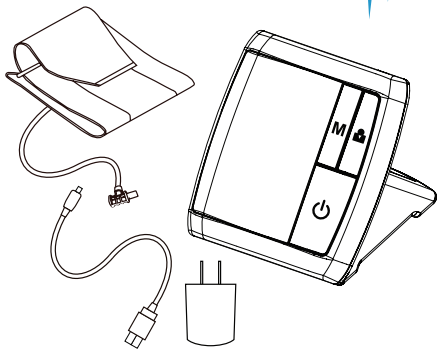
LUMISCOPE®

by graham-field



BLOOD PRESSURE MONITOR
AUTOMATIC ARM TYPE 1137

INSTRUCTION MANUAL

SAVE THIS MANUAL FOR FUTURE USE.

LS_1137-INS-LAB-RevG22

CONTENTS

SAFETY GUIDELINES—READ BEFORE USE

The safety statements presented in this chapter refer to the basic safety information that the Blood Pressure Monitor (BPM) user shall pay attention to and abide by. There are additional safety statements in other chapters or sections, which may be the same as or similar to the following, or specific to the operations. Please note the following special statements, used throughout this manual, and their significance:

⚠ **WARNING: Indicates a potential hazard situation or unsafe practice that, if not avoided, could result in death or serious personal injury.**

⚠ **CAUTION: Indicates a potential hazard or unsafe practice that, if not avoided, could result in minor or moderate personal injury.**

▲ **NOTICE: Indicates a potential hazard or unsafe practice that, if not avoided, could result in product or property damage.**

Info: Provides application recommendations or other useful information to ensure that you get the most from your product.

⚠ **WARNING: Important! Read and understand these instructions before using the Blood Pressure Monitor. If you do not understand any part of these warnings, cautions or instructions, contact a healthcare professional for direction in the use of this product. If the Blood Pressure Monitor is not properly assembled and used, personal injury and damage to the Blood Pressure Monitor could result.**

⚠ **WARNING: This product should not be used without proper instruction from a healthcare professional.**

⚠ **WARNING: If components are damaged or missing, contact your Graham-Field authorized distributor immediately. DO NOT use substitute parts. Use only Lumiscope replacement parts. Non-Lumiscope replacement parts could cause personal injury and damage to the Blood Pressure Monitor.**

⚠ **WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov.**

⚠ **WARNING: GF Health Products, Inc. assumes no responsibility for any damage or injury caused by improper assembly or use of this product.**

INTENDED USE

This device is intended for the noninvasive measurement of systolic and diastolic arterial blood pressure and pulse rate in adults. The device is intended to be used by adults, at room temperature, with skin contact.

CONTRAINDICATIONS

⚠ **WARNING: Do not use this appliance on infants, children, or persons who cannot express their own intentions.**

⚠ **WARNING: Consult your physician before use during pregnancy.**

⚠ **WARNING: Consult your physician before use if diagnosed with arrhythmia, arteriosclerosis, cardiovascular disease (such as atherosclerosis), diabetes, liver or kidney disease, severe hypertension, or peripheral circulatory disorders, etc.**

PRODUCT DESCRIPTION

SYMBOLS KEY

SYS	Systolic Pressure
DIA	Diastolic Pressure
⎓	Direct Current
	Type BF Applied Part
	Attention, consult accompanying documents
	Follow operating instructions
	Manufacturer
SN	Serial Number
	Irregular Pulse Detection
	Keep dry
	Do not dispose of the device or batteries with household waste.
P	Pumping
P Err	Pumping failure
UU Err	Excessive body movement detected during measurement.
LL Err	Insufficient pulse detected for measurement.
rrErr	SYS and DIA readings detected are not reasonable.
HI	Cuff pressure is over 300 mmHg
PP	Pulse pressure is equal to systolic minus diastolic
	Temperature Limit
	Humidity Limitation

Symbols Key continued

	Battery recycling symbol
RoHS conform 2011/65/EU	Restriction of Hazardous Substances
	REACH symbol- Registration, Evaluation, is a European Union regulation. Authorisation and Restriction of Chemicals (REACH)
	Power "ON" / "OFF"
IP20	Protection against solid foreign objects > 12.5mm Ø and no water-proof test

ABOUT BLOOD PRESSURE

What is blood pressure?

