



Metrology Systems

- 3D Optical Profilers
- Laser Interferometers
- Nano-Position Sensors
- Custom Metrology Solutions

Laser Interferometers

- Verifire™
- Verifire™ HD
- Verifire™ HDX
- DynaFiz®
- Mx™ Software
- Interferometer Accessories

Special Applications

- Verifire™ MST
- Infrared Interferometers
- Verifire™ VTS
- Verifire™ XL
- Large Aperture Systems Upgrades

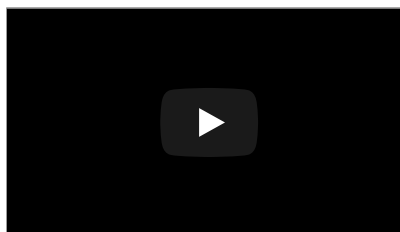
Unique Technologies

- QPSI™
- DynaPhase®

Verifire™ HD

High Definition Interferometer System with QPSI™ Vibration Tolerant Technology

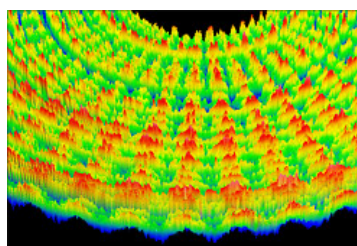
ZYGO's Verifire™ HD interferometer system provides fast high-resolution measurements of flat or spherical surfaces, and transmitted wavefront measurement of optical components and assemblies. The interferometric cavity length is precisely modulated while a high-speed camera captures several fringe images, which are analyzed by the software to create a highly detailed measurement of the part being tested.



Watch: Verifire™ HD QPSI™ demo on shop floor.

Exposes Mid-Spatial Frequency Surface Features

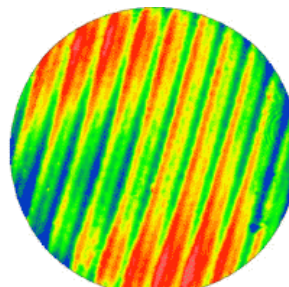
Mid-spatial frequency features can't hide any longer. The Verifire HD system boasts a hi-res camera and optimized optical design to reliably measure surface features that have been difficult to discern in the past. Plus, the Mx™ software package provides the facility to quantify mid-spatial frequency content with powerful Power Spectral Density (PSD) and diffraction simulation tool.



Mid-spatial frequency chatter on a single point diamond turned optical surface

QPSI™ Vibration Tolerant Interferometry

QPSI technology eliminates ripple and phase noise caused by common sources of vibration such as grinding and polishing equipment, motors, pumps, blowers, and personnel, which means you can use the Verifire HD system right on the production floor, without the hassle and expense of vibration isolation tables.



Animated comparison of a PSI measurement with fringe print-through due to vibration, and the same surface measured with QPSI™ technology - free of noisy print-through.

QPSI is enabled by a powerful new proprietary laser and a high frame rate camera. No calibration or special setup is required. A simple change of a menu option enables/disables QPSI technology.

Powerful Long-Life Laser

The unique performance capabilities of the Verifire HD system require an equally unique laser. It had to be more powerful than lasers typically found in interferometers, and we wanted it to have a much longer life span so as to minimize the inconvenience of downtime.

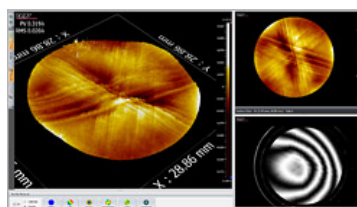


Proprietary long-life lasers are designed and manufactured by Zygo.

To ensure the laser met our stringent requirements and exacting standards, we decided to design and build it in-house. Our proprietary field-proven design provides unmatched reliability and a longer service life. This high-performance laser available exclusively from ZYGO.

Mx™ Software

ZYGO's proprietary Mx™ analysis software offers a wide range of operational features and data analysis tools for unmatched measurement capability in an easy-to-use interface. The built-in SPC provides powerful capability for production situations.



How it Works

The Verifire™ HD system uses the principle of mechanical phase modulation to show

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Spec Sheets ▼



Application Notes ▶

Manuals ▶

Technical Papers ▶

Note: Login Required to download Application Notes; Click for details.



What's New at ZYGO?

- » **Blog:** AMETEK Essential Businesses Remain Open During COVID-19 Outbreak
- » **Blog:** ZYGO's Statement on the COVID-19 Outbreak
- » **Blog:** New Interferometer System Boosts Productivity for Spherical Optics Manufacturers
- » **Blog:** Measuring Surface Form of Thin Plane-Parallel Optics, the Quick and Easy Way
- » **Blog:** Characterizing Cylinder Surfaces at Each Step of the Thermal Barrier Coating Process
- » **Blog:** Nano-Positioner Manufacturer Chooses ZYGO DMI System to Characterize Performance



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fine measurement detail on optical surfaces with excellent precision and repeatability. During a measurement, the interferometric cavity length is precisely modulated while a high-speed 5.3 megapixel camera captures several fringe images, which are analyzed by the software to create a highly detailed measurement of the part being tested.

Measure glass or plastic optical components like flats, lenses, and prisms - precision metal components like computer disks, bearing and sealing surfaces - polished ceramics, and contact lens molds, too.

- 5.3 megapixel camera
- Point source or coherent noise reduction (artifact suppression)
- Ultra-precise phase measuring interferometry
- Resolves mid-spatial frequency surface features
- QPSI™ technology provides reliable measurements in production environments
- Proprietary long-life powerful laser

Inquiry Form

Please use the form below to contact us with any questions you have regarding ZYGO's Verifire HD interferometer system, or interferometry in general.

First Name * Last Name *

Phone Number E-mail Address *

Company or Organization * Job Title or Function *

Street Address City

State/Province † Zip/Postal Code

Country/Region *

Check this box to provide consent for ZYGO to contact you in the future. **

Please indicate your level of interest... *

- Current Need
 Upcoming Need
 Possible Need
 Gathering Data

Please type your inquiry below:

* Required entries
† Required for USA and Canada

Submit Form

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