Photonic Measurements

COD Probe

COD Measurement in Water: Efficient, Reagent-Free Process Management

UVT measurement of Chemical Oxygen Demand (COD) offers a fast, responsive, and cost-effective method for managing water treatment processes.

Utilizing ultraviolet transmittance (UVT) technology, this approach eliminates the need for reagents, streamlining monitoring and reducing costs. It provides real-time insights into organic load, enabling prompt adjustments to treatment processes and ensuring optimal performance.

Applications

Drinking Water

- Source water monitoring and alerts

Waste Water

- Final effluent COD monitoring
- UV disinfection efficiency
- Inlet water quality monitoring
- Aeration control and optimization

Benefits

Fast, Accurate Results

- No moving parts, ensuring minimal upkeep
- Long-lasting light source
- Intuitive calibration and setup
- Automated measurements, eliminating the need for grab samples

Operational Efficiencies

- Optimizes chemical dosing
- Eliminates reagent costs
- No recurring operational expenses
- Automates manual processes
- Rapid response to water changes

Easy Installation & Placement

- Intuitive, modern, and easy-to-use interface
- Lightweight and portable device
- Suitable for use by anyone without specialized training

Compliance

- Provides more data for enhanced compliance

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Specifications

Measurements	COD/UVT/UVA/IRA/IRT
Range	0-2800 mg/L COD
Accuracy	±0.5%
Repeatability	±0.05%
Path Length	1, 2, 5, 10, 20, or 50 mm
Sampling Time	10 Seconds
Material	Stainless Steel 316
Body	Stainless Steel 316 with cable gland
Wavelength	254 nm
Dimensions	Probe: 39mm diameter Height 150mm + path length

Operating Conditions	10 to 45 °C, max 80% relative humidity (non-condensing)
Storage Conditions	-20 to 60 °C, max 80% relative humidity (non-condensing)
Enclosure Rating	IP68
Interfaces	RS485, MODBUS
Warranty	1 year
Cleaning System	Optional jet wash cleanse unit
Conformity Safety	EN61010
Conformity EMC	EN61326
Cable Length	Standard 10 m (longer available)
Supply Voltage	12 volts—20 volts DC

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* Routine calibration of surrogate measurements is necessary to adhere to standard procedures, as the water matrix chemistry can vary over time.

SUVA measurements require periodic updates to the probe with current dissolved organic carbon levels from the water.