



# ProODO<sup>®</sup>

Optical Dissolved Oxygen Meter for the Lab or Field

## SPECIFICATIONS



a xylem brand

# ProODO

## Digital Optical Dissolved Oxygen Meter

YSI ODO® technology reduces the time required to calibrate and maintain your sensors. And the user-replaceable sensing element only needs replacement about once a year. There are no electrodes to clean or solutions to change. Based on usage, calibrations can be stable for up to one year and are stored in each sensor.



### The ProODO Offers:

- Expanded DO range of 0-500% with a response time of T90 in approximately 25 seconds
- Non-consumptive luminescent method eliminates stirring
- Easy-to-read graphic, backlit display and keypad for use in any lighting condition
- Truly field-worthy, impact resistant, IP-67 waterproof case and connectors; rubber over molded non-slip case for extra durability and grip
- User-replaceable cables in lengths of 1- to 100-meters; cable management kit included with 4- through 30-meter cables
- Pro Comm II allows USB connectivity for use with Data Manager software and powers the instrument
- Stores 5000 data sets (sensor data, date, time, site and user defined information)
- Multiple languages include English, Spanish, French, Italian, Norwegian, Portuguese, German, Japanese and Chinese
- 3-year instrument warranty; 2-year cable and probe warranty

# YSI Optical BOD Probe

## ProOBOD® -

Use in the lab with the ProODO®

- Smart sensor retains calibration in the probe
- User-replaceable, low-maintenance sensor with +1-year life
- 2-year warranty; reliable and serviceable design reduces cost-of-ownership and down-time
- Probe body tapered to fit into a standard 300 mL BOD bottle; international version also available
- Extremely quiet operation
- No warm-up time required
- Self-stirring to provide representative sample and improve response times
- Guarded sensor cap protects the sensor



ProODO with OBOD probe used with the convenient Lab Dock.

# Tougher



The ProODO is the best handheld optical dissolved oxygen instrument on the market. Its combination of versatility, field-worthy durability, and data management are second to none. YSI employees have verified the ProODO's rugged design with a waterproof rating, and rigorous drop, cable flex, and strength tests. You'll receive extreme confidence with every purchase. The feature set in this instrument is so extensive, we encourage you to visit [ysi.com/proODO](http://ysi.com/proODO) or contact us to learn more.

- Easy-to-install cable weights; can be daisy-chained for additional weight
- Rubber over molded IP-67 waterproof case (even without battery cover)
- Rugged cables, sensors, and military-spec connectors
- Drop-tested 1 meter at all angles
- Scratch-resistant lens; viewable with polarized glasses
- Instrument floats
- Weighted, user-replaceable cable lengths
- Military Spec, waterproof connectors with simple quarter-turn locking



With ODO technology, oxygen is constantly moving through the diffusion layer, affecting the luminescence of the sensing layer.



The YSI MS (military spec), waterproof, bayonet-style keyed connectors are far superior to plastic connectors.



This ProODO was submerged in freezing water during a lake study. This is confidence in YSI's ruggedness.



This connector had no problems after a 1/2 mile trip down a gravel road. In fact, the meter had no problems either.



# Smarter



The ProODO utilizes “smart” sensor technology which stores calibration data within the sensor. This allows probes to be placed on any ProODO instrument without re-calibration.

The instrument also provides multiple languages, detailed GLP data including sensor diagnostics, on-screen Help to eliminate the need for manuals, security passwords, and much more.

The new laboratory BOD probe, ProOBOD, connects easily to the instrument to provide a unique optical BOD in a very compact footprint. The OBOD has a super-quiet stirrer to improve response times and provide a representative sample.

## Cable management kit:



Probe guard protects sensing element.



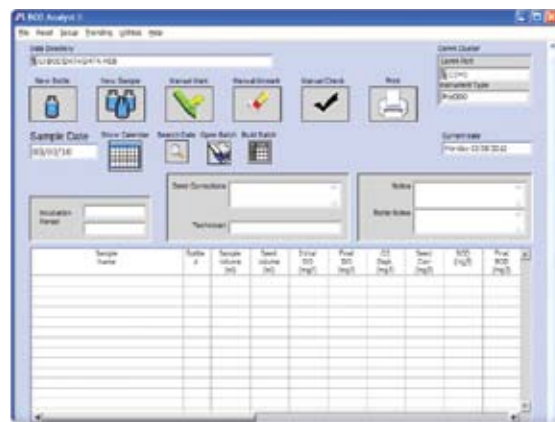
- **5000 data set memory**
- **Free Data Manager desktop software & ProComm II saddle; USB connection also powers the instrument**
- **Interval or single-event logging**
- **100 folder and site list data structure**
- **Password protection**
- **Detailed GLP data**
- **1-point or 2-point calibration with zero cal**
- **User-adjustable auto-stable with prompts**
- **User-upgradeable software via waterproof USB port**
- **Search function filters user-defined data information**
- **Cable management kit included on cables from 4- to 30-meters**

# Software



## FREE Data Manager Software

- Easy-to-use software to manage all your data studies
- View, print and export graphical and tabular data
- View and print GLP data
- Quickly configure just one or multiple instruments
- Conduct real-time studies



**BOD Analyst Pro** software automates BOD testing.



## BOD Analyst Pro® Software

Automatically calculate BOD/CBOD values by directly connecting to the ProODO instrument. Set up samples, groups and more regardless of the seeding method or number of dilutions to instantly build batches. Report BOD data accurately and efficiently.

