

NewView™ 7300

Specifications

SYSTEM

ZYGO P/N	6301-0401-01 (VGA camera) 6301-0402-01 (1K camera)
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, 2.75X, 5X, 5.5X, 10X, 20X, 50X, 100X; objectives available in standard and long working distances Refer to the NewView Objective Chart for objective specifications
Objective Mounting Options	<ul style="list-style-type: none"> • 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	Motorized 3-position system zoom
Field of View	Objective and zoom dependent; from 0.03 to 14 mm; larger area imaged with field stitching
Illuminator	Unique single white-light LED design with superior life, uniform imaging and high efficiency
Controls	Filter Tray, Aperture Stop, and Field Stop (Focus-aid)
Measurement Array	Selectable, standard- 640x480, 320x240, 160x120; optional- 1000x1000 (1K camera)
Part Viewing Focus	Integrated on Primary Display Motorized manual and auto focus
Z-Drive (Focus) Stage	DC brushless microstepper motor with ballscrew drive, 100 mm range, and 0.1 µm resolution
Part Stage Options	<ul style="list-style-type: none"> • Manual Tip/Tilt/X/Y with ±6° tip/tilt, ±50 mm x/y • Motorized Tip/Tilt/X/Y with ±4° tip/tilt, ±75 mm x/y • Motorized Tip/Tilt/X-Theta (or Y-Theta) with ±4° tip/tilt, ±75 mm linear travel
Computer Software	High-performance Dell PC w/ 1080P HD display ZYGO MetroPro software running under Microsoft Windows 7 (64-bit)

PHYSICAL

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



PERFORMANCE

Vertical Scan Range	150 µm (5906 µin); Extended scan range to 20 mm (0.79 in.)
Vertical Resolution	< 0.1 nm (0.004 µin)
Lateral Resolution	0.36 to 9.50 µm (14.2 to 374 µin); objective dependent
Data Scan Rate	≤135 µm/sec, user-selectable; camera and scan mode 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, nonspecular
Maximum Size (HWD)	89 x 203 x 203 mm (3.5 x 8 x 8 in.); larger sample sizes possible
Reflectivity	1-100%

ENVIRONMENTAL REQUIREMENTS

Temperature	15 to 30°C (59 to 86°F)
Rate of Temperature 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
Vibration Criterion	VC-C or better

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; for vibration isolation table