



## Chlorophyll a, Phycocyanin (BGA-PC), Phycoerythrin (BGA-PE) and Rhodamine WT Sensors

**DETECT HARMFUL ALGAL BLOOMS FASTER AND IMPROVE SENSITIVITY OF TRACER STUDIES USING SENSORS WITH PATENTED INTEGRATED OPTICAL COMPENSATION. THIS TECHNOLOGY PREVENTS INSTRUMENT DRIFT AND PROVIDES MORE STABILITY AT LOWER DETECTION LIMITS FOR BETTER DATA OVERALL.**

Available sensors for Aqua TROLL 500 and Aqua TROLL 600 Multiparameter Sondes include Rhodamine WT, Chlorophyll a, Phycocyanin (BGA-PC) and Phycoerythrin (BGA-PE) Sensors.

### BE MOBILE

- **Automate data collection:** Use the Aqua TROLL 500 or Aqua TROLL 600 with our VuSitu Mobile App to collect data wirelessly—no field logs required.
- **Use the Aqua TROLL 500 or Aqua TROLL 600 anywhere:** Flexible multiprobes are ideal for spot checks as well as long-term monitoring. Sub-2" anti-fouling wiper, titanium construction and factory-stable sensors ensure reliability even in challenging conditions.
- **Keep projects moving forward:** multiparameter sonde LCD display gives an instant snapshot of instrument health, while internal SD card backs up data for long-term deployments.

1-800-446-7488 (toll-free in U.S.A. and Canada)  
1-970-498-1500 (U.S.A. and international)

[www.in-situ.com](http://www.in-situ.com)

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### BE SMART

- **Get reliable data:** Integrated Optical Compensation uses a second detector to correct for LED drift, providing more stability and accuracy.
- **Minimize interferences:** Separate chlorophyll and blue-green algae sensors excite and detect a smaller range of the visible light spectrum than combined sensors in order to increase performance while minimizing interferences from other fluorescence sources.
- **Sample anywhere:** Ambient Light Rejection blocks external light from affecting the sensor for more consistent monitoring and calibration across different sites.
- **Run multiple sensors:** Isolated Optical Frequencies generate a unique digital signature for each light source, so you can use multiple sensors without interference.
- **Reduce cost of ownership:** Customize your multiparameter sonde with interchangeable, wet-mateable sensors, buying only what you need. Simplified calibration and internal diagnostics also reduce maintenance costs.

### BE IN-SITU

- **Free 24/7 tech support and application help in the field**
- **Guaranteed 7-day maintenance turnaround in the U.S.**
- **Top-rated customer service for over 40 years**

### Applications:

- LAKE, RESERVOIR AND RIVER MONITORING
- COASTAL AND ESTUARINE STUDIES
- DETECTING HARMFUL ALGAL BLOOMS
- TRACER STUDIES
- MUNICIPAL WATER MONITORING

| GENERAL                | FLUOROMETER SENSORS   |                           |                               |                           |                  |
|------------------------|---|---------------------------|-------------------------------|---------------------------|------------------|
| OPERATING TEMPERATURE  | -5 to 50°C (23 to 122°F)  |                           |                               |                           |                  |
| STORAGE TEMPERATURE    | -40 to 65°C (-40 to 149°F)  |                           |                               |                           |                  |
| WETTED MATERIALS       | Titanium, Sapphire, Polycarbonate, Nylon, Viton®  |                           |                               |                           |                  |
| ENVIRONMENTAL RATING   | System: IP68 when installed into sonde<br>Sensor: IP67 when not installed   |                           |                               |                           |                  |
| MAX PRESSURE RATING    | Equivalent to max pressure of sonde   |                           |                               |                           |                  |
| PRODUCT COMPATIBILITY  | Aqua TROLL® 500 and Aqua TROLL® 600   |                           |                               |                           |                  |
| STANDARD SENSORS       | LINEARITY   | RANGE                     | RESOLUTION                    | RESPONSE TIME*            | UNITS OF MEASURE |
| CHLOROPHYLL a          | R²>0.999 for serial dilutions of Chl a in MeOH across full range  | 0-100 RFU<br>0-1,000 µg/L | 0.001 RFU<br>0.01 µg/L Chl. a | T63<1s, T90<1s,<br>T95<1s | RFU, µg/L        |
| PHYCOCYANIN (BGA-PC)   | R²>0.999 for serial dilutions of PC Standard across full range  | 0-100 RFU<br>0-1,000 µg/L | 0.001 RFU<br>0.01 µg/L PC     | T63<1s, T90<1s,<br>T95<1s | RFU, µg/L        |
| PHYCOERYTHRIN (BGA-PE) | R²>0.999 for serial dilutions of PE Standard across full range  | 0-100 RFU<br>0-1,000 µg/L | 0.001 RFU<br>0.01 µg/L PE     | T63<1s, T90<1s,<br>T95<1s | RFU, µg/L        |
| RHODAMINE WT           | R²>0.999 for serial dilutions of Rhodamine WT across full range   | 0-100 RFU<br>0-1,000 µg/L | 0.001 RFU<br>0.01 µg/L        | T63<1s, T90<1s,<br>T95<1s | RFU, µg/L        |
| WARRANTY               | 2-year warranty on sensor.  |                           |                               |                           |                  |
| NOTES                  | Specifications are subject to change without notice. Apple, iPhone, iPod touch, and iPad are trademarks of Apple Inc. registered in U.S. and other countries. Android is a trademark of Google Inc. Viton® is a registered trademark of DuPont Performance Elastomers L.L.C.<br><br>* Response time is typical when moving from air to ambient water temperature. |                           |                               |                           |                  |

- **Isolated Optical Frequencies:** Using two or more optical sensors simultaneously typically creates interference among sensors. Our sensors use separate frequencies, providing a unique digital signature for each light source to minimize interference and improve accuracy.
- **Ambient Light Rejection:** External light can introduce bias in your data, but our fluorometers block external light for reliable performance in any setting.
- **Integrated Optical Compensation:** In-Situ's patented technology uses a second detector to compensate for LED drift over temperature and time, providing more accurate, stable measurements.
- **Low Interference Spectral Bands:** Combined chlorophyll and BGA sensors measure wide ranges of the visible spectrum. Our individual BGA sensors detect smaller ranges to reduce environmental interference.



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