Press release

No. 643e

**High-precision inline measurement of thin layers**

**The new white light interferometers of the interferoMETER IMS5200-TH series are used for nanometer-precise coating thickness measurements from 1 to 100 micrometers. With a measuring rate of up to 24 kHz, the new white light interferometers are ideal for dynamic measurement tasks in semiconductor production – even in a vacuum – as well as in coating processes.**



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The new white light interferoMETER IMS5200-TH is designed for fast, high-precision inline measurements. It measures coating thicknesses from 1 to 100 µm with nanometer precision and an excellent linearity of < ± 100 nm. In addition, multi-peak measurement of up to five thin layers is possible. The measuring rate can be continuously adjusted from 100 Hz to 24 kHz. Thanks to the stored material selection list, it is not necessary to teach in the material separately, thus allowing for maximum flexibility during use.

The IMS5200-TH can be used for a wide range of applications, from measuring air gaps in glass wafers and masks to testing the coating processes of beverage cartons to paint thickness tests in the metal industry. Sectors such as semiconductor production, the metal and steel industry or the packaging industry, in particular, can benefit from the new interferometer series from Micro-Epsilon.

The sensor and controller are coordinated and calibrated with one another at the factory, enabling air gap and coating thickness measurements with nanometer precision. Thanks to the compact and robust sensor design, combined with a large working range of ± 2 mm, the sensor can be easily integrated even in confined production lines. The controller is mounted on a DIN rail in the control cabinet.

For seamless integration into modern networks, Micro-Epsilon offers Ethernet, EtherCAT and RS422 as well as advanced encoder connections and digital I/Os. Thanks to versatile interfaces, measured values can be efficiently processed via existing analog outputs and flexibly integrated into existing automation systems.

With protection class IP40 (controller) and IP65 (sensor) and temperature operating range from +10 to +50 °C, the sensors are adapted to industrial environments. They can also be used in special environments such as clean rooms and vacuums. Even under high shock or vibration loads, these interferometers ensure consistently high measurement results. Compared to conventional interferometers, Micro-Epsilon white light interferometers can be conveniently commissioned and parameterized via a web interface, which means that no additional software needs to be installed.

approx. 2,600 characters

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