SHSInspect - Technical Product Information

SHSInspect for testing of transmitted light

SHSInspect HR - High-resolution system

Wavelength	635 nm
Diameter	1 mm - 20 mm
Sample type	positive, negative, afocal planar, spherical, aspherical, cylindrical numerical aperture: 0 - 0.9 (optics as accessories)
Lateral sampling	55x42 (SHSLab HR)
Accuracy	< 40 nm (pv)
Sensitivity	< 3 nm (rms)
Evaluation rate	up to 20 Hz
Sample alignment	x, y, α, β, γ (for centering)
Sample mount	customized
Computer	notebook or PC

System options

Alignment	Micrometer alignment stage for microscope objective
Optics	Various microscope objectives and illumination optics
Light sources	405 nm ... 1064 nm
Magnification	Exchangeable telescopes
other resolutions	on demand

Software

Camera control	automatic
Export	ASCII, BMP, clipboard
Evaluation	wave-front (incl. Zernike), PSF, MTF, centering, focal length (EFL)
Passfail analysis	various parameters and combinations can be selected
Access control	expert and simple user mode
Reporting	adaptable to customer´s demands
Automatic archiving	

SHSInspect for testing in reflected light*

Diameter*	0.1 mm - 40 mm

* Preliminary: All other data analogous to the SHSInspect basic system as far as applicable.

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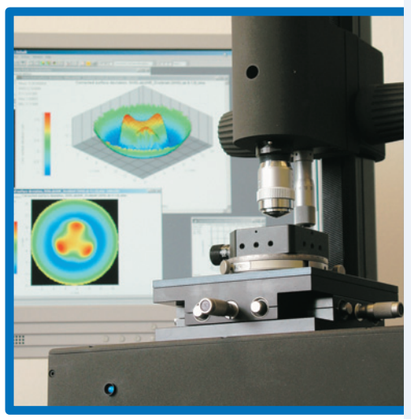
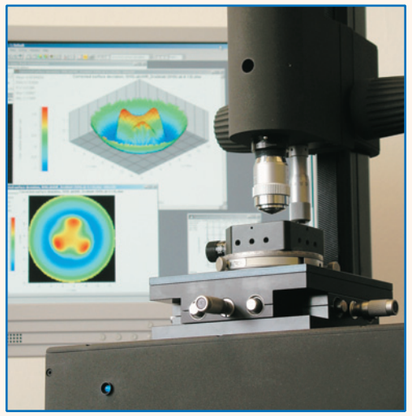


SHSInspect
Product Information

SHSInspect - The Universal Tool for Optical Testing

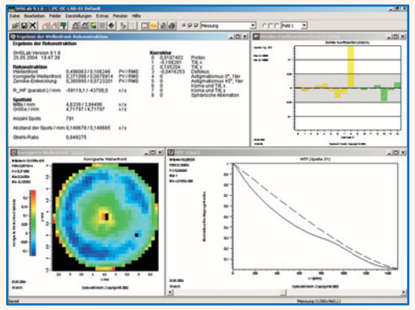
SHSInspect for manufacturers and users

SHSInspect is the universal tool for random sample or small series testing. It simplifies the workflow, ensures product quality by means of reliable control measurements and also enables the optimization of optical systems.
SHSInspect can be profitably applied for both final inspection at the manufacturer's site and for the incoming-goods inspection at the user's site. The communication of quality criteria between manufacturers and users will be especially simplified if the wave-front is considered in addition to the modulation transfer function.
SHSInspect has a manual adjustment system and provides easy and safe operation. The customer-specific measurement task can optionally be automated*.



Software

The functionality of the software and the metrology features of the SHSInspect hardware are tailored to each other. The particular requirements of users in production, research and development have been taken into account. Various automatic functions facilitate the software usage in everyday business.



SHSLab with Zernike plot, wave-front and MTF

The SHSLab sensor module software offers:

Excellent user-friendliness

- Configurable pass-fail-analysis
- Export of all data fields and plots
- Automatic adjustment of measurement parameters
- Automatic reporting and archiving after evaluation
- Password protection for administrator and customized user mode

Optimum effectiveness

- Extreme measurement dynamics
- Sophisticated calibration functions for extreme accuracy
- High evaluation speed (live mode)
- Comprehensive analysis (Zernike, PSF, MTF, M^2, ...)

* see also: SHSAutolab automation platform

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SHSInspect - Application Spectrum

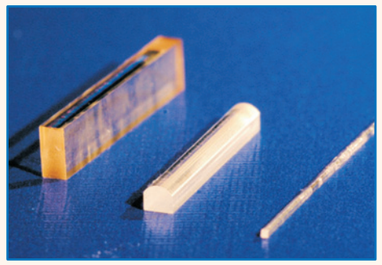
Applications in optics testing

SHSInspect is ideally suited for measuring optical elements and systems or even active optical systems, such as laser modules. It is based on the SHSLab wave-front sensor and offers the same comprehensive functionality and superior quality. SHSInspect allows for measurement possibilities that cover the most common characteristics of optics and active optical systems:

- Imaging quality: wave-front, point spread function, modulation transfer function, etc.
- Imaging parameters: focal length, chromatic errors (optional), etc.
- Alignment of single elements in the optical path
- Surface deviations
- Laser beam parameters

Thus, SHSInspect is well-suited for the characterization of the following test samples:

- Intraocular lenses and contact lenses
- Spectacle lenses
- Lenses for optical storage applications
- Camera objectives for mobile devices
- Optics for automotive vision systems
- Various micro lenses or micro-optical systems
- Objectives (e.g., for night vision systems)
- Flat optics and filters
- FAC lenses and other cylindrical optics
- Laser modules



Refractive and GRIN cylindrical lenses

Intraocular lens

Monocular

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