

# TriLux

## Multi-parameter Algae Fluorometer

Low cost, miniature algae sensor that monitors three key algal parameters in a single probe



# TriLux Multi-parameter algae fluorometer

TriLux is a low cost, miniature algae sensor that monitors three key algal parameters in a single highly sensitive probe. This is achieved by stimulating chlorophyll- $\alpha$ , phycocyanin and phycoerythrin pigments using three excitation wavelengths, and measuring the resulting chlorophyll- $\alpha$  fluorescence as energy is transferred from accessory pigments.

The 3-in-1 fluorometer enables widespread monitoring in a variety of applications, including harmful algal blooms, aquaculture, water treatment works, river catchments and coastal studies.

With three different parameter combinations and depth ratings to 2000 m, TriLux is suitable for a wide variety of water environments:

- Chlorophyll  $\alpha$ , Phycocyanin, Turbidity for freshwater deployments
- Chlorophyll  $\alpha$ , Phycoerythrin, Phycocyanin for coastal deployments
- Chlorophyll  $\alpha$ , Phycoerythrin, Turbidity for marine deployments

TriLux is compact and easy to integrate in wider systems and platforms including CTDs, data buoys, monitoring stations, AUVs and gliders.

## Features

- Monitors 3 parameters in a single, highly sensitive probe
- Low cost solution for widespread algae monitoring and large scale monitoring programmes
- Real-time data output in  $\mu\text{g/l}$
- User configurable sampling frequency from 0.1 Hz to 3 Hz
- Robust ambient light and turbidity rejection

## Applications

- Monitoring within water treatment plants
- Algal bloom monitoring in rivers, lakes, estuaries and oceans



## Specifications

### Performance

Dynamic range*	Calibrated for 0-100 $\mu\text{g/L}$ Chlorophyll $\alpha$ in acetone)
Limit of detection	Typically 0.1 % of full range
Combinations	Chlorophyll $\alpha$ , Phycoerythrin, Phycocyanin Chlorophyll $\alpha$ , Turbidity, Phycoerythrin Chlorophyll $\alpha$ , Turbidity, Phycocyanin

\* Configurable up to 1000  $\mu\text{g/L}$

### Mechanical

Size	$\varnothing$ 26.5 mm x 140 mm (including connector)
Weight in air	190 g
Pressure housing	Titanium (2000 m)
Depth rating	2000 metres
Connector	MCBH-6-MP

### Electrical

Input voltage	11 to 25 Vdc
Data output	Digital RS232 and analogue 0 to 5 Vdc (or RS422, SDI-12 and 4-20 mA options)
Power requirements	<1 Watt @ 12 V

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



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