

QE12

12 x 12 mm, 0.7 μ J - 3.9 J

MONITORS

ENERGY DETECTORS

POWER DETECTORS

OPTICAL DETECTORS

THZ DETECTORS

OEM DETECTORS

CALORIMETERS

DIFRACTIVE OPTICS

BEAM DIAGNOSTICS

KEY FEATURES

- 1 Modular Concept**
Increase the power capability of your detector:
2 different cooling modules
- 2 Low Noise Level**
0.7 μ J for the MB coating
- 3 Test Target Included**
With the MB models
- 4 Available with Metallic Absorber**
High Repetition Rate (6000 Hz)
- 5 Smart Interface**
Containing all the calibration data



AVAILABLE MODELS



QE12LP-S-MB
(Broadband-Convection)



QE12LP-H-MB
(Broadband-Heatsink)



QE12SP-S-MT
(Metallic-Convection)



QE12SP-H-MT
(Metallic-Heatsink)

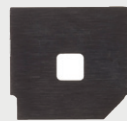
ACCESSORIES



Stand with Delrin Post



DB-15 to BNC Adaptor



QED-12 Attenuator



Pelican Carrying Case

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QE12

SPECIFICATIONS



*Also traceable to NRC-CNRC

MODELS	QE12LP-S-MB	QE12LP-H-MB	QE12SP-S-MT	QE12SP-H-MT
MAX MEASURABLE ENERGY (WITH ATTENUATOR)	3.9 J	3.9 J	1.6 J	1.6 J
MAX REPETITION FREQUENCY	300 Hz	300 Hz	6000 Hz	6000 Hz
APERTURE	12 x 12 mm	12 x 12 mm	12 x 12 mm	12 x 12 mm

MEASUREMENT CAPABILITY

Spectral Range ^a	0.19 – 20 μm		0.19 – 20 μm		0.19 – 20 μm ^b		0.19 – 20 μm ^b	
	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
Maximum Measurable Energy 1064 nm, 7 ns, 10 Hz ^c	0.85 J	3.9 J	0.85 J	3.9 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 ^d	0.7 μJ		0.7 μJ		0.8 μJ		0.8 μJ	
Sensitivity ^{e,f}	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 μs [*]		400 μs [*]		10 μs		10 μs	
Rise Time (typical 0-100 %)	550 μs		550 μs		20 μs		20 μs	
Calibration Uncertainty ^g	$\pm 3\%$		$\pm 3\%$		$\pm 3\%$		$\pm 3\%$	
Repeatability	<0.5 %		<0.5 %		<0.5 %		<0.5 %	

DAMAGE THRESHOLDS

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
Maximum Energy Density 1064 nm, 7 ns, single shot	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator	Alone	Attenuator
	0.6 J/cm ²	16 J/cm ²	0.6 J/cm ²	16 J/cm ²	0.50 J/cm ²	4 J/cm ²	0.50 J/cm ²	4 J/cm ²
1064 nm, 7 ns, 10 Hz	0.6 J/cm ²	8 J/cm ²	0.6 J/cm ²	8 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	6 J/cm ²	0.6 J/cm ²	6 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
Maximum Average Power Density	10 W/cm ²	600 W/cm ²	10 W/cm ² ^h	600 W/cm ²	10 W/cm ²	600 W/cm ²	10 W/cm ² ^h	600 W/cm ²

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 QE12ELP-MB for pulse widths up to 2 msec, custom-tuned for rep. rate, sensitivity, and pulse width.

a. 0.19 - 2.5 μm with QED Attenuator.
 b. Detectors with the MT coating can be used within the range 0.19 to 20 μm , however the absorption in the IR wavelengths decreases significantly. This, in turn, reduces the sensitivity and increases the noise level.
 c. Increasing pulse width increases the maximum measurable energy.

d. Nominal value, actual value depends on electrical noise in the measurement system.
 e. Load: 1 M Ω and ≤ 30 pF.
 f. Maximum output voltage = sensitivity x maximum energy.
 g. Excludes non-linearities.
 h. At 3 W. Maximum Average Power Density is 10 W/cm² @ 5 W for -H versions.

Specifications are subject to change without notice