

HQ:NSC35/Hard/Al BS

AFM Probe with 3 Different Long Scanning, DLC Hardened Soft Tapping Mode AFM Cantilevers

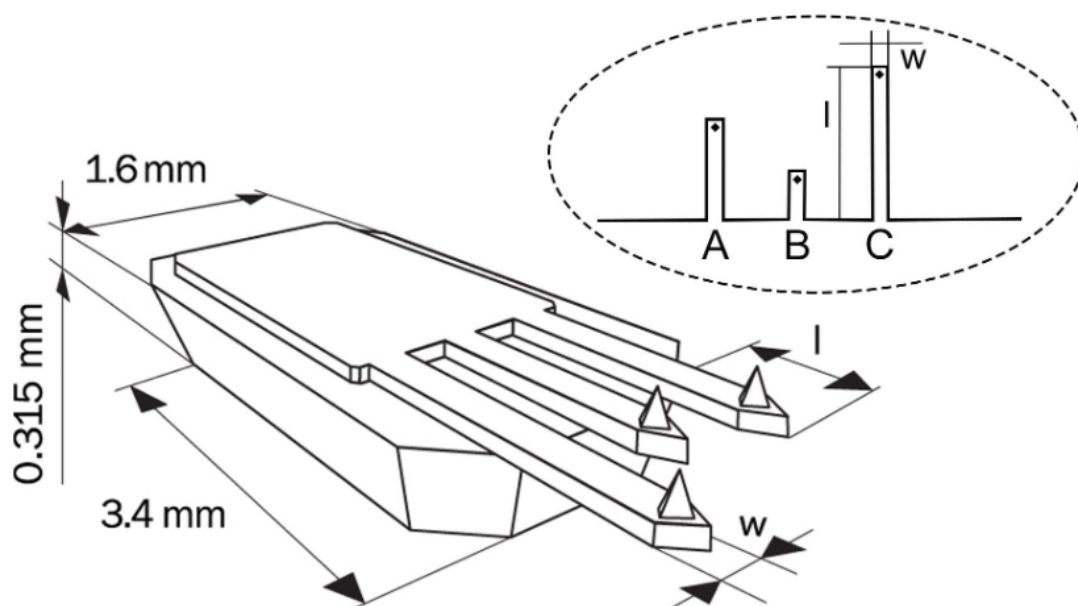
AFM probes of the HQ:NSC35 series have three different soft tapping mode AFM cantilevers on one side of the holder chip. They can be used in various applications.

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 cantilevers. 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 cantilevers 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°	< 35 nm

AFM Cantilever

CANTILEVER	SHAPE	FORCE CONST.	RES. FREQ.	LENGTH	WIDTH	THICKNESS
Cantilever A	Beam	8.9 N/m (2.7 – 24 N/m)*	205 kHz (130 – 290 kHz)*	110 μm (1 – 115 μm)*	35 μm (32 – 38 μm)*	2 μm (1.5 – 2.5 μm)*
Cantilever B	Beam	16 N/m (4.8 – 44 N/m)*	300 kHz (185 – 430 kHz)*	90 μm (1 – 95 μm)*	35 μm (32 – 38 μm)*	2 μm (1.5 – 2.5 μm)*
Cantilever C	Beam	5.4 N/m (1.7 – 14 N/m)*	150 kHz (95 – 205 kHz)*	130 μm (1 – 135 μm)*	35 μm (32 – 38 μm)*	2 μm (1.5 – 2.5 μm)*

* typical values