

Micro cantilever

Product name

BL-AC10DS-A2

Silicon cantilever with tetrahedral tip

Product name		Micro Cantilever	
Lot/No.		BL-AC10DS-A2	
Typical Value	Inspection result	Inspection result	Inspection result
Resonant frequency 1.5 (MHz)	-	-	-
Spring constant 0.1 (N/m)	(Calculated Value)	-	-
http://www.olympus.co.jp/probe/			
OLYMPUS			
Inspection result		2	

BL - AC 10 D S - A 2

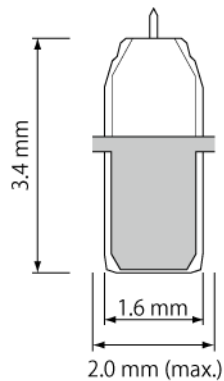
BL : Olympus Bio-Lever
 AC : main application is AC mode measurement
 10 : Lever length of 9 μm (around 10 μm)
 D : Plate tip of bird-beak shape
 S : Gold reflex coating (Single side)
 A : 12 chips / unit
 2 : Chip thickness 0.3 mm

Chip

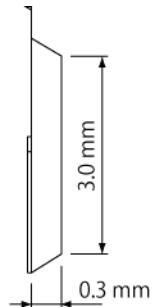
There is a rectangular cantilever on one side of the silicon chip.

Dimension

tip side view



side view

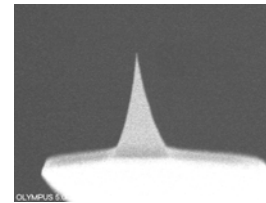


Material

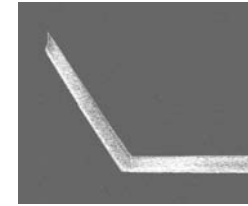
Tip and Lever	Silicon Nitride
Metal coating (tip side)	Non
Metal coating (back side)	Gold / Chromium
Chip	Silicon (4 – 6 ohm.cm)

Tip

Macroscopically, lever and tip are shaped in bird-beak. The tip apex shapes in tetrahedral so that three ridges terminated at one point.



Front



Side

Dimensions

	Typical value	Typical range
Tip height (μm)	0.8	0.3 – 1.5
Tip radius (nm)	24	less than 30
Tip angle (deg.)	(front) less than 20	

Cantilever

Dimensions

Cantilever length L (μm)	9
Cantilever width W (μm)	2
Cantilever thickness t (μm)	0.13
Metal coat thickness tm (μm)	Gold / Chromium 0.02

Calculated mechanical properties

	Typical value	Typical range
Resonant frequency (MHz)	1.5	1.0 – 2.0
Spring constant (N/m)	0.1	0.02 – 0.2

OLYMPUS

BL-AC10DS-A2

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