B.O.L.T

Wireless Vitals Monitor - VA01

Keep a tab on your Health

Legal

Disclaimer

This publication/content contains proprietary information which is protected by copyright. No part of this publication may be reproduced, transcribed, stored in a retrieval system, translated into any language or computer language, or transmitted in any form whatsoever without the prior written consent of the publisher. American Megatrends India Private Ltd. retains the right to update, change or modify this publication at any time, without notice.

For Additional Information

Call American Megatrends India Private Ltd at 1800-419-9868.

Limitations of Liability

In no event shall American Megatrends India Private Ltd be held liable for any loss, expenses, or damages of any kind whatsoever, whether direct, indirect, incidental, or consequential, arising from the design or use of this product or the support materials provided with the product.

Limited Warranty

No warranties are made, either expressed or implied, with regard to the contents of this work, its merchantability, or fitness for a particular use. American Megatrends India Private Ltd assumes no responsibility for errors and omissions or for the uses made of the material contained herein or reader decisions based on such use.

Trademark and Copyright Acknowledgments

AMERICAN MEGATRENDS INDIA PRIVATE LTD.,

KUMARAN NAGAR,

SEMMANCHERY VILLAGE,

CHENNAI (TN) 600119

All product names used in this publication are for identification purposes only and are trademarks of their respective companies.

B.O.L.T VA 01 User Manual

Model VA 01 – NIBP Monitor (Systole, Diastole, Pulse Rate) Infrared Ear Thermometer (Temperature) Pulse Oximeter (SpO2 & Pulse Rate)

Thank you very much for purchasing BOLT - the Wireless Vitals Monitoring System. Please read this User manual thoroughly to ensure safe and correct use of the product. Please keep this User manual for future reference.

BOLT is a Non Invasive medical gadget with NiBP (Non-invasive Blood Pressure), SpO2 (Pulse Oximeter) and Infrared Thermometer (IRT) combined into a small form factor device which gets controlled from a mobile device/computer. BOLT is a cloud enabled solution. With BOLT your health vitals can be stored in your personal health cloud. For BOLT to be in your hands, all you need is any leading MAC or Windows Desktop with a Bluetooth dongle or laptop, or mobile device and a simple gadget that connects to your device's OS.

Table of Contents

Safety Measures

Warning

- If you encounter any problem while taking blood pressure measurement, such as inflation does not stop or air leakage in the cuff, remove the cuff or pull out the air tube from the base unit.
- Do not wrap the cuff to measure the BP over the arm where an intravenous injection or transfusion is being given to the patient.
- Do not operate the gadget in places where inflammable gas, such as highly inflammable anesthetic, may be generated or in a high-pressure oxygen room or an oxygen tent.
- Keep the gadget away from infants, small children or anyone who are incapable of using the gadget in the correct manner.
- Please do not use the same cuff for patients who are highly infectious as this practice may cause cross-infection.
- Make sure the ear canal is clean for temperature measurement.
- Use dust cover for IRT probe during the temperature measurement.
- Place the finger inside the SpO2 probe properly during the Blood oxygen level measurement.
- Use by trained professionals only.

Caution

- Do not use the gadget while moving in a vehicle as this may result in erroneous readings.
- Do not use any other branded cuffs as this may result in reading errors.
- Do not use unauthorized parts and accessories.
- Do not store or use this gadget in locations which are maintained above the specified temperature and humidity ranges.
- Fingernail polish or false fingernails may cause inaccurate SpO2 readings.
- SpO2 measurements may be adversely affected in the presence of high ambient light.
- Use only American Megatrends India Specified batteries and charging devices.

Care and Maintenance

- Store the gadget and the components in a clean and safe location.
- Changes or modifications not approved by the manufacturer will void the user warranty.
- Keep the accessories and gadget away from rain, sweat and water.
- Do not disassemble, repair or modify the gadget and the components by yourself.
- Clean the rubber touching the finger inside the SpO2 probe gently by a soft cloth dampened with 70% isopropyl alcohol before measurement.

