



UP12-H

12 mm Ø, 1 mW - 110 W

MONITORS

ENERGY DETECTORS

POWER DETECTORS

HIGH POWER SOLUTIONS

PHOTO DETECTORS

THZ DETECTORS

OEM DETECTORS

SPECIAL PRODUCTS

BEAM DIAGNOSTICS



KEY FEATURES

- 1. MODULAR CONCEPT**
Increase the power capability of your detector: 3 different cooling modules
- 2. HIGH PERFORMANCE**
Fast Rise Time (0.3 sec)
High Damage Threshold (36 kW/cm²)
- 3. COMPACT DESIGN**
Only 14 mm thick (10S model)
- 4. ENERGY MODE**
Measure single shot energy up to 5 J
- 5. SMART INTERFACE**
Containing all the calibration data

AVAILABLE MODELS



UP12E-10S-H5
(10W-Standalone)



UP12E-20H-H5
(20W-Heatsink)



UP12E-70W-H5
(70W-Water-Cooled)

ACCESSORIES



Stand with Steel Post
(Model Number: 200160)



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



Fiber Adaptors and Connectors
(FC, SC or SMA)



Pelican Carrying Case

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MEASURING LASER POWER WITH A THERMOPILE DETECTOR: THE BASICS!	202175

UP12-H



*Also traceable to NRC-CNRC

SPECIFICATIONS

	UP12E-10S-H5	UP12E-20H-H5	UP12E-70W-H5
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
Noise Equivalent Power ^a	1 mW	1 mW	1 mW
Rise Time (nominal) ^b	0.3 sec	0.3 sec	0.3 sec
Sensitivity (typ into 100 kΩ load) ^c	0.53 mV/W	0.53 mV/W	0.53 mV/W
Calibration Uncertainty ^d	±2.5 %	±2.5 %	±2.5 %
Repeatability	±0.5 %	±0.5 %	±0.5 %
Energy Mode			
Sensitivity	0.84 mV/J	0.84 mV/J	0.84 mV/J
Maximum Measurable Energy ^e	5 J	5 J	5 J
Noise Equivalent Energy ^a	0.02 J	0.02 J	0.02 J
Minimum Repetition Period	1.5 sec	1.5 sec	1.5 sec
Maximum Pulse Width	50 ms	50 ms	50 ms
Accuracy with energy calibration option	±5 %	±5 %	±5 %
DAMAGE THRESHOLDS			
Maximum Average Power Density ^a	36 kW/cm ²	36 kW/cm ²	36 kW/cm ²
Pulsed Laser Damage Thresholds	Max Energy Density		Peak Power Density
1064 nm, 360 µs, 5 Hz	5 J/cm ²		14 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	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			
Product Name	UP12E-10S-H5	UP12E-20H-H5	UP12E-70W-H5
Product Number (Including stand)	200384	200386	200390
Add Extension for INTEGRA	-INT	-INT	-INT
Product Number (Including stand)	202612	202614	

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 Gentec-EO MAESTRO, UNO, P-LINK, TUNER and S-LINK monitors.
 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 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.