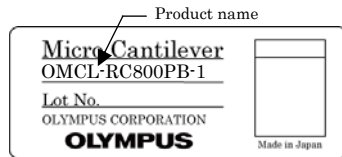


Micro cantilever

Product name

OMCL-RC800PB-1

Silicon nitride Triangular cantilever with Sharpened Pyramidal tip



OMCL - RC 800 PB - 1

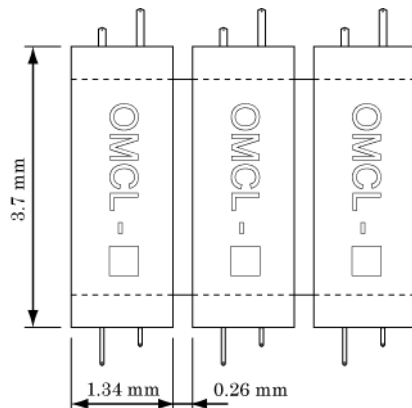
OMCL : Olympus Micro Cantilever
 RC : Rectangular cantilever
 800 : Lever thickness of 800 nm
 P : Pyramidal tip
 B : Both side metal coating
 1 : One strip (34 chips) / unit

Chip

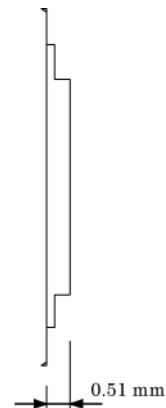
There are two types of rectangular cantilevers (100 μm and 200 μm long, 40 μm and 20 μm wide) on both sides of the glass chip.

Dimensions

tip side view



side view



Material

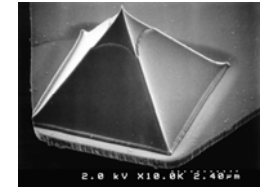
Tip & Lever	Silicon nitride
Metal coating	Gold / Chromium
Chip	Pyrex glass

Tip

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

Dimensions

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



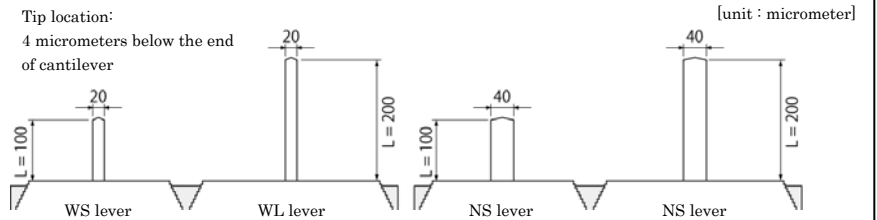
SEM micrograph of the sharpened pyramidal tip

Tip angle between diagonal ridges is less than 90 degrees.

Cantilever

Dimensions

	WS lever	WL lever	NS lever	NL lever
Cantilever width W (μm)	40		20	
Cantilever length L (μm)	100	200	100	200
Cantilever thickness t (μm)	0.8			
Metal coat thickness tm (μm)	Tip side 0.05 Back side 0.065			



Calculated mechanical properties

	WS lever	WL lever	NS lever	NL lever
Resonant frequency (kHz)	66	17	64	17
Spring constant (N/m)	0.82	0.11	0.42	0.06

OLYMPUS

OMCL-RC800PB-1

Ver. 5.0 August 6, 2009