

Micro cantilever

Product name

OMCL-AC160TN-R3

Silicon cantilever with a sharpened tetrahedral tip

Product name

Micro Cantilever

OMCL-AC160TN-R3

LotNo.

Typical Value	Inspection result
Resonant frequency 300 (kHz)	
Spring constant 26 (N/m)	(Calculated Value)

http://www.olympus.co.jp/probe/

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Inspection result

OMCL - AC 160 T N - R 3

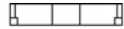
OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 160 : Lever length of 160 μm
 T : sharpened Tetrahedral tip
 N : No reflex metal coating
 R : 100 chips / unit
 3 : Chip thickness 0.3 mm,
 Rectangular cross section chip

Chip

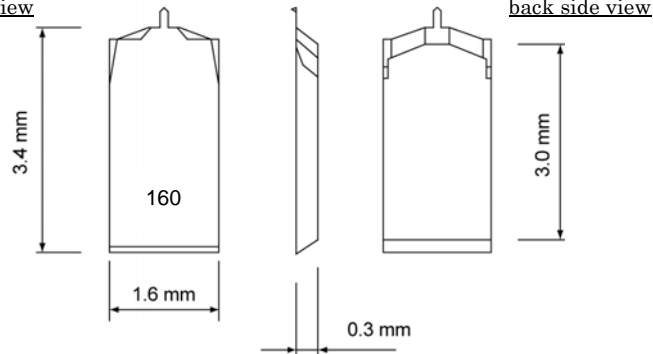
There is a rectangular cantilever on one side of the silicon chip.

Dimension

front side view



tip side view

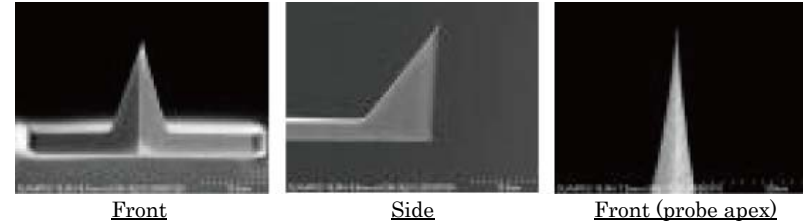


Material

Tip & Lever	Silicon (n-type, 0.01 - 0.02 ohm.cm)
Metal coating (tip side)	Non
Metal coating (ref ; ex side)	Non
Chip	Silicon (n-type, 0.01 - 0.02 ohm.cm)

Probe

The probe is a sharpened tetrahedral. The probe is fabricated on the exact end of each cantilever.



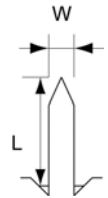
Dimensions

	Typical value	Typical range
Probe length (μm)	14	9 - 19
Tip radius (nm)	7	4 - 10
Probe tip half angle (deg.)	(axis) less than 17.5 (side) less than 17.5	
Probe side tip angle (deg.)	(front) 0, (back) 35 (side) 18, 18	

Cantilever

Dimensions

Cantilever length L (μm)	160 (± 15)
Cantilever width W (μm)	40 (± 2)
Cantilever thickness t (μm)	3.7 (± 0.5)



Calculated mechanical properties

	Typical value	Typical range
Resonant frequency (kHz)	300	200 - 400
Spring constant (N/m)	26	8.4 - 57

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