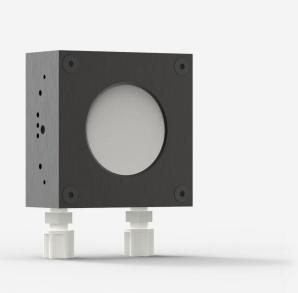


# UP52M-300W-QED-D0

Thermal detector for laser power measurement up to 300 W.



## PRODUCT FAMILY KEY FEATURES

## MODULAR CONCEPT

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

## HIGH PEAK POWER DIFFUSING ABSORBER

Perfect for pulsed beams with high energy density

## COMPACT DESIGN

40 mm thick

#### HIGH AVERAGE POWER

Measure up to 300 W of continuous power

#### SMART INTERFACE

Containing all the calibration data

#### AWARD-WINNING TECHNOLOGY

The UP-QED laser power detectors for extremely high density lasers were recognized among the most innovative photonics technologies for the 2021 Laser Focus World Innovators Awards, as a Gold honoree.



#### **COMPATIBLE STAND**

STAND-S-443

## **SPECIFICATIONS**

## **MEASUREMENT CAPABILITIES**

Maximum average power (continuous) <sup>1</sup>	300 W
Maximum average power (1 minute) <sup>2</sup>	300 W
Noise equivalent power <sup>3</sup>	15 mW
Spectral range <sup>4</sup>	0.266 - 2.5 μm
Typical rise time <sup>5</sup>	4 s
Power calibration uncertainty <sup>6</sup>	±2.5 %
Repeatability	±0.5 %

- 1. Minimum cooling flow 1 liters/min, water temperature  $\leq$  22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.
- 2. Minimum cooling flow 1 liters/min, water temperature  $\leq$  22°C, 1/8 NPT compression fittings for 1/4 inch semi-rigid tube. Contact Gentec-EO for clean deionized water cooling module option.
- 3. Nominal value, actual value depends on electrical noise in the measurement system.
- 4. For the calibrated spectral range, see the user manual.
- 5. With anticipation.
- 6. Including linearity with power.

## MEASUREMENT CAPABILITIES (ENERGY MODE)

Maximum measurable energy <sup>1</sup>	1000 J
Noise equivalent energy <sup>2</sup>	0.25 J
Minimum repetition period	9 s
Maximum pulse width	371 ms
Energy calibration uncertainty <sup>3</sup>	±5 %

1. For 360  $\mu s$  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

DAMAGE THRESHOLDS	
Maximum average power density <sup>1</sup>	100 kW/cm <sup>2</sup>
Maximum energy density <sup>2</sup>	8 J/cm²
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	Water
Aperture diameter	52 mm
Absorber	QED
Dimensions	89H x 89W x 43D mm
Weight	0.84 kg
ORDERING INFORMATION	
UP52M-300W-QED-D0	203878
UP52M-300W-QED-IDR-D0	205205
UP52M-300W-QED-INT-D0	205198
UP52M-300W-QED-BLU-D0	TBD

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

# INTERESTED IN THIS PRODUCT?



Find your local sales representative at gentec-eo.com/contact-us