



GIÁM ĐỐC
Le Khắc Lý



Instruction Manual for MaxCure9(Curing Light)

Please read this manual before operating

⚠ Safety Precautions

- ⚠ **WARNING:** If you neglect these safety precautions, you may cause personal injury such as electric shock, fire or damage to the product.
1. Use a separate, grounded power outlet. Never use wet hands to unplug the power cord.
 2. Please do not use other than the specified voltage to recharge the battery.
 3. Please recharge the battery at least 4 hours before first time usage.
 4. It is forbidden to touch the charging connector with metal or other conductor, to avoiding damage the circuit of charge or the battery.
 5. It is forbidden to extrude, shake or rock the battery. The Lithium battery is forbidden to be in short-circuit situation and it is forbidden to put the battery with metal or other conductors.
 6. Please recharge the battery in cool and ventilated room.
 7. It is forbidden to self-taking-apart the battery, in order not to result in short-circuit or leakage.
 8. Keep the Curing Light clean before and after operation.
 9. During the operation, the light should be aimed straightly at the composite resin to ensure the effect of solidification.
 - ⚠ **WARNING:** Avoid aiming at eyes directly.
 10. Don't knock or rub the Curing Light.
 11. This product is intended for use in hospitals and dental clinics only. The user must be professionally trained and qualified dentists.
 12. Only the original pedestal charger, adapter and Lithium battery could be used, because other brand pedestal charger, adapter and Lithium battery are likely to damage the circuit.
 13. If you don't use this equipment for a long time, please take the battery out and preserve separately.
 14. As a professional manufacturer of medical instruments, we are only responsible for the safety on the following conditions:

Quinn Refine Medical Instrument Co., LTD
RF-MC9 M001.1.0 20220302

1

The maintenance, repair and modification are made by the manufacturer or the authorized dealer.
The changed components are original of our company and operated correctly according to instruction manual.

- ⚠ **WARNING:** No modification of this equipment is allowed.
⚠ **WARNING:** If this equipment is modified, appropriate inspection and testing must be conducted to ensure continued safe use of equipment.
⚠ **WARNING:** If the curing light works for 40s continuously, the temperature of the top of optical fiber may reach 56 °C.
⚠ **WARNING:** Do not modify this equipment without authorization of the manufacturer.
⚠ **Contraindication:**
The heart disease patient, pregnant woman, children and the person who are allergic to blue light should be cautious to use this equipment.

Symbol instruction

Symbol	Instruction	Symbol	Instruction
	Caution		Consult instructions for use
	Date of manufacture		Manufacturer
	Class II equipment		Type B applied part
	Screw inside/outside		For indoor use only
	Recovery		Keep dry
	Fragile, handle with care		Atmospheric pressure limitation: 70kPa-106kPa
	Temperature limit: -20°C-+40°C		Humidity limitation: 10%-93%
	Waste electrical and electronic equipment		CE Mark
	Authorized representative in the European Community		

2

1 Product introduction

The product suppose to be used in hospital and dental clinic, should be used by trained qualified dentist. This Curing Light is used for the principle of ray radiation to solidify the light-sensitive resin by shooting at it in a short time. This curing light is intended for use by trained dental professionals for the purpose of light curing dental resins and composites and used to restore teeth.

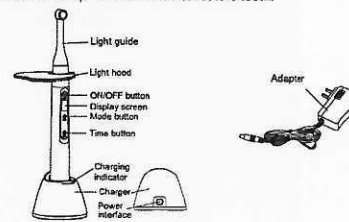


Figure 1

Note: The button labeled 'Time' indicates the time setting, and the button labeled 'Mode' indicates the mode setting.

Safety classification	Working condition
1. Protection type against electrical shock: Class II	
2. Protection degree against electrical shock: Type B	
3. Protection against harmful ingress of water or particular matter: ordinary equipment (IPX0), can't be waterproof.	a) Environment temperature: 5°C-+40°C
4. operation mode: short time run equipment.	b) Relative humidity: 30%-75%
5. Safety in the presence of flammable anesthetic mixture with air, oxygen or nitrous oxide: not suitable under this condition.	c) Atmosphere pressure: 70kPa-106kPa

