WAVELET OPTICAL WATER QUALITY KIT

SUMMARY

The high-end sensor included in the Wavelet Optical Water Quality Kit is ideal for various environmental optical water quality applications. The sensor measures fluorescence levels to detect concentrations of cyanobacteria, chlorophyll in vivo, dissolved organic matter (CDOM/FDOM), crude oil and refined fuels, and other contaminants in streams, rivers, and coastal waters. Combined with Wavelet technology, this submersible sensor is well-suited for autonomous and continuous monitoring in aquatic environments.
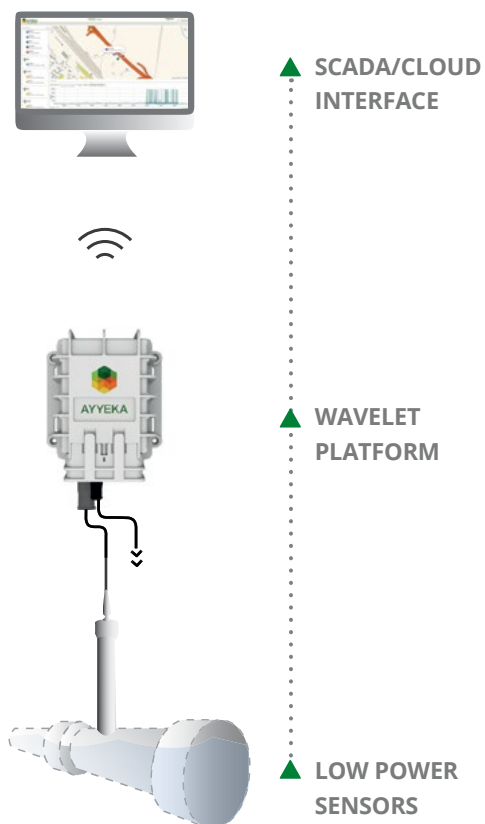
WAVELET PLATFORM FEATURES

▶ **PLUG-AND-PLAY**
▶ **BUILT-IN SCADA INTERFACE**
▶ **CYBER-SECURITY**
▶ **USER-FRIENDLY DATA VISUALIZATION**
▶ **CLOUD-BASED DATA STORAGE**
▶ **REMOTE NETWORK MANAGEMENT**
▶ **GLOBAL GSM CELLULAR SERVICE**
▶ **PROGRAMMABLE THRESHOLDS**
▶ **E-MAIL & SMS ALERTS**
▶ **GPS TIME & LOCATION SYNC**
▶ **LOW POWER CONSUMPTION**
▶ **AUTONOMOUS OPERATION**

THE WAVELET PLATFORM

Wavelet brings together end-to-end, turnkey solutions that cover all of your continuous remote monitoring needs. Starting from the smart sensors, across the transmission platform, through data management, we have created unique monitoring kits to measure and monitor a range of water supply, water quality, wastewater and hydrologic parameters. Wavelet Kits are all designed to help facilitate more effective water network management.

Ayyeka's Wavelet Kit features a fully integrated, plug-and-play monitoring solution that fits seamlessly onto any water infrastructure and sends the data securely to you. Our Kits provide you with total visibility of your networks. The Kits are easy to setup and use, and will save valuable time and money.

▲ SCADA/CLOUD INTERFACE

▲ WAVELET PLATFORM

▲ LOW POWER SENSORS

AYYEKA

OPTICAL WATER QUALITY SENSOR SPECIFICATIONS

Linearity	0.99R2
Dimensions (L x Ø)	14.5 cm x 2.3 cm (5.7 in. x 0.9 in.) standard model
	14.5 cm x 3.2 cm (5.7 in. x 1.25 in.) optional model
Operational Temperature	Ambient Temperature: 0°C to 50°C (32°F to 122°F)
	Water Temperature: -2°C to 50°C (28°F to 122°F)
Depth Range	600 m (1,969 ft)

APPLICATION

▶ CONTAMINANT	▶ MIN. DETECTION LIMIT	▶ LINEAR RANGE
Turbidity	0.05 NTU	0-1,000 NTU
CDOM/FDOM	0.15 ppb / 0.5 ppb	0-1,250 ppb / 0-5,000 ppb
Chlorophyll in vivo		
Blue Excitation	0.025 μg/L	0-500 μg/L
Red Excitation	0.5 μg/L	>500 μg/L
Oil – Crude	0.2 ppb	0-2,700 ppb
Oil – Fine	10 ppb	>6,000 ppb
Optical Brighteners	0.6 ppb	0-15,000 ppb
Phycocyanin	2 ppb	0-35,000 ppb
Phycoerythrin	0.15 ppb	0-750 ppb
PTSA Dye	0.1 ppb	0-650 ppb
Rhodamine Dye	0.01 ppb	0-1,000 ppb
Tryptophan	3 ppb	>1,000 ppb

The Turner Designs Cyclops-7 series offers an ideal solution for freshwater, oceanographic, and dye tracing applications.

CASE STUDY

▶ **Client:** Municipal Water Utility.

▶ **Description:** Residents continuously complained to the municipality that water being delivered to their home was cloudy. Every time the water company came to investigate, the turbidity measurement was at acceptable levels.

▶ **Solution:** Continuous monitoring of turbidity levels revealed an increase in turbidity at regular intervals during early morning hours, enabling the water company to pinpoint the anomaly and improve water quality of the local residents.

WAVELET PLATFORM SPECIFICATIONS

▶ **DATA & SOFTWARE**

Ayyeka Data Server	Ayyeka Private Cloud and/or Customer On-Premises Server
User Interface	Web-Based, Tablet & Mobile
Data Export Options	Excel, CSV
SCADA & 3rd Party Integration	OPC/DNP3/API
Data Encryption	AES 256
Internal Memory	32 GB

▶ **CONNECTIVITY & INTERFACE**

Cellular Network	Multi-Cellular Carrier: 2G, 3G and CDMA (Verizon)
Data Transmission Profiles	Periodic, Data Dependent
Event Driven Alerts	SMS, E-Mail, API
Configuration & Upgrades	Remotely Over-The-Air, USB PC Connection
Antenna	Internal or External
SIM Card	Included

▶ **POWER**

Primary Power Supply	Internal Lithium Battery
Operational Run Time	3,500+ Transmissions per Battery Pack, Field Replaceable Battery
External Power Supply (Optional)	4.5V-28V, Automatic Power Source Switching
Battery Level Notifications	Included