 nm, 7 ns.

HP60

60 mm Ø with cone reflector, 300 W - 15 000 W



KEY FEATURES

HIGH POWER HANDLING
Handles up to 15 kW of continuous power. Custom models available for higher powers. The new HP60A-15KW-GD-QBH is designed for use with QB/QBH high power fibers.

LOW BACK REFLECTIONS
The cone reflector traps most of the incident laser power inside the detector head. With its TUBE extension, the HP60A-15KW-GD-TUBE has the lowest back reflection rating: under 2 %.

AVAILABLE WITH YAG AND CO_2 CALIBRATIONS
All HP models can be calibrated at YAG and CO_2 wavelengths with a calibration uncertainty of ± 5 %

DIRECT USB CONNECTION TO A PC
Each head comes with both a DB15 connector (for use with a Gentec-EO display device) and a USB output for direct connection to a PC

TRACK WATER PARAMETERS
Water flow and temperature are monitored in real time and displayed continuously

OUTPUT OPTIONS

SMART DB15 CONNECTOR
Contains all the calibration data

USB PORT
- Connects directly to a PC
- Included in all HP models

CUSTOM OPTION: RS-232
Contact you Gentec-EO representative to configure your available connectors

COMPATIBLE DISPLAYS & PC INTERFACES

MAESTRO

TUNER

UNO

ACCESSORIES

Stand with steel post

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

5 m USB cable (Included)

Water filter (Metric: 202984, Imperial: 202990)

Pelican carrying case

**A USB power adaptor will be necessary if the HP is used with a DB15 extension cable.*

HP60
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC




	HP60A-10KW-GD	HP60A-15KW-GD	HP60A-15KW-GD-TUBE	HP60A-15KW-GD-QBH
MAX AVERAGE POWER	10 kW	15 kW	15 kW	15 kW
EFFECTIVE APERTURE	60 mm Ø	60 mm Ø	70 mm Ø	QB/QBH fiber adaptor
COOLING METHOD	Water-cooled	Water-cooled	Water-cooled	Water-cooled
MEASUREMENT CAPABILITY				
Spectral range	0.8 - 12 µm	0.8 - 12 µm	0.8 - 12 µm	0.8 - 12 µm
Calibrated spectral range [a]	0.8 - 2.1 µm	0.8 - 2.1 µm	0.8 - 2.1 µm	0.8 - 2.1 µm
Noise equivalent power [b]	10 W	15 W	15 W	15 W
Minimum average power [c]	300 W	500 W	500 W	500 W
Rise time (nominal)	12 s	15 s	15 s	15 s
Back reflections	10%	5 - 10%	1 - 2%	1 - 2%
Calibration uncertainty	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm	± 5% at 1064 nm & 1070 nm
Repeatability	± 2%	± 2%	± 2%	± 2%
Linearity with power	± 2%	± 2%	± 2%	± 2%
Linearity with beam diameter	± 2.0%	± 2.5%	± 2.5%	± 2.5%
Linearity with beam position [d]	± 3.0%	± 4.0%	± 4.0%	± 4.0%
DAMAGE THRESHOLDS				
Maximum average power density [e]				
1 kW	70 kW/cm²	70 kW/cm²	70 kW/cm²	70 kW/cm²
5 kW	35 kW/cm²	35 kW/cm²	35 kW/cm²	35 kW/cm²
10 kW	20 kW/cm²	20 kW/cm²	20 kW/cm²	20 kW/cm²
15 kW		10 kW/cm²	10 kW/cm²	10 kW/cm²
PHYSICAL CHARACTERISTICS				
Effective aperture	60 mm Ø	60 mm Ø	70 mm Ø tube aperture	QB/QBH fiber adaptor
Absorber	GD (cone reflector)	GD (cone reflector)	GD (cone reflector)	GD (cone reflector)
Cooling water				
Required cooling flow [f]	(6 - 8) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min
Temperature range	15 - 25 °C	15 - 25 °C	15 - 25 °C	15 - 25 °C
Rate of temperature change	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min
Maximum water pressure (input)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)
Dimensions	127H x 127W x 95D mm	153H x 153W x 97D mm	153H x 153W x 302D mm	153H x 153W x 302D mm
Weight	6 kg	10 kg	15 kg	15 kg
ORDERING INFORMATION				
Available output options	DB15 & USB	DB15 & USB	DB15 & USB	DB15 & USB
Compatible stand	STAND-S-443-C	2x STAND-S-443-C	3x STAND-S-443-C	3x STAND-S-443-C
Product page				

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. For lower powers, call your Gentec-EO representative.
d. For a beam size of 20 % of the aperture area, moved across 80 % of the aperture area.
e. At 1064 nm, 1.07-1.08 µm and 10.6 µm, for beams < 50 mm Ø.
f. > 1 min. contact Gentec-EO for deionized water cooling module option.

