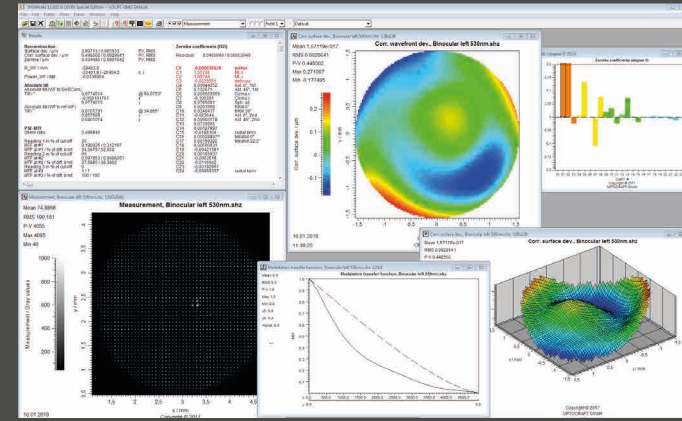


# All you've ever wanted to know about your optics – captured by SHSInspect!

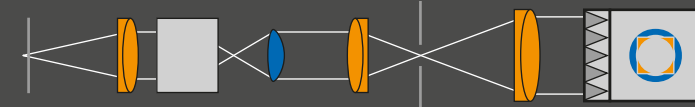
SHSWorks captures multiple properties of optics and optical systems – in just one single measurement.

- Wavefront, Zernike, PSF, MTF
- On axis and off axis aberrations
- Chromatic aberrations
- Adjustment
- Surface shape, radius of curvature
- Additional VCC camera



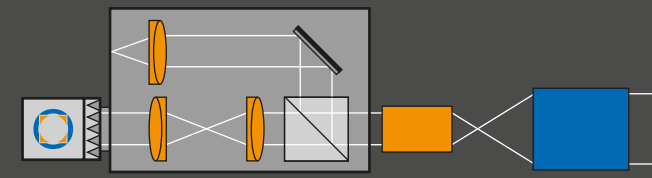
## Measurement configurations

1Xpass: single pass measurement



- Plano filters, lens elements, aspheres
- Calibration with golden master sample

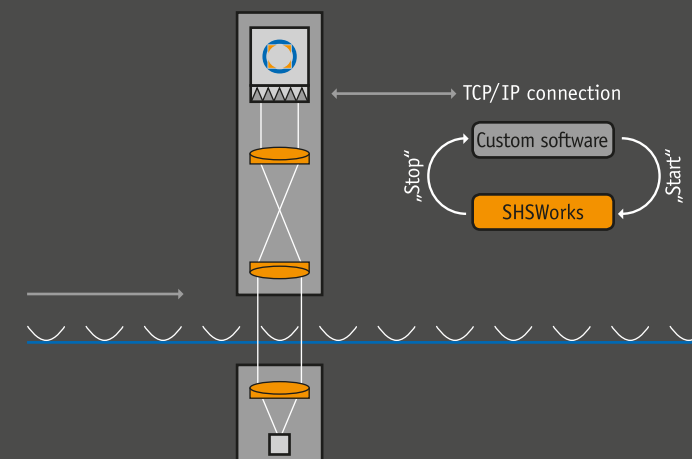
2Xpass: double pass measurement



- Lens assemblies, telescopes, binoculars
- Calibration with flats, spheres
- Finite and infinite conjugate

## Automatic and automation functions

- Multifunctional systems with automatic processing
- Transmitted and reflected light configuration
- Modules for integration into automated manufacturing
- Fast, robust, reliable



