

Industrial design patent No.: CN201430226585.X
Please read this manual before operating

RTA

MiniS Curing light Instruction Manual



GUILIN WOODPECKER MEDICAL INSTRUMENT CO., LTD.
www.glwoodpecker.com

Content

1. Introduction	1
2. Structure and components	1
3. Technical specifications	1
4. Installation and Uninstallation Method	3
5. Operation	3
6. Precaution	5
7. Contraindication	5
8. Daily maintenance	6
9. Troubleshooting	6
10. Storage and transportation	7
11. After-sales Service	8
12. Environment protection	8
13. Symbol instructions	8
14. Statement	9

1. Instruction

1.1 Foreword

Guilin Woodpecker Medical Instrument Co., Ltd. is a high-tech enterprise in researching, developing, and producing dental equipment, and has a perfect quality assurance system, main products including ultrasonic scaler, curing light, micro motor, apex locator and ultrasurgery, etc.

1.2 Principle and Usage

1.2.1 MiniS adopts the principle of ray radiation to solidify the light-sensitive resin in a short time by shooting at it.

1.2.2 This product is used to restore teeth.

1.3 Features

1.3.1 The solidification effect is not affected by the consumption of remaining power.

1.3.2 A full charge can be continuously used for more than 300 times under 10s working time mode.

1.3.3 Ergonomic design, small and convenient.

1.3.4 Special light hood and holder design with high efficiency in filtering light.

2. Structure and Components

MiniS curing light (dentistry) is mainly composed by high power LED, optical fiber, and main unit.

3. Technical Specifications

3.1 Size: 230mm×26mm×30mm

3.2 Net weight: 105g

3.3 Configuration:

Main unit *1

Adapter *1

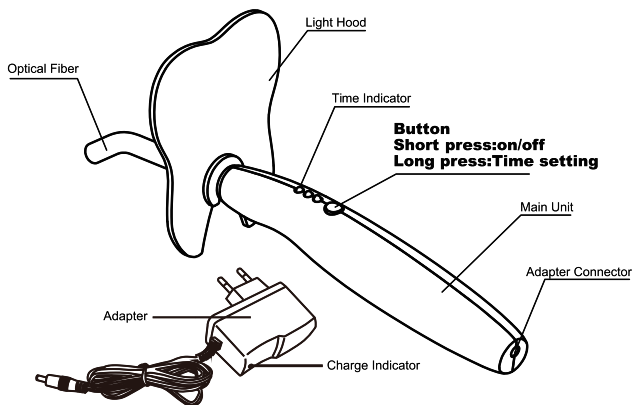
Optical fiber *1

Light hood *1

Instruction book *1

Product certificate *1

Warranty card *1



Picture 1

Button:

“Short Press” means let go of the button immediately after pressing it, while **“Long Press”** means keep pressing the button.

3.4 Power Source

3.4.1 Power supply: rechargeable Lithium battery.

3.4.2 Rechargeable Lithium battery.

Battery mode: ICR 18490

Battery voltage and capacity: 3.7V/1400mAh

Battery has protection against Over-voltage, over-current and short circuit.

3.4.3 Adapter (charger)

Power Input: AC100V - 240V, 50Hz/60 Hz

Power Output: DC4.2V/1A

Built-in Fuse: F2AL250V

3.5 LED Light Performance

3.5.1 3W high power blue light LED.

3.5.2 Classes: Class I

3.5.3 AEL: $3.9 \times 10^{-3} \text{J}$

3.5.4 Checking method: the LED light is fine when the light is on during correct operation.

3.5.5 The wave length of this product can match with the clinical dental resin solidification, such as 3M, Dentsply, etc.

