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3D-MICROMAC RECEIVES LASER-TRIMMING-SYSTEM ORDER FROM INFINEON FOR NEW DRESDEN SMART POWER FAB

Laser micromachining expert exclusively supplies Infineon Dresden with the microVEGA FC laser-trimming system

HIGHLIGHTS

- 3D-Micromac AG equips Infineon Technologies Dresden GmbH & Co. KG with production equipment for laser trimming
- The system will be installed in Infineon's Smart Power Fab for use in the production of analog/mixed-signal technologies and power semiconductors
- Both companies share a goal of installing 3D-Micromac AG's laser-trimming systems at more of Infineon's production sites

Chemnitz, Germany, July 29, 2024 – 3D-Micromac AG, the leading provider of laser micromachining and roll-to-roll laser systems for the semiconductor, photovoltaics, glass, and display industries, announced that Infineon Technologies Dresden GmbH & Co. KG has ordered one of 3D-Micromac's first microVEGA™ FC laser-trimming systems for Infineon's new Smart Power Fab in Dresden, Germany. Designed specifically for Infineon, the microVEGA FC laser-trimming system will be exclusively supplied by 3D-Micromac to Infineon Dresden who is utilizing this advanced technology for its semiconductor laser-trimming applications for the new Smart Power Fab.

The order was preceded by a joint-development project in which 3D-Micromac's laser-trimming process was transferred into a mass-production-capable laser system. The basis for the new solution was the microVEGA system – a system that has already been utilized successfully to process up to 300-mm (12-inch) semiconductor wafers in several industrial use cases.

The laser beam of the microVEGA FC is shaped in the single-digit micrometer range and moves continuously over semiconductor chips. During this motion, the laser selectively processes defined microstructures of several dies. This trimming process adjusts the resistance value in individual IC chips to a target value. The small size of the dies' structures (approximately 1-2 micron) and the resulting extremely high demands on the three-dimensional positioning accuracy of the laser spot in relation to the structures place the highest demands on the machine hardware. The microVEGA FC includes an integrated measuring technology to achieve 100-percent process control, overcoming a particular challenge in semiconductor laser-trimming applications. The microVEGA FC system features fully automatic handling for 200-mm and 300-mm wafers. At process speeds of up to 400 mm/s, the system achieves a positioning accuracy of ± 200 nm (at 3 Sigma).

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Infineon plans to begin manufacturing analog/mixed-signal technologies and power semiconductors in Dresden's Smart Power Fab in the fall of 2026. The interaction of power semiconductors and analog/mixed-signal components enables particularly energy-efficient and intelligent system solutions commonly used in power supply systems, such as energy-efficient chargers, smaller engine control units for cars, data centers, and Internet of Things (IoT) applications.

Infineon has decided to work with 3D-Micromac to adopt advanced European production technology. Raik Brettschneider, managing director of Infineon Dresden, states, "3D-Micromac's experience and innovative strength, as well as the close exchange between the specialists of both companies, led to the joint development project's success. Together, we have paved the way for the microVEGA FC and its future use in Infineon's production chain. We are content that we can now order the first 3D-Micromac system."

Both companies share a goal of installing 3D-Micromac AG's laser-trimming systems at more of Infineon's production sites. "We are pleased that Infineon decided to go with 3D-Micromac as their supplier for laser-trimming technologies," Uwe Wagner, CEO of 3D-Micromac AG, concludes. "We are proud to support the European Commission's goal of increasing the European share of semiconductor production and helping to secure value chains in key European countries."

About 3D-Micromac

Founded in 2002, 3D-Micromac AG is the industry leader in laser micromachining, delivering powerful, user-friendly and leading-edge processes with superior production efficiency. We develop processes, machines and turnkey solutions at the highest technological level. 3D-Micromac systems and services have been successfully implemented in various high-tech industries worldwide, including photovoltaic, semiconductor, glass and display industries, micro diagnostics, and medical technology. For more information, visit the company's website at <https://www.3d-micromac.com>.

About Infineon

Infineon Technologies AG is a leading provider of semiconductor solutions for power systems and the Internet of Things (IoT). With its products and solutions, Infineon is driving decarbonization and digitalization forward. The company has around 56.200 employees worldwide and generated sales of around EUR 16.3 billion in the financial year of 2023 (till the end of September). Frankfurt Infineon is listed under the symbol "IFX" and in the USA on the OTCQX International market under "IFNNY".

Further information is available at <https://www.infineon.com>.

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