Know Your Unit

The base unit has a look and feel as shown below with two LED indicators and a power ON/OFF button. Accessories like cuff, IRT probe and SpO2 probe are provided with the base unit. An optional dual accessories connector is also provided for simultaneously measurement.

Base Unit

Bluetooth Indicator
Power Indicator
ON/OFF Button
Accessory Connector

Accessories

Cuff   IRT Probe   SpO2 Probe   Dual accessories connector
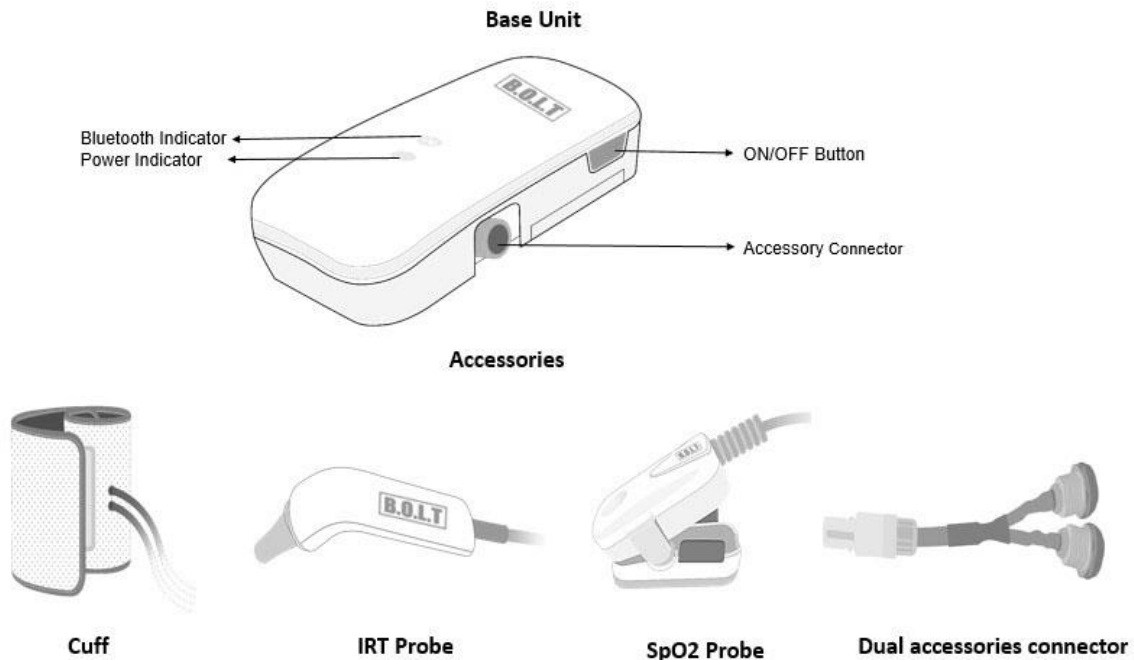
Features of the Product

- Elegant design enables simple and easy use of the product.
- Multiple Platform Support and same application for multiple users.
- Secured Cloud application to share and manage trends and health data.
- Monitor and share your health trends with doctor and loved ones.
- Safe and convenient to use.
- The BOLT device can be operated both with Power adapter and Battery or only battery.

Intended use

BOLT (VA01)

It is used to measure the vital signs like Blood pressure, body temperature & blood oxygen saturation level and it is controlled from a mobile device/computer.

Prerequisites

Some basic requirements must be adopted as mentioned below to ensure better operation of the product.

- BOLT is designed to be used with Android, Windows or iOS.
- The Android OS version of the using computer/mobile device should be 2.3 or higher.
- The Windows OS version of the using computer/mobile device should be 8 or higher.
  The iOS version of the using computer/mobile device should be 7 or higher.

Using BOLT

Downloading and Installing BOLT Application in your computer/mobile device

1. Connect your computer/mobile device to the internet.
2. Download and Install BOLT application from the Play store/Application store/Windows application market.
3. On successful installation, launch the BOLT application in the computer/mobile device.
4. Register for the Login ID with your Name and Email ID.

