

# QE12-MB

12 x 12 mm, 0.7 µJ - 3.9 J



## KEY FEATURES

- > **MODULAR CONCEPT**  
Increase the power capability of your detector.  
2 different cooling modules
- > **LOW NOISE LEVEL**
- > **QED ATTENUATOR AVAILABLE**
  - Measure up to 5X higher energies
  - Available with optional calibration, all wavelengths between 532 & 1064 nm, or single wavelength
- > **HIGH REPETITION RATE OPTIONS**
  - QE12LP: 300 Hz
  - QE12HR: 1000 Hz
- > **TEST TARGET INCLUDED**

## OUTPUT OPTIONS

- > **SMART INTERFACE**  
Containing 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



QE12 attenuator









Pelican carrying case

# QE12-MB

## Specifications

CE NIST\*  
Traceable   
\*Also traceable to NRC-CNRC



	QE12LP-S-MB	QE12LP-S-MB-QED	QE12LP-H-MB	QE12LP-H-MB-QED	QE12HR-H-MB	QE12HR-H-MB-QED
<b>MAX MEASURABLE ENERGY<sup>a</sup></b>	3.9 J	3.9 J	3.9 J	3.9 J	0.85 J	3.9 J
<b>MAX REPETITION FREQUENCY<sup>b</sup></b>	300 Hz	300 Hz	300 Hz	300 Hz	1 kHz	1 kHz
<b>EFFECTIVE APERTURE</b>	12 x 12 mm	9 x 9 mm	12 x 12 mm	9 x 9 mm	12 x 12 mm	9 x 9 mm
<b>MEASUREMENT CAPABILITY</b>						
<b>Spectral range</b>	0.19 - 20 μm	0.3 - 2.1 μm	0.19 - 20 μm	0.3 - 2.1 μm	0.19 - 20 μm	0.3 - 2.1 μm
<b>Calibrated spectral range<sup>c</sup></b>	0.248 - 2.1 μm	0.532 - 2.1 μm	0.248 - 2.1 μm	0.532 - 2.1 μm	0.248 - 2.1 μm	0.532 - 2.1 μm
<b>Maximum measurable energy<sup>a</sup></b>						
1064 nm, 7 ns	0.85 J	3.9 J	0.85 J	3.9 J	0.85 J	3.9 J
266 nm, 7 ns	0.70 J	0.81 J	0.70 J	0.81 J	0.70 J	0.81 J
<b>Noise equivalent energy<sup>d</sup></b>	0.7 μJ	1.4 μJ	0.7 μJ	1.4 μJ	1.4 μJ	2.8 μJ
<b>Max repetition frequency<sup>b</sup></b>	300 Hz	300 Hz	300 Hz	300 Hz	1 kHz	1 kHz
<b>Maximum pulse width (typical)<sup>e</sup></b>	400 μs	400 μs	400 μs	400 μs	40 μs	40 μs
<b>Calibration uncertainty<sup>f</sup></b>	± 3%	± 3%	± 3%	± 3%	± 3%	± 3%
<b>Repeatability</b>	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	< 0.5%
<b>DAMAGE THRESHOLDS</b>						
<b>Maximum average power</b>	3 W	7.5 W	5 W	12.5 W	5 W	12.5 W
<b>Maximum energy density</b>						
1064 nm, 7 ns, single shot	0.6 J/cm <sup>2</sup>	16 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	16 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	16 J/cm <sup>2</sup>
1064 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	8 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	8 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	8 J/cm <sup>2</sup>
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	6 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	6 J/cm <sup>2</sup>
266 nm, 7 ns, 10 Hz	0.5 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>	0.5 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>	0.5 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>
<b>Maximum average power density<sup>g</sup></b>	10 W/cm <sup>2</sup>	600 W/cm <sup>2</sup>	10 W/cm <sup>2</sup> <sup>j</sup>	600 W/cm <sup>2</sup>	10 W/cm <sup>2</sup>	600 W/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>						
<b>Effective aperture (with attenuator)</b>	12 x 12 mm	9 x 9 mm	12 x 12 mm	9 x 9 mm	12 x 12 mm	9 x 9 mm
<b>Absorber</b>	MB	QED	MB	QED	MB	QED
<b>Dimensions</b>	36H x 36W x 14D mm	39H x 41W x 19D mm	36H x 36W x 33D mm	39H x 41W x 38D mm	36H x 36W x 33D mm	39H x 41W x 38D mm
<b>Weight</b>	87 g	87 g	117 g	117 g	117 g	117 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	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	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. Calibration at 2.1 to 2.5 μm is available on special request.
- d. Nominal value, actual value depends on electrical noise in the measurement system.
- e. Also available on special order: ELP (extra-long pulse) version.
- f. Excludes non-linearities.
- g. At maximum power.
- j. At maximum power.

Specifications are subject to change without notice