

PRESENTATION

600 W FAN-COOLED



- Noise: 45 mW
- Max Power: 600 W
- Aperture: 55 mm Ø
- Cooling:



UP55G-600F-HD

Unique on the market, the UP55G-600F-HD measures 600 W of continuous power WITHOUT THE NEED FOR WATER-COOLING. Just plug the fan and you are ready to go! This detector is the ideal choice for service technicians that wish to cut down on the setup times at each customer visit.

Available with
 integra

700 W COMPACT SIZE



- Noise: 45 mW
- Max Power: 700 W
- Aperture: 55 mm Ø
- Cooling:



UP55M-700W-HD

The UP55M-700W-HD is a very compact detector that measures up to 700 W of continuous power. Since it is based on our popular mid-power series UP55-H, it also features a fast response time and low noise level, ensuring quick and accurate measurements from the mW level to several hundreds of Watts.

Available with
 integra

2 500 W WIDE POWER RANGE



- Noise: 200 mW
- Max Power: 2 500 W
- Aperture: 55 mm Ø
- Cooling:



UP55C-2.5KW-HD

The UP55C-2.5KW-HD is very in demand because it measures both very low and very high powers (up to 2 500 W), thanks to a noise level of only 200 mW. It also has the fastest response time for a detector of its size. This is a compact and versatile detector that is more affordable than any other high power solution on the market.

Available with
 integra

4 000 W TO 15 000 W LARGE APERTURE



- Noise: 3-10 W
- Max Power: 4 000 to 15 000 W
- Aperture: 125 mm Ø
- Cooling:



HP100A AND HP125A

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. As all the other HP detectors, those models feature a USB output for direct measurements on a PC and a very large aperture of 100 or 125 mm Ø.

PRESENTATION

10 000 W SMALL BEAMS



- Noise: 10 W
- Max Power: 10 000 W
- Aperture: 60 mm Ø
- Cooling: 


 + USB

HP60A-10KW-GD

The gold reflector cone of the HP60A-10KW-GD 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 @ the full power (10 kW). Also features a USB output for direct measurements on a PC.

25 000 W AND MORE CUSTOM SHAPES



- Up to 100 000 W
- Up to 400 X 400 mm
- Cooling: 

 + USB

SUPER HP

Our unique high power design allows for infinite customization capabilities. The square and rectangular apertures shown here are just examples of our capabilities, so do not hesitate to contact us with your specific needs. All our Super HP models feature a USB output for direct measurements on a PC as well as our standard DB-15 connector if you prefer to do the measurement using one of our power monitors.

500 W TO 10 000 W HANDHELD PROBES



- Noise: 100 mW
- Max Power: 10 000 W
- Aperture: 55 mm Ø
- Cooling: 

FLASH

The FLASH Series of Handheld Laser Probes come in 4 models: 500, 3 000, 6 000 and 10 000 W, all in the same compact format that make them highly portable. Their integrated display is encased in a rugged metallic casing to withstand the harshest of environments. All models are available either with a fixed handle or a removable handle with 5 feet of soft cable.

BEAM DUMPS FOR LASERS UP TO 12 000 W



- Rugged
- Easy-to-Use
- Absorb up to 12 000 W in Continuous Mode
- Large 100 mm Ø Aperture

BD-4KW-HE & BD-12KW-HD

Our new Beam Dumps are rugged and easy-to-use, simply plug the water-cooling and you're ready to go! Like our high power HP Detectors, these beam dumps have a highly resistant absorber that can withstand several kW in continuous mode. Their very large aperture of 100 mm in diameter accommodates even the largest beams. An isolation tube (available in option) helps reduce the back reflections. 2 models are offered: 4 kW and 12 kW.



UP55-HD

55 mm Ø, 45 mW - 2 500 W

600 W

2 500 W

700 W



KEY FEATURES

1. 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

2. 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!

3. UP55M-700W-HD - FAST AND COMPACT

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

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

Measures both very low and very high powers (up to 2 500W) with a fast response time. A compact and versatile detector that is more affordable than any other high power solution on the market.

5. integra OPTIONS

- Standard: USB Output (-INT)
- In Option: RS-232 Output (-IDR)

AVAILABLE MODELS



UP55G-600F-HD
(600W-Fan-Cooled)



UP55M-700W-HD
(700W-Water-Cooled)



UP55C-2.5KW-HD
(2500W-Water-Cooled)

ACCESSORIES



Stand with Steel Post
(Model Number: 201102)



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
(Model Number: 202199)



Pelican Carrying Case

SEE ALSO

HOW IT WORKS	14
CALIBRATION	6
TECHNICAL DRAWINGS	106
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
S-LINK	28
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	188

UP55-HD

CE NIST*
Traceable
*Also traceable to NRC-CNRC

SPECIFICATIONS

	UP55G-600F-HD	UP55M-700W-HD	UP55C-2.5KW-HD
MAX AVERAGE POWER (CONTINUOUS / 1 MINUTE)	600 W / 600 W	700 W ¹ / 700 W ¹	2 500 W / 2 500 W
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
Noise Equivalent Power ^a	45 mW	45 mW	200 mW
Rise Time (nominal) ^b	2.8 sec	2 sec	3.5 sec
Sensitivity (typ into 100 kΩ load) ^c	0.03 mV/W	0.03 mV/W	8 µV/W
Calibration Uncertainty ^d	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %
Energy Mode			
Sensitivity	0.008 mV/J	0.008 mV/J	---
Maximum Measurable Energy ^e	200 J	200 J	---
Noise Equivalent Energy ^a	0.25 J	0.25 J	---
Minimum Repetition Period	12 sec	12 sec	---
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/cm ²	45 kW/cm ²	45 kW/cm ²
1064 nm, 500 W, CW	8 kW/cm ²	8 kW/cm ²	9 kW/cm ²
1064 nm, 2 500 W, CW	---	---	6 kW/cm ²
10.6 µm, 500 W, CW	---	---	4.5 kW/cm ²
10.6 µm, 1 500 W, CW	---	---	3.5 kW/cm ²
10.6 µm, 2 500 W, CW	---	---	3.0 kW/cm ²
Pulsed Laser Damage Thresholds			
	Max Energy Density	Peak Power Density	
1064 nm, 360 µs, 5 Hz	9 J/cm ²	25 kW/cm ²	
1064 nm, 7 ns, 10 Hz	1 J/cm ²	143 MW/cm ²	
532 nm, 7 ns, 10 Hz	0.6 J/cm ²	86 MW/cm ²	
266 nm, 7 ns, 10 Hz	0.3 J/cm ²	43 MW/cm ²	
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 48D mm
Weight (head only)	2.75 kg	0.90 kg	1.95 kg
ORDERING INFORMATION			
Product Name	UP55G-600F-HD	UP55M-700W-HD	UP55C-2.5KW-HD
Product Number	201879	201916	202219
 Add Extension for INTEGRA (USB)	-INT	-INT	-INT
 Add Extension for INTEGRA (RS-232)	-IDR	-IDR	-IDR

Specifications are subject to change without notice

* For the calibrated spectral range, see the user manual.

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. With anticipation.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

e. For 360 µs pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).

f. Minimum cooling flow 3 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.

HP

Up to 125 x 125 mm, 100 W – 15 000 W



KEY FEATURES

- 1. HIGH POWER HANDLING**
Handles up to 15 kW of continuous power with our standard models. Custom models available for higher powers (See SUPER HP)
- 2. STABLE READING**
Less sensitive to variations in water cooling temperature than other high power water-cooled meters on the market
- 3. LARGE APERTURE**
Our standard HP models (4KW, 12KW and 15KW) have very large effective apertures of 100 mm Ø and 125 x 125 mm to accommodate large laser beams. Larger apertures with various shapes are available upon request (See SUPER HP)
- 4. SPECIAL MODEL FOR SMALL BEAMS**
10 kW model with reflective cone available. Perfect for small beams (with Avg Power Densities up to 10 kW/cm² @ 10 kW)
- 5. AVAILABLE WITH YAG AND CO₂ CALIBRATIONS**
All HP Models can be calibrated at YAG and CO₂ wavelengths with a calibration uncertainty of ± 5%
- 6. DIRECT USB CONNECTION TO A PC**
Each head comes with both a DB-15 connector (for use with a Gentec-EO monitor) and a USB output for direct connection to a PC

AVAILABLE MODELS



HP100A-4KW-HE and
HP100A-12KW-HD
(4000W and 12000W-Water-Cooled)

NEW



HP125A-15KW-HD
(15000W-Water-Cooled)



HP60A-10KW-GD
(10000W-Small Beams)

NOW AVAILABLE!



TUBE EXTENSION TO REDUCE BACK REFLECTIONS

The 4KW and 12KW models can be fitted with a 70 mm aperture water-cooled absorbing TUBE to reduce the back reflections below 4%. The TUBE extension is backward compatible so you can send your already purchased HP detector to be retrofitted*.

* The HP detector needs to be sent back to be retrofitted and recalibrated (Calibration is included)

ACCESSORIES



Stand with Steel Post
(Model Number: 201102)



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



5 m USB Cable
(Included)



Pelican Carrying Case

SEE ALSO

HOW IT WORKS	14
CALIBRATION	6
TECHNICAL DRAWINGS	106
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
S-LINK	28
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	188

APPLICATION NOTE

MEASURING IN VACUUM

202178

Watch the Introduction video available on our website at www.gentec-eo.com

* A USB Power Adaptor will be necessary if the HP is used with a DB-15 Extension Cable.

