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Press Release - New Quantum EnergyMax Sensors for Very Low Energy Laser Pulses

Dear Customer,

We are glad to inform you that **Coherent Inc.** has just released the new **Quantum EnergyMax Sensors** for accurate measurement of laser pulse energies down to 20 pJ, as well as the average power of pulsed systems from the nW to mW level, across a broad range of wavelengths. Here the main key content:

- **EnergyMax?** line extension, called **Quantum EnergyMax Sensors: J-10SI-LE & J-10SI-HE (Silicon photodiode)**, and the **J-10GE-LE (Germanium photodiode)**.
- These sensors can be useful to those in universities, commercial laser manufacturers, or research centers using **kHz ultrafast oscillator systems** and **regenerative amplifier systems** with outputs at the μJ level or lower.
- All three models contain **large 10 mm clear apertures** and operate at **repetition rates from single pulse up to 10 kHz**.
- Compatible with **LabMax?-TOP**, **3sigma** and **EPM1000/2000** meters.

Attached herewith you find the reviewed **EnergyMax? Guide**.
Please feel free to contact us for any further product detail.



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New Large Aperture Sensors for Very Low Energy Laser Pulses

Santa Clara, California, May 1, 2009

Three new **Quantum EnergyMax?** sensors from Coherent Inc. (Santa Clara, CA) (Nasdaq: COHR) enable accurate measurement of **laser pulse energies down to 20 pJ**, as well as the average power of pulsed systems from the nanowatt to milliwatt level, across a broad range of wavelengths. Specifically, the J-10SI-LE and J-10SI-HE are both silicon photodiode based sensors with **apertures of 10 mm** and a spectral range of 325 nm to 900 nm, which measure down to 20 pJ and 200 pJ respectively, at repetition rates of up to 10 kHz.

The J-10GE-LE utilizes a 10 mm aperture germanium photodiode to measure minimum pulse energies of 200 pJ over the 800 nm to 1700 nm spectral range, also at up to 10 kHz. The 10 mm aperture is the largest currently available on the market for detectors



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of this sensitivity, and can often eliminate the need to utilize an integrating sphere.

All three Quantum EnergyMax sensors are compatible with the Coherent **LabMax?-TOP** and **LabMax-TOP with GPIB meters**. Quantitative measurement of picojoule pulses is notoriously difficult, but with these low noise meters and the new sensors? built in wavelength compensation feature, an absolute accuracy of better than 6% can be achieved. Quantum EnergyMax sensors also deliver an **excellent repetition rate linearity of less than $\pm 1\%$ error**, from single pulse measurement to 10 kHz.

Quantum EnergyMax sensors are useful for a broad range of research, commercial and military applications involving low power pulses. Examples include measurement of **kHz ultrafast oscillators and regenerative amplifier systems with outputs at the μJ level or lower**.

Founded in 1966, Coherent, Inc. is a Russell 2000 Index company and a world leader in providing laser-based solutions to the commercial and scientific research markets. For more information about Coherent, including product and financial updates, visit our website at <http://www.Coherent.com>.

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