

Specifications

SYSTEM	
ZYGO P/N	6314-0100-01
Configuration Options	Manual 100x50 mm XY Motion Kit Motorized 100x100 mm XY Motion Kit Extended work volume head mounting
Measurement Technique	Non-contact, three-dimensional, coherence scanning interferometry
Scanner	Long range z-stage
Objectives	1X – 50X magnification; Standard and long working distance
Objective Mounting Options	<ul style="list-style-type: none"> • Single objective dovetail (standard) • Manual or motorized 4 obj. turret (option)
Field of View	Objective dependent See the Nexview NX2 / NewView 9000 / ZeGage Pro Objective Chart for details
Illuminator	Integrated long-life white light LED with computer controlled light level
Measurement Array	Selectable 1600 x 1200, 1000 x 1000, 1000 x 600, 1000 x 200
Part Viewing	Integrated view window in Mx software
Focus Assist	Mx powered Part Finder with Fast Focus Technology
Z-Drive (Focus) Stage	100 mm travel; head may be mounted at either of 2 heights for optimal work volume Manual Tip/Tilt Stage with $\pm 4^\circ$ travel, and integrated t-slot fixture plate (standard on all configurations)
Part Stage	<ul style="list-style-type: none"> • Manual XY w 50 x 100 mm x/y travel • Motorized X/Y w/ 100 x 100 mm x/y travel
Stage Control	ZYGO XYZ pendant with joystick, speed control, z-stop and emergency stop
System Controller	i7 class PC with 23 in. 1080P display
Software	ZYGO Mx software running under Microsoft Windows 7 (64-bit)

PHYSICAL	
Dimensions (HWD)	156 x 127 x 76 cm (ZeGage on workstation table)
	82 x 53 x 53 cm (ZeGage)
	74 x 127 x 76 cm (Workstation Table)
Weight	ZeGage: 54 kg
	Workstation Table: 37 kg

UTILITY REQUIREMENTS	
Input Voltage	100 to 240 VAC, 50/60 Hz

Specifications subject to change without prior notice.

PERFORMANCE	
Vertical Scan Range	≤ 20 mm (limited by objective working distance)
Surface Topography Repeatability ⁽¹⁾	≤ 3.5 nm
Repeatability of RMS ⁽²⁾	0.1 nm
Optical Lateral Resolution ⁽³⁾	0.52 μm (50X objective)
Spatial Sampling	0.17 μm (50X objective)
Data Scan Speed ⁽⁴⁾	32 $\mu\text{m}/\text{sec}$ @ 1600 x 1200
	42 $\mu\text{m}/\text{sec}$ @ 1000 x 1000
	64 $\mu\text{m}/\text{sec}$ @ 1000 x 600 171 $\mu\text{m}/\text{sec}$ @ 1000 x 200
Step Height Repeatability ⁽⁵⁾	$\leq 0.3\%$ @ 1σ
Step Height Accuracy	$\leq 3\%$

TEST PART CHARACTERISTICS	
Material	Opaque, transparent, coated, uncoated, specular, rough
Maximum Size (HWD)	87 x 100 x 100 mm for 100 mm XY coverage using std. head pos.
	147 x 100 x 100 mm for 100 mm XY coverage using ext. head pos. Larger sample width and depth possible with partial coverage
Sample Reflectivity	0.05% - 100%

ENVIRONMENTAL REQUIREMENTS	
Temperature	15 to 30°C with rate of change $< 1.0^\circ\text{C}$ per 15 min
Humidity	5 to 95% relative, noncondensing
Vibration Isolation	No external isolation required
Vibration Criterion	VC-A or better (recommended)

FOOTNOTES

Performance specifications under laboratory conditions using standard specimens, according to ISO 25178-601, 25178-604 and 5436-1.

- (1) Single measurements at 7.8 $\mu\text{m}/\text{sec}$ scan speed, 1 million image points, 3x3 pixel denoising filter.
- (2) Repeatability of the RMS surface roughness parameter S_q , under the same conditions as for (1). Note that the repeatability of the S_q is sometimes referred to informally as "vertical resolution."
- (3) Lateral Resolution = sparrow criterion, objective dependent.
- (4) Data scan speed depends on the measurement array and data acquisition mode.
- (5) $1-\sigma$ Step height repeatability verified using 1.8 μm and 24 μm NIST-traceable step height standards.

Distribution in the UK & Ireland



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