

## Configurations

The CDOM-Station and CDOM-Station Pro have been designed for both indoor and outdoor operation, with the UviLux fluorometers either fitted within a water trough or mounted in flow-through manifolds for in-line operation. A single cable connects the UviLux fluorometers to the Watchkeeper display and logger unit, which is powered from a 24 Vdc supply. Signal inputs are presented on the screen and up to three 4 – 20 mA signals can be accessed for data system networking. Audible alarms or control valves can be fitted and programmed to alert or activate when signals exceed user-set thresholds.

Data is recorded onto a 2 Gbyte memory card. Data can be downloaded via a USB cable, or by removal of the memory card.

## Specification

### UviLux Fluorometer

Size	Ø70 x 150 mm	
Weight	800 g	
Pressure rating	60 bar	

### UviLux Performance

	CDOM	Tryptophan
Sensitivity (QSU)	0.01	0.01
Calibrated range (QSU)	600	600
Example compound: sensitivity - range (ppb)	PTSA:* 0.02 - 900	Tryptophan: 0.02 - 1200

\*PTSA is pyrene tetrasulphonic acid

### CDOM-Station, single UviLux fluorometer with Flow Manifold

Size	Ø130 x 200 mm
Weight	2.5 kg
Fluid connections	Union, 20mm, PN16
Pressure rating	4 bar
Max operating temp.	55 °C

### CDOM-Station Pro, two UviLux fluorometers with Flow Manifolds

Size	265 x 200 x 200 mm
Weight	5 kg
Fluid connections	Union, 20mm, PN16
Pressure rating	4 bar
Max operating temp.	55 °C

### Watchkeeper display and logger

Display	320 x 240 pixel qVGA backlit LCD
Display size	70 x 50 mm
Size	200 x 110 x 60 mm
Weight	900 g
Memory capacity	2 Gbyte
IP rating	IP67
Voltage input	24 Vdc
Power	2.8 W @ 24 Vdc 4.6 W @ 24 Vdc (Pro)
Temperature range	-20 °C to 55 °C

Contact us today to see how we can help you

# CDOM-Station and CDOM-Station Pro



[www.chelsea.co.uk](http://www.chelsea.co.uk)

CDOM-Station systems provide real-time, highly sensitive measurements for assessing fluorescent dissolved organic matter.



## Applications

- Managing disinfection by-product formation potential
- Assessing organic load through works
- Filter management
- Coagulation Control
- Monitoring THM and HAA precursors



Clarity in Water



In view of our continual improvement, the designs and specifications of our products may vary from those described.

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## What can the CDOM-Station do for you?



## How does it work?

### ★ Features

- Real-time indication of CDOM levels
- Automated data logging (2Gbyte storage capacity)
- 4 – 20mA output for data export in real-time
- Relay for audible alarm or control valves
- In-line flow-through operation with standard pipefittings
- High sensitivity

### Introduction

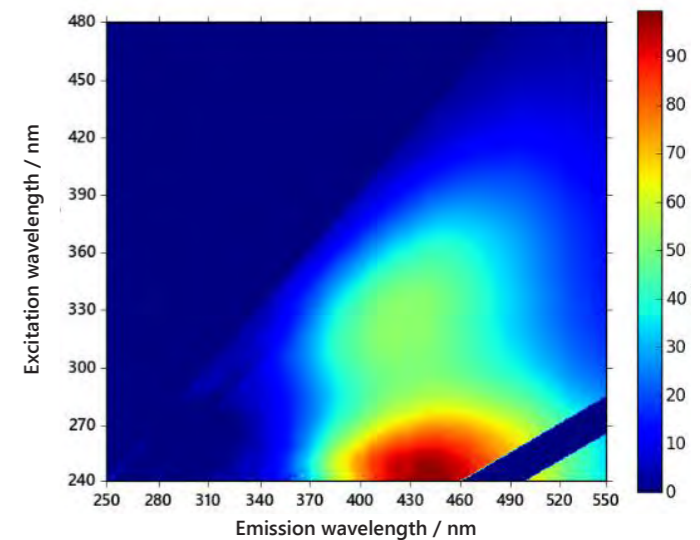
CTG's **CDOM-Station** and **CDOM-Station Pro** systems allow utility operation managers, process scientists and engineers to assess real-time levels of coloured dissolved organic matter (CDOM) in water systems. This is achieved by detecting UV CDOM fluorescence, which has been shown to correlate with organic levels in a wide variety of water environments, providing significantly enhanced improvements in sensitivity over conventional absorbance methods.

The **CDOM-Station** comprises a CTG UviLux fluorometer and a Watchkeeper wall mounted data display and logger. CTG's UviLux fluorometers detect UV fluorescence with industry-leading sensitivity and selectivity and have been optimised for minimal interference from water turbidity.

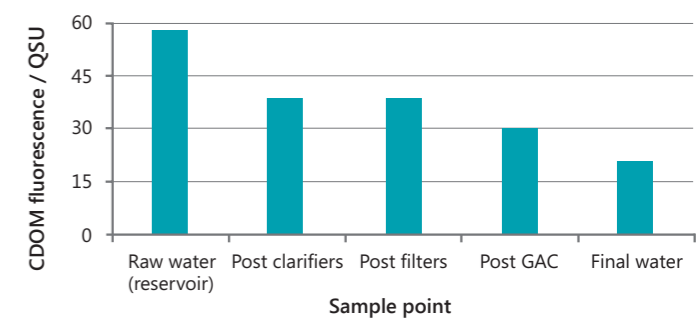
Data is displayed on the Watchkeeper's colour touchscreen and is logged internally. Up to three 4 - 20mA outputs are provided for data transmission.

CTG's **CDOM-Station** and **CDOM-Station Pro** detect UV fluorescence from Dissolved Organic Matter (DOM). These compounds absorb UV light and re-emit a fraction of this energy as fluorescence at longer wavelengths. Fluorescence intensity is directly proportional to concentration. The technique is widely recognised as one of the most sensitive detection methods available.

CDOM may originate from terrestrial or riverine sources and fluoresces in the blue region when excited with UV light. Only aromatic ring compounds can be detected by fluorescence, with emission wavelengths generally increasing with the size of the ring compounds. CTG excite at short UV wavelengths enabling highly sensitive detection of aromatic compounds.



Fluorescence map of CDOM from a Reservoir sample, indicating CDOM-Station measurement window



CDOM levels through a Water Treatment Works

### i CDOM-Station & CDOM-Station Pro

Provides real-time CDOM measurements informing on the efficacy of filtration and disinfection processes

Touch screen display

Audible alarms when exceeding thresholds

2gb storage capacity

The **CDOM-Station** comprises a single CTG UviLux CDOM fluorometer and a Watchkeeper wall mounted data display and logger. The **CDOM-Station Pro** includes an additional UviLux sensor, configured for detecting Tryptophan-like fluorescence. The second sensor provides additional sample information regarding potential bacterial contamination.