

HQ:DPE-XSC11

AFM Probe with 4 Different Low Noise Conductive AFM Cantilevers

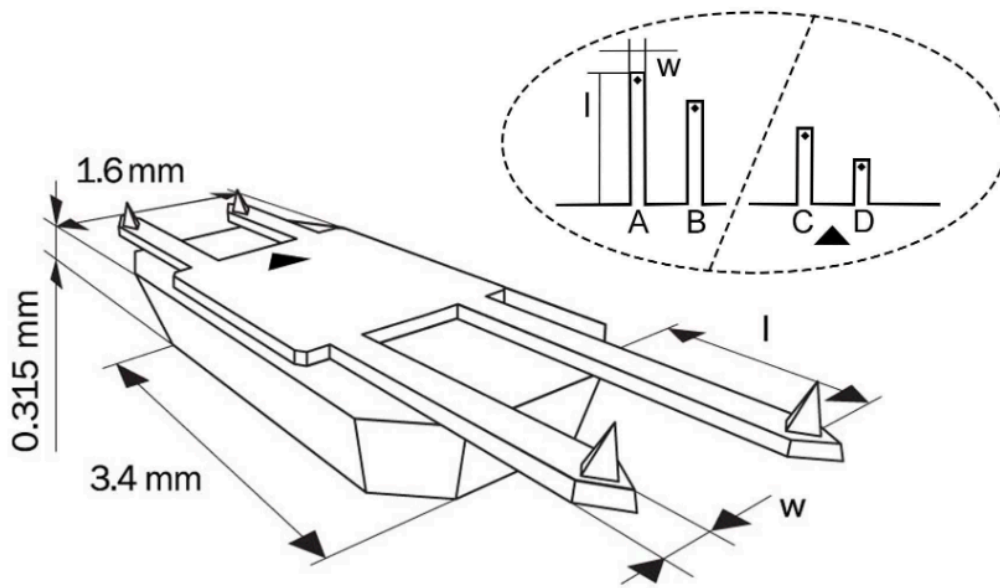
AFM probes of the HQ:XSC11 series have four different AFM cantilevers, two on each side of the holder chip. They can be used in various applications.

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

The DPE AFM probes have a special structure of conductive layers applied to the tip side of the AFM cantilevers that provides a better signal-to-noise ratio in the AFM scans of electric properties. The coating thickness is increased, which gives more freedom for using the DPE AFM probes in contact electrical modes. The AFM probes provide better performance and higher contrast of electrical signals, while the ability to resolve the small surface details might be reduced. The DPE AFM probes can be used in dynamic electric modes when a study of the electric properties of a sample has higher priority.

Coating

Electrically Conductive



AFM Probe Specifications

AFM Tip

SHAPE	HEIGHT	FULL CONE ANGLE	RADIUS
Rotated	15 μm (12 – 18 μm)*	40°	< 40 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 – 505 μm)*	30 μm (27 – 33 μm)*	2.7 μm (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 – 215 μm)*	30 μm (27 – 33 μm)*	2.7 μm (2.2 – 3.2 μm)*
Cantilever C	Beam	7 N/m (3 – 16 N/m)*	155 kHz (115 – 200 kHz)*	150 μm (1 – 155 μm)*	30 μm (27 – 33 μm)*	2.7 μm (2.2 – 3.2 μm)*
Cantilever D	Beam	42 N/m (17 – 90 N/m)*	350 kHz (250 – 465 kHz)*	100 μm (1 – 105 μm)*	50 μm (47 – 53 μm)*	2.7 μm (2.2 – 3.2 μm)*

* typical values