

# DIALUNOX



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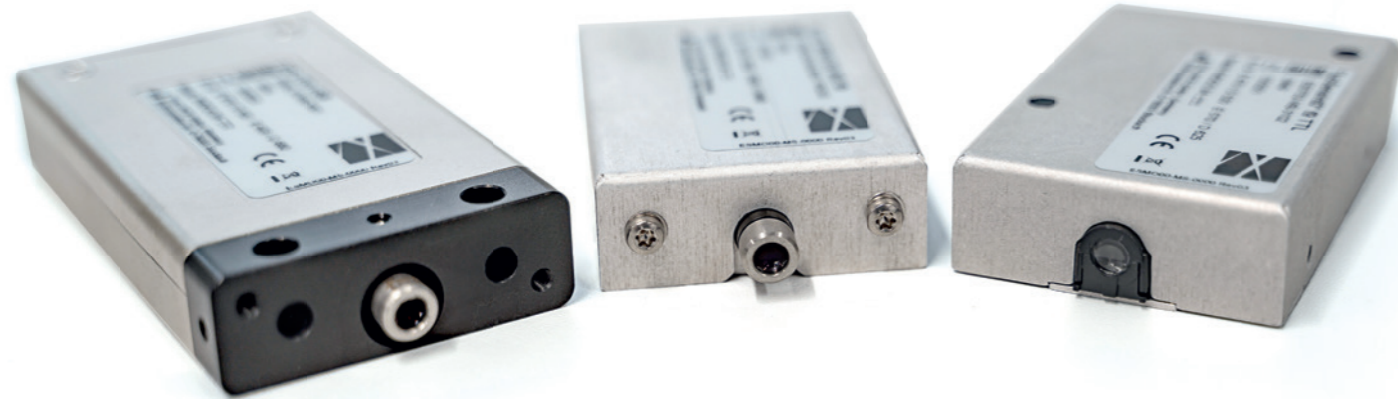
ESMO00-MS-0000 Rev03

Your solution for small  
mobile detection systems

## Fluo Sens Integrated

Compact size, highly sensitive and easily adaptable

# Fluo Sens Integrated



The Fluo Sens Integrated is your solution for mobile detection systems. It is highly suited to be built into compact and mobile fluorescence detection systems or for online measurements in automated processes. The main advantage is a highly-integra-

ted module, meaning that the light sources, light detection and the control unit that triggers measurements and collects raw data are all located in a single housing the size of a matchbox. This allows you to insert this unit quickly into existing or newly

developed hardware while focusing on your real need: Carrying out high precision and high sensitivity fluorescence measurements.

The module can detect up to three different fluorescent samples. We provide modules optimized for your needs, including an array of pre-configured variants for the most common wavelength combinations. Our modules cover the whole spectral range from UV to near infrared spectra. You can then focus on working with your set of dyes and let us take care of the perfect detection.

The unit's compact size allows you to combine several detectors and create a multiplex detection system for many different dyes in your sample tubes, microfluidic systems or directly on surfaces.

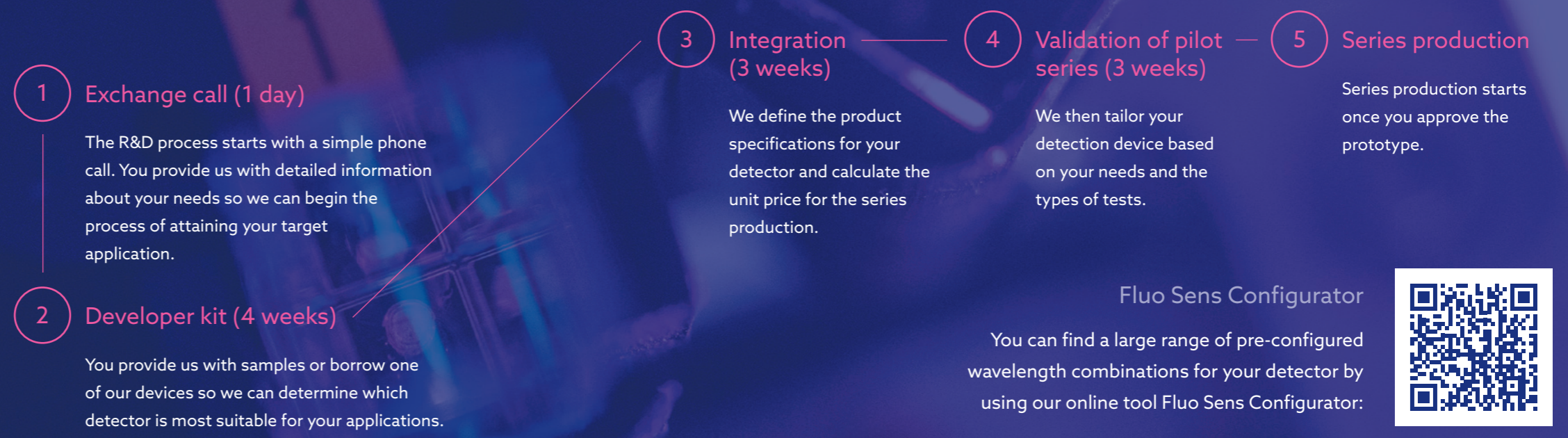
The Fluo Sens Integrated offers many advantages:

- Saves time and money: The unit is ready to use and can be integrated directly into your system.
- Enables high performance detection of fluorescence down to picomolar concentrations with ultra-fast read-out times.
- Easy scale up: Whether you start with one or several thousand units, DIALUNOX guarantees consistent quality and performance for each manufactured unit.
- "Made in Germany": The units are produced in our very own production facilities.

Flexible options to meet your needs

## Create your very own detector

We want to help you reach your detection goals as fast as possible. You can already detect many targets accurately right from the start using one of our standard detectors. During the course of development, we then adjust the module to match your setup precisely. This allows you to attain optimum performance in terms of minimizing cross talk, determining the right dynamic range and the perfect working distance between detector lens and your target. After we receive your final approval, the customized units are then transferred into series production.



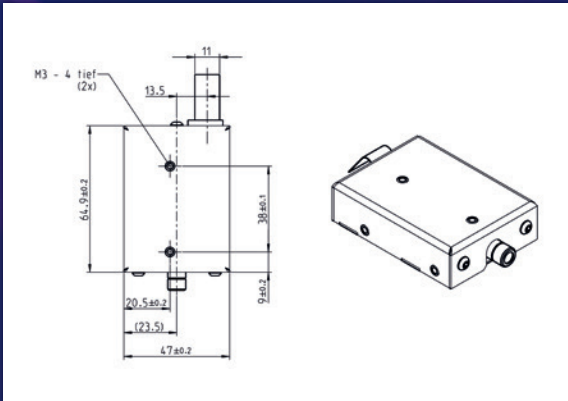
Fluo Sens Configurator

You can find a large range of pre-configured wavelength combinations for your detector by using our online tool Fluo Sens Configurator:



Performance

# Technical specifications



Also available with 90 degree optical output

Problem-free plug & play. The circuit board is an important interface between the detector and the USB port.



The holder is used to precisely position and analyze PCR tubes in front of the detector.

| Definition                          | Description                                                                                                                                                                  |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Absolute lower detection limit LLOD | e.g. @ 470nm excitation and 520nm detection 15 pMol fluorescein-sodium in 0.1 M sodium hydroxide                                                                             |
| Dynamic range                       | Up to 6 orders of magnitude                                                                                                                                                  |
| Noise level                         | < 0.2% at max. range                                                                                                                                                         |
| Excitation                          | High performance-LED with feedback loop for stabilization                                                                                                                    |
| Detection                           | High amplification with low-noise (between 0.05% and 1.5% of dynamic range depending on multiple factors), precision Si-Photodiode                                           |
| Measurement intervals               | 0.02 seconds to hours<br>Signal settling time ("On-Delay"): 20 - 300 ms<br>Signal fall time ("Off-Delay"): 20 - 300 ms<br>Measurement frequency in "scan mode": up to 10 kHz |
| Detection area                      | 1 mm <sup>2</sup> to 25 mm <sup>2</sup> (depends on working distance and used front lens)                                                                                    |
| Distance (detector/object)          | 6 mm to 18 mm (depends on used front lens)                                                                                                                                   |
| Available excitation wavelengths*   | 365 nm .. 980 nm (two different spectral excitation ranges per detector)                                                                                                     |
| Available detection wavelengths*    | 460 nm .. 980 nm (two different spectral detection ranges per detector)                                                                                                      |

\*Typical dyes: Alexa Fluor® 647, Pacific Blue EGFP, 5-FAM™, ROX, HEX, Cy®3, Cy5, TAMRA, FITC

Visit [www.fluorescence-measurement.com](http://www.fluorescence-measurement.com) and discover more!

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