Specifications are subject to change without notice
T 418.651.8003 | info@gentec-eo.com

HP100

Up to 125 x 125 mm, 100 W - 15 kW

KEY FEATURES

HIGH POWER HANDLING
Handles up to 15 kW of continuous power with our standard models. Custom models available for higher powers (See SUPER HP)

LARGE APERTURE
Our standard HP models have very large effectives apertures to accomodate large laser beams. Larger apertures with various shapes are available upon request (See SUPER HP)

AVAILABLE WITH YAG AND CO_2 CALIBRATIONS
All HP Models can be calibrated at YAG and CO_2 wavelengths with a calibration uncertainty of ± 5 %

DIRECT USB CONNECTION TO A PC
Each head comes with both a DB15 connector (for use with a Gentec-EO display device) and a USB output for direct connection to a PC

TRACK WATER PARAMETERS
Water flow and temperature are monitored in real time and displayed continuously

OUTPUT OPTIONS

SMART DB15 CONNECTOR
Contains all the calibration data

USB PORT
- Connects directly to a PC
- Included in all HP models

CUSTOM OPTION: RS-232
Contact you Gentec-EO representative to configure your available connectors

COMPATIBLE DISPLAYS & PC INTERFACES

MAESTRO

TUNER

UNO

ACCESSORIES

Stand with steel post

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

5 m USB cable
(Included)

Water filter
(Metric: 202984, Imperial: 202990)

Pelican carrying case

**A USB power adaptor will be necessary if the HP is used with a DB15 extension cable.*

HP100
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC

	HP100A-4KW-HE	HP100A-4KW-HE-TUBE	HP100A-12KW-HD	HP100A-12KW-HD-TUBE	HP125A-15KW-HD	HP125A-15KW-HD-TUBE
MAX AVERAGE POWER	4000 W	4000 W	12 000 W	12 000 W	15 000 W	15 000 W
EFFECTIVE APERTURE	100 mm Ø	70 mm Ø	100 mm Ø	70 mm Ø	125 x 125 mm	70 mm Ø
COOLING METHOD	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled	Water-cooled
MEASUREMENT CAPABILITY						
Spectral range	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm	0.19 - 20 µm
Calibrated spectral range [a]	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm	0.248 - 2.1 µm
Noise equivalent power [b]	± 3 W	± 3 W	± 10 W	± 10 W	± 15 W	± 15 W
Minimum average power [c]	100 W	100 W	300 W	300 W	500 W	500 W
Rise time (nominal)	7 s	7 s	9 s	9 s	15 s	15 s
Back reflections	10-15%	< 4%	10 - 15%	< 4%	10 - 15%	2 - 4%
Calibration uncertainty [d]	± 5	± 5%	± 5%	± 5%	± 5%	± 5%
Repeatability	± 2%	± 2%	± 2%	± 2%	± 2%	± 2%
Linearity with power	± 1.5%	± 1.5%	± 1.5%	± 1.5%	± 2%	± 2%
Linearity vs beam diameter	± 1%	± 1%	± 1%	± 1%	± 1%	± 1%
Linearity vs beam position [e]	± 1.7%	± 1.7%	± 1.7%	± 1.7%	± 1.0%	± 1.0%
DAMAGE THRESHOLDS						
Maximum average power density [f]						
500 W	10 kW/cm²	10 kW/cm²	16 kW/cm²	16 kW/cm²	16 kW/cm²	16 kW/cm²
4 kW	4 kW/cm²	4 kW/cm²	---	---	---	---
5 kW	---	---	6.5 kW/cm²	6.5 kW/cm²	6.5 kW/cm²	6.5 kW/cm²
10 kW	---	---	3.5 kW/cm²	3.5 kW/cm²	3.5 kW/cm²	3.5 kW/cm²
15 kW	---	---	---	---	1.5 kW/cm²	1.5 kW/cm²
PHYSICAL CHARACTERISTICS						
Effective aperture	100 mm Ø	70 mm Ø	100 mm Ø	70 mm Ø	125 x 125 mm	70 mm
Absorber (high damage threshold)	HE	HE	HD	HD	HD	HD
Cooling water						
Required cooling flow [g]	(4 - 6) LPM < ± 1 LPM/min	(4 - 6) LPM < ± 1 LPM/min	(6 - 10) LPM < ± 1 LPM/min	(6 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min	(8 - 10) LPM < ± 1 LPM/min
Temperature range	15 - 25 °C	15 - 25 °C	15 - 25 °C	15 - 25 °C	15 - 25 °C	15 - 25 °C
Rate of temperature change	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min	< ± 3°C/min
Maximum water pressure (input)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)	413 kPa (60 psi)
Dimensions	127H x 127W x 74D mm	127H x 127W x 234D mm	127H x 127W x 70D mm	127H x 127W x 230D mm	153H x 153W x 70D mm	153H x 153W x 272D mm
Weight (head only)	1.8 kg	6.0 kg	3.3 kg	7.5 kg	5 kg	10 kg
ORDERING INFORMATION						
Available output options	DB15 & USB	DB15 & USB	DB15 & USB	DB15 & USB	DB15 & USB	DB15 & USB
Compatible stand	STAND-S-443-C	2x STAND-S-443-C	STAND-S-443-C	2x STAND-S-443-C	2x STAND-S-443-C	3x STAND-S-443-C
Product page						

a. Calibrations at 2.1 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. For lower powers, call your Gentec-EO representative.
d. At 1064 nm and 1070 nm
e. For a beam size of 20 % of the aperture area, moved across 80 % of the aperture area.
f. At 1064 nm, 1.07-1.08 µm and 10.6 µm.
g. > 1 min. Contact Gentec-EO for deionized water cooling module option.

