



TheGlobalBeautyGroup
Technology for Beautiful Business

MediLUX User Manual



LUX Series

Designed, Developed and Engineered by
The Global beauty Group in Australia

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Contents

Introduction	4
Use of this manual.....	4
Maintenance.....	4
Modification of the System.....	4
Safety	5
Precautions	5
Contraindications.....	6
Safety Eyewear	7
Explosions and Fire Hazards.....	7
Grounding the system	7
System Safety Features	8
Key switch.....	8
Emergency Shut-Off Button	8
Light Emission Indicators	8
Device Labels.....	9
System Labels	9
Packaging Label	9
Installation.....	10
Unpacking confirmation	10
Installation	10
System Description	12
Product feature.....	12
Intended use.....	12
Environment requirement	12
Transportation and storage.....	12
System appearance and structure	13
Controls and Indicators	14
Introduction	14
Control Panel.....	14
LCD Touch-Screen.....	14
Emergency stop button.....	14
Light Emission Indicator	14
Key-switch	14
Service panel.....	14
Power switch	14
Operating Instructions.....	15
Introduction	15
Preparing the system for operation.....	15
Operating the System	16
Maintenance	18
Introduction	18
Use and maintenance precautions	18
Cleaning and Disinfecting the System	19
Disposal of Unit	19
System specifications.....	20
Troubleshooting and Warranty	21
Troubleshooting Guides	21
After-Sales Service	22





CAUTION



To ensure safe and reliable ongoing operation please read the following manual completely before operating this device. Keep this manual readily accessible to be referred to at any time.

This manual describes how to use this machine safely.

Review the manual carefully before operating this device. Carefully review proper maintenance procedures.

All operators of this machine must carefully study this manual to become familiar with proper and safe operation of the device.

Indications of dangers, warnings and cautions

To ensure safe operation of the device and to prevent extraneous accidents from occurring, it is highly recommended that the contents of this manual are thoroughly studied and followed. This includes studying all warnings and attached signs, which detail the inherent danger when using this device.

Warning labels should be unobstructed and easily viewable.

Promptly replace all stained or detached labels with new labels.

Contact The Global Beauty Group when new labels are needed.



Symbols, signs, and/or signal words used throughout this manual:



Indicates an immediate hazard to patients, operators, staff, or the machine.



Indicates a potential hazard to patients, operators, staff, or damage to the machine.



Indicates a possible mistake that could result in injury to patient / operator or damage to the machine.



Be sure to follow the instructions when you operate the machine



Use the machine and/or maintenance device incorrectly, may lead to an electrical shock.



Fire hazard. Take care to avoid flammable material



Indicates prohibited actions.



Highlights a requirement that must be adhered to.



Be sure the electrical sources are properly grounded



Wear eye protection



Disconnect the mains plug from an electrical outlet



Refer to the user's manual



Introduction

Use of this manual

MediLUX is designed to meet international safety and performance standards. Personnel operating the system must have a thorough understanding of the proper operation of this Equipment.

This manual has been prepared to aid medical and technical personnel in the use, operation and maintenance of the system. Do not operate MediLUX before reading this manual and gaining a clear understanding of system operation. If any part of this manual is not clear, please contact The Global Beauty Group clinical support for clarification.

 WARNING	
	Use of the device beyond parameters specified herein may put the operator and/or the patient at risk. Before attempting to use or operate the system, applicable personnel should read this manual and become thoroughly familiar with all its safety requirements and operating procedures.

The information provided in this manual is not intended to replace the professional training on the clinical use of the system. Please contact The Global Beauty Group for current information on available training. This manual should always accompany the system and all operating personnel must know its location. Additional copies of this manual are available from The Global Beauty Group.

Maintenance

MediLUX is a precision medical device that requires periodic routine maintenance, which must be performed by an authorized GBG engineer. Failure to adhere to **warranty terms** will void all warranties, expressed and implied. Please contact The Global Beauty Group for details,

Modification of the System

Unauthorized modification of the hardware, software, or specifications of MediLUX Equipment voids all warranties, expressed and implied. GBG takes no responsibility for the use or operation of such a modified device.



