



High accuracy in-situ nitrate measurement

- **Product type**
Attended, Unattended
- **Parameters measured**
Nitrate
- **Product highlights**
High-accuracy, chemical-free, in-situ nitrate measurement
- **Interface**
SDI-12, RS-232

With improved optics and built-in adaptive sampling intelligence, the SUNA V2 measures nitrate with industry-leading accuracy and stability over a wide range of environmental conditions. The wide range of optional features offered for the SUNA V2 make the sensor a cost-effective choice for routine nitrate measurements.

| Mechanical | SUNA with Wiper |
|-----------------------|-----------------|
| Material | Titanium |
| Rated Depth | 100 m |
| Weight (in air) | 4.8 kg |
| Pathlength | 10 mm or 5 mm |
| Length | 588 mm/ 583 mm |
| Diameter | 63 mm |
| Temp Range, Operation | -2 - 35 °C |
| Temp Range, Storage | -20 - 50 °C |

Technical Data

Sea-Bird Scientific SUNA Optical Nitrate Sensor



| Electrical | |
|--------------------------|---|
| Input | 8 - 18 VDC |
| Input, Sensor with Wiper | 8 - 15 VDC |
| Current Draw, Operation | ~ 625 mA at 12V |
| Current Draw, Standby | ~ 20 mA at 12V |
| Light Source | UV Deuterium Lamp (900 hr lifetime) |
| Communication Interface | RS232; Analog 4 - 20 mA; (USB, SDI-12 optional) |
| Data Storage | 2GB (optional) |

| Optical | |
|----------------|-----------------------|
| Spectral Range | 190-370 nm |
| Pathlength | 10 mm (5 mm optional) |

Nitrate Measurement Accuracy

| Concentration Range | 10 mm pathlength |
|---------------------|---------------------|
| Calibration | Sensor Specific* |
| up to 14 mg N/L | 0.028 mg N/L or 10% |
| up to 28 mg N/L | 0.028 mg N/L or 15% |
| up to 42 mg N/L | 0.028 mg N/L or 20% |
| up to 56 mg N/L | out of range |
| Calibration | Class Based** |
| up to 14 mg N/L | 0.035 mg N/L or 20% |
| up to 28 mg N/L | 0.035 mg N/L or 25% |
| up to 42 mg N/L | 0.035 mg N/L or 30% |
| up to 56 mg N/L | out of range |

| Concentration Range | 5 mm pathlength |
|---------------------|---------------------|
| Calibration | Sensor Specific* |
| up to 14 mg N/L | 0.056 mg N/L or 10% |
| up to 28 mg N/L | 0.056 mg N/L or 15% |
| up to 42 mg N/L | 0.056 mg N/L or 15% |
| up to 56 mg N/L | 0.056 mg N/L or 15% |
| Calibration | Class Based** |
| up to 14 mg N/L | 0.063 mg N/L or 20% |
| up to 28 mg N/L | 0.063 mg N/L or 25% |
| up to 42 mg N/L | 0.063 mg N/L or 25% |
| up to 56 mg N/L | 0.063 mg N/L or 25% |

* A sensor specific calibration uses extinction coefficients from the sensor itself

** A class based calibration uses extinction coefficients that are the averager of many sensors

Nitrate Measurement Precision

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We reserve the right to make technical changes and improvements without notice. V-31/03/2026

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Technical Data

Sea-Bird Scientific SUNA Optical Nitrate Sensor



| Processing Configuration | Seawater or Freshwater with T-S Correction |
|--|--|
| Short-term precision (3 sigma) | 0.004 mg N/L |
| Change ("drift") per hr of lamp time | <0.004 mg N/L |
| Processing Configuration | Seawater (0-40PSU) |
| Short-term precision (3 sigma) | 0.034 mg N/L |
| Change ("drift") per hr of lamp time | <0.014 mg N/L |
| Limit of Detection and Limit of Quantification | |

| Processing Configuration | Seawater or Freshwater with T-S Correction |
|--------------------------|--|
| Limit of Detection | 0.004 mg N/L |
| Limit of Quantification | 0.014 mg N/L |

| Processing Configuration | Seawater (0-40 PSU) |
|--------------------------|---------------------|
| Limit of Detection | 0.034 mg N/L |
| Limit of Quantification | 0.112 mg N/L |

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