3.5.6 Wave length: 420nm-480nm

3.6 Light intensity: 1000mW/cm^2 - 1200mW/cm^2

3.7 Light effective acreage: 50mm^2

3.8 Working condition:

3.8.1 Environment temperature: $+5^\circ\text{C} \sim +40^\circ\text{C}$

3.8.2 Relative humidity: 30%~75%

3.8.3 Atmospheric pressure: 70kPa~106kPa

3.9 Equipment Safety

3.9.1 Operating mode: intermittent operation.

3.9.2 Protection type against electrical shock: class II.

3.9.3 Protection degree against electrical shock: type B.

3.9.4 Protection against harmful ingress of water or particular matter: ordinary equipment (IPX0).

3.9.5 Safety in the presence of flammable anesthetic mixture with air, oxygen or nitrous oxide: not suitable under this condition.

4. Installation and Uninstallation Method

4.1 Fix the light hood on the bottom of the optical fiber.

4.2 Take off the red cap from the optical fiber, and then insert the straight end into the front part of main unit (make sure to screw the fiber to the end).

4.3 Please do the opposite way when uninstall or change the optical fiber.

5. Operation

- 5.1 Short press the button to start the curing light.
- 5.2 Long press the button, then the time indicator will flash in cycles and three time modes are available: 5s, 10s, and 20s.
- 5.3 During the operation, please aim the light at the solidification-needed point, short press the button and the main unit will produce "Bi" sound, the curing light radiates blue light and starts working according to the set modes. Meanwhile, it starts counting down and it stops working when counting down to "0".
- 5.4 During the operation, the blue light can be stopped by short pressing the button at any time.
- 5.5 After a working cycle, operator can short press the button switch to start another working cycle. Stop operating if the equipment began to heat obviously, do not restart until the equipment cool down. Suggest continuous working cycle less than 10 times.
- 5.6 Low power detect circuit is fixed inside of the main unit, when low power is detected, the display screen of main unit will wink or the buzzer will ring 3 times, please charge in time.
- 5.7 When the battery needs charging, connect the plug of the adapter into the AC100V-240V power supply. Then connect the output plug of the adapter to the input plug of the main unit. Adapter charge indicator turns yellow means it is charging. When charging is finished, the indicator will turn green.
- 5.8 When operation is finished, please clean the optical fiber with calico in order not to affect the light intensity.
- 5.9 This equipment will turn off automatically if there is no action within 2 minutes, turn it on by pressing any button.
- 5.10 The depth of solidification of composite is no less than 4mm per 10 seconds.
- 5.11 The curing light is equipped with over-heat protection system. It can continuously work 200s, For example, continuously operate the curing light for 10 times under 20s working mode (even the curing light works less than 20s, it is counted as a full operation), then it will come into over-heat protection status. And only after 2-minute sleep, it can restart

working 200s continuously.

Notice: Before operation, the optical fiber must be rotated and stuck into the bottom, in case the optical fiber falls down.

6. Precaution

6.1 Please charge the battery at least 4 hours before first time usage.

6.2 When fixing the optical fiber, revolve it to the bottom to avoid the decline of light intensity.

6.3 Optical fiber is fragile, so it is forbidden to beat, crush or drop.

6.4 During operation, the blue light should be aimed straightly at the composite resin to ensure the effect of solidification.

6.5 Avoid aiming the blue light at eyes directly. Please use the original light hood or special curing light glasses to protect eyes.

6.6 Please use the power adapter and lithium battery which is designed and supplied by our company. It may cause dangers to operator and patient by using the power adapter and lithium battery which is designed and supplied by other manufacturers.

6.7 It is forbidden to use metal or other conductors to touch the charging point of main unit, because it may burn the internal circuit or make the lithium battery short circuit.

6.8 Please recharge the battery in cool and ventilated room.

6.9 It is forbidden to personally take apart the battery, in order not to cause short-circuit or leakage.

6.10 It is forbidden to extrude, shake or rock the battery. The Li-ion battery is forbidden to be in short circuit situation and it is forbidden to place the battery with metal or other conductors.

7. Contraindication

Heart disease patients, pregnant women and children should be cautious to use this equipment.

8. Daily Maintenance

8.1 This equipment does not include the self-maintenance parts, so it should be performed by professional or special maintenance shop.

8.2 Users can change the light hood and optical fiber on-site. Please use accessory which is designed and supplied by our company, contact the local dealer or our company if you want to buy. It may cause potential dangers to curing light or other damages which is designed and supplied by other manufacturers.

