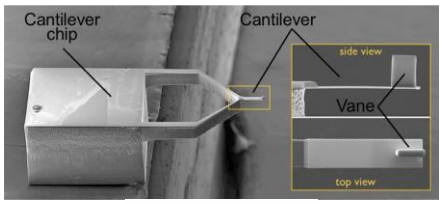
2D-LCA

A Laser Cantilever Anemometer

The 2D-LCA is an innovative anemometer for two-dimensional measurements of wind velocities at high spatial and temporal resolutions. Its measurement technique uses a micro-structured cantilever that is used as a flow body. The bending of the cantilever due to the flow of the medium, is detected by means of laser lever principal.



ADVANTAGES OF THE 2D LCA:

- Simultaneous measurement of two wind speed components
- Frequency response up to 150 kHz
- High spatial and temporal resolution
- Interference protected optical method
- Portable

COMPARED TO HOT WIRE:

- More robust
- Less frequent calibration requirements
- Works as well in water and in air
- Throw away your Hot Wire!

APPLICATIONS INCLUDE:

- Laboratory flows
- Turbulence
- Atmospheric flows

MEASUREMENT SPECIFICATIONS	
Velocity range	2 -100 m/sec
Temporal resolution	Up to 150 KHz
Spatial resolution	100 - 400 μm

PROBE BODY SPECIFICATIONS	
Probe dimensions	22 cm length, 3 cm diameter
Probe weight	180 g

LASER SPECIFICATIONS	
Laser power	5 mW
Wavelength	670 nm
Laser type	Class IIIb

OPERATING PARAMETERS OF LCA	
Temperature	0°F-160°F
Operating voltage	+/-9V
Power consumption	150mA
Output voltage range	+/-8.5V

SIGNAL PROCESSING UNIT SPECIFICATIONS	
Temperature	0°F-160°F
Operating voltage	110 V
Low pass filter	x2, x3, x4
Output	2x BNC socket
Data acquisition	Via USB or blue-tooth

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