

Powerheart G5 parameters

Table 1: Physical parameters

Parameter	Detail
Operation	Automatic Semi-automatic Multi-language (in specified combinations only)
Dimensions	Height: 9 cm (3.4 in) Width: 23 cm (9.0 in) Depth: 30 cm (11.8 in)
Weight (with battery and pads)	2.6 kg (5.7 lb)

Table 2: Environmental information

Parameter	Detail
Operating and standby	Temperature: 0°C to 50°C (32°F to 122°F) Humidity: 10% to 95% (non-condensing)
Storage and transport (up to 3 days)	Temperature: -30°C to 65°C (-22°F to 149°F) Humidity: 10% to 95% (non-condensing)
Altitude	CSA evaluated: -382 m to 3000 m Minimum: -382 m (approximate; calculated from pressure) Maximum: 4594 m (approximate; calculated from pressure)
Pressure	CSA evaluated: 700 hPa to 1060 hPa Minimum: 570 hPa Maximum: 1060 hPa

Keep the AED inside the operating ranges (not the storage ranges) so that the device is ready for use.

Table 3: Functionality

Parameter	Detail
RHYTHMx® ECG analysis performance	The AED RHYTHMx ECG Analysis system analyzes the patient's ECG and advises you when the AED detects a shockable or non-shockable rhythm. This system makes it possible for a person, with no training in the interpretation of ECG rhythms, to offer defibrillation therapy to victims of sudden cardiac arrest.
Waveform	STAR® Biphasic
Impedance	25 Ω to 175 Ω
Energy (adult pads)	Escalating energy from 95 J to 354 J
Energy (pediatric pads)	Escalating energy from 22 J to 82 J
Shock times	<ul style="list-style-type: none"> • Initiation of rhythm analysis to ready to shock: 15 seconds (typical); 45 seconds (maximum) With a fully charged battery • Initiation of rhythm analysis to ready to shock, used battery: 15 seconds (typical); 45 seconds (maximum) With a battery that has been used for 15 shocks • Lid-open to ready to shock: 15 seconds (typical) With a battery that has been used for 15 shocks • Post CPR to ready to shock: 10 seconds (typical) With these conditions: "Post CPR" begins after the "Stop CPR" prompt is given; English is the selected language; semi-automatic AED detects persistent VF; new, unused battery is attached to the AED.
Automated self-tests	<p>Daily: Battery, pads, internal electronics, buttons.</p> <p>Weekly (every 7 days): Battery, pads, CPR Device accelerometer, internal electronics, buttons, high voltage circuit (standard tests, partial energy charge cycle).</p> <p>Monthly (every 28 days): Battery under load, pads, CPR Device accelerometer, internal electronics, buttons, high voltage circuit (advanced tests, full energy charge cycle).</p>

Table 3: Functionality (continued)

Parameter	Detail
Audible alerts	Voice prompts Maintenance alerts
Indicators	Battery status Check pads Rescue Ready Service Text display
USB port communication	Event download, device data, configuration, and maintenance
Internal data storage	90 minutes

Table 4: Applicable standards

Type	Detail
<p>Cardiac Science AEDs have been designed and manufactured to conform to the highest standards of safety and performance including electromagnetic compatibility (EMC). This AED and defibrillation pads conform to the applicable requirements of the following:</p>	
General	<p>CE Marked by BSI 0086 per the Medical Device Directive 93/42/EEC.</p>  <p>0086</p> <p>Classified by CSA with respect to electric shock, fire and mechanical hazards only in accordance with CAN/CSA C22.2 No.601.1-M90, EN60601-1:1988 and EN60601-2-4:2002. Certified to CAN/CSA Standard C22.2 No. 601.1-M90 and 60601-2-4.</p> 

Table 4: Applicable standards (continued)

