

# C3™ and C6P™ Submersible Fluorometers



## C3 & C6P Submersible Fluorometers

These Submersible Fluorometers can be configured with up to three or six optical sensors ranging from the deep ultraviolet to the infrared spectrum. Internal memory storage capacity combined with an external submersible lithium ion battery allow the C3 or C6P to run during extended or short-term deployments. Each unit comes with a factory-installed temperature sensor. Factory-installed depth sensors and mechanical wipers are also available. The durable delrin housing is highly resistant to harsh environments. Antifouling copper tape pieces are included for placement on the C3 optical head to reduce bio-fouling on and around the sensors. An antifouling copper plate is available as an option for both the C3 and C6P for longer deployments. The Integrator Firmware option is recommended when the C3 or C6P are used as part of a continuous sampling system that requires 24/7 streaming data collection. C-Soft Windows™ based software allows for intuitive calibration, datalogging set-up and file management capabilities as well as data integration.

## Customized Optical Sensors

Choose up to six optical sensors to be factory installed for a variety of applications.

### • Available Optical Sensors

- Blue Green Algae
    - Phycoerythrin (marine)
    - Phycocyanin (freshwater)
  - CDOM/FDOM
  - Chlorophyll *in vivo*
    - Blue excitation
    - Red excitation
  - Fluorescent Dye Tracing
    - Fluorescein
    - PTSA
    - Rhodamine
  - Hydrocarbons
    - Crude Oil
    - Refined Fuels
  - Turbidity
  - Wastewater Monitoring
    - Optical Brighteners
    - Tryptophan
- Contact us for Custom Optics*

## Highlights of the C3 & C6P

- 1, 2, 3, 4, 5 or 6 Optical Sensors
- Temperature Sensor Included
- Optional Depth Sensor
- Optional 3-Brush Mechanical Wiper
- All Plastic Housing
- Robust Memory – Over 60,000 Data Lines!
- Easy to Use Software with Data Management Capabilities
- Optional C-ray Deployment Body Enables Horizontal Towing of the C3



Digital integration with a CTD profiler or third party platform  
(Analog adapter available for C3)



Extended Deployments in the Self-Contained Mode with Submersible Battery



Reduced Bio-Fouling with Antifouling Copper Tape or Copper Plate



Solid Secondary Standard used to check signal stability or correlate to a primary standard

Reliable Instruments for an Unreliable World

# C3™ and C6P™ Submersible Fluorometers



Application	Minimum Detection Limit	Linear Range	Physical Specifications
CDOM/FDOM	0.15 ppb** 0.5 ppb***	0-1,250 ppb** 0-5,000 ppb***	Weight in Air 1.64 kg; 3.6 lbs (C3) 2.54 kg; 5.6 lbs (C6P)
Chlorophyll <i>in vivo</i>			Length 23 cm; 9.1 in (C3) 27.43 cm; 10.8 in (C6P)
Blue excitation	0.025 µg/L	0-500 µg/L	Diameter 10 cm; 3.9 in (C3) 13.84 cm; 5.25in (C6P)
Red excitation	0.5 µg/L	>500 µg/L	Material Delrin Plastic
Fluorescein Dye	0.01 ppb	0-500 ppb	Temperature -2 to 50 degrees C.
Oil - Crude	0.2 ppb***	0-2,700 ppb***	Depth 0 to 600 meters
Oil - Fine	10 ppb* 10 ppm****	6,000 ppb* >100ppm****	
Optical Brighteners	0.6 ppb***	0-15,000 ppb***	
Phycocyanin	2 ppb <sup>PC</sup>	0-3,500 ppb <sup>PC</sup>	
Phycocerythrin	0.15 ppb <sup>PE</sup>	0-750 ppb <sup>PE</sup>	
PTSA Dye	0.1 ppb***	0-650 ppb***	
Rhodamine Dye	0.01 ppb	0-1,000 ppb	
Tryptophan	3 ppb	1,000 ppb	
Turbidity	0.05 NTU	0-1,000 NTU	

Electrical Specifications	
Output	Digital (ASCII) Analog (0 - 5 volt)- optional C3 only
Interface	RS232 Interface
Minimum Sample Interval	1 Second
Minimum Power Supply	8 - 30 volts; 5 watts
Maximum Current Draw @ 12 volts	
- operational	200 mA (C3) / 300 mA (C6P)
- sleep mode	3 mA

\* 1,5 Naphthalene Disulfonic Disodium Salt  
 \*\* Quinine Sulfate  
 \*\*\* PTSA (1,3, 6, 8 - Pyrenetetrasulfonic Acid Tetrasodium Salt)  
 \*\*\*\* BTEX (Benzene, Toluene, Ethylbenzene, Xylenes)  
<sup>PC</sup> Phycocyanin pigment from Prozyme diluted in Deionized water  
<sup>PE</sup> Phycocerythrin pigment from Prozyme diluted in Deionized water

## Available Accessories

- |  |   |
|--|---|
| 3-Brush Mechanical Wiper                     | 0.6 Meter Pigtail Interface Cable                               |
| Pressure Sensor                              | Communication & Integration Cable w/ Locking Sleeve             |
| Antifouling Copper Tape (9) (C3 only)        | Boosters (Set of 2)*  |
| Antifouling Copper Plate                     | 10 Meter Extender Cable   |
| Analog Output Adapter (C3 only)              | 25 Meter Extender Cable*  |
| Submersible Battery Pack                     | 50 Meter Extender Cable*  |
| High Capacity Submersible Battery Pack       | Integrator Firmware   |
| Battery Pack Bracket                         | *Boosters are required for cable lengths greater than 10 meters |
| Flow Cap                                     |   |
| Shade Cap (Recommended for most deployments) |   |
| Shade Cap Weight                             |   |
| C-ray Towed Deployment Body (C3 only)        |   |
| C-ray Shade Cap (C3 only)                    |   |
| Solid Secondary Standard                     |   |
| UV Solid Secondary Standard                  |   |

## OIL SPILL RESPONSE FOR SMART PROTOCOL (C3)

- SMART Firmware
- C-ray Shade Cap
- C-ray Deployment Body

## Contact Us

Toll-Free : 1.877.316.8049	Email : sales@turnerdesigns.com	Address:
Phone : 408.749.0994	Web : www.turnerdesigns.com	1995 N. 1st Street
Fax : 408.749.0998		San Jose, CA 95112