

NewView™ 7000

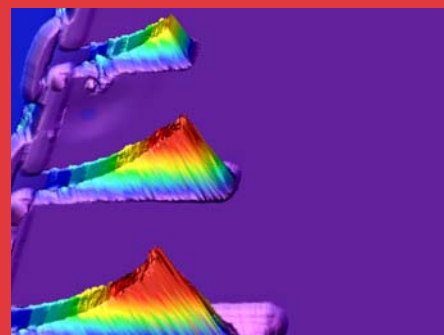
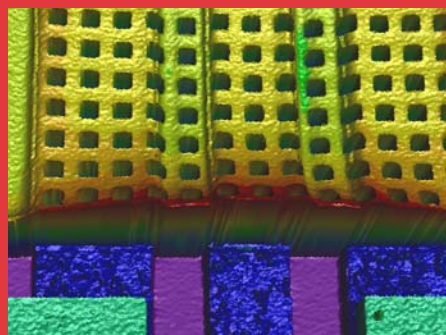
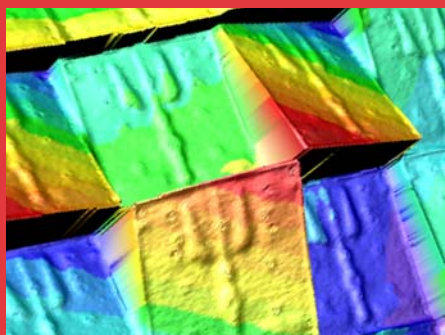
ZYGO CORPORATION'S

NewView™ 7000 Series of 3D Optical Profilers

Precise, Noncontact Surface Metrology for MEMS

To meet the challenges and varying needs of MEMS research and production, Zygo Corporation has developed the NewView™ 7000 series of 3D optical profilers for precise surface measurement and characterization of micro-devices. Employing leading-edge and patented scanning technology, the NewView™ enables noncontact surface profiling of smooth and rough surfaces, large steps, and thick films, for flexible and complete MEMS metrology on a single platform – with sub-nanometer resolution.

- Fast, noncontact surface topography measurement
- Full 3D static and dynamic metrology capabilities
- Sub-nanometer Z-resolution
- Leading precision and gage capability
- Enhanced optical imaging
- Variable field-of-view and magnification
- Large vertical scan range
- Long-working distance imaging objectives
- Comprehensive data segmentation and analyses
- Flexible and configurable platform
- Compatible with diffuse or specular surfaces



zygo®

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ZYGO's powerful measurement and analysis software, MetroPro™, is integral to all NewView™ 7000 systems and provides extensive 2D and 3D data analysis, visualization, and data processing options. User-friendly MetroPro™ also enables customizable displays, password protection, pass/fail controls, program recipes, and more. A number of advanced application modules are available to extend the capabilities of the instrument, such as dynamic metrology, segmentation analysis, field stitching, and film analysis.

Productivity and ease-of-use is maximized with performance enhancing features, such as programmable motorized sample staging, auto-focus, motorized system zoom and objective turret for reliable and optimized functionality.

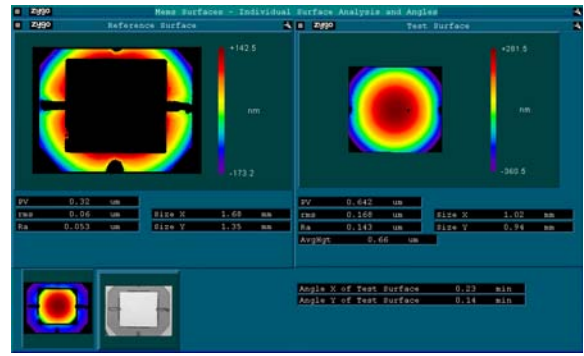
The NewView™ provides the ideal combination of resolution, speed, and range for precise measurement of key MEMS device parameters:

- Step-height
- Critical Dimensions
- Curvature and Shape
- Roughness
- Tilt and Angle
- Motion and Displacement

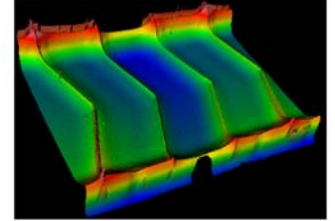
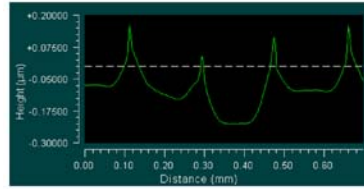
Applications

The NewView™ 7000 series is capable of characterizing a wide range of MEMS devices and precision surfaces including:

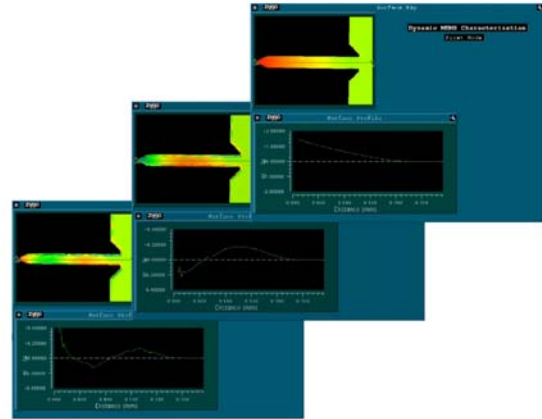
- Accelerometers
- Pressure Sensors
- Inkjet Printheads
- Micro-Mirror Displays
- RF Filters
- Lab on Chip
- Environmental Sensors
- Optical Switches
- Gyroscopes
- Hearing Aids
- Biochips



MetroPro™ offers segmentation analysis, enabling regions of interest to be automatically identified (based on height or intensity parameters) and analyzed.



MetroPro™ features proprietary film correction and analysis tools to enable 2D and 3D profiling of complex structures and surfaces containing transparent films (thickness $\geq 1\mu\text{m}$).



Measurement of moving structures is possible with the optional dynamic metrology module, allowing 2D and 3D characterization of in-plane and out-of-plane parameters. The above example reveals the deformation of a cantilever at various resonant frequencies (75 KHz, 450 KHz, 1.2 MHz).

Contact ZYGO today to arrange for a free analysis of your samples and a NewView™ 7300 demonstration at a location near you!

Covered by one or more of the following US patents: 4,948,253, 5,402,234, 5,398,113, 5,953,124, 5,784,164, 6,028,670, 6,597,460, 6,822,745, 6,775,006, and 6,714,307. Other US and foreign patents pending.

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