SUPER HP

Custom sizes and shapes, up to 150 000 W upon request

KEY FEATURES

- **THE HIGHEST POWER HANDLING**
  Custom models handle up to 150 000 W of continuous power
- **INFINITE CUSTOMIZATION CAPABILITIES**
  1. Choose YOUR size
  2. Choose YOUR maximum power
  3. We will customize one just for you!
- **COMPACT AND LIGHT WEIGHT**
  Lighter and more compact than any other high power detector on the market, thanks to our unique design
- **AVAILABLE WITH YAG AND CO_2 CALIBRATIONS**
  All HP models can be calibrated at YAG and CO_2 wavelengths with a calibration uncertainty of ± 5 %
- **DIRECT USB CONNECTION TO A PC**
  Each head comes with both a DB15 connector (for use with a Gentec-EO display device) and a USB2.0 output for direct connection to a PC. Other connectors available upon request
- **TRACK WATER PARAMETERS**
  Water flow and temperature are monitored in real time and displayed continuously
- **HIGH POWER NIST-TRACEABLE CALIBRATION WITH A 5 KW FIBER LASER**

OUTPUT OPTIONS

- **SMART DB15 CONNECTOR**
  Contains all the calibration data
- **USB PORT**
  - Connects directly to a PC
  - Included in all HP models
- **CUSTOM OPTION: RS-232**
  Contact you Gentec-EO representative to configure your available connectors

COMPATIBLE DISPLAYS & PC INTERFACES

MAESTRO

TUNER

UNO

ACCESSORIES

Stand with steel post
For 30 kW model

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

5 m USB cable
(Included)

Pelican carrying case

SUPER HP
Specifications

CE NIST* Traceable WEEE/RoHS COMPLIANT

*Also traceable to NRC-CNRC

	HP280A-30KW-HD	HP100A-50KW-GD	CUSTOMIZATION CAPABILITIES
MAX AVERAGE POWER	30 000 W	50 000 W	Up to 150 000 W
EFFECTIVE APERTURE	280 x 280 mm	100 mm Ø	Up to 500 x 500 mm
COOLING METHOD	Water-cooled	Water-cooled	Water-cooled
MEASUREMENT CAPABILITY			
Spectral range	0.19 - 20 µm	0.8 - 12 µm	0.19 - 20 µm
Calibrated spectral range [a]	1.064 - 1.070 µm	1.030 - 1.080 µm	1.064 - 1.070 µm
Noise equivalent power [b]	± 30 W	± 200 W	Adapted to maximum power
Minimum average power [c]	1000 W	1000 W	Adapted to maximum power
Rise time (nominal)	25 s	80 s	≤ 45 s
Back reflections	10-15%	< 2.5 %	Depends on the design
Calibration uncertainty [d]	± 5%	± 5 %	± 5%
Repeatability	± 2%	± 2 %	± 2%
Linearity with power	± 2%	± 2 %	± 2%
DAMAGE THRESHOLDS			
Maximum average power density [e]			
10 kW	2.5 kW/cm²	25 kW/cm²	2.5 kW/cm²
30 kW	0.2 kW/cm²	11 kW/cm²	0.45 kW/cm²
PHYSICAL CHARACTERISTICS			
Effective aperture	280 x 280 mm	100 mm Ø	Square apertures up to 500 x 500 mm Rectangular and round apertures also available
Absorber (high damage threshold)	HD	GD	HD
Cooling water			
Required cooling flow	0-30 kW: (15 - 18) LPM < ± 1 LPM/min [f] 0-10 kW: (12-15) LPM < ± 1 LPM/min [f]	(18 - 25) LPM < ± 1 LPM/min	Adapted to maximum power
Temperature range	15 - 25 °C	15 - 25 °C	15 - 25 °C
Rate of temperature change	< ± 3°C/min	< ± 1°C/min	< ± 3°C/min
Dimensions	314H x 324W x 89D mm	305H x 324W x 197D mm	
Weight (head only)	20 kg	60 kg	
ORDERING INFORMATION			
Available output options	DB15 & USB	DB15 & USB	DB15 & USB
Compatible stand	STAND HP280A-30KW-HD	Ask	Ask
Product page			

** These products are custom-built. Contact us with your requirements for a version tailored to your needs.*

a. Calibrations at 0.248 to 2.5 µm and 10.6 µm are available on special request.
b. Nominal value, actual value depends on electrical noise in the measurement system.
c. For lower powers, call your Gentec-EO representative.
d. At 1064 nm and 1070 nm.
e. At 1064 nm, 1.07-1.08 µm and 10.6 µm.
f. > 1min

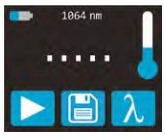
HIGH-POWER PRONTO

1 W - 10 kW high power probes with touchscreen controls

USER INTERFACES (SSP MODE)

Make a measurement in just a few seconds

1 → 2 → 3 → 4

Press PLAY	Ready	Countdown	Measurement complete!
			
	The device waits for a laser beam	Automatically starts when exposed to a laser beam	The value is displayed until the next measurement

Adjust the wavelength and calibration

Wavelength

Calibration

Warns you when the device is too hot*

Set the brightness and orientation

KEY FEATURES

WIDE POWER RANGE
Very low noise level = wide power range with just one device

CONTINUOUS READINGS AT LOW POWERS
The PRONTO-500 includes a continuous power mode (CWP) for measurements up to 40 W.

NO-WAIT MEASUREMENTS
5 seconds measurements allow for very short cooling time (all models except PRONTO-3K)

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!

