

Type: **M1- Metrology Probe M1**

Multipurpose High Aspect Ratio and High Resolution EBD probe

The **nanotools® M1_NCH_13** tip is designed for non-contact / high frequency mode, in particular for automated AFM systems for in-line process control as well as general purpose AFM. Excellent lifetime and reliability for high aspect ratio and high resolution applications are key features.

EBD Material

The high aspect ratio part of the probe is made of HIGH-DENSITY, DIAMOND LIKE CARBON (HDC/DLC). The tips show superior properties over integrated tips, such as high aspect ratio, hydrophobic surface properties, high stiffness / elastic modulus (8x of that of silicon), low thermal mass as well as abrasion resistance. Our HDC dissipates static charge.

This leads to probes offering the extreme durability of diamond together with high resolution imaging capability. Applying our patented **EBD** (electron beam deposition) technique we ensure a stiff and rigid high aspect ratio probe of superior symmetry and nanometer precision.

Technical Data

Tip dimensions	Shape:	conical
	Length:	800 nm (+/- 200 nm)
	Diameter *:	70 nm (+/- 10 nm)
	Radius:	<10 nm, typically 5 nm
	Tilt compensation:	13 deg (+/- 1 deg)

Cantilever	Pointprobe NCH/ TESP
	l: 125µm w: 30µm t: 4µm
	k: 42N/m f: 320kHz

Coating	Tip side: none
	Back side: none

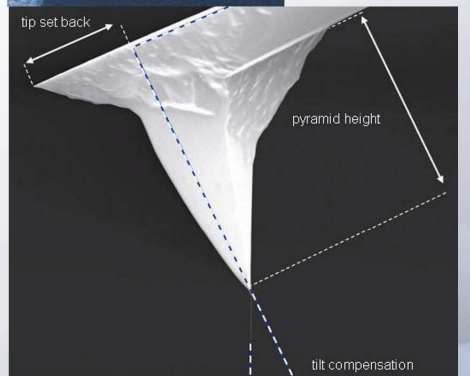
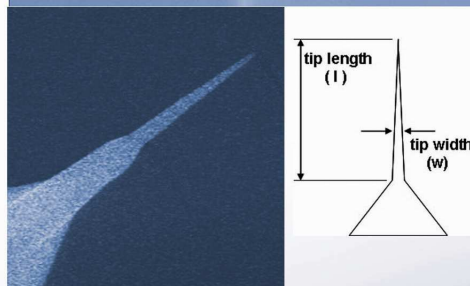
* measured at 600 nm from tip end

First in Quality

A 100% quality check by SEM for every tip, high scan speeds, flexibility in combination with stiffness, 13 deg tilt compensation and optimized cost per scan are key parameters. The **M1_NCH_13** is used by leading fabs worldwide for several AFM in-line monitoring tasks such as depth control or STI.

Datasheet for every tip with precise tip dimensions provided.

nanotools is the first and only probe manufacturer being quality certified to ISO 9001.



For more information please contact: info@nano-tools.com
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