## Why Optocraft?

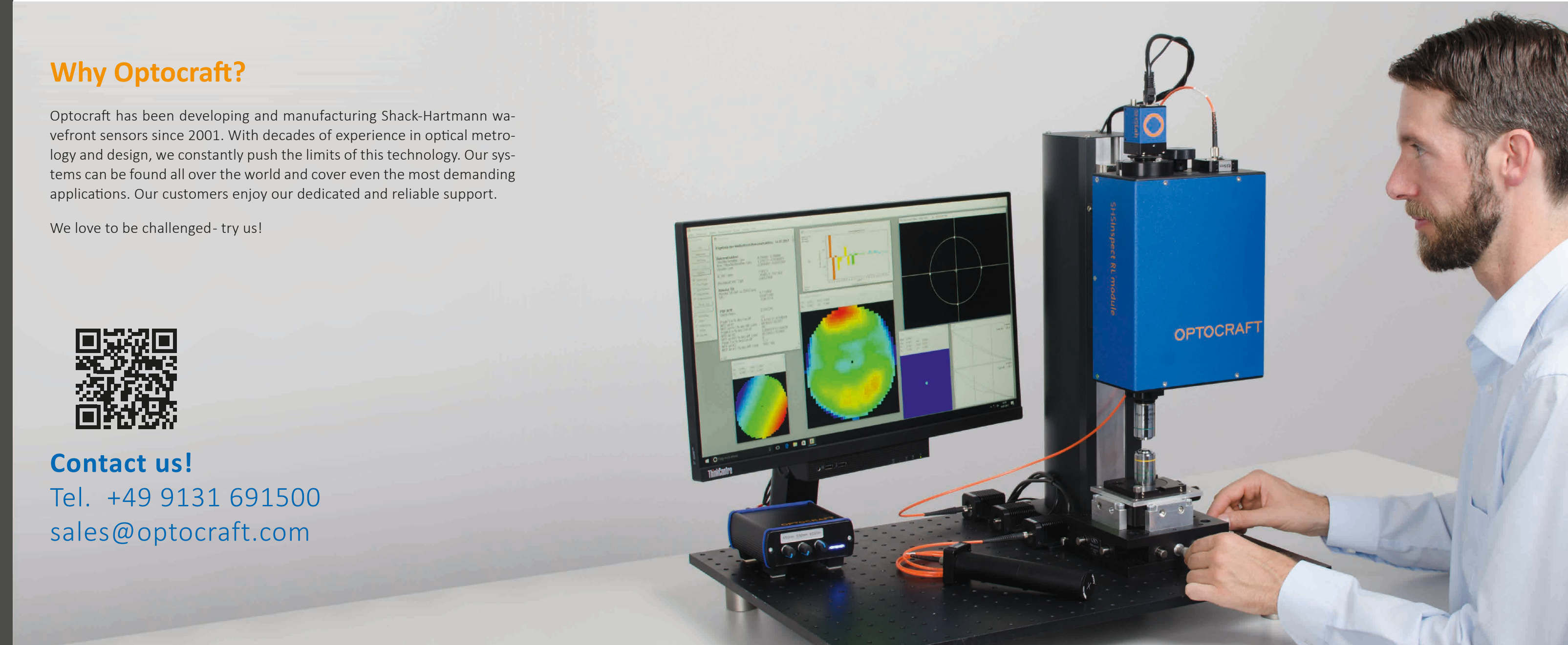
Optocraft has been developing and manufacturing Shack-Hartmann wavefront sensors since 2001. With decades of experience in optical metrology and design, we constantly push the limits of this technology. Our systems can be found all over the world and cover even the most demanding applications. Our customers enjoy our dedicated and reliable support.

We love to be challenged- try us!



## Contact us!

Tel. +49 9131 691500  
[sales@optocraft.com](mailto:sales@optocraft.com)



