



让水质监测变得更简单

Water Monitoring  
Made Simple



Yosemite Technologies Co.,Ltd

苏州禹山传感科技有限公司

[www.yosemitech.com](http://www.yosemitech.com)

## About us

Headquartered in Suzhou Industrial Park, at the center of the well-developed Yangtze River Delta Economic Zone in China, Yosemite Technologies designs and manufactures water quality monitoring sensors and instruments. Combining advanced optical sensing and digital/mobile technologies, YosemiteTech brings innovative and cost competitive solutions to global water quality monitoring market. YosemiteTech provides a full family of optical dissolved oxygen sensors based on state of art luminescent lifetime technology. With different configurations intended for both field in-situ and laboratory purposes, our products are ideal for measuring dissolved oxygen in wastewater, drinking water, aquaculture pond, and general environmental water monitoring.

In addition to optical DO sensors, YosemiteTech has complete product offerings including Turbidity, TSS, pH, ORP, Conductivity, Oil-in-water, Blue-green algae, Chlorophyll, COD, NH4, Multi-parameter Sonde and other sensors. We strive to become a one-stop shop for various water quality monitoring applications.

YosemiteTech focuses on smart sensor development. All of our sensors have digital RS485/Modbus interface with open communication protocols. Our universal handheld instrument and online controller can easily connect to and automatically recognize any of our sensors or Sonde.

YosemiteTech also brings innovative IoT (Internet of Things) solutions to our customers. We can integrate multiple sensors together on a single platform, such as a data buoy or a monitoring station, and support wireless communications with cloud data services.

## Table of contents

### Product and application selection matrix

Y4000 Multiparameter Sonde	01
Y4000 sensor specifications	02
Y551 UV254COD Probe	03
Online Optical Dissolved Oxygen sensor	04
Y500-B laboratory DO	05
Y505-A aquaculture DO	06
Turbidity sensor	07
Y513 Blue green algae sensor	08
Chlorophyll sensor	09
Suspended Solid Sensor	10
Oil-in-Water (Crude) sensor	11
Oil-in-Water (Refined) sensor	12
Digital conductivity sensor	13
NH4 Probe	14
Digital pH probe	15
Digital ORP probe	16
Data Buoy	17
Handheld meter	18
Universal Controller	19



## Product and Application Selection Matrix



Product and Application Matrix	Temp	pH	ORP	CT	Salinity	DO	Turb	SS	Chl	BGA	Oil W Crude)	Oil W Refined)	NH4	COD UV254	Wf per	Multi parameter Sonde Y4000	Handheld Meter Y600-A	Universal Controller Y610-B	Data Buoy Y5000
Y500-B	●					●													
Y504-A	●					●											●	●	●
Y504-B	●					●										●			
Y505-A	●					●											●	●	●
Y506-A	●					●										●	●		
Y532-A		●														●	●	●	●
Y533-A			●													●	●	●	●
Y521-A	●			●	●												●	●	●
Y521-B	●			●	●											●	●	●	●
Y510-B						●											●	●	●
Y510-C							●									●	●		
Y511-A								●								●	●	●	●
Y514-A									●							●	●	●	●
Y515-B									●							●	●	●	●
Y541-A																			
Y560-A	●															●	●	●	●
Y517-A												●				●	●	●	●
Y517-C												●				●	●	●	●
Y516-A												●				●	●	●	●
Y516-C												●				●	●	●	●
Y513-A										●									
Y513-B										●									
Y512-A								●								●	●	●	●
Y515-A									●							●	●	●	●
Y551-B													●	●			●	●	●
Y551-C													●				●	●	●

## Y4000 Multiparameter Sonde



Yosemititech Y4000 multi-parameter Sonde is one of the most comprehensive water quality monitoring product in our portfolio for dissolved oxygen, conductivity, turbidity, pH, chlorophyll, blue green algae, oil-in-water and temperature measurement in a single platform. The integrated wiper system can effectively prevent impacts from biofouling, air bubbles, debris, etc. It is an ideal system to continuously deliver high quality data for long term monitoring applications



### Field Application Examples



### Y4000 Features

- Easy system integration, and hassle free installation
- Modbus RS485 interface
- Programmable auto cleaning wiper.
- IP68 water proof connectors.
- Capable of measuring 7 parameters
- Selection of any 6 digital probes: pH, ORP, CT, Turb, ODO, BGA, Chl, OIW

