ElectriTap190-G

AFM Tip

SHAPE	HEIGHT	SETBACK	RADIUS	HALF CONE ANGLE
Rotated	17 µm (15 – 19 µm)*	15 µm (10 – 20 µm)*	25 nm	20°–25° along cantilever axis, 25°–30° from side, 10° at the apex

AFM Cantilever

Cantilever A	
Shape	Beam
Force Constant	48 N/m (28 – 75 N/m)*
Resonance Frequency	190 kHz (160 – 220 kHz)*
Length	225 µm (215 – 235 µm)*
Width	38 µm (33 – 43 µm)*
Thickness	7 µm (6 – 8 µm)*

* typical range

Coating

Electrically conductive coating of 5 nm Chromium and 25 nm Platinum on both sides of the cantilever. This coating also enhances the laser reflectivity of the cantilever.

Alignment Grooves

This product features alignment grooves on the back side of the holder chip.

Additional Info

Monolithic silicon AFM probe for high frequency non–contact and tapping mode operation, and electric modes such as:

— scanning capacitance microscopy (SCM)
— electrostatic force microscopy (EFM)
— Kelvin probe force microscopy (KFM)
— scanning probe lithography

The rotated AFM tip allows for more symmetric representation of high sample features. The consistent AFM tip radius ensures good resolution and reproducibility.

The AFM holder chip fits most commercial AFM systems as it is industry standard size.

BudgetSensors' Tap190 series features a longer AFM cantilever and it is meant as an alternative to BudgetSensors' Tap300 AFM probes series, when the feedback loop of the AFM system does not accept high frequencies (400 kHz) or when the detection system needs a minimum AFM cantilever length > 125 µm. The scanning speed of Tap190 series AFM probes is slightly slower than the scanning speed of the Tap300 series.