



ZeroTouch®

ZTS-1020 / ZTS-1050

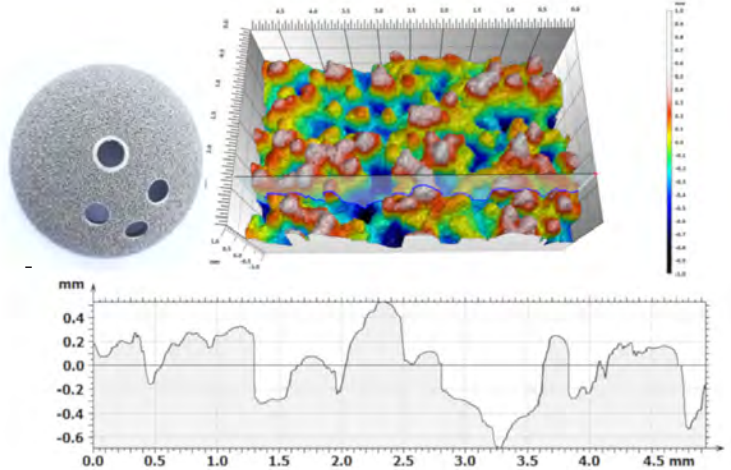
NON-CONTACT 3D SURFACE PROFILING SENSOR

A high-speed, precision surface profiling inspection sensor for shop floor installation.

The ZeroTouch® 1000 Series non-contact surface profiling sensor generates a precision 3D point cloud of surface micro-geometries and micro-structures down to single atom layers.



Measurement of Surface Roughness Standards Exceeding Ra max. 80µm



KEY BENEFITS

- Non-contact measurements of smooth, rough, and specular surfaces such as glass, metal, plastic, and composite
- Precise measurement of height and relevant surface parameters
- Installed in the immediate vicinity of the production line
- Inspects mirrors, semiconductor wafers, microlenses, and solar cells
- Micron-level fast measurements of various surface profiles
- 3D sensor with manually interchangeable objective

KEY FEATURES

- White-light interferometry based, very high resolution sensors (5 MP and 2.3 MP)
- Piezo positioning system with interferometric calibrated closed-loop controller (up to 5,000µm scan range)
- Optional XY positioning table with manual Z adjustment
- Advanced algorithms improve speed and reduce system noise

DWF



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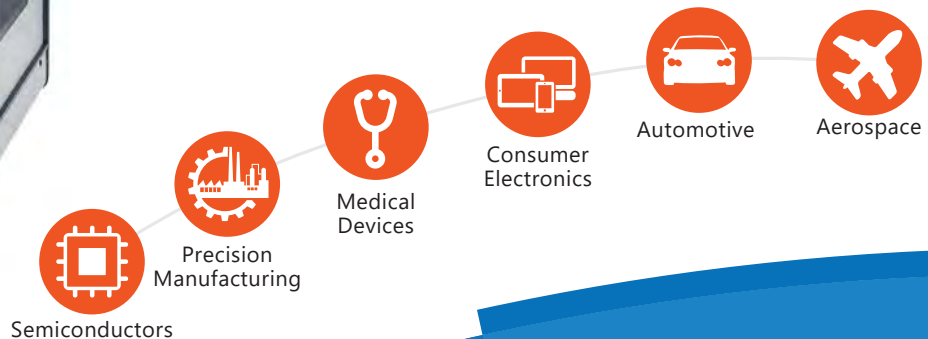
SPECIFICATIONS

HIGH-RESOLUTION CAMERA	5 MP	2.3 MP
Measuring Points	2456 x 2054	1920 x 1200
Scanning Speed Full Resolution	77 Hz	169 Hz
Scanning Speed ROI	Up to 2 kHz	Up to 3.2 kHz
Topography Reproducibility	<7nm	<5nm
Scanning Speed	5.2µm/s	11.4µm/s
SYSTEM PERFORMANCE		
1-σ Reproducibility 0.4µm Step Height	<10nm	
1-σ Reproducibility 12µm Step Height	<20nm	
1-σ Reproducibility 100µm Step Height	<30nm	
SCANNING		
Scan Range	Up to 5,000µm	
Max Scanning Speed	~400µm/s	
Digitization	Up to 0.01µm	
SOFTWARE		
OS	Windows 10	
Analysis Software	MountainsMap	

MACHINE SIZE	
Sensor Weight	~2 kg (4.4 lbs)
Coarse Positioning Range (max.) (manual Z positioning)	70 mm
Fine Positioning Range (manual Z positioning)	1.9 mm
Tilting Angle (leveling device)	±3°
POSITIONING TABLES	
Positioning Area	100 x 100 mm²
Positioning Options	Manual or Automatic
Load Capacity	2 kg
Resolution	0.01µm
Orthogonality	<10arcsec
Vibration Isolation	Options available
ENVIRONMENTAL	
Temperature (Operational)	10°C (50°F) to 35°C (95°F)
Relative Humidity (Non-Condensing)	Up to 80%
ELECTRICAL SUPPLY	
Electrical Service	100 to 240 VAC, 50/60Hz



KEY INDUSTRIES



DWFRITZ®
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DWFritz Metrology is a global provider of high-speed, non-contact metrology and inspection platforms for advanced manufacturing. The company designs, builds, and supports engineer-to-order automation systems, as well as provides world-class build-to-print manufacturing capabilities.