# Y4000 Sensor Specifications



Specifications		
Optical DO	Range	0-20mg/L or 0-200% SAT
	Accuracy	±0.1mg/L
	Resolution	0.01mg/L
Turbidity	Range	0-1000 NTU
	Accuracy	< 5% or 0.3NTU
	Resolution	0.1NTU
Conductivity	Range	1µS/cm-100mS/cm
	Accuracy	1% FS
	Resolution	0.1uS/cm
Chlorophyll	Range	0~400 µg/L or 0~100 RFU
	MDL	0.1 µg/L
	Resolution	0.1 µg/L 0.1 RFU
Blue Green Algae(Fresh water)	Range	0-200,000 cells/mL
	MDL	300 cells/mL
	Resolution	1 cells/mL
pH	Range	0-14pH
	Accuracy	±0.1pH
	Accuracy	0.01
ORP	Range	-999~999mV
	Accuracy	±20mV
	Resolution	1mV
Oil-in-Water (Crude)	Range	0-500ppb or 0-5000ppb
	Accuracy	5%
	Resolution	0.1ppb
Others	Operating Temperature	0~50°C
	Output	Modbus RS485
	Wiper	Yes/optional
	Power Supply Voltage	12V ±5%
	Supply Current	100 mA
	IP Rating	IP68
	Cable length	10m ( default ) , Custom length available

# Y551 UV254 COD Probe



Yosemite Y551 UV254 probe features highly reliable UVC LED for light absorption measurement. This proven technology provides reliable and accurate analysis of organic pollutants for water quality monitoring at low cost and low maintenance. With rugged design, and integrated turbidity compensation, it is an excellent solution for continuous monitoring of source water, surface water, municipal and industrial wastewaters.

## Features

- Modbus RS-485 output for easy system integration
- Programmable auto-cleaning wiper
- No chemicals, direct UV254 spectral absorption measurement
- Proven UVC LED technology, long lifetime, stable and instant measurement
- Measurement of SAC, COD, TOC, and BOD
- Advanced turbidity compensation algorithm



## Specifications

Model Number	Range	Applications
Y551-B ( 6 mm pathlength )	SAC 0.5 to 250 1/m COD 0.75 to 370 mg/l equiv. KHP TOC 0.3 to 150 mg/l equiv. KHP	Waster water/surface water
Y551-C ( 1 mm pathlength )	SAC 1.5 to 700 1/m COD 2.5 to 1000 mg/l equiv. KHP TOC 0.9 to 410 mg/l equiv. KHP	Industrial waster water

# Online Optical Dissolved Oxygen Sensor



The DO sensor is based on well known oxygen fluorescence lifetime quenching technique. Its technical procedure meets ASTM D888-09 standard for optical sensing of dissolved oxygen. Its rugged design and large measurement range make it an ideal solution for water quality measurement on streams, rivers, lakes, estuaries, and coastal waters.

## Features

- Digital sensor, Modbus RS485 interface
- No membrane, no electrolyte, easy sensing cap replacement
- No oxygen consumption, no flow dependency, no H<sub>2</sub>S interference
- Embedded temperature for automatic temperature compensation

## Specifications

Model	Y504-A
Measurement Range	0~20mg/L or ~200% SAT
Accuracy	1% or 0.1 mg/L
Response time	20 sec
Sensor Drifting	<1% per year
Temperature Sensor	NTC
Operating Temperature	0 ~ 50°C
Temperature Accuracy	±0.2°C
IP Rating	IP68
Max Pressure	6bar
Output Interface	Modbus RS-485
Installation	6 NPT , Submersible
Power consumption	DC 6~12V , I<50mA
Dimensions	Φ26*177.5 mm
Cable Length	10m ( default ) , custom length available
Calibration	One point or two-points
Sensing Cap Lifetime	One year ( Normal use )
Material	POM and SS316



# Y500-B Laboratory ODO



Y500-B is designed for handheld and laboratory instrument. Its small sensor diameter and fast response time are especially useful for field and laboratory sampling applications

## Features

- Digital signal Modbus RS485 interface
- No membrane, no electrolyte, easy sensing cap replacement
- No oxygen consumption, no flow dependency, no H<sub>2</sub>S interference
- Embedded temperature sensor for automatic temperature compensation

## Specifications

Model	Y500-B
Measurement Principle	Optical fluorescence lifetime
Range	0~20mg/L or 0~200%SAT
Accuracy	1%
Response time	15 sec
Temperature Sensor	NTC
Temperature Range	0 ~ 50°C
Temperature Accuracy	±0.2°C
IP Rating	IP68
Output	Modbus RS-485
Power Consumption	DC 6~12V , I<50mA
Dimensions	Φ16*180mm
Cable length	5m ( default ) , custom length available
Calibration	One point or two-points
Sensor cap lifetime	One year ( Normal use condition )
Body material	POM and SS 316

# Y505-A Aquaculture ODO



Y505-A is developed for cost sensitive aquaculture applications. With build-in NTC temperature sensor for compensation and rugged metal sensor housing, it can be easily integrated with any data acquisition equipment and wireless transmission systems for real time aerator control.

