



## VK-X1100

Measurement head: Violet semiconductor laser



## SPECIFICATIONS

Model			VK-X1100
Туре			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 <sup>-2</sup>
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 stit ching)		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 <sup>*3</sup>
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 sou rce	Wavelength		Violet semiconductor laser, 404 nm
	Maximum output		1 mW
	Laser class		Class 2 laser product (IEC60825-1, FDA (CDRH) Part 1040.10 <sup>*4</sup> )
Power supply	Power voltage		100 to 240 VAC, 50/60 Hz
	Power consumption		150 VA
Weight			Approx. 13.0 kg

<sup>&</sup>lt;sup>1</sup> When using a 23 inch full-screen display.

<sup>2</sup> 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 μm.

<sup>3</sup> When measuring a standard sample (standard scale) with a 20 x or greater lens.

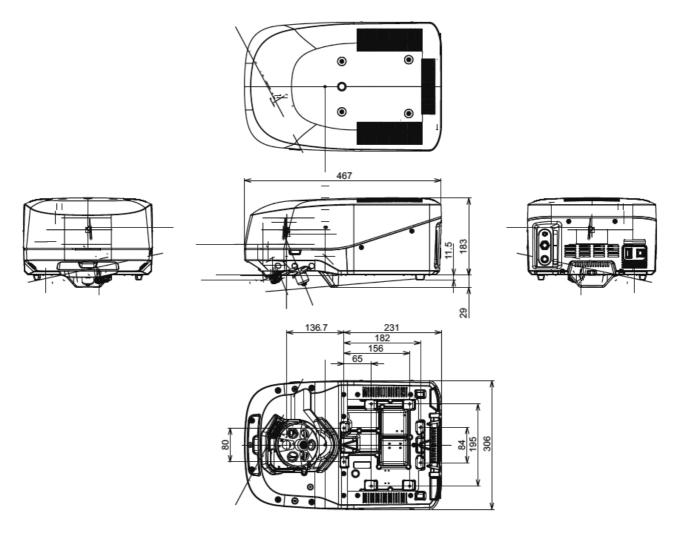
<sup>4</sup> The laser classification for FDA (CDRH) is implemented based on IEC60825-1 in accordance with the requirements of Laser Notice No. 50.



## Dimensions

## Measurement unit (VK-X1100)

Unit: mm



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