Type	Detail
Safety and performance	CAN/CSA C22.2 No.60601-1:08, Part I IEC 60601-1:2005 IEC 60601-1-2: 2007 ANSI/AAMI/IEC 60601-2-4: 2010 RTCA DO-160G:2010: Section 5 Category C; Section 4, Category A4 EN 1789
Emissions	EM: EN 55011:2009+A1/CISPR 11:2010, Group 1, Class B
Immunity	EM EC 61000-4-3:2010, Level X, (20V/m) EC 60601-2-4:2010, Section 202.6.2.3 (20V/m) Magnetic IEC 61000-4-8:2009 IEC 61000-4-8:2009, Section 202.6.8.1 ESD IEC 61000-4-2:2008, Level 3 IEC 60601-2-4:2010, Section 202.6.2.2 6 KV contact discharge, 8 KV air gap discharge
Free fall drop	MIL-STD-810G, Method 516.5, Procedure IV
Shock	MIL-STD-810G 516.5, Procedure 1
Vibration (Random)	MIL-STD-810G, Method 514.5, Procedure 1, Category 24; RTCA DO-160D, Section 8, Category S, Zone 2 (curve B) and Category U, Zone 2 (curves F and F1)
Vibration (Sine)	MIL-STD-810G, Method 514.5, Procedure 1, Category 24, Helicopter Minimum Integrity
Enclosure protection	IEC 60529:2001, IP55
Shipping and transportation	ISTA Procedure 2A

Table 4: Applicable standards (continued)

Type	Detail
Sensitivity and specificity of Rhythm Detection	Shockable Rhythm—VF: Meets EC 60601-2-4:2010 requirement and AHA recommendation of Sensitivity of >90%
	Shockable Rhythm—VT: Meets EC 60601-2-4:2010 requirement and AHA recommendation of Sensitivity of >75%
	Non-shockable Rhythm—NSR: Meets EC 60601-2-4:2010 requirement (>95%) and AHA recommendation (>99%) of Specificity
	Non-shockable—Asystole: Meets EC 60601-2-4:2010 requirement and AHA recommendation of Specificity of >95%
	Non-shockable—all other rhythms: Meets EC 60601-2-4:2010 requirement and AHA recommendation of Specificity – all other rhythms of >95%

Defibrillation pads

Table 5: Adult defibrillation pads (model XELAED001A)

Parameter	Detail
Type	Pre-gelled, self-adhesive, disposable, non-polarized (identical pads, which can be placed in either position) defibrillation pads
Applicable age and weight of patient	Older than 8 years or heavier than 25 kg (55 lb)
Shelf life	24 months
Disposal	Check local regulations for disposal information

Table 6: Adult defibrillation pads with CPR Device (model XELAED002A)

Parameter	Detail
Type	Pre-connected, pre-gelled, self-adhesive, disposable, non-polarized (identical pads, which can be placed in either position) defibrillation pads with CPR Device
Applicable age and weight of patient	Older than 8 years or heavier than 25 kg (55 lb)
Shelf life	24 months
Disposal	Check local regulations for disposal information

Table 7: Pediatric defibrillation pads (model XELAED003A)

Parameter	Detail
Type	Pre-gelled, self-adhesive, disposable, non-polarized (identical pads, which can be placed in either position) defibrillation pads
Applicable age and weight of patient	Eight years or younger or 25 kg (55 lb) or lighter
Shelf life	24 months
Disposal	Check local regulations for disposal information.

Intellisense® battery (model XBTAED001A)

Table 8: Intellisense battery

Parameter	Detail
Type	Intellisense lithium battery, non-rechargeable
Output voltage	12 VDC (nominal)
Lithium content	9.2 g (approximate)
Disposal	Check local regulations for disposal information
Estimated shelf life*	5 years from date of manufacture Temperature ranges: Short term (3 days at either temperature extreme): -30°C to 65°C Long term (5 years at either temperature extreme): 20°C to 30°C
Estimated operating life** (new and fully charged battery)	Shocks (typical): 420 Shocks (minimum): 250 16 hours of operating time at 20-30°C

*Shelf life is the length of time a battery can be stored prior to installation into an AED without significantly affecting its operating life.

**The battery operating life depends on the type of battery, device settings, actual usage, and environmental factors. The number of shocks is estimated at a 300 VE energy level with a “three shock stack” followed by 60 seconds of CPR using Basic prompt settings between each set of shocks.