High speed optical metrology system

The VIEW Benchmark 250 delivers high performance and reliability in a compact, benchtop package.

Advanced optics, illumination, image processing and available EDFI imaging make VIEW Benchmark a world-class metrology system.

VIEW metrology software (VMS™) offers an advanced programming language for complex, high throughput metrology with a customized production floor user interface.

- Single or dual magnification fixed lens optical system
- Advanced image processing for high speed, accuracy and precision
- Powerful metrology software and data analysis tools

	X	Y	Z
Travel (mm)	300	150	150

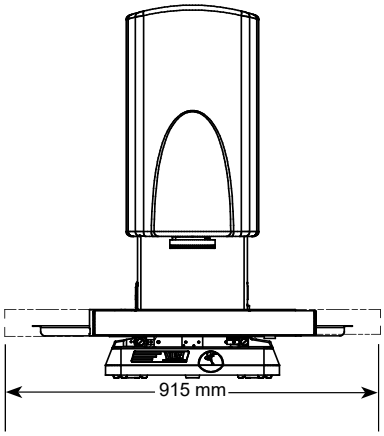
VIEW Benchmark™ 250

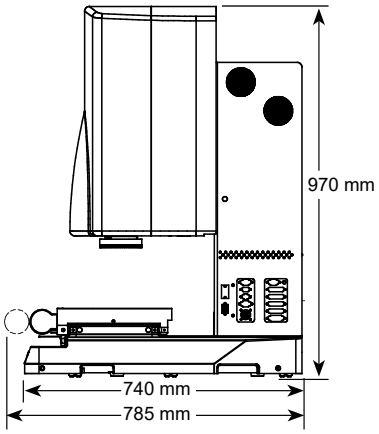
Metrology Software:

- VIEW Metrology Software (VMS)
- Optional: Elements® metrology software
- Optional: Measure-X® metrology software

Optional Software Modules:

- Area Multi-Focus (AMF)
- Extended Depth of Field Image (EDFI)
- Continuous Image Capture (CIC)
- Advanced Image Processing
- COM and Custom UI
- MeasureFit® Plus
- SmartProfile® GD&T evaluation software
- VMS Offline image processing workstation





System weight: 145 kg (uncrated), 315 kg (crated)

	Standard		Optional		
XYZ travel (mm)	300 x 150 x 150		300 x 150 x 200		
XYZ scale resolution	0.1µm		0.05µm (dual scales for X axis)		
Stage drive system	DC Servo Motor, X,Y,Z				
Max recommended load	25 kg				
Imaging optics	Single magnification, fixed lens optics with factory configurable back tube and field interchangeable front lens		Dual magnification, fixed lens optics with field interchangeable front lens		
Back tube (factory installed)	VIEW 1X back tube		VIEW 2X back tube (Available for single magnification optics only. FOV changes when 2X back tube applied.)		
Standard front lens	VIEW 2.5X	FOV (mm) 2.78 x 2.07	VIEW 2.5X (DMO)	FOV (mm) Low: 2.78 x 2.07 FOV (mm) High: 0.64 x 0.48	
Optional front lenses (field interchangeable)			Lens Option	Single Mag FOV (mm)	Dual Mag FOV (mm)
			VIEW 0.8X	8.34 x 6.23	Low: 8.34 x 6.23 High: 1.91 x 1.43
			VIEW 1X	6.46 x 4.82	Low: 6.46 x 4.82 High: 1.59 x 1.19
			VIEW 5X	1.35 x 1.01	Low: 1.35 x 1.01 High: 0.31 x 0.23
			VIEW 10X	0.69 x 0.52	Low: 0.69 x 0.52 High: 0.16 x 0.12
			VIEW 25X	0.28 x 0.21	Low: 0.28 x 0.21 High: 0.06 x 0.05
Metrology camera	2.0 megapixel (1628 x 1236), digital, monochrome metrology camera		Color and other camera configurations are optionally available		
Illumination	Programmable LED illumination system for coaxial through-the-lens surface light, below-the-stage backlight, and multi-color ring light with motorized incidence angle control		Grid autofocus system		
Sensor options			Through-the-lens (TTL) laser Rainbow Probe™ off-axis white light range sensor		
Measurement modes	High Speed Move And Measure (MAM)		Continuous Image Capture (CiC)		
System controller	Intel® processor based Microsoft® Windows® operating system and on-board networking and communication ports				
Controller accessory package	QVI multifunction handheld controller with 3 axis joystick and illumination controls		Single LCD flat panel display, computer keyboard and mouse Dual LCD flat panel displays, computer keyboard and mouse Space saving operator workstation desk with dual monitor mounts		
Power requirements	100 - 120 VAC or 200 - 240 VAC, 50/60 Hz, 1 phase, 700 W				
Rated environment	Temperature: 18 °C - 22 °C, stable to ± 1 °C | Relative Humidity: 30% - 80% | Vibration below 15 Hz: <0.0015g				
XY area accuracy	E_2: (1.8+6L/1000) µm[1,2,3,4,5,6]		E_2: (1.0+6L/1000) µm[1,2,3,4,5,6] (requires 0.05µm dual scale option)		
Z linear accuracy	E_1: (2.0+5L/1000) µm[1,2,5,6]		E_1: (1.2+5L/1000) µm[1,2,5,6] (requires TTL laser and 5X lens)		
Notes	1.Where L = measuring length in mm. Applies to a thermally stable system in rated environment. Maximum rate of temperature change 1 °C/hour. Maximum temperature gradient 1 °C/meter. When equipped with zero expansion scale option, all specifications are applicable when the artifact is at 20 °C. | 2. With evenly distributed load of 5 kg. Depending on load distribution, accuracy at higher loads may be less than standard accuracy. | 3. Measured in the standard measuring plane. The standard measuring plane is defined as a plane that is within 25 mm of the worktable surface. | 4. Accuracy specifications applicable to standard and optional optical configurations with 2.5X or higher lens magnification. | 5. E_1 Z axis linear and E_2 XY area accuracy standards are described in QVI Publication Number 790762. | 6. Accuracy specifications do not apply to Continuous Image Capture (CiC) mode.					

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