

Micro cantilever

Product name

OMCL-AC240TS-R3

Silicon cantilever with a sharpened tetrahedral tip

Product name	
Micro Cantilever	
OMCL-AC240TS-R3	
LotNo.	
Typical Value	Inspection result
Resonant frequency 70 (kHz)	
Spring constant 2 (N/m)	(Calculated Value)
INSPECTION	
OLYMPUS	

Inspection result

OMCL - AC 240 T S - R 3

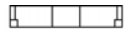
OMCL : Olympus Micro Cantilever
 AC : main application is AC mode measurement
 240 : Lever length of 240 μm
 T : sharpened Tetrahedral tip
 S : Aluminum reflex coating (Single side)
 R : 100 chips / unit
 3 : Chip thickness 0.3 mm,
 Rectangular cross section chip

Chip

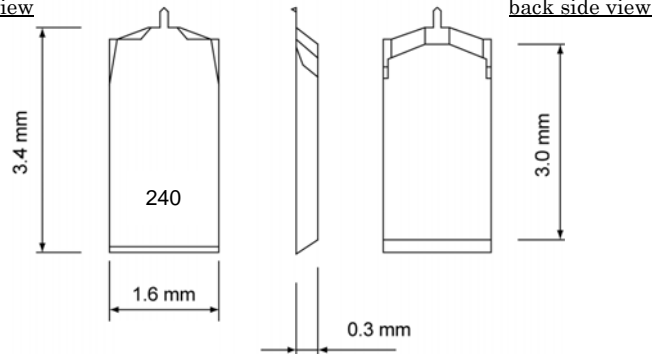
There is a rectangular cantilever on one side of the silicon chip.

Dimension

front side view



tip side view

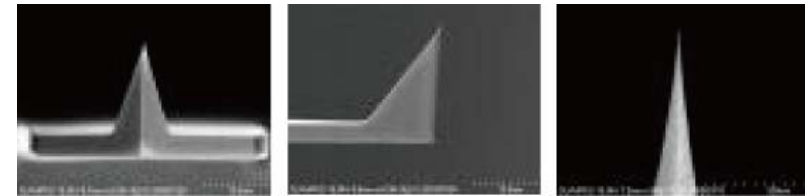


Material

Tip & Lever	Silicon (0.01 – 0.02 ohm.cm)
Metal coating (tip side)	Non
Metal coating (ref ; ex side)	Aluminum on Silicon cantilever
Chip	Silicon (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)

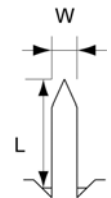
Dimensions

	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)	240 (± 15)
Cantilever width W (μm)	40 (± 2)
Cantilever thickness t (μm)	2.3 (± 0.7)
Thickness of Metal Coat tm (μm)	Aluminum 0.1 (± 0.04)



Calculated mechanical properties

	Typical value	Typical range
Resonant frequency (kHz)	70	50 - 90
Spring constant (N/m)	2	0.6 - 3.5

OLYMPUS

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