HP

SPECIFICATIONS

	HP100A-4KW-HE		HP100A-12KW-HD		NEW HP125A-15KW-HD		HP60A-10KW-GD	
MAX AVERAGE POWER	4 000 W		12 000 W		15 000 W		10 000 W High Average Power up to 10 kW/cm²	
EFFECTIVE APERTURE	100 mm Ø (70 mm Ø with tube)		100 mm Ø (70 mm Ø with TUBE)		125 x 125 mm		60 mm Ø with cone reflector	
COOLING METHOD	Water-Cooled		Water-Cooled		Water-Cooled		Water-Cooled	
MEASUREMENT CAPABILITY								
Spectral Range	0.19 – 20 µm		0.19 – 20 µm		0.19- 20 µm		0.8 – 12 µm	
Noise Equivalent Power ^a	±3 W		±10 W		± 15 W		±10 W	
Minimum Average Power ^b	100 W		300 W		500 W		300 W	
Rise Time (nominal)	7 sec		9 sec		15 sec		11 sec	
Back Reflections	Alone	with TUBE	Alone	with TUBE	Alone		Alone	
	10-15%	<4% (with 70 mm aperture in place)	10-15%	<4% (with 70 mm aperture in place)	10-15%		N/A	
Sensitivity (typ into 100 kΩ load)	0.4 mV/W		0.15 mV/W		0.13 mV/W		0.2 mV/W	
Calibration Uncertainty	±5 % @ 1064 nm		±5 % @ 1064 nm		±5 % @ 1064 nm		±5 % @ 1064 nm	
Repeatability	±2 %		±2 %		±2 %		±2 %	
Linearity with Power	±1.5 %		±1.5 %		±2 %		±2 %	
Linearity vs Beam Diameter	±1 %		±1 %		±1 %		< 35 mm Ø: ±0.5 %	
							> 35 mm Ø: ±1.5 %	
Linearity vs Beam Position	±1.7 % ^c		±1.7 % ^c		±1.0 % ^c		±3 % ^c	
DAMAGE THRESHOLDS								
Maximum Average Power Density ^d								
500 W	10 kW/cm²		16 kW/cm²		16 kW/cm²		---	
4 kW	4 kW/cm²		---		---		---	
5 kW	---		6.5 kW/cm²		6.5 kW/cm²		---	
10 kW	---		3.5 kW/cm²		3.5 kW/cm²		< 35 mm Ø: 10 kW/cm²	
							> 35 mm Ø: 3.5 kW/cm²	
15 kW	---		---		1.5 kW/cm²		---	
PHYSICAL CHARACTERISTICS								
Effective Aperture	Alone	with TUBE	Alone	with TUBE	Alone		Alone	
	100 mm Ø	70 mm Ø	100 mm Ø	70 mm Ø	125 x 125 mm		60 mm Ø (Optimized for 35 mm Ø)	
Absorber (High Damage Threshold)	HE		HD		HD		GD (cone reflector)	
Required Cooling Flow	(4 - 6) LPM < ±1 LPM/min ^e		(6 - 10) LPM < ±1 LPM/min ^e		(8 - 10) LPM < ±1 LPM/min ^e		(6 - 10) LPM < ±1 LPM/min ^e	
Cooling Water								
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	
Output Connectors	DB-15 cable & USB port		DB-15 cable & USB port		DB-15 cable & USB port		DB-15 cable & USB port	
PCB Electrical Supply	Through USB or Gentec-EO monitors ^f		Through USB or Gentec-EO monitors ^f		Through USB or Gentec-EO monitors ^f		Through USB or Gentec-EO monitors ^f	
Maximum Output Signal	2 V ^g		2 V ^g		2 V ^g		2 V ^g	
Dimensions	Alone	with TUBE	Alone	with TUBE	Alone		Alone	
	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		127H x 127W x 90D mm	
Weight (head only)	1.8 kg	6.0 kg	3.3 kg	7.5 kg	5 kg		5 kg	
ORDERING INFORMATION								
	Alone	Add Extension for TUBE	Alone	Add Extension for TUBE				
Product Name	HP100A-4KW-HE	-TUBE	HP100A-12KW-HD	-TUBE	HP125A-15KW-HD		HP60A-10KW-GD	
Product Number (Including stand)	202208	203156	201329	203155	202264		201306	

Specifications are subject to change without notice

a. Nominal value, actual value depends on electrical noise in the measurement system.

b. For lower powers, call your Gentec-EO representative.

c. For a beam size of 20% of the aperture area, moved across 80% of the aperture area.

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

e. > 1 min. contact gentec-eo for deionized water cooling module option.

f. A USB power adaptor will be necessary if the hp is used with a db-15 extension cable.

g. 12 V maximum output signal available upon request

SUPER HP

Custom Sizes and Shapes, up to 100,000 W upon request



KEY FEATURES

- 1. THE HIGHEST POWER HANDLING**
Custom models handle up to 100 000 W of continuous power
- 2. STABLE READING**
Less sensitive to variations in water cooling temperature than any other high power water-cooled meter on the market
- 3. INFINITE CUSTOMIZATION CAPABILITIES**
 - 1. Choose YOUR size
 - 2. Choose YOUR maximum power
 - 3. We will customize one just for you!
- 4. COMPACT AND LIGHT WEIGHT**
Lighter and more compact than any other high power detector on the market, thanks to our unique design
- 5. AVAILABLE WITH YAG AND CO₂ CALIBRATIONS**
All HP Models can be calibrated at YAG and CO₂ wavelengths with a calibration uncertainty of ±5%
- 6. DIRECT USB CONNECTION TO A PC**
Each head comes with both a DB-15 connector (for use with a Gentec-EO monitor) and a USB2.0 output for direct connection to a PC. Other connectors available upon request

AVAILABLE MODELS (CUSTOM BUILT)



HP280/100A-10KW-HD
(10 kW-Water-Cooled)



HP210A-25KW-HD
(25 kW-Water-Cooled)



HP280-30KW-HD
(30 kW-Water-Cooled)

ACCESSORIES



Stand with Steel Post
For 25 kW Model



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



5 m USB Cable
(Included)



Pelican Carrying Case

SEE ALSO

HOW IT WORKS	14
CALIBRATION	6
TECHNICAL DRAWINGS	106
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
S-LINK	28
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	188

APPLICATION NOTE

MEASURING IN VACUUM [202178](#)
Watch the Introduction video available on our website at www.gentec-eo.com

SUPER HP

CE NIST*
Traceable
*Also traceable to NRC-CNRC

SPECIFICATIONS

	HP280/100A-10KW-HD	HP210A-25KW-HD	NEW HP280A-30KW-HD	CUSTOMIZATION CAPABILITIES
MAX AVERAGE POWER	10 000 W	25 000 W	30 000 W	Up to 100 000 W
EFFECTIVE APERTURE	280 x 100 mm	210 x 210 mm	280 x 280 mm	Up to 400 x 400 mm
COOLING METHOD	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
Noise Equivalent Power ^a	± 10 W	± 20 W	± 25 W	Adapted to Maximum Power
Minimum Average Power ^b	300 W	500 W	1 000 W	Adapted to Maximum Power
Rise Time (nominal)	20 sec	25 sec	25 sec	≤ 45 sec
Sensitivity (typ into 100 k Ω load)	0.2 mV/W	0.08 mV/W	0.07 mV/W	Adapted to Maximum Power
Calibration Uncertainty				
@ 1064 nm	± 5 %			± 5 %
@ 0.25- 2.5 μm	± 6 %			± 6 %
Repeatability	± 2 %			± 2 %
Linearity with Power	± 2 %			± 2 %
Linearity vs Beam Diameter ^c	± 2 %			± 2 %
DAMAGE THRESHOLDS				
Maximum Average Power Density ^d				
10 kW	3.5 kW/cm ²	3.5 kW/cm ²	3.5 kW/cm ²	3.5 kW/cm ²
25 kW	---	0.25 kW/cm ²	---	0.25 kW/cm ²
30 kW	---	---	0.2 kW/cm ²	0.2 kW/cm ²
PHYSICAL CHARACTERISTICS				
Effective Aperture	280 x 100 mm	210 x 210 mm	280 x 280 mm	Square Apertures Up to 400 x 400 mm Rectangular and Round Apertures also available
Absorber (High Damage Threshold)	HD			HD
Required Cooling Flow	(6 - 10) LPM < ± 1 LPM/min ^f	(12 - 15) LPM < ± 1 LPM/min ^f	0-30 kW: (15 - 18) LPM < ± 1 LPM/min ^f 0-10 kW: (8 - 12) LPM < ± 1 LPM/min ^f	Adapted to Maximum Power
Cooling Water				
Temperature Range	15 – 25 °C			15 – 25 °C
Rate of Temperature Change	< ± 3 °C/min			< ± 3 °C/min
Output Connectors	DB-15 cable & USB port			DB-15 cable & USB port
PCB Electrical Supply	Through USB or Gentec-EO Monitors			Through USB or Gentec-EO Monitors
Maximum Output Signal	2 V			Analog Output 2V or 12V
Dimensions	152H x 305W x 75D mm	229H x 229W x 80D mm	300H x 300W x 92D mm	
Weight (head only)	11 kg	16 kg	20 kg	
ORDERING INFORMATION				
Product Name	HP280/100A-10KW-HD	HP210A-25KW-HD	HP280A-30KW-HD	Please call for more information on our customization capabilities

Specifications are subject to change without notice

- a. Nominal value, actual value depends on electrical noise in the measurement system.
 b. For lower powers, call your Gentec-EO representative.
 c. For a centered beam with size from 20% to 80% of the total aperture.

