

# 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

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

(\* Other focal lengths are available on request)

## 2D LDV Controller

<b>Dimensions</b>	330 x 370 x 150 mm (*)
<b>Weight</b>	10.3 kg
<b>Signal Detector</b>	Photomultipliers, optical separation module
<b>Communication</b>	Ethernet Connection

(\* LDV Controller also available for 19" rack)

## Spectral Analysis Module

<b>Sample rates</b>	50 MHz, 250 MHz, 1 GHz
<b>Resolution</b>	8 Bit, 12 bit, 14 bit
<b>Input range</b>	+/- 100 mV, +/- 200 mV, +/- 500 mV, +/- 1 V
<b>Interface</b>	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).