Cantilever Data	Value	Range*
Resonance Frequency	105 kHz	80 - 130 kHz
Force Constant	6.2 N/m	3 - 11.4 N/m
Length	225 µm	220 - 230 µm
Mean Width	27.5 µm	22.5 - 32.5 µm
Thickness	3 µm	2.5 - 3.5 µm

NanoWorld® Pointprobe® FM probes are designed for force modulation mode imaging. The force constant of the FM type fills the gap between contact and non-contact AFM probes. Furthermore non-contact or tapping mode imaging is possible with this AFM probe.

All AFM probes of the Pointprobe® series are made from monolithic silicon which is highly doped to dissipate static charge. They are chemically inert and offer a high mechanical Q-factor for high sensitivity. The AFM tip is shaped like a polygon based pyramid with a typical height of 10 - 15 µm.

For applications that require hard contact between AFM tip and sample this AFM probe offers a real diamond tip-side coating. This coating features extremely high wear resistance due to the unsurpassed hardness of diamond.

The typical macroscopic AFM tip radius of curvature lies in the range between 100 and 200 nm. Nanoroughnesses in the 10 nm region improve the resolution on flat surfaces.
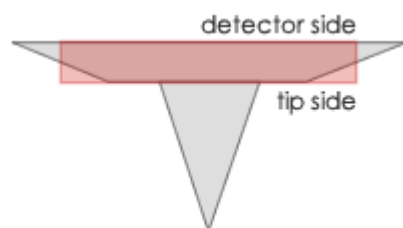
A trapezoidal cross section of the AFM cantilever and therefore 30% wider (e.g. NCH) AFM cantilever detector side result in easier and faster laser adjustment. Additionally, because there is simply more space to place and reflect the laser beam, a higher SUM signal is reached.

Tip shape: Standard
Coating: Diamond

Diamond Coating / Aluminum Reflex Coating

The diamond coating consists of a 100 nm thick polycrystalline diamond layer deposited on the tip side of the AFM cantilever resulting in an unsurpassed hardness of the AFM tip.

The aluminum reflex coating deposited on the detector side of the AFM cantilever enhances the reflectance of the laser beam and prevents light from interfering within the AFM cantilever.

Order Code	Quantity	Data Sheet
DT-FMR-10	10	yes
DT-FMR-20	20	yes
DT-FMR-50	50	no