

# ultraLDV™

## An ultra-stable Laser Doppler Velocimeter

The ultraLDV is ideal for applications where extreme stability, precision, and ease of use is required. The ultraLDV is an integrated system with the laser source, ultra stable frequency shifting, and processing electronics, all housed in one enclosure. The ultraLDV requires no alignment or calibration by the user.



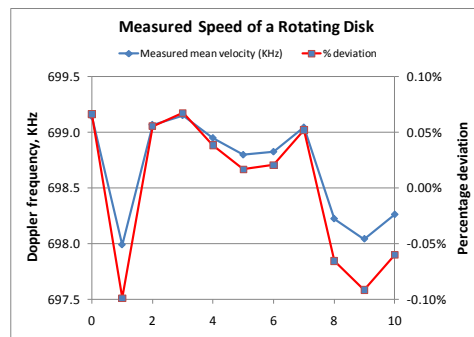
### ADVANTAGES OF THE ULTRA LDV:

- Non-intrusive fluid and solid velocity measurements.
- Optimized to achieve high precision measurements of low velocities (mm/s to m/s)
- Frequency shifting feature allows measurement of direction along with speed.
- Works with all type of fluids
- Laser source, optics, frequency shifting, processing engine, integrated in one enclosure.
- No moving parts make it suitable for onboard instrumentation.
- No alignment needed.
- No calibration needed.
- Software controlled automated profile measurement.
- Waterproof and temperature resistant housing option.

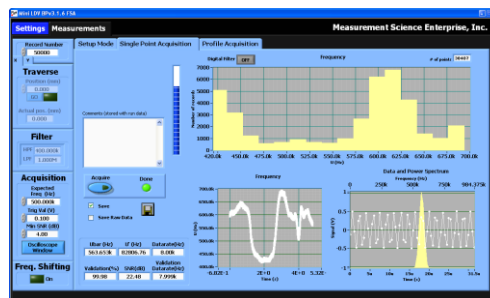
### APPLICATIONS INCLUDE:

- Steady or oscillatory flows in laminar or turbulent regimes.
- Laboratory experiments and onboard instrumentation with limited space.
- Particularly suited for low speed flows (mm/s to m/s).
- Wind, water, oil tunnels or channels

*The ultraLDV probe, the size of a small shoebox, is self-contained and permanently aligned; no calibration required by the user. The probe contains a laser, transmitting and receiving optics, and processing engine.*



*Extremely high precision, even in integrated measurements.*



*The user-friendly interface of the Burst Processor software complements the probe's ease of setup.*

MEASUREMENT SPECIFICATIONS	
Velocity range	-10 to 200 m/s*
Repeatability	99.9 %
Accuracy	99.9 % or better

PROBE VOLUME	
PV dimensions (x by y by z)	30 x 60 x 200 μm**
Standoff distance (air)	300, 400, 500 m***

PROBE SPECIFICATIONS	
weight	10 lb (5 Kg)
Dimensions	13.5 x 5.0 x 9 inches (340 x 130 x 225 mm)

LASER SPECIFICATIONS	
Laser power	130 mW
Wavelength	658 nm*
Laser type	Class IIIb

OPERATING PARAMETERS	
Temperature	0 to 55°C
Pressure	Atmospheric
Computer	Laptop or PC

OPTIONAL FEATURES	
Software controlled traversing stage for profile measurements	
Battery operated	

POWER SUPPLY	
12 Volt DC	

\* Please specify the desired velocity range and laser wavelength

\*\* Depends on the standoff distance

\*\*\* Please specify desired standoff

One or more of the following U.S. Patents apply: No. 6,654,102, 6,580,503, 6,608,668, 6,717,172, 6,956,230

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