



VK-X1100
Measurement head: Violet semiconductor laser



*Please note that accessories depicted in the image are for illustrative purposes only and may not be included with the product.

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This model has been discontinued.

Compliance with the certification standard is ensured as of the time of shipment from our company.

Contact Us: 1-888-539-3623

Recommended Replaceable Products: [Measurement head - VK-X3100](#)

Specifications

Model		VK-X1100	
Type		Head unit	
Total magnification		Up to 28,800 x ^{*1}	
Field of view (minimum range)		11 μm to 7,398 μm	
Frame rate (laser measurement speed)		4 to 125 Hz, 7,900 Hz ^{*2}	
Measurement principle	Optical system		Pinhole confocal optical system, Focus variation
	Light-receiving element		16-bit photomultiplier: High-definition color CMOS
	Scanning method (during general measurement and image stitching)		Automatic upper/lower limit setting, high-speed light intensity optimization (AAGII) , poor reflected light intensity supplement (Double Scan)
Height measurement	Display resolution		0.5 nm
	Linear scale		
	Dynamic range		16 bits
	Repeatability σ	Laser confocal	20 x: 40 nm, 50 x: 12 nm
		Focus variation	5 x: 500 nm, 10 x: 100 nm, 20 x: 50 nm, 50 x: 20 nm
	Height data acquisition range		700,000 steps
	Accuracy		0.2 + L /100 μm or less (L = Measuring length) ^{*3}
Width measurement	Display resolution		1 nm
	Repeatability 3σ	Laser confocal	20 x: 100 nm, 50 x: 50 nm
		Focus variation	5 x: 400 nm, 10 x: 400 nm, 20 x: 120 nm, 50 x: 50 nm
	Accuracy		Measured value ±2 % or less ^{*3}
XY stage configuration	Manual: Operating range		70 mm x 70 mm 2.76" x 2.76"
	Motorized: Operating range		100 mm x 100 mm 3.94" x 3.94"
Observation	Observation image		High-resolution color CMOS image 16-bit laser color confocal image Confocal + ND filter optical system C-laser differential interference image
	Lighting		Ring illumination, coaxial illumination
Measurement laser light source	Wavelength		Violet semiconductor laser, 404 nm
	Maximum output		1 mW
	Laser class		Class 2 laser product (IEC60825-1, FDA (CDRH) Part 1040.10 ^{*4})
Power supply	Power voltage		100 to 240 VAC, 50/60 Hz
	Power consumption		150 VA

Weight	Approx. 13.0 kg
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*1 When using a 23 inch full-screen display.
*2 At top speed when using a combination of measurement mode/measurement quality/lens magnification. When the line scan has a measurement pitch that is within 0.1 μ m.
*3 When measuring a standard sample (standard scale) with a 20 x or greater lens.
*4 The laser classification for FDA (CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice.

Dimensions

* Download CAD file or product manual for larger image/text and more detail.

Measurement unit (VK-X1100)

Unit: mm

