



FOR IMMEDIATE RELEASE

LEADING SUPPLIER OF SEMICONDUCTOR-BASED SOLUTIONS CHOOSES VEECO PROPEL® HVM MOCVD SYSTEM

After Successful Beta Test, ON Semiconductor Selects Industry's First Single-Wafer Cluster Platform

PLAINVIEW, New York, April 10, 2018 – [Veeco Instruments Inc.](#) (Nasdaq: VECO) today announced that ON Semiconductor (Nasdaq: ON) has ordered its Propel® High-volume Manufacturing (HVM) Gallium Nitride (GaN) Metal Organic Chemical Vapor Deposition (MOCVD) system. Based on its successful beta evaluation of the Propel HVM tool, ON Semiconductor ordered the production-level Propel system for GaN power electronics manufacturing. As the industry's first single-wafer cluster platform, the Propel GaN MOCVD system is specifically designed for high-voltage power-management devices used in data centers; automotive, information and communication technology; defense; aerospace and power distribution systems, among other applications.

“Our prior learning with Veeco’s K465i™ GaN MOCVD system drove us to investigate the Propel HVM platform for our production ramp,” said Marnix Tack, PhD, senior director of corporate R&D and Open Innovation at ON Semiconductor. “The beta test results demonstrated superior device performance with high uniformity and within-wafer and wafer-to-wafer repeatability, while meeting our cost-of-ownership targets for six- and eight-inch wafers. As such, the Propel HVM system proved to be the most suitable platform for our power electronics manufacturing needs.”

The Propel HVM platform is based on Veeco’s innovative single-wafer system with proprietary IsoFlange™ and SymmHeat™ technologies that provide homogeneous laminar flow and uniform temperature profile across the entire wafer. The system enables production of power electronics, laser diodes, RF devices and advanced LEDs with higher performance and production yields while ensuring very low cost-of-ownership.

“The Propel HVM platform is rapidly gaining traction in the industry as innovative companies like ON Semiconductor recognize the benefits of GaN-on-silicon, which will partially replace current silicon technology for power electronics,” commented Peo Hansson, PhD, senior vice president and general manager of Veeco MOCVD operations. “With its highly controlled doping, run-to-run stability, superior wafer uniformity, high productivity and uptime, Propel HVM extends the benefits of our [TurboDisc®](#) platform to a unique single-wafer architecture. These capabilities benefit customers that seek a superior solution for manufacturing while providing a path for scaling to eight-inch wafers and expansion to RF and other advanced applications.”

GaN is a wide band gap semiconductor material with specific advantages over conventional technologies such as gallium arsenide (GaAs) and silicon carbide (SiC). GaN has enormous potential in the short term due to its benefits in terms of thermal behavior, efficiency, weight and size. According to market research firm Yole Développement, the GaN power device business was worth \$14 million in 2016, and projects that it will reach \$460 million by 2022, with a compound annual growth rate (CAGR) of 79 percent. GaN-based devices will be used increasingly in RF amplifiers, LEDs and high voltage applications among others, primarily due to their abilities to operate at high frequency, power density and temperature with improved efficiency and linearity.

Veeco is discussing the power of its innovative MOCVD and wet etch systems in the “5G: Where Are We and What’s Next?” track at the [CS International Conference](#) this week in Brussels, Belgium. Somit Joshi, senior director of MOCVD marketing is presenting a session titled, “Enabling GaN RF and Power Electronics through Innovative MOCVD and Wet Etch Process Technologies,” on Wednesday, April 11, and the Veeco team will also be accepting the CS Industry [2018 Award for Innovation](#) for its GENxcel™ R&D MBE System at the awards ceremony held during the conference.

About ON Semiconductor

ON Semiconductor (Nasdaq: ON) is driving energy efficient innovations, empowering customers to reduce global energy use. The company is a leading supplier of semiconductor-based solutions, offering a comprehensive portfolio of energy efficient power management, analog, sensors, logic, timing, connectivity, discrete, SoC and custom devices. The company’s products help engineers solve their unique design challenges in automotive, communications, computing, consumer, industrial, medical, aerospace and defense applications. ON Semiconductor operates a responsive, reliable, world-class supply chain and quality program, a robust compliance and ethics program, and a network of manufacturing facilities, sales offices and design centers in key markets throughout North America, Europe and the Asia Pacific regions. For more information, visit <http://www.onsemi.com>.

About Veeco

Veeco (NASDAQ: VECO) is a leading manufacturer of innovative semiconductor process equipment. Our proven MOCVD, lithography, laser annealing, ion beam and single wafer etch and clean technologies play an integral role in producing LEDs for solid-state lighting and displays, and in the fabrication of advanced semiconductor devices. With equipment designed to maximize performance, yield and cost of ownership, Veeco holds technology leadership positions in all these served markets. To learn more about Veeco's innovative equipment and services, visit www.veeco.com.

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