LIFEGARD® II Multi-Parameter Patient Monitor

LIFEGARD II offers a comprehensive array of sophisticated, non-invasive parameters in a light-weight portable package.

Powerful, versatile and portable
- 10.4" bright color display, visible from multiple viewing angles
- 3 or 4-hour battery life (based on configuration) for prolonged transport monitoring
- Spot-check and continuous monitoring capability
- Ideal for a comprehensive patient assessment in ED triage, peri-op, ICU, cardiac step-down units, rehab, med/surg, and for diabetic patient management

Featured Technologies
- 3 or 5 lead ECG (HR)
- Nellcor® OxiMax® SpO₂
- Manual and auto-interval (NIBP) non-invasive blood pressure
- YSI Temperature (highly sensitive)
- (Optional) Continuous, non-invasive cardiac output – ICG (Impedance Cardiography) and measurement of 17 hemodynamic values
- (Optional) Oridion® Microstream® EtCO₂ for continuous monitoring of intubated/non-intubated patients
**Patient Monitors**

**LIFEGARD® II Multi-Parameter Patient Monitor**

- Fully configured with non-invasive ECG(HR), RESP, SpO₂, NIBP, YSI TEMP, EtCO₂, ICG with 17 hemodynamic parameters
- Spot-check and continuous monitoring modes
- Integrated printer for fast, easy data recording
- Network ready for connection to LIFEGARD Vue Central Monitoring and Notification system
- 3- or 5-lead ECG with support for 2-lead simultaneous display when using 5 leads
- 3 priority level alarms with visual alarm notification, HR tone & battery status

**ECG Performance**
- Leads: 3 or 5 leads, user selectable
- Heart Rate Range: 20 to 250 bpm
- Heart Rate Accuracy: ±1 bpm or ±1%
- Pacemaker Detection Mode: Indicator on waveform display, user selectable

**Respiration Performance (ECG or EtCO₂ derived)**
- Range: 3 to 150 breaths per minute
- Accuracy: ±3 breaths per minute

**NIBP Performance**
- Pulse Rate Range: 40 to 200 bpm
- Pulse Rate Accuracy: ±2 bpm or ±2%
- Blood Pressure Measurement Range
  - Systolic: 40 to 250 mmHg
  - Diastolic: 20 to 200 mmHg
- Mean Arterial Pressure: 27 to 220 mmHg

**Measurement Modes**
- Auto: Automatic measurements at intervals of 1, 3, 5, 10, 30, 60 and 90 minutes
- Manual: Single measurement initiated by start/stop button
- STAT: Series of consecutive measurements for 5 minutes

**SpO₂ Performance**
- Nellcor® OxiMax® Technology
  - % Saturation Range: 1% to 100%
  - Pulse Rate Range: 30 to 250 bpm
  - SpO₂ Accuracy: 70% to 100% ± 3 digits with DS100A sensor
  - Pulse Rate Accuracy: ±3 bpm

**Temperature Performance**
- YSI Temperature compatible with YSI 401 and 409 temperature probes
  - Range: 15°C to 45°C (59°F to 113°F)
  - Accuracy: ±0.1°C (0.18°F)

**Compliance and Approvals**
- CE marking: Medical Device Directive, 93/42/EEC
- Safety Standards: IEC 60601-1, IEC 60601-1-1, UL 60601-1, CAN/CSA C22.2 No. 601.1 (M90), EN 60601-1
- Water Resistance: IEC 60529 Classification IPX1
- Mechanical Shock: IEC 60608-2-27
- Environmental Humidity: IEC 60608-2-78
- Environmental Temperature: IEC 60608-2-1, IEC 60608-2-2
- Electromagnetic Compatibility: IEC 601-1-2
  - UL60601-1, CAN/CSA C22.2 No. 601.1 (M90)
  - IEC/EN 60601-1-4 EN 865
  - IEC/EN 60601-1-8 EN 1060-1
  - IEC/EN 60601-2-7 EN 1060-3
  - IEC/EN 60601-2-30 ANSI/AAMI SP10
  - IEC/EN 60601-2-49 ISO 9918
  - EN 864

