

Micro cantilever

Product name

OMCL-AC160BN-W2

Silicon cantilever with a high-aspect-ratio tip

Product name		
Micro Cantilever		
OMCL-AC160BN-W2		
LotNo. _____		
Typical Value	Inspection result	Quality inspection
Resonant frequency 300 (kHz)		
Spring constant 42 (N/m)	(Calculated Value)	
http://www.olympus.co.jp/probe/ OLYMPUS		

Inspection result

OMCL - AC 160 B N - W 2

OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 160 : Lever length of 160 μm
 B : Blade-like tetrahedral tip
 N : Non metal-reflex-coating
 W : 375 chips / unit
 2 : Chip thickness 0.3 mm

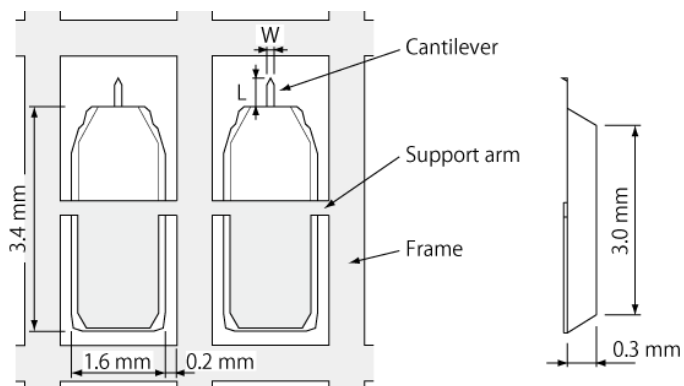
Chip

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

Dimension

tip side view

side view

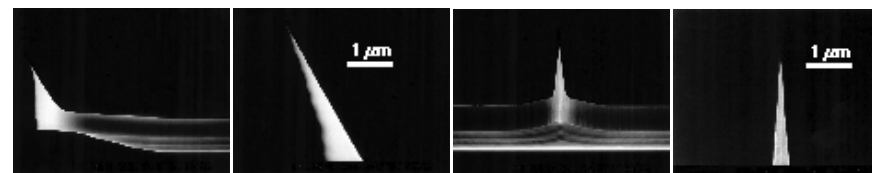


Material

Tip & Lever	Silicon (4 - 6 ohm.cm)
Metal coating (tip side)	No coating
Metal coating (back side)	No coating
Chip	Silicon (4 - 6 ohm.cm)

Tip

The tip shapes into a sharpened tetrahedral, that shows typical aspect ratio of 7:1 in the last 2 μm of the tip. The tip is fabricated on the exact end of each cantilever.



Side

Side (tip apex)

Front

Front (tip apex)

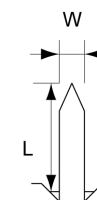
Dimension

	Typical value	Typical range
Tip height (μm)	9	7 - 15
Tip radius (nm)	8	less than 15
Tip angle (deg.)		(side) less than 23 (front) less than 12

Cantilever

Dimension

Cantilever length L (μm)	160 (± 20)
Cantilever width W (μm)	50 (± 2)
Cantilever thickness t (μm)	4.6 (± 0.8)
Metal coat thickness tm (μm)	0



Calculated mechanical properties

	Typical value	Typical range
Resonant frequency (kHz)	300	200 - 400
Spring constant (N/m)	42	12 - 103

OLYMPUS

OMCL-AC160BN-W2

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