- d. At 1064 nm, 1.07-1.08 μm and 10.6 μm .
 e. Average period > 1 min.
 f. > 1min

FLASH

Handheld Laser Probe, 500 W, 3 kW, 6 kW and 10 kW



KEY FEATURES

- 1. **WIDE POWER RANGE**
Very low noise level = wide power range with just one device
- 2. **NO-WAIT MEASUREMENTS**
5 seconds measurements allow for very short cooling time (all models except FLASH-3K-55)
- 3. **EASY OPERATION**
 - Backlight with ON/OFF controls
 - Thermometer for head temperature
 - Red and Green LEDs for device status
 - Functions separated on 2 buttons
- 4. **AVAILABLE WITH HANDLE OR CABLE**
 - Standard Model: Fixed Handle
 - In Option: -C Model with 5 feet soft cable and removable handle
- 5. **LARGE APERTURE**
55 mm Ø aperture to accommodate large beams
- 6. **RUGGED**
 - All-metal body
 - High Damage Thresholds

AVAILABLE MODELS



ACCESSORIES



Stand with Steel Post
(Model Number: 201102)



Pelican Carrying Case

SEE ALSO

HOW IT WORKS	14
CALIBRATION	6
TECHNICAL DRAWINGS	106
LIST OF ALL ACCESSORIES	188

Watch the Demo video available on our website at www.gentec-eo.com

FLASH

CE NIST*
Traceable
*Also traceable to NRC-CNRC

SPECIFICATIONS

	FLASH-500-55		FLASH-3K-55		FLASH-6K-55		FLASH-10K-55	
MAX AVERAGE POWER	500 W		3 000 W		6 000 W		10 000 W	
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	
Maximum Measurable Power	500 W		3000 W		6000 W		10000 W	
Available Wavelengths	CO ₂ , YAG, Custom (250 - 2500 nm) - Up to 3 Calibrations/Unit							
Noise Equivalent Power	0.1 W		5 W		20 W		30 W	
Response Time	5 sec		10 sec		5 sec		5 sec	
Calibration Uncertainty	±3 %		±5 %		±5 %		±5 %	
Number of Readings Before Cooling	100 W	25 (200 sec)	0.5 kW	6 (72 sec)	1 kW	6 (36 sec)	1 kW	10 (60 sec)
(Maximum Exposure Time Before Cooling)	200 W	12 (100 sec)	1 kW	3 (36 sec)	2 kW	3 (18 sec)	2 kW	5 (30 sec)
	300 W	8 (60 sec)	1.5 kW	2 (24 sec)	3 kW	2 (12 sec)	5 kW	2 (12 sec)
	500 W	5 (40 sec)	3 kW	1 (12 sec)	6 kW	1 (6 sec)	10 kW	1 (6 sec)
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, 10000 W, CW	---		---		—		5.5 kW/cm²	
Maximum Allowable Absorber Temperature	65 °C		65 °C		75 °C		75 °C	
GENERAL SPECIFICATIONS								
Digital Display	40 x 20 mm		40 x 20 mm		40 x 20 mm		40 x 20 mm	
Battery Type	2 x AA batteries, 3.0 V		2 x AA batteries, 3.0 V		2 x AA batteries, 3.0 V		2 x AA batteries, 3.0 V	
Battery Life	>5000 measurements		>5000 measurements		>5000 measurements		>5000 measurements	
Operating Temperature Range	10 to 40 °C		10 to 40 °C		10 to 40 °C		10 to 40 °C	
Storage Temperature Range	10 to 60 °C		10 to 60 °C		10 to 60 °C		10 to 60 °C	
PHYSICAL CHARACTERISTICS								
Effective Aperture	55 mm Ø		55 mm Ø		55 mm Ø		55 mm Ø	
Dimensions (Sensor Head, Monitor and Handle)	335H x 88W x 35D mm		335H x 88W x 45D mm		335H x 88W x 36D mm		335H x 88W x 46D mm	
Weight	930 g		1240 g		1520 g		2150 g	
ORDERING INFORMATION								
Common Product Name	FLASH-500-55		FLASH-3K-55		FLASH-6K-55		FLASH-10K-55	
Add Extension for Cable	-C		-C		-C		-C	
Product Number	201244	201959	201245	201973	201851	201975	201868	201977
Specifications are subject to change without notice								

BEAM DUMPS

Water-Cooled Beam Dumps for High Power Lasers



KEY FEATURES

- 1. **EASY-TO-USE**
Just plug the water-cooling and you're done!
- 2. **2 MODELS TO CHOOSE FROM**
 - 4 kW : BD-4KW-HE
 - 12 kW : BD-12KW-HD
- 3. **VERY LARGE APERTURE**
The round aperture of 100 mm in diameter accommodates even the largest beams
- 4. **HIGH DAMAGE THRESHOLDS**
Up to 16 kW/cm² (at 500 W)
- 5. **ISOLATION TUBE IN OPTION**
It is possible to add an isolation tube to reduce back reflections

AVAILABLE MODELS



BD-4KW-HE
4 kW Beam Dump



BD-12KW-HD
12 kW Beam Dump

ACCESSORIES



Stand with Steel Post
(Model Number: 201102)



Pelican Carrying Case

SEE ALSO

UP55-HD	96
HP	98
SUPER HP	100
LIST OF ALL ACCESSORIES	188

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

BEAM DUMPS

SPECIFICATIONS

	BD-4KW-HE	BD-12KW-HD
MAX AVERAGE POWER (CONTINUOUS / 2 MINUTES)	4 000 W / 4 500 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/cm ²	16 kW/cm ²
4 kW	4 kW/cm ²	---
5 kW	---	6.5 kW/cm ²
10 kW	---	3.5 kW/cm ²
PHYSICAL CHARACTERISTICS		
Effective Aperture	100 mm Ø	100 mm Ø
Absorber (High Damage Threshold)	HE	HD
Required Cooling Flow	(4 - 6) LPM < ±1 LPM/min ^b	(6 - 10) LPM < ±1 LPM/min ^b
Temperature of Cooling Water	(15 - 25) °C < ±3°C/min ^b	(15 - 25) °C < ±3°C/min ^b
Dimensions	127H x 127W x 74D mm	127H x 127W x 70D mm
Weight (head only)	1.8 kg	3.3 kg
ORDERING INFORMATION		
Product Name	BD-4KW-HE	BD-12KW-HD
Product Number (Including stand)	202937	202939

Specifications are subject to change without notice

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

b. > 1 min. Contact Gentec-EO for clean deionized water cooling module option.