## Features

- Digital signal Modbus RS485 interface
- No membrane, no electrolyte, easy sensing cap replacement
- No oxygen consumption, no flow dependency, no H<sub>2</sub>S interference
- Built-in temperature sensor, automatic compensation



## Specifications

Model	Y505-A
Measurement Principle	Optical fluorescence lifetime
Range	0~20mg/L or 0~200%SAT
Accuracy	1%
Response time	45 sec
Temperature Sensor	NTC
Temperature Range	0 ~ 50°C
Temperature Accuracy	±0.2°C
IP Rating	IP68
Output	Modbus RS-485
Power Consumption	DC 6~12V , I<50mA
Dimensions	Φ16*180mm
Cable length	5m ( default ) , custom length available
Calibration	One point or two-points
Sensor cap lifetime	One year ( Normal use condition )
Housing material	POM and SS 316, or Ti

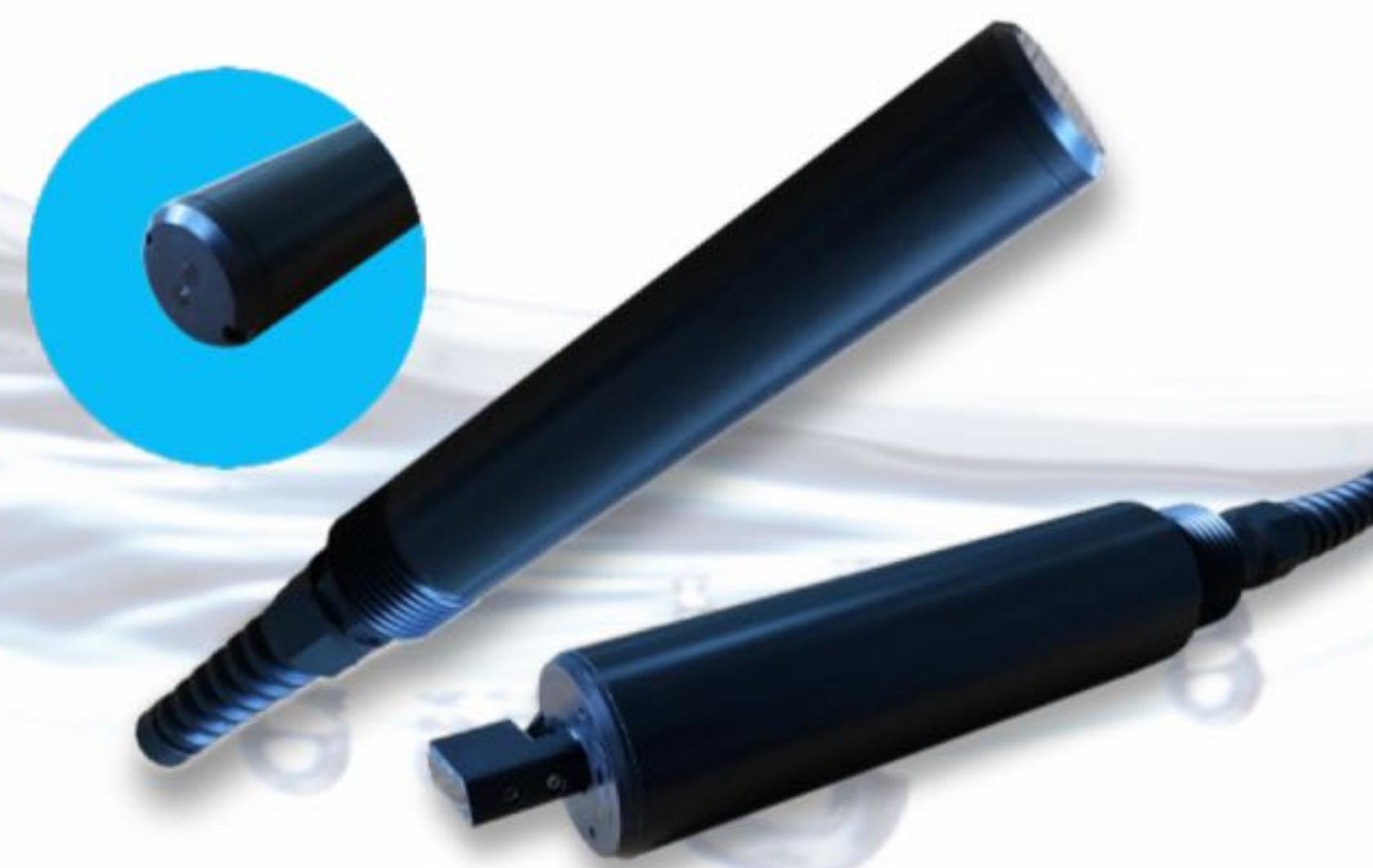
# Turbidity Sensor



Yosemitotech's turbidity sensor is complied with ISO 7027 Turbidity Standard. With optional self cleaning wiper, the turbidity sensor can be deployed in-situ and provide stable data over long period of usage. It is suitable for applications such as environmental monitoring, wastewater plant, and process control.