Note: You can also login as a guest user which might not store the measured vital parameters in the storage space or enables receiving e-mails on the measured parameters.

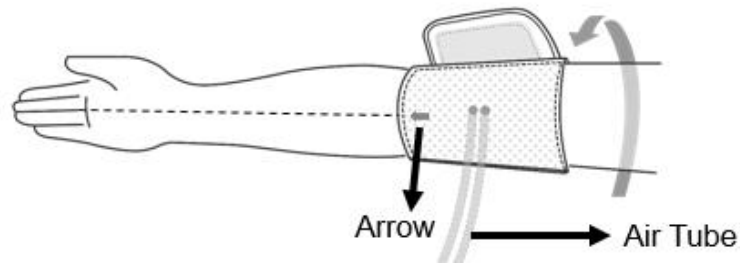# Blood Pressure Measurement Procedures

Mandatory instructions to be followed during blood pressure measurement

- Relax yourself in a comfortable position.
- Avoid eating, exercising and smoking for 30 minutes before taking a measurement.
- Avoid taking measurements during stressful times.
- Remove tight-fitting clothing from the right upper arm.
- Sit in a chair with your feet flat on the floor and place the right arm on a table as shown below.
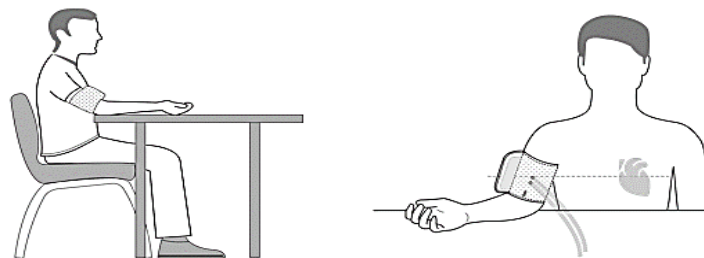
- Apply the cuff to the right upper arm so that the cuff is wrapped at the same level of your heart.

7

- Ensure that the arrow present in the BP cuff points the artery along the middle finger of the right hand as shown below.
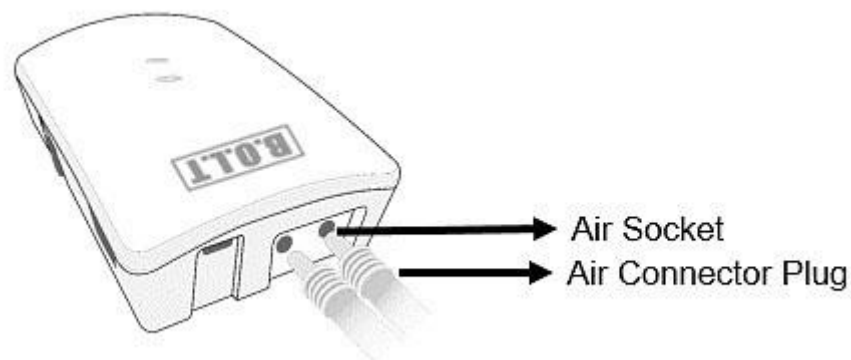

Arrow   Air Tube

- Stay calm without shaking the hand during the measurement.

Blood Pressure measurement with BOLT

BOLT enables connecting an air hose through which the blood pressure is monitored.

Connecting air hose with the gadget

Insert the air connector plug into the air socket firmly as shown below.

Air Socket
Air Connector Plug

Pairing BOLT with the computer/mobile device

1. Switch ON the gadget using the ON/OFF button.
2. Enable Bluetooth Connectivity in the computer/mobile device.
3. Launch the BOLT application in the computer/mobile device.
4. Login with the User ID and Password which is used for the registration.
5. On successful login, select your gadget from the list of available BOLT devices for pairing.

Note: On Successful pairing of the computer/mobile device, Bluetooth light stops blinking in the gadget. The battery status of the gadget can be viewed using the options button provided on the top right corner of the application.

