

# UP55G



55 mm Ø, 15 mW - 500 W



## Key Features

- 1 **Fan-Cooled**  
High Power without the need for water cooling
- 2 **Portable**  
Perfect for production environments and service technicians
- 3 **High Quality Absorber**  
For the highest power handling in the UP Series
- 4 **Energy Mode**  
Measure single shot energy up to 200 J
- 5 **Smart Interface**  
Containing all the calibration data



UP55G-500F-H12



**NEW**

### See also

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| . How it works .....        | 14  |
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| SOLO 2 .....                | 20  |
| UNO .....                   | 22  |
| S-LINK-2 .....              | 24  |
| P-LINK .....                | 26  |

## Accessories

### » Fiber Optic Adapters (FC, SMA, SC)

Variety of fiber adapter options to give you the most flexibility in using our power detectors with your fiber coupled lasers.



### » Extension Cables (4, 15, 20 and 25 m)

For some OEM, manufacturing and laboratory applications.




### » Pelican Carrying Case

We offer a robust hard shell polymer carrying case.



## SPECIFICATIONS

|                                       |  |
|---------------------------------------|--|
| <b>Models</b>                         | UP55G-500F-H12   |
|                                       |  |
| <b>Max Average Power (continuous)</b> | 500 W  |
| <b>Max Average Power (1 minute)</b>   | 500 W  |

| MEASUREMENT CAPABILITY                                  |  | UP55G-500F-H12          |
|---|--|-------------------------|
| Spectral Range  |  | 0.19 – 20 $\mu\text{m}$ |
| Noise Equivalent Power <sup>a</sup>                     |  | 15 mW                   |
| Rise Time (nominal) <sup>b</sup>                        |  | 2.8 sec                 |
| Sensitivity (typ into 100 k $\Omega$ load) <sup>c</sup> |  | 0.06 mV/W               |
| Calibration Uncertainty <sup>d</sup>                    |  | $\pm 2.5$ %             |
| Repeatability   |  | $\pm 0.5$ %             |
| Energy Mode   |  |                         |
| Sensitivity   |  | 0.013 mV/J              |
| Maximum Measurable Energy <sup>e</sup>                  |  | 200 J                   |
| Noise Equivalent Energy <sup>a</sup>                    |  | 0.25 J                  |
| Minimum Repetition Period                               |  | 14.3 sec                |
| Maximum Pulse Width                                     |  | 433 ms                  |
| Accuracy with energy calibration option                 |  | $\pm 5$ %               |

## DAMAGE THRESHOLDS

|                                   |                       |                        |
|-----------------------------------|-----------------------|------------------------|
| Maximum Average Power Density     |                       |                        |
| 1064 nm, 10 W, CW                 |                       | 45 kW/cm <sup>2</sup>  |
| 1064 nm, 500 W, CW                |                       | 8 kW/cm <sup>2</sup>   |
| Pulsed Laser Damage Thresholds    | Max Energy Density    | Peak Power Density     |
| 1064 nm, 360 $\mu\text{s}$ , 5 Hz | 9 J/cm <sup>2</sup>   | 25 kW/cm <sup>2</sup>  |
| 1064 nm, 7 ns, 10 Hz              | 1 J/cm <sup>2</sup>   | 143 MW/cm <sup>2</sup> |
| 532 nm, 7 ns, 10 Hz               | 0.6 J/cm <sup>2</sup> | 86 MW/cm <sup>2</sup>  |
| 266 nm, 7 ns, 10 Hz               | 0.3 J/cm <sup>2</sup> | 43 MW/cm <sup>2</sup>  |

## PHYSICAL CHARACTERISTICS

|                                  |                       |
|----------------------------------|-----------------------|
| Effective Aperture Diameter      | 55 mm $\emptyset$     |
| Absorber (High Damage Threshold) | H12                   |
| Dimensions                       | 120H x 120W x 135D mm |
| Weight (head only)               | 2.75 kg               |

## ORDERING INFORMATION

|                                  |                |
|----------------------------------|----------------|
| Full Product Name                | UP55G-500F-H12 |
| Product Number (including stand) | 201100         |

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

b. With Gentec-EO SOLO, UNO, P-LINK and S-LINK-2 monitors.

c. Maximum output voltage = sensitivity x maximum power.

d. Including linearity with power.

e. For 360  $\mu\text{s}$  pulses. Higher pulse energy possible when customized for long pulses (ms), less for short pulses (ns).

## America

Canada  
United States  
South America

## Europe

Austria  
Belgium  
France  
Germany  
Ireland  
Italy  
Poland  
Russia  
Spain  
Sweden  
Scandinavia  
Switzerland  
The Netherlands  
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# gentec-EO

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### Calibration Centers

Quebec City, Canada  
Olching (Munich), Germany

### Distributed in the UK by

**Lambda**  
photometrics  $\lambda$

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