



SFM Head

Nanotec's® standard head for Scanning Force Microscopy includes an optical system for cantilever deflection measurement using the laser beam bounce method. With a high stability diode and multiple adjustment capability our laser setup adapts to any cantilever and scanning need. The design of the cantilever holder incorporates magnets to fix the cantilever holder in place, allows rapid exchange between cantilever chips, and prevents damage to unused cantilevers on multiple-cantilever chips.

General:

- Two micrometer screws allow easy adjustment of the laser beam to focus on any cantilever.
- Axial view of cantilever and sample permits viewing with optical microscope.
- Two-spring loaded mounts insures stable coupling of the SFM head to the support chassis.

Photodiode:

- 4-quadrant photodiode for simultaneous measurement of Normal Force and Lateral Force.
- Wide photodiode positioning capability enables easy location of reflected spot. Fine positioning aided by two micrometers.

Cantilever holder:

- Easy to use cantilever holder with magnetic attachment to the head.
- Cantilever holder is designed for use with multi-cantilever chips, including those chips with cantilevers fabricated on both sides; no damage to the unused cantilevers.
- Cantilever holder retains previous position due to mechanical alignment feature.

Integrated piezo plate enables dynamic scanning modes.
Easy wiring access to all electronic signals sent to the cantilever.

QUICK SPECIFICATIONS**	
DIMENSIONS:	12 X 6 X 14 CM (4.8 X 2.4 X 5.6 IN)
COARSE HORIZONTAL POSITIONING RANGE:	4 X 4 MM (0.16 X 0.16 IN)
LASER:	
WAVELENGTH:	632 NM
POWER:	<1 MW
BEAM DIAMETER:	26-30 MICRONS
PHOTODIODE:	
QUADRANTS:	4 (SIMULTANEOUS NORMAL & LATERAL FORCE)

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