Safety

Precautions



To reduce the risk of electrical shock or fire, do not expose this unit to rain or moisture. Do not spill water or other liquids into or on to your unit. Be sure that the local power outlet matches that of the required voltage for your unit. Do not attempt to operate this unit if the power cord is frayed or broken. Disconnect from mains power before making any type of connection to the device.



Do not remove the cover under any conditions. There are no user serviceable parts inside. Never operate this unit when it's cover is removed. Always be sure to mount this unit in an area that will allow proper ventilation. Allow at least 50cm between the device and any walls or other large devices. Do not attempt to operate this unit if it becomes damaged. This unit is intended for indoor use only, use of this product outdoors voids all warranties. During long periods of non-use, unplug the unit from mains power. Always mount this unit in safe and stable matter. All jewelry should be removed prior to treatment.



Do not use the machine over 20 minutes on any single treatment area
Do not put the machine near water.



Contraindications

1. Active infection after surgery;
2. Psychopaths or persons who have unrealistic expectations of treatment outcomes
3. Patients who have leucoderma, psoriasis and, systemic lupus erythematosus (SLE) and malignant tumor in the active stage
4. Pregnancy or lactation period
5. Photosensitised persons
6. Diabetes (insulin dependent);
7. Persons who suffered serious sunburn within the last 6 weeks
8. Persons taking antibiotics;
9. Persons taking photosensitive medication or topical applications
10. Patients who wear the cardiac pacemaker
11. Not suitable for infants or children;

Please pay attention to the photosensitive reaction caused by drugs.

For patient safety, patients taking the following medications should not be treated for a period of time.

Medicine Name	Brand	Application	Exceptions
Amiodarone (Allergic to 334-460nm)	Codarone X or Aratae	Antiarrhythmic	The patient can be treated if his disease is mild.
Gold	Auranofin, Ridanra or gold 50	Anti-arthritis	The patient cannot be treated.
Griseofulvin	Grisovin	Antifungal and antibiotic	The patient can be treated if no medication taken within 5 days.
Isotretinoin	Roaccutane	Anti-acne	The patient can be treated if no medication taken within 5 days.
Methotrexate	Ledertexate	Anti-arthritis and antineoplastic drugs	The patient can be treated if no medication taken within 3 days.
Chlorpromazine (Only for high doses)	Thorazine or Largafil	Antipsychotic drug	The patient can be treated if no medication taken within 8 days.
Tetracycline (Sensitive to 320nm-420nm)	Vibramycin	Antibiotic	The patient can be treated if no medication taken within 5 days.



Safety Eyewear

 DANGER	
	The MediLUX emits high intensity visible and infrared light, thus all persons in the treatment room, including the patient, should wear appropriate eye protection whenever the device is powered on.

Explosions and Fire Hazards

The absorption of light raises the temperature of the absorbing material. Take precautions to reduce the risk of igniting combustible materials in and around the treatment area.

Do not use any flammable substances such as alcohol or acetone in the preparation of the skin for treatment. If necessary, use soap and water to clean before treatment.

If alcohol is used to clean and disinfect any part of MediLUX allow it to dry thoroughly before operating the system.

Flammable materials must be kept at a safe distance from the system.

 DANGER	
	Do not operate in the presence of flammable liquids (such as alcohol or acetone) flammable gases (such as ether) or oxidizing gases, such as nitrous oxide (N₂O) and oxygen. Do not place flammable or explosive articles in the light path as the emitted light may ignite flammable or explosive articles, resulting in fire or even explosion. Do not operate in the presence of volatile solvents such as alcohol, gasoline, or other solvents.

Whenever system maintenance is performed, never leave MediLUX turned on, open, or unattended.

Grounding the system

The system is grounded through the grounding conductor in the power cord and internal grounding pin.

 WARNING	
	To avoid the risk of electric shock, this device must only be connected to a supply main that is properly grounded.



System Safety Features

MediLUX is equipped with a number of safety features. All operating room personnel should be familiar with the location and operation of these safety features.

Key switch

To prevent unauthorized use the MediLUX system is equipped with a key switch. The Key switch is an essential tool that powers the system on and off. The key cannot be removed except in the OFF position and the device will operate only with the key in the ON position. The key should be removed when the MediLUX system is not in use.

