

# QE25-MT

25 x 25 mm, 2  $\mu$ J - 23 J, tuned for high repetition rates



## KEY FEATURES

- > **MODULAR CONCEPT**  
Increase the power capability of your detector:  
2 different cooling modules
- > **LOW NOISE LEVEL**
- > **NEW MODELS FOR HIGH REPETITION RATES**  
The QE25HR models are tuned for short pulses with  
high repetition rates (up to 10 kHz)

## OUTPUT OPTIONS

- > **SMART DB15 CONNECTOR**  
Contains all the calibration data
- > **integra ALL-IN-ONE-METER**  
Connects directly to a PC  
Three models available:
  - USB output (-INT)
  - RS-232 output (-IDR)
  - USB with external trigger (-INE)

## COMPATIBLE DISPLAYS & PC INTERFACES



MIRO ALTITUDE



MAESTRO



U-LINK



M-LINK



S-LINK

## ACCESSORIES



Stand with delrin post



DB15 to BNC adaptor



QED-25 attenuator



Pelican carrying case

# QE25-MT

## Specifications



|                                                   | QE25SP-S-MT-D0                                                                      | QE25SP-H-MT-D0                                                                      | QE25HR-H-MT-D0                                                                        |
|---------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>MAX MEASURABLE ENERGY <sup>a</sup></b>         | 3.0 J                                                                               | 3.0 J                                                                               | 3.0 J                                                                                 |
| <b>MAX REPETITION FREQUENCY <sup>b,c</sup></b>    | 6 kHz                                                                               | 6 kHz                                                                               | 10 kHz                                                                                |
| <b>EFFECTIVE APERTURE</b>                         | 25 x 25 mm                                                                          | 25 x 25 mm                                                                          | 25 x 25 mm                                                                            |
| <b>MEASUREMENT CAPABILITY</b>                     |                                                                                     |                                                                                     |                                                                                       |
| <b>Spectral range</b>                             | 0.19 - 20 $\mu\text{m}$                                                             | 0.19 - 20 $\mu\text{m}$                                                             | 0.19 - 20 $\mu\text{m}$                                                               |
| <b>Calibrated spectral range <sup>d</sup></b>     | 0.248 - 2.1 $\mu\text{m}$                                                           | 0.248 - 2.1 $\mu\text{m}$                                                           | 0.248 - 2.1 $\mu\text{m}$                                                             |
| <b>Maximum measurable energy <sup>a</sup></b>     |                                                                                     |                                                                                     |                                                                                       |
| 1064 nm, 7 ns                                     | 3.0 J                                                                               | 3.0 J                                                                               | 3.0 J                                                                                 |
| 266 nm, 7 ns                                      | 0.44 J                                                                              | 0.44 J                                                                              | 0.44 J                                                                                |
| <b>Noise equivalent energy <sup>e</sup></b>       | 2 $\mu\text{J}$                                                                     | 2 $\mu\text{J}$                                                                     | 3 $\mu\text{J}$                                                                       |
| <b>Max repetition frequency <sup>b,c</sup></b>    | 6 kHz                                                                               | 6 kHz                                                                               | 10 kHz                                                                                |
| <b>Maximum pulse width (typical)</b>              | 10 $\mu\text{s}$                                                                    | 10 $\mu\text{s}$                                                                    | 4 $\mu\text{s}$                                                                       |
| <b>Calibration uncertainty <sup>f</sup></b>       | $\pm 3\%$                                                                           | $\pm 3\%$                                                                           | $\pm 3\%$                                                                             |
| <b>Repeatability</b>                              | < 0.5%                                                                              | < 0.5%                                                                              | < 0.5%                                                                                |
| <b>DAMAGE THRESHOLDS</b>                          |                                                                                     |                                                                                     |                                                                                       |
| <b>Maximum average power</b>                      | 5 W                                                                                 | 10 W                                                                                | 10 W                                                                                  |
| <b>Maximum energy density</b>                     |                                                                                     |                                                                                     |                                                                                       |
| 1064 nm, 7 ns, single shot                        | 0.50 J/cm <sup>2</sup>                                                              | 0.50 J/cm <sup>2</sup>                                                              | 0.50 J/cm <sup>2</sup>                                                                |
| 1064 nm, 7 ns, 10 Hz                              | 0.50 J/cm <sup>2</sup>                                                              | 0.50 J/cm <sup>2</sup>                                                              | 0.50 J/cm <sup>2</sup>                                                                |
| 532 nm, 7 ns, 10 Hz                               | 0.07 J/cm <sup>2</sup>                                                              | 0.07 J/cm <sup>2</sup>                                                              | 0.07 J/cm <sup>2</sup>                                                                |
| 266 nm, 7 ns, 10 Hz                               | 0.07 J/cm <sup>2</sup>                                                              | 0.07 J/cm <sup>2</sup>                                                              | 0.07 J/cm <sup>2</sup>                                                                |
| <b>Maximum average power density <sup>g</sup></b> | 10 W/cm <sup>2</sup>                                                                | 10 W/cm <sup>2</sup>                                                                | 10 W/cm <sup>2</sup>                                                                  |
| <b>PHYSICAL CHARACTERISTICS</b>                   |                                                                                     |                                                                                     |                                                                                       |
| <b>Effective aperture</b>                         | 25 x 25 mm                                                                          | 25 x 25 mm                                                                          | 25 x 25 mm                                                                            |
| <b>Absorber</b>                                   | MT                                                                                  | MT                                                                                  | MT                                                                                    |
| <b>Dimensions</b>                                 | 50H x 50W x 14D mm                                                                  | 50H x 50W x 53D mm                                                                  | 50H x 50W x 53D mm                                                                    |
| <b>Weight</b>                                     | 193 g                                                                               | 193 g                                                                               | 193 g                                                                                 |
| <b>ORDERING INFORMATION</b>                       |                                                                                     |                                                                                     |                                                                                       |
| <b>Available output options</b>                   | DB15, USB or RS-232                                                                 | DB15, USB or RS-232                                                                 | DB15, USB or RS-232                                                                   |
| <b>Compatible stand</b>                           | STAND-D-233                                                                         | STAND-D-233                                                                         | STAND-D-233                                                                           |
| <b>Product page</b>                               |  |  |  |

- a. Not exceeding maximum average power. Increasing pulse width increases the maximum measurable energy. The maximum measurable energy depends on the display or PC interface used. If your laser is close to the maximum, contact us to check your specifications.
- b. With the IDR version, measured values are sampled when the repetition rate is > 200 Hz.
- c. Maximum 5.2 kHz with INT version.
- d. Calibration at 2.1 to 2.5  $\mu\text{m}$  is available on special request.
- e. Nominal value, actual value depends on electrical noise in the measurement system.
- f. Excludes non-linearities.
- g. At maximum power.