8.3 The optical fiber should be sterilized for 4 minutes with 134°C and 2.0bar~2.3bar (0.20MPa~0.23MPa) before each use, other parts should be cleaned by clean water or neutral sterilized liquid, but do not soak the equipment in the water. Do not clean by volatile or soluble liquid, otherwise the marks of the control panel will fade.

8.4 Please clean the optical fiber to avoid remaining resin left on the surface and affecting solidification effectiveness and lifespan.

9. Troubleshooting

Faulty	Possible cause	Solutions
No indication, no response	1. Battery is out of power 2. Faulty of battery 3. Short circuit of charging port, battery enters the state of protection	1. Charge the equipment 2. Send to after-service to change a new battery 3. Plug the adapter to activate the battery
Indicator flickers	1. Low battery 2. Faulty of the main unit	1. Charge the battery 2. Send to the after-service

Faulty	Possible cause	Solutions
Light intensity is weak	<ol style="list-style-type: none"> 1. Optical fiber is not fixed to the bottom 2. There is resin on the top of the optical fiber. 3. Low battery 4. Faulty of the main unit 	<ol style="list-style-type: none"> 1. Fix the optical fiber to the bottom 2. Clean the resin 3. Charge the battery 4. Send to the after-service unit
Not charging when the adapter is connected	<ol style="list-style-type: none"> 1. The adapter is not connected well 2. Faulty of adapter or incompatible 	<ol style="list-style-type: none"> 1. Reconnect 2. Change the adapter
Effective duration of the battery become short	The capacity of the battery decreased	Send to after-sales Service for change a new battery

If the problem still can't be solved, please contact the local dealer or manufacturer.

10. Storage and Transportation

10.1 The equipment should be handled carefully and lightly. Be sure that it is far from the vibration, and installed or kept in a cool, dry and ventilated place.

10.2 Don't store the machine together with the articles that are combustible, poisonous, caustic, and explosive.

10.3 This equipment should be stored in a room where the relative humidity is 10%~93%, atmospheric pressure is 70kPa to 106kPa, and the temperature is -20°C to +55°C.

10.4 Excessive impact or shake should be prevented during transportation, lay it carefully and do not invert it.

- 10.5 Don't put it together with dangerous goods during transportation.
- 10.6 Avoid solarization and getting wet in rain or snow during transportation.

11. After-sales Service

From the date this equipment has been sold, base on the warranty card, we will repair this equipment free of charge if it has quality problems, please refer to the warranty card for the warranty period.

12. Environment Protection

Please dispose according to the local laws.

13. Symbol Instruction

RTA Trademark



Caution! Consult the accompanying documents

5S 5-second time symbol

10S 10-second time symbol

20S 20-second time symbol



Short press: on/off

Long press: time setting



Date of manufacture



Manufacturer



Class II equipment



Type B applied part

IPX0

Ordinary equipment



Used indoor only



Appliance compliance WEEE directive



Atmospheric pressure for storage



Temperature limitation for storage



Humidity limitation for storage

14. Statement

All rights of modifying the product are reserved to the manufacturer without further notice. The pictures are only for reference. The final interpretation rights belong to GUILIN WOODPECKER MEDICAL INSTRUMENT CO., LTD. The industrial design, inner structure, etc, have claimed for several patents by WOODPECKER, any copy or fake product must take legal responsibilities.

Scan and Login website
for more information



Guilin Woodpecker Medical Instrument Co., Ltd.
Information Industrial Park, Guilin National High-Tech
Zone, Guilin, Guangxi, 541004 P. R. China

Tel:

Europe Sales Dept.: +86-773-5873196, +86-773-2125222

North America, South America &

Oceania Sales Dept.: +86-773-5873198, +86-773-2125123

Asia & Africa Sales Dept.: +86-773-5855350, +86-773-2125896

Fax: +86-773-5822450

E-mail: woodpecker@glwoodpecker.com, sales@glwoodpecker.com

Website: <http://www.glwoodpecker.com>