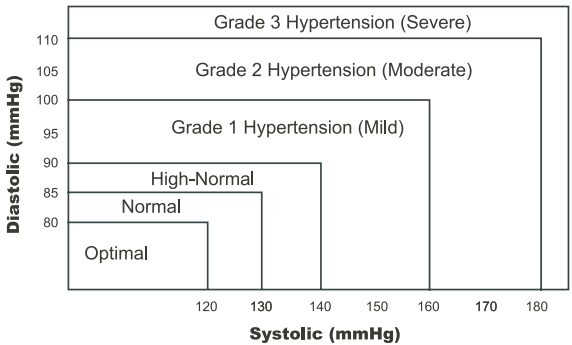
Blood pressure is the pressure produced by the force of blood flowing against artery walls after the heart ejects blood into the vessel system.

Systolic and diastolic pressures

Systolic pressure represents the highest pressure during heart contraction and diastolic pressure is the lowest pressure while heart is resting.

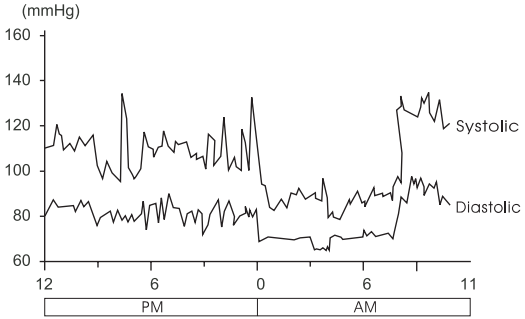
WHO / ISH classification

Your blood pressure measurement can be compared with classification categories defined by 1999 World Health Organization – International Society of Hypertension Guidelines for Management of Hypertension for preliminary evaluation. Consult your physician for interpretation of blood pressure measurement and follow their directions.



Blood pressure fluctuation and variation

Human blood pressure fluctuates and will vary 24 hours a day. Blood pressure measurement can be affected by the measurement position, posture, and physiologic condition as well as factors such as eating, bathing, exercising, smoking, drinking alcohol, stress, mental tension, breathing, conversation, movement, temperature or humidity change, etc.

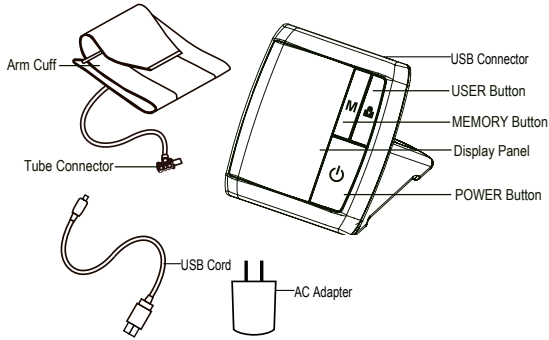


Obtaining reliable measurements

In order to obtain reliable measurements, follow recommendations below:

1. Keep taking and recording blood pressure measurement consistently at the same time every day to establish your blood pressure pattern.
2. Wait at least thirty minutes after eating, bathing, smoking, exercising, or ingesting caffeine or alcohol before measurement.
3. Remove constricting clothing or ornaments from your arm and ensure the range of cuff circumference is applicable to you.
4. Be seated and relax for at least five minutes in a quiet and comfortable place prior to measurement.
5. Wait at least five minutes between measurements, so that your blood vessels can return to the state they were in before measurement. Rest between repeated measurements.

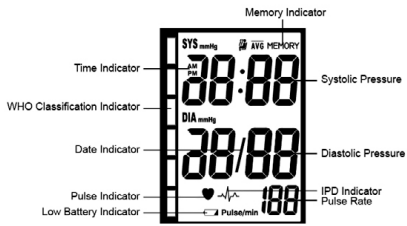
DEVICE OVERVIEW



Info: This product includes
one blood pressure monitor,
one universal arm cuff,
one instruction manual (not shown), and
one USB Cord with AC Adapter.

Info: Batteries are not included.

DISPLAY OVERVIEW



SETUP

BATTERY INSTALLATION

1. Remove the battery cover and insert four AA alkaline batteries (not included) into the battery compartment with polarities “+” and “-” matching polarity indicator. Replace the battery cover.
2. Use only fully-charged AA alkaline batteries.
3. Always replace all four batteries at the same time.
4. The built-in clock may need to be reset and reading memories may be erased after battery replacement.
5. Dispose of used batteries in compliance with local regulations for environmental protection.