## ProODO System Specifications (instrument with cable and probe)

<b>Dissolved Oxygen</b> (% saturation)	<b>Sensor Type</b>	Optical (dynamic luminescence quenching lifetime detection)
	<b>Range</b>	0 to 500% air saturation
	<b>Accuracy</b>	0 to 200% air saturation $\pm 1\%$ of the reading or $\pm 1\%$ air saturation, whichever is greater; 200 to 500% air saturation $\pm 10\%$ of the reading
	<b>Resolution</b>	0.1% air saturation
<b>Dissolved Oxygen</b> (mg/L)	<b>Sensor Type</b>	Optical (dynamic luminescence quenching lifetime detection)
	<b>Range</b>	0 to 50 mg/L
	<b>Accuracy</b>	0 to 20 mg/L $\pm 0.1$ mg/L or $\pm 1\%$ of reading, whichever is greater; 20 to 50 mg/L $\pm 10\%$ of the reading
	<b>Resolution</b>	0.01 or 0.1 mg/L (auto-scaling)
<b>Temperature</b> (°C, °F, °K)	<b>Range</b>	-5 to 70°C
	<b>Accuracy</b>	$\pm 0.2^\circ\text{C}$
	<b>Resolution</b>	0.1°C
<b>Barometer</b> (mmHg, inHg, mBar, Psi, KPa)	<b>Range</b>	375 to 825 mmHg
	<b>Accuracy</b>	$\pm 1.5$ mmHg from 0 to 50°C
	<b>Resolution</b>	0.1 mmHg



603069 belt clip

## ProODO Additional Specifications

<b>Storage Temperature</b>	-20 to 70°C
<b>Size</b>	8.3 cm width x 21.6 cm length x 5.6 cm depth (3.25 in x 8.5 in x 2.21 in)
<b>Weight with batteries</b>	475 grams (1.05 lbs)
<b>Probe Dimensions</b>	19 cm length (7.5 in); 2.4 cm diameter (0.95 in)
<b>Power</b>	2 alkaline C-cells or USB power; approximately 80 hours - ambient conditions in manual sampling mode
<b>Cable Lengths*</b>	1- 4- 10- 20- 30- 40- 50- 60- and 100-m; (3.3, 13.1, 32.8, 65.6, 98, 131, 164, 197 and 328 ft)
<b>Connectors</b>	MS (military spec) waterproof with bayonet lock
<b>Warranty</b>	3-year instrument; 2-year cable and probe; 1-year sensor cap
<b>Salinity Input Range</b>	0-70 ppt; manual (automatically compensates for manual input value)
<b>Data Memory</b>	5000 data sets (sensor data, date, time, site and user defined information)
<b>Flow Dependence</b>	None - however, flow may improve DO response time
<b>Typical Response Time</b>	90% in 25 seconds; 95% in 45 seconds
<b>Calibration</b>	DO - one point or two point with a zero % value; barometer - one point
<b>Languages</b>	English, Spanish, German, French, Italian, Norwegian, Portuguese, Japanese, Chinese language support in the future
<b>Certifications</b>	RoHS, CE, WEEE, C-Tick, VCCI, IP-67, 1-meter drop test, Assembled in USA
<b>Connectivity</b>	USB 2.0; communications saddle and USB cable included
<b>Data Management</b>	Data Manager desktop software included; 100 user defined folders and site names
<b>User ID</b>	Optional User ID for data security
<b>Measurement/ Logging Modes</b>	Automatic and Manual sampling modes/Continuous and Interval logging modes
<b>GLP Compliant</b>	Yes
<b>Probe/Sensor Materials</b>	The following materials may come into contact with the sampling environment: Xenoy® PBT Polycarbonate blend, Noryl, Stainless Steel, Titanium, Polyurethane, Santoprene, Acrylic, Polystyrene
	* special order cables up to 100-meters in 10-meter increments