DATA LOGGING
Save your data to the internal memory and then transfer them to your PC over the USB connection.

LARGE APERTURE
55 mm Ø aperture to accommodate large beams

RUGGED
- All-metal body
- High damage thresholds

SERIAL COMMANDS
Serial commands are available to let you take full control of your PRONTO from your PC.

ACCESSORIES

Stand with steel post

Pelican carrying case

HIGH-POWER PRONTO

Specifications

*Also traceable to NRC-CNRC




	PRONTO-500		PRONTO-3K		PRONTO-6K		PRONTO-10K	
MAX AVERAGE POWER								
SSP Mode (Measures Power in 5 s)	500 W		3000 W		6000 W		10 000 W	
CWP Mode (Measures Power continuously)	40 W		N/A		N/A		N/A	
EFFECTIVE APERTURE	55 mm Ø		55 mm Ø		55 mm Ø		55 mm Ø	
COOLING METHOD	Convection		Convection		Convection		Convection	
MEASUREMENT CAPABILITY								
Spectral range	0.19 - 20 µm		0.19 - 20 µm		0.19 - 20 µm		0.19 - 20 µm	
Calibrated spectral range[a]	0.248 - 2.5 µm		0.248 - 2.5 µm		0.248 - 2.5 µm		0.248 - 2.5 µm	
Noise equivalent power	0.1 W		5 W		20 W		30 W	
Exposure time	5 s[b]		10 s		5 s		5 s	
Calibration uncertainty	± 3% (± 2.5% in CWP mode)		± 5%		± 5%		± 5%	
Number of readings before cooling [c]	100 W	25 (200 s)	0.5 kW	6 (72 s)	1 kW	6 (36 s)	1 kW	10 (60 s)
(Maximum exposure time before cooling)	200 W	12 (100 s)	1 kW	3 (36 s)	2 kW	3 (18 s)	2 kW	5 (30 s)
	300 W	8 (60 s)	1.5 kW	2 (24 s)	3 kW	2 (12 s)	5 kW	2 (12 s)
	500 W	5 (40 s)	3 kW	1 (12 s)	6 kW	1 (6 s)	10 kW	1 (6 s)
DAMAGE THRESHOLDS								
Maximum average power density								
1064 nm, 100 W, CW	25 kW/cm²		---		---		---	
1064 nm, 500 W, CW	5 kW/cm²		7 kW/cm²		---		---	
1064 nm, 3000 W, CW	---		5 kW/cm²		8 kW/cm²		---	
1064 nm, 6000 W, CW	---		---		7 kW/cm²		7 kW/cm²	
1064 nm, 10 000 W, CW	---		---		-		5.5 kW/cm²	
Maximum allowable casing temperature	65 °C		65 °C		75 °C		75 °C	
GENERAL SPECIFICATIONS								
Display type	Touchscreen color LCD		Touchscreen color LCD		Touchscreen color LCD		Touchscreen color LCD	
Display size	28.0 x 35.0 mm (128 x 160 pixels)		28.0 x 35.0 mm (128 x 160 pixels)		28.0 x 35.0 mm (128 x 160 pixels)		28.0 x 35.0 mm (128 x 160 pixels)	
Data storage	50 000 pts		50 000 pts		50 000 pts		50 000 pts	
Battery type	Rechargeable Li-ion		Rechargeable Li-ion		Rechargeable Li-ion		Rechargeable Li-ion	
Battery life	17 hours or 4 200 measurements (with brightness set at 25%)		17 hours or 4 200 measurements (with brightness set at 25%)		17 hours or 4 200 measurements (with brightness set at 25%)		17 hours or 4 200 measurements (with brightness set at 25%)	
Battery recharge via	USB port		USB port		USB port		USB port	
PHYSICAL CHARACTERISTICS								
Effective aperture	55 mm Ø		55 mm Ø		55 mm Ø		55 mm Ø	
Dimensions (sensor head)	88W x 88L x 32D mm		88W x 88L x 43D mm		88W x 88L x 36D mm		88W x 88L x 46D mm	
Dimensions (monitor)	41W x 140L x 16D mm		41W x 140L x 16D mm		41W x 140L x 16D mm		41W x 140L x 16D mm	
Weight	930 g		1240 g		1520 g		2150 g	
ORDERING INFORMATION								
Compatible stand	STAND-S-443		STAND-S-443		STAND-S-443		STAND-S-443	
Product page								

a. For calibration at 10.6 µm, add C02-CAL-UP-2 to the order
b. Response time in CWP mode is 2 s.
c. Assuming an exposure time of 8 seconds and for 25°C starting temperature.

Specifications are subject to change without notice

T 418.651.8003 | info@gentec-eo.com

BD

Water-cooled beam dumps for high power lasers

REDUCE BACK-REFLECTIONS

All BD models can be fitted with a water-cooled absorbing TUBE to reduce the back-reflections below 4 %. The TUBE extension is backward-compatible so it can be added to your current BD unit.

KEY FEATURES

EASY TO USE
Just plug the water-cooling and you're done!

