

## fp40LD LDA system



The fp40LD LDA probe

### **BENEFITS:**

- **High system stability**
- **High accuracy**
- **Very compact**
- **For calibration applications**
- **Transportable without loss of adjustment**

The fp40LD LDA system is specially designed for calibration applications. The temperature controlled laser diode is working in the visible range at 785nm. An Avalanche Photo Diode (APD) is used as receiver. All optical elements are rigidly fixed inside the probe. The receiving fiber is fixed to the probe, so no user adjustment is needed. As a result this probe combines a high measuring accuracy (0,5%) in a very compact setup and so is commonly used as a primary standard to calibrate sensors such as hot wire anemometers, cup anemometers, propeller anemometers etc. The fp40LD is often used in universities and advanced technical colleges for educational and scientific research work due to the very attractive pricing. All LDA systems from ILA are operated via the proven and user-friendly *flowPOINT* software interface.

## FEATURES

### Probe:

- Integrated temperature controlled laser diode
- Laser power 30mW@785nm
- Fixed optical path length compensated beam splitters
- No frequency shift
- Focal length: 160, 200mm
- Beam distance: 35mm
- accuracy about 0,5% for f=200mm

### Data:

- 1D-Controller in a halfsize 19" rack
- Controller: fiber-based
  - analog signal pre-processing with freely combinable 8 lowpass and 8 highpass filters,
  - Bandwidth up to 90MHz (filters) and 60MHz (APD)
  - APD with power supply
  - all parameters (filters, gain, APD Gain) controllable via USB
- PC: standard PC or Notebook.
- Spectral Analysis Module: two channel A/D-converter, sampling rate up to 50 MHz per channel, 8 Bit, input range +/-50mV, +/-100mV, +/-200mV, +/-500mV, +/-1V,
- Velocity range for f=200mm: 0,005-30m/s
- Dimension: (L) 13cm, (W) 4,5cm, (H) 4,5cm

### Accessories

- Traversing units (up to 5 axes, displacements from 200 to 2000mm)
- Traversing software integrated
- Phase correlation module

### Accuracy Certification

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