603062 cable management kit



603075 soft-sided carrying case with ProODO, cable, and accessories

## YSI ProOBOD Probe Specifications

<b>Accuracy</b>	<b>mg/L</b>	0-20 mg/L, $\pm 0.1$ mg/L or $\pm 1\%$ reading, whichever greater; 20-50 mg/L, $\pm 10\%$ reading
	<b>% air</b>	0-200%, $\pm 1\%$ reading or $\pm 1\%$ , whichever greater; 200-500%, $\pm 10\%$ reading
	<b>temperature</b>	$\pm 0.2^\circ\text{C}$
<b>Range</b>	<b>mg/L</b>	0-50 mg/L
	<b>% air</b>	0-500% air saturation
	<b>temperature</b>	Ambient (10 to +40° C); Compensation (-5 to +50° C)
<b>Resolution</b>	<b>mg/L</b>	0.01
	<b>% air</b>	0.1%
	<b>temperature</b>	0.1° C
<b>Warranty</b>	2-years; 1-year sensor cap	
<b>Cable Length</b>	3-meters (6 feet)	
<b>Power</b>	External 110-230 VAC power supply with DC input to sensor	
<b>Sensor Type</b>	Optical; dynamic luminescence quenching lifetime detection	
<b>Typical Response Time</b>	95% in 22 seconds with stirring; 95% in 40 seconds without stirring	
<b>Certifications</b>	RoHS, CE, WEEE, IP-65, Assembled in USA	

## ProODO Ordering Information (order items separately)\*

<b>626281</b>	ProODO handheld instrument
<b>626320</b>	Replacement sensing element (included with initial probe purchase)
<b>626250-1</b>	1-m probe/cable for DO/temp
<b>626250-4</b>	4-m probe/cable for DO/temp (includes cable management kit)
<b>626250-10</b>	10-m probe/cable for DO/temp (includes cable management kit)
<b>626250-20</b>	20-m probe/cable for DO/temp (includes cable management kit)
<b>626250-30</b>	30-m probe/cable for DO/temp (includes cable management kit)
<b>626250-40</b>	40-m probe/cable for DO/temp
<b>626250-50</b>	50-m probe/cable for DO/temp
<b>626250-60</b>	60-m probe/cable for DO/temp
<b>626250-100</b>	100-m probe/cable for DO/temp
<b>626400</b>	ProOBOD BOD probe; U.S./Japanese version with power supply
<b>626401</b>	ProOBOD BOD probe; International version with power supply

\*Special order cable lengths up to 100 meters in 10-meter increments available

## Accessories Ordering Information (visit [ysi.com/accessories](http://ysi.com/accessories))

<b>603075</b>	Soft-sided carrying case
<b>603074</b>	Hard-sided carrying case
<b>603069</b>	Belt clip to attach instrument to belt
<b>063517</b>	Ultra clamp (attach to instrument to secure it to a desk, boat, etc)
<b>063507</b>	Small tripod (attach to instrument to sit on any flat surface)
<b>603062</b>	Cable management kit (included with 4- through 30-m cables)
<b>605978</b>	Cable weight, 4.9 oz, attach to stainless steel probe guard
<b>626444</b>	Laboratory Dock, holds instrument, BOD bottle and Pro Comm II communications saddle

## Ordering Guide for ProODO Kits

	Description	Included in Kit
<b>603192</b>	ODO, 4-m	ProODO meter, 4-meter field cable with optical DO probe, soft-sided carrying case (603162)
<b>603193</b>	ODO, 10-m	ProODO meter, 10-meter field cable with optical DO probe, soft-sided carrying case (603162)
<b>603194</b>	ODO Lab/Field, 4-m, US	ProODO meter, ProOBOD optical BOD probe, 4-meter field cable with optical DO probe, Lab Dock, US power supply (626600) and ProComm II power (605209), soft-sided carrying case (603162)
<b>603199</b>	ODO Lab/Field, 4-m, INT	ProODO meter, ProOBOD optical BOD probe, 4-meter field cable with optical DO probe, Lab Dock, International power supply (626601) and ProComm II power (605210), soft-sided carrying case (603162)
<b>603195</b>	OBOD Kit, US	ProODO meter, ProOBOD optical BOD probe, Lab Dock, US power supply (626600) and ProComm II power (605209)
<b>603196</b>	OBOD Kit, INT	ProODO meter, ProOBOD optical BOD probe, Lab Dock, International power supply (626601) and ProComm II power (605210)
<b>603197</b>	OBOD Kit, US Pro	ProODO meter, ProOBOD optical BOD probe, Lab Dock, US power supply (626600) and ProComm II power (605209), BOD Analyst Pro desktop software for BOD calculations
<b>603198</b>	OBOD Kit, INT Pro	ProODO meter, ProOBOD optical BOD probe, Lab Dock, International power supply (626601) and ProComm II power (605210), BOD Analyst Pro desktop software for BOD calculations



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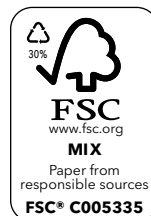
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