LUMETRICS®

Performance You Can See. Precision You Can Trust.

OptiGauge II® EMS

Non-Contact Thickness Measurements from 12 µm to 50 mm

Our patented optical interferometer-based technology allows you to measure the absolute thickness of virtually any translucent or lightly absorbing materials. Using an infrared LED signal transmitted through the optical probe, reflections from each surface of the sample material (top, bottom, and internal) are analyzed using sophisticated software, and the absolute thickness is calculated and displayed to the operator.

The OptiGauge EMS provides the ease of use, reliability, and accuracy that leading manufacturers have come to rely on from Lumetrics® for over 20 years. Using a built-in laser, the system is continuously calibrated, eliminating the need for periodic calibration. Ultra-stable design delivers repeatability and accuracy traceable to NIST standards.

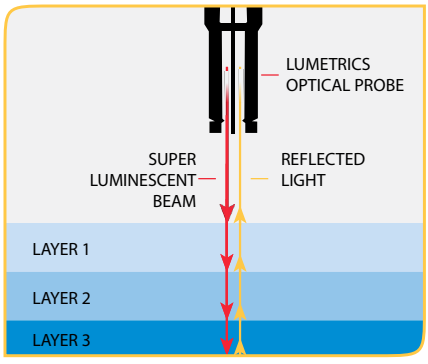
Features

- Non-contact thickness measurements
- Measurement range: 12 µm to 50 mm
- Internal self-calibration
- NIST traceability
- Accuracy ±1.0 µm

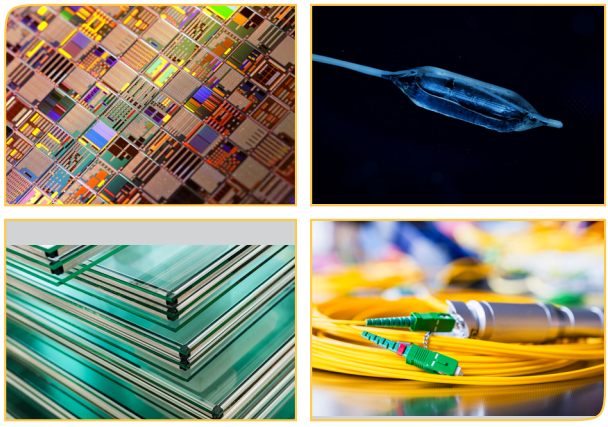
Typical Applications

- Float glass
- Single- and multi-lens optics and lens stacks
- Alignment of lenses in optical assemblies
- Medical balloons and tubes: top wall, inside diameter, bottom wall, outside diameter

Measurement Technology



How it works: The optical probe directs invisible 1310nm infrared light through transparent, translucent or colored materials and sends reflections for each internal surface back to the OptiGauge, where highly advanced software provides instant analysis in an easy-to-use graphical interface.



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OptiGauge II® EMS

OptiGauge Core Unit Specs

OptiGauge II EMS — Extended Measurement System	
Part #	**10000-99**
Measurement Method	Low Coherence Interferometry - 1310 nm Measurement Wavelength
Common Measurement Materials	Glass, Plastic, Tubing, Silicon, Coated Metals
Maximum Number of Layers Measured	Up to 20
Thickness Measurement Range	12 µm to 50 mm, dependent on refractive index of sample material
Measurement Units	µm, mm, mils, inches, µin
Accuracy (Published accuracy at temperature range 15° to 30°C)	±1.0 µm
Repeatability	±1.0 µm 1σ
Measurement Scan Rate	30 Hz
Power Requirements	AC 110 V – 240 V 50/60 Hz, 20 watts / 30 VA
Dimensions	425 mm (w) × 457 mm (d) × 140 mm (h) / 16.75" (w) × 18" (d) x 5.5" (h)
Weight	25lbs./9kg
Operating Temperature Range	15° to 30°C (59° to 86°F)*
Operating Relative Humidity	10 to 90% (non-condensing)
Data Output	RS-232
Output Connectivity	RS-232

* Standard probe operating temperature -40°–185°F (-40° –85°C), higher temperature options available.

Off-Line or On-Line

- Ideal for R&D, QC or process control
- Standard and custom fixtures for off-line and on-line applications
- Customized software available
- Installation and training available

About Lumetrics

For more than a decade, Lumetrics has provided precision measurement solutions to leading edge companies throughout the world. Our systems are deployed in quality, R&D labs, and production floors. We provide real-time measurements to improve yield, reduce cost, improve quality, and meet compliance requirements. Our commitment to our customers sets us apart from the competition.

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