

# PureLight<sup>®</sup> PureSAT<sup>®</sup> sensor & signal technology

PureLight<sup>®</sup> sensors produce the pure light spectrum which eliminates variations in readings from patient-to-patient and sensor-to-sensor. Accurate and dependable SpO<sub>2</sub> readings start with PureLight sensors.

Nonin's PureSAT<sup>®</sup> technology makes greater use of signal characteristics for artifact rejection, using improved pulse detection technology for faster, more precise pulse detection and quick readings.

## Comprehensive Data Capture



With integrated SpO<sub>2</sub> & heart rate memory, the Avant<sup>®</sup> 9700 can be used for extended monitoring situations. When used with Nonin's proprietary software, nVISION<sup>®</sup>, a clear picture of the trended SpO<sub>2</sub> and heart rate data can be reviewed instantly - including the ability to edit parameters for event identification.

## Select Your Options

- ✓ Sensors & Cables - Use with Nonin's complete line of PureLight sensors & cables (Neonate, Infant, Pediatric, Adult)
- ✓ Nurse Call Cable - A variety of cables are available
- ✓ Carrying Case - Convenient for transport and storage - Avant Series Product
- ✓ Rolling Stand - Standard or deluxe 5 point stand portability - Avant Series Product
- ✓ Pole Clamp - Mounts horizontal or vertical - Avant Series Product
- ✓ Output Options - nVISION<sup>®</sup> Data Management Software for oximetry screening
  - Portable thermal printer
  - Digital to Analog Converter Module



## Your Partner of Choice

With over 15 years of experience and dedication to the design and support of noninvasive monitoring devices, Nonin has helped many medical professionals meet clinical and economic objectives. Trusted by clinicians worldwide, countless tests are performed every day on thousands of Nonin pulse oximeters in more than 125 countries. Nonin's dedication to technological leadership, precision manufacturing and uncompromised customer support ensures quality products and service you expect.

Please contact your authorized distributor for more information.

## Specifications

|   |  |
|---|--|
| <b>Oximeter</b>                                   |  |
| Oxygen Saturation Range (%SpO <sub>2</sub> )      | 0% to 100%   |
| Pulse Rate Range                                  | 18 to 300 pulses per minute  |
| <b>Displays</b>                                   |  |
| Numeric Displays                                  | 3-digit LED's, Tricolor (red, green, amber)  |
| Pulse Strength Indicator                          | Tricolor LED segments  |
| Pulse Quality Indicator                           | Amber LED  |
| LCD   | 16 color; 256 x 64 pixel   |
| <b>Accuracy*</b>                                  |  |
| Blood Oxygen Saturation (%SpO <sub>2</sub> ±1 SD) |  |
| No Motion: Adults, Pediatrics                     | 70 - 100% ±2 digits  |
| Neonates  | 70 - 100% ±3 digits  |
| Motion: Adults, Pediatrics                        | 70 - 100% ±2 digits  |
| Neonates  | 70 - 100% ±3 digits  |
| Low Perfusion: Adults, Pediatrics                 | 70 - 100% ±2 digits  |
| Neonates  | 70 - 100% ±3 digits  |
| <b>Pulse Rate</b>                                 |  |
| No Motion   | 18 to 300 bpm ±3 digits  |
| Motion  | 60 to 240 bpm ±5 digits  |
| Low Perfusion                                     | 60 to 240 bpm ±3 digits  |
| <b>Temperature</b>                                |  |
| Operating   | +32° to +122°F (+0° to +50°C)  |
| Storage/Transportation                            | -22° to +122°F (-30° to +50°C)   |
| <b>Humidity</b>                                   |  |
| Operating   | 10% to 90% noncondensing   |
| Storage/Transportation                            | 10% to 95% noncondensing   |
| <b>Altitude</b>                                   |  |
| Operating   | Up to 40,000 feet (12,192 m)   |
| <b>Power Requirements</b>                         |  |
| Mains   | 100-240 VAC 50-60 Hz   |
| DC Input  | 12 VDC 1.5A AC adapter   |
| <b>Internal Power</b>                             |  |
| Battery   | 7.2 volt battery pack (6 cells)  |
| Operating   | Minimum 12 hours of continuous operation with a fully charged battery pack and LCD backlight off |
|   | Minimum 8 hours of continuous operation with a fully charged battery pack and LCD backlight on   |
| Storage   | 27 days  |
| Recharge  | 4 hours  |
| <b>Dimensions</b>                                 |  |
|   | 7.25" wide x 5.5" high x 4.5" deep   |
|   | 18.4 cm x 14 cm x 11.4 cm  |
| <b>Weight (excluding Pole Mount System)</b>       |  |
|   | 2.4 pounds (1.1 kg)  |
| <b>Memory</b>                                     |  |
|   | 115 hours non-volatile   |
| <b>Warranty</b>                                   |  |
|   | 3 years  |

### Classifications per IEC 60601-1/UL2601-1

|                      |   |
|----------------------|---|
| Type of Protection   | Class I (when on AC power with 300PS-UNIV battery charger)<br>Internally powered (on battery power) |
| Degree of Protection | Type BF-Applied Part  |

### Nurse Call

|                      |   |
|----------------------|---|
| Maximum Voltage      | 30 V, AC or DC (non-polarized)                      |
| Maximum Load Current | 20mA continuous                                     |
| Output Impedance     | 320 ohms typical                                    |
| Output               | Normally Open or Normally Closed; switch selectable |
| Output Connector     | 0.141" miniature phone jack                         |

\*Accuracy is expressed for adult patients and determined with the Reusable 8000AA Finger Clip Sensor and 8000J Flex Sensor. All accuracy specifications are results determined by induced hypoxia studies on healthy adult volunteers. Motion accuracy specifications apply to the 8000AA Finger Clip Sensor and 8000J Flex Sensor. The low perfusion specifications apply to monitor performance.

