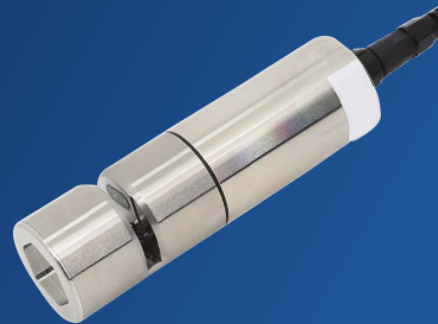


UV254 TOC/COD

TOTAL ORGANIC CARBON + COD



The ART-UV254-H/L Total Organic Carbon (TOC) probe is a Plug and Play probe that provides accurate simultaneous TOC and COD (Chemical Oxygen Demand) measurements, with built-in turbidity compensation, for municipal, environmental, and wastewater environments.

OVERVIEW

The ART-UV254-H/L TOC/COD Sensor measures dissolved organic contaminants using UV absorption at 254 nm, providing accurate, reagent-free TOC and COD readings. An integrated turbidity sensor automatically compensates for interference from suspended particles. Operating directly in water with a self-cleaning brush, it ensures stable, low-maintenance, and environmentally friendly continuous monitoring.

PLUG AND PLAY INSTALLATION

The probe shows up automatically in the ART dashboard on any device when connected to a compatible telemetry device.

USE CASES

| **Municipal drinking water**

| **Wastewater**

| **Environmental water**

| **Industrial water**

COMPATIBLE MONITORING AND TELEMETRY PLATFORMS

ART-AT1-2

AlgaeTracker Buoy

Solar powered surface buoy with built-in algae and turbidity sensors.

ART-SEN1

Sentinel Buoy

Solar telemetry buoy for sondes and single sensors, without surface sensors.

ART-TRN1

TrackerNode

Telemetry unit for docks, bridges, existing buoys, and indoor installations.

ART-HH1

HandHeld Meter

Take on-site readings without a platform connection, and calibrate the sensor in the field.

ENGINEERED FOR DURABILITY

- Titanium stabilized low carbon steel construction resists corrosion and biofouling better than stainless steel while offering superior strength and longevity.
- Smart sensor retains settings and calibration data, enabling hot-swapping between monitoring platforms.
- Digital data transmission cable prevents electrical interference for stable, accurate readings regardless of distance.
- Turbidity compensated readings of TOC and COD: an included turbidity sensor corrects for interference from suspended particles.
- Self-cleaning: included brushing system triggers before each measurement enabling longer term deployments.
- Perforated metal sleeve protects the optical window and brushing system.

Sensor Ratings		UV254 TOC/COD Sensor
Model:	ART-UV254-H/L	
Range, TOC:	0-180 mg/L (L model) or 0-600 mg/L (H model)	
Accuracy, TOC:	±5%	
Resolution, TOC:	0.01 mg/L	
Range, COD:	0-500 mg/L (L model) or 0-1,500 mg/L (H model)	
Accuracy, COD:	±5%	
Resolution, COD:	0.01 mg/L	
Response Time:	40 sec for 95% response	
Temperature sensor:	Built-in	
Temperature compensation:	Automatic	
Environmental Ratings		
Housing IP Rating:	IP68	
Maximum water depth:	40 m	
Temperature range:	0-50°	
General		
Measurement principle:	UV absorption (TOC/COD); scattering (turbidity compensation)	
Sensor Interface:	Direct to monitoring platform via Sensor Mount ART-SMK1	
Sensor diameter:	50 mm Outer Diameter	
Sensor length:	179 mm	
Calibration:	Two point calibration with potassium hydrogen phthalate (TOC/COD)	
Sensor housing material:	Titanium stabilized high carbon steel	
Protective metal sleeve:	Included, replaceable	

PERFORMANCE HIGHLIGHTS

- **Seamless Integration:** Factory-calibrated sensor supports plug-and-play operation, automatically recognized by any AquaRealTime monitoring platform without additional setup.
- **Automatic Data Sync:** Real-time data is stored securely in the cloud and accessible via the ART dashboard on any device.
- **Effortless Data Access:** Download historical measurements anytime in CSV format for analysis and reporting alongside other water quality readings.
- **Provides simultaneous measurement of 3 parameters:** TOC, COD, and temperature in a single probe.
- **Brushing system and encapsulating sleeve** reduce bio-fouling and enable long term stable deployment.

MEASUREMENT PRINCIPLE

The UV254 TOC/COD sensor measures how much ultraviolet light at 254 nm is absorbed by dissolved organic compounds, which correlates with total organic carbon and chemical oxygen demand. Aromatic and unsaturated organic molecules absorb strongly at this wavelength. A secondary turbidity measurement corrects for light scattering from suspended particles, improving accuracy. The sensor's calibrated algorithm then converts the corrected UV absorbance into equivalent TOC and COD values, providing continuous, reagent-free monitoring.

AVAILABLE IN TWO MEASUREMENT RANGES

- ART-UV254-H for high range: TOC 0-600 mg/L, COD 0-1,500 mg/L
- ART-UV254-L for low range: TOC 0-180 mg/L, COD 0-500 mg/L