# 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

*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.