

OptiGauge®

Non-Contact Thickness Measurements from
12 μm to 16 mm

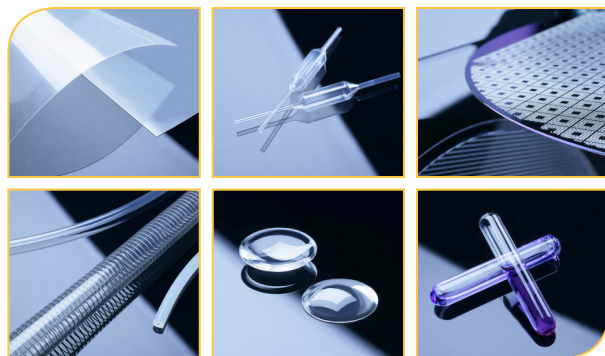


Features

- Measurement range: 12 μm to 16 mm
- Accuracy $\pm 0.1 \mu\text{m}$
- Single and multi-layer measurements
- Multi-probe configuration available
- Continuous internal calibration
- NIST traceability
- Desktop or rack mount

Typical Applications

- **Medical** — Balloons, catheters, tubing (wall, ID, OD)
- **Glass** — Automotive, float, flat, electronic display, optics (thickness, inner layers)
- **Ophthalmic** — Contact lenses, IOLs (CT, SAG)
- **Industrial** — Film, coatings, packaging, adhesives, barrier layers (thickness)



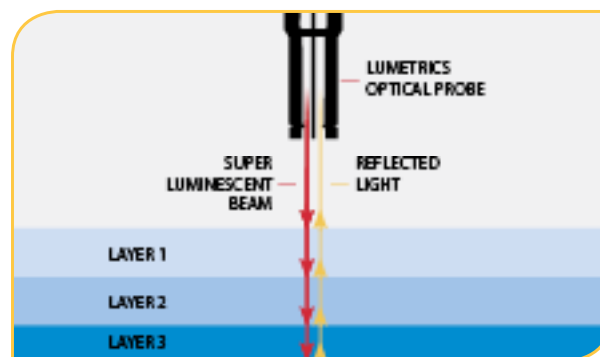
Lumetrics® Expertise

- Patented non-contact thickness measurement technology
- Custom development of off-line and on-line systems, fixtures, and probes
- Customized software solutions
- Complete turn-key solutions

Measurement Technology

Our patented optical interferometric technology enables the measurement of absolute thickness of virtually any translucent or lightly absorbing materials. It provides real-time measurement of single or multi-layer materials.

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.





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 extensive metrology expertise sets us apart from the competition.

“Let our engineering team solve your toughest measurement problems.”

- The top ophthalmic companies use the OptiGauge for contact lens and IOL inspection.
- The largest glass manufacturers in the world use the OptiGauge to optimize production and ensure quality.
- The majority of top medical device companies use OptiGauge for quality control and R&D purposes.

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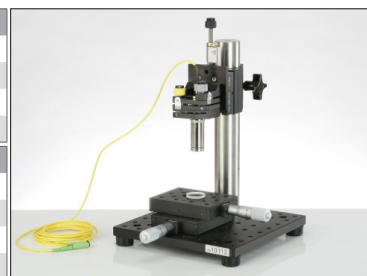
OptiGauge® Core Unit

	OptiGauge II
Measurement Method	Low Coherence Interferometry
Measurement Wavelength	1310 nm
Software	Lumetrics OptiGauge Control Center®
Common Measured Materials	Glass, Plastic, Tubing, Silicon, Coatings, Fluids, Air Gaps, Contact Lenses, Intraocular Lenses
Number of Layers Measured	Up to 49
Thickness Measurement Range	12 µm – 16 mm, dependent on refractive index of sample material
Units of Measurement	µm, mm, mils, in, µ in
Accuracy	±0.1 µm
Repeatability	±0.1 µm 1σ
Measurement Rate	50 Hz (100 Hz & 200 Hz optional)
Power Requirements	AC 110 V – 240 V 50/60 Hz, 20 watts / 30 VA
Dimensions	17" (w) x 4.5" (h) x 19.5" (d) 43.18 cm (w) x 11.43 cm (h) x 49.53 cm (d)
Weight	27 lbs. (12.25 kg)
Operating Temperature Range	59° – 86°F (15° – 30°C)
Operating Relative Humidity	10 – 90% (non-condensing)
Output Connectivity	RJ-45 Ethernet, RS-232, USB 2.0, aux digital I/O

Measurement Probes

	OptiGauge II
Optical Probe	50 mm
Working distance	49 mm
Measurement spot size	40 µm
Angular tolerance	± 2°
Optical fiber length*	3 m standard, up to 1000 m
Optical Probe	25 mm
Working distance	20 mm
Measurement spot size	20 µm
Angular tolerance	± 3.5°
Optical fiber length*	3 m standard, up to 1000 m
Optical Probe	25 mm HNA
Working distance	21 mm
Measurement spot size	10 µm
Angular tolerance	± 8.5°
Optical fiber length*	3 m standard, up to 1000 m
Optical Probe	100 mm
Working distance	91 mm
Measurement spot size	80 µm
Angular tolerance	± 1°
Optical fiber length*	3 m standard, up to 1000 m

* Optical fiber sold separately. Standard probe operating temperature –40° – 185°F (–40° – 85°C)



Minimum Computer Requirements

OptiGauge Control Center software license is included with each OptiGauge II system

	OptiGauge II
Operating system	Microsoft® Windows 7 Professional 64-bit, Windows 8 Pro 64-bit, Windows 10 Pro 64-bit
Processor	4th Generation Intel® Core i5
Hard drive/Memory	10GB free hard drive space required/ 4GB RAM
Connection	USB 2.0, USB 3.0, Ethernet
Screen resolution	1600 x 900 pixels

(Specifications subject to change without notice)

**Metrology Instrumentation,
Integration, and Solutions**