

Piccolo₂

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 Piccolo₂

The ultra-compact Piccolo₂ 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
Piccolo₂ OEM



For Advanced Contactless Sensor Applications

The Piccolo₂ 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

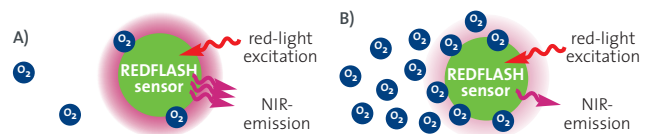
Specifications Piccolo₂

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
Operation Conditions	0-50°C, non-condensing conditions
Measuring Principle	Different oxygen sensors with proven REDFLASH technology
Measuring Range	0-100% O ₂ (maximum) 0-50% O ₂ (optimum)

Proven REDFLASH 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 Pyro Science oxygen sensor systems (available as free download).



Broad Range of available Oxygen Sensors

- Optimum Concentration Range: 0-50% O₂ (0-23 mg/L)
- Resolution: 0.01% O₂ at 1% O₂ ; 0.05% O₂ at 20% O₂
- Calibration: 1-point or 2-point
- Detection Limit: 0.02% O₂

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% O₂)



Respiration Vials

- Plug & Play: ready assembled, different volumes
- Gas and Aqueous Samples
- also trace range versions (0-10% O₂)



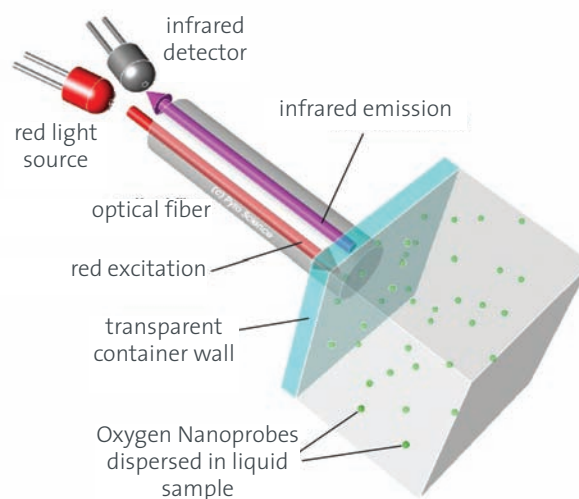
Flow-through Cells

- 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% O₂)



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 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)



Pyro Science GmbH

Hubertusstr. 35
52064 Aachen · Germany

fon: +49 (0)241 518322-10

fax: +49 (0)241 518322-99

info@pyro-science.com

www.pyro-science.com