

## Micro cantilever

### Product name

#### OMCL-AC160TS-C2

Silicon cantilever with tetrahedral tip

Product name		OMCL-AC160TS-C2
Micro Cantilever		
LotNo.		
Typical Value	Inspection result	Inspection result
Resonant frequency 300 (kHz)		
Spring constant 42 (N/m)	(Calculated Value)	
http://www.olympus.co.jp/probe/		
OLYMPUS		

### OMCL - AC 160 T S - C 2

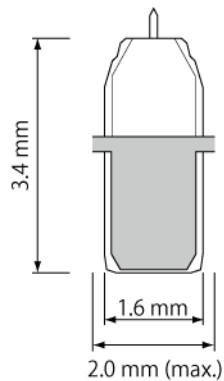
OMCL : Olympus Micro Cantilever  
 AC : main application is AC mode measurement  
 160 : Lever length of 160  $\mu\text{m}$   
 T : Tetrahedral tip  
 S : Aluminum reflex coating (Single side)  
 C : 24 chips / unit  
 2 : Chip thickness 0.3 mm

### Chip

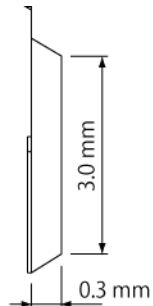
There is a rectangular cantilever on one side of the silicon chip.

#### 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)

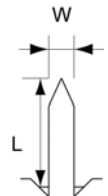
### Dimensions

	Typical value	Typical range
Tip height ( $\mu\text{m}$ )	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 ( $\mu\text{m}$ )	160 ( $\pm 20$ )
Cantilever width W ( $\mu\text{m}$ )	50 ( $\pm 2$ )
Cantilever thickness t ( $\mu\text{m}$ )	4.6 ( $\pm 0.8$ )
Metal coat thickness tm ( $\mu\text{m}$ )	Aluminum 0.1 ( $\pm 0.04$ )



#### Calculated mechanical properties

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

**OLYMPUS**

OMCL-AC160TS-C2

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