2 MODELS TO CHOOSE FROM
- 4 kW : BD-4KW-HE
- 12 kW : BD-12KW-HD

VERY LARGE APERTURE
The round aperture of 100 mm in diameter accommodates even the largest beams

HIGH DAMAGE THRESHOLDS
Up to 16 kW/cm^2 (at 500 W)

ISOLATION TUBE IN OPTION
It is possible to add an isolation tube to reduce back reflections

ACCESSORIES

Stand with steel post

Pelican carrying case

Water filter
(Metric: 202984,
Imperial: 202990)

BD
Specifications

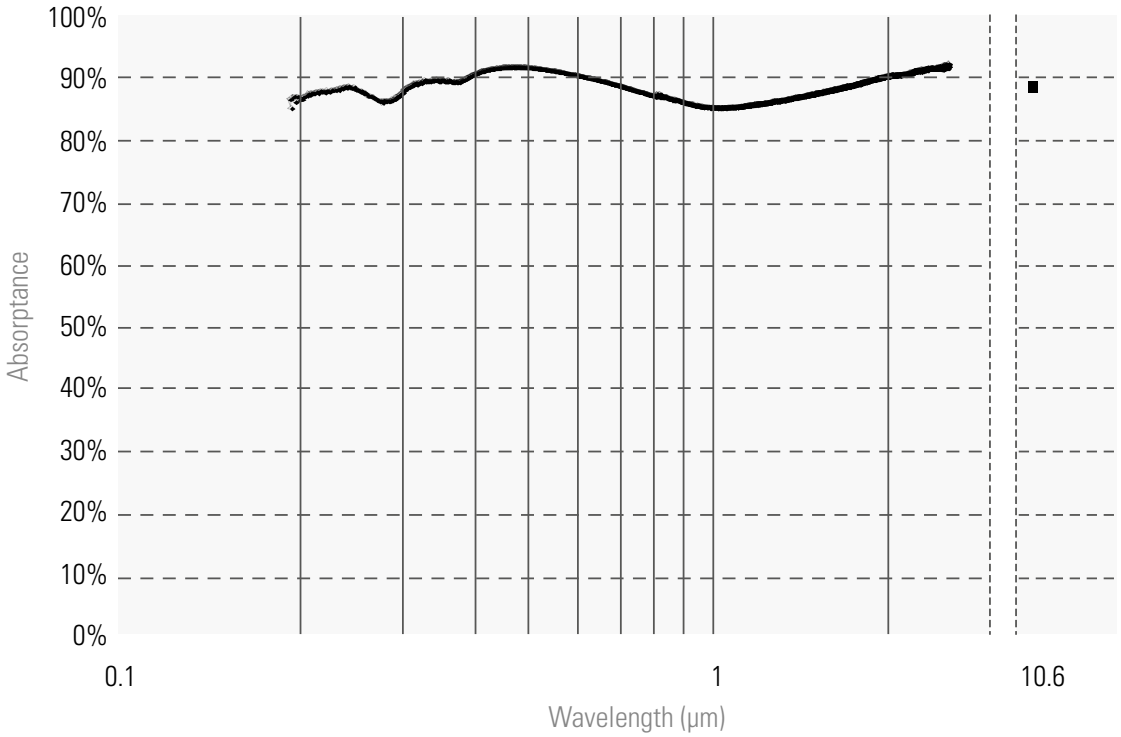
*Also traceable to NRC-CNRC

	BD-4KW-HE	BD-12KW-HD
MAX AVERAGE POWER (CONTINUOUS / 2 MINUTES)	4000 W / 4500 W	12 000 W / 12 000 W
EFFECTIVE APERTURE	100 mm Ø	100 mm Ø
COOLING METHOD	Water-cooled	Water-cooled
DAMAGE THRESHOLDS		
Maximum average power density [a]		
500 W	10 kW/cm²	16 kW/cm²
4 kW	4 kW/cm²	---
5 kW	---	6.5 kW/cm²
10 kW	---	3.5 kW/cm²
PHYSICAL CHARACTERISTICS		
Effective aperture	100 mm Ø	100 mm Ø
Absorber (high damage threshold)	HE	HD
Cooling water		
Required cooling flow	(4 - 6) LPM	(6 - 10) LPM
Temperature range	(15 - 25) °C	(15 - 25) °C
Dimensions	127H x 127W x 74D mm	127H x 127W x 70D mm
Weight (head only)	1.8 kg	3.3 kg
ORDERING INFORMATION		
Compatible stand	STAND-S-443-C	STAND-S-443-C
Product page		

