

OptiGauge[®]

Non-Contact Thickness Measurements from 12 μm to 16 mm

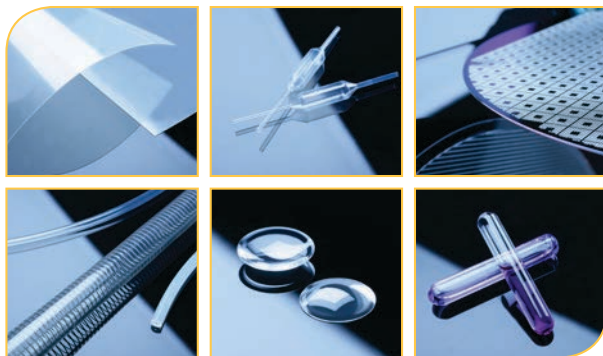


Features

- 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)



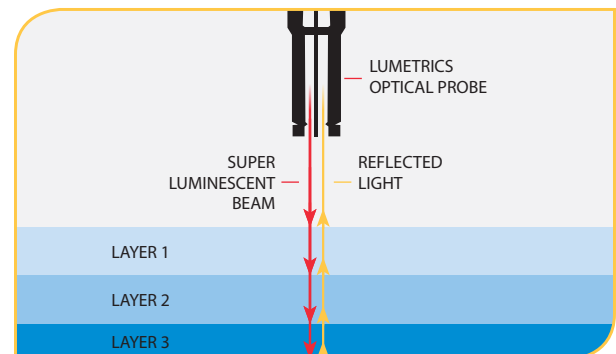
Lumetrics[®] Expertise

- 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	OptiGauge LT
Part #	10000-30	10000-44
Measurement Method	Low Coherence Interferometry	Low Coherence Interferometry
Measurement Wavelength	1310 nm	1310 nm
Software	Lumetrics OptiGauge Control Center®	Lumetrics OptiGauge Control Center®
Common Measured Materials	Glass, Plastic, Tubing, Silicon, Coatings, Fluids, Air Gaps, Contact Lenses, Intraocular Lenses	Glass, Plastic, Tubing, Silicon, Coatings, Fluids, Air Gaps, Contact Lenses, Intraocular Lenses
Number of Layers Measured	Up to 20	Up to 20
Thickness Measurement Range	12 µm – 16 mm, dependent on refractive index of sample material	12 µm – 5 mm, dependent on refractive index of sample material
Units of Measurement	µm, mm, mils, in, µ in	µm, mm, mils, in, µ in
Accuracy	±0.1 µm	±2 µm
Repeatability	±0.1 µm 1σ	±1 µm 1σ
Measurement Rate	50 Hz (100 Hz & 200 Hz optional)	50 Hz
Power Requirements	AC 110 V – 240 V 50/60 Hz, 20 watts / 30 VA	AC 110 V – 240 V 50/60 Hz, 20 watts / 30 VA
Dimensions	17" (w) × 4.5" (h) × 19.5" (d) 43.18 cm (w) × 11.43 cm (h) × 49.53 cm (d)	17" (w) × 4.5" (h) × 19.5" (d) 43.18 cm (w) × 11.43 cm (h) × 49.53 cm (d)
Weight	27 lbs. (12.25 kg)	27 lbs. (12.25 kg)
Operating Temperature Range	59° – 86°F (15° – 30°C)	59° – 86°F (15° – 30°C)
Operating Relative Humidity	10 – 90% (non-condensing)	10 – 90% (non-condensing)
Output Connectivity	RS-232, USB 3.0, USB 2.0, aux digital I/O	USB 3.0

Measurement Probes

	OptiGauge II and OptiGauge LT
Optical Probe Part #	13000-91
Working distance	49 mm
Measurement spot size	40 µm
Angular tolerance	±2°
Optical fiber length	3 m standard, up to 1000 m
Optical Probe Part #	13000-92
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 Part #	13000-93
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 Part #	13000-94
Working distance	91 mm
Measurement spot size	80 µm
Angular tolerance	±1°
Optical fiber length	3 m standard, up to 1000 m



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

Minimum Computer Requirements

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

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

(Specifications subject to change without notice)

**Metrology Instrumentation,
Integration, and Solutions**