

HQ:NSC18/Cr-Au

Gold Coated Soft Tapping Mode AFM Probe

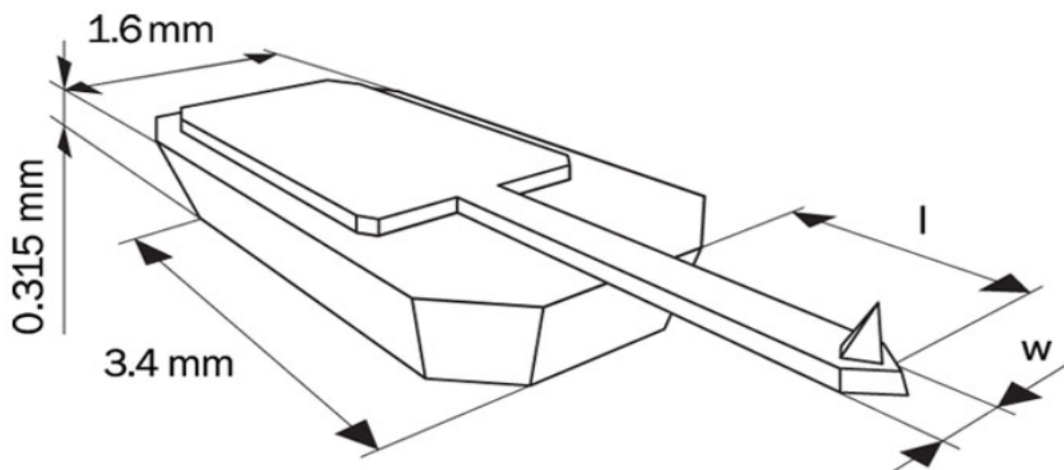
AFM probes of the HQ:NSC18 series are suitable for soft tapping and Lift mode operation AFM (e.g. EFM and MFM) since they provide high stability in tapping mode as well as high sensitivity to magnetic and electric forces that may be weak. These AFM probes are also used for mapping of materials properties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

The overall 30 nm Au coating with 20 nm Cr sublayer is electrically conductive and chemically inert. It also enhances the laser reflectivity of the AFM cantilever in air and liquids. The resulting coated AFM tip radius is below 35 nm. The coating may cause AFM cantilever bending up to 3°.

Coating

Gold Overall



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 | 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