Coherent Introduces Germanium-Free Electro-Optic Modulator for High-Speed CO2 Laser Via Drilling

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SAXONBURG, Pa., Jan. 16, 2026 (GLOBE NEWSWIRE) -- Coherent Corp. (NYSE: COHR), a global leader in photonics, today announced the release of a new electro-optic modulator (EOM) designed for high-speed switching of CO_2 lasers in via drilling applications for the semiconductor industry. The new EOM provides a germanium-free solution capable of sub-microsecond pulse generation at laser powers up to 300W, addressing both performance demands and supply-chain constraints.

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Coherent announced the release of a new electro-optic modulator (EOM) designed for high-speed switching of CO_2 lasers in via drilling applications for the semiconductor industry.

The Coherent EOM is the only germanium-free ultra-fast switching solution on the market capable of producing pulses shorter than 1µs with sub-200ns rise and fall times. By eliminating dependence on germanium while delivering high speed and power handling, the EOM establishes a new benchmark for precision laser modulation in via drilling.

Via drilling remains a critical segment of semiconductor manufacturing, yet the scarcity of germanium has made traditional acousto-optic modulators (AOMs) increasingly expensive and difficult to source. Coherent's EOM addresses this challenge with a germanium-free architecture that delivers higher power handling, shorter pulse capability, and faster switching performance than conventional AOM-based solutions. Simplifying system design and installation, EOM's enable straight through alignment, eliminating diffractive order beam angles of conventional AOM-based solutions. There are currently no comparable EOM alternatives available for this market.

"Coherent has been developing electro-optic modulators for more than 50 years," said Steve Rummel, Sr. Vice President at Coherent. "This EOM represents a significant step forward for the via drilling market, delivering ultra-fast switching performance at a more accessible price point while removing dependence on scarce materials at a time when supply security is critical. Our ability to replace the scarcity of germanium with an alternative is the perfect time for the market."

Coherent is launching a fully featured 300W version of the EOM, with a 1,000W version available for alpha prototype testing. The EOM pairs seamlessly with Coherent CO_2 lasers and Coherent F-Theta lenses, enabling efficient delivery of maximum pulse energy with industry-leading precision and performance. This release represents version 2.0 of Coherent's EOM platform, featuring improved reliability and ease of use compared to the previous generation.

The product is available to order now with standard lead times. For more information, visit: https://www.coherent.com/optics/optical-devices-and-subassemblies/eo-modulators

About Coherent

Coherent is the global photonics leader. We harness photons to drive innovation. Industry leaders in the datacenter, communications, and industrial markets rely on Coherent's world-leading technology to fuel their own innovation and growth. Founded in 1971 and operating in more than 20 countries, Coherent brings the industry's broadest, deepest technology stack; unmatched supply chain resilience; and global scale to help its customers solve their toughest technology challenges. For more information, visit us at coherent.com.

Media Contact:

innovations@coherent.com

A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/aa3c619a-4527-4562-b8ea-e6ebf975d54d