Quality systems registered to ISO 9001:1994/EN 46001:1996, ISO 13485:1996, and CE self-marking per Annex II, Clause 3 of EC Directive No. 93/42/EEC concerning medical devices.

Specifications are subject to change without notice.



Nonin Medical, Inc.  
2605 Fernbrook Lane North  
Plymouth, MN 55447-4755, USA  
Phone: +1.763.553.9968 Toll Free: 1.800.356.8874  
Fax: +1.763.553.7807  
info@nonin.com

✓ Where People Make the Difference



# Pulse Oximetry

# 9700 Avant<sup>®</sup>

## Tabletop/Portable Digital Pulse Oximeter with Waveform



## Product Highlights

- ✓ Easy-to-Use - Intuitive, color coded displays
- ✓ Versatile - Monitor neonates to adults; acute care to homecare
- ✓ Powerful - On-demand printing & minimum 8 hour battery life
- ✓ Flexible - Patient Security Mode, Nurse Call & User-Defined Defaults
- ✓ Intelligent - Nonin's Next Generation PureSAT<sup>®</sup> signal processing technology
- ✓ Convenient - Compact, lightweight & durable

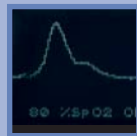
✓ Where People Make the Difference



# Distinctive Displays – Dependable Performance

The plethysmographic waveform alters color as a real-time reflection of the patient's pulse signal quality – alerting you to patient changes. The high-resolution color display compliments the signal quality indicators and LED values. The Avant® 9700 combines flexible alarm options, unparalleled non-volatile memory, and Nonin's time-honored technology to give you an easy-to-use and efficient monitor.

## Intuitive Displays



**Green = Good**



**Amber = Alert**



**Red = Action**



Dynamic color changes correlated to the patient's pulse signal quality provide the caregiver with an immediate evaluation tool. The 16-color high-resolution Liquid Crystal Display (LCD) provides:

### Color Coded Waveforms

- ✓ A green waveform represents a strong signal
- ✓ An amber waveform represents a marginal signal
- ✓ A red waveform represents a weak signal

### Automatic Scaling Factor

- ✓ Automatically scales for optimum waveform visualization.
- ✓ Scaling factors are: x1, x2, x4, x8 & x16.

### Crystal Clear LEDs

Bright, adjustable Light Emitting Diodes (LEDs) allow patient monitoring to continue even when the LCD backlight is turned off.

## 9700 Avant®

Tabletop/Portable Digital Pulse Oximeter with Waveform



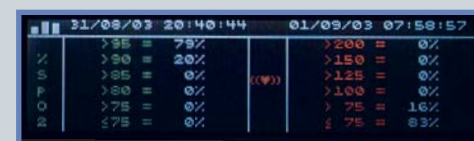
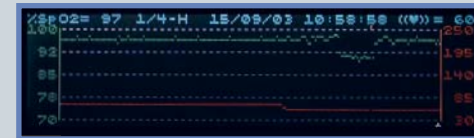
## On-Screen Trending & Histogram

The Avant 9700 color LCD offers clear viewing of on-screen trending. The high resolution screen quickly displays an easy-to-read trend graph and histogram.

The dual-scale (SpO<sub>2</sub> & heart rate) color chart draws gridlines so data values can be clearly graphed and evaluated at a glance. On screen viewing of up to 24 hours of SpO<sub>2</sub> & heart rate trends.

Up to 115 hours of data is stored in non-volatile memory for access with nVISION® Data Management Software. Most recent 24 hours of patient data is available for on screen recall.

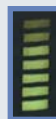
The patient histogram offers a concise tabulation of the recorded SpO<sub>2</sub> & heart rate values over the length of the record.



## User-Friendly Interface

The Avant 9700 provides a variety of display indicators to ensure reliable readings for easy patient evaluation.

**Qualitative Pulse Strength** - Color-coded bar graph assists in assessing the patient's status. An audible tone is generated with each pulse; the pitch changes with the patient's saturation level.



**Pulse Quality Indicator** - Detects movement or signal quality changes that may necessitate the need for sensor site stabilization.



**Sensor Indicator** - The sensor icon indicates the lack of sensor presence or the need for sensor attention.



A quick and complete assessment of your patient's oximetry readings is made easier with the combination of information supplied by the Qualitative Pulse Strength bar graph, variable pitch pulse/saturation tone and Pulse Quality Indicator.

## Printing Options

The Avant 9700 has two convenient printing options:

1. Print-on-Demand – *one touch printing*
2. Real-time Printing – *once-per-second outputs*



## Flexible & Versatile Alarm Settings

|                              |  |
|------------------------------|--|
| <b>Patient Security Mode</b> | Locks alarm limits, volume and time/date settings, preventing unintentional changes. |
| <b>Nurse Call</b>            | Facility's call indicator light system connects via cable connection.                |
| <b>Latched Mode</b>          | Audible and visual indication of an alarm continues even after an event has ended.   |
| <b>Unlatched Mode</b>        | Audible and visual indication of an alarm state concludes when an event has ended.   |
| <b>Recall Function</b>       | Reinstatement of user's last customized alarm settings.                              |
| <b>User-Defined Defaults</b> | Alarm settings return to user customized settings on every power up.                 |