USING THE USB CORD WITH AC ADAPTER

⚠ **WARNING: Use only the USB Cord with AC Adapter included with the 1137 Blood Pressure Monitor. Non-Lumiscope parts could cause personal injury and damage to the Blood Pressure Monitor.**

1. Plug one end of the USB Cord into the device, and the other into the AC Adapter.
2. Plug the AC adapter into a properly grounded electrical wall outlet.
3. Unplug the device immediately after use.

SETTING THE CLOCK

1. To have correct date and time for memory storage, the built-in clock needs to be set before beginning first measurement.
2. Under power-off mode, press and hold the MEMORY button until the display shows a blinking year then press the POWER button for adjustment. After current year is selected, press the MEMORY button to set it and switch to next adjustment.
3. Repeat previous steps to adjust and set current month, day, hour, and minute one by one while they are blinking.
4. Press MEMORY button again to finish setting.

OPERATION

OPERATION SAFETY

▲ **NOTICE: The unit is not waterproof. Do not immerse this instrument in liquid.**

⚠ **WARNING: Read and follow the entire instruction manual before operating this blood pressure monitor.**

⚠ **WARNING: Do not press the POWER button if the cuff has not been properly applied.**

⚠ **WARNING: Do not use the instrument if you think it is damaged or if you notice anything unusual.**

⚠ **WARNING: Do not disassemble or modify the device or cuff.**

⚠ **WARNING: Discard old batteries carefully, out of reach of children. Swallowing a battery may be fatal. If a battery or other small part is swallowed, contact a hospital immediately to have it removed.**

⚠ **WARNING: To avoid accidental strangulation, keep the product away from children and do not place the hose around the neck.**

⚠ **WARNING: Avoid prolonged over-inflation of the bladder to prevent physical injury.**

⚠ **WARNING: If the cuff causes any discomfort during measurement, press the POWER button to turn off the device immediately.**

⚠ **WARNING: Pull off the hook and loop strap to detach the cuff if the cuff pressure exceeds 300mmHg without an automatic rapid exhaust.**

⚠ **WARNING: Keep blood pressure monitor away from children.**

⚠ **WARNING: This manual and the product are not substitutes for visiting the physician. Neither the information contained herein nor this product may be used to diagnose or treat health problems, or to prescribe drugs. If you have or suspect that you have a medical problem, seek immediate advice from your physician.**

⚠ **WARNING: Measuring too frequently may result in circulatory disorders, which can cause unpleasant sensations such as localised bleeding under the skin or temporary numbness in your arm. These symptoms do not usually last long; however, if you have not recovered quickly, consult your physician.**

⚠ **WARNING: Take into consideration the electromagnetic compatibility of the unit (e.g. disruptions to the power supply, radio frequency interference, etc.) Only use the unit indoors. To avoid inaccurate results due to electromagnetic interference between electrical and electronic equipment, do not use the unit near mobile phones or microwave ovens. Keep devices whose maximum power exceeds 2 W at least 11 feet (3.3 meters) from the blood pressure monitor.**

⚠ **WARNING: Verify the accuracy of the blood pressure monitor every two years. Contact an authorized agent or laboratory for inspection / calibration service.**

⚠ **WARNING: If using the USB Cord with AC Adapter, unplug the device when not in use.**

OPERATION PREPARATION

1. Do not conduct any measurements if the temperature is low (below 41°F / 5°C) or high (over 104°F / 40°C), or if the relative humidity is beyond the range of 15% to 90%, as this can lead to inaccurate readings.
2. Take the measurement at room temperature in a quiet and stress-free environment.
3. Do not move yourself or the unit during the measurement. Do not speak during the measurement.
4. Blood pressure varies naturally depending on the time of day and is affected by many factors. Blood pressure is usually highest at work and reaches its lowest level during sleep.
5. Blood pressure measurements should be assessed by a physician or trained healthcare professional who is familiar with your medical history. If you use the unit and regularly record the results, keep your physician informed of any changes in your blood pressure.
6. The performance of this device can be affected as severe arrhythmias such as atrial or ventricular premature beats or atrial fibrillation are presented during measurement.

7. The blood pressure measurements conducted with this unit are equivalent to measurements obtained by a trained observer in accordance with the values achieved using the cuff/stethoscope auscultation method and are within the specified EN 1060-4 standard limits.

