


## Micro cantilever

### Product name

OMCL-AC55TS-R3

Micro Cantilever	
<b>OmegaLevel</b> OMCL-AC55TS-R3	
Lot No.	
Nominal value	Inspection result
Resonant frequency 1.6 (MHz)	-
Spring constant 85 (N/m)	(Calculated value)
Inspector	
	
Made in Japan	

Olympus Mega Hz Silicon cantilever  
with a sharpened tetrahedral tip

### OMCL - AC 55 T S - R3

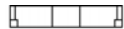
OMCL : Olympus Micro Cantilever  
 AC : Main application is AC mode measurement  
 55 : Lever length of 55  $\mu\text{m}$   
 T : Sharpened Tetrahedral tip  
 S : Reflex metal coating (Single side)  
 R3 : 100 chips / unit  
 Rectangular cross section chip

### Chip

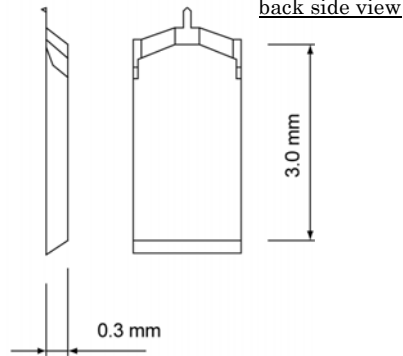
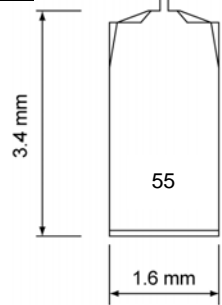
The chip has a pentagonal cantilever on beveled chip shoulders side.

#### Dimensions

front side view



tip side view

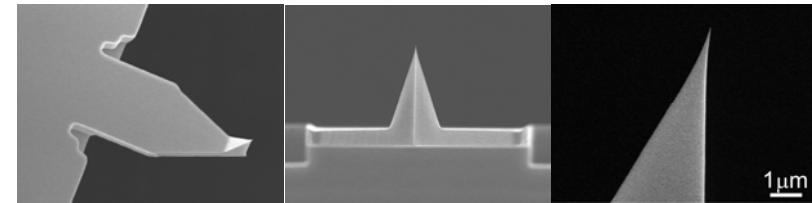


### Material

Tip & Lever	Silicon (n-type, 0.01 – 0.02 ohm.cm)
Metal coating (tip side)	Non
Metal coating (reflex side)	Gold / Chromium
Chip	Silicon (n-type, 0.01 – 0.02 ohm.cm)

## Probe

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



Perspective

Front

Side (probe apex)

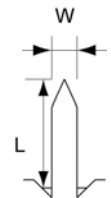
### Dimensions

	Nominal value	Typical range
Probe length ( $\mu\text{m}$ )	12	8 - 16
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 ( $\mu\text{m}$ )	55 ( $\pm 10$ )
Cantilever width W ( $\mu\text{m}$ )	31 ( $\pm 1$ )
Cantilever thickness t ( $\mu\text{m}$ )	2.35 ( $\pm 0.3$ )
Thickness of Metal Coat tm ( $\mu\text{m}$ )	0.07



### Calculated mechanical properties

	Nominal value	Typical range
Resonant frequency (MHz)	1.6	0.85 - 2.5
Spring constant (N/m)	85	38 - 184

**OLYMPUS**

OMCL-AC55TS-R3

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