

Micro cantilever

Product name

OMCL-AC240TM-B3

Platinum coated Silicon cantilever with tetrahedral tip

Product name Micro Cantilever	
OMCL-AC240TM-B3	
LotNo.	
Typical Value	Inspection result
Resonant frequency 70 (kHz)	-
Spring constant 2 (N/m)	(Calculated Value)
http://www.olympus.co.jp/probe/	
OLYMPUS	

Inspection result

OMCL - AC 240 T M - B 3

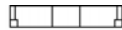
OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 240 : Lever length of 240 μm
 T : Tetrahedral tip
 M : Platinum coated on Tip side
 B : 18 chips / unit
 3 : Chip thickness 0.3 mm,
 Rectangular cross section chip

Chip

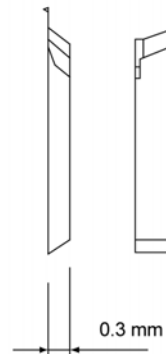
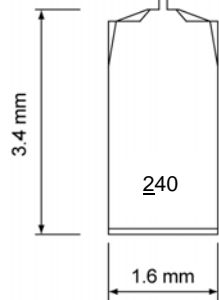
There is a rectangular cantilever on one side of the silicon chip.

Dimension

front side view



tip side view



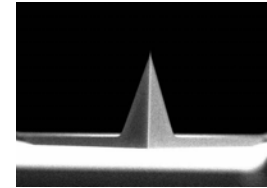
back side view

Material

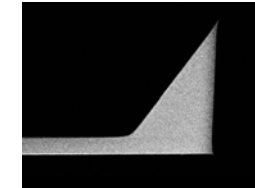
Tip & Lever	Silicon (0.01 – 0.02 ohm.cm)
Metal coating (tip side)	Platinum / Titanium on Silicon cantilever
Metal coating (back side)	Aluminum on Silicon cantilever
Chip	Silicon (0.01 – 0.02 ohm.cm)

Tip

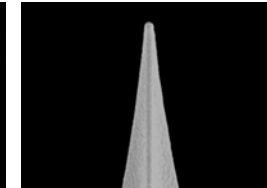
The tip is a sharpened tetrahedral. The tip is fabricated on the exact end of each cantilever.



Front



Side



Front (probe apex)

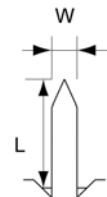
Dimension

	Typical value	Typical range
Tip height (μm)	14	9 - 19
Tip radius (nm)	15	less than 25
Tip angle (deg.)		(side) less than 35 (front) less than 35

Cantilever

Dimension

Cantilever length L (μm)	240 (±15)
Cantilever width W (μm)	40 (±2)
Cantilever thickness t (μm)	2.3 (±0.7)
Metal coat thickness tm (μm)	Platinum 0.02 (±0.01) Aluminum 0.1 (±0.04)



Calculated mechanical properties

	Typical value	Typical range
Resonant frequency (kHz)	70	45 - 95
Spring constant (N/m)	2	0.6 - 4.6

OLYMPUS

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