



# Multipurpose EnergyMax Sensors

## High Damage Threshold, Large Area, Laser Energy Sensors for a Wide Variety of Uses

The Multipurpose EnergyMax measure laser pulse energy over a wide range of wavelengths (190 nm to 12  $\mu$ m), beam diameters, average power levels and repetition rates. They incorporate Coherent's unique MaxBlack coating, which offers high damage resistance and mechanical durability characteristics.

These sensors are compatible with Coherent LabMax-Pro SSIM, LabMax-TOP, FieldMax-TOP, and FieldMaxII-P meters. USB and RS-232 enabled models are also available.

### FEATURES

- MaxBlack coating delivers high damage threshold and mechanical durability
- Operate over the 190 nm to 12  $\mu$ m range
- Enable pulse energy measurements from 300 nJ to 2 J
- Measure single shot to 1 kHz repetition rate

### APPLICATIONS

- Medical
- Scientific
- Industrial

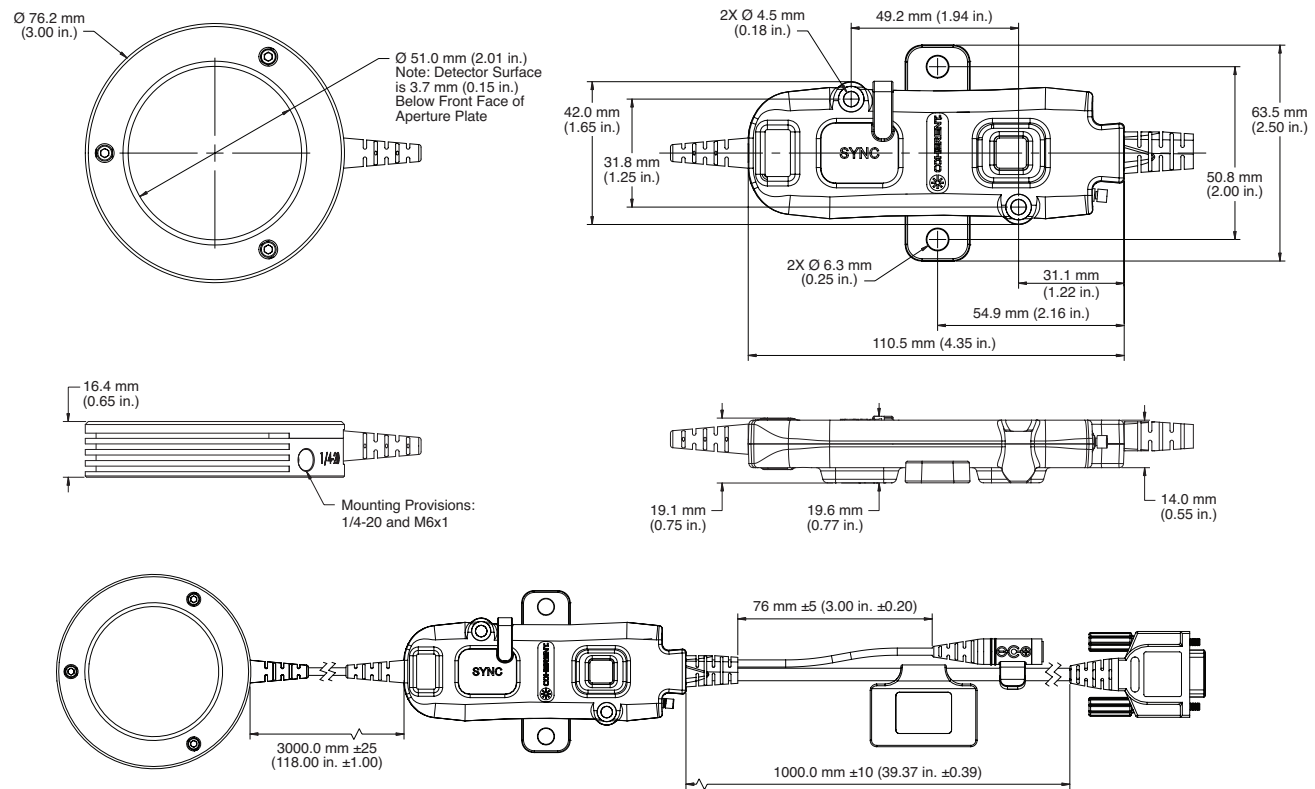


| SPECIFICATIONS                               | J-50MB-HE               | J-50MB-LE            | J-25MB-HE            | J-25MB-LE            | J-10MB-HE            | J-10MB-LE            |
|--|-------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Energy Range                                 | 1 mJ to 2 J             | 250 µJ to 500 mJ     | 500 µJ to 1 J        | 25 µJ to 50 mJ       | 10 µJ to 20 mJ       | 300 nJ to 600 µJ     |
| Noise Equivalent Energy                      | <33 µJ                  | <8 µJ                | <16 µJ               | <1 µJ                | <0.5 µJ              | <20 nJ               |
| Wavelength Range (µm)                        | 0.19 to 12              |                      |                      |                      |                      |                      |
| Active Area Diameter (mm)                    | 50                      |                      | 25                   |                      | 10                   |                      |
| Maximum Average Power <sup>1</sup> (W)       | 10                      |                      | 5                    |                      | 4                    |                      |
| Maximum Pulse Width (µs)                     | 57                      |                      | 17                   |                      |                      |                      |