## Features

- Digital MODBUS RS485 interface
- 90° scattering measurement
- Optional programmable self cleaning wiper
- Great ambient light rejection



## Specifications

Model	Y510-B	Y511-A
Measurement Principle	90° scattering, ISO 7027 method	
Range	0-1000NTU	
Resolution	0.1 NTU	
Accuracy	<5% or 0.3NTU WIG	
IP rating	IP68	
Depth Rating	Max 60 m	Max 10m
Temperature Range	0 ~ 50°C	
Sensor Output	MODBUS RS485	
Installation Option	flow cell/immersible	Immersible
Power	DC 5~12V , I<50mA	DC 5~12V , I<50mA ( without wiping )
Dimensions	Φ22mm*120mm	Φ33mm*156mm
Cable length	10米 ( default ) , custom length available	
Body Material	POM	
Autowiper	No	Yes

# Y513 Blue Green Algae (Fresh Water)



Y513 blue green algae sensor detects phycocyanin pigment fluorescence. This high sensitive fluorometer provides a cost effective solution for in-situ environmental algae bloom monitoring, algae studies, cell culture monitoring and process control.

## Features

- Modbus RS-485 digital interface
- Optional self cleaning wiper
- In vivo cell fluorescence measurement
- Fast response, in-situ monitoring
- Ambient light rejection



## Specifications

Model	Y513-B	Y513-A
Measurement	Fluorescence	
Range	0-200,000 cells/mL	
MDL	300 cells/mL	
Resolution	1 cells/mL	
Linearity	$R^2 > 0.999$	
IP Rating	IP68	
Depth Rating	60m	10m
Operating Temperature	0 ~ 50°C	
Output	Modbus RS-485	
Power consumption	DC 5~12V , I<50mA	DC 5~12V , I<50mA ( without wiping )
Dimensions	Φ26*167.5 mm	Φ45*175.8 mm
Cable Length	10m ( default), custom length available	
Body Material	POM and 316L	
Self cleaning Wiper	None	Yes

