

HQ:NSC16/Cr-Au

Gold Coated Tapping Mode AFM Probe with Long AFM Cantilever

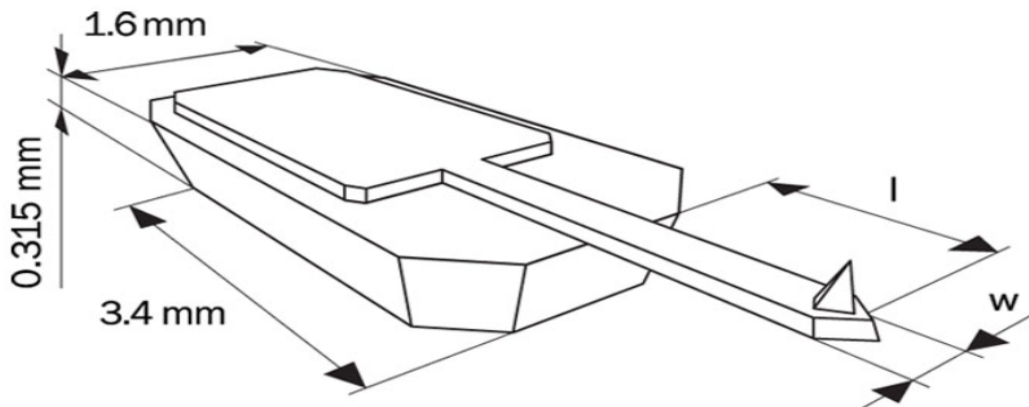
AFM probes of the HQ:NSC16 series have AFM cantilevers with a high spring constant and low resonance frequency (below 250 kHz) that can be used in tapping mode in SPMs with low-frequency feedback loops. These AFM probes also fit SPM systems that do not support short AFM cantilever arms.

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 | 45 N/m (30 – 70 N/m)* | 190 kHz (170 – 210 kHz)* | 225 μm (1 – 230 μm)* | 37.5 μm (34.5 – 40.5 μm)* | 7 μm (6.5 – 7.5 μm)* |

* typical values