ABOUT US

VISION

We aim at creating cutting-edge, portable instruments for scientific and industrial purposes, with a focus on simplicity and modularity.

MISSION

Our goal is to democratize fluorescence lifetime analysis technologyby promoting FPGA-based instrumentation and devices that can offer new opportunities for research and industry, expanding their potential.

STORY

Since 2019, FLIM LABS has been leveraging its expertise to create user-friendly and cost-effective technological solutions.

OUR PRODUCTS

FLIM LABS offers many in-house solutions that can support the user in building cutting-edge fluorescence lifetime-based setups that are effective and affordable.

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Portable Devices for Fluorescence Lifetime Analysis

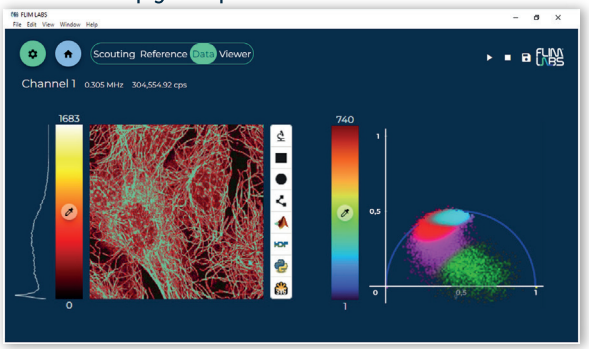
Entry Level Starter Kit

The FLIM Starter-Kit for fluorescence lifetime analysis is a comprehensive instrument solution designed specifically for single-photon FLIM imaging and time-resolved single-point spectroscopy applications.

1. FIBER-COUPLED PICOSECOND-PULSED LASER MODULE
2. FLIM DATA ACQUISITION CARD
3. SINGLE-PHOTON SPAD DETECTOR
4. FLIM STUDIO SOFTWARE

FLIM Studio Software

This software solution simplifies the data acquisition, reconstruction and analysis of fluorescence lifetime for FLIM and spectroscopy experiments.



TECH-SPECS

- Real time imaging and fluorescence decay histogram data reconstruction
- FLIM phasor-plot analysis
- AI-driven phasor-plot analysis techniques
- Software API for data acquisition and reconstruction
- Python-based FLIM-phasors and imaging data exporting
- Supported platforms: MS Windows

Fiber-coupled Picosecond-pulsed Laser Module

These laser modules are designed to provide short light pulses as low as 50 ps and peak power of up to 150mW in various of wavelengths, all in a compact size.

TECH-SPECS

- Dimensions: 135x110x50 mm
- Available wavelengths: 405, 445, 488, 520, 635 and 850 nm
- Pulse duration down to 50 ps (FWHM)
- From 1 KHz up to 80 MHz repetition rate
- Up to 150 mW pulse peak power
- Up to 1.5 mW average CW power at 80 MHz
- Single-mode fiber coupled module (FC/PC type)
- External and internal trigger available (LVTTL @ 50 Ohm and LVDS interface)
- Standalone module, no computer connection required
- B2C or B2B selling options

Constant Fraction Discriminator (CFD) Module

A CFD module is an electronic device that produces precise digital time stamps for input signals with variable amplitudes but a consistent rise time.

TECH-SPECS

- Dimensions: 85x70x30 mm
- Single channel dual-output module
- Discrimination for positive and negative input signals
- Rise time: <500 ps
- Jitter: <15 ps
- Max repetition rate: 140 MHz
- Min input detectable signal: +/- 100 mV
- Max output signal: 4V @ 50 Ohm load
- B2C or B2B selling options

FLIM Data Acquisition Card

The FLIM card is a sleek, USB-powered device featuring an FPGA-based design for precise single-photon time tagging and multichannel TDC functionality. This cutting-edge tool has been meticulously crafted to facilitate FLIM and spectroscopy TCSPC applications with ease and efficiency.

TECH-SPECS

- Dimensions: 101x139x28 mm
- < 300 ps single-shot precision ($\sigma/\sqrt{2}$)
- 48 ps minimum time bin resolution
- 1.5 ns deadtime
- 80 MHz max laser sync rate
- < 0.5% rms differential non-linearity
- Transfer rate up to 100 Mcounts/s
- Peak count rate per input channel up to 640 Mcounts/s
- Up to 25 input channels
- B2C or B2B selling options

Blue-Shifted Single-photon SPAD Detector

The USB-powered fiber-coupled single-photon SPAD sensor is specifically designed for conducting time-resolved fluorescence lifetime imaging and spectroscopy measurements.

TECH-SPECS

- USB Type-C power
- Dimensions: 100x60x30 mm
- Spectral response range from 370 nm to 900 nm
- Peak sensitivity at 450 nm
- 7 cps dark count
- < 200 ps jitter
- 50 µm photosensitive area
- Digital LVTTL @ 50 Ohm and LVDS output
- B2C or B2B selling options