	
WARNING	
	When the system is not used, turn the key to the "OFF" position and store it safely in order to prevent the device from accidentally being operated.

Emergency Shut-Off Button

This red button is used to shut the machine down in an emergency. When pressed, it immediately shuts off power to the entire system. To release the emergency shut-off button, turn it clockwise. Otherwise, the system will remain off.

Light Emission Indicators

The system features two light emission indicators: a LED located on top of the control panel and a buzzer.

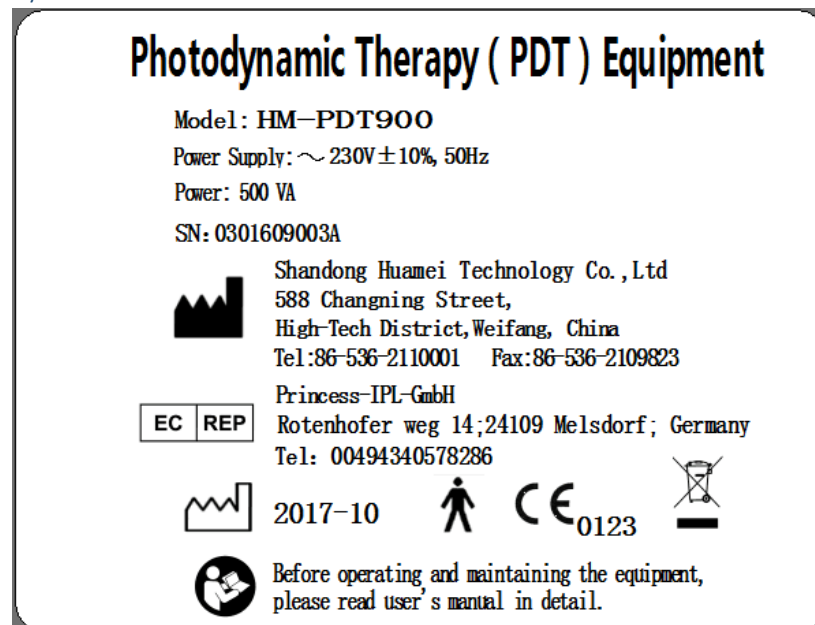
The LED has two modes:

- ◆ **Green**—Indicates the system is turned on
- ◆ **Red** -Illuminates continuously during treatment



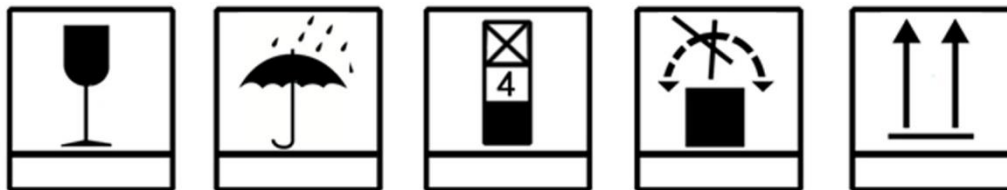
Device Labels

System Labels



Packaging Label

The following labels are attached to MediLUX's shipping crate:



Installation

Unpacking confirmation

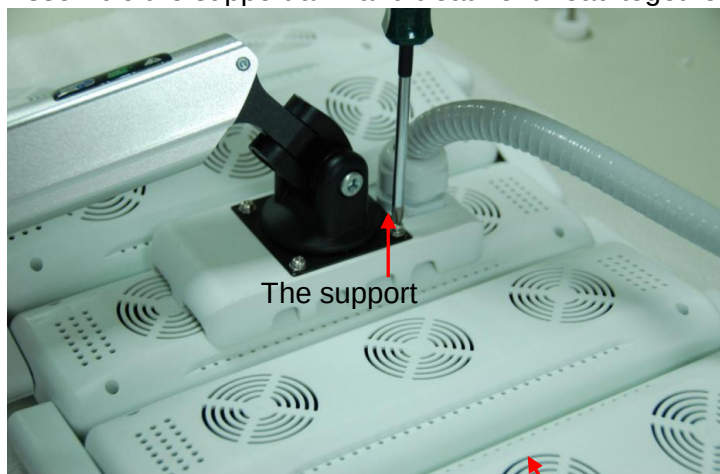
Open the aluminum box to check if the main unit and accessories are complete, Check the main console and the LCD screen to ensure they have not been damaged during transit.