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

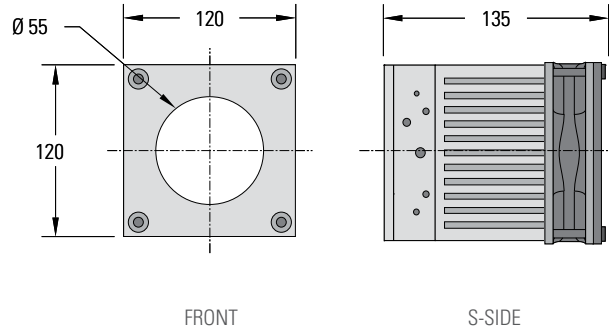
SPECIAL PRODUCTS

BEAM DIAGNOSTICS

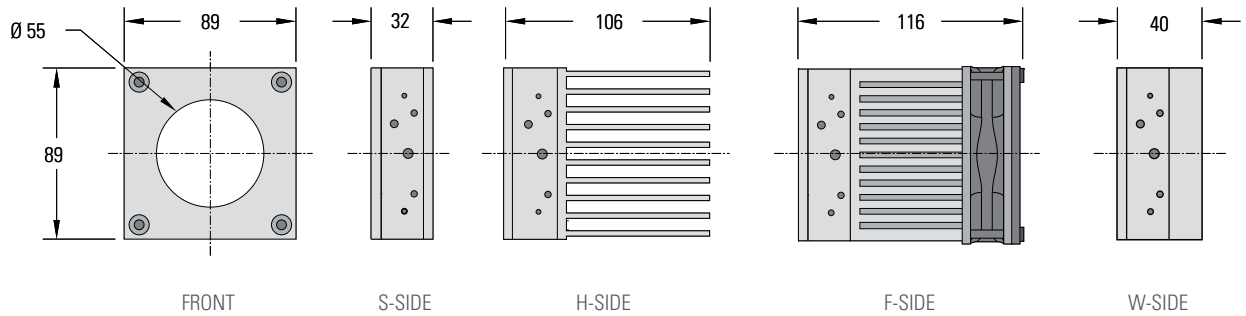
TECHNICAL DRAWINGS

All dimensions in mm

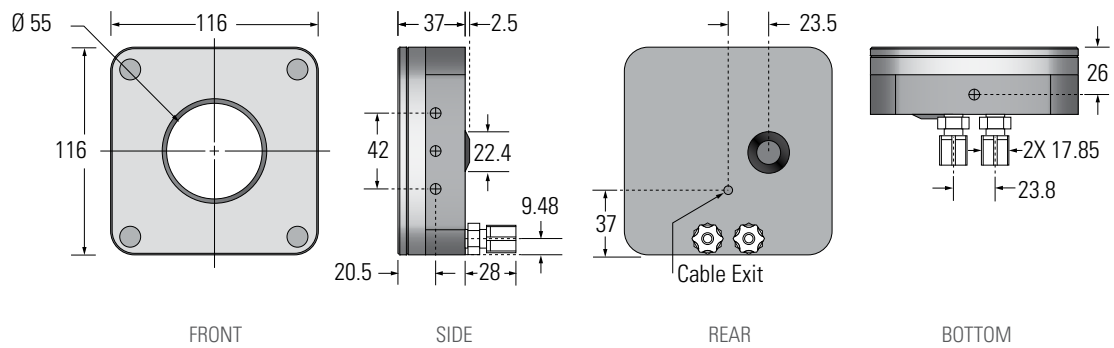
UP55G-600F-HD



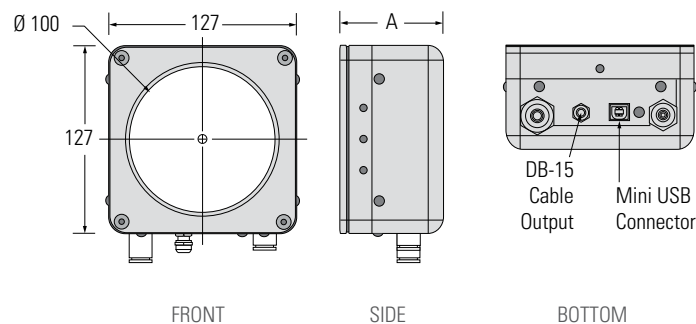
UP55M-700W-HD



UP55C-2.5KW-HD



HP100A

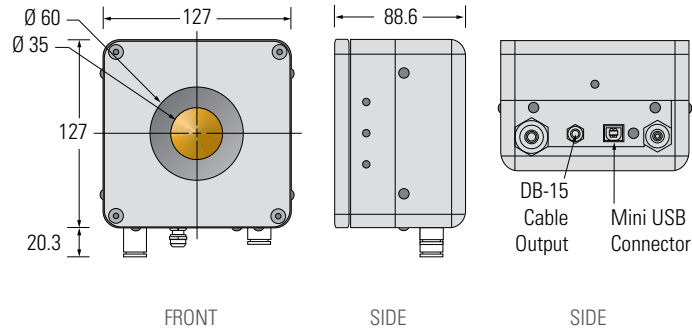


MODEL	DIM. A
4KW	74
12KW	70

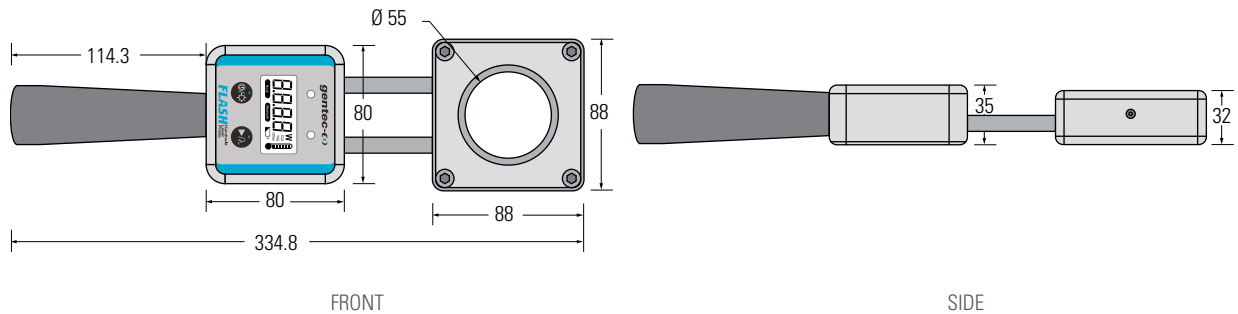
TECHNICAL DRAWINGS

All dimensions in mm

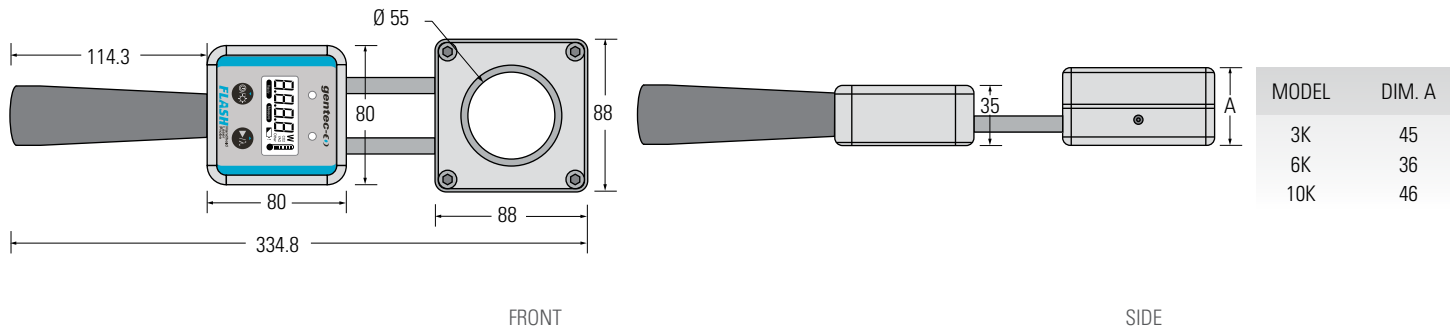
HP60A-10KW-GD



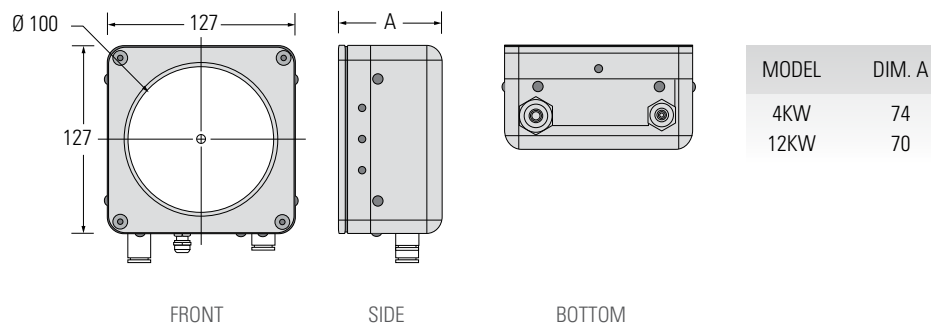
FLASH-500-55



FLASH-3K/6K/10K-55



BEAM DUMPS



PRESENTATION

OVERVIEW OF THE DIFFERENT MODELS

Our photo detectors are offered for both power or energy measurements. Measure as low as a few femtojoules in energy or a few picowatts in power.

FOR POWER MEASUREMENTS

The section below lists all the photo detectors used for power measurements. The corresponding comparison table and power range chart are given at the next page.



Available with
integra



PH-B

- 5 and 10 mm Ø Apertures
- UV-Silicon and Germanium Sensors
- Amplified signal in V/W, perfect for integration

NOISE DOWN TO THE pW LEVEL

See page 110

PH

- High Power Photo Detectors for measurements up to 750 mW
- Available from UV to IR
- Silicon, UV-Silicon and Germanium Sensors
- OD1/OD2 Attenuators Available

HIGH POWER Si OR Ge SENSORS

See page 112



PRONTO-Si

- Compact Low Power Probe up to 800 mW
- 10 x 10 mm Aperture
- Continuous Measurements
- Integrated OD1 Slide-in Attenuator

POCKET-SIZED

COLOR TOUCH SCREEN DISPLAY

SCREEN AND SENSOR ARE PROTECTED WHEN YOU FLIP IT CLOSE

USE IT IN VERY TIGHT SPACES
(ONLY 6 mm AT THE SENSOR)

See page 116

FOR ENERGY MEASUREMENTS

The section below lists all the photo detectors used for energy measurements. The corresponding comparison table and energy range chart are given at the next page.

