

FireSting O₂

Fiber-Optic Oxygen Meter



The future in oxygen sensing with
proven REDFLASH technology

One Device –
Many Applications

- Compact USB-powered fiber-optic oxygen meter
- REDFLASH technology
- 1, 2 or 4 oxygen and 1 temperature channel (optionally 4)
- Broad range of different oxygen sensors
- For gases and liquids
- Integrated pressure and humidity sensor
- Analog outputs and auto-mode
- Versatile logging software included
- OEM versions available

pyroscience 
sensor technology

www.pyroscience.com

The future in oxygen sensing with unique REDFLASH technology

The all-rounder FireStingO2

The compact FireStingO2 is a PC-controlled (USB) fiber-optic oxygen meter available with 1, 2 or 4 channels for different optical oxygen sensor types from PyroScience.

The FireStingO2 features

- a broad range of different sensors
- compatibility with sensors for the full and the trace range
- automatic temperature and pressure compensation
- comfortable logging and calibration with versatile logger software

• temperature extension module TeX4 for individual temperature compensation of each oxygen sensor

- proven REDFLASH technology



Innovative REDFLASH technology



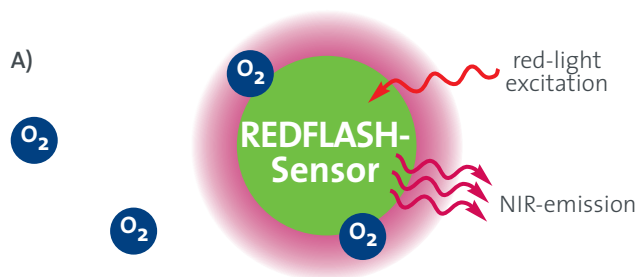
The proven REDFLASH technology is based on the bright REDFLASH oxygen sensors and impresses by

- (ultra-)fast response times
- low power consumption
- high precision
- high reliability
- low cross-sensitivity and
- reduced interferences

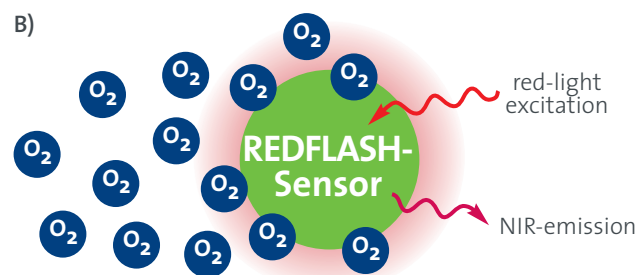
Specifications

Weight	350 g
Dimensions (w x l x h)	68 x 120 x 30 mm
Computer Interface	USB
Oxygen Sensors	microsensors, minisensors, robust probes, sensor spots, respiration vials and flow-through cells
Temperature Sensor	PT100 temperature sensors
Measuring Channels	<ul style="list-style-type: none"> • 1, 2 or 4 oxygen sensors • 1 temperature sensor (optionally 4)
Measuring Principle	lifetime detection of REDFLASH indicators
Measuring Range (optimum)	<ul style="list-style-type: none"> • 0-50% O₂ (full range sensor) • 0-10% O₂ (trace range sensor) • 0-50°C
Detection Limit	0.02% O ₂
Accuracy (2-point-calibrated)	<ul style="list-style-type: none"> • 0.2% O₂ (at 20% O₂) • 0.02% O₂ (at 1% O₂)
Response time (t ₉₀)	down to 0.3 sec (gas/water)
Software Oxygen Logger	Windows XP, Vista, 7, 8, 10
Power Supply	via USB
Operating Conditions (instrument)	<ul style="list-style-type: none"> • 0-50°C • non-condensing conditions
Options	<ul style="list-style-type: none"> • OEM • temperature extension module TeX4

A)



B)



Principle: red light excited REDFLASH indicators show luminescence in the near infrared (NIR), which decreases with increasing oxygen (quenching effect).

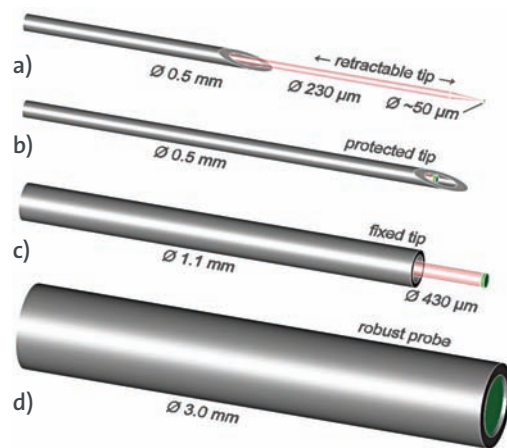
- A) high NIR emission at low oxygen and
B) low NIR at high oxygen



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

Needle-type Oxygen Sensors and Robust Probes

- **Tip Diameters:** from 50 μm to 3 mm (microsensors, minisensors, robust probes).
- **Concentration Range:** full range 0-100% O₂ (0-40 mg/L dissolved oxygen), trace range 0-21% O₂ (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 microsensors, b) needle-type minisensor with protected tip or c) fixed sensor tip and d) robust probe

Oxygen Sensor Spots

- **Standard Spot Diameter:** 5 mm on PET foil
- **Concentration Range:** full range 0-100% O₂ (0-40 mg/L dissolved oxygen), trace range 0-21% O₂ (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



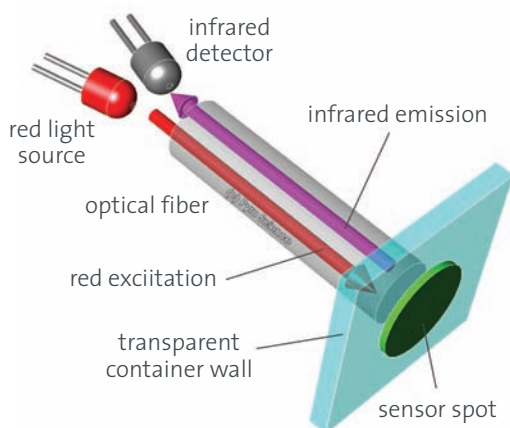
Respiration Vials

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



Flow-through Cells

Small and large version available with luer-lock adapters for easy integration into experimental setups (aqueous and gas samples).



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 micro-profiling and
- OEM solutions available from PyroScience GmbH

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