# DORGEAN
**Beijing Dorgean Electronic Technology Co.,Ltd**

**Instrument Expert**
**Original factory packaging**
**www.dorgean.com**

# Multipurpose EnergyMax USB-RS 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 μm), 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 have USB and RS-232 interfaces for use with a PC or industrial controller. DB25 models are also available for use with stand-alone energy meters.

### FEATURES

- MaxBlack coating delivers high damage threshold and mechanical durability
- Operate over the 190 nm to 12 μm range
- Enable pulse energy measurements from 300 nJ to 2 J
- Measure single shot to 1 kHz repetition rate
- USB and RS-232 interfaces

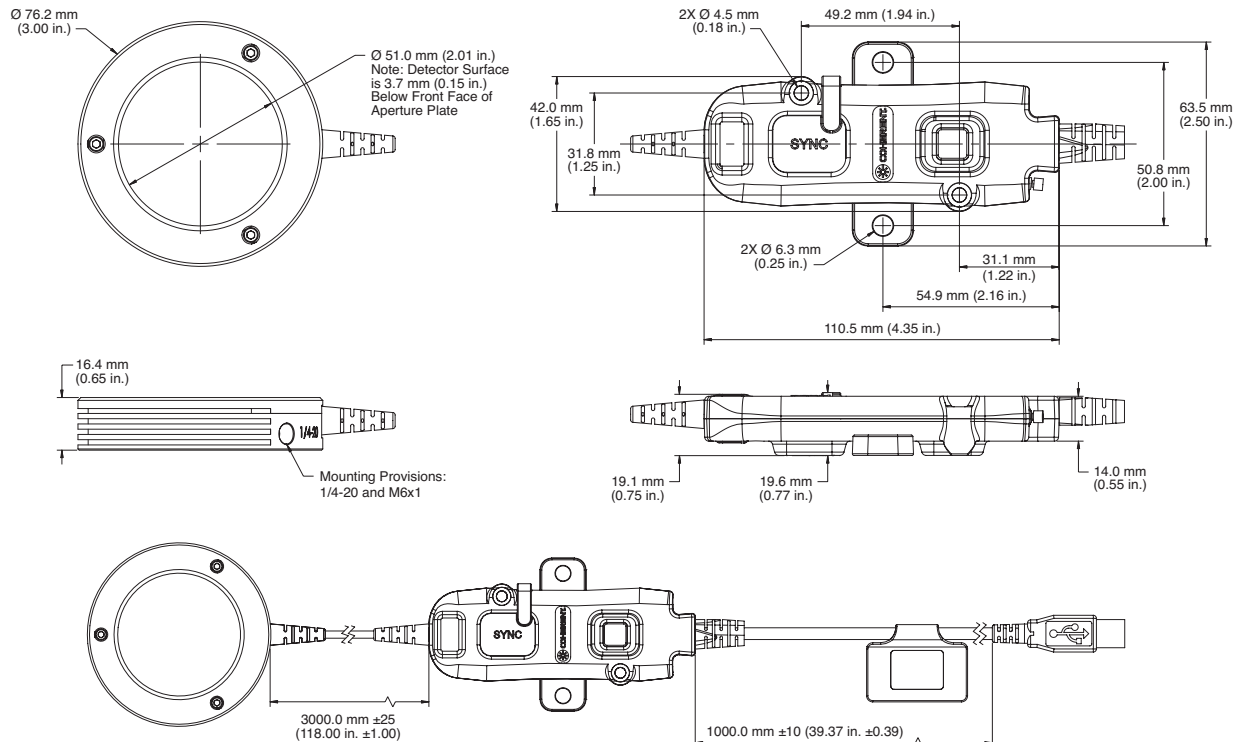### APPLICATIONS

- Medical
- Scientific
- Industrial

## COHERENT®
**Superior Reliability & Performance**

| SPECIFICATIONS | J-50MB-HE | J-50MB-LE | J-25MB-HE | J-25MB-LE | J-10MB-HE | J-10MB-LE |
|---|---|---|---|---|---|---|
| Energy Range | 1.6 mJ to 2 J | 400 µJ to 500 mJ | 850 µJ to 1 J | 50 µJ to 50 mJ | 12 µJ to 20 mJ | 500 nJ to 600 µJ |
| Noise Equivalent Energy | <160 µJ | <40 µJ | <85 µJ | <5 µJ | <1.2 µJ | <50 nJ |
| Wavelength Range (µm) | 0.19 to 12 | | | | | |
| Active Area Diameter (mm) | 50 | | 25 | | 10 | |
| Maximum Average Power[1] (W) | 10 | | 5 | | 4 | |
| Maximum Pulse Width (µs) | 57 | | 17 | | | |
| Maximum Repetition Rate (pps) | 300 | | 1000 | | | |
| Maximum Energy Density (mJ/cm$^2$) | 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 (m) | 3 | | | | | |
| Cable Type | USB and RS | | | | | |
| Part Number<br>  USB<br>  RS | 1191444<br>1191432 | 1191443<br>– | 1191442<br>– | 1191441[2]<br>1191431 | 1191436<br>1191429 | 1191435[2]<br>1191428 |