Installation

Install the stand column using the supplied screwdriver.



Assemble the support arm and treatment head together.



Treatment head



Install the assembled support arm and treatment head on the stand column.



Connect the cables.



System Description

Product feature

The MediLUX utilizes the characteristics of Light Emitting Diodes (LED). These LED's are combined in an array to emit different wavelengths of light which act on different chromophors within the tissue surface causing a biochemical effect to occur on the treatment area, achieving a therapeutic purpose. The outstanding feature of the MediLUX is that it uses high power LED's in a large, dense array combined in a large area semicircle. This achieves uniform exposure with high power over a large area.

Intended use

The MediLUX is clinically intended for the treatment of the following skin conditions:

- Treatment of acne vulgaris
- Wound repair
- Relief from wound pain, inflammation and swelling (results may vary)

Environment requirement

Environment Temperature : 10°C~ 30°C ;

Relative Humidity : ≤80%

Atmospheric Pressure : 700hPa~1060hPa ;

Power Supply : AC220V±10%, 50Hz

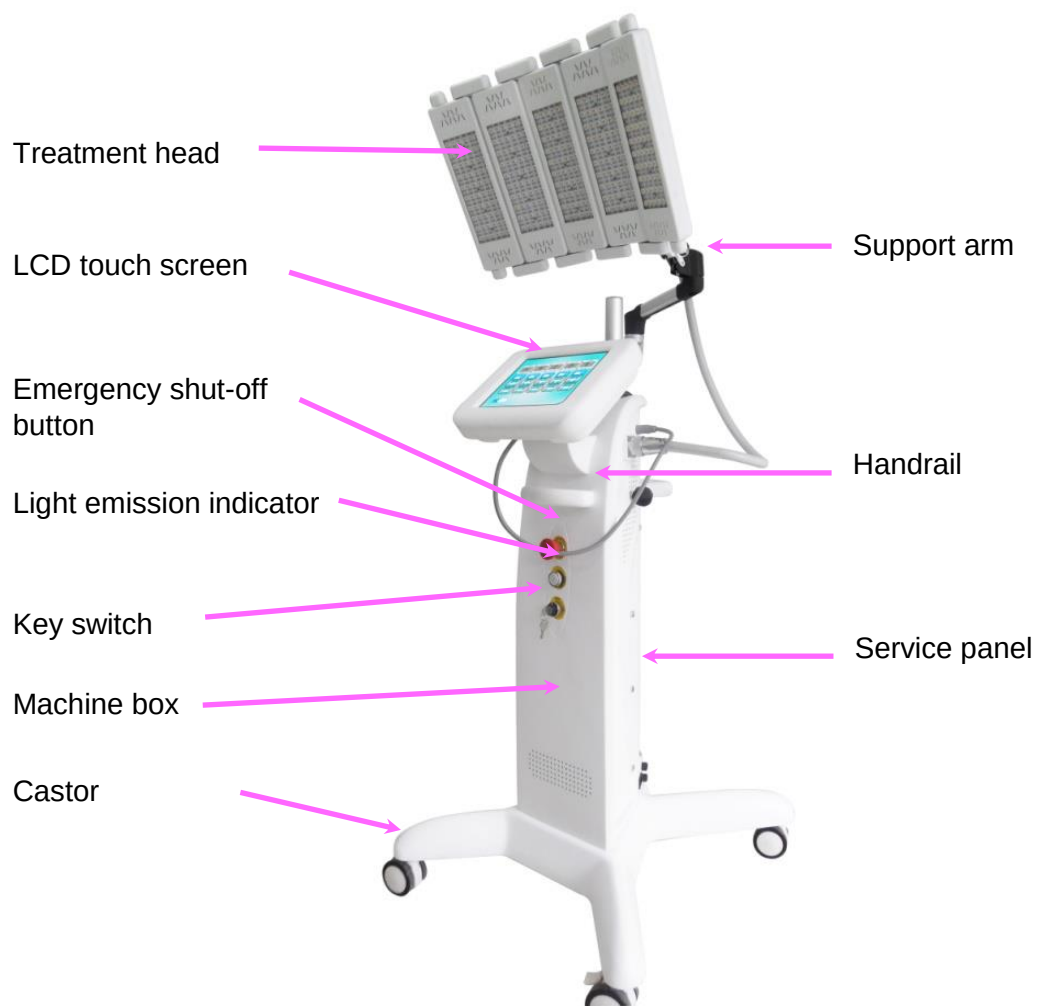
Transportation and storage

The MediLUX can only be transported after repacking.

After packaging, the MediLUX should be stored in a clean room with good ventilation, the relative humidity less than 80%, and no corrosive gas.



System appearance and structure



Controls and Indicators

Introduction

This chapter details the controls, indicators and connection ports of MediLUX

Control Panel

The control panel incorporates all the controls necessary to operate MediLUX including a back-lit LCD graphic display with built-in touch-screen technology, key-switch, emergency shut-off knob, light emission indicator(visible).

LCD Touch-Screen

The LCD touch-screen presents all the system screens that are described in the operations section of this manual.

Emergency stop button

In case of emergency the red shut-off knob should be pressed to switch off all electrical power supply to the system. To resume operation, release the knob (by a quarter of a turn clockwise).

Light Emission Indicator

