

Micro cantilever

Product name

BL-AC40TS-C2 (Bio-Lever mini)

Silicon nitride cantilever with silicon tetrahedral tip

Product name		BL-AC40TS-C2
Micro Cantilever		
LotNo.		
Typical Value	Inspection result	
Resonant frequency 110 (kHz)		
Spring constant 0.09 (N/m)	(Calculated Value)	
http://www.olympus.co.jp/probe/		
OLYMPUS		

Inspection result

BL - AC 40 T S - C 2

BL : Bio Lever

AC : main application is AC mode measurement

40 : Lever length of 40 μm

T : Tetrahedral tip

S : Gold/Chromium reflex coating (Single side)

C : 24 chips / unit

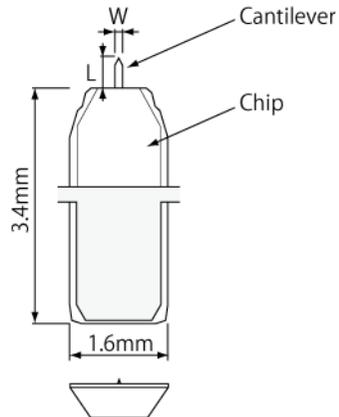
2 : Chip thickness 0.3 mm

Chip

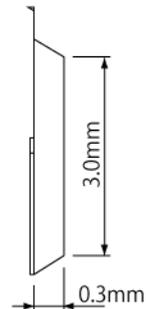
There is a rectangular cantilever on one side of the silicon chip.

Dimension

tip side view



side view

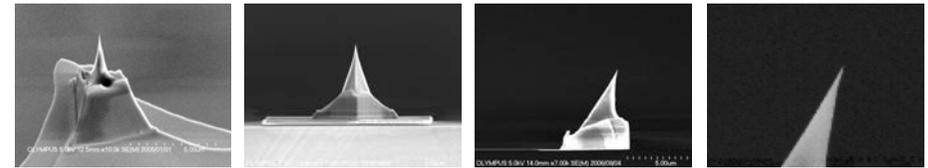


Material

Tip	Silicon (4 - 6 ohm.cm)
Cantilever	Silicon nitride
Metal coating (tip side)	No coating
Metal coating (back side)	Gold/Chromium
Chip	Silicon (4 - 6 ohm.cm)

Tip

A sharpened tetrahedral silicon tip extends from the end of the cantilever. The base of the tip is covered in silicon nitride which attaches it to the cantilever. The effective tip height is the tip apex which is not covered by the silicon nitride.



Perspective View

Front

Side

Magnified Side View

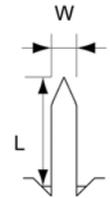
Dimensions

	Typical value	Typical range
Tip height (μm)	7	5 - 9
Effective tip height (μm)	3.5	2 - 5
Tip radius (nm)	8	less than 15
Tip angle (deg.)	(side) less than 35 (front) less than 35	

Cantilever

Dimensions

Cantilever length L (μm)	38 (± 3)
Cantilever width W (μm)	16 (± 2)
Cantilever thickness t (μm)	0.2 (± 0.02)
Thickness of Metal Coat t _m (μm)	0.04 (± 0.01)



Nominal mechanical properties

	Typical value	Typical range
Resonant frequency in air (kHz)	110	75 - 145
Resonant frequency in water (kHz)	25	17 - 45
Spring constant (N/m)	0.09	0.02 - 0.14

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BL-AC40TS-C2

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