

# Piccolo<sub>2</sub>

Fiber-Optic Oxygen Meter



The world's  
smallest optical  
oxygen meter

- proven REDFLASH technology
- for gases and liquids
- versatile logger software
- broad variety of oxygen sensor types
- contactless sensing through thick windows (up to 20 mm)
- very low power consumption
- OEM versions available

# The world's smallest optical oxygen meter

## Optical oxygen meter Piccolo<sub>2</sub>

The ultra-compact Piccolo<sub>2</sub> is a one-channel fiber-optic oxygen meter integrated in a small USB stick housing and can be used with different oxygen sensor types like

- robust probes,
- dipping probes,
- sensor spots (through 20 mm thick windows),
- respiration vials,
- flow-through cells or
- nanoprobes



Also available as  
Piccolo<sub>2</sub> OEM

## For Advanced Contactless Sensor Applications

The Piccolo<sub>2</sub> is optimized for

- contactless oxygen measurements through up to 20 mm thick transparent windows with oxygen sensor spots
- microfluidic applications with oxygen nanoprobes (lab-on-a-chip) and
- mobile application with a Windows tablet due to its unmatched compactness

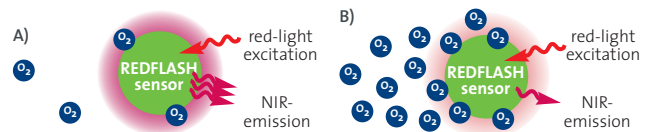
## Specifications Piccolo<sub>2</sub>

Dimensions (without connector)	ca. 16 x 16 x 54 mm
Weight	ca. 25 g
Interface & Power	USB 2.0
System Requirements	Windows 2000, XP, VISTA, 7, 8, 9, 10
Operation Conditions	0-50°C, non-condensing conditions
Measuring Principle	Different oxygen sensors with proven REDFLASH technology
Measuring Range	0-100% O <sub>2</sub> (maximum) 0-50% O <sub>2</sub> (optimum)

## Proven REDFLASH sensor technology

The proven REDFLASH technology stands for

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



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

## Comfortable Calibration & Logging Functions

The user-friendly logging software "Pyro Oxygen Logger" provides comfortable calibration and logging functions for PyroScience oxygen sensor systems (available as free download).



## Broad Range of available Oxygen Sensors

- Optimum Concentration Range: 0-50% O<sub>2</sub> (0-23 mg/L)
- Resolution: 0.01% O<sub>2</sub> at 1% O<sub>2</sub> ; 0.05% O<sub>2</sub> at 20% O<sub>2</sub>
- Calibration: 1-point or 2-point
- Detection Limit: 0.02% O<sub>2</sub>

### Oxygen Probes

#### Dipping and Robust Probe

- Tip Diameter: 3 mm
- Gas and Aqueous Samples



### Contactless Oxygen Sensors

#### Sensor Spots

- Ø 5 mm PET foil
- Gas and Aqueous Samples
- also trace range versions (0-10% O<sub>2</sub>)



#### Respiration Vials

- Plug & Play: ready assembled, different volumes
- Gas and Aqueous Samples
- also trace range versions (0-10% O<sub>2</sub>)



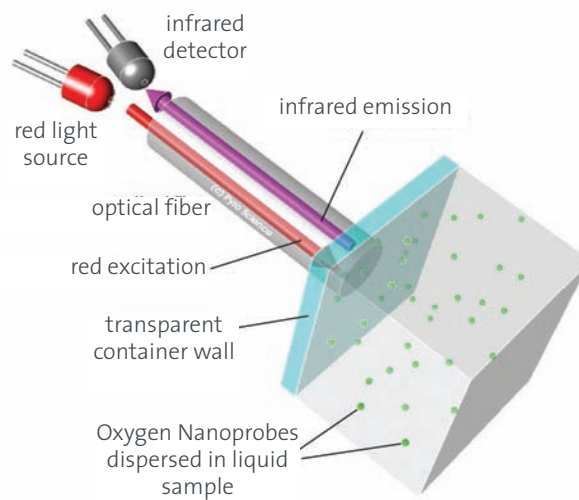
#### Flow-through Cells

- Small and Large Version: with luer lock adapters for easy integration into the experimental setup
- Gas and Aqueous Samples
- also trace range versions (0-10% O<sub>2</sub>)



### Nanoprobes

- Dispersible oxygen nanoparticles
- Real-time oxygen monitoring
- High through-put screening
- Microfluidics (lab-on-a-chip)
- Aqueous 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 measurements and
- OEM solutions available from PyroScience GmbH

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