

## UP55N-50F-W9-D0

Thermal detector for laser power measurement up to 50 W.



### PRODUCT FAMILY KEY FEATURES

#### MODULAR CONCEPT

Increase the power capability of your detector: 4 different cooling modules

#### VERY HIGH DAMAGE THRESHOLD

100 kW/cm<sup>2</sup> in average power density

#### VERY LARGE APERTURE

55 mm effective aperture diameter, perfect for the largest beams

#### HIGHEST ENERGY READINGS IN THE SERIES

Measure single shot energy up to 500 J

#### SMART INTERFACE

Containing all the calibration data

#### COMPATIBLE STAND

[STAND-S-443](#)

## SPECIFICATIONS

### MEASUREMENT CAPABILITIES

|  |               |
|--|---------------|
| Maximum average power (continuous)         | 50 W          |
| Maximum average power (1 minute)           | 85 W          |
| Noise equivalent power <sup>1</sup>        | 5 mW          |
| Spectral range <sup>2</sup>                | 0.193 - 10 μm |
| Typical rise time <sup>3</sup>             | 3.5 s         |
| Power calibration uncertainty <sup>4</sup> | ±2.5 %        |
| Repeatability                              | ±0.5 %        |

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

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

3. With anticipation.

4. Including linearity with power.

### MEASUREMENT CAPABILITIES (ENERGY MODE)

|   |           |
|---|-----------|
| Typical energy sensitivity                  | 0.02 mV/J |
| Maximum measurable energy <sup>1</sup>      | 500 J     |
| Noise equivalent energy <sup>2</sup>        | 0.25 J    |
| Minimum repetition period                   | 11.1 s    |
| Maximum pulse width                         | 467 ms    |
| Energy calibration uncertainty <sup>3</sup> | ±5 %      |

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

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

3. When single-shot energy calibration is purchased

### DAMAGE THRESHOLDS

|  |                        |
|--|------------------------|
| Maximum average power density <sup>1</sup> | 100 kW/cm <sup>2</sup> |
| Maximum energy density <sup>2</sup>        | 1.1 J/cm <sup>2</sup>  |

1. At 1064 nm, 10 W CW. May vary with wavelength and average power.

2. At 1064 nm, 7 ns, 10 Hz. May vary with wavelength and pulse width.

### PHYSICAL CHARACTERISTICS

|                   |                     |
|-------------------|---------------------|
| Cooling           | Fan                 |
| Aperture diameter | 55 mm               |
| Absorber          | W                   |
| Dimensions        | 92H x 92W x 120D mm |
| Weight            | 1.38 kg             |

#### ORDERING INFORMATION

|                     |         |
|---------------------|---------|
| UP55N-50F-W9-D0     | 205346B |
| UP55N-50F-W9-INT-D0 | 205349B |
| UP55N-50F-W9-BLU-D0 | 205358B |
| UP55N-50F-W9-IDR-D0 | 205353B |

Specifications are subject to change without notice. Refer to the user manual for complete specifications.

## INTERESTED IN THIS PRODUCT?

GET A QUOTE

Find your local sales representative at [gentec-eo.com/contact-us](https://gentec-eo.com/contact-us)