MEASUREMENT POSTURE

1. Wait at least thirty minutes after finishing a caffeinated drink or cigarette before measurement.
2. Sit down and relax for at least five minutes before measurement.
3. Wait at least five minutes between repeated measurements.
4. Use the same arm consistently for each measurement (preferably the left) and take the measurement at about the same time every day.
5. Sit down in a chair in a comfortable position with your elbows placed on a table and both feet on the ground. Do not interlock your legs during the measurement.
6. Sit with your hand relaxed, your arm extended in front of you and palm facing up.
7. Sit upright in a chair with your feet flat on the floor in a natural position and relax.

APPLYING THE CUFF

1. Ensure the circumference of your upper arm is within applicable cuff range.
2. Plug the tube connector into the cuff socket securely.
3. Put your bare-skinned (or thinly clothed) left arm through the cuff with tube located at the middle of your inner arm and aligned to your middle finger. If it is not possible to take measurement with the left arm, use the right arm instead.
4. Fasten the cuff with its bottom edge approximately an inch (2 ~ 3 cm) above your elbow. ***Ensure the cuff is not wrapped too tightly.***
5. Sit upright in a chair with your feet flat on the floor in a natural, comfortable position and relax.
6. Steadily rest your forearm on a table with the cuff at heart level.

TAKING A MEASUREMENT

Info: Remain still and do not talk during measurement.

1. If using the USB Cord with AC Adapter, plug into wall outlet.
2. Press the USER button to choose user number for memory storage. User selection can also be made by pressing the USER button while readings are displayed after measurement is completed.
3. Press the POWER button to start automatic measurement. The measurement can be interrupted anytime by pressing the POWER button again.
4. When the measurement is completed, the systolic pressure, diastolic pressure and pulse rate will be displayed.
5. The display will indicate which category your blood pressure reading belongs to according to classification defined in 1999 WHO / ISH Guidelines for Management of Hypertension. Optimal and normal categories are indicated with green, high-normal category is indicated with yellow, and grade 1 ~ 3 hypertension categories are indicated with red.
6. IPD (Irregular Pulse Detection): The device can detect irregular pulse (a pulse interval longer than 5/3 times the average pulse interval) during measurement. The IPD indicator will appear when more than three irregular pulses were detected during measurement. If the IPD indicator is displayed with measurement readings frequently, consult a physician for further directions.
7. The device also provides the PP (Pulse Pressure) function that is equal to systolic minus diastolic. If systolic is higher than diastolic 60 mmHg, LCD will display “PP” and differentiation value. If PP indicator is displayed with measurement readings frequently, please consult a qualified physician for further direction.
8. Press the POWER button to turn off the device or it will turn off automatically after 150 seconds non-operation. Readings will be saved into memory automatically while powering off.
9. If using the USB Cord with AC Adapter, unplug from wall outlet.

⚠ **WARNING: Unplug the device when not in use.**

MEMORY FUNCTION

1. Press the USER button to select the desired user number for memory recall.
2. Press the MEMORY button to show the latest three readings' average (-L03), then press the MEMORY button again to recall the last reading stored in memory.
3. Press the MEMORY button repeatedly to recall the next set of previous readings.
4. After completing steps 1-3 above, to delete the current displayed readings from memory, press and hold the POWER button until the display shows "dEL", then press the POWER button again; the current displayed reading is deleted after three beeps are heard.

Info: The number displayed before "dEL" indicates which user number memory set is selected for deletion.

5. To erase all readings in memory, press and hold the POWER button while in memory mode until the display shows "dEL", then press the MEMORY button to display "dEL ALL", then press the POWER button; all readings in memory are erased after three beeps are heard.
6. Press the POWER button to exit memory function.

AVERAGE MODE

1. Press and hold the USER button for three seconds to enter average mode from standby mode.
2. The latest three readings' average will display (-L03); press the USER button to show 7-day (-d07), 14-day, 21-day, and 28-day (-d28) all-day average sequentially.
3. Press the MEMORY button to show morning, evening, and all-day average sequentially. For example: The last reading average in the morning (AL03) and 7-day night average (Pd07).
4. To exit average mode, press the POWER button.

