

# FireStingGO<sub>2</sub>

Pocket Oxygen Meter  
with long-term logging



Simplify & boost your  
field and lab research

One Device –  
Many Applications

- for long-term logging (up to >1 year)
- smart LCD user interface
- rechargeable battery
- REDFLASH technology
- 1 oxygen & 1 temperature channel
- broad oxygen sensor portfolio
- operation modes: stand-alone, Android App, Windows PC

**pyroscience**   
sensor technology

high performance & fair prices

## Pocket Oxygen Meter with long-term logging

### Hand-held oxygen meter FireStingGO2

The FireStingGO2 is a fiber-optic oxygen meter based on the established FireSting technology featuring:

- broad oxygen sensor portfolio (micro- and minisensors, robust probes, cap probes, sensor spots, flow-through cells, respiration vials)
- sensors for the full and the trace oxygen range
- automatic temperature and pressure compensation
- proven REDFLASH technology



#### New Features:

- integrated high contrast LCD display
- integrated rechargeable battery
- extremely low power consumption for long-term logging (up to >1 year)

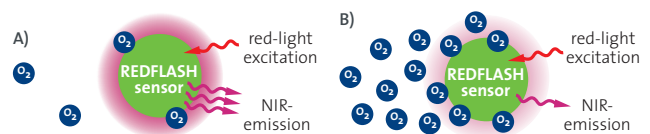
#### Operation Modes:

- stand-alone via intuitive LCD user interface
- with smartphone/tablet App (Android)
- with Windows PC via USB

### Innovative REDFLASH technology



The REDFLASH technology is based on the unique oxygen-sensitive REDFLASH indicators showing excellent brightness. The REDFLASH indicators are excitable with red light ( $\lambda=620$  nm) and show an oxygen-dependent luminescence in the near infrared (NIR). The REDFLASH technology impresses by its high precision, high reliability, low power consumption, low cross-sensitivity, and fast response times. The red light excitation significantly reduces interferences caused by autofluorescence and reduces stress in biological systems.



**Principle:** red light excited REDFLASH indicators show luminescence in the near infrared (NIR), which decreases with increasing oxygen (quenching effect).  
**A)** high NIR emission at low oxygen and **B)** low NIR at high oxygen

## Specifications

|                                   |   |
|-----------------------------------|---|
| Weight                            | 150 g   |
| Dimensions (w x l x h)            | 52 x 97 x 20 mm   |
| Interface                         | LCD, USB  |
| Operation Modus                   | stand-alone, smartphone/tablet App (Android), Windows PC  |
| Logging Memory                    | 2 GB  |
| Battery                           | rechargeable Li-Ion battery<br>max. 2 h charging via micro-USB  |
| App                               | Android   |
| PC Software                       | Windows XP, Vista, 7, 8   |
| Operating Conditions (instrument) | <ul style="list-style-type: none"> <li>• 0-50°C</li> <li>• non-condensing conditions</li> </ul>   |
| Oxygen Sensors (1 channel)        | microsensors, minisensors, robust probes, cap probes, sensor spots, respiration vials, flow-through cells   |
| Temperature Sensors (1 channel)   | Pt100 temperature sensors   |
| Measuring Range (optimum)         | <ul style="list-style-type: none"> <li>• 0-50% O<sub>2</sub> (full range sensor)</li> <li>• 0-10% O<sub>2</sub> (trace range sensor)</li> <li>• 0-50°C</li> </ul> |
| Detection Limit                   | <ul style="list-style-type: none"> <li>• 0.02% O<sub>2</sub> (full range sensor)</li> <li>• 0.005% O<sub>2</sub> (trace range sensor)</li> </ul>                  |
| Precision (2-point calibrated)    | <ul style="list-style-type: none"> <li>• 0.2% (at 20% O<sub>2</sub>)</li> <li>• 0.02% (at 1% O<sub>2</sub>)</li> </ul>  |