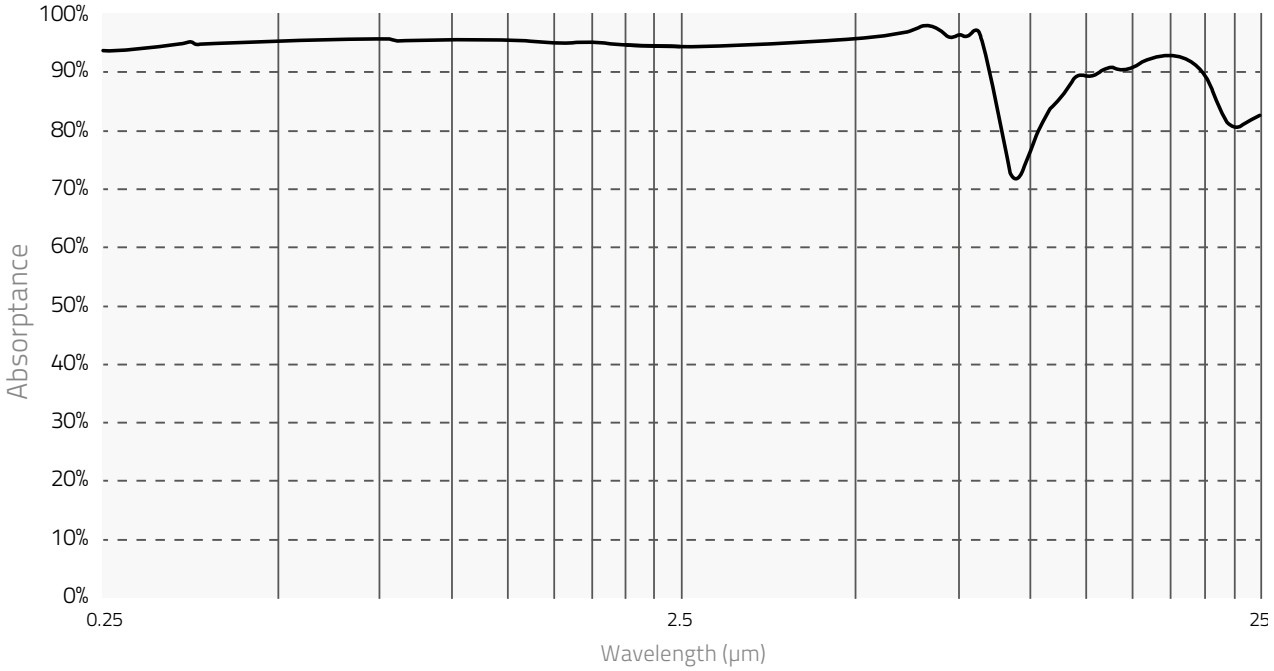
a. At 1064 nm, 1.07-1.08 µm and 10.6 µm.

