Large radius hemispherical tip

Due to the defined hemispherical tip shape, the ideal application is material characterization by nanoindentation.
For this purpose SEM-Image (as "tif" - File) and measured radius of tip apex and the cantilver dimensions (used for calculation of lever stiffness) are included for easier post processing of indentation data.

Another application is measurement of step heights over large scan areas.

Tip Apex Specifications

Radius:	250 nm - 500 nm - 750 nm
Full cone angle:	~ 40°
Tip height:	> 9 µm

Tip Radius Specifications

nominal Radius	Type	Radius Range
250 nm	LRCH250	150 nm - 350 nm
500 nm	LRCH500	350 nm - 650 nm
750 nm	LRCH750	600 nm - 900 nm

Available Cantilevers:

C = 0.2 N/m, fo = 15 kHz

C = 3.0 N/m, fo = 75 kHz
C = 40 N/m, fo = 300 kHz
C = 250 N/m, fo = 575 kHz
C = 750 N/m, fo = 830 kHz

Consider below listed additional packages to increase your productivity or range of experiments.

1 pack includes 5 probe-tips

Publications from our customers:

1. "High-resolution and large dynamic range nanomechanical mapping in tapping-mode atomic force microscopy",
   Ozgur Sahin and Natalia Erina,
   Nanotechnology 19 (2008) 445717 (9pp)
2. "AFM Nanoindentation of Viscoelastic Materials with Large End-Radius Probes",
   Gunter Moeller,
   Journal of Polymer Science: Part B: Polymer Physics, Vol. 47, 1573-1587 (2009)

Probe tips, cantilevers, and cantilever chips consist of single crystal silicon.

All cantilevers are shipped with Al-reflex coating (R).
The LRCH probes are also available with alignment grooves on the back side of the holder chip.
Shipments without reflex coating or with special coatings upon request.

All probe tips are SEM quality inspected prior to shipment.

Cantilever Dimensions:

Stiffness	Typical resonant frequency	Length	Width
0.2 N/m	15 kHz	450 (± 15 µm)	35 (± 3) µm
3.0 N/m	75 kHz	225 (± 15) µm	35 (± 3) µm
40 N/m	300 kHz	125 (± 15) µm	35 (± 3) µm
250 N/m	575 kHz	125 (± 15) µm	35 (±3) µm
750 N/m	830 kHz	125 (± 15) µm	35 (±3) µm

Holder chip dimensions:

length	3.40 mm
width	1.55 mm
thickness	0.315 mm

LRCH Radius:	250 nm,500 nm,750 nm
LRCH lever:	C = 0.2 N/m,C = 0.7 N/m,C = 3.0 N/m,C = 40 N/m,C = 250 N/m,C = 750 N/m
ReflexCoating:	Al-reflex,None