Available with
integra



PE-B

- 3, 5 and 10 mm Ø Apertures
- Germanium and InGaAs Sensors
- Lowest Noise Level of ALL Energy Detectors (8 fJ with PE3B-Si)

8 fJ NOISE LEVEL

See page 114

COMPARISON TABLE

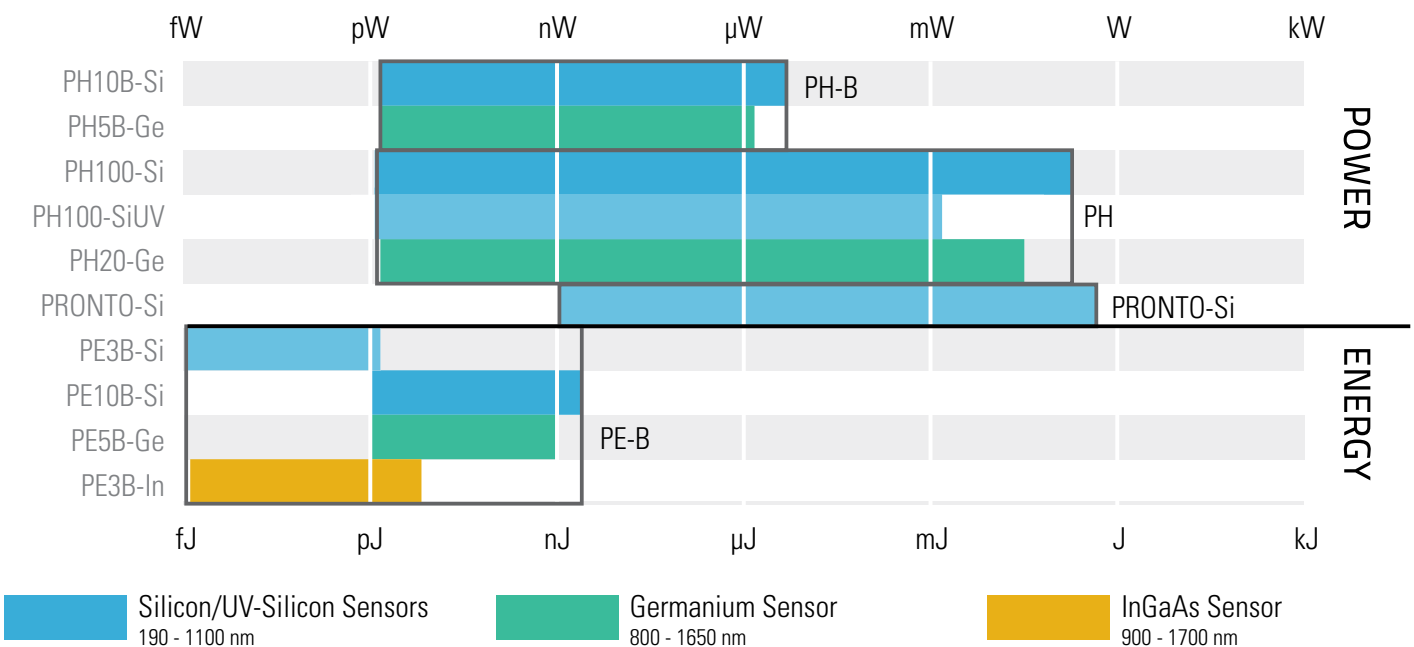
FOR POWER MEASUREMENTS

MODEL	P _{MAX}	NOISE LEVEL	λ _{MIN}	λ _{MAX}	SENSOR TYPE	APERTURE	SEE PAGE
PH5B-Ge	40 μW	40 pW	800 nm	1.65 μm	Germanium	5 mm Ø	110
PH10B-Si	200 μW	50 pW	210 nm	1.08 μm	UV-Silicon	10 mm Ø	110
PH100-SiUV	4 mW	10 pW	210 nm	1.08 μm	UV-Silicon	10 mm Ø	112
PH100-SiUV-OD.3	11 mW	30 pW	210 nm	1.08 μm	UV-Silicon	10 mm Ø	112
PH100-SiUV-OD1	38 mW	100 pW	400 nm	1.08 μm	UV-Silicon	10 mm Ø	112
PH20-Ge	30 mW	60 pW	800 nm	1.65 μm	Germanium	5 mm Ø	112
PH100-Si-HA	36 mW	10 pW	350 nm	1.08 μm	Silicon	10 mm Ø	112
PH100-Si-HA-OD1	300 mW	100 pW	420 nm	1.08 μm	Silicon	10 mm Ø	112
PH20-Ge-OD1	300 mW	600 pW	900 nm	1.65 μm	Germanium	5 mm Ø	112
PH20-Ge-OD2	500 mW	6 nW	950 nm	1.65 μm	Germanium	5 mm Ø	112
PH100-Si-HA-OD2	750 mW	1 nW	630 nm	1.1 μm	Silicon	10 mm Ø	112
PRONTO-Si	800 mW	10 pW	320 nm	1.1 μm	Silicon	10 X 10 mm	116

FOR ENERGY MEASUREMENTS

MODEL	E _{MAX}	NOISE LEVEL	λ _{MIN}	λ _{MAX}	SENSOR TYPE	APERTURE	SEE PAGE
PE3B-Si	30 pJ	8 fJ	210 nm	1.08 μm	UV-Silicon	3 mm Ø	114
PE3B-In	300 pJ	30 fJ	900 nm	1.7 μm	InGaAs	3 mm Ø	114
PE5B-Ge	3 nJ	1 pJ	800 nm	1.65 μm	Germanium	5 mm Ø	114
PE10B-Si	150 nJ	1.5 pJ	210 nm	1.08 μm	UV-Silicon	10 mm Ø	114

 Available with INTEGRA all-in-one detector + meter



PH-B

40 pW - 200 μ W, Amplified Si and Ge Sensors for Low-Power Measurements



KEY FEATURES

- 1. **VERY SENSITIVE PHOTO DETECTOR**
Measure down to the pW level
- 2. **PERFECT FOR INTEGRATION**
The internal amplification gives a signal output directly in V/W, which you can measure with your own acquisition system
- 3. **SENSORS AVAILABLE**
 - PH10B-Si: 10 mm \varnothing , UV-Silicon sensor for 0.21 to 1.08 μ m
 - PH5B-Ge: 5 mm \varnothing , Germanium sensor for 0.8 to 1.65 μ m
- 4. **SMART INTERFACE**
Containing all the calibration data

AVAILABLE MODELS



PH10B-Si
(10 mm - UV-Silicon)



PH5B-Ge
(5 mm - Germanium)

ACCESSORIES



Stand with Delrin Post
(Model Number: 200428)



Fiber Adaptors & Connectors
(FC, ST or SMA)



APM Analog Power Supply
(Model Number: 201848)



Pelican Carrying Case

This product cannot be used with DB-15 extension cables

SEE ALSO

TECHNICAL DRAWINGS	118
SENSITIVITY CURVES	119
COMPATIBLE MONITORS	
MAESTRO	20
S-LINK	28
M-LINK	32
LIST OF ALL ACCESSORIES	188

APPLICATION NOTE	
CALIBRATION UNCERTAINTY OF PHOTO DETECTORS	202174

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS

PH-B

CE NIST*
Traceable
*Also traceable to NRC-CNRC

SPECIFICATIONS

	PH10B-Si	PH5B-Ge
MAX AVERAGE POWER	200 µW	40 µW
EFFECTIVE APERTURE	10 mm Ø	5 mm Ø
MEASUREMENT CAPABILITY		
Spectral Range	210 - 1080 nm	800 - 1650 nm
Maximum Measurable Power		
With M-LINK	200 µW @ 633 nm	40 µW @ 1310 nm
With S-LINK	175 µW @ 633 nm	30 µW @ 1310 nm
With MAESTRO	150 µW @ 633 nm	25 µW @ 1310 nm
Noise Equivalent Power ^a	50 pW @ 633 nm	40 pW @ 1310 nm
Rise Time (0-100%)	≤ 0.2 s	≤ 0.2 s
Peak Sensitivity	15 kV/W @ 633 nm	80 kV/W @ 1047 nm
Calibration Uncertainty ^b	±8 % (210 - 219 nm)	± 3.5% (800 - 1650 nm)
	±6.5 % (220 - 399 nm)	
	±2.5 % (400 - 899 nm)	
	±3.5 % (900 - 999 nm)	
	±5 % (1000 - 1049 nm)	
	±7 % (1050 - 1080 nm)	
DAMAGE THRESHOLDS		
Maximum Average Power Density	100 W/cm ²	100 W/cm ²
PHYSICAL CHARACTERISTICS		
Effective Aperture	10 mm Ø	5 mm Ø
Distance to Sensor Face	13.7 mm	10.5 mm
Sensor	UV-Silicon	Germanium
Dimensions	38.1 Ø x 27.4D mm	38.1 Ø x 27.4D mm
Weight	91 g	91 g
ORDERING INFORMATION		
Product Name	PH10B-Si	PH5B-Ge
Product Number (Including stand)	202820	202821

Specifications are subject to change without notice

- a. Nominal value, depends on environmental electromagnetic interference and wavelength.
b. With a Gentec-EO monitor.



PH

10 pW to 750 mW, Si and Ge Sensors



KEY FEATURES

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

AVAILABLE MODELS

PH100-Si-HA
(10 mm - Silicon)PH100-Si^{UV}
(10 mm - UV-Silicon)PH20-Ge
(5 mm - Germanium)PH Series Detector
With OD Attenuator

OD ATTENUATORS

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

ACCESSORIES

Stand with Delrin Post
(Model Number: 200428)Extension Cables
(4, 15, 20 or 25 m)Fiber Adaptors & Connectors
(FC, SC, ST and SMA)

OD Attenuators



Pelican Carrying Case

SEE ALSO

TECHNICAL DRAWINGS	118
SENSITIVITY CURVES	120-121
COMPATIBLE MONITORS	
MAESTRO	20
TUNER	24
UNO	26
P-LINK	30
M-LINK	32
LIST OF ALL ACCESSORIES	188

APPLICATION NOTE

CALIBRATION UNCERTAINTY
OF PHOTO DETECTORS

202174

SPECIFICATIONS

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

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



PE-B

8 fJ - 150 nJ, Our Lowest Energy Measurements



KEY FEATURES

- 1. VERY LOW NOISE LEVEL**
Take measurements with a noise level as low as 8 fJ with the M-LINK, MAESTRO and S-LINK monitors
- 2. 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
- 3. SMART INTERFACE**
Containing all the calibration data
- 4. integra OPTIONS**
 - Standard: USB Output (-INT)
 - In Option: RS-232 Output (-IDR) and External Trigger (-INE)

