



ContourX-100 3D Optical Profilometer

- Streamlined and Affordable Benchtop for Roughness Metrology

The ContourX-100 Optical Profilometer sets a new benchmark for accurate and repeatable non-contact surface metrology at a best-in-class price point. The small footprint system offers uncompromised 2D/3D high-resolution measurement capabilities in a streamlined package that incorporates decades of proprietary Bruker white light interferometry (WLI) innovation. The gage-capable benchtop system features the industry's most advanced user-friendly interface to provide intuitive access to an extensive library of pre-programmed filters and analyses for precision machined surfaces, thick films, and tribology applications. Next-generation enhancements include a new 5 MP camera, updated stage, and new measurement modes for even wider flexibility. You will not find a more streamlined benchtop system with better value than the ContourX-100.

Fast and repeatable 3D Metrology

- Industry-best Z resolution, independent of magnification
- Largest standard field of view
- Compact, vibration-tolerant design for highest stability and repeatability

Superior Measurement and Analysis

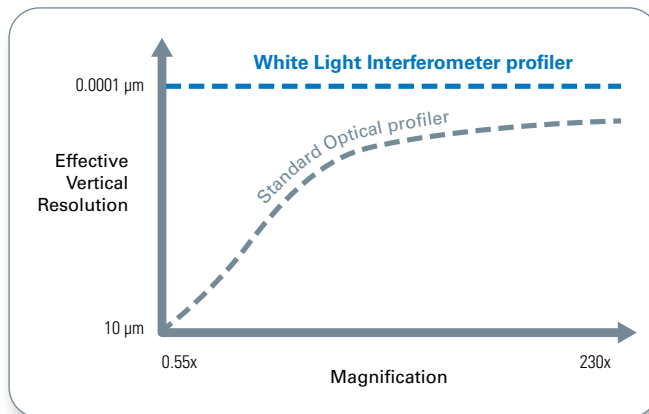
- Easy-to-use interface for quick and accurate results
- Extensive library of filters and analysis options for roughness, surface texture, and critical dimension
- Customized analysis reporting to industry standards, such as ISO 25178, ASME B46.1, ISO 4287

Unparalleled Metrology

The ContourX-100 profiler is the culmination of over four decades of proprietary optical innovation and industry leadership in non-contact surface metrology, characterization, and imaging. The system utilizes 3D WLI and 2D imaging technology for multiple analyses in a single acquisition. ContourX-100 is robust in all surface situations from 0.05% to 100% reflectivity.

Unmatched Value and Analysis

With thousands of customized analyses and Bruker's simple and powerful VisionXpress™ and Vision64® user interfaces, the ContourX-100 benchtop is optimized for productivity in both labs and on factory floors. The hardware and software combine to provide streamlined access to top high-throughput optical performance, completely outclassing comparable metrology technologies.



WLI offers constant and ultimate vertical resolution for all objectives.



ContourX-100 manual stage.

ContourX-100 Specifications

| | |
|-----------------------------------|---|
| Max. Scan Range | ≤10 mm |
| Vertical Resolution ¹ | <0.01 nm |
| Lateral Resolution | 0.38 μm min (Sparrow criterion); 0.13 μm (with AcuityXR®) |
| Step Height Accuracy ² | <0.75% |
| Step Height Repeatability | <0.1% 1 sigma repeatability |
| Max Scan | 37 μm/sec (with standard camera) |
| Reflectivity Range | 0.05% to 100% |
| Max. Sample Slope | ≤40° (shiny surfaces); ≤87° (rough surfaces) |
| Sample Height | ≤100 mm (4 in.) |
| XY Sample Stage | 150 mm (6 in.) manual stage |
| Z Focusing | 100 mm (4 in.) |
| Tip/Tilt Function | ±6° available on stage |
| Optical Metrology Module | Patented dual-color LED illumination; Single-objective adapter; Optional automated or manual turret; Optional motorized or manual discrete modules |
| Objectives | Parfocal: 2.5X, 5X, 10X, 20X, 50X, 115X; LWVD: 1X, 1.5X, 2X, 5X, 10X; TTM: 2X, 5X, 10X, 20X; Bright Field: 2.5X, w5X, 10X, 50X |
| Available Zoom Lenses | 0.55, 0.75X, 1X, 1.5X, 2X |
| Camera | Monochrome (standard) or color (optional); 5 MP with 1200x1000 data array |
| Software System | Vision64 and VisionXpress Analysis Software on Windows 10 OS; 64-bit |
| Software Packages | USI; Advanced PSI; Production Mode; VisionMAP; AcuityXR®; Optical Analysis; SureVision; Film; MATLAB; SDK, TCP/IP |
| Automation | Auto intensity; auto focus; auto-saving, on-fly analysis; recording in database |
| Calibration | Via NIST/PTB traceable step height and lateral ruler standards |
| System Footprint | 451 mm (W) x 533 mm (D) x 754 mm (H) |
| Weight | 60 kg |
| Warranty | 12 months |

¹ As demonstrated by taking the one sigma Sq value of 30 PSI repeatability measurements on an SIC reference mirror.

² Absolute accuracy for step heights 8 μm and higher.

● Bruker Nano Surfaces and Metrology Division

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