

# QE145-MB

Extra-large pyroelectric energy detector

New product



## KEY FEATURES

- > **CUSTOM-BUILT**  
Contact us with your requirements for a version tailored to your needs
- > **MODULAR CONCEPT**  
Increase the power capability of your detector:  
2 different cooling modules
- > **EXTRA LARGE APERTURE**  
Effective aperture of 145 mm Ø
- > **QED ATTENUATOR AVAILABLE**
  - Measure up to 5X higher energies
  - Available with optional calibration,  
all wavelengths between 532 & 1064 nm,  
or single wavelength
- > **LOW NOISE LEVEL**
- > **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



Pelican carrying case



# QE145-MB

## Specifications

CE NIST\*  
Traceable

 \*Also traceable to NRC-CNRC



	QE145, CUSTOM CAPABILITIES	QE145-QED, CUSTOM CAPABILITIES
<b>MAX MEASURABLE ENERGY <sup>a</sup></b>	Up to 135 J	Up to 385 J
<b>MAX REPETITION FREQUENCY</b>	Up to 200 Hz	Up to 200 Hz
<b>EFFECTIVE APERTURE</b>	145 mm $\phi$	135 mm $\phi$
<b>MEASUREMENT CAPABILITY</b>		
<b>Spectral range</b>	0.19 - 20 $\mu\text{m}$	0.3 - 2.1 $\mu\text{m}$
<b>Calibrated spectral range <sup>b</sup></b>	0.248 - 2.1 $\mu\text{m}$	0.308 - 2.1 $\mu\text{m}$
<b>Maximum measurable energy <sup>a</sup></b>		
1064 nm, 150 $\mu\text{s}$	Up to 135 J	Up to 385 J
1064 nm, 7 ns	Up to 70 J	Up to 220 J
<b>Noise equivalent energy <sup>c</sup></b>	As low as 100 $\mu\text{J}$	As low as 200 $\mu\text{J}$
<b>Max repetition frequency</b>	Up to 200 Hz	Up to 200 Hz
<b>Maximum pulse width (typical)</b>	Up to 5 ms	Up to 5 ms
<b>Calibration uncertainty <sup>e</sup></b>	$\pm 3\%$	$\pm 3\%$
<b>Repeatability</b>	$< \pm 0.5\%$	$< \pm 0.5\%$
<b>DAMAGE THRESHOLDS</b>		
<b>Maximum average power</b>	Up to 75 W	Up to 190 W
<b>Maximum energy density</b>		
1064 nm, 150 $\mu\text{s}$ , 10 Hz	1.2 J/cm <sup>2</sup>	14 J/cm <sup>2</sup>
1064 nm, 7 ns, single shot	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>
266 nm, 7 ns, 10 Hz	0.5 J/cm <sup>2</sup>	1 J/cm <sup>2</sup>
<b>Maximum average power density <sup>f</sup></b>	10 W/cm <sup>2</sup>	600 W/cm <sup>2</sup>
<b>PHYSICAL CHARACTERISTICS</b>		
<b>Effective aperture</b>	145 mm $\phi$	135 mm $\phi$
<b>Absorber</b>	MB or MT	QED
<b>Dimensions</b>	180H x 180W x 24D mm (thicker with heatsink)	180H x 180W x 27D mm (thicker with heatsink)
<b>Weight</b>	1.9 - 2.5 kg	2.3 - 2.8 kg
<b>Cooling</b>	Convection or heatsink	Convection or heatsink
<b>ORDERING INFORMATION</b>		
<b>Available output options</b>	DB15, USB or RS-232	DB15, USB or RS-232
<b>Compatible stand</b>	STAND-D-443	STAND-D-443
<b>Product page</b>		

\* These products are custom-built. Contact us with your requirements for a version tailored to your needs.

- 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.
- Calibration at 2.1 to 2.5  $\mu\text{m}$  is available on special request.
- Nominal value, actual value depends on electrical noise in the measurement system.
- Excludes non-linearities.
- At 12 W.

Specifications are subject to change without notice