HQ:DPER-XSC11

AFM Probe with 4 Different High Resolution Conductive AFM Cantilevers

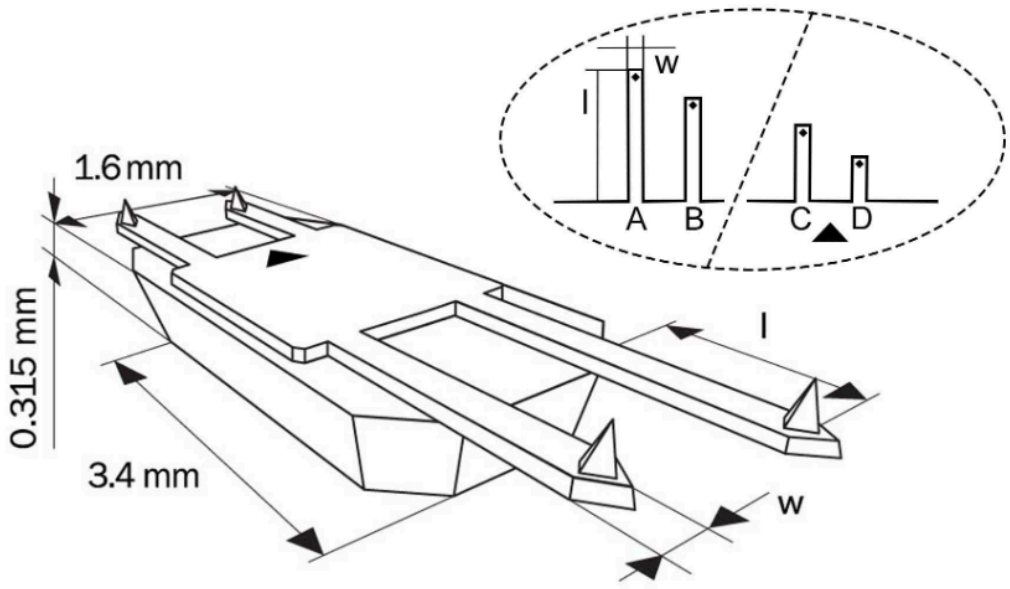
AFM probes of the HQ:XSC11 series have four different AFM cantilevers, two on each side of the holder chip. They can be used in various applications.

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

The overall platinum coating is electrically conductive and chemically inert. The thickness of the DPER tip side coating is about 15 nm on the flat cantilever surface, resulting in a coated AFM tip radius below 20 nm. The AFM probes can be used for imaging samples with higher resolution in XY directions.

Coating

Electrically Conductive



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	0.2 N/m (0.1 – 0.4 N/m)*	15 kHz (12 – 18 kHz)*	500 µm (1 – 505µm)*	30 µm (27 – 33µm)*	2.7µm (2.2 – 3.2 µm)*
Cantilever B	Beam	2.7 N/m (1.1 – 5.6 N/m)*	80 kHz (60 – 100 kHz)*	210 µm (1 – 215µm)*	30 µm (27 – 33µm)*	2.7µm (2.2 – 3.2 µm)*
Cantilever C	Beam	7 N/m (3 – 16 N/m)*	155 kHz (115 – 200 kHz)*	150 µm (1 – 155µm)*	30 µm (27 – 33µm)*	2.7µm (2.2 – 3.2 µm)*
Cantilever D	Beam	42 N/m (17 – 90 N/m)*	350 kHz (250 – 465 kHz)*	100 µm (1 – 105µm)*	50 µm (47 – 53µm)*	2.7µm (2.2 – 3.2 µm)*

* typical values