An advancement in near-infrared spectroscopy (NIRS) regional oximetry, the SenSmart Model 8204CA dual emitter regional oximetry sensor for use with the SenSmart Universal Oximetry ($rSO_2$/$SpO_2$) System, offers clinicians absolute accuracy to optimize patient care. SenSmart Technology offers accurate $rSO_2$ values on all patients...no more guessing when the system doesn’t provide a reading, and no more outliers that misrepresent patients’ true physiologic condition.$^{1,2}$
SenSmart™ rSO₂ Technology: Four-Wavelength Optics
Greater Accuracy and Reliability through Better Science

SenSmart rSO₂ Technology utilizes four wavelengths of light to measure the balance of oxy- and deoxy-hemoglobin, while compensating for tissue factors that reduce rSO₂ accuracy. The result is highly accurate measurements of patients’ true tissue oxygen saturation.

Compared to traditional NIRS trending technology, SenSmart rSO₂ Technology is absolute, providing enhanced accuracy in rSO₂ measurements on all patients, regardless of skin color…no more guessing or over-treatment if patients do not read, or read inaccurately.
SenSmart™ rSO₂ Technology: Dual-Emitter Architecture Effectively Removes Surface Tissue Artifacts

Only the patented SenSmart rSO₂ sensors use dual emitters and dual detectors to provide repeatable cerebral cortex measurements that are minimally affected by intervening tissue or surface effects.³

A recent independent, peer-reviewed study showed in a statistically significant manner that of the three cerebral oximeters, Nonin’s rSO₂ technology had the least interference from extracranial tissue.³

Older NIRS technology claimed to be absolute, but clinician confidence suffered when the technology could not read some patients. In a recent series of 50 healthy adults, Nonin’s rSO₂ technology captured data on all subjects, regardless of gender, body type or skin color, while 5% of subjects did not read using other technologies.¹
SenSmart™ Model X-100
Universal Oximetry (rSO\(_2\)/Sp\(_O\(_2\)\)) System

Product Highlights

- **Absolute Accuracy**\(^1\) – 4.1 \(\text{A}_{\text{cm}}\)^a
- **Consistent** – Repeatable results for maximum efficiency and time savings\(^4\)
- **Immediate Response** – Near-instant measurements ensure readings from the moment the sensor is placed
- **Real-time Readings** – Sampling rates less than two seconds apart guarantee up-to-date saturation readings

SenSmart™ Model 8204CA
Regional Oximetry (rSO\(_2\)) Sensor

Improved rSO\(_2\) Sensor Utility

- 13% smaller footprint than 8004CA
- Quick-connect intermediate cable that can stay connected to signal processor between cases
- Proven, reliable adhesion; even with highly diathermic patients
- Nonin dual-emitter absolute accuracy
- Same “over the top” vs side-of-head cable exit angle
- Write-on Sharpie strip on sensor face for time/date of placement (e.g. ICU use)

References:

\(^1\) Data on file at Nonin Medical, Inc. Plymouth, MN.
\(^4\) Lobbestael A et al; White Paper 2009; Nonin Medical, Inc.

*Accuracy for SenSmart™ EQUANOX Advance™ Sensor, Model 8004CA only. Pediatric through adult >40 kg.