

SE 400adv



Laser Ellipsometer

- Sub-Angstrom accuracy
- High speed
- It has never been easier to apply ellipsometry to real-world samples



SENTECH

Erfolg
durch Leistung



Laser ellipsometer SE 400adv with controller

Product description

The **SE 400adv** can be utilized to characterize single films and substrates from selectable, application specific angles of incidence.

The auto-collimating telescope ensures precise measurement on most kinds of absorbing or transparent substrate with a flat, reflective surface.

The fully integrated support of multiple angle measurements (40°–90° in steps of 5°) can be used for determining thickness, refractive index, and extinction coefficient of layer stacks. Multiple angle measurements are also applied for absolute thickness measurement to compensate the ambiguity of measured thickness in laser ellipsometry.

The **SE 400adv** is the SENTECH laser ellipsometer for measuring thickness of ultra thin single films. The compact table top instrument comprises the ellipsometer optics, goniometer, sample platform, auto-collimation telescope, HeNe laser source, and detection unit.

The options of the **SE 400adv** support applications in micro-electronic, photovoltaic, data storage, display technology, life science, metal processing, and others.

SE 400adv Laser Ellipsometer

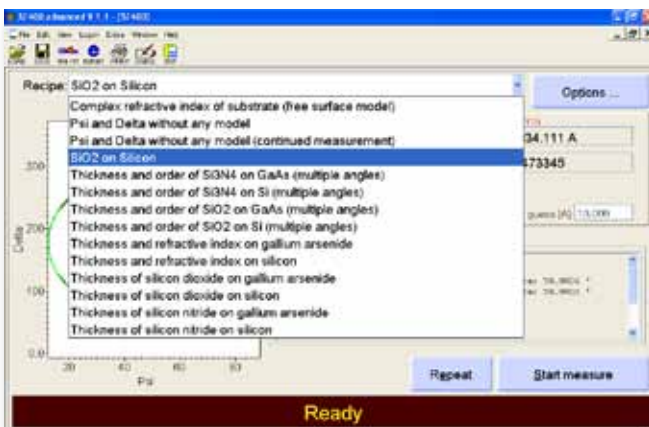
- Extraordinary high stability and accuracy
- Highly precise sample alignment
- Fast and comfortable measurement
- Fully integrated support of multiple angle measurements

Specifications

Precision of Ψ, Δ at 90° (transmission) position:	$\delta(\Psi) = 0.002^\circ$ $\delta(\Delta) = 0.002^\circ$
Long term stability:	$\delta(\Psi) = \pm 0.01^\circ$ $\delta(\Delta) = \pm 0.1^\circ$
Precision of film thickness:	0.1 Å for 100 nm SiO ₂ on Si
Precision of refractive index:	5×10^{-4} for 100 nm SiO ₂ on Si
Setup:	PCSA with compensator
Diameter of laser spot:	1 mm
Angle of incidence:	manual goniometer 40°–90°, set in steps of 5°
Sample alignment:	auto collimating telescope (ACT) for manual sample tilt and height adjustment

Options

- Microspots (25 µm)
- Mapping stages (50 mm to 300 mm)
- Liquid cells
- Video camera
- Autofocus
- Video camera
- Computer controlled goniometer
- Simulation software
- Certified reference wafers



Recipe selection in SE 400adv measurement software

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