

## Hemispherical Cone Shaped Tip

Due to the defined hemispherical tip shape, the ideal application is material characterization by nano- indentation (e.g. bio-medical materials, polymeres, .. )

### Tip Apex Specifications

Radius:	20 nm - 40 nm - 60 nm
Full cone angle:	~ 20°
Tip height:	> 9 µm

### Tip Radius Specifications

nominal Radius	Type	Radius Range
20 nm	HSC20	< 20 nm
40 nm	HSC40	20 nm - 40 nm
60 nm	HSC60	40 nm - 60 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

These tips are coated with metal carbide.

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

1 pack includes 5 probe-tips

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

The probes are coated conformal with metal carbide.

All cantilevers are shipped with Al-reflex coating (R).

The HSC 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 ( $\pm$ 15 $\mu$ m)	35 ( $\pm$ 3) $\mu$ m
3.0 N/m	75 kHz	225 ( $\pm$ 15) $\mu$ m	35 ( $\pm$ 3) $\mu$ m

40 N/m	300 kHz	125 ( $\pm$ 15) $\mu$ m	35 ( $\pm$ 3) $\mu$ m
250 N/m	575 kHz	125 ( $\pm$ 15) $\mu$ m	35 ( $\pm$ 3) $\mu$ m
750 N/m	830 kHz	125 ( $\pm$ 15) $\mu$ m	35 ( $\pm$ 3) $\mu$ m

Holder chip dimensions:

length	3.40 mm
width	1.55 mm
thickness	0.315 mm

HSC-Radius:	20 nm,40 nm,60 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