ABSORPTION CURVES

H, HD AND HE ABSORBERS

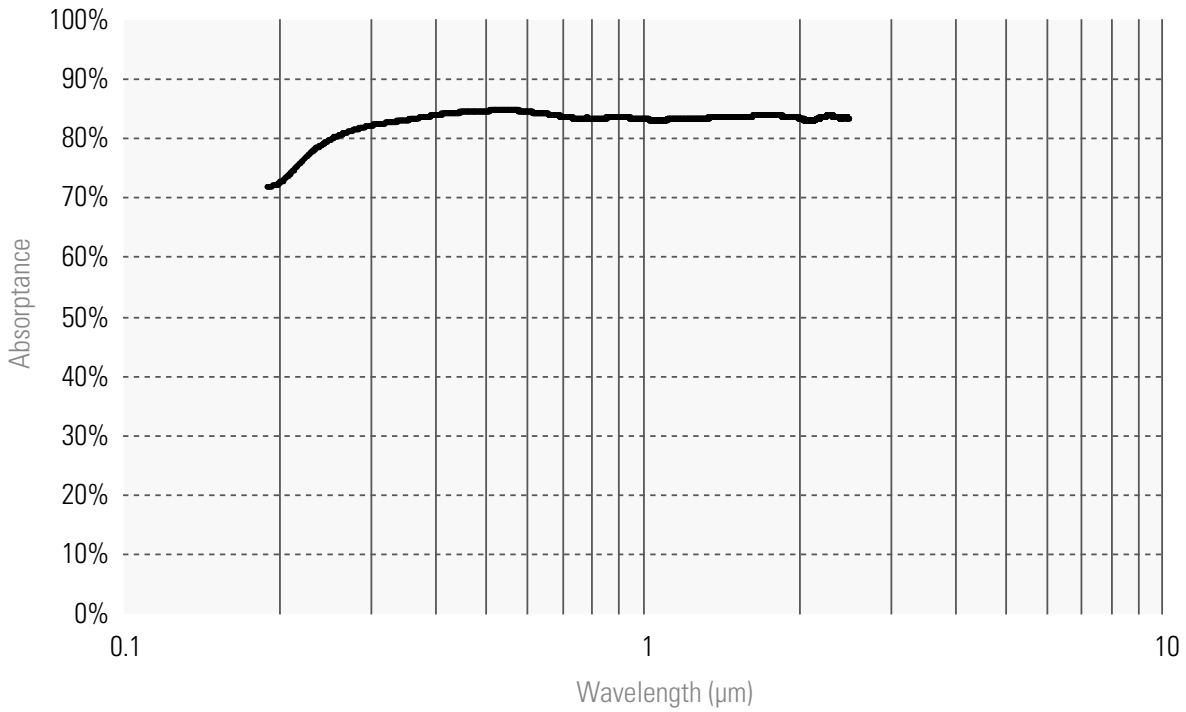


VP ABSORBER

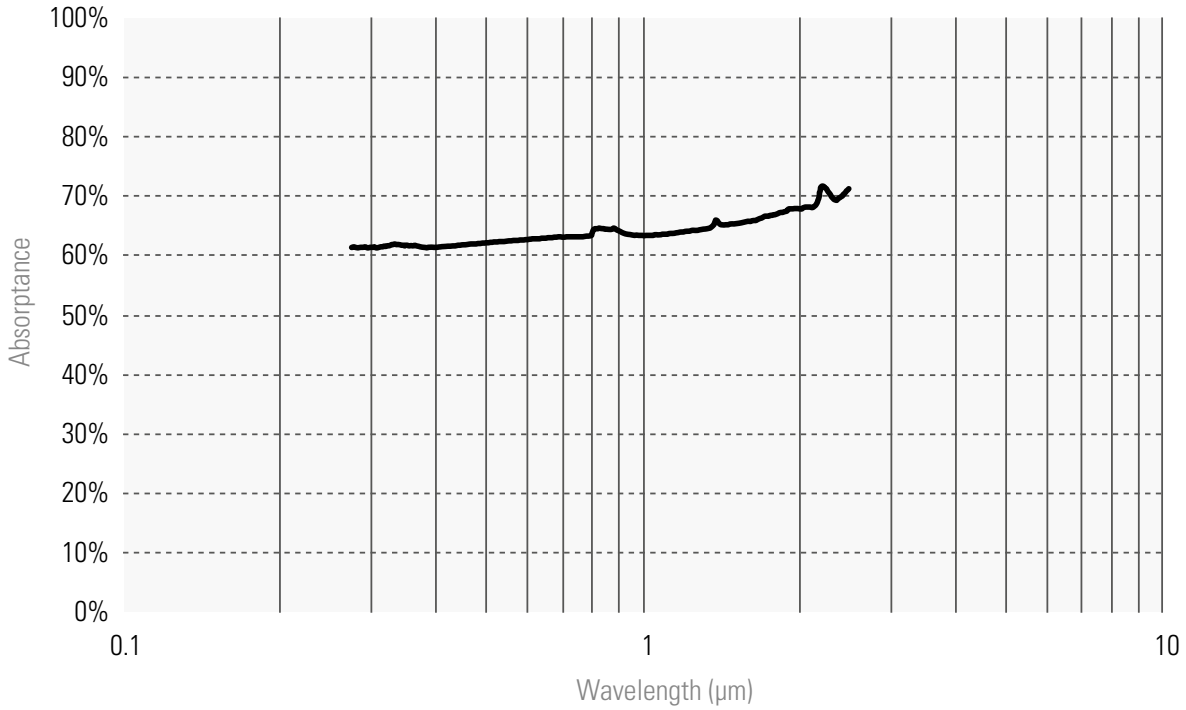


ABSORPTION CURVES

W ABSORBER

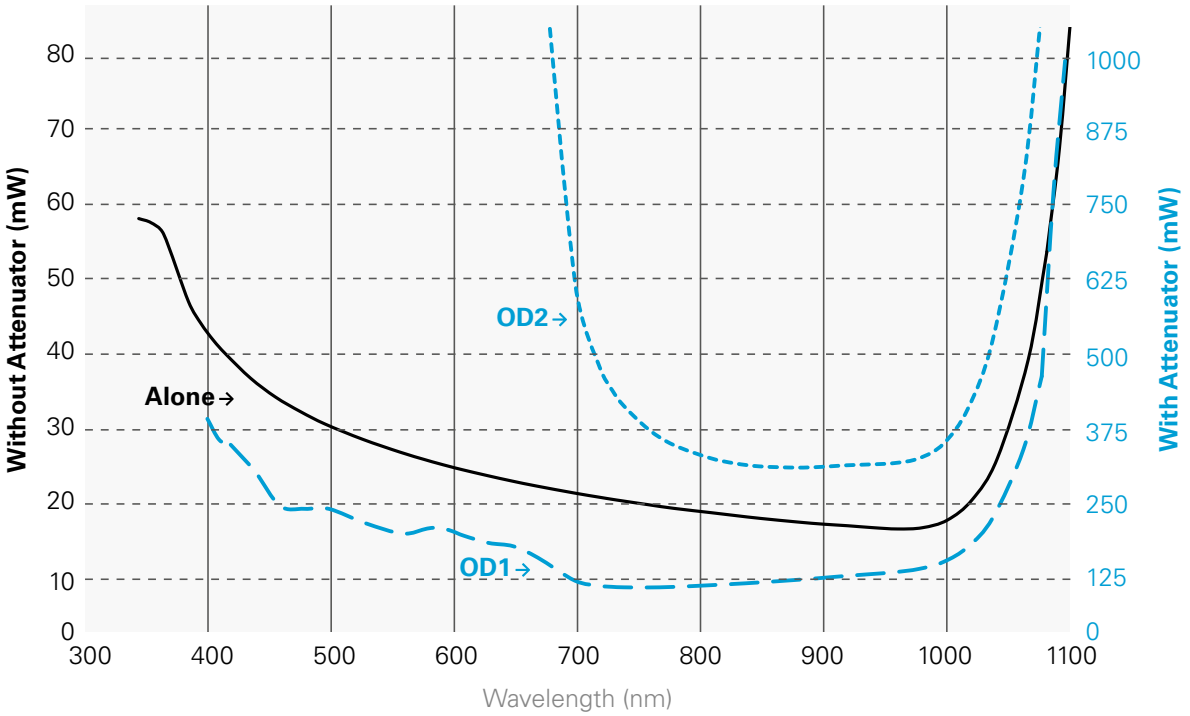


QED ABSORBER

