FOR IMMEDIATE RELEASE

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DETECTION THRESHOLDS DROP WITH LOW NOISE QUANTUM CASCADE LASER DRIVER
The QCL Driver Laboratory Series Instrument is now available.

Electronic noise from Quantum Cascade Laser drivers has long limited the detection threshold of chemical sensors. No longer. Patented low noise technology is now available to both researchers and developers. Wavelength Electronics introduces the QCL LAB family of instruments that couple an intuitive touchscreen display with low noise drive electronics that have a proven track record of dropping detection thresholds up to an order of magnitude.

Quantum Cascade Lasers (QCLs) operate with high power at wavelengths suited to detecting molecules significant to humans. Some applications include remote detection of explosive materials, medical diagnosis using the breath, non-invasive glucose testing, emissions & air quality monitoring, petroleum leak detection, methane detection in fracking... The list is growing exponentially as researchers discover new possibilities.

Detection threshold is always a defining characteristic of a sensor. With 0.4 µA RMS noise current and 1nA / √Hz average current noise density up to 100kHz, the QCL500 LAB instrument allows the lowest possible detection thresholds. Low electronic noise translates into stable center wavelength, narrow linewidth, and repeatable scans.

Models are available with output currents of 500 mA, 1000 mA, 1500 mA, and 2000 mA in Constant Current mode. Compliance voltage is adjustable up to 20 V with 2-3 MHz analog modulation bandwidth. Operate standalone or via USB or Ethernet (remote operation software included). Application notes and free technical support help you minimize noise in particularly demanding applications.

After your testing is complete, compact OEM drivers are available for integration into field-deployable systems. The QCL OEM family noise levels are also the lowest commercially available.

Safety features include:
- Adjustable soft-clamp current limit, with Brick-Wall Never-Exceed circuitry
- Password protection available to lock out a selectable control set
- Key switch, active, and passive interlocks
- Driver over-temperature protection circuit
- Relay shorts output when current is disabled
- AC input and patented power supply filtering
- 2 second turn-on delay — adjustable
- 1.5 msec current ramp

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COUNT ON WAVELENGTH ELECTRONICS

Wavelength Electronics leads the laser control industry by simplifying advanced quantum cascade laser, laser diode, and thermal control for demanding electro-optical OEMs and researchers. Our experienced Sales Engineers are available to help you decide which controller is right for your application. To learn more about the QCL Series Low Noise Quantum Cascade Laser Drivers and Wavelength's complete line of high precision, low-noise, ultra-stable laser diode drivers and temperature controllers visit us at Photonics West, Booth #2406 in the South Hall, or www.teamWavelength.com. Come see our product demo on Tuesday, February 10 at 10:30AM in Demo Area 1, South Hall.

1 Covered by U.S. Patents 6,696,887; 6,867,644 and 7,176,755. Licensed from Battelle Memorial Institute.

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