

Micro cantilever

Product name

OMCL-AC160TS-W2

Silicon cantilever with tetrahedral tip

Product name

Micro Cantilever

OMCL-AC160TS-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/

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Inspection result

OMCL - AC 160 T S - W 2

OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 160 : Lever length of 160 μm
 T : Tetrahedral tip
 S : Aluminum reflex coating (Single side)
 W : 375 chips / unit
 2 : Chip thickness 0.3 mm

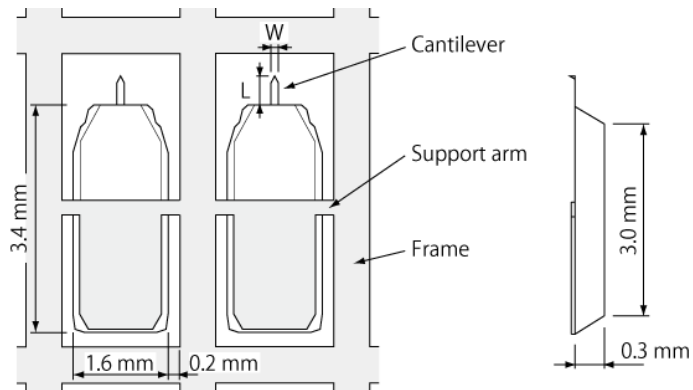
Chip

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)	Non
Metal coating (back side)	Aluminum on Silicon cantilever
Chip	Silicon (4 - 6 ohm.cm)

Tip

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



Front

Side

Side (tip apex)

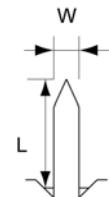
Dimensions

	Typical value	Typical range
Tip height (μm)	14	7 - 19
Tip radius (nm)	7	less than 10
Tip angle (deg.)		(side) less than 35 (front) less than 35

Cantilever

Dimensions

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)	Aluminum 0.1 (± 0.04)



Calculated mechanical properties

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

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