1   Extend average power range with optional heat sink.
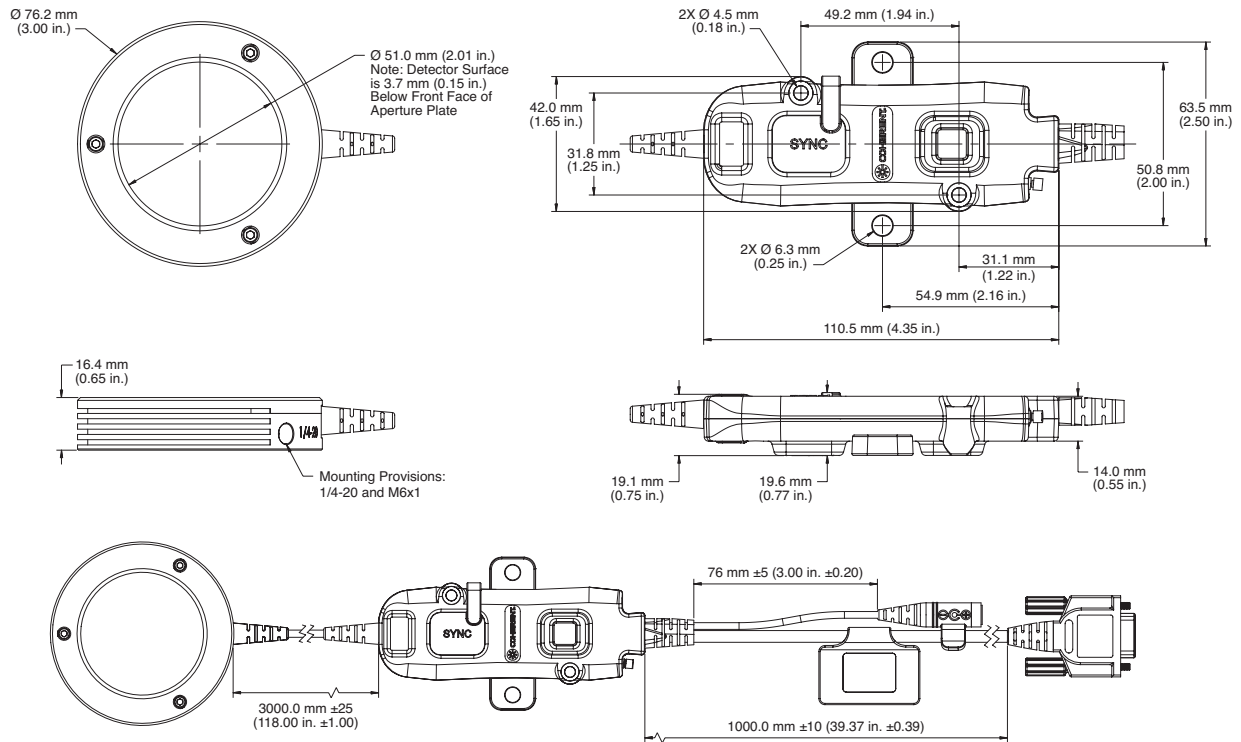2   1 Day Ship program: eligible for next business day shipment.
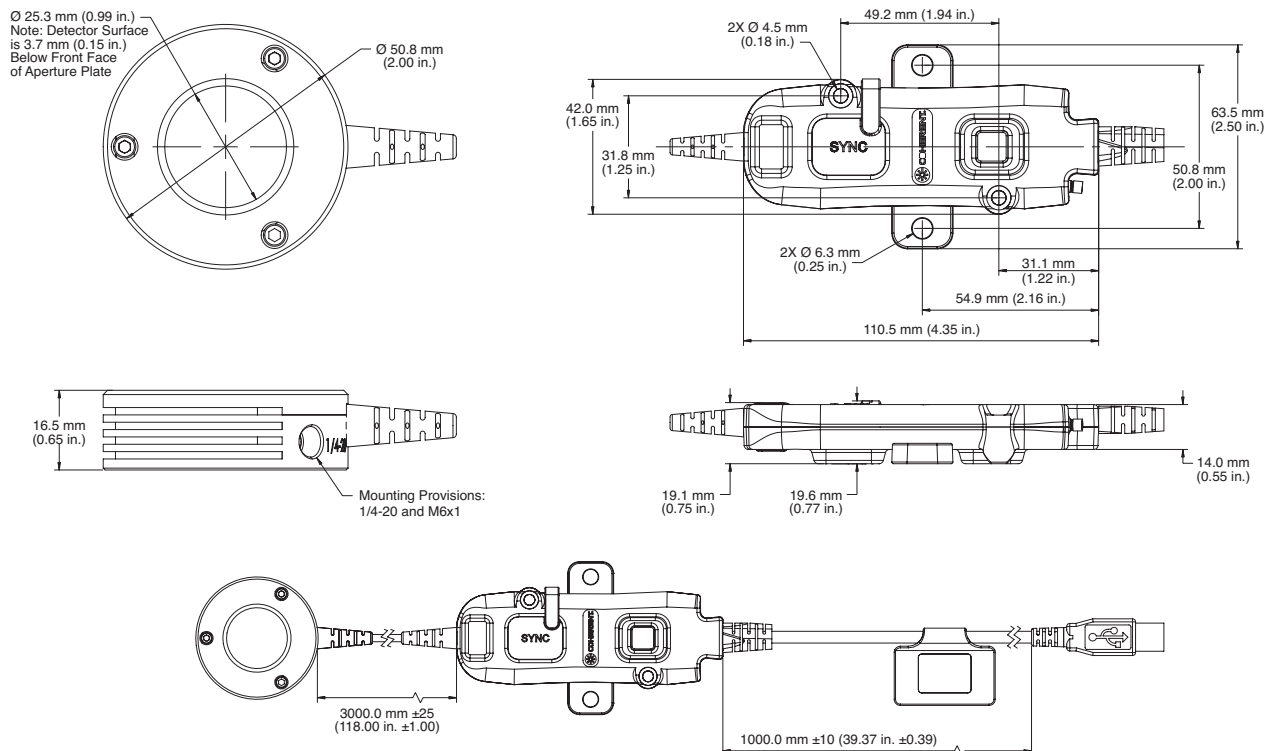
## MECHANICAL SPECIFICATIONS

