

## QE12

12 x 12 mm, 0.7  $\mu$ J - 3.4 J

## Key Features

- 1 **Modular Concept**  
Increase the power capability of your detector : 2 different cooling modules
- 2 **Low Noise Level**  
0.7  $\mu$ J for the MB coating
- 3 **Test Target Included**  
With the MB models
- 4 **Available with Metallic Absorber**  
High Repetition Rate (6000 Hz)
- 5 **Noise Reduction Stand**  
Delrin post to reduce noise coming from exterior vibrations
- 6 **Smart Interface**  
Containing all the calibration data



QE12LP-H-MB

QE12LP-S-MB



Diamond Configuration

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## Accessories

» **QEA/QED Attenuators**

15 - 20% transmittance  
400 nm - 2.5  $\mu$ m : QEA  
190 nm - 2.5  $\mu$ 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	QE12LP-S-MB	QE12LP-H-MB	QE12SP-S-MT	QE12SP-H-MT
Max Measurable Energy (with Attenuator)	3.5 J	3.5 J	1.6 J	1.6 J
Max Repetition Frequency	300 Hz	300 Hz	6000 Hz	6000 Hz





MEASUREMENT CAPABILITY	S-MB		H-MB		S-MT		H-MT	
Spectral Range	0.19 – 20 $\mu\text{m}$		0.19 – 20 $\mu\text{m}$		0.19 – 20 $\mu\text{m}$		0.19 – 20 $\mu\text{m}$	
Maximum Measurable Energy	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
1064 nm, 7 ns, 10 Hz <sup>a</sup>	0.85 J	3.5 J	0.85 J	3.5 J	0.70 J	1.60 J	0.70 J	1.60 J
266 nm, 7 ns, 10 Hz	0.70 J	0.81 J	0.70 J	0.81 J	0.10 J	0.25 J	0.10 J	0.25 J
Noise Equivalent Energy <sup>b</sup>	0.7 $\mu\text{J}$		0.7 $\mu\text{J}$		0.8 $\mu\text{J}$		0.8 $\mu\text{J}$	
Sensitivity <sup>c, d</sup>	60 V/J		60 V/J		100 V/J		100 V/J	
Max Repetition Frequency	300 Hz		300 Hz		6000 Hz		6000 Hz	
Maximum Pulse Width (typical)	400 $\mu\text{s}$ *		400 $\mu\text{s}$ *		10 $\mu\text{s}$		10 $\mu\text{s}$	
Rise Time (typical 0-100%)	550 $\mu\text{s}$		550 $\mu\text{s}$		20 $\mu\text{s}$		20 $\mu\text{s}$	
Calibration Uncertainty <sup>e</sup>	$\pm 3$ %		$\pm 3$ %		$\pm 3$ %		$\pm 3$ %	
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
	3 W	7.5 W	5 W	12.5 W	3 W	7.5 W	5 W	12.5 W
Maximum Energy Density	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
1064 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	7 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	7 J/cm <sup>2</sup>	0.50 J/cm <sup>2</sup>	2 J/cm <sup>2</sup>	0.50 J/cm <sup>2</sup>	2 J/cm <sup>2</sup>
532 nm, 7 ns, 10 Hz	0.6 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>	0.6 J/cm <sup>2</sup>	5 J/cm <sup>2</sup>	0.07 J/cm <sup>2</sup>	0.35 J/cm <sup>2</sup>	0.07 J/cm <sup>2</sup>	0.35 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>	0.07 J/cm <sup>2</sup>	0.30 J/cm <sup>2</sup>	0.07 J/cm <sup>2</sup>	0.30 J/cm <sup>2</sup>

Choice of Attenuator : QEA-12 (0.4 – 2.5  $\mu\text{m}$ ) or QED-12 (0.19 – 2.5  $\mu\text{m}$ )

## PHYSICAL CHARACTERISTICS

Effective Aperture (with Attenuator)	12 X 12 mm (9 X 9 mm)			
Absorber				
	Multi-Band	Multi-Band	Metallic	Metallic
Dimensions	36H x 36W x 14D mm	36H x 36W x 33D mm	36H x 36W x 14D mm	36H x 36W x 33D mm
Weight	87 g	117 g	87 g	117 g

## ORDERING INFORMATION

Full Product Name	QE12LP-S-MB	QE12LP-H-MB	QE12SP-S-MT	QE12SP-H-MT
Product Number (including stand)	200508	200510	200511	200512

\*Also available on special order: The Extra Long Pulse Series QE12-ELP-MB for pulse widths up to 2 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 $\Omega$  and  $\leq$  130 pF.

d. Maximum output voltage = sensitivity x maximum energy.

e. Excludes non-linearities.

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