



Specifications

XYZ Scanner	Open loop scanner Scan range: 30 μm \times 30 μm \times 30 μm (switchable to 3 μm \times 3 μm \times 3 μm) Out-of-plane motion: < 1 nm (over full range) Resolution: 0.5 nm (0.05 nm in smaller scan range) Resonant frequency (XYZ): 350 \times 220 \times 250 Hz (unloaded)
Stage	XYZ motorized stage Range: 12 mm, with 0.1 μm resolution
Sample	Size: clearance of 100 mm \times 100 mm \times 25 mm Weight: < 100g (recommended)
Optical System	Objective: 10 \times /0.3 NA /Infinity corrected system Working distance: 16 mm Light: Cold white light LED (800 mW) 1 MP CMOS Camera Field-of-view: 300 \times 300 μm
Electronics & Controller	Signal processing AFM controller: Real time FPGA based Loop rate: > 1kHz Analog I/O : Equivalent 19 bits Software Dedicated LabView based software for instrument control & data visualization
Cantilever Detection	Beam deflection technique Focus spot size: < 10 μm (on probe) Laser power output: 4.5 mW Detector noise: NEP – 0.21 pW/ $\sqrt{\text{Hz}}$, 50 MHz B/w
Modes	Contact Mode Dynamic Mode (with lock-in detection; frequency range: upto 0.5 MHz, resolution: 30 mHz) I. Amplitude Modulation II. Phase Imaging III. Frequency Modulation STM (Scanning Tunneling Microscope) Current range: — 100 nA Resolution: 3 pA Conductive AFM mode Lift Mode with point by point measurements Compatible with magnetic & conductive tips
Others	Vibration isolation: Recommended HALCYONICS or equivalent Closed loop scanner can be integrated on request Liquid Cell for life science applications with temperature control

Contact Us:

Shilps Sciences Private Limited, # 216/2, 1st Floor, 10th Cross, F-block, Sahakarnagar, Bangalore-560092, India
 Phone: +91-80-4210-2235, E-mail : info@shilpsscience.com, Web: www.shilpsscience.com