

## PointProbe® Plus Force Modulation Mode - 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-FMAu is offered for force modulation microscopy. The force constant of this AFM probe spans the gap between contact and non-contact mode and is specially tailored for the force modulation mode. Furthermore non-contact or tapping mode operation is possible with the FM tip but with reduced operation stability.

### 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]	75	45 - 115
Force Constant [N/m]	2.8	0.5 - 9.5
Length [µm]	225	215 - 235
Mean Width [µm]	28	20 - 35
Thickness [µm]	3	2 - 4

### Order codes and shipping units:

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