

# HQ:CSC17/Hard/Al BS

## Long Scanning, DLC Hardened Contact Mode AFM Probe

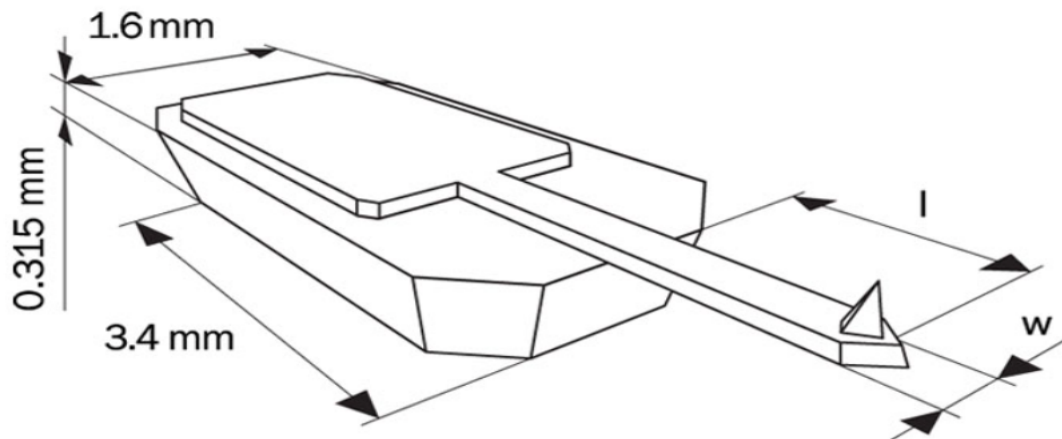
AFM probes of the HQ:CSC17 series have AFM cantilevers with low force constants that offer high sensitivity in contact mode AFM. These AFM probes are also used for Lateral Force Microscopy.

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 $\mu\text{m}$ (12 – 18 $\mu\text{m}$ )*	40°	< 20 nm

#### AFM Cantilever

CANTILEVER	SHAPE	FORCE CONST.	RES. FREQ.	LENGTH	WIDTH	THICKNESS
Cantilever A	Beam	0.18 N/m (0.06 – 0.4 N/m)*	13 kHz (10 – 17 kHz)*	450 $\mu\text{m}$ (1 – 455 $\mu\text{m}$ )*	50 $\mu\text{m}$ (47 – 53 $\mu\text{m}$ )*	2 $\mu\text{m}$ (1.5 – 2.5 $\mu\text{m}$ )*

\* typical values