Measuring BP with BOLT

1. On successful paring of the computer/mobile device, enter the Name of the person to be measured in the application.
2. Wrap the cuff around the upper arm of the right hand above the elbow.
3. Ensure that the arrow in the BP cuff points the artery along the middle finger of the right hand as discussed earlier in the blood pressure measurement procedure section.
4. Select the Blood pressure option from the home screen in the application.
5. Ensure that the person remains stable until the application displays the results.
6. On successful measurement, note the Blood pressure and Pulse rate from the application display and a copy of reading will be mailed to your registered mail ID.
7. Multiple readings can be taken with 1 minute interval by selecting the auto-reading option.

Blood Pressure Classification for Adults

The World Health Organization (WHO) has created the following classification for assessing high blood pressure (Hypertension). Please note that this table can give only a generic view as other factors such as diabetes, obesity and smoking, also need to be considered for understanding the different ranges. Consult with your physician for accurate assessment.

Blood Pressure Classification	Systole	Diastole
Optimal	<120	<80
Normal	**120-129**	**80-84**
High-Normal	130-139	85-89
Grade 1 Hypertension (mild)	140-149	90-99
Grade 2 Hypertension (moderate)	160-179	100-109
Grade 3 Hypertension (severe)	>180	>100

Temperature Measurement Procedures

Mandatory instructions to be followed during temperature measurement

- Relax yourself in a comfortable position.
- Use new dust cover for each measurement.
- Place the IRT probe firmly into the ear canal for accurate measurement.
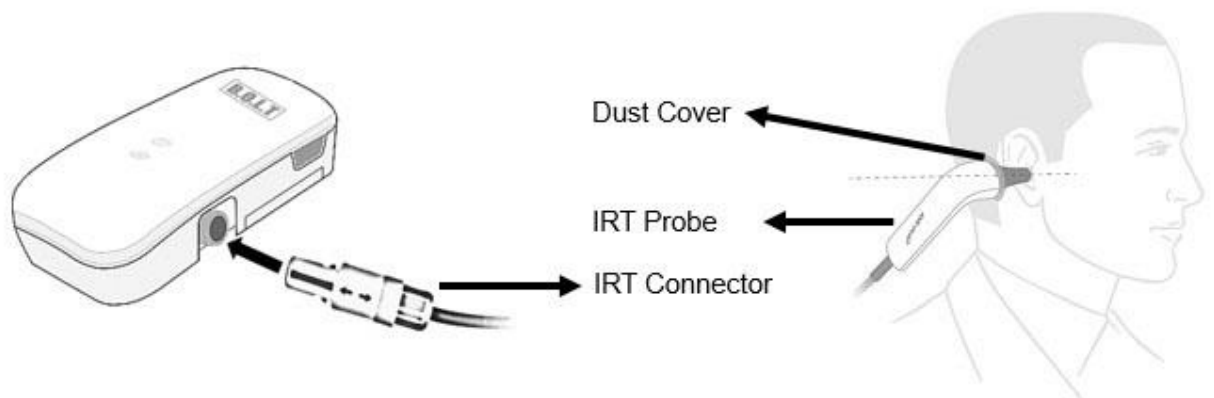- Remain stable during the measurement.

- Wait until the application displays the measured temperature.

Body Temperature measurement with BOLT

BOLT enables connecting an IRT probe through which the temperature is measured.

Connecting IRT probe with the gadget

Insert the IRT connecter into the socket firmly as shown below.

Measuring Body Temperature with BOLT

1. On successful paring of the computer/mobile device, enter the Name of the person to be measured in the application.
2. Use dust cover over the tip of the IRT probe.
3. Place the IRT probe inside the ear horizontally as such the pointer maintains horizontal position as displayed above.
4. Select the temperature option from the home screen.
5. On successful measurement, note the temperature from the application display and a copy of reading will be mailed to your registered mail ID.

Temperature Classification

Please note that this table can give only a generic view. Consult with your physician for accurate assessment.

