

1D fp50-shift LDV System



Overview

The fp50-shift LDV system integrates the laser source, frequency shifting and optics in a single compact probe. There are no optical fibers to transport the beams from the Laser to the probe optics, so almost all of the Laser energy is transmitted to the measurement volume.

When comparing with common fiber-based LDV systems, this approach has the advantage of a high available illumination power offered at a very competitive price.

The fp50-shift is designed with robustness and stability in mind. All optical elements, such as Bragg cells and prisms, are factory-aligned and fixed, with no need for in-use readjustment.

Main Features

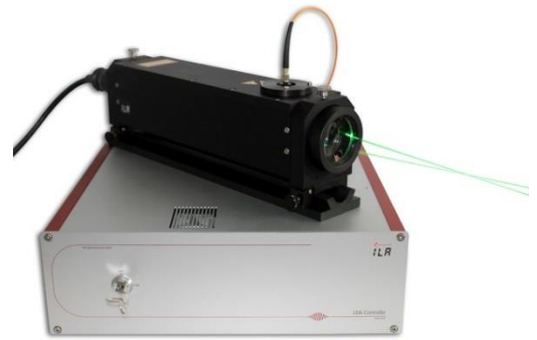
- Simple setup and alignment
- High long term stability
- High laser power transferred to the measurement volume
- Low measurement uncertainty
- Small dispersion effect
- Good visibility
- No optical transmission fibers
- Automatic traversing (optional)
- Robust Transportation Suitcases
- Upgradeable to 2D System

Specifications

1D fp50-shift LDV Probe

Dimensions	328 x 80 x 80 mm (L x W x H)
Weight	4.1 kg
Laser Power	75, 100, 150, 200, 300, 500 mW
Power Adjustment	30-100 %, optional
Wavelength	532 nm
Coherence Length	≥ 100 m
Focal Length	80, 160, 250, 400, 800 mm (*)
Beam Distance	45 mm
Accuracy	0.2 %

(*) Other focal lengths are available on request



1D LDV Controller

Dimensions	330 x 370 x 150 mm (*)
Weight	7 kg
Signal Detector	Photomultiplier
Communication	Ethernet Connection

(*) LDV Controller also available for 19" rack

Spectral Analysis Module

Sample rates	50 MHz, 250 MHz, 1 GHz
Resolution	8 Bit, 12 bit, 14 bit
Input range	+/- 100 mV, +/- 200 mV, +/- 500 mV, +/- 1 V
Interface	PCI-ex

Accessories

- Traversing units with up to 4 axes and displacement from 200 mm up to 2 m
- Traversing software for different suppliers integrated in LDV software *LDA Control Qt*
- Raytracing Software
- Receiving optical fibers
- Integrated IF Converter with 6 analog input channels (4-20 mA)
- ILA Workstation for LDV-Measurements
- Seeder and particles

Accuracy Certification

Upon request we offer a calibration certificate for the accuracy (deviation of the fringe distance inside the measuring volume) from the German National Metrology Institute (PTB-Braunschweig).