**Know your quality.**  
 Optical metrology made by Optocraft

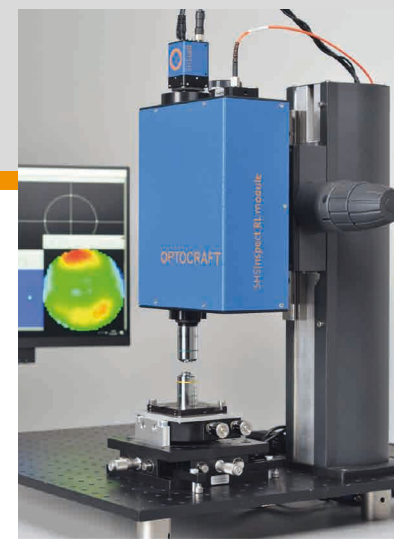
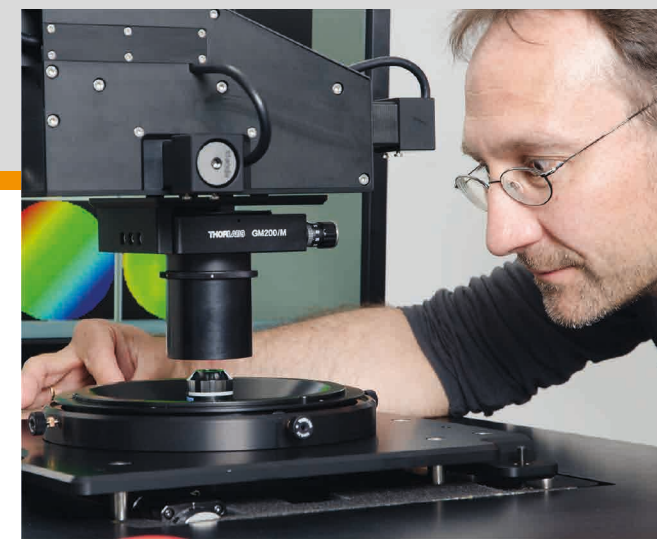
**SHSInspect**  
 Optics testing systems you can rely on



# The SHSInspect applications

Optocraft's instruments are widely used in R&D and production when performance, reliability and efficiency counts most. Based on the state-of-the-art wavefront sensor SHSLab, Optocraft offers measurement modules, turnkey instruments and automated systems for a great variety of applications in the field of optics and optical systems.

Measurement of ...	SHSInspect		
	RL module	1Xpass	2Xpass
<b>Optical elements</b> Plano optics, filters, spheric and aspheric lens elements, mirrors, etc.	✓	✓	✓
<b>Micro optics</b> Micro optics down to a diameter of 0.05mm with high numerical aperture	✓	✓	
<b>Optics for lasers and microscopy</b> Objectives with low and high NA, air and immersion, high end and mass production	✓		✓
<b>Optics for consumer devices</b> R&D and quality control of lenses for mobile devices, camera lenses, etc.	✓	✓	✓
<b>Astro optics and systems</b> Telescopes, instruments, etc.	✓		
<b>Optics in mass production</b> Automated assembly, automated inspection, etc.	✓		



# Turnkey solutions

Multifunctional test platform for testing objective lenses, plano windows, optical elements and afocal optics.

## SHSInspect 1Xpass

All-in-one instrument for testing flat optics, filters and lens elements.

- Transmitted wavefront, Zernike, PSF, MTF
- Accuracy better than  $\lambda/20$  PVr
- High intrinsic stability and reliability



## SHSInspect 2Xpass

All-in-one instrument for multifunctional measurements of lens assemblies and objective lenses.

- Transmitted wavefront, Zernike, PSF, MTF
- On-axis and off-axis measurement
- Chromatic aberrations
- Polarisation effects
- Automated measurement process

# Modules & Custom solutions

Optical measurement modules for inline testing or integration into customer setups. Customization of standard instruments and development of fully-customized solutions.

## SHSInspect RL module

Optical measurement module for integration into test benches, OEM, inline testing.

- Transmitted Wavefront, Zernike, PSF, MTF
- Accuracy:  $\lambda/20$  PVr
- Alignment and final testing
- Surface shape measurement



## SHSInspect 1Xpass module

Wavefront measurement module for functional testing of optics in single pass configuration.

- Transmitted Wavefront, Zernike, PSF, MTF
- Refractive power
- Lens diameter



### Why SHSInspect?

- Single shot, high speed measurement based on Optocraft's state-of-the-art wavefront sensor technology
- Broad spectrum of applications: low demand on coherence allows for a wide range of light sources
- Robust and reliable: minimum requirements on the operating environment. Produces accurate results even when vibrations cannot be eliminated
- Stand-alone or integrated into manufacturing environments

*„At Zeiss AG, Consumer Products, we utilize Optocraft's SHSInspect RL module to investigate the optical aberrations of our lenses in order to ensure best in class performance of ZEISS products. Optocraft stands behind their products all the way from concept development to deep technical recommendations and solutions. Their support was instrumental in every phase of the project. There are no black boxes, neither in hardware nor in software, which was absolutely necessary to build a reliable and highly accurate metrology setup.“*

**Carl Zeiss Consumer Products  
Application & Testing division**