

PointProbe® Plus Contact Mode - Au Coating

The Point Probe® 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-CONTAu AFM probes are designed for contact mode (repulsive mode) AFM imaging. This AFM probe can also be used for force-distance spectroscopy mode or pulsed force mode (PFM). The CONT type is optimized for high sensitivity due to a low force constant.

The AFM probe offers unique features:

- metallic conductivity of the AFM tip
- AFM tip height 10 - 15 µm
- Au coating on both sides of the 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]	13	6 - 21
Force Constant [N/m]	0.2	0.02 - 0.77
Length [µm]	450	440 - 460
Mean Width [µm]	50	42.5 - 57.5
Thickness [µm]	2	1 - 3

Order codes and shipping units:

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