The light emission indicator, located on the control panel, indicates the following:

Green—Indicates the system is turned on

Red -Illuminates continuously during system working

Key-switch

The key switch connects and disconnects electrical power to the system, and is used to switch the system ON and OFF. Operation of the system is possible only with the key provided by GBG. This prevents unauthorized use of the device. Do not leave the device unattended with a key in it. Verify that the system is inoperable when the key is removed.

 WARNING	
	To avoid misuse of the system, do not leave the key in the key switch while the system is unattended.

Service panel

The service panel incorporates the mains power cord receptacle, power switch, and fuse.

Power switch

The red power switch, located at the bottom of the device backboard, protects the system against power overload. Pressing the power switch to the “O” position disconnects to the system. To initiate system operation, press the “1” position of the red button to switch on the device.



Operating Instructions

Introduction

This chapter describes in detail the operating instructions for MediLUX.

 CAUTION	
	◆ This system may only be operated by a licensed practitioner, according to the local laws in every country. ◆ Improper use or adjustment of this system may invalidate the system service warranty agreement. Please contact your authorized GBG distributor before attempting to use the system in any manner other than those specified in this manual.

Preparing the system for operation

- Plug the system into the main power outlet. Insert the key into the key switch.
- The patient and all personnel in the room should wear safety eyewear when using MediLUX (refer to safety eye wear).
- Locate the red button (power switch) on the back of the MediLUX console. Press the “1” position of the red button to switch on the device circuit.
- Verify that the emergency shut-off button is not engaged. If it is, release it by turning it clockwise until the button pops up.



Operating the System

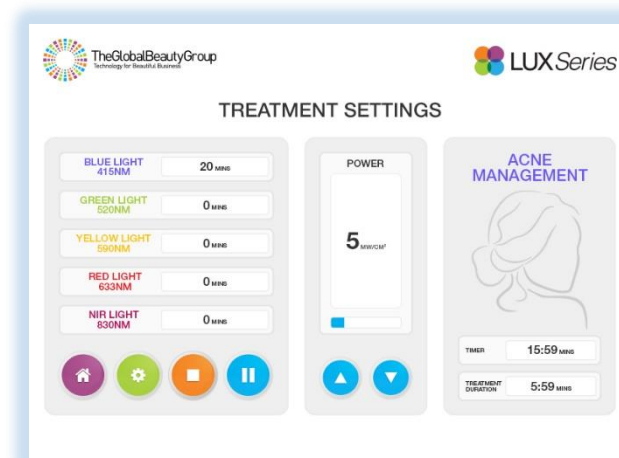
Turn the key switch one quarter of a turn clockwise. The system will power on and the startup screen will appear:



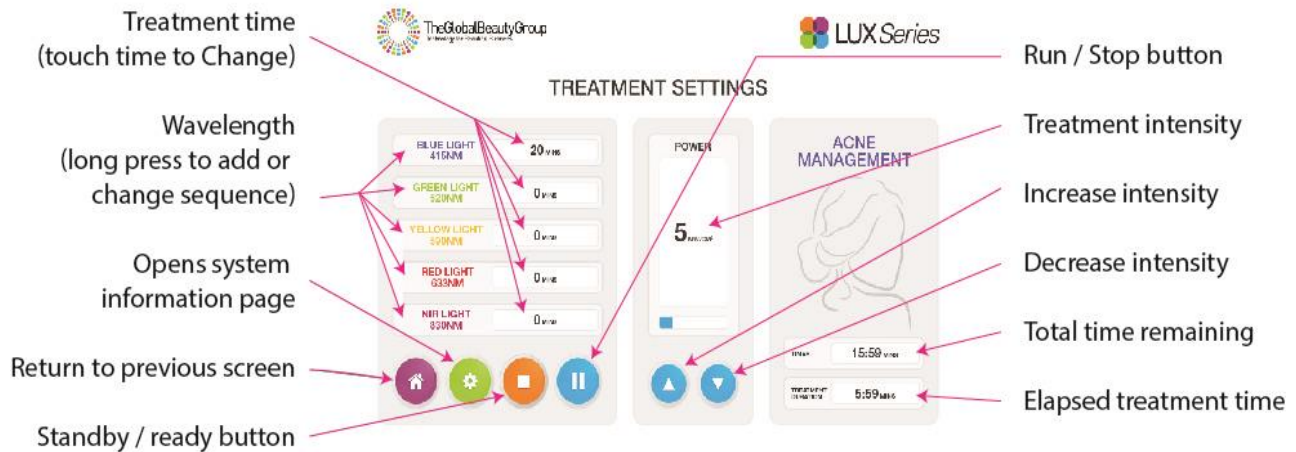
After the system has initialized, the main treatment selection menu will appear:



Selecting any treatment will open a treatment settings page. The page has recommended



wavelengths and treatment times preconfigured for the type of treatment



Setting the parameters:

Ensure that the wheels have been locked to prevent inadvertent movement of the machine.

Ensure that the patient and the operator are wearing suitable protective eyewear.

One treatment session can be undertaken using a single wavelength or a sequence of wavelengths.

The wavelengths, sequences and treatment times are pre-set for the different treatment modalities

To select different wavelengths, touch and hold (long press) on any of the wavelength buttons. The treatment time will change to sequence number. Touching on any sequence number will cause it to cycle through sequence 1 to 5 and no sequence. Only one wavelength can operate at a time, therefore two wavelengths cannot have the same sequence number.

Long press any wavelength button to return to the treatment time menu. Touching the treatment time will pop-up a keyboard menu allowing the treatment time for the selected wavelength to be selected. Short press on the wavelength will allow the intensity of the selected wavelength to be set using the up and down buttons.

Once the sequence, times (or using the default settings) and intensities have been set, position the machine over the desired treatment area.

Press the standby / ready button. This will lock in the parameters then press the run / stop button to commence treatment. The treatment may be paused at any time by re- pressing the run / stop button.

During treatment, the individual wavelength times and total time counter will count down, giving an indication of the remaining treatment time. Similarly, the treatment duration counter will show the elapsed time. The system will automatically sequence through the selected wavelengths and stop at the end of the treatment time

The system information button displays technical information regarding the performance of the MediLUX if required

At the end of treatment press the Home button to return to the main menu.

If no further treatments are planned, turn off the key switch to shut down the system.

Remove the key to prevent unauthorized use.

Maintenance

Introduction

This chapter contains maintenance instructions for MediLUX.

Routine maintenance should only be performed by clinical staff, unless otherwise specified. Additional maintenance procedures not mentioned within the contents of this chapter are to only be performed by authorized GBG technical personnel.

This device is designed to operate without any need for operator maintenance. However, the outer surfaces of the system should be kept clean for hygienic reasons.

