

AFM Probe Specifications:

Coating

Gold Overall

Additional Info

AFM probes of the 3XC series feature three different AFM cantilevers for various measurement modes:

500DC - Contact mode AFM cantilever

240AC - Soft tapping mode AFM cantilever for imaging soft samples

200AC - Standard tapping mode AFM cantilever

The tetrahedral AFM tips are located precisely at the free ends of the AFM cantilevers. This allows the AFM tips to be positioned accurately over the area of interest on the sample surface.

The gold coated AFM tips are suitable for biological applications, AFM tip functionalization and custom applications. The overall gold coating ensures inertness and electrical conductivity, as well as high and stable laser reflectivity in air, vacuum, liquid and aggressive chemical environments.

AFM Tip:

Shape	Height	Setback	Radius	Half Cone Angle
Optimized Positioning	14 μm (12 - 16 μm)*	0 μm	< 30 nm	0° front, 35° back, <9° side

* typical values

AFM Cantilever:

Cantilever	Shape	Force Const.	Res. Freq.	Length	Width	Thickness
Contact mode AFM cantilever	Beam	0.3 N/m (0.1 - 0.6 N/m)*	17 kHz (11 - 22 kHz)*	500 μm (1 - 510 μm)*	30 μm (28 - 32 μm)*	3 μm (2.5 - 3.5 μm)*
Standard tapping mode AFM cantilever	Beam	9 N/m (2.8 - 21 N/m)*	150 kHz (100 - 200 kHz)*	175 μm (1 - 185 μm)*	40 μm (38 - 42 μm)*	3 μm (2.5 - 3.5 μm)*
Soft tapping mode AFM cantilever	Beam	2.5 N/m (0.75 - 5.3 N/m)*	75 kHz (50 - 100 kHz)*	240 μm (1 - 250 μm)*	30 μm (28 - 32 μm)*	3 μm (2.5 - 3.5 μm)*

* typical values