## The New All-rounder

### Pocket Oxygen Meter

with

- unbeatable size & performance
- large application spectrum
- multiple operation modes
- broad sensor portfolio
- long-term logging (months even with activated display)

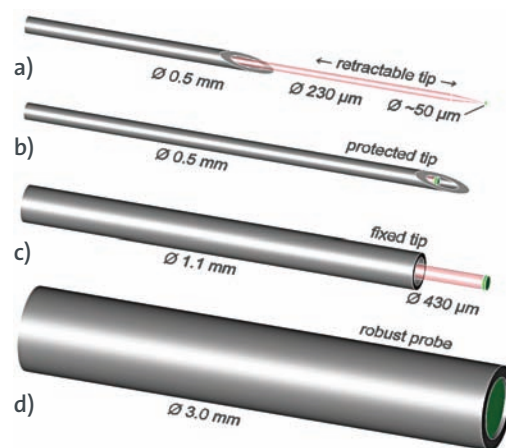
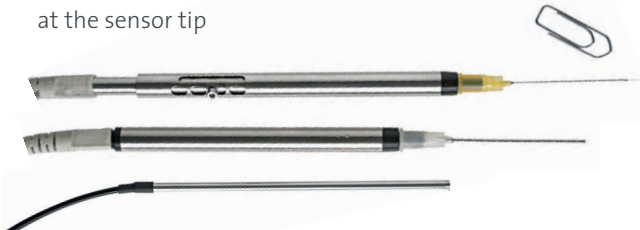
**Simplify & Boost your Field and Lab Research!**



## One Device – Many Applications with various fiber-optic oxygen sensors

### Needle-type Oxygen Sensors and Robust Probes

- **Tip Diameters:** from 50  $\mu\text{m}$  to 3 mm (microsensors, minisensors, robust probes).
- **Concentration Range:** full range 0-100% oxygen (0-40 mg/L dissolved oxygen), trace range 0-21% oxygen (0-8 mg/L dissolved oxygen)
- **Options:** protected tip, optical isolation, fast response time
- **Calibration:** 1-point or 2-point calibration
- **Measurement:** with oxygen-sensitive REDFLASH indicators at the sensor tip



#### Examples of available tips:

- a) retractable needle-type microsensor, b) needle-type minisensor with protected tip or c) fixed sensor tip and d) robust probe

### Oxygen Cap Probe

Probe with exchangeable oxygen sensor cap

- **Diameter:** 8 mm



### Oxygen Sensor Spots

- **Standard Spot Diameter:** 5 mm on PET foil
- **Concentration Range:** full range 0-100% oxygen (0-40 mg/L dissolved oxygen), trace range 0-21% oxygen (0-8 mg/L dissolved oxygen)
- **Placement of spots:** on transparent inner container wall enclosing a liquid or gas
- **Measurement:** with spot fiber connected to a spot adapter fixed at the outer container wall
- **Options:** custom spot material/ dimensions



### Respiration Vials

Ready assembled respiration vials of different volume with integrated oxygen sensor as plug & play solution.



### Flow-through Cells

Online monitoring of oxygen in a liquid or gas pumped through the flow-through cell with an integrated oxygen sensor. Small and large version available with luer-lock adapters for easy integration into experimental set-ups.



## Contact and Service

Please contact us for more information concerning the

- different fiber-optic oxygen meters
- broad range of available sensors and probes
- set-ups for automatized microprofiling and
- OEM solutions available from Pyro Science GmbH

Profit from our innovation, scientific expert knowledge and flexibility to develop customized solutions for high performance sensing technology.

**In cooperation with leading international academic research groups and universities:**

### Sensor development

Graz University of Technology (Austria)  
Institute of Analytical Chemistry and Food Chemistry



### Application development for research

Max-Planck-Institute for Marine Microbiology (Germany)  
University of Copenhagen (Denmark)  
University of Southern Denmark (Denmark)



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