**J-50MB-HE and -LE USB**



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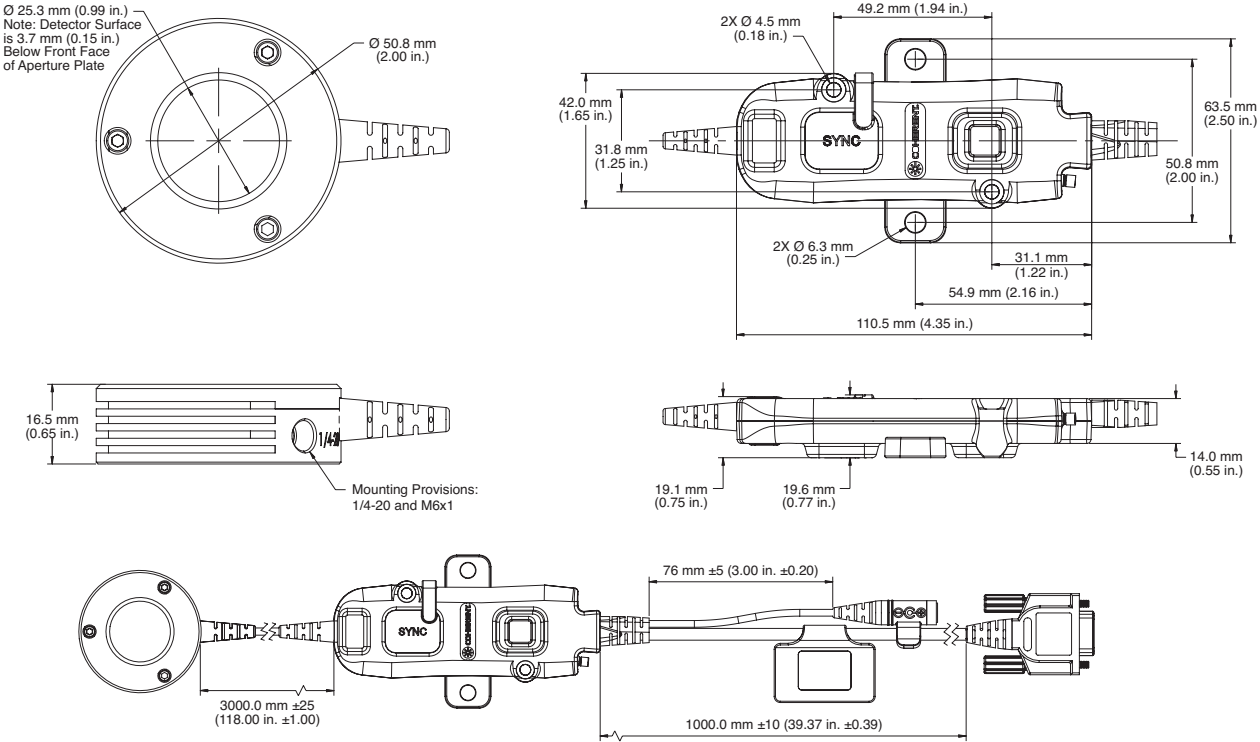
## MECHANICAL SPECIFICATIONS