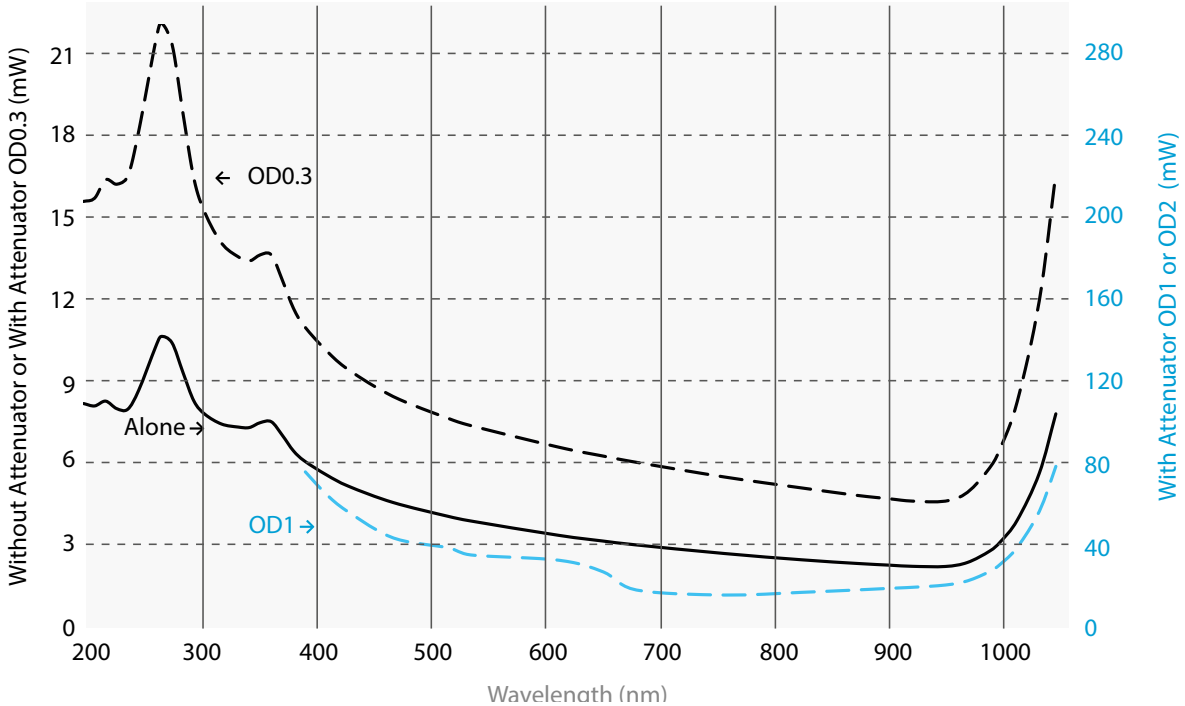


ABSORPTION CURVES

PH100-SI-HA maximum power

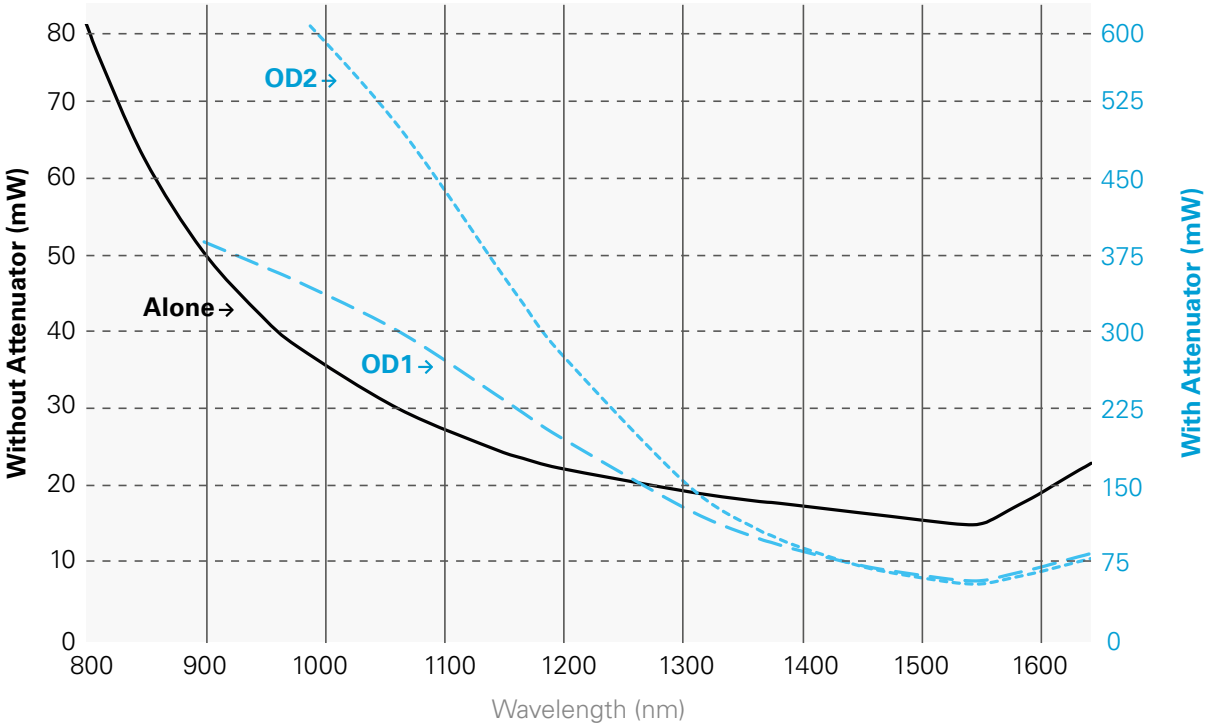


PH100-SIUV maximum power



ABSORPTION CURVES

PH20-GE maximum power



PRONTO-SI maximum power