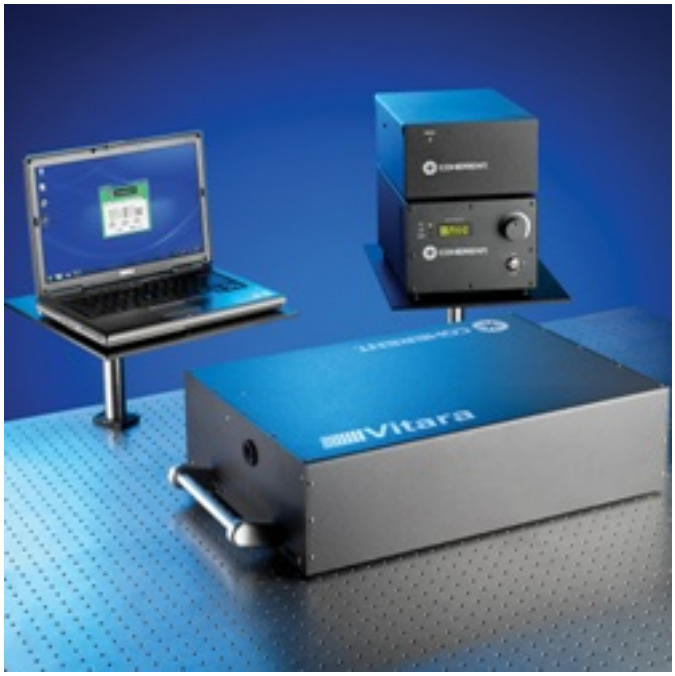
Widely Tunable Short-Pulse Laser with True Hands-Free Operation



The new Vitara from Coherent Inc. (Santa Clara, CA) (Nasdaq: COHR) is the first widely tunable, ultrafast laser to deliver pulsewidths shorter than 12 fs, while also offering true hands-free and fully automated operation. This includes automated wavelength tuning over a wide (755 nm to 860 nm) range and push-button bandwidth adjustment from 30 nm to 125 nm. The output power of Vitara peaks at over 450 mW due to the fully integrated and compact Verdi G 5W pump laser based on Coherent’s unique optically pumped semiconductor.

As with other one-box ultrafast lasers from Coherent, the Vitara is designed to bring state-of-the-art performance to the widest possible spectrum of users. The 125 nm maximum bandwidth delivers a specified pulsewidth of ‹20 fs, with a typical pulsewidth of 15 fs directly from the laser output. In addition, the optional compact compressor enables the Vitara pulsewidth to be further compressed to 12 fs or less. No other flexible and widely tunable laser can approach this short pulsewidth. Other options for Vitara include a next generation CEP stabilization module that delivers the industry’s highest phase stabilization specification, and a Synchrolock module for external pulse timing stabilization.

Applications for the Vitara include seeding short-pulse amplifiers and CEP-stabilized amplifiers, which benefit from Vitara’s stability and bandwidth, and pump probe spectroscopy where the short pulsewidth of Vitara is a key advantage. Other applications include THz spectroscopy and imaging, where the short pulsewidth produces the highest possible THz bandwidth, multiphoton (MPE) microscopy and

multiplex CARS imaging.

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. Please direct any questions to Nigel Gallaher, product manager, Research Scientific Lasers Business Unit, at (408) 764-4151. For more information about Coherent, including product and financial updates, visit our website at http://www.Coherent.com.

Source URL (retrieved on *04/18/2014 - 3:10am*):
http://www.mdtmag.com/product-releases/2011/10/widely-tunable-short-pulse-laser-true-hands-free-operation