### J-50MB-HE and -LE RS-232
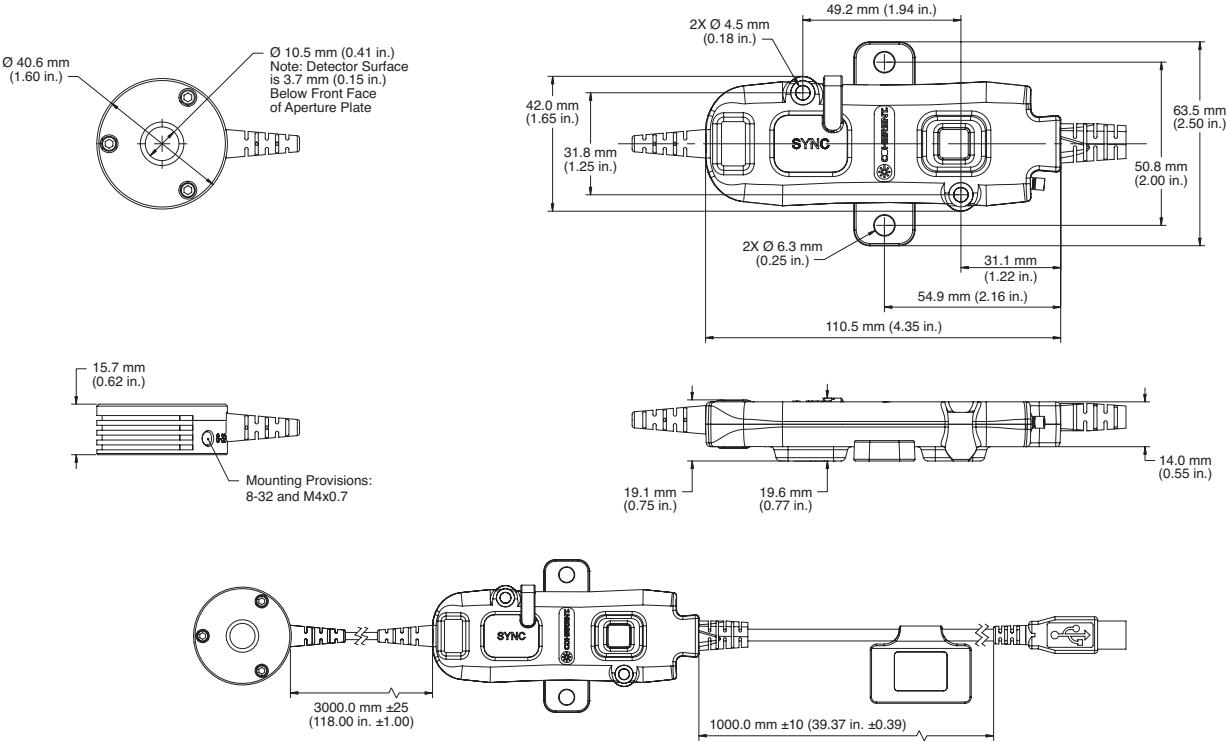


### J-25MB-HE and -LE USB



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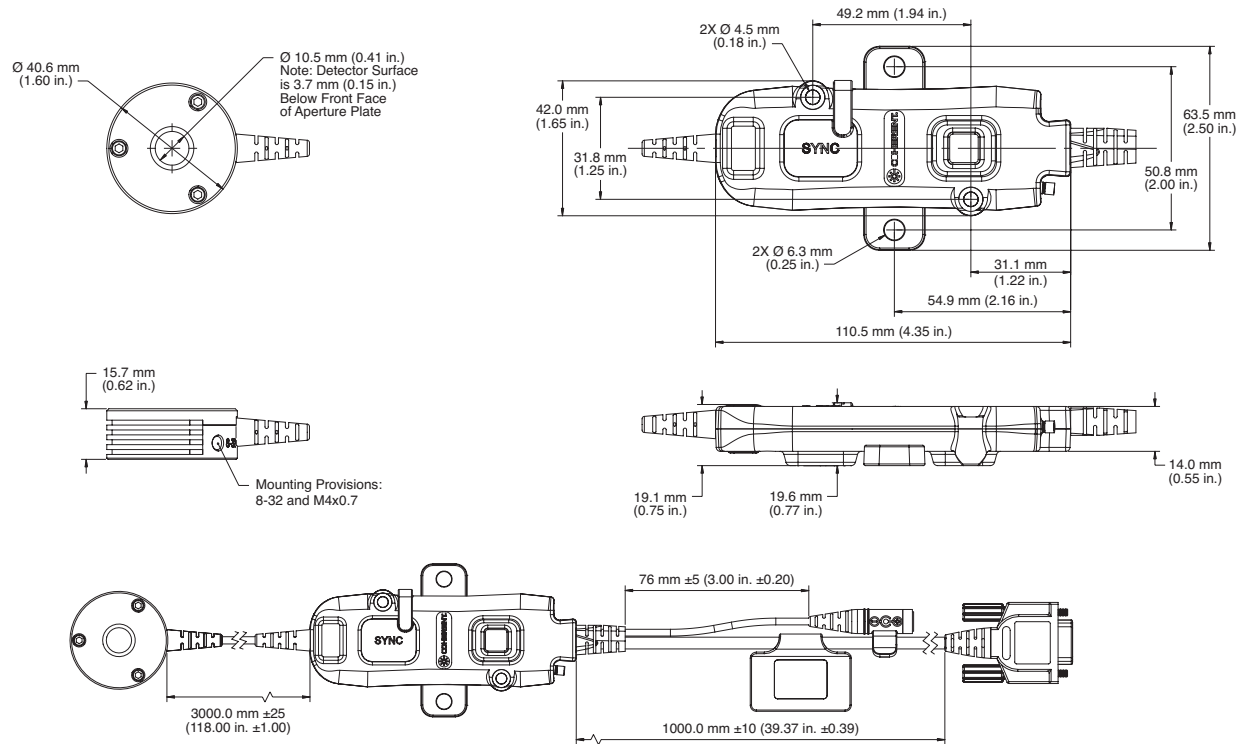## MECHANICAL SPECIFICATIONS

### J-25MB-HE and -LE RS-232

Ø 25.3 mm (0.99 in.)
Note: Detector Surface is 3.7 mm (0.15 in.) Below Front Face of Aperture Plate

Ø 50.8 mm (2.00 in.)

2X Ø 4.5 mm (0.18 in.)

49.2 mm (1.94 in.)

42.0 mm (1.65 in.)

31.8 mm (1.25 in.)

63.5 mm (2.50 in.)

50.8 mm (2.00 in.)

2X Ø 6.3 mm (0.25 in.)

31.1 mm (1.22 in.)

54.9 mm (2.16 in.)

110.5 mm (4.35 in.)

16.5 mm (0.65 in.)

1/4

Mounting Provisions: 1/4-20 and M6x1

14.0 mm (0.55 in.)

19.1 mm (0.75 in.)

19.6 mm (0.77 in.)

76 mm ±5 (3.00 in. ±0.20)

3000.0 mm ±25 (118.00 in. ±1.00)

1000.0 mm ±10 (39.37 in. ±0.39)

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

Ø 40.6 mm (1.60 in.)

Ø 10.5 mm (0.41 in.)
Note: Detector Surface is 3.7 mm (0.15 in.) Below Front Face of Aperture Plate

2X Ø 4.5 mm (0.18 in.)

49.2 mm (1.94 in.)

42.0 mm (1.65 in.)

31.8 mm (1.25 in.)

63.5 mm (2.50 in.)

50.8 mm (2.00 in.)

2X Ø 6.3 mm (0.25 in.)

31.1 mm (1.22 in.)

54.9 mm (2.16 in.)

110.5 mm (4.35 in.)

15.7 mm (0.62 in.)

Mounting Provisions: 8-32 and M4x0.7

14.0 mm (0.55 in.)

19.1 mm (0.75 in.)

19.6 mm (0.77 in.)

3000.0 mm ±25 (118.00 in. ±1.00)

1000.0 mm ±10 (39.37 in. ±0.39)

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## MECHANICAL SPECIFICATIONS

**J-10MB-HE and -LE RS-232**