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Industrial Femtosecond Green Laser for Superior Materials Processing

Santa Clara, Calif., February 12, 2016 – Coherent has extended the capabilities of their Monaco family of industrial femtosecond lasers with the first model delivering visible (green) output, thereby enabling superior processing of a wider range of materials. The new Monaco 517 is a fiber-based laser that produces 20 watts at 517 nm, and combines short (<400 fs) pulsewidth and high (20 μ J) pulse energy to generate the high peak intensity needed for precision micromachining of “tough” materials like polymers. Plus, the laser’s MHz pulse repetition rate supports fast throughput. The Monaco 517 is also simple to integrate into any OEM system because its self-contained compact laser head measures only 635 mm x 340 mm x 167mm. Moreover, the monolithic construction of the laser means that optimum alignment is maintained throughout its entire lifetime, thus maximizing its value and utility for end users and OEMs alike.

Green output delivers three key advantages for materials processing in industries like microelectronics and display fabrication. First, it yields a lower ablation threshold than longer wavelengths, thereby expanding the range of materials and thicknesses that can be athermally processed. Next, the shorter wavelength allows smaller focused spots, enabling finer features to be created. Finally, several materials, including important semiconductors, have improved absorption properties in the green, so this wavelength maximizes cutting efficiency and depth control.

The Monaco 517 is ideal for a range of micromachining applications in the semiconductor, flat panel display, solar, and microelectronics industries. It is well-suited for processing metal and non-metal thin films and foils, and for scribing conductive oxides and semiconductors. In addition to processing homogeneous materials, such as glass and metals, the material versatility of the Monaco 517 makes it an optimum tool for drilling, cutting and patterning complex, layered-structures.

Monaco has been developed as part of *The Industrial Revolution in Ultrafast Science*, which is redefining customer expectations of performance and reliability for laser technology. By employing a rigorous, multifaceted HALT/HASS protocol in the design, engineering, and manufacturing of our ultrafast products, the customer receives a product with certified reliability and performance, irrespective of the intended use. It’s cutting-edge testing for cutting-edge performance.

Founded in 1966, Coherent, Inc. is one of the world’s leading providers of lasers and laser-based technology for scientific, commercial and industrial customers. Our common stock is listed on the Nasdaq Global Select Market and is part of the Russell 2000 and Standard & Poor’s MidCap 400 Index. For more information about Coherent, visit the company’s website at <http://www.coherent.com/> for product and financial updates.

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