SURFACE FORM | TRANSMITTED WAVEFRONT | ADVANCED ANALYSIS

Verifire™ HD

LASER INTERFEROMETERS

Advanced Spatial Resolution and Imaging for Precision Metrology

Distribution in the UK & Ireland

Lambda

www.lambdaphoto.co.uk

zygo®

AMETEK®
ULTRA PRECISION TECHNOLOGIES

PRECISE LASER INTERFEROMETERS DESIGNED FOR MAXIMUM SPATIAL RESOLUTION AND ITF PERFORMANCE.

The Verifire™ HD laser interferometer represents advanced performance and spatial resolution for high precision metrology and characterization of optical components and systems in both manufacturing and laboratory environments.

The Verifire HD features a fully coherent design and high resolution 5.3 megapixel camera to produce high-quality imaging of test parts. In addition, the Verifire HD interferometer also includes a proprietary, frequency stabilized laser that delivers high output and life-long reliability and ZYGO's patented QPSI vibration-tolerant acquisition technology which provides the instrument with its unique ability to obtain reliable measurements in production environments.

The Verifire HD interferometer is also supported by a full range of hardware options and optical accessories and is powered by our comprehensive software platform, MX™, providing key data acquisition, analysis, and visualization functions, and instrument hardware control. Versatility and expanded capabilities are easily accessible through defined applications or customizable recipes and scripts.

The modular design allows for configurability to address a wide range of applications, with available apertures from 25 mm to 800 mm, horizontal and vertical mounting configurations, and a complete line of reference optics and accessories from industrial grade to extreme precision.

Verifire™ HD system provides increased spatial resolution and combined with the reliability and versatility of the industry-leading Verifire series of laser interferometers.

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INDUSTRY-LEADING FEATURES

HIGH SPATIAL SAMPLING

Large megapixel camera delivers high data density.

The Verifire™ HD interferometer comes standard with a 5.3-megapixel camera (2.3 x 2.3K camera array) providing high spatial resolution and data density for high definition surface form and transmitted wavefront metrology.

QPSI™ VIBRATION TOLERANT METROLOGY

Ensuring reliable and precise results in vibration-prone environments.

QPSI technology is a ZYGO patented on-axis acquisition method that can tolerate production level vibrations while providing optimum measurement accuracy at full camera resolution, without the need for special calibrations or specific cavity configuration. Metrology without compromise.

ULTRA-PERFORMANCE LASER

High output, frequency stabilized laser with 3-year warranty—all standard.

Designed and manufactured in the USA by ZYGO, our lasers boast higher power and reliability than any 633 nm HeNe laser used in a commercially available Fizeau laser interferometer. With a lifetime rating of >70,000 hours, and backed by an industry-leading 3-year warranty, our lasers deliver the performance and reliability that you expect from ZYGO.

SMARTAVERAGING™ ACQUISITION

Eliminates guesswork in yielding the lowest noise measurements.

With our unique Smart Averaging™ software feature, you get the highest level of precision and measurement throughput, simply and automatically, providing you with a simple solution for optimizing metrology and minimizing operator variability.

COHERENT ARTIFACT REDUCTION SYSTEM (CARS)

See what you want, how you want—with variable zoom.

Our CARS solution reduces imaging artifacts and noise from wavefront shearing, speckle or mottle – by a factor of 6-10 times. Our hardware-based CARS solution is simply turned on/off via a software setting, and is ideally suited for applications requiring sub-nanometer precision and highest quality surface data.

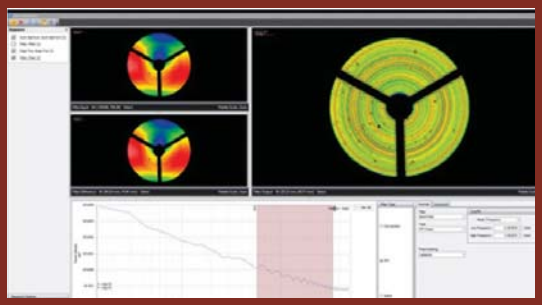
POWERFUL SOFTWARE SUITE

The Verifire™ laser interferometer is powered by our Mx™ data acquisition and analysis software package, with hundreds of reportable parameters. Surface characterization and measurement applications include:

- Radius of Curvature
- Transmitted Wavefront
- Material Homogeneity
- Peak-to-Valley; PVr
- Prism, Wedge, Corner Cube
- PSD, PSF, MTF Analysis
- Grazing Incidence
- Zernike and Legendre Fits

Additional features and capabilities include:

- Scripting
- Remote Access



LEADING HARDWARE OPTIONS AND REFERENCE OPTICS

Precision metrology depends on high quality reference optics. That's why we design, manufacture and qualify our transmission flats and spheres to provide you with optimum performance from your laser interferometer. Our certified manufacturing and metrology processes are based on NIST approved calibration techniques, ensuring that all ZYGO reference optics meet or exceed the specified performance.

Hardware options include:

- Encoded and Zoom Turret Focus
- Switchable Polarization

zygo®

Offering the broadest and most reliable optical metrology solutions in the industry for more than 45 years! See why ZYGO is the most trusted brand of laser interferometer today.

Metrology without compromise.

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