

## QE4



3.7 mm Ø, 1 µJ - 43 mJ



## Key Features

1 **Our Smallest Energy Detector**

Complete pyroelectric detector,  
the size of a quarter

2 **Low Noise Level**

Only 1 µJ noise (MT coating)

3 **High Sensitivity**

200 V/J (MT coating)

4 **Available with Metallic Absorber**

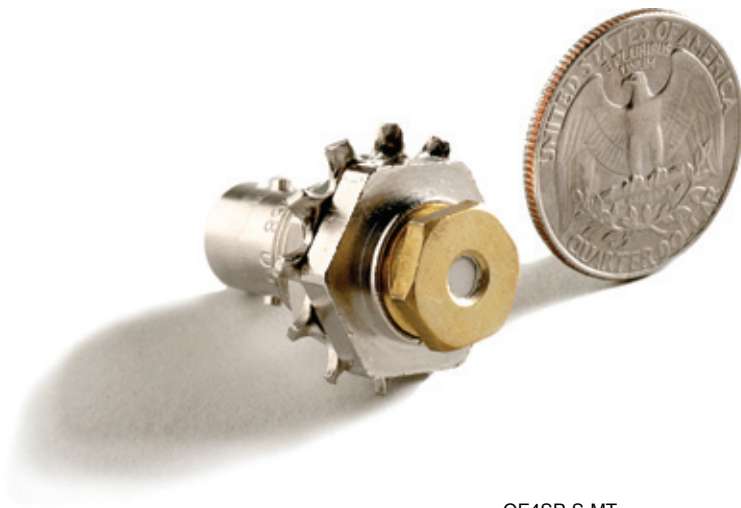
High Repetition Rate (6000 Hz)

5 **BNC Mounted**

For direct reading with an oscilloscope

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QE4SP-S-MT



## Accessories

» **Pelican Carrying Case**

We offer a robust hard shell polymer carrying case.





## SPECIFICATIONS



Models	QE4-SP-S-BL	QE4-SP-S-MT
Max Measurable Energy	16 mJ	43 mJ
Max Repetition Frequency	1200 Hz	6000 Hz

MEASUREMENT CAPABILITY	BL	MT
Spectral Range	0.19 – 20 $\mu\text{m}$	0.19 – 20 $\mu\text{m}$
Maximum Measurable Energy		
1064 nm, 7 ns, 10 Hz <sup>a</sup>	16 mJ	43 mJ
266 nm, 7 ns, 10 Hz	0.7 mJ	7.6 mJ
Noise Equivalent Energy <sup>b</sup>	15 $\mu\text{J}$	1 $\mu\text{J}$
Sensitivity <sup>c, d</sup>	150 V/J	200 V/J
Max Repetition Frequency	1200 Hz	6000 Hz
Maximum Pulse Width (typical)	100 $\mu\text{s}$	10 $\mu\text{s}$
Rise Time (typical 0-100%)	200 $\mu\text{s}$	20 $\mu\text{s}$
Calibration Uncertainty <sup>e</sup>	$\pm 4\%$	$\pm 4\%$
Repeatability	<0.5 %	<0.5 %

## DAMAGE THRESHOLDS

		
Maximum Average Power	0.3 W	0.3 W
Maximum Energy Density		
1064 nm, 7 ns, 10 Hz	150 mJ/cm <sup>2</sup>	400 mJ/cm <sup>2</sup>
266 nm, 7 ns, 10 Hz	6 mJ/cm <sup>2</sup>	70 mJ/cm <sup>2</sup>

## PHYSICAL CHARACTERISTICS

Effective Aperture	3.7 mm $\emptyset$	
Absorber		
	Black	Metallic
Dimensions	20H x 17.5W x 30D mm	
Weight	20 g	

## ORDERING INFORMATION

Full Product Name	QE4SP-S-BL	QE4SP-S-MT
Product Number	200636	200638

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.