

2D fp50-shift LDV System



Overview

The 2D LDV Probe is based on our fp50-shifted probe's design. It follows the ILA's approach of building high reliable LDV probes with incorporated lasers and without optical transmission fibers. The greatest advantage of our approach is that between 80 to 90 % of the laser power is transferred to the measurement volume; furthermore it involves a reduction of costs due to the omission of the additional optical fibers. Two Nd:YAG-Laser are built-in the probe, with wavelengths of 532 and 561 nm and a maximum power of up to 500 mW.

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

Specifications

2D fp50-shift LDV Probe

Dimensions	400 x 100 x 80 mm (L x W x H)
Weight	4.3 kg
Laser Power	75, 100, 150, 200, 300, 500 mW
Power Adjustment	30-100 % (*), optional
Wavelengths	532 and 561 nm
Coherence Length	≥ 100 m
Focal Length	80, 160, 250, 400, 800 mm (*)
Beam Distance	45 mm
Accuracy	0.3 %

(* Other focal lengths are available on request)

2D LDV Controller

Dimensions	330 x 370 x 150 mm (*)
Weight	10.3 kg
Signal Detector	Photomultipliers, optical separation module
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).