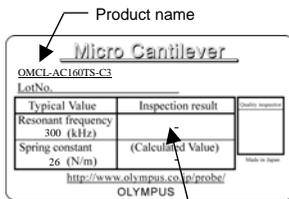


Micro cantilever

Product name

OMCL-AC160TS-C3

Silicon cantilever with a sharpened tetrahedral tip



Inspection result

OMCL - AC 160 T S - C 3

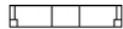
OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 160 : Lever length of 160 μm
 T : sharpened Tetrahedral tip
 S : Aluminum reflex coating (Single side)
 C : 24 chips / unit
 3 : Chip thickness 0.3 mm,
 Rectangular cross section chip

Chip

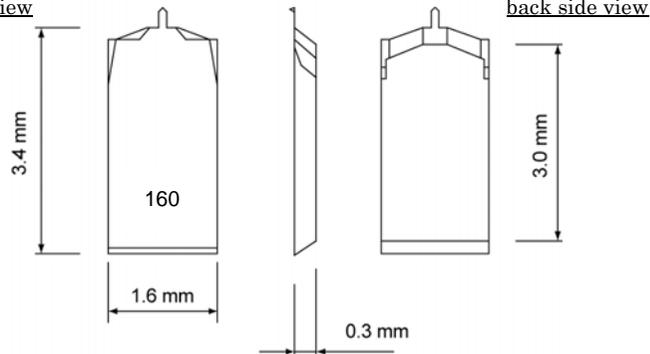
There is a rectangular cantilever on one side of the silicon chip.

Dimension

front side view



tip side view

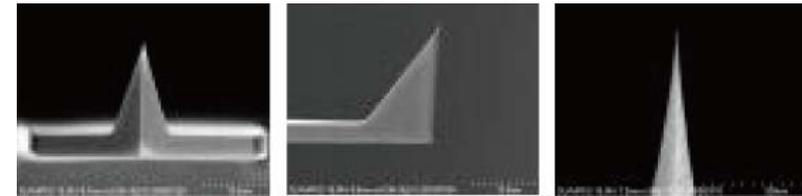


Material

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



Front

Side

Front (probe apex)

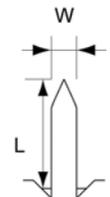
Dimensions

	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)
Thickness of Metal Coat tm (μm)	Aluminum 0.1 (± 0.04)



Calculated mechanical properties

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

OLYMPUS

OMCL-AC160TS-C3

Ver.1.3 June 3, 2011