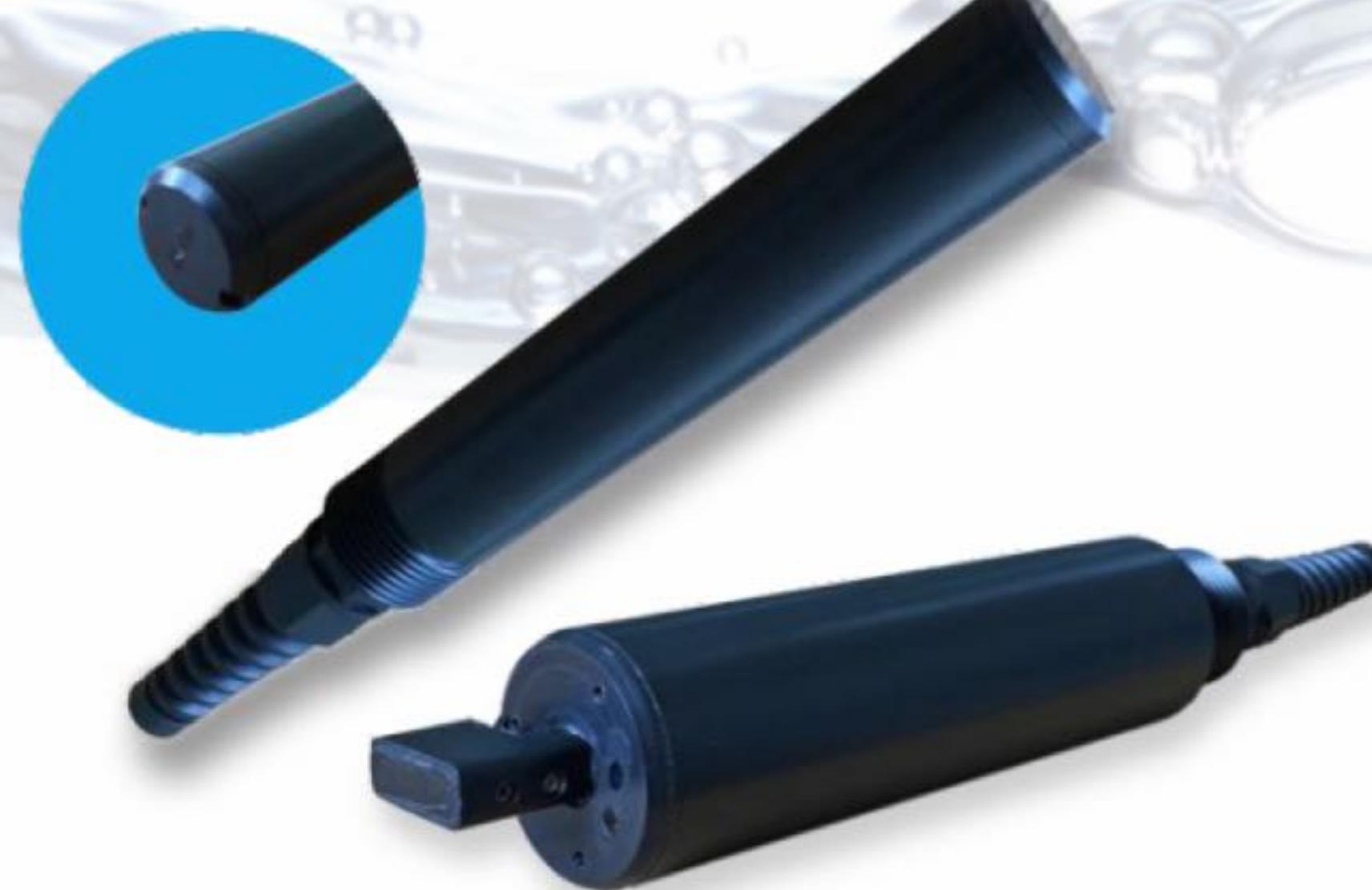
# Chlorophyll Sensor



Chlorophyll sensor is one of Yosemitech's high performance fluorometers. It has an integrated wiper system which can automatically clean the optical surface. Its low maintenance and rugged design are especially valuable for long term deployment for rivers, lakes, ponds, streams, and costal water monitoring.

## Features

- MODBUS RS485 interface
- In vivo measurement
- Optional auto cleaning wiper
- No color or ambient light interference
- Low power consumption and low maintenance



## Specifications

Model	Y515-A	Y514-A
Measuring Principle		Fluorescence
Range	0~400µg/L or 0~100RFU	
Resolution	0.1 µg/L or 0.1% RFU	
Linearity	$R^2>0.999$	
IP rating	IP68	
Depth Rating	60 m Max	10 m Max
Operating Temperature		0 ~ 50°C
Output		Modbus RS-485
Power Consumption	DC 5~12V , I<50mA	DC 5~12V , I<50mA ( without wiping )
Dimension	Φ22mm*120mm	Φ33mm*156mm
Cable length	10m ( default ) , custom length available	
Auto wiper	None	Yes

# Suspended Solid Sensor



Y512-A suspended solid sensor measures 135 degree backscattering light from particulates in water. The self-cleaning wiper ensures high clarity of the optical window from biofouling, air bubbles, and particle deposition. The high sensitivity sensor provides a cost effective solution for in-situ environmental, wastewater monitoring and process control.



## Features

- MODBUS RS485 interface
- Auto cleaning wiper
- High ambient light rejection
- Low power consumption and low maintenance

## Specifications

Model	Y512-A
Range	0.5-4000mg/L
Resolution	0.1mg/L
Accuracy	< 3%
Depth Rating	10 m
Operating Temperature	0 ~ 50°C
Output	Modbus RS-485
Power consumption	DC 5~12V , I<50mA ( none wiping )
Dimensions	Φ33mm*156mm
Cable length	10 m ( default ) , custom length available
Housing material	POM
Self cleaning wiper	YES

# Oil-in-Water Sensor (Crude oil)



Crude oil or Petroleum is unprocessed oil. The properties of crude oil are dependent on their chemical composition and structures. Crude oils can be excited by UV lights and emit fluorescence light. The fluorescence properties are determined by the compounds carbon structures. Yosemite OIW sensor detect fluorescence excited by a highly reliable UV LED.