 DANGER	
	To avoid the risk of electric shock, pull out the power cord from the electrical outlet when performing maintenance duties.

 WARNING	
	Maintenance by the operator should be performed only when the system is shut down and disconnected from the main power source. Performing maintenance procedures with the system turned on may be hazardous to the operator and/or destructive to the system.

Use and maintenance precautions

1. Read and understand all information mentioned in this manual.
2. When using the equipment, be sure to follow the basic safety precautions to reduce the risk of fire, electric shock and injury. Strictly comply with the notices on equipment.
3. Before cleaning, disconnect the main power supply.
4. Do not put the equipment near water sinks, showers etc. to reduce the risk of inadvertent water ingress.
5. The device should be connected to a stable reliable power source.
6. There should be at least 50cm of space between MediLUX and surrounding walls.
7. To ensure the normal operation of the equipment, users must use correct accessories from our company and not from third parties.
8. Take care to protect the plastic casing to prevent scratches.
9. If the fuse fails, replace it with one supplied with the spare parts.
10. Do not spray water on the equipment, as it may cause fire or electrical failure.



Cleaning and Disinfecting the System

It is recommended to wipe the outer surface area clean with a soft cotton cloth swabbed in 70% alcohol.

 WARNING	
	Turn power off and disconnect the power cord before cleaning the machine. Failure to do so may result in severe electrical shock or death. Never immerse machine in liquids. Do not use abrasive materials to clean the machine. Do not clean the inside of this device. Doing so will cause damage to the machine.

Disposal of Unit

Follow all local, governmental and/or international laws and regulations when disposing of the MediLUX.



System specifications

Wavelength	Red light $633 \pm 10\text{nm}$; Blue light $415 \pm 5\text{nm}$; Green light $520 \pm 5\text{nm}$ Yellow light $590 \pm 5\text{nm}$ NIR light $830 \pm 5\text{nm}$
Output power density	Red light 110mw/cm^2 Blue light 100mw/cm^2 Green light 90mw/cm^2 Yellow light 30mw/cm^2 NIR light 120mw/cm^2
Display mode	LCD touch screen
Control mode	Microcomputer control system
Time control range	0-60min (Adjustable continuously)
Working mode	Continuous or pulse
Power supply	AC230V $\pm 10\%$, 50Hz
Weight	42Kg
Dimension	800mm $\times$ 450mm $\times$ 16000mm (Host) 470mm $\times$ 300mm (Treatment head)



Troubleshooting and Warranty

Troubleshooting Guides

The following table lists some possible system malfunctions for which no messages are displayed. If the corrective actions listed in the table do not solve the problem, contact your GBG service representative.

The following troubleshooting guides do not attempt to list all possible system failures. Any fault not listed should be referred to your GBG service representative.

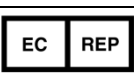
Please advise the GBG Service Department of all error messages that occur.

System Malfunctions Troubleshooting Guide

Symptom	Probable Cause	Corrective Action
Display does not work when the key switch is turned on.	1. Emergency shut-off button is engaged. 2. The power switch is in the OFF state. 3. No main power supplies. 4. The fuse is burned out. 5. Other unknown faults.	1. Turn off the system, turn the emergency shut-off button clockwise, and restart the system. 2. Switch the power switch to the ON state. 3. Check if a main power supply is present and if the power cable is well. 4. Replace the fuse. 5. Call GBG Service.
No output	1. Operation mistake 2. Other reasons	1. Read the instruction for use carefully. 2. Call GBG Service.
The output energy is reduced significantly.	1. There is dust on the protective cover. 2. Other reasons	1. Clean the protective cover. 2. Call GBG Service.



Chapter 10 Symbols instruction

	CE certificated by TUV SUD		Serial number
	Recycling according to local laws		Date of manufacture
	See the Instruction		Manufacturer
	Cautions		European union representative
	Standby	IPX1	IP degree
	Temperature range		Avoid sunlight
	Humidity range		Up toward
	Keep dry		BF applied part

After-Sales Service

Our company offers pre-sales and after-sales services including installation, debugging, training and maintenance and so on. All products are provided with a one-year warranty, lifetime maintenance service, and free technical consultation and software upgrade services.

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