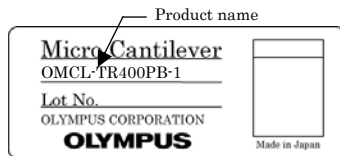


Micro cantilever

Product name

OMCL-TR400PB-1

Silicon nitride Triangular cantilever with Sharpened Pyramidal tip



OMCL - TR 400 P B - 1

OMCL : Olympus Micro Cantilever

TR : Triangular cantilever

400 : Lever thickness of 400 nm

P : Pyramidal tip

B : Both side metal coating

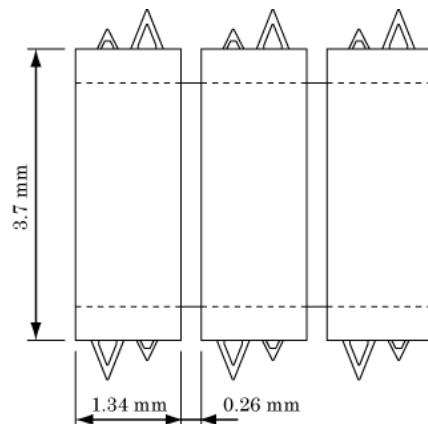
1 : One strip (34 chips) / unit

Chip

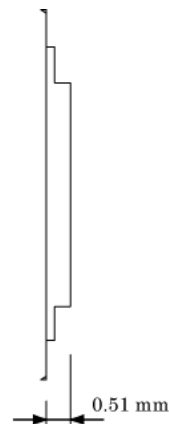
There are two types of triangular cantilevers (100 μm and 200 μm long) on both sides of the glass chip.

Dimensions

tip side view



side view



Material

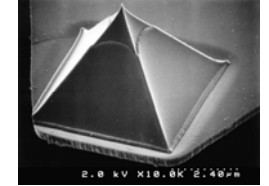
Tip & Lever	Silicon nitride
Metal coating	Gold / Chromium
Chip	Tempax glass

Tip

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

Dimensions

	Typical value
Tip height (μm)	2.9
Tip radius (nm)	< 40
Tip angle (deg.)	< 70



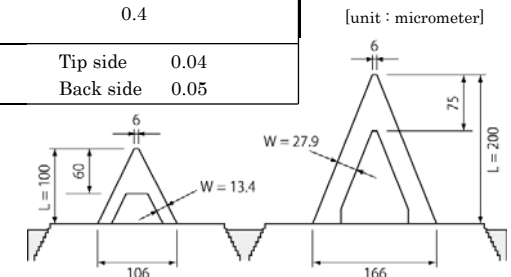
SEM micrograph of the sharpened pyramidal tip

Tip angle between diagonal ridges is less than 90 degrees.

Cantilever

Dimensions

	Typical value	
Cantilever length L (μm)	100	200
Cantilever width W (μm)	refer to illust. below	
Cantilever thickness t (μm)	0.4	
Metal coat thickness tm (μm)	Tip side	0.04
	Back side	0.05



Calculated mechanical properties

		Typical value
Resonant frequency (kHz)	100 μm long lever	32
	200 μm long lever	10
Spring constant (N/m)	100 μm long lever	0.09
	200 μm long lever	0.02

OLYMPUS

OMCL-TR400PB-1