3

2 Technical Parameters

- 2.1 Power supply(Rechargeable Lithium battery):
- 2.1.1 Battery model: ICR16500
- 2.1.2 Battery voltage and capacity: 3.6V/2600mAh
- 2.2 Power supply(Adapter):
- 2.2.1 Input : 100-240VAC, 50Hz/60Hz
- 2.2.2 Output: DC 5V/1A
- 2.3 Applied part : Light guide
- 2.4 Light intensity: 1000mW/cm² - 2500mW/cm²
- 2.5 Modes setting:
- 2.5.1 TURBO mode: Display P1, Light Intensity 2500mW/cm² - 2500mW/cm²
- 2.5.2 NORMAL mode: Display P2, Illumination 1000mW/cm² - 1200mW/cm²
- 2.6 Time setting:
- 2.6.1 TURBO mode: 1S, 3S
- 2.6.2 NORMAL mode: 5S, 10S, 15S, 20S
- 2.6.3 lightly press the time button to choose the solidification time.
- 2.7 Dimensions: φ72mm×275mm
- 2.8 Net weight: 255g
- 2.9 Light source:
- a) 5W high power blue LED
- b) Wave length: 385nm-515nm
- 2.10 Consumption power: 1 SW
- 2.11 Composed mainly: main unit, charger, light hood, LED lamp, battery and power adapter.

3 Installation and demounting

- a) Take off the red cap from the optical fiber and then insert the metal part into the front of Curing Light, make sure to screw the fiber to the end. To install the light hood on the top of the optical fiber. (The models with optical fiber)
- b) To install the light hood on the top of the optical fiber.
- c) For dismantlement, taking the instruction of installment above reversely.
- d) When finishing using or when the bottery needs to be charged, connect the plug of the adapter into the 100-240VAC power supply. Then connect the output plug of the adapter to the input plug of the pedestal, and then the indicator turn to white, that means the pedestal is standby. Put the main unit to the charging point of the pedestal, the indicator turn to blue, and the curing lights starts charging. When charging finished the indicator turn to white.

4



4 Operation

- 4.1 Modes setting: Lightly press the mode key to change the running modes. The Curing Light will shine the different illuminated blue light. The available modes see the Technical Parameters.
- 4.2 Time setting: Lightly press the time button to choose the solidification time. The available time setting see the Technical Parameters.
- 4.3 During the operation, put disposable isolation sleeve on the main unit, aim blue light at the position needing solidification. Press the power button "ON/OFF" switch, a "beep" sound will appear, the Curing Light starts to work under the selected mode. Then it counts down to "0" second to end the solidification.
- 4.4 During operation, the blue light can be stopped by press the power button "ON/OFF" at any time.
- 4.5 Low power detect circuit is fixed inside of the main unit, when low power is detected, the indicator of the main unit will wink, please charge in time.
- 4.6 After the operation, please clean the fiber with calico in order not to affect the light intensity.
- 4.7 This equipment will turn off automatically if no any action within 2 minutes, turn it on by press "ON/OFF" button.
- 4.8 The depth of solidification of composite is no less than 4mm per 10 seconds.
- 4.9 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, then it will come into over-heat protection status. And only after 2 minutes sleep, it can restart working 200s continuously.

5 Cleaning, disinfecting and sterilizing

- 5.3.1 Please notice that this equipment is not allowed to carry out steam sterilization process otherwise it will cause damage.
- 5.3.2 Before using this equipment, users need to put disposable isolation sleeve which is supplied by our company on the light guide of Curing Light to avoid contact between the main unit or other components and the patient's skin or oral mucosa and avoid cross infection. After use, remove the disposable isolation sleeve and dispose of it in accordance with applicable legal requirements in your country as well as the hygiene regulations of the hospital or clinic.
- 5.3.3 The disposable isolation sleeve purchased by the user should meet the requirements of medical device regulations.
- 5.3.4 The accessory of the equipment should be cleaned by clean water or neutral sterilized liquid. Do not soak. Do not use highly volatile and diffident solvent to clean this equipment, which can cause the signs on the control panel to fade.
- 5.3.5 Disposable isolation sleeves are not allowed to be reused to prevent cross-infection.
- 5.3.6 Please clean the resin remained on the top of the main unit after using to

5

avoid infecting the life-span or solidified effect.

6 Transportation, storage and maintenance

- 6.1 Transportation
- 6.1.1 Excessive impact and shake should be prevented in the transportation. Lay it carefully and lightly and don't invert it.
- 6.1.2 Don't put it together with dangerous goods during transportation.
- 6.1.3 Avoid solarization and getting wet in rain or snow during transportation.
- 6.2 Storage
- 6.2.1 Don't store the machine together with the articles that is combustible, poisonous, caustic, or explosive.
- 6.2.2 This equipment should be stored in a room where the relative humidity is 10%-95%, atmospheric pressure is 70kPa-106kPa, and the temperature is -20°C-+40°C.
- 6.3 Maintenance
- 6.3.1 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.
- 6.3.2 Please turn off the electrical source if not use it, if not use for a long time, please make the machine get through to the power once 3 months for five minutes.

7 Troubleshooting

Faulty	Possible cause	Solutions
No indication, no response.	1. Battery is out of power. 2. Faulty of battery. 3. The main