



# High Repetition-Rate EnergyMax Sensors

Energy Range 300 nJ to 1 J

These sensors incorporate a diffuse metallic coating that enables measurements at high and low repetition rates across a wide range of energies, and wavelengths from 190 nm to 2.1  $\mu\text{m}$ .

## FEATURES

- Unique diffuse metallic coating delivers increased damage threshold, allows high repetition rate operation and reduces specular reflectance
- Operate over the entire 190 nm to 2.1  $\mu\text{m}$  range
- Enable pulse energy measurements from 300 nJ to 1 J with high signal-to-noise characteristics
- Measure up to 10 kHz repetition rate
- Direct USB and RS-232 interfaces – PC Application Software included

## APPLICATIONS

- Medical
- Scientific
- Industrial
- Laser Rep Rates up to 10 kHz



SPECIFICATIONS	J-50MT-10KHZ-1571	J-50MT-10KHZ
Energy Range	90 $\mu$ J to 100 mJ	400 $\mu$ J to 1 J
Noise Equivalent Energy ( $\mu$ J)	<9	<40
Wavelength Range ( $\mu$ m)	0.19 to 2.1	
Active Area Diameter (mm)	50	
Max. Average Power <sup>1</sup> (W)	20	
Max. Pulse Width ( $\mu$ s)	1.7	
Max. Rep. Rate (pps)	10,000	
Max. Energy Density (mJ/cm <sup>2</sup> )	500 (at 1064 nm, 10 ns)	
Detector Coating	Diffuse Metallic	
Diffuser	No	
Calibration Wavelength (nm)	1064	
Calibration Uncertainty (%) (k=2)	$\pm 2$	
Energy Linearity (%)	$\pm 3$	
Cable Length (m)	3	
Cable Type	USB and RS	
Part Number		
USB	1208286	1191447
RS	–	1191433

SPECIFICATIONS	J-25MT-10KHZ	J-10MT-10KHZ
Energy Range	90 $\mu$ J to 100 mJ	300 nJ to 200 $\mu$ J
Noise Equivalent Energy	<9 $\mu$ J	<30 nJ
Wavelength Range ( $\mu$ m)	0.19 to 2.1	
Active Area Diameter (mm)	25	10
Max. Average Power <sup>1</sup> (W)	10	1
Max. Pulse Width ( $\mu$ s)	1.7	
Max. Rep. Rate (pps)	10,000	
Max. Energy Density (mJ/cm <sup>2</sup> )	500 (at 1064 nm, 10 ns)	50 (at 1064 nm, 10 ns)
Detector Coating	Diffuse Metallic	
Diffuser	No	
Calibration Wavelength (nm)	1064	
Calibration Uncertainty (%) (k=2)	$\pm 2$	
Energy Linearity (%)	$\pm 3$	
Cable Length (m)	3	
Cable Type	USB and RS	
Part Number		
USB	1191446	1191445
RS	–	–

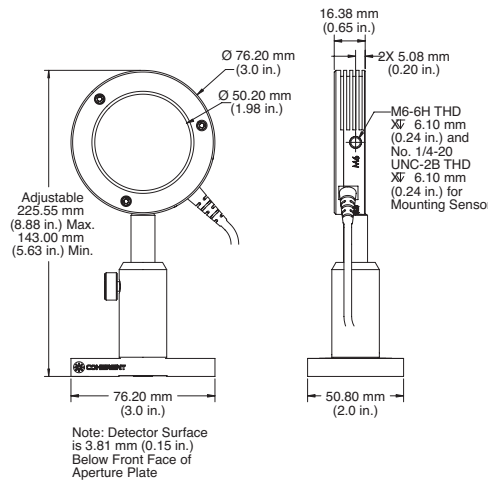
<sup>1</sup> Extend average power range with optional heat sink.



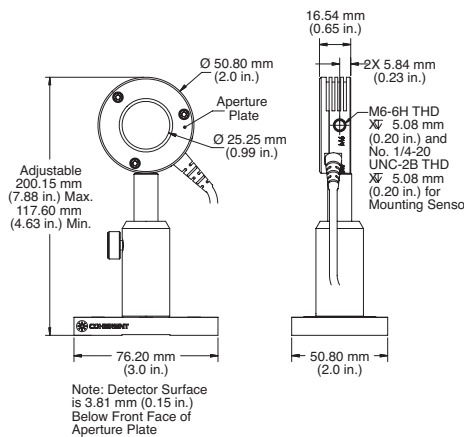
## High Repetition-Rate EnergyMax Sensors Datasheet

### MECHANICAL SPECIFICATIONS

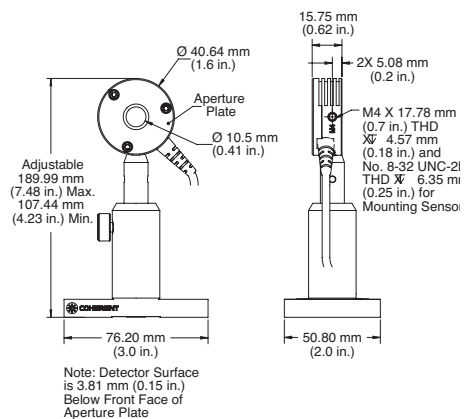
#### J-50MT-10KHZ & J-50MT-10KHZ-1571



#### J-25MT-10KHZ



#### J-10MT-10KHZ



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Coherent follows a policy of continuous product improvement. Specifications are subject to change without notice. Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all EnergyMax Sensors. For full details of this warranty coverage, please refer to the Service section at [www.coherent.com](http://www.coherent.com) or contact your local Sales or Service Representative.  
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