



MFM Head

Nanotec's® Magnetic Force Microscopy (MFM) head can perform SFM experiments as well. The MFM Head utilizes the same optical system for cantilever deflection measurement using the laser beam bounce method and a similar cantilever holder to the Nanotec's® SFM Head. The absence of magnets in the construction is the main difference from the standard SFM Head. Using mechanical attachments to mount the cantilever holder still produces 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 insure 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 mechanical 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 attachment 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)