AVAILABLE MODELS



PE3B-Si
(3 mm - UV-Silicon)



PE10B-Si
(10 mm - UV-Silicon)



PE5B-Ge
(5 mm - Germanium)



PE3B-In
(3 mm - InGaAs)

ACCESSORIES



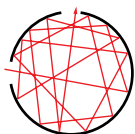
Stand with Delrin Post
(Model Number: 200428)



Fiber Adaptors & Connectors
(FC, ST or SMA)



APM Analog Power Supply
(Model Number: 201848)



Integrating Sphere



Pelican Carrying Case

This product cannot be used with DB-15 extension cables

SEE ALSO

TECHNICAL DRAWINGS	118
SENSITIVITY CURVES	119
COMPATIBLE MONITORS	
MAESTRO	20
S-LINK	28
M-LINK	32
LIST OF ALL ACCESSORIES	188

APPLICATION NOTE

CALIBRATION UNCERTAINTY
OF PHOTO DETECTORS

[202174](#)

PE-B



SPECIFICATIONS

	PE3B-Si	PE10B-Si	PE5B-Ge	PE3B-In
MAX MEASURABLE ENERGY	30 pJ	150 nJ	3 nJ	300 pJ
EFFECTIVE APERTURE	3 mm Ø	10 mm Ø	5 mm Ø	3 mm Ø
MEASUREMENT CAPABILITY				
Spectral Range	210 - 1080 nm	210 - 1080 nm	800 - 1650 nm	900 - 1700 nm
Maximum Measurable Energy				
With M-LINK	30 pJ @ 634 nm	150 nJ @ 634 nm	3 nJ @ 1310 nm	300 pJ @ 1310 nm
With S-LINK	25 pJ @ 634 nm	130 nJ @ 634 nm	2.5 nJ @ 1310 nm	250 pJ @ 1310 nm
With MAESTRO	20 pJ @ 634 nm	110 nJ @ 634 nm	2 nJ @ 1310 nm	200 pJ @ 1310 nm
Noise Equivalent Energy ^a	8 fJ @ 634 nm	1.5 pJ @ 634 nm	1 pJ @ 1310 nm	30 fJ @ 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
Sensitivity	100 GV/J @ 634 nm	20 MV/J @ 634 nm	1 GV/J @ 1310 nm	10 GV/J @ 1310 nm
Calibration Uncertainty ^b	± 4% ^c	± 8 % (210 - 219 nm)	± 3.5%	± 4% ^d
		± 6.5 % (220 - 399 nm)		
		± 2.5 % (400 - 899 nm)		
		± 3.5 % (900 - 999 nm)		
		± 5 % (1000 - 1049 nm)		
		± 7 % (1050 - 1080 nm)		
DAMAGE THRESHOLDS				
Max Energy Density	N/A	5 µJ/cm ²	5 µJ/cm ²	N/A
Max Average Power Density	N/A	65 mW/cm ² @ 532 nm	320 mW/cm ² @ 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				
Product Name	PE3B-Si	PE10B-Si	PE5B-Ge	PE3B-In
Product Number (Including stand)		202822	202825	
Add Extension for INTEGRA (USB)	-INT	-INT	-INT	-INT
Add Extension for INTEGRA (RS-232)	-IDR	-IDR	-IDR	-IDR
Add Extension for INTEGRA (Ext Trig)	-INE	-INE	-INE	-INE
Specifications are subject to change without notice				

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

b. With Gentec-EO monitor.

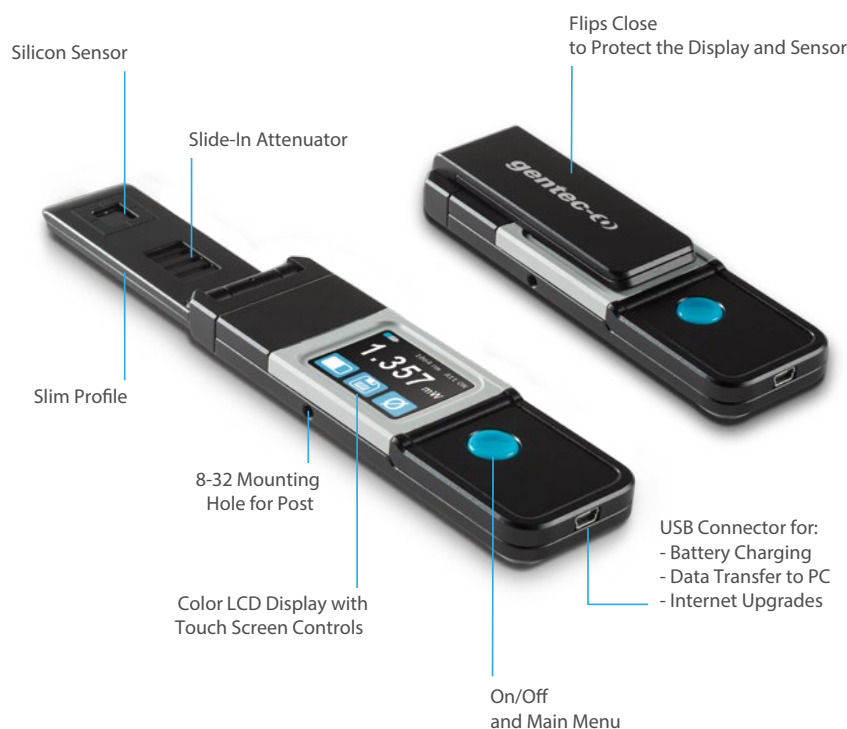
c. This detector is NIST Traceable at the calibration wavelength of 634 nm. Typical values are used at other wavelengths.

d. This detector is NIST Traceable at the calibration wavelength of 1310 nm.

Typical values are used at other wavelengths.

PRONTO-Si

0.3 nW - 800 mW Power Probe with Touch Screen Controls

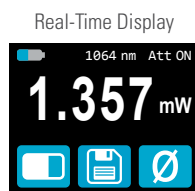


KEY FEATURES

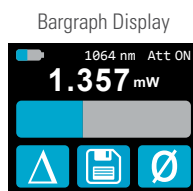
- 1. POCKET-SIZE**
This low power laser probe is so compact it fits in your pocket!
- 2. SLIM PROFILE**
The sensor part is only 6 mm thick, allowing it to fit into tight spaces
- 3. EASY-TO-USE**
The touch screen color LCD allows for a friendly user interface. You can make a measurement with just the touch of a button!
- 4. 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
- 5. SLIDE-IN ATTENUATOR**
Just slide the OD1 integrated filter to the ON position and you can measure up to 800 mW of continuous power
- 6. USER SETTABLE**
You can set the wavelength, brightness and screen orientation to adapt to your application
- 7. DATA LOGGING**
Save your data to the internal memory and then transfer it to your PC over the USB connection

USER INTERFACE

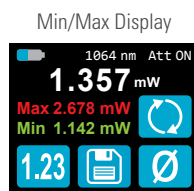
3 Displays for the Measurements



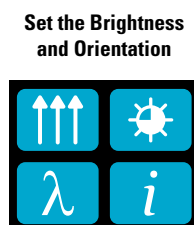
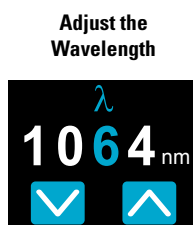
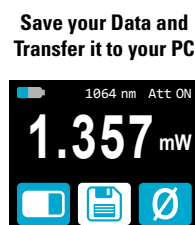
Displays the measured value with large digits so you can see them from a distance



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



In addition to the Real Time value, the device displays the lowest and highest values



SLIDE-IN ATTENUATOR



DATA TRANSFER TO PC



Watch the Demo video available on our website at www.gentec-eo.com

PRONTO-Si

SPECIFICATIONS

PRONTO-Si

MAX AVERAGE POWER (ATTENUATOR OFF / ATTENUATOR ON)	80 mW / 800 mW
EFFECTIVE APERTURE	10 x 10 mm
INTERFACE	Touch Screen Color LCD Display

MEASUREMENT CAPABILITY

Spectral Range	320 - 1100 nm
Attenuator OFF	320 - 1100 nm
Attenuator ON	400 - 1100 nm
Power Range	0.3 nW - 800 mW @ 1064 nm
Attenuator OFF	0.3 nW - 80 mW @ 1064 nm
Attenuator ON	3 nW - 800 mW @ 1064 nm
Noise Equivalent Power	10 pW @ 980 nm
Response Time	0.2 sec
Measurement Accuracy	From $\pm 1.5\%$ to $\pm 7.0\%$ (wavelength-dependent)
Display Resolution	1 pW

DAMAGE THRESHOLDS

Maximum Average Power Density	100 W/cm ²
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	Simple On/Off Controls, saves to on-board memory and transfers data to the PC using the USB connection
Screen Personalization	Orientation and Brightness controls
Battery Indicator	On-screen indicator with 4 levels

GENERAL SPECIFICATIONS

Display Type	Touch Screen Color LCD
Display Size	28.0 x 35.0 mm (128 x 160 pixels)
Backlight	Adjustable
Internet Upgrades Via	USB port
Data Storage	50,000 pts
Battery Type	Rechargeable Li-ion
Battery Life	17 hours (with brightness set at 25%)
Battery Recharge Via	USB port
Operating Temperature Range	15 - 28 °C (max 80% RH)

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)	41.0W x 212.0L x 15.0D mm (Sensor part is only 6.0D mm)
Dimensions (Closed)	41.0W x 134.0L x 21.5D mm
Weight	150 g