Temperature Classification	Range
Hypothermia	<35.0 °C (95.0 °F)
Normal	**36.5-37.5 °C (97.7- 99.5 °F)**
Fever	>37.5-38.3 °C (99.5- 100.9 °F)

Hyperthermia	>37.5-38.3 °C (99.5- 100.9 °F)
Hyperpyrexia	>40.0-41.5 °C (104.0- 106.7 °F)

Blood Oxygen Level Measurement Procedures

**Mandatory instructions to be followed during blood oxygen level measurement**

- Relax yourself in a comfortable position.
- Remain stable during the measurement.
- Place the finger properly inside the SpO2 probe.
- Clean the surface of the fingertip before the measurement.

Blood Oxygen Level measurement with BOLT

BOLT enables connecting a SpO2 probe through which the blood oxygen level is measured.

Connecting SpO2 probe with the gadget

Insert the SpO2 connector into the socket firmly as shown below.
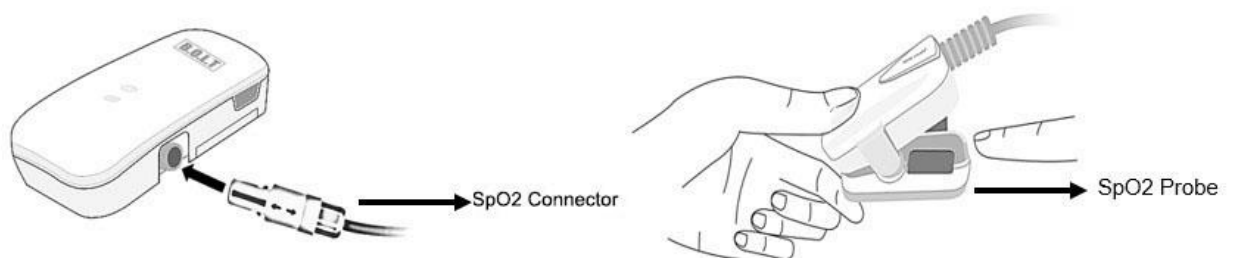
Measuring Blood Oxygen Level with BOLT

1. On successful paring of the computer/mobile device, enter the Name of the person to be measured in the application.
2. Clip the SpO2 probe in the index finger of the person to be measured in right/left hand.
3. Select the blood oxygen option from the home screen.
4. On successful measurement, note the SpO2 value and pulse rate from the application display and a copy of reading will be mailed to your registered mail ID.

Note: An additional dual accessories connector is provided to simultaneously connect IRT and SpO2 probes for measuring temperature and Blood oxygen level.

Blood Oxygen Level Classification

Please note that this table can give only a generic view. Consult with your physician for accurate assessment.

SpO2 Classification	Range
Error Level	< 64 %
High Risk Level	65-79 %
Risk Level	80-91 %
Deviant Level	92-94 %
Normal	**95-100 %**
Error Level	> 100 %

Battery Care

- Power adapter is included in the pack and the specifications are mentioned below.

   AC input: 100-240V, Frequency: 50Hz to 60Hz, 0.35A Max, DC output: +5V @ 2A
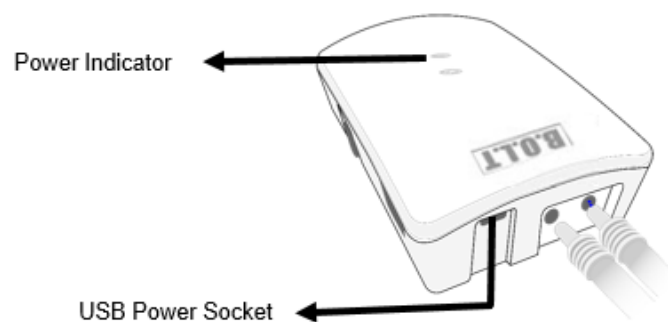
- Connect the AC power adapter to the power source and micro USB to the base unit`s USB Power socket.
- Charge the base unit for minimum two hours during the first time usage.
- The mobile application software shows the battery low status when the battery level goes below 25% and shows critically low status when the battery level goes below 10%.
- Charge the base unit using the power adapter and view the charge level in the mobile application software .It is recommended to unplug the power adapter from power source when the charge level reaches 100%.

- When fully charged the device will automatically cut off charging internally, thus the device's design has taken safety measures into account to face various abnormal conditions like over-charging, over discharging etc.

