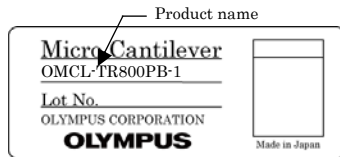


## Micro cantilever

### Product name

OMCL-TR800PB-1

Silicon nitride Triangular cantilever with Sharpened Pyramidal tip



### OMCL - TR 800 P B - 1

OMCL : Olympus Micro Cantilever

TR : Triangular cantilever

800 : Lever thickness of 800 nm

P : Pyramidal tip

B : Both side metal coating

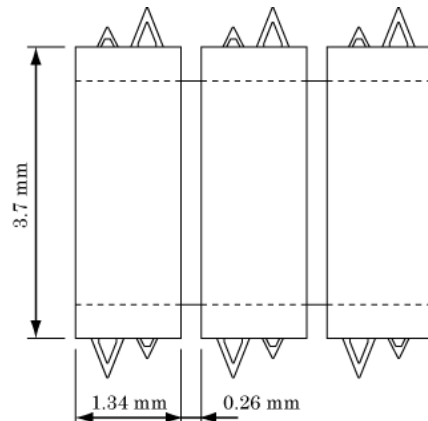
1 : One strip (34 chips) / unit

### Chip

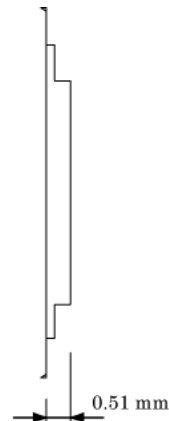
There are two types of triangular cantilevers (100  $\mu\text{m}$  and 200  $\mu\text{m}$  long) on both sides of the glass chip.

### Dimensions

tip side view



side view



### Material

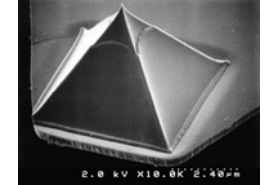
Tip & Lever	Silicon nitride
Metal coating	Gold / Chromium
Chip	Pyrex glass

### Tip

The tip is a hollow pyramid with a sharp apex (oxide sharpened).

### Dimensions

	Typical value
Tip height ( $\mu\text{m}$ )	2.9
Tip radius (nm)	< 40
Tip angle (deg.)	< 70



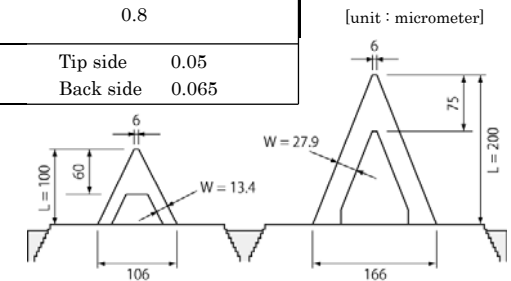
SEM micrograph of the sharpened pyramidal tip

Tip angle between diagonal ridges is less than 90 degrees.

### Cantilever

### Dimensions

	Typical value	
Cantilever length L ( $\mu\text{m}$ )	100	200
Cantilever width W ( $\mu\text{m}$ )	refer to illust. below	
Cantilever thickness t ( $\mu\text{m}$ )	0.8	
Metal coat thickness tm ( $\mu\text{m}$ )	Tip side	0.05
	Back side	0.065



### Calculated mechanical properties

		Typical value
Resonant frequency (kHz)	100 $\mu\text{m}$ long lever	68
	200 $\mu\text{m}$ long lever	22
Spring constant (N/m)	100 $\mu\text{m}$ long lever	0.61
	200 $\mu\text{m}$ long lever	0.16

**OLYMPUS**

OMCL-TR800PB-1

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