



OTFP ST50.
Thin film measuring devices.

The **OTFP series** of measuring devices (optical thin film probe) allow fast, precise and contactless measurement of film thicknesses in the nanometer and micrometer range. The films must be smooth, transparent or slightly absorbent. The measurement process is based on the principle of thin film interference. Reflectometric thin film measurement is already widespread in sectors such as semiconductors, solar power, medical products and optics. This technology is typically used to measure the thicknesses of semiconductor films, antireflective coatings or coatings on medical implants.

The OTFP measuring devices feature an integrated Windows PC. They can be used as a single workstation solution or as a server. This makes it possible to contact one or more software clients via a simple TCP/IP connection. The results can therefore be simultaneously displayed or used at various points, such as for process control.

The devices are delivered with all necessary parts, such as fiberglass cables, measuring head and user software, as well as an axis system or measuring station depending on the configuration. A reference sample can be supplied upon request.



Typical applications.

Measuring of films on Si-wafers:
Photoresist, oxides and nitride layers

Liquid crystal displays:
Cell spacing, polyimides and ITO layers

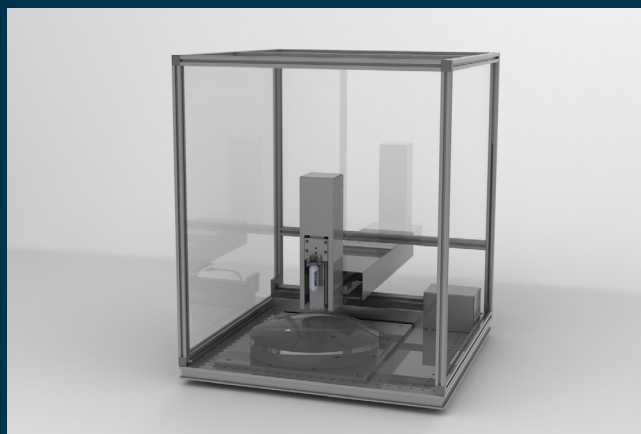
Optical coatings:
Anti-reflective (AR) coatings, optical filters,
hard coatings

Technical data.

Measuring range (depending on film arrangement)	50 nm - 50 µm
Spectrometer wavelength range	200 - 1100 nm
Spectrometer resolution	2048 Pixel
Precision (without axis system, depending on film arrangement)	+/- 1 nm
Reproducibility (without axis system, depending on film arrangement)	+/- 0,1 nm
Electrical output of light source (tungsten halogen lamp, optional color temperature compensation filter)	50 W

Optional mapping system.

The mapping system allows to create xy-surface profiles. All axes are driven by stepper motors. The standard scanning range is up to 300 x 300 mm. Larger range on request.



Technical data.

Dimensions (H x W x D)	600 mm x 600 mm x 993 mm
Max. sample size (H x W x D)	70 mm x 300 mm x 300 mm
Weight	Approx. 55 kg

Measurement parameters.

	Range (mm)	Precision (µm)	Reproducibility (µm)
X-axis (scan)	300	20	3
Y-axis (scan)	300	20	3
Z-axis (focus)	80	20	3