

HQ:NSC18/Hard/Al BS

Long Scanning, DLC Hardened Lift Mode and Soft Tapping Mode AFM Probe

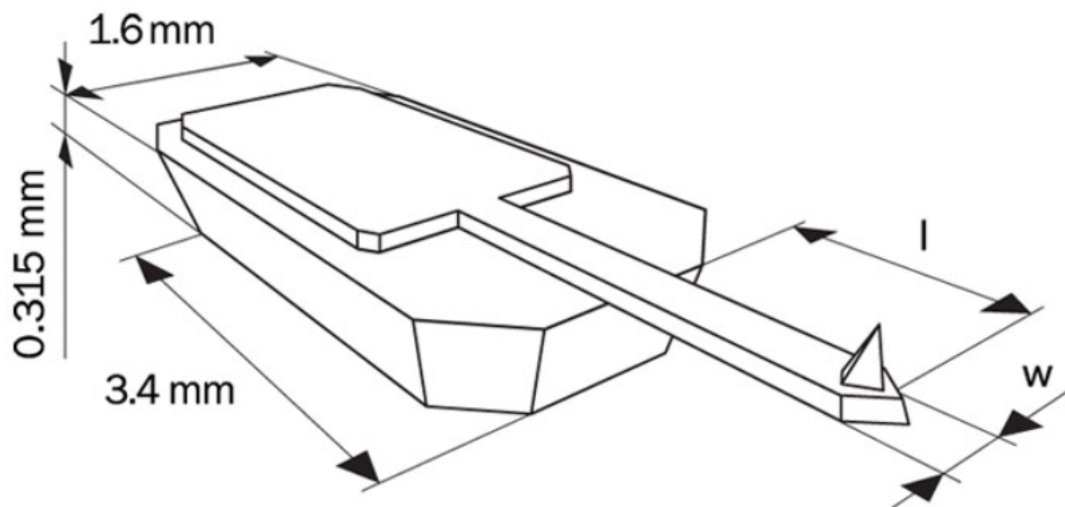
AFM probes of the HQ:NSC18 series are suitable for soft tapping and Lift mode operation AFM (e.g. EFM and MFM) since they provide high stability in tapping mode as well as high sensitivity to magnetic and electric forces that may be weak. These AFM probes are also used for mapping of materials properties in Force modulation mode and true topography imaging of soft samples in Soft tapping mode.

The HQ AFM probes offer high consistency of the AFM tip radius, the AFM cantilever reflectivity and the quality factor.

A 20 nm wear-resistant DLC coating is applied to the tip side of the AFM cantilever. The coating is chemically inert and more hydrophobic than silicon with a natural oxide layer. The aluminum reflective coating enhances the laser reflectivity of the AFM cantilever by approximately 2.5 times.

Coating

Hard Diamond-Like-Carbon



AFM Probe Specifications

AFM Tip

SHAPE	HEIGHT	FULL CONE ANGLE	RADIUS
Rotated	15 μm (12 – 18 μm)*	40°	< 20 nm

AFM Cantilever

CANTILEVER	SHAPE	FORCE CONST.	RES. FREQ.	LENGTH	WIDTH	THICKNESS
Cantilever A	Beam	2.8 N/m (1.2 – 5.5 N/m)*	75 kHz (60 – 90 kHz)*	225 μm (1 – 230 μm)*	27.5 μm (24.5 – 30.5 μm)*	3 μm (2.5 – 3.5 μm)*

* typical values