## Features

- MODBUS RS485 interface
- Auto wiper available
- State of art UV LED for long lifetime
- Quick response, low power, no warm-up time
- Minimized particle affection



## Specifications

Model	Y516-A	Y516-C
Measuring Principle	UV Fluorescence	
Range	0-50ppm	
Resolution	0.01ppm	
Accuracy	±3%F.S.	
IP rating	IP68	
Depth Rating	60m Max	10m Max
Operating Temperature	0 ~ 50°C	
Output	Modbus RS-485	
Power consumption	DC 5~12V , I<50mA	DC 5~12V , I<50mA ( without wiping )
尺寸	Φ26*167.5 mm	Φ45*175.8 mm
Cable length	10米 ( default ) , custom length available	
Body material	316L	
Auto wiper	None	Yes

# Y517 Oil-in-Water Sensor (Refined oil)



Y517 OIW sensor detects the aromatic hydrocarbons (PAH) in water. The oil in water sensor measures the fluorescence of the hydrocarbon components in water excited by UV light. An oil molecule absorbs the UVC light energy and then emits fluorescence light. UV fluorescence measurement method provides high sensitivity and selectivity toward PAH detection

## Features

- MODBUS RS485 interface
- Options for wiperable and none wiperable versions
- State of art low power, long life UVC LED
- No warm up time
- High ambient light rejection



## Specifications

Model	Y517-A	Y517-C
Measuring Principle		UV Fluorescence
Range		0-3ppm
Resolution		0.1ppb
MDL		1 ppb
IP rating		IP68
Depth Rating	60m Max	10m Max
Operating Temperature		0 ~ 50°C
Output		Modbus RS-485
Power consumption	DC 5~12V , I<50mA	DC 5~12V , I<50mA ( non wiping )
尺寸	Φ26*167.5 mm	Φ45*175.8 mm
Cable length	10m ( default ) , custom length available	
Body material	316L	
Auto wiper	None	Yes

# Conductivity Sensor



Yosemitech's four-electrode conductivity sensor provides more accurate, stable measurement and wider measurement range than traditional two electrode design. It has no polarization effect and can deploy in long periods of time without frequent maintenance. It supports RS485 MODBUS protocols

## Features

- Digital sensor, support RS485 / MODBUS
- Minimal polarization effect, long maintenance cycle
- Wide measurement range, excellent biofouling resistance
- Long life time

## Specifications

Model		Y521-A
Range		1μS/cm~100 μS/cm
Accuracy		1%
Resolution		0.0001mS/cm
Response time		<2 sec
IP rating		IP68
Max Pressure		6 bar
Operating Temperature		0 ~ 50°C
Output		Modbus RS-485
Power Consumption		DC 5~12V , I<50mA
Temperature Sensor		NTC
Body Material		PEEK
Dimension		Φ22*146.5 mm
Cable length		10米 ( default ) , custom length available
Calibration		One point or two-points

# NH4 Probe



Y560-A Ammonium analyzer measures the concentration of dissolved ammonium as nitrogen (NH4+N) in water. The analyzer uses three electrodes of ammonium ISE electrode, pH, and Potassium Ion (optional). With autocleaning wiper, it is designed for use in various applications including monitoring environmental waters, lakes, streams, wells, and fish ponds as well as wastewater treatment plants.

## Features

- Modbus RS-485 interface
- No chemicals, no reagents
- Removable electrodes
- K+, pH, and T compensation
- Auto cleaning wiper for long term deployment



## Specifications

Model		Y560-A
Range		0-1000mg/L NH4-N
Accuracy		5%
Resolution		0.1 mg/L
pH range		0-14
IP rating		IP68
Depth Rating		10m Max
Operating Temperature		0 ~ 50°C
Output		MODBUS RS485
Power Supply		DC 5~12V , I<50mA
Cable Length		10m ( default ) , custom length available
Body Material		POM

# Y532-A digital pH probe



Yosemititech Y532-B is a general purpose digital pH sensor, which uses a rugged industrial pH electrode. It has a built-in temperature sensor for automatic temperature compensation, and supports RS485 Modbus digital output. It is ideal for long-term environmental water monitoring.

## Features

- Modbus RS485 interface
- Digital probe, easy integration
- Build-in temperature sensor
- Automatic temperature compensation

## Specifications

Model	Y532-B
Range	0-14 pH
Accuracy	±0.1 pH
Resolution	0.01
Depth Rating	10 m Max
Storage Temperature	0~60°C
Operating Temperature	0 ~ 50°C
Output	4 pin connector Modbus RS-485
Power Consumption	DC 5V , I<50mA
Dimensions	Φ 26 * 167.5 mm
Body Material	POM
Calibration	3-point calibration

# Y533-A Digital ORP Probe



Yosemititech Y533-A is a general purpose digital ORP sensor, which uses rugged industrial electrode. It has a built-in temperature sensor for automatic temperature compensation, and supports RS485 Modbus digital output. It is ideal for long-term online environmental water monitoring.