MAINTENANCE

⚠ **WARNING: Ensure device is unplugged before maintenance.**

⚠ **WARNING: Do not disassemble or modify the device or cuff.**

▲ **NOTICE: Do not drop the device. It is not shock proof.**

▲ **NOTICE: Do not twist the cuff or bend the tube.**

▲ **NOTICE: Do not store the device or cuff in direct sunlight, high temperature, moisture, or severe dust.**

▲ **NOTICE: Do not use thinner, benzene, or other harsh cleaners to clean the device.**

▲ **NOTICE: Do not wash or immerse any part of the device.**

▲ **NOTICE: Remove all batteries if the device is not likely to be used for a long period of time.**

CLEANING

1. Moisten a clean, soft cloth with a solution of 5-10% mild detergent to clean water. Gently wipe the device with a contact time of at least 10 minutes.
2. Use a clean, soft cloth moistened with clear, cool water to remove any chemical residue remaining on the device.
3. If necessary, repeat steps 1 and 2 to ensure the device is clean.
4. Wipe dry with a clean, soft, cloth to avoid water stains.

DISINFECTION (WHEN CLEANING PROCESS IS COMPLETE)

1. Use 70 to 75% isopropyl alcohol in a spray bottle and spray both sides of the cuff with it, with a contact time of at least 10 minutes.
2. Use a clean, soft cloth moistened with clear, cool water to remove any chemical residue remaining on the device.
3. Air dry the device and cuff at a room temperature of 68°F ~ 86°F (20°C ~ 30°C) for 3 ~ 4 hours.

STORAGE

▲ **NOTICE: When the device is often in use, store it in a dry, clean, and dust-free environment at a moderate temperature of 41°F ~ 104°F (5°C ~ 40°C), < 93 % RH. If the device is not likely to be used for a long period of time, store it at a temperature of -4°F ~ 131°F (-20°C ~ 55°C), < 93 % RH.**

▲ **NOTICE: Remove all batteries if the device is not likely to be used for a long period of time.**

TROUBLESHOOTING

PErr	Pumping failure. Ensure the cuff's bottom edge is approximately an inch (2 ~ 3 cm) above your inner elbow and not wrapped too tightly. Refasten the cuff and measure again.
UU Err	Excessive body movement detected during measurement. Refasten the cuff and measure again.
LL Err	Insufficient pulse detected for measurement. Refasten the cuff and measure again.
rrErr	Detected SYS and DIA readings are not reasonable, possibly as a result of too much interference. Keep the unit away from mobile phones and microwave ovens. Refasten the cuff and measure again.
HI	The pumping pressure is over 300 mmHg. The cuff may be improperly wrapped. Refasten the cuff and measure again.
	Replace all batteries.

PRODUCT SPECIFICATIONS

Measuring Range	Pressure: 20 ~ 300 mmHg Pulse Rate: 40 ~ 200 pulse/min.
Accuracy	Pressure: ± 3 mmHg Pulse Rate: ± 5 % of reading
Measuring Method	Oscillometric method
Inflation Method	Electrical rolling pump
Rapid Exhaust	Electrical solenoid valve
Display	Digital LCD (Liquid Crystal Display)
Memory	4 x 99 sets
Operation Condition	41°F - 104°F (5°C - 40°C), 15% ~ 90% RH
Storage Condition	-4°F ~ 131°F (-20°C ~ 55°C), < 93% RH
IP Classification	IP20 (Protection against touching foreign bodies <.5 in. (12.5 mm) and no water-proof test)
Power Source	Four AA alkaline batteries (not included) or USB cord with AC adapter (included)
Battery Life	~ 250 measurements with alkaline batteries
Power Saving	Auto-off after 150 sec. non-operation
Size	5.6 in. x 5.6 in. x 4.7 in. (142 mm x 142 mm x 120 mm)
Weight	~ 18.4 oz. (522 g) including batteries
Cuff Range	8.66 in. ~ 17.32 in. (22 cm ~ 44 cm)

1. This blood pressure monitor is designed to comply with requirements of European Standard EN ISO 81060-1:2012 Non-invasive sphygmomanometers - Part 1: Requirements and test methods for non-automated measurement type, EN 1060, Noninvasive sphygmomanometers - Part 3: Supplementary requirements for electro-mechanical blood pressure measuring systems.
2. Blood pressure measurements determined with this device are equivalent to those obtained by a trained observer using the cuff/stethoscope auscultatory method, within the limits prescribed by the American National Standard ANSI/AAMI SP10, “Manual, electronic, or automated sphygmomanometers.”or automated sphygmomanometers.”

