PVA TePla

LuXpector
THEA

PRECISION MEETS EFFICIENCY

High-throughput, automated thin film measurement

LuXpector THEA (**T**ool for **H**igh-precision **E**llipsometry **A**nalysis) combines ellipsometry and reflectometry in a compact, cost-effective and fast system for accurate thin-film characterization in semiconductor manufacturing. Designed for both R&D and production environments, it delivers reliable and high measurement accuracy of even complex layer systems, with minimal effort in operation and maintenance.

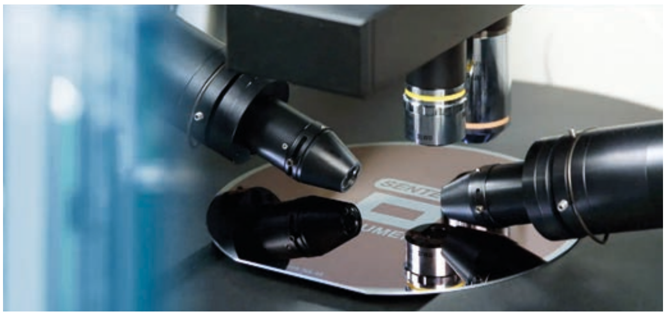
FEATURES AT A GLANCE

- **High Throughput**
  Up to 160 wafers per hour with automated handling for maximum productivity.
- **Flexible Integration:**
  Ideal for R&D or seamless integration into production lines, SECS/GEM automation ready.
- **User-Friendly Interface**
  Intuitive operation, automated calibration and analysis functions allow easy operation.
- **No Backside Reflection (SiC)**
  Accurate thin-film analysis on SiC wafers, eliminating errors from backside reflections for reliable results.
- **AlGaN Concentration Resolution via Band Edge Measurement**
  Precise determination of aluminum content in AlGaN layers using advanced band edge analysis.

SENTECH
Erfolg durch Leistung

Developed in close cooperation with SENTECH, experts in plasma process technology and thin-film metrology.

TYPICAL APPLICATIONS



- Thin-film thickness and optical properties on semiconductor wafers
- Measurement of dielectrics, metals, and semiconductor layers
- Process control in development and high-volumemanufacturing
- Coating validation and material characterization

TECHNICAL DATA

Applications	Standard applications	Si (MEMS, SOI), SiC, GaN, advanced packaging, Qromis
	Thin-film thickness resolution	20 – 300 Å (σ ≤ 0.2 Å)
	Possible measuring parameters	Coating thickness, refractive index, absorption coefficient, reflectivity, deposition rate, etch rate, roughness, composition
	Wafer throughput	100 Wph (@13 MP)
Wafer loading options	Cassette options	200 mm open cassette, 200 mm SMIF, 300 mm FOUP
	Wafer Size	200 mm, 200 mm – 300 mm, 300 mm
	Number of loading ports	1x 200 mm, 1x 300 mm, 2nd 300 mm port / 300 mm OHT(optional)
	Wafer material	Silicon, silicon carbide, gallium arsenide, sapphire, glass ….
	Max. wafer weight	Up to 350 g
	Wafer throughput	Up to 160 Wph
Analytical equipment	Ellipsometer wavelength	300 – 780 nm
	Ellipsometer spot size	50 x 50 µm
	Reflectometer wavelength	400 – 100 nm
	Reflectometer spot size	Ø 16 µm

WANT TO FIND OUT MORE?
CONTACT US FOR INFORMATION!

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Learn more