| Maximum Repetition Rate (pps)                | 300                     |                      | 1000                 |                      |                      |                      |
| Maximum Energy Density (mJ/cm <sup>2</sup> ) | 500 (at 1064 nm, 10 ns) |                      |                      |                      |                      |                      |
| Detector Coating                             | MaxBlack                |                      |                      |                      |                      |                      |
| Diffuser                                     | No                      |                      |                      |                      |                      |                      |
| Calibration Wavelength (nm)                  | 1064                    |                      |                      |                      |                      |                      |
| Calibration Uncertainty (%) (k=2)            | ±2                      |                      |                      |                      |                      |                      |
| Energy Linearity (%)                         | ±3                      |                      |                      |                      |                      |                      |
| Cable Length <sup>2</sup> (m)                | 2.5                     |                      |                      |                      |                      |                      |
| Cable Type                                   | J DB-25                 |                      |                      |                      |                      |                      |
| Part Number                                  | 1110573 <sup>3</sup>    | 1110576 <sup>3</sup> | 1110746 <sup>3</sup> | 1110743 <sup>3</sup> | 1110843 <sup>3</sup> | 1110855 <sup>3</sup> |

1 Extend average power range with optional heat sink.  
2 Cable lengths up to 10m possible. Contact factory.  
3 1 Day Ship program: eligible for next business day shipment.

MECHANICAL SPECIFICATIONS

J-50MB-HE and -LE

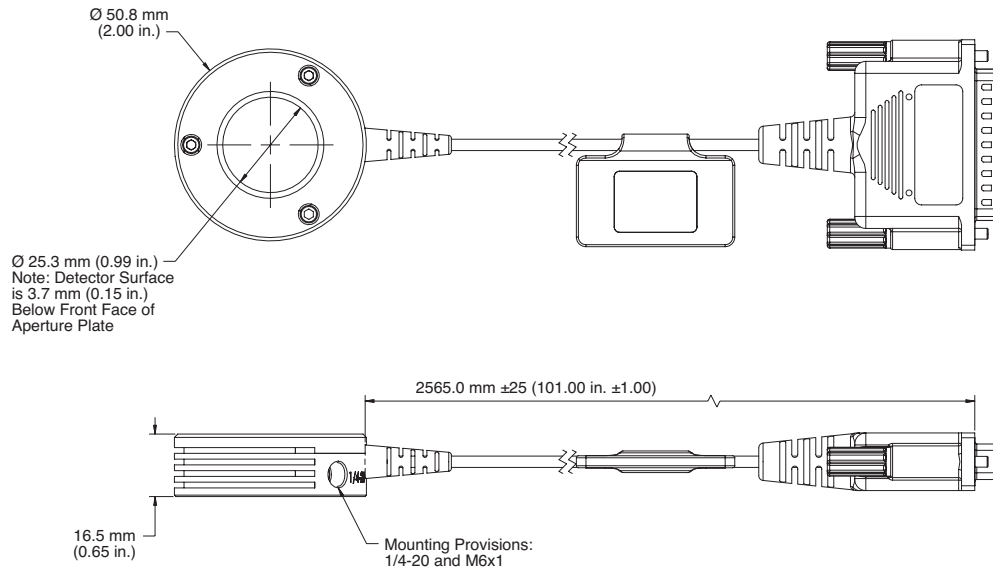




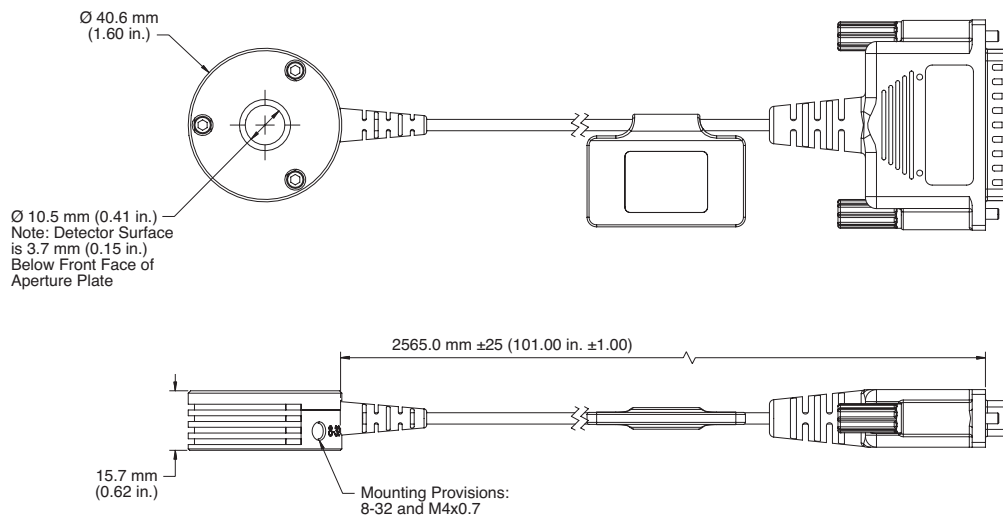
## Multipurpose EnergyMax Sensors Datasheet

### MECHANICAL SPECIFICATIONS

#### J-25MB-HE and -LE



#### J-10MB-HE and -LE



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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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