LIMITED WARRANTY

SCOPE OF WARRANTY

GF Health Products, Inc. ("GF") warrants to the Original Purchaser only that it will replace or repair components, at GF's sole discretion, that are defective in material or workmanship under normal use and service. All warranties are conditioned upon the proper use of the products strictly in accordance with good commercial practice and applicable GF instructions and manuals, including proper use and maintenance. To the extent that a third party warrants a component, GF conveys all of its rights under that warranty to the Original Purchaser, to the extent permitted. Original Purchaser is one who purchases this product new and unused from GF or a Certified GF Dealer/Distributor.

This limited warranty shall only apply to defects that are reported in accordance with the provisions set forth in this warranty document, within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. (See Obtaining Warranty Service below) This limited warranty is not transferable.

This limited warranty shall only apply to defects that are reported in accordance with the provisions set forth in this warranty document, within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. (See Obtaining Warranty Service below) This limited warranty is not transferable.

* Labor is not included in the warranty.

‡ The warranty period is as designated above. If a part is replaced under warranty, the original warranty period will not be affected. All other replacement parts will be subject to the warranty period specified.

The applicable warranty period shall commence from date of shipment to the Original Purchaser, unless there is an expiration date on the component in which case the warranty shall expire on the earlier of warranty period or the expiration date.

OBTAINING WARRANTY SERVICE

Contact the Dealer/Distributor from whom the product was purchased. If there is not a Dealer/Distributor, you must contact GF directly by calling (678) 291-3207, sending a fax request to 770-368-2386 or by e-mailing a request to cs@grahamfield.com. The Customer Service Representative will provide specific directions. Failure to abide by the specific directions will result in denial of the warranty claim.

The warranty does not cover and GF shall not be liable for the following:

1) Defects, damage, or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
2) Products which are not installed, used, or properly cleaned and maintained as required in the official manual for the applicable product;
3) Products considered to be of a non-durable nature including, but not limited to: filters, fuses, gaskets, lubricants, and charts;
4) Accessories or parts not provided by GF;
5) Matching of color, grain or texture except to commercially acceptable standards;
6) Changes in color caused by natural or artificial light:
7) Charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing, in advance, by GF;
8) Any labor or shipping charges incurred in the replacement part installation or repair;
9) Costs and expenses of regular maintenance and cleaning; and
10) Representations and warranties made by any person or entity other than GF.

ENTIRE WARRANTY, EXCLUSIVE REMEDY AND CONSEQUENTIAL DAMAGES DISCLAIMER

TO THE GREATEST EXTENT PERMITTED BY LAW, THIS WARRANTY IS GF'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. EXCEPT IN CASES WHERE IMPLIED WARRANTIES MAY NOT BE VALIDLY WAIVED, GF MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IF ANY MODEL OR SAMPLE WAS SHOWN TO THE CUSTOMER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE GENERAL TYPE AND QUALITY OF THE PRODUCT AND NOT TO REPRESENT THAT THE PRODUCT WOULD NECESSARILY CONFORM TO THE MODEL OR SAMPLE IN ALL RESPECTS. THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS. GF SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER, OR EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS. CERTAIN STATES AND COUNTRIES MAY CONFER ADDITIONAL RIGHTS REGARDING WARRANTIES AND IN THOSE INSTANCES, GF'S LIABILITY AND THE LIABILITY OF GF'S SUPPLIERS, SHALL BE LIMITED TO THE FULLEST EXTENT PERMITTED BY LAW.

The warranties contained herein, together with GF's current Terms and Conditions, contain all the representations and warranties with respect to the subject matter of this document, and supersede all prior negotiations, agreements and understandings with respect thereto. The recipient of this document hereby acknowledges and represents that it has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this document.

For additional information on this product or this warranty, please contact a GF Customer Service Representative.

NOTES:

1) Additional terms and conditions may apply. See GF's General Terms and Conditions on its website: www.grahamfield.com.
2) Freight claims must be notated on the appropriate shipping documents and must be made with immediacy. International, federal and state regulations govern specific requirements for freight claims. Failure to abide by those regulations may result in a denial of the freight claim. GF will assist you in filing the freight claim.
3) Claims for any short shipment must be made within three (3) days of the invoice date.

LUMISCOPE®
by graham-field

Manufactured For:

GF Health Products, Inc.
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Made in China

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Information contained herein is subject to change without notice. The most current and complete product information can be found on our website.

www.grahamfield.com

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