

QE50



50 x 50 mm, 10 μ J - 75 J



Monitors

Energy Detectors

Power Detectors

OEM Detectors

Calorimeters

Diffractive Optics

Beam Diagnostics



QE50LP-H-MB

QE50LP-S-MB

Key Features

- 1 **Modular Concept**
Increase the power capability of your detector : 2 different cooling modules
- 2 **Low Noise Level**
10 μ J for the MT coating
- 3 **Test Target Included**
With the MB models
- 4 **Available with Metallic Absorber**
High Repetition Rate (4000 Hz)
- 5 **Noise Reduction Stand**
Delrin post to reduce noise coming from exterior vibrations
- 6 **Smart Interface**
Containing all the calibration data



Diamond Configuration

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- . Spectral absorption106
- . Compatible monitors
 - SOLO 220
 - S-LINK-224

Accessories

» QEA/QED Attenuators

15 - 20% transmittance
400 nm - 2.5 μ m : QEA
190 nm - 2.5 μ m : QED



» DB-15 to BNC Adaptor

Make your QE Series detector compatible with your oscilloscope.



» Pelican Carrying Case

We offer a robust hard shell polymer carrying case.



SPECIFICATIONS

Models	QE50LP-S-MB	QE50LP-H-MB	QE50SP-S-MT	QE50SP-H-MT
Max Measurable Energy (with Attenuator)	75 J	75 J	44 J	44 J
Max Repetition Frequency	200 Hz	200 Hz	4000 Hz	4000 Hz





MEASUREMENT CAPABILITY	S-MB		H-MB		S-MT		H-MT	
Spectral Range	0.19 – 20 μm		0.19 – 20 μm		0.19 – 20 μm		0.19 – 20 μm	
Maximum Measurable Energy	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
1064 nm, 7 ns, 10 Hz ^a	15 J	75 J	15 J	75 J	13 J	44 J	13 J	44 J
266 nm, 7 ns, 10 Hz	13 J	22 J	13 J	22 J	1.8 J	6.5 J	1.8 J	6.5 J
Noise Equivalent Energy ^b	15 μJ		15 μJ		10 μJ		10 μJ	
Sensitivity ^{c, d}	3 V/J		3 V/J		4 V/J		4 V/J	
Max Repetition Frequency	200 Hz		200 Hz		4000 Hz		4000 Hz	
Maximum Pulse Width (typical)	675 μs *		675 μs *		10 μs		10 μs	
Rise Time (typical 0-100%)	900 μs		900 μs		20 μs		20 μs	
Calibration Uncertainty ^e	$\pm 3\%$		$\pm 3\%$		$\pm 3\%$		$\pm 3\%$	
Repeatability	<0.5 %		<0.5 %		<0.5 %		<0.5 %	

DAMAGE THRESHOLDS

	S-MB		H-MB		S-MT		H-MT	
Maximum Average Power All Wavelengths	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
	10 W	25 W	20 W	45 W	10 W	25 W	20 W	45 W
Maximum Energy Density	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
1064 nm, 7 ns, 10 Hz	0.6 J/cm ²	7 J/cm ²	0.6 J/cm ²	7 J/cm ²	0.50 J/cm ²	2 J/cm ²	0.50 J/cm ²	2 J/cm ²
532 nm, 7 ns, 10 Hz	0.6 J/cm ²	5 J/cm ²	0.6 J/cm ²	5 J/cm ²	0.07 J/cm ²	0.35 J/cm ²	0.07 J/cm ²	0.35 J/cm ²
266 nm, 7 ns, 10 Hz	0.5 J/cm ²	1 J/cm ²	0.5 J/cm ²	1 J/cm ²	0.07 J/cm ²	0.30 J/cm ²	0.07 J/cm ²	0.30 J/cm ²

Choice of Attenuator : QEA-50 (0.4 – 2.5 μm) or QED-50 (0.19 – 2.5 μm)

PHYSICAL CHARACTERISTICS

Effective Aperture (with Attenuator)	50 X 50 mm (47 X 47 mm)			
Absorber				
	Multi-Band	Multi-Band	Metallic	Metallic
Dimensions	75H x 75W x 15D mm	75H x 75W x 44D mm	75H x 75W x 15D mm	75H x 75W x 44D mm
Weight	209 g	338 g	209 g	338 g

ORDERING INFORMATION

Full Product Name	QE50LP-S-MB	QE50LP-H-MB	QE50SP-S-MT	QE50SP-H-MT
Product Number (including stand)	200307	200308	200305	200306

*Also available on special order: The Extra Long Pulse Series QE50-ELP-MB for pulse widths up to 4 msec, custom-tuned for rep. rate, sensitivity, and pulse width.

a. Increasing pulse width increases the maximum measurable energy.

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

c. Load: 1 M Ω and ≤ 130 pF.

d. Maximum output voltage = sensitivity x maximum energy.

e. Excludes non-linearities.

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