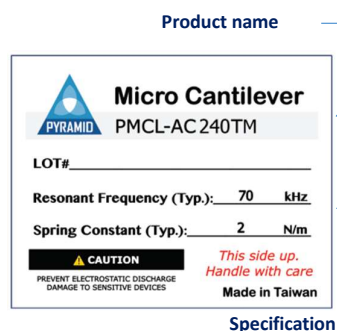


Micro Cantilever

Product name

PMCL-AC240TM

Silicon AFM probe with a sharpened tetrahedral tip



PMCL – AC240TM

PMCL: Pyramid Micro Cantilever

AC: Tapping mode measurement

240: Cantilever length of 240 μm

T: Sharpened tetrahedral tip

M: Platinum coated on Tip side

Material

Micro Cantilever Tip & lever	Silicon (n-type, 0.01 – 0.02 ohm.cm)
Metal coating (tip side)	None
Metal coating (reflex side)	Gold/Chromium on Silicon probe lever
Chip	Silicon (n-type, 0.01 – 0.02 ohm.cm)

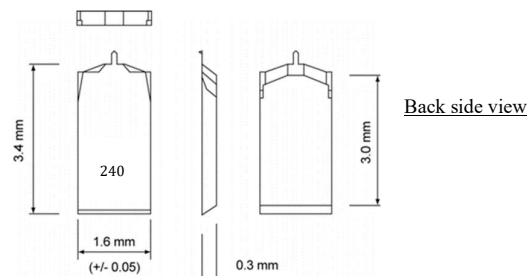
Chip

A rectangular shape silicon probe on one side of the silicon chip

Dimension

Front side view

Tip side view

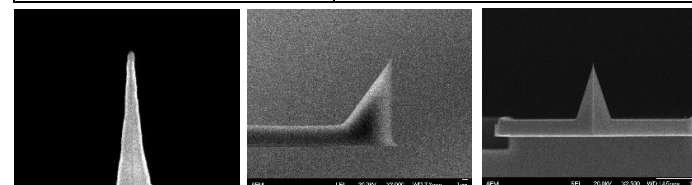


Probe Tip

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

Dimensions

	Typ. Value	Typ. Range
Tip length (μm)	14	9 - 19
Tip radius (nm)	20	17 - 23
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	

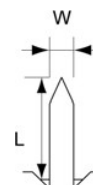


Cantilever

Calculated mechanical properties

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

Dimensions



Cantilever length L (μm)	240 (± 15)
Cantilever width W (μm)	40 (± 2)
Cantilever thickness t (μm)	2.3 (± 0.7)
Coated metal thickness t_m (μm)	Pt 0.015 (± 0.005) · Al 0.1 (± 0.04)

