

# SD3 Series

Ultrasonic Pocket Doppler  
Version 1.0

## Data Sheet



|                                             |                                        |                                                                                                                       |                               |  |
|---------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------|--|
| Physical Specifications                     | Main Unit                              | Dimensions(D×W×H) 168mm×31mm×67mm<br>Weight 350g approx. (including the battery)                                      |                               |  |
|                                             | Probe                                  | Dimensions(obstetrical probe) 39mm×140mm<br>Dimensions(vascular probe) 25 mm×115mm<br>Weight <100g<br>Cable Length 2m |                               |  |
|                                             | Charge Stand                           | Dimensions(D×W×H) 96mm×93mm×100mm<br>Weight <200g                                                                     |                               |  |
|                                             | Display                                | 0.96 inch OLED Double Color Screen                                                                                    |                               |  |
| Power Supply<br>(SD3 Vascular<br>/SD3 Lite) | 3 AA alkaline battery LR6              | Normal working time ≥10hours                                                                                          |                               |  |
|                                             | 3 AA rechargeable NI-MH battery R6     | Normal working time ≥10hours<br>Charge mode rechargeable NI-MH battery charger<br>Charge time about 5 hours           |                               |  |
| Power Supply<br>(SD3 Plus<br>/SD3 Pro)      | Nominal Capacity                       | 2600mAh                                                                                                               |                               |  |
|                                             | Nominal Voltage                        | 3.7V                                                                                                                  |                               |  |
|                                             | Normal working time                    | ≥16hours                                                                                                              |                               |  |
|                                             | Charge time                            | ≤6hours                                                                                                               |                               |  |
|                                             | Work Temperature                       | Charging Temperature                                                                                                  | 0°C ~ +45°C (+32°F ~ +113°F)  |  |
|                                             |                                        | Discharging Temperature                                                                                               | -20°C ~ +60°C (-4°F ~ +140°F) |  |
| Storage Temperature                         | Within 1Month                          | 0°C ~ +45°C (+32°F ~ +113°F)                                                                                          |                               |  |
|                                             | 1 ~ 3Month                             | 0°C ~ +35°C (+32°F ~ +95°F)                                                                                           |                               |  |
|                                             | 3 ~ 12Month                            | 0°C ~ +25°C (+32°F ~ +77°F)                                                                                           |                               |  |
| Audio Output                                | Output Power                           | 2W                                                                                                                    |                               |  |
| FHR                                         | Operating Mode                         | CW                                                                                                                    |                               |  |
|                                             | Working Frequency                      | (2±10%)MHz/(3±10%)MHz                                                                                                 |                               |  |
|                                             | Nominal Frequency                      | 2MHz/3MHz                                                                                                             |                               |  |
|                                             | 2MHz/3MHz Obstetrical Probe            | p-                                                                                                                    | <0.1 MPa                      |  |
|                                             |                                        | I <sub>ob</sub>                                                                                                       | <20mW/cm <sup>2</sup>         |  |
|                                             |                                        | I <sub>spta</sub>                                                                                                     | <100mW/cm <sup>2</sup>        |  |
|                                             | Effective Radiating Area of Transducer | (245±15%)mm <sup>2</sup>                                                                                              |                               |  |
|                                             | FHR Measurement Range                  | 50bpm ~ 240bpm                                                                                                        |                               |  |
|                                             | Resolution                             | 1bpm                                                                                                                  |                               |  |
|                                             | Accuracy                               | ±2bpm                                                                                                                 |                               |  |
| Sensitivity                                 | 9 Weeks Gestation (3MHz)               |                                                                                                                       |                               |  |
| Vascular                                    | Operating Mode                         | CW                                                                                                                    |                               |  |
|                                             | Working Frequency                      | (4±10%)MHz/(5±10%)MHz/(8±10%)MHz                                                                                      |                               |  |
|                                             | Nominal Frequency                      | 4MHz/5MHz/8MHz                                                                                                        |                               |  |
|                                             | 4MHz/5MHz/8MHz Vascular Probe          | p-                                                                                                                    | <1MPa                         |  |
|                                             |                                        | I <sub>ob</sub>                                                                                                       | <25mW/cm <sup>2</sup>         |  |
| Effective Radiating Area of Transducer      | 4MHz/5MHz                              | (32±15%)mm <sup>2</sup>                                                                                               |                               |  |
|                                             | 8MHz                                   | (14±15%)mm <sup>2</sup>                                                                                               |                               |  |

|                              |                                                        |                                                                                                                                       |
|------------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Recording and Playing        | Audio Sampling Frequency                               | 4 kHz                                                                                                                                 |
|                              | Recording Length                                       | 240 seconds                                                                                                                           |
| Auto Power-off               | 1 minute after no signal or operation, auto shut down. |                                                                                                                                       |
|                              | Probe replacement, auto shut down.                     |                                                                                                                                       |
| Coupling Gel                 | pH                                                     | 5.5 ~ 8.0                                                                                                                             |
|                              | Acoustic Impedance                                     | $1.5 \times 10^6$ Pa.s/m ~ $1.7 \times 10^6$ Pa.s/m (35°C/95°F)                                                                       |
| Safety Specifications        | Standards Compliance                                   | IEC 60601-1:2005, EN 60601-1:2006, IEC 60601-1-2:2014, EN 60601-1-2:2015, IEC/EN 61266:1994, EN 60601-2-37: 2008, IEC 60601-2-37:2007 |
|                              | Anti-electric Shock Type                               | Internally powered equipment                                                                                                          |
|                              | Anti-electric Shock Degree                             | Type B equipment                                                                                                                      |
|                              | Degree of Protection against Harmful Ingress of Water  | Main Unit Ordinary Equipment (Sealed equipment without liquid proof)<br>Probes IPX8                                                   |
|                              | Degree of Safety in Presence of Flammable Gases        | Equipment not suitable for use in presence of flammable gases                                                                         |
|                              | EMC                                                    | CISPR11 Group 1 Class B                                                                                                               |
|                              | Working System                                         | Continuous Operation                                                                                                                  |
| Environmental Specifications | Temperature                                            | Working +5°C ~ +40°C (+41°F ~ +104°F)<br>Transport and Storage -20°C ~ +55°C (-4°F ~ +131°F)                                          |
|                              | Relative Humidity                                      | Working 25% ~ 80% (non-condensing)<br>Transport and Storage 25% ~ 93% (non-condensing)                                                |
|                              | Atmospheric Pressure                                   | Working 86kPa ~ 106kPa<br>Transport and Storage 70kPa ~ 106kPa                                                                        |



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