**EtCO₂**
- Oridion® Microstream® EtCO₂
  - Range: 0 to 99 mmHg (0 to 13 kPa), or 13% CO₂ which ever is lower
  - Accuracy: 0 - 20 minutes: 0 to 38 mmHg ±4 mmHg; 38 to 99 mmHg ±12% of indicated value
    - > 20 minutes: 0 to 38 mmHg ±2 mmHg 38 to 99 mmHg ±5% of indicated value +0.08% for every 1.0 mmHg above 40 mmHg
  - Airway Respiration (awRR)
    - Range: 0 to 150 breaths/min (br/min)
    - Accuracy: 0 to 41 br/min ±1 br/min; 41 to 70 br/min ±2 br/min; 71 to 100 br/min ±3 br/min; > 100 br/min ±5% of reading

**ICG Performance**
- Measurement principle: TEB (thoracic electrical bioimpedance)
- Number of Electrode Pairs: 4
- Basic Thoracic Impedance Range: 0-60Ω
- Impedance Variation Range: ±1Ω
- Impedance Noise: < 1 mΩ at 50Ω basic impedance
- Patient Criteria / Adult
  - Height: 4 ft - 7 ft. 5 in (122 cm - 229 cm)
  - Weight: 67 lbs - 360 lbs (30 kg - 159 kg)

**Graphical and Tabular Trends**
- Memory Storage: 72 hours
- Data Interval: 20 seconds
- Display Range: 2 hours, 72 hours scrollable
- Tabular Format: One table for all variables; six fields per row (time and 5 vital signs)
- Display Interval: Per NIBP measurement or 15 minutes if no NIBP, or during an alarm condition; adjustable vertical scaling when using graphical trends
- Stored Data: Trend data for HR, SpO₂, NIBP, awRR, etCO₂ Temp; plus 17 Hemodynamic Values; SV, SVI, CO, CI, SVR/SVRI, TFC/TFI, ACI, EVI, EPI, PEPT, ETR, STR, LCWI, HI; any 2 parameters may be graphically trended

**Interfaces**
- EIA-232 digital output from the serial port for one of the following: nurse call, transferring data to an external computer transferring patient data and waveforms to LIFEGARD Vue Central System

**Physical**
- Weight: 5.7 kg (12.5 lb.) w/out accessories, options, cables
- Size: 34.3 cm x 25.4 cm x 17.8 cm (13.5" x 10.0" x 7.0")

**Monitor Environmental**
- Operating Temperature: 5°C to 45°C (41°F to 113°F)
- Storage Temperature: - 20°C to 60°C (- 4°F to 140°F)
- Operating/Storage Humidity: 20% to 90% relative humidity, non-condensing
- Operating Altitude: 0 to 3,048m (0 to 10,000 ft.)

**Power**
- AC 100 to 240 VAC, 50/60 Hz, 1A

**Monitor Performance - Display**
- TFT color-active matrix
- Screen Size: 210.8 mm x 157.5 mm (8.3" x 6.2")
- 264.2 mm (10.4") diagonally
- Resolution: 640 x 480 pixel
- View Angles: 70° left / right, 40° up, 70° down
- Backlight Life: 25,000 hours

**LIFEGARD II Monitor Models**
- AN4320P Basic Monitor (ECG, Resp, Temp, NIBP and SpO₂)
- AN4321P Basic Monitor with EtCO₂ and Printer
- AN4322P Basic Monitor with ICG and Printer
- AN4323P Basic Monitor with EtCO₂, ICG and Recorder
- Note: ICG and EtCO₂ do not function simultaneously

**Accessories**
- Roll Stand (including mounting plate)
- Blood Pressure Cuffs (See BP Cuff Sell sheet for options)
- ECO₂ Procedural Sedation Starter Kit
- ECO₂, CCU Starter Kit
- Temperature Probe-Surface/skin, reusable
- Temperature Probe-Esophageal/Rectal, reusable
- ECG Lead Sets:
  - AHA (Red, Black, White), 3-lead with Snaps
  - IEC (Red, Yellow, Green), 3-lead with Grabbers
  - 0 to 38 mmHg ±4 mmHg; 38 to 99 mmHg ±5% of indicated value +0.08% for every 1.0 mmHg above 40 mmHg
  - Acc专业人士currently unavailable