NenoVision

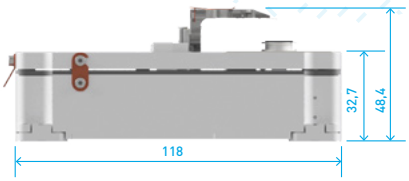
LiteScope™
Technical Specification

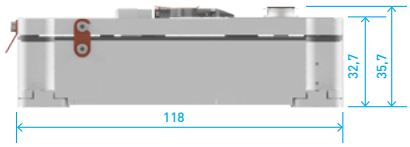
Environmental

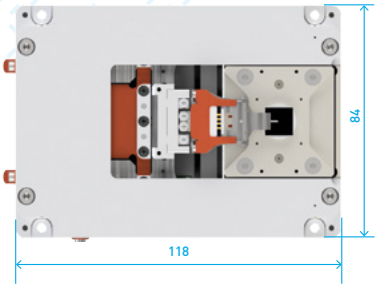
Operating temperature	+10 °C to +35 °C
Operating pressure	10^{-5} Pa to 10^{5} Pa
Dry environment only	

Mechanical

Overall dimensions	118 mm × 84 mm × 35,7 – 48,4 mm







Weight	460 g
Maximal scanned sample area	21 mm × 11 mm × 8 mm
Coarse approach	True orthogonal positioning
	Calibrated, pre-stressed linear ball bearings
	Open Loop and Closed Loop option
	Self-locking
	Speed > 2 mm/s
	Travel range XYZ: 21 mm × 12 mm × 12 mm
Scanning unit	Open Loop / Closed Loop option
	Scan range in open loop XYZ (±10%): 100 µm × 100 µm × 20 µm
	Scan range in closed loop XYZ: 80 µm × 80 µm × 16 µm
	Resolution XYZ: 0.2 nm × 0.2 nm × 0.04 nm
	Based on multi-layer, low-voltage piezoelectric transducer
	Solid state flexure guide system
Fast and easy probe exchange	Universal acceptor for different probes
	Five standard probe holders
	
Sample holder for standard SEM stubs (Ø12.7 mm with Ø3.2 mm and up to 6 mm long pin)	Two additional positions for SEM/FIB imaging/machining (not to be measured by AFM)

Operation and control system

Modes of operation	Topography and surface roughness, Energy dissipation (tapping mode), FMM (contact mode), F-z curves, nanoindentation, C-AFM, C-CPEM, KPFM, PFM, I-V spectroscopy, STM, MFM
Probes	Akiyama probe, Tuning-fork based probes, Piezoresistive probes, NenoProbes, etc.
Input channels could be used in feedback-loop	
Probe signal output / monitor	
External probe excitation	
All necessary connections for using external PLL	
Ethernet connection to the control PC	
110 VAC / 230 VAC operation, 200 W	

Software

Web based user interface	
Easy for new users, flexible for experts	
User accounts	Every user has an account
	Accounts individually configurable – layout, parameters, complexity,...
Remote access to the user data, download of data from control PC to the local workstation	
Remote experiment control via eg. tablet, smartphone	
Integrated data post-processing, analysis, export, etc.	

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