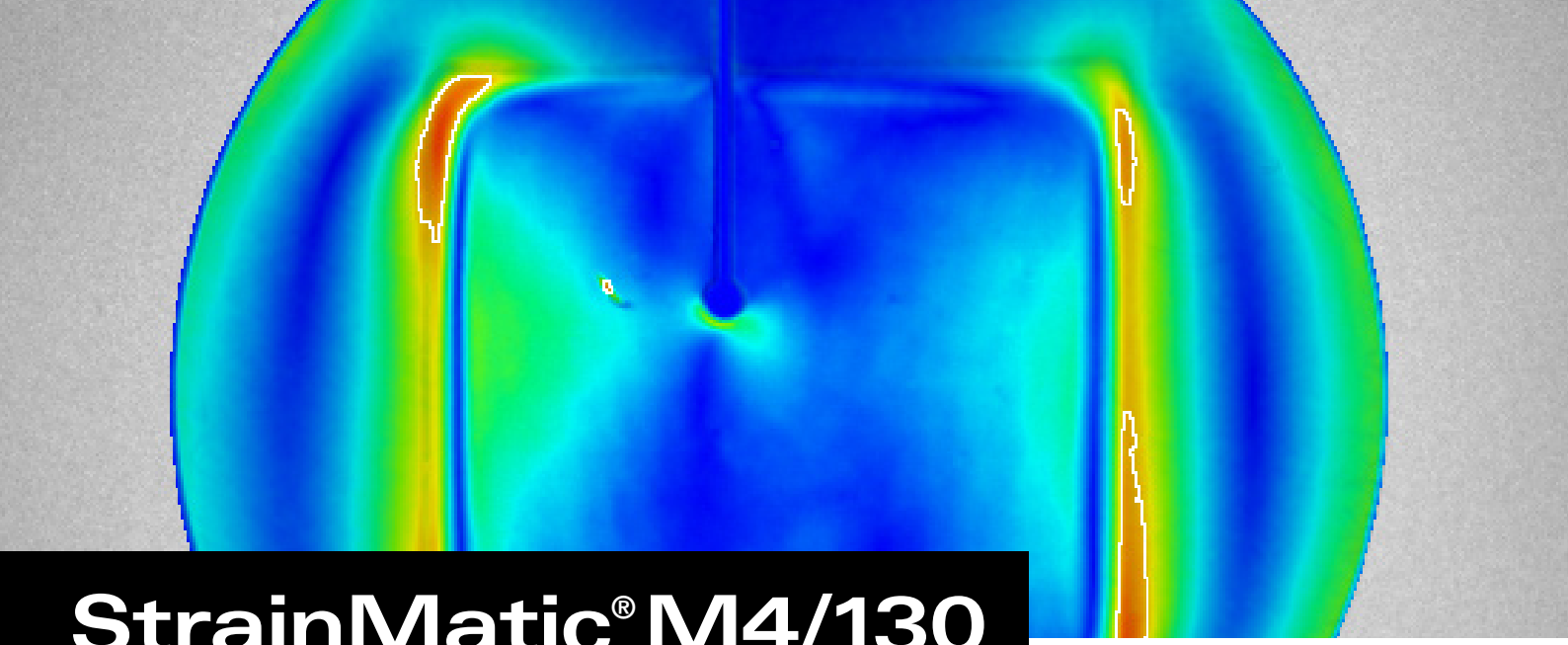
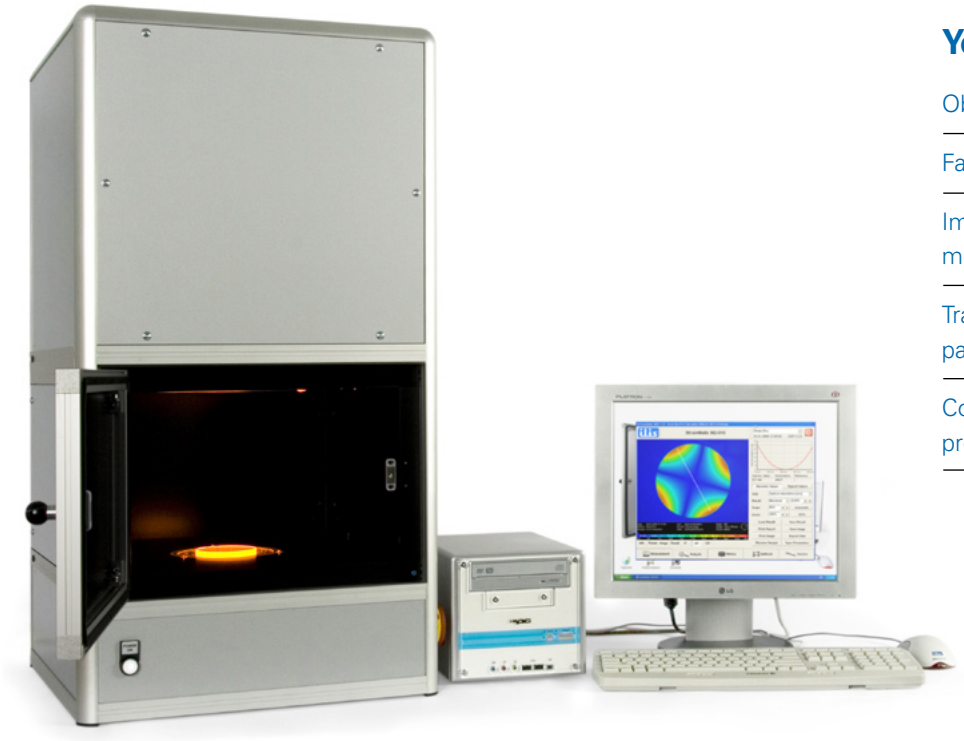


