

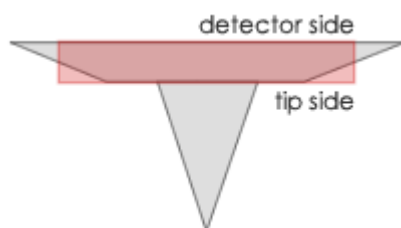
Cantilever Data	Value	Range*
Resonance Frequency	320 kHz	250 - 390 kHz
Force Constant	42 N/m	21 - 78 N/m
Length	125 μm	120 - 130 μm
Mean Width	30 μm	25 - 35 μm
Thickness	4 μm	3.5 - 4.5 μm

NanoWorld® Pointprobe® NCH probes are designed for non-contact or tapping mode imaging. This AFM probe type combines high operation stability with outstanding sensitivity and fast scanning ability.

All SPM and AFM probes of the Pointprobe® series are made from monolithic silicon which is highly doped to dissipate static charge. They are chemically inert and offer a high mechanical Q-factor for high sensitivity. The AFM tip is shaped like a polygon based pyramid with a typical height of 10 - 15 μm .

The AFM tip radius of curvature is less than 25 nm.

For applications requiring lower resonance frequencies or an AFM cantilever length exceeding 125 μm we recommend our Pointprobe® type [NCLPt](#).



A trapezoidal cross section of the AFM cantilever and therefore 30% wider (e.g. NCH) AFM cantilever detector side result in easier and faster laser adjustment. Additionally, because there is simply more space to place and reflect the laser beam, a higher SUM signal is reached.

Tip shape: Standard

Coating: Electrically Conductive

PtIr5 Coating

The PtIr5 coating consists of a 23 nm thick platinum iridium5 layer deposited on both sides of the AFM cantilever. The tip side coating enhances the conductivity of the AFM tip and allows electrical contacts. The detector side coating enhances the reflectance of the laser beam by a factor of 2 and prevents light from interfering within the AFM cantilever.

The coating process is optimized for stress compensation and wear resistance. Wear at the AFM tip can occur if operating in contact-, friction- or force modulation mode. As the coating is almost stress-free the bending of the AFM cantilever due to stress is less than 2 degrees.

Order Code	Quantity	Data Sheet
NCHPt-10	10	yes
NCHPt-20	20	yes
NCHPt-50	50	no
NCHPt-W	380	yes