## Features

- Modbus RS485 interface
- Digital probe, easy integration
- Build-in temperature sensor
- Automatic temperature compensation



## Specifications

Model	Y533-A
Range	-999~999mV
Accuracy	±20mV
Resolution	1mV
Depth Rating	10 m max
Storage Temperature	0~60°C
Operating Temperature	0 ~ 50°C
Output	4 pin connector Modbus RS-485
Power Consumption	DC 5V , I<50mA
Dimensions	Φ 26 * 167.5 mm
Body Material	POM

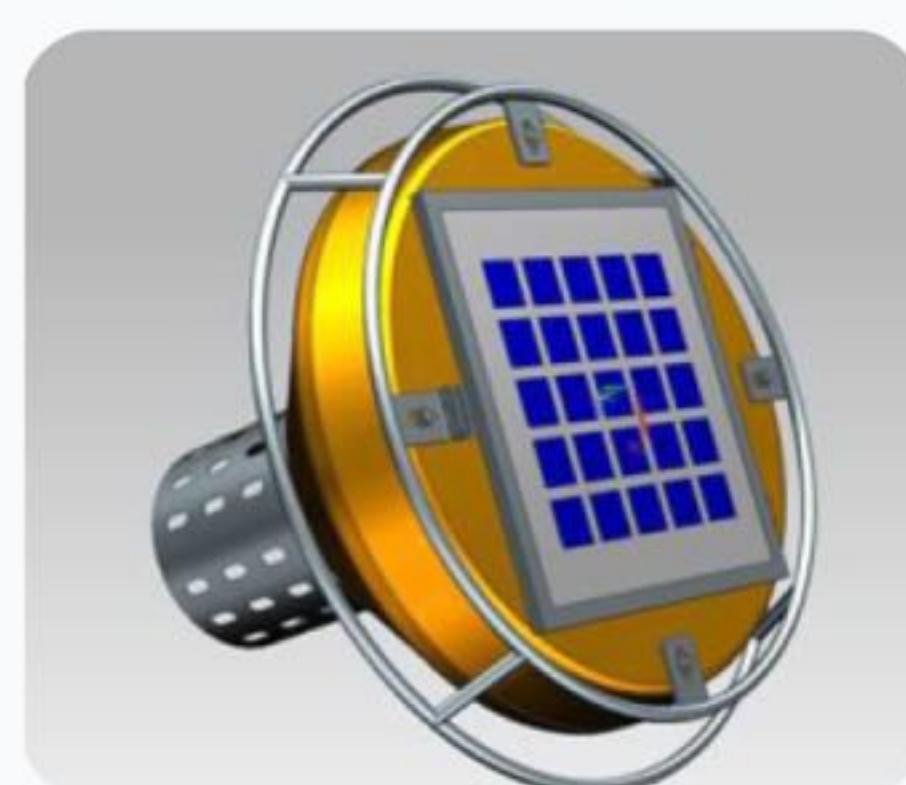
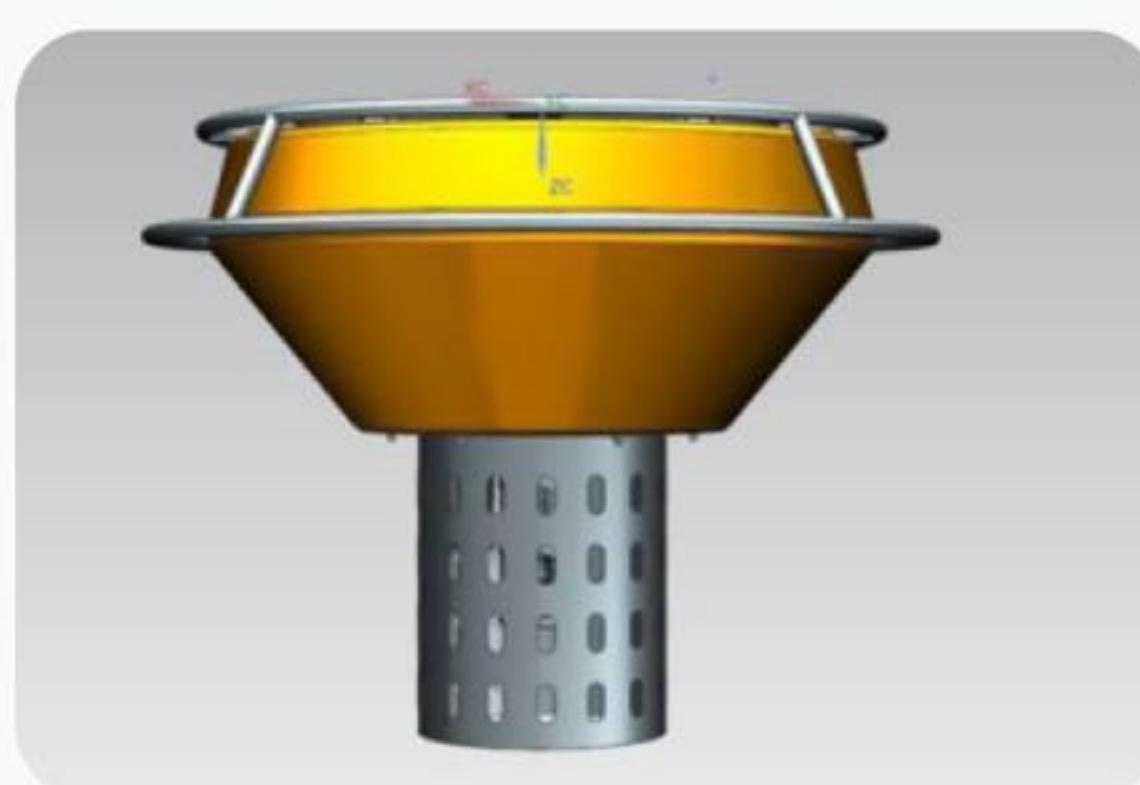
# Data Buoy



