

# UniLux

The new family of low cost miniature digital fluorimeters  
from Chelsea Technologies

## APPLICATIONS

- In-situ chlorophyll & algae class studies
- Environmental monitoring
- Dye tracing
- Particulate studies
- Process control
- Designed for moored, profiled, towed or ROV / AUV platforms



## FEATURES

- Miniature, low cost single wavelength fluorimeter
- Range of wavelengths available
- Digital output in engineering units
- Additional analogue output as standard
- User selectable sampling rate, 0.1Hz - 3Hz
- Low power consumption
- Internal referencing of excitation intensity
- High rejection of ambient daylight
- Low noise, high sensitivity
- Low turbidity breakthrough
- User adjustable dynamic range
- RS232 & analogue output (or RS422 option)

## DESCRIPTION

The innovative UniLux range of digital *in-situ* fluorimeters provides the user with increased functionality when compared to other fluorimeters currently available on the market. CTG has used expertise gained within its Life Science Group that have resulted in a significant reduction in production costs, providing the marine, fresh water, surveying and process control markets with a low cost, high performance sensor. Users can select from a wide range of fluorescent parameters, specifying the UniLux tailored to their specific monitoring requirements.

Two signals can be obtained from the standard UniLux: the first is a digital RS232 output in engineering units, the second a 0V to 5V volt calibrated analogue output derived from the digital signal. A single RS422 output is also available as an option. This flexibility makes the UniLux suitable for integrating into many different systems and platforms.

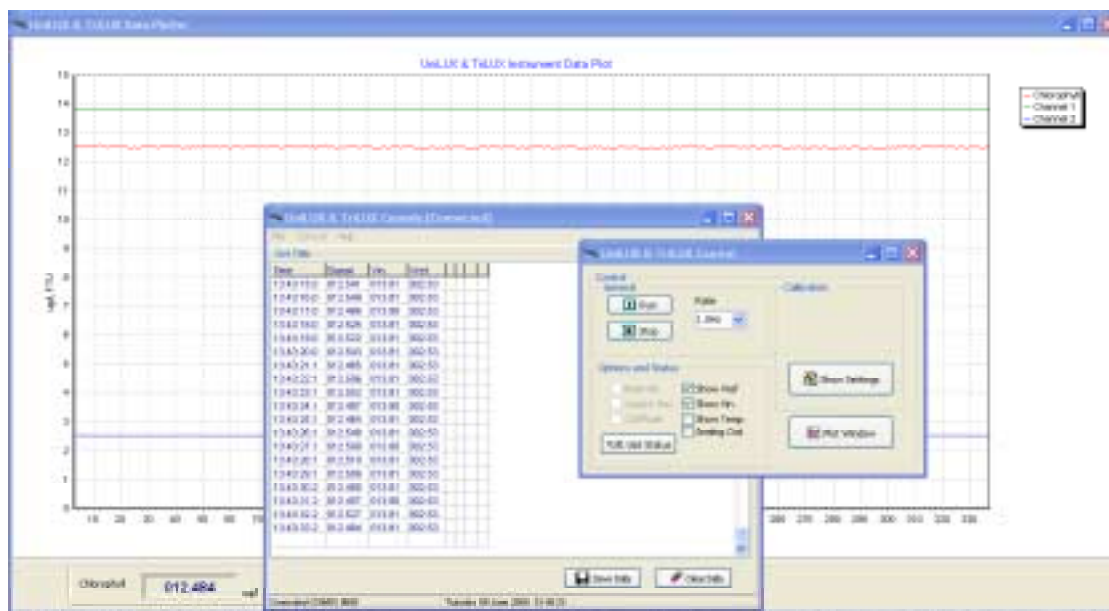
A Windows based Graphical User Interface (GUI) is provided that allows the user to both plot and record time stamped data when operating the UniLux directly from a PC and gives control over many instrument parameters, including: sampling rate, calibration factors and dynamic range.

The dynamic range of the UniLux can be adjusted simply by varying the LED intensity using the GUI, while still maintaining the factor set calibration via the internal referencing of LED output.

Although small and low cost, the UniLux fluorimeter maintains the performance standards and build quality previously seen in the CTG's range of *in-situ* fluorimeters.

## ACCESSORIES

- Lux USB interface cable, which allows the UniLux to be powered directly from, and communicate with, a USB port on a laptop or PC (shown right).
- Flow-through manifold/light shield
- Calibration cell
- Secondary standard



Screen shot from the UniLux GUI application

## SPECIFICATION

The UniLux is calibrated over the following ranges:

### Performance

Wavelength Option	Dynamic Range*	Limit of Detection
Chlorophyll- <i>a</i>	0 to 100 µg/L	<0.01 µg/L
Fluorescein	0 to 100 µg/L	<0.005 µg/L
Rhodamine WT	0 to 100 µg/L	<0.02 µg/L
Phycocerythrin Cyanobacteria	0 to 100 µg/L	<0.02 µg/L
Phycocyanin Cyanobacteria	0 to 100 µg/L	<0.01 µg/L
Nephelometer	0 to 100 FTU	<0.02 FTU

\* User configurable

### Mechanical

Size:	26.5mm dia x 105mm (140mm to end of connector)
Weight in air:	100g
Pressure housing:	Acetal C
Depth rating:	600 metres
Connector:	MCBH-6-MP-SS

### Electrical

Input voltage:	11 to 18Vdc
Data output:	Digital RS232 and analogue 0 to 5Vdc (RS422 as an option)
Power requirements:	<1Watt @ 12 volt

### Delivery Package

UniLux, Handbook, flying lead (0.6m) with locking sleeve & Graphical User Interface.

In view of our policy of continual improvement, the designs and specifications of our products may vary from those described. 7/09



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