StrainMatic® M4/130
Quality is measurable

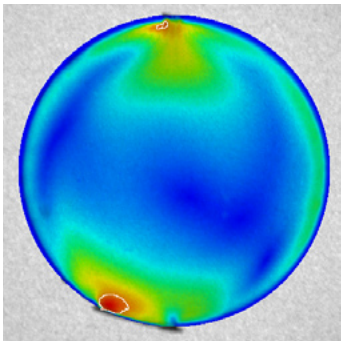
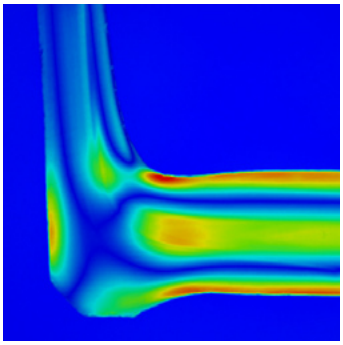
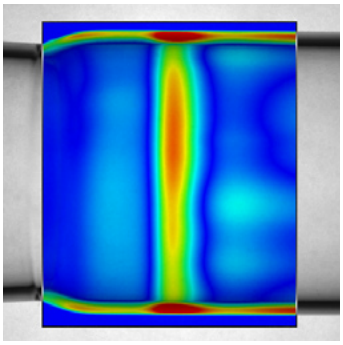
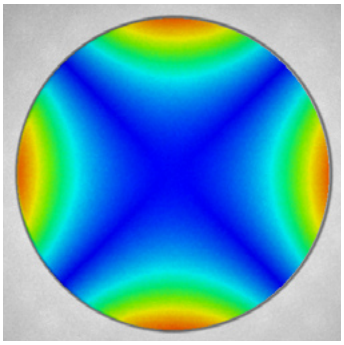
Imaging polarimeter systems for the automatic measurement of residual stresses in optical materials

In industrial optics, especially in the field of microlithography, highly homogeneous optical materials are used. Through the effect of stress birefringence, residual stresses influence the polarization of light, which is an undesirable effect in many applications. Therefore, constant testing of residual stress is a very important part of quality control.
The new StrainMatic® M4 series automatizes the measurement and evaluation of the stress birefringence and enables a fast and exact determination of the stress distribution in optical materials and components.



Your Benefits

- Objective results
- Fast and easy operation
- Improvement in quality by on-site measurement
- Traceability by automatic filing of all parameters and results
- Cost reduction by optimization of the production process

StrainMatic® M4/130

Technical Data

operation	external PC with TFT monitor, mouse, keyb.
metering chamber	approx. 240 x 450 x 450 mm (H/W/D)
illumination	LED Array, approx. 200 x 160 mm
image acquisition	CCD camera (640 x 480 pixels) with telecentric lens (130 mm aperture)
image size	approx. 104 x 78 mm (0.16 mm pixel distance, 38 pixel/mm^2)
measuring area	variable rectangular, round or elliptical
measuring results	polarization angle (°) optical retardation (nm) normalized optical retardation (nm/cm) normalized stress (MPa)
measuring range	approx. -290 to +290 nm optical retardation optional -2900 to +2900 nm (HOD module)
reproducibility	typical <±0.1 nm (mean deviation)
interfaces	Ethernet, USB, VGA
power supply	230 V, 50 Hz or 115 V, 60 Hz
dimensions	approx. 935 x 550 x 550 mm (H/W/D)
weight	approx. 80 kg (without PC and accessories)

Application Examples

Optical materials (e.g. fused silica, Al_2O_3, CaF_2, BaF_2, MgF_2)

Optical components (e.g. lenses, windows, prisms)

Tubing glass and related products (e.g. lab glass, reaction tubes)

Custom adaptations and special versions are possible on request. No responsibility is taken for the correctness of the information. All information is subject to change without prior notice.

Product website: www.ilis.de/en/strainmatic.html

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