Yosemititech Data buoy consists of a cross-linked ethylene vinyl acetate foam hull with tough coatings. A 45W solar panel is mounted on the top of the buoy to charge the battery pack inside the buoy which provides continuous power to data logger, communication module, and sensors. Stainless steel ring provides protection and lifting rigs for quick and easy deployment. The buoy can be moored to the river or lake bottom via anchor chains.

## Features

- Light and stable, modular design
- Easy deployment
- Support many Yosemititech and third party probes
- Stainless steel sensor protection guard
- GPRS、3G、4G or NB-IOT available for data communication



## Specifications

Name	Specs and description
Buoy body materials	PE、EVA filling 、SS-316L rings
Probes	Support multiparameter Sonde, MH4 probe, UV254 COD probe, and others
Power Supply	45W Panel , 12V 54AH Battery Pack
Dimensions	73cm x φ80cm ( φ92cm including rings )
Wireless Communication	Support GPRS、3G、4G, or NB-IOT
Data Platform	Cloud Data Service

# Handheld Instrument



The newly released multi-parameter handheld instrument is capable of measuring dissolved oxygen, pH, ORP, Temperature, Turbidity, Chlorophyll, BGA, OIW, and NH4. It can be used easily for multi-parameter Sonde field calibration and data sanity check. Its rugged design and IP67 rating makes it a true field instrument for water quality measurement professionals.

## Features

- Support all Yosemititech's digital sensors and Sonde
- Auto-sensor recognition
- Easy-to-read graphic backlit display
- Local data storage up to 5000 data set
- Easy sensor calibration
- Rechargeable large capacity battery



## Specifications

Model	Y600-A
Dimensions	220x 96 x 44 mm
Weight	0.46kg
Power	2 x 18650 Battery, Rechargeable
Working temperature	-5~50°C
Storage Temperature	-40~85°C
Display	LCD (54.38x54.38mm ) with back light
Probe supported	Yosemititech Probe: DO, pH, ORP, Turb, Chl. BGA, OIW, Nh4, COD
Internal Data Storage	5000 Data set
Pressure	Build-in, automatic compensation 50~115kPa
IP rating	IP67
Cable length	5 m (default), custom length available
Measurement Mode	Sampling, or continuous logging

# Universal Controller



Yosemite Y610-B online transmitter supports all Yosemite sensors and offers convenient output interfaces. It is an ideal solution for customers who need quick/easy deployment and minimize deployment efforts.

## Features

Plug and play, support majorities of Yosemite sensors

One 4-20mA channel output, one RS485 digital output

Relay output

Industrial isolation standard



## Specifications

Model	Y610-B
Dimensions	144*144*115 mm
Display	77*53 mm
Weight	0.8kg
Operating temperature	0~55°C
Body material	ABS
Ambient humidity	≤80%
Power requirements	110~220V AC
Output	One 4~20mA analogue , one RS485 digital , one HI/LO relay
Local storage	Yes
Sensor support	Yosemitech COD、ODO、CT、Turbidity、BGA、Chlorophyll、OIW、SS、Ph、ORP
Installation Dimension	Opening size (138*138mm )

让水质监测变得更简单  
Water Monitoring Made Simple

Addr : 苏州工业园区东长路18号 , 中节能环保产业园25栋  
Bldg.25, No.18 Dongchang Rd., CECEP, Suzhou  
Industrial Park, Jiangsu China  
Tel : +86-512-87663997 87663987 65970621  
Fax : +86-512-87663911  
Email : sales@yosemitech.com