- When charging is needed, please connect the base unit to the power source using the power adapter.

- The Device can be operated by

  o   Connecting to power source directly using the power adapter

     or

  o   Using the charged inbuilt battery (adapter not required)

The device can work normally while charging.

Replacement of Battery Pack

Manufacturer highly recommends to change the battery of the base unit for every year at the AMI authorized service center. Use AMI recommended battery for replacement.

Replacement procedure

1. Switch off the base unit before removing the back cover for the battery replacement.
2. Remove the single screw on the upper portion of the battery cover as shown below.
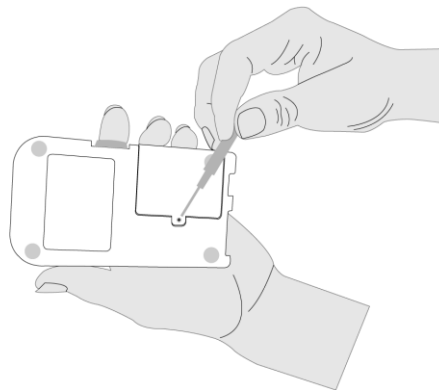
3. Press and remove the battery cover in the recommended direction as shown below.
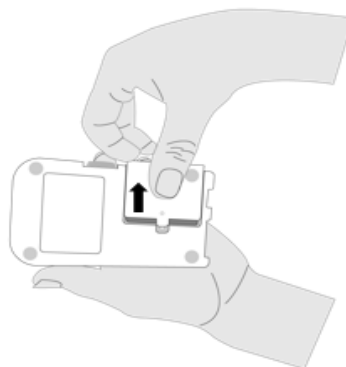
4. Disconnect the battery pack from the connector and replace with new one.
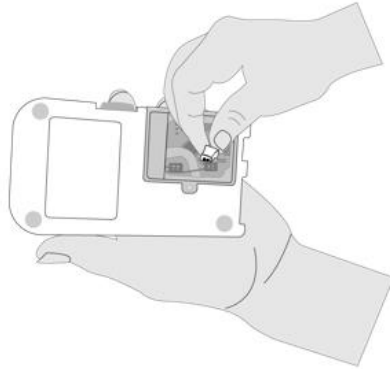
Battery connector is polarized and correct orientation of the connector to be checked before insertion of battery connector. Do not try to connect the battery with reverse polarity.
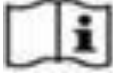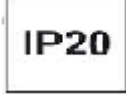
5. Install the battery cover and fasten with the screw.
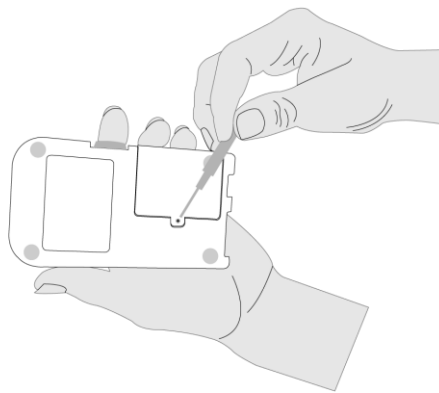
6. Connect the base unit with AC adapter and then charge for more than two hours before use

Explanation of Indicators/Symbols

Indicators/Symbols	Function/Description
	The indicator displays full battery power of the gadget in the computer/mobile device.
	The indicator displays low battery power of the gadget in the computer/mobile device.
SYS	Systolic blood pressure in mmHg.
DIA	Diastolic blood pressure in mmHg.
PUL./min	Pulse per minute.
	▪ Flashing of the Bluetooth light indicates that the gadget is waiting for pairing with the mobile/tab. ▪ Steady Bluetooth light indicates that the gadget is paired and ready for the measurement.
	▪ Steady green light indicates that the gadget is operating in battery mode. ▪ Blinking of green light indicates that the gadget has low battery level.
	Steady red light indicates that the gadget is in the charging mode.
	Symbol for "ENVIRONMENT PROTECTION"
	KEEP DRY
	MANUFACTURER"
	MANUFACTURED DATE
	SERIAL NUMBER
	EUROPEAN REPRESENTATIVE
	CE LOGO WITH NOTIFIED BODY NUMBER

