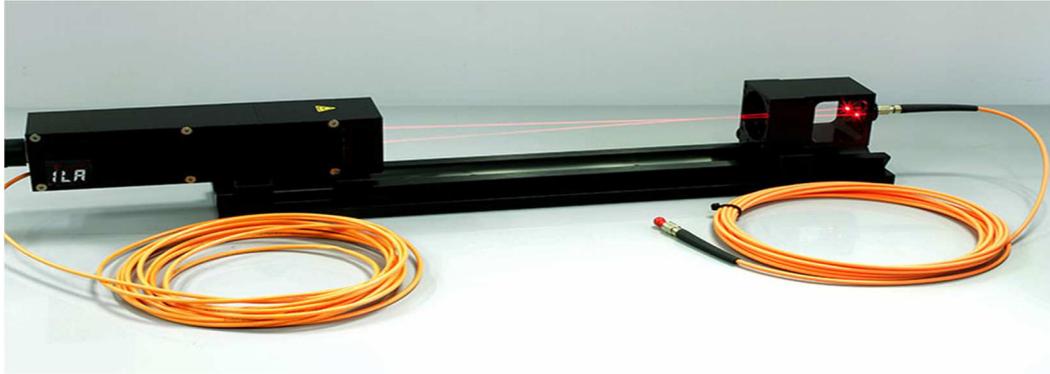


# fp40-LD LDV System with backward and forward scattering



## Main Features

- To be used with backward- and forward scattering
- Light collector can be used separately
- High accuracy
- High system stability
- Transportable without loss of adjustment
- Optical fiber is fixed parallel to the probe. No disassembling and new adjustment needed after first calibration.

## LDV Probe

- Integrated temperature controlled laser diode
- Fixed optical path length compensated beam splitters
- No frequency shift
- Accuracy about 0.5% for  $f=200\text{mm}$
- Light collector with fixed fiber

## LDV-Controller

- Fiber-based
- Analog signal pre-processing with freely combinable 8 low pass and 8 high pass filters
- PM or APD with dig. temperature controller
- Connection to PC or networks over Ethernet
- Remote control via internet
- PC: Standard PC or Notebook
- Velocity range for  $f=200\text{mm}$ : 0.005-50m/s

The benefit of the new fp40 system is the capability to use backward AND forward scattering. If the optical access allows forward scattering you get more signal power. The light collector, developed by ILA, can be positioned within the area the particles reflect the light, so there is more flexibility when using this system! The light collector can furthermore also be used separately with our other LDV systems, so you can extend these systems too! As you need two optical accesses to use forward scattering, there is the possibility to use our self-designed window chambers.

## Specifications

### LDV Probe

<b>Dimensions</b>	(L) 130mm, (H) 45mm, (W) 45mm
<b>Weight</b>	
<b>Laser Power</b>	30mW@785nm; 40mW@643nm
<b>Coherence Length</b>	
<b>Focal Length</b>	90mm, 160mm, 200mm
<b>Beam distance</b>	30 mm
<b>Wavelengths</b>	
<b>Power Adjustment</b>	

### LDV Controller

<b>Dimensions</b>	330 x 370 x 116 mm (*)
<b>Weight</b>	6,8 kg
<b>Detector</b>	Photomultiplier/APD
<b>Communication</b>	Ethernet Connection

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

### Spectral Analysis Module

<b>sample rates</b>	50MHz, 200MHz or 400 MHz,
<b>Resolution</b>	8 Bit
<b>Input range</b>	+/-50mV, +/-100mV, +/-200mV, +/-500mV, +/-1V

### Accessories

- Traversing units (up to 4 axes, displacements from 50mm to 2000mm)
- Traversing software integrated
- LDV-Software flowpoint

### Accuracy Certification

Upon request we offer a calibration certificate for the accuracy (deviation of the fringe distance inside the measuring volume) from the Physikalisch-Technische Bundesanstalt (PTB).