

# EnergyMax Sensors - Standard DB-25

## MaxBlack Coating and Diffusers



J-50MB-YAG

### Features

- High energy and peak power to 14 J/cm<sup>2</sup>
- Operate at Nd:YAG fundamental and harmonics
- Enable pulse energy measurements from 1 mJ to 15J
- Spectral compensation characteristics built into each unit
- Onboard sensors provide automatic temperature compensation

These sensors are specifically designed for high energy and high peak power lasers operating at relatively low repetition rates, such as those based on Nd:YAG, Ruby, Ho:YAG and Erbium. The J-50MB-YAG sensor can be used with beams up to 35 mm in diameter and can work at 1064 nm, 532 nm, 355 nm and 266 nm without the need to change or self-calibrate diffusers or any other accessories. Sensors combine a MaxBlack coating and a diffuser to produce superior damage resistance characteristics. This combination enables operation with lasers that produce either very high energy per pulse or very high peak fluences.

Device Specifications	Model	J-50MB-YAG	J-50MB-YAG-1528	J-50MB-YAG-1535	J-50MB-YAG-1561
Energy Range		1.5 mJ to 3J	1.5 mJ to 3J	12 mJ to 15J	50 μJ to 100 mJ
Noise Equivalent Energy (μJ)				<50	
Wavelength Range (μm)				0.266 to 2.1	
Maximum Beam Size (mm)				35	
Maximum Average Power (W) <sup>1</sup>				20	
Maximum Pulse Width		340 μs	57 μs	2 ms <sup>2</sup>	340 μs
Maximum Repetition Rate (pps)		50	300	10	50
Maximum Energy Density (J/cm <sup>2</sup> )			14.0 (at 1064 nm, 10 ns) 2.8 (at 532 nm, 10 ns) 0.75 (at 355 nm, 10 ns) 1.0 (at 266 nm, 10 ns)		
Detector Coating		MaxBlack			
Diffuser		YAG			
Calibration Wavelength (nm)		1064			
Calibration Uncertainty (%) (k=2)		±2			
Energy Linearity (%)		±3			
Cable Length (m) <sup>3</sup>		2.5			
Cable Type		J DB-25			
Part Number		1110744**	1144701	1151431	1174756

<sup>1</sup> Extend average power range with optional heat sink. See page 75 and 94.

<sup>2</sup> Pulsewidths up to 5 ms can be measured with an additional ±1% uncertainty.

<sup>3</sup> Cable lengths up to 10m possible. Contact factory.

\*\*C24 Quick Ship program: eligible for next business day shipment.

ISO/IEC 17025:2005



### J-50MB-YAG