	READ THE DOCUMENTATION
	WARNING
	SHOCK PROTECTION
IP20	PROTECTED FROM TOUCH BY FINGERS AND OBJECTS GREATER THAN 12 MILLIMETERS NOT PROTECTED FROM LIQUIDS

Technical Specifications

Product Name	B.O.L.T
Model	VA01
Blood pressure measurement method	Oscillometric method with automatic inflation & measurement
IRT measurement method	Tympanic, Infrared based
SpO2 measurement method	Optical method
Bluetooth	Bluetooth 4.0 EDR or Lower compatibility, Bluetooth Low Energy
Pressure Accuracy	±4mmHg
Pulse Accuracy	± 5%
Cuff Size	610 mm * 145 mm
Cuff Limb Circumference	22 cm to 42 cm
Cuff Pressure range	0 to 280 mmHg
BP Pulse range	30 to 180 BPM
Cuff Weight	205 Grams
Body temperature Accuracy	±0.2°C (from 35°C to 39.0°C), ± 0.3°F(from 95.0°F to 102.6°F) ±0.3°C (from 39.1°C to 44.0°C), ± 0.4°F(from 102.38°F to 111.2°F)
Body temperature range	34°C to 42°C (93.2°F to 107.6°F)
IRT Humidity	30%RH to 90%RH
IRT Operating Ambient	16°C to 35°C (60.8°F to 95.0°F)
IRT Storage and Transport Temperature	10°C to 55°C (14°F to 131°F)
IRT Display resolution temperature range	0.1 °F
SpO2 Measurement Accuracy	70% to 100% - ±2%, below 70%: Unspecified
SpO2 Pulse Rate Range	30 to 180 BPM
SpO2 Operation Temperature	+5 to +40℃
Base Unit Dimensions	130 (L) X 40.3 (H) X 75 (D) mm
IRT Unit Dimensions	84.8 (L) X 18 (H) X 26.6 (D) mm (Highest width along the profile)
SpO2 Unit Dimensions	58.2 (L) X 35 (H) X 35.3 (D) mm
Base Unit Weight	220 grams (Including Battery)
IRT Unit Weight	42 grams
SpO2 Unit Weight	60 grams
Base unit Power Input	DC: +5V @ 2A
Power Adapter	Input:: AC:100-240V, Frequency: 50Hz to 60Hz, 0.35A Max Output :DC: +5V @ 2A
Type of Battery	Lithium Polymer
Voltage and capacity of battery	3.7V, 900mAh

NOTE: These specifications are subject to change without notice.

Warranty Information

The BOLT is warranted to be free from defects in materials and workmanship within one year from the date of purchase when used in accordance with the provided instructions. The warranty is extended only to the end user. The company will repair free of charge any part or parts of the product, if the defect is due to the faulty material or workmanship.

To obtain warranty service contact customer care support by calling **1800-419-9868** for the address of the repair location and the return shipping and handling fee.

Enclose the warranty card, Proof of Purchase. Include a letter with your name, address, phone number, and description of the specific problem. Pack the product carefully to prevent damage in transit.

Customer Care Support

AMI's flexible approach allows the customers to get Technical Support and Warranty services for BOLT through our customer care support.

➢ Toll free number (India): 1800–419–9868
➢ Customer Care Support timings : 10am - 6pm Monday – Friday (Except National Holidays)

Contact us

AMERICAN MEGATRENDS INDIA PRIVATE LTD.,

KUMARAN NAGAR,

SEMMANCHERY VILLAGE,

CHENNAI (TN) 600119

Tel – (91) 44 66540922, Fax – (91) 44 66540901

Email: support@amibolt.com

Website: www.amibolt.com; www.amiindia.co.in

EC REP American Megatrends International GmbH

Truderingerstraße (Truderinger Strasse) 283

81825 München (Munich), Deutschland (Germany)

Tel: [49] 89 969995-10

Support: [49] 89 969995-11

Fax: [49] 89 969995-19

Email: europesales@ami.com