

PointProbe® Plus Non-Contact / Tapping Mode - High Resonance Frequency - Au coating

The PointProbe® Plus (PPP) combines high application versatility and compatibility with most commercial SPMs. The typical AFM tip radius of less than 7 nm and the minimized variation in AFM tip shape provide reproducible images and enhanced resolution.

NANOSENSORS™ PPP-NCHAu AFM probes are designed for non-contact mode or tapping mode AFM (also known as: attractive or dynamic mode). This sensor type combines high electrical conductivity with outstanding sensitivity and fast scanning ability.

The AFM probe offers unique features:

- metallic conductivity of the AFM tip
- AFM tip height 10 - 15 μm
- Au coating on detector side of AFM cantilever
- chemically inert

A metallic layer (Au) is coated on both sides of the AFM cantilever. The tip side coating enhances the conductivity of the AFM tip and allows electrical contacts - the typical AFM tip radius of curvature is less than 50nm. The detector side coating enhances the reflectivity of the laser beam by a factor of 2.5 and prevents light from interfering within the AFM cantilever. The coating process is optimized for stress compensation. As the coating is nearly stress-free the bending of the AFM cantilever due to stress is less than 2 degrees.

Please note: Wear at the AFM tip can occur if operating in contact-, friction- or force modulation mode.

This AFM probe features alignment grooves on the back side of the holder chip. These grooves fit to the NANOSENSORS Alignment Chip.

Cantilever data:

Property	Nominal Value	Specified Range
Resonance Frequency [kHz]	330	204 - 497
Force Constant [N/m]	42	10 - 130
Length [μm]	125	115 - 135
Mean Width [μm]	30	22.5 - 37.5
Thickness [μm]	4	3 - 5

Order codes and shipping units:

Order Code	AFM probes per pack	Data sheet
PPP-NCHAu-10	10	of all probes