

HQ:NSC35/Cr-Au

AFM Probe with 3 Different Gold Coated Soft Tapping Mode AFM Cantilevers

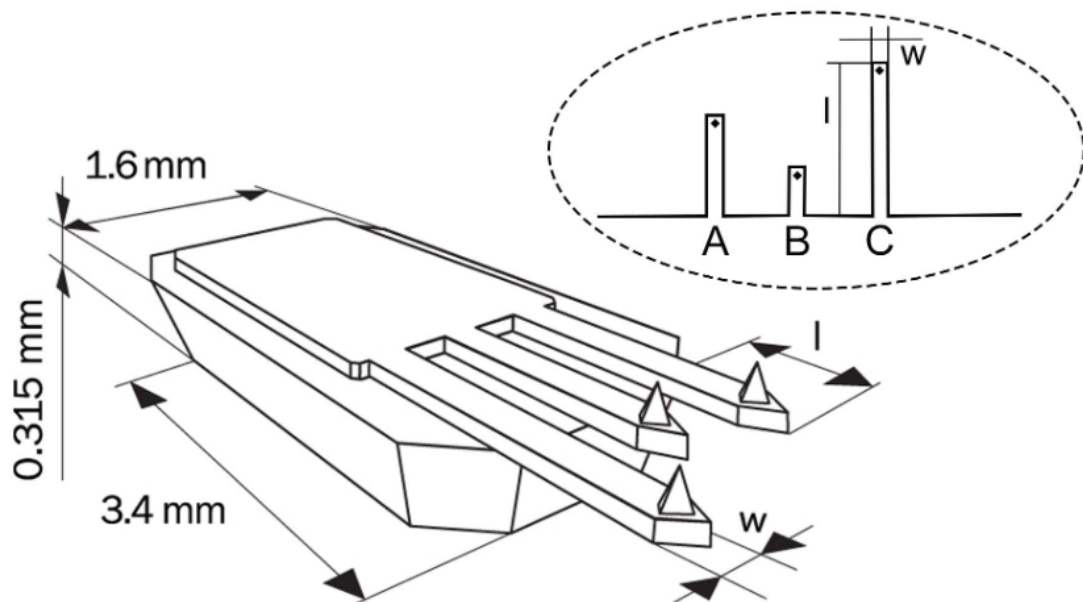
AFM probes of the HQ:NSC35 series have three different soft tapping mode AFM cantilevers on one side of the holder chip. They can be used in various applications.

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

The overall 30 nm Au coating with 20 nm Cr sublayer is electrically conductive and chemically inert. It also enhances the laser reflectivity of the AFM cantilevers 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 | 8.9 N/m (2.7 – 24 N/m)* | 205 kHz (130 – 290 kHz)* | 110 μm (1 – 115 μm)* | 35 μm (32 – 38 μm)* | 2 μm (1.5 – 2.5 μm)* |
| Cantilever B | Beam | 16 N/m (4.8 – 44 N/m)* | 300 kHz (185 – 430 kHz)* | 90 μm (1 – 95 μm)* | 35 μm (32 – 38 μm)* | 2 μm (1.5 – 2.5 μm)* |
| Cantilever C | Beam | 5.4 N/m (1.7 – 14 N/m)* | 150 kHz (95 – 205 kHz)* | 130 μm (1 – 135 μm)* | 35 μm (32 – 38 μm)* | 2 μm (1.5 – 2.5 μm)* |

* typical values