NewView™ 7200 Specifications

System	
Measurement Technique	Non-contact, three-dimensional, scanning white light interferometry
Scanner	Closed-loop piezo-based, with highly linear capacitive sensors
Objectives	1X, 2X, 2.5X, 5X, 10X, 20X, 50X, 100X; objectives available in standard and long working distances Refer to the NewView Objective Chart for objective specifications
Objective Mounting Options	• Single objective dovetail • Manual 6-position turret • Motorized 6-position turret
Field Zoom Lenses	High-quality discrete zoom lenses; 0.5X, 0.75X, 1.0X, 1.5X, 2.0X
Image Zoom	Single user-interchangeable zoom lens
Field of View	From 0.03 to 14 mm; larger area imaged with field stitching; objective and zoom dependent
Illuminator	Unique single white-light LED design with superior life, uniform imaging and high efficiency
Controls	Filter Tray and Field Stop (Focus-aid)
Measurement Array	Selectable, includes standard-640x480, 320x240, 160x120; optional- 992 x 992 (1K)
Part Viewing	Secondary LCD monitor
Focus	Motorized manual and auto focus
Z-Drive (Focus) Stage	DC brushless microstepper motor with ballscrew drive, 4 in. range, and 0.1 µm resolution
Part Stage Options	• Manual Tip/Tilt/X/Y with ±6° tip/tilt, ±2 in. x/y • Motorized Tip/Tilt/X/Y with ±4° tip/tilt, ±3 in. x/y • Motorized Tip/Tilt/X-Theta (or Y-Theta) with ±4° tip/tilt, ±3 in. linear travel
Computer	High-performance Dell PC with LCD monitor
Software	ZYGO MetroPro software running under Microsoft Windows XP

Physical	
Dimensions (H x W x D)	Overall System: 62 x 52 x 35 in. (157 x 132 x 89 cm) NewView: 32 x 23 x 16 in. (81 x 58 x 41 cm) Vibration Isolation Table: 30 x 24 x 24 in. (76 x 61 x 61 cm) Workstation Table: 33.5 x 52 x 35 in. (85 x 132 x 89 cm)
Weight	System: ≈ 950 lb (430 kg) NewView: ≈ 200 lb (90 kg) Vibration Isolation Table: ≈ 600 lb (272 kg)

Performance	
Vertical Scan Range	150 µm (5906 µin); Extended scan range to 20 mm (0.79 in.)
Vertical Res.	< 0.1 nm (0.004 µin)
Lateral Res.	0.36 to 9.5 µm; objective dependent
Data Scan Rate	≤26 µm/sec, user-selectable; camera and scan mode dependent
Maximum Data Points	307,200; 984,064 (optional); camera dependent
RMS Repeatability	< 0.01 nm (0.0004 µin) RMSσ
Step Height	Accuracy ≤ 0.75% Repeatability ≤ 0.1% @ 1σ

Test Part Characteristics	
Material	Various surfaces: opaque, transparent, coated, uncoated, specular, and nonspecular
Maximum Size (H x W x D)	3.5 x 8 x 8 in. (89 x 203 x 203 mm); larger sample sizes possible
Reflectivity	1-100%

Environmental Requirements	
Temperature	15 to 30°C (59 to 86°F)
Rate of Temp. Change	<1.0°C per 15 min
Humidity	5 to 95% relative, noncondensing
Vibration Isolation	Required for vibration frequencies in the range of 1 Hz to 120 Hz

Utility Requirements	
Input Voltage	100 to 240 VAC, 50/60 Hz
Compressed Air	60 to 80 psi (4.1 to 5.5 bar); dry and filtered source; 1/4 in. input

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