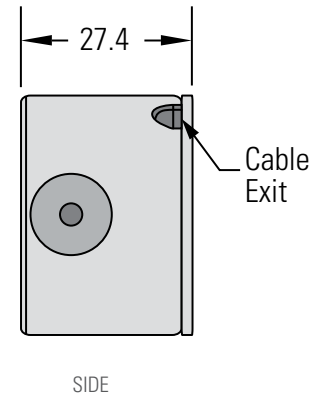
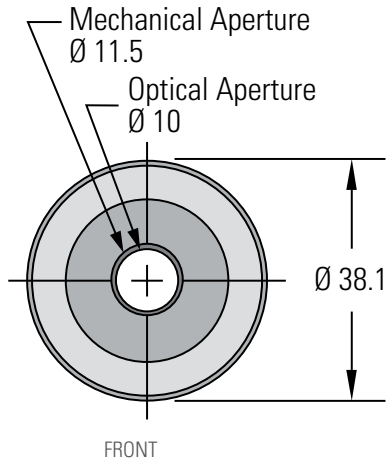
ORDERING INFORMATION

Product Name	PRONTO-Si
Product Number	202963

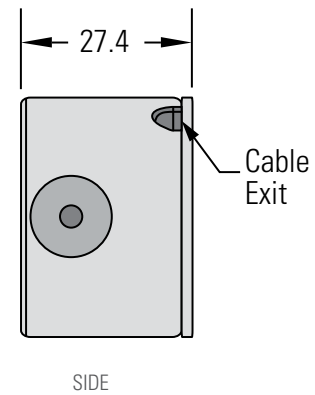
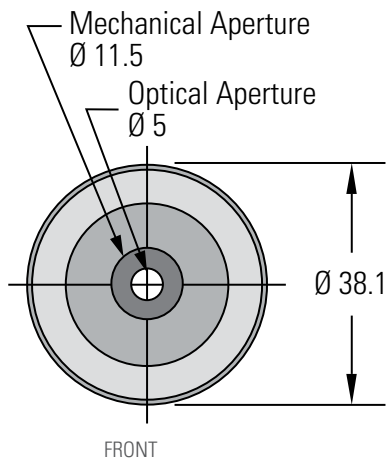
Specifications are subject to change without notice

TECHNICAL DRAWINGS

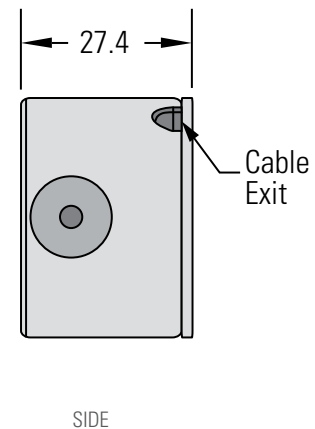
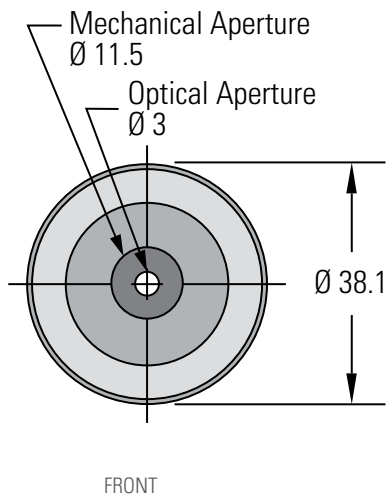
All dimensions in mm

PH10B-Si PH100-Si/Si^{UV} PE10B-Si

PH5B-Ge PH20-Ge PE5B-Ge

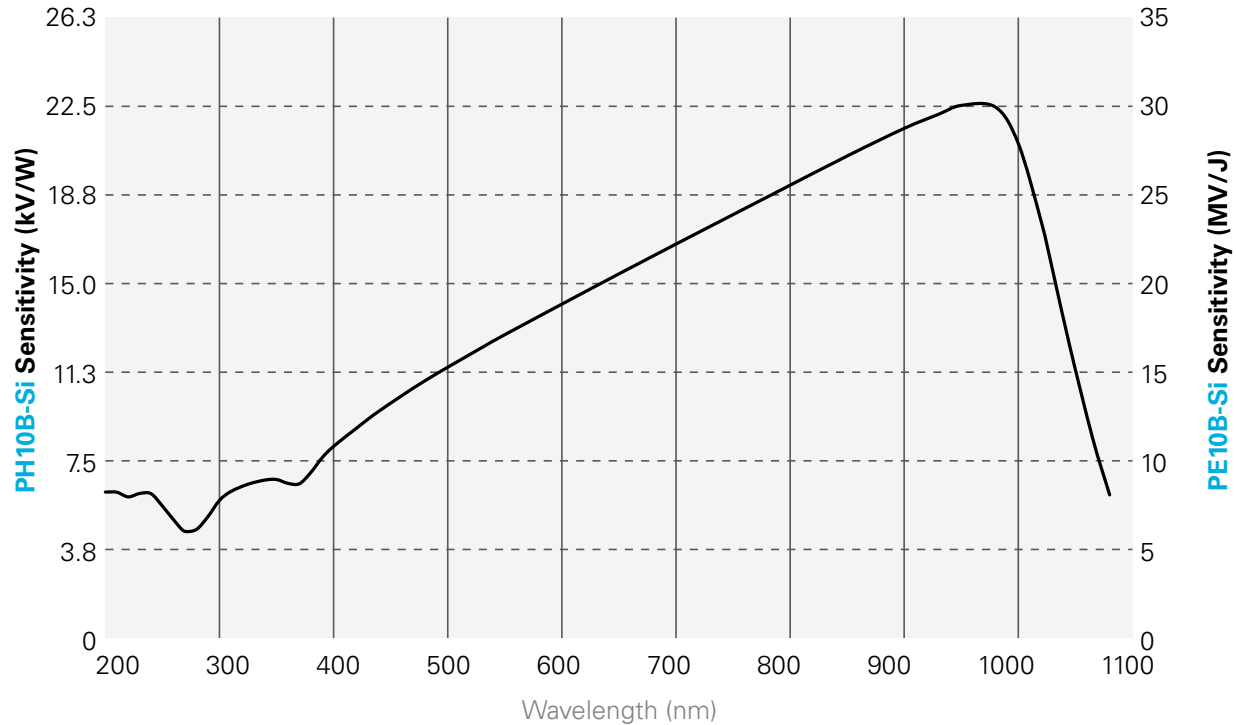


PE3B-In

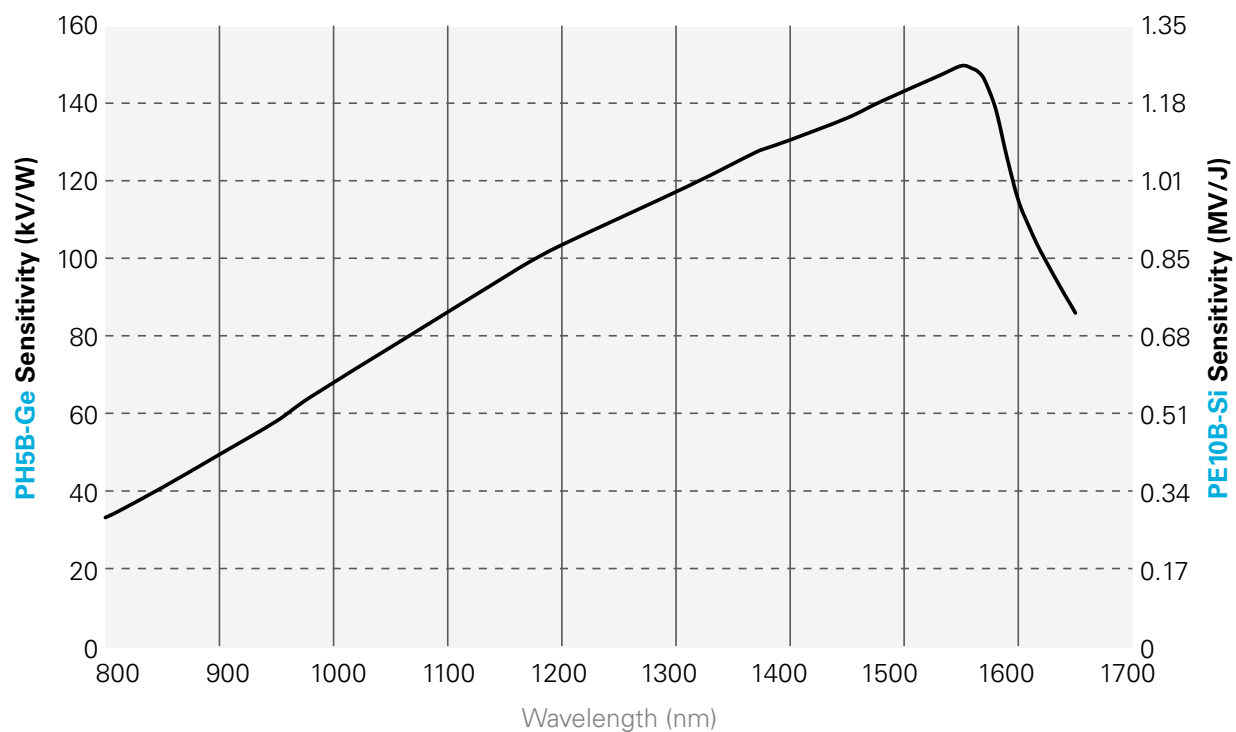


SENSITIVITY CURVES

PH10B-Si, PE10B-Si

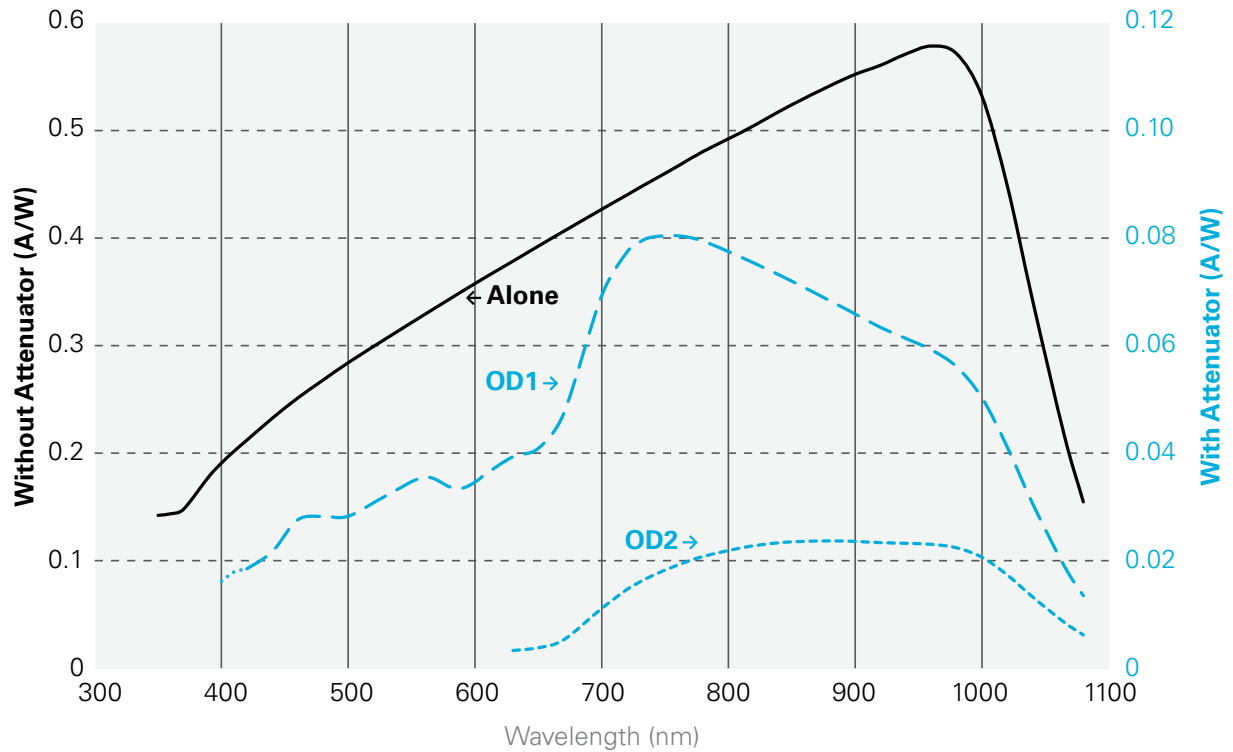


PH5B-Ge, PE5B-Ge

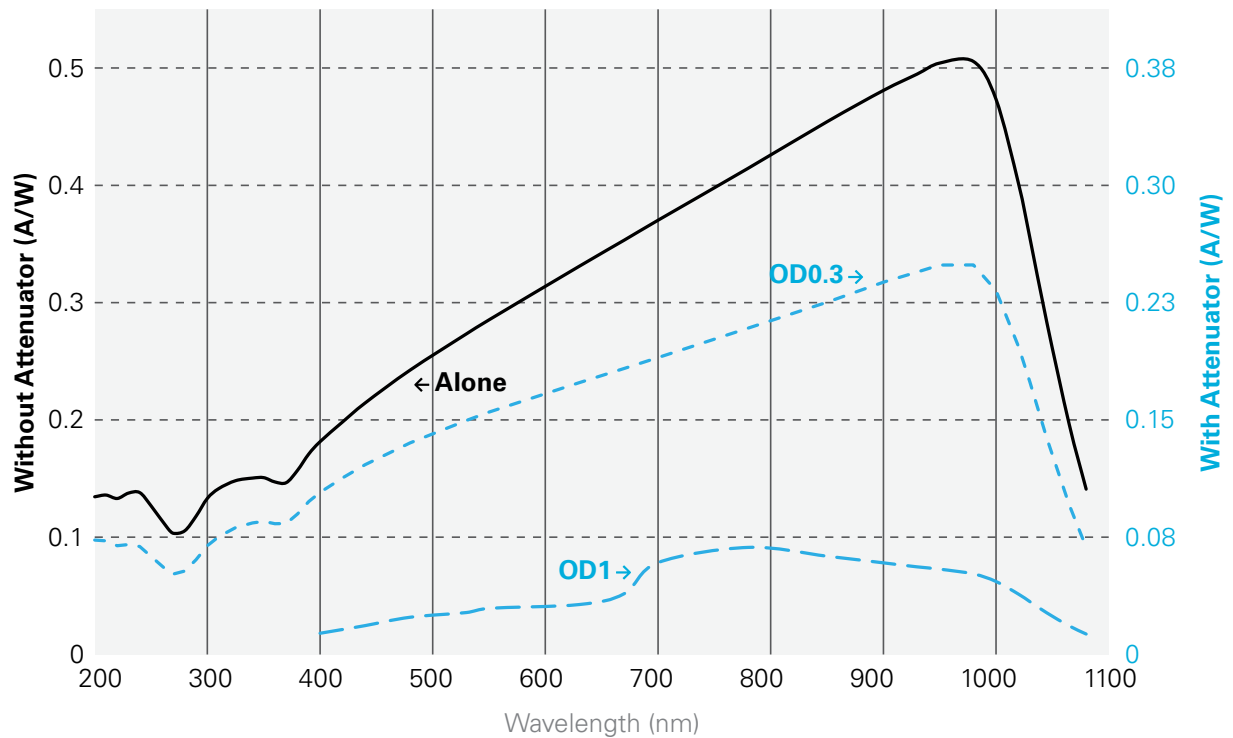


SENSITIVITY CURVES

PH100-Si-HA

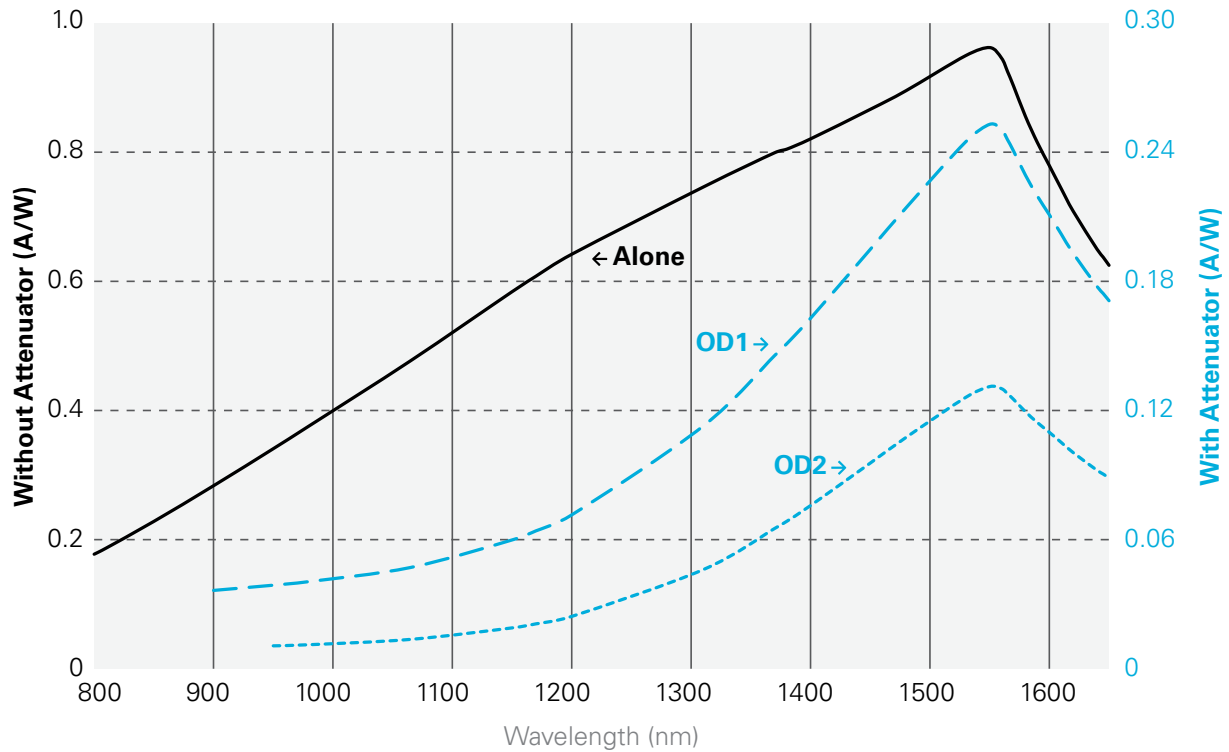


PH100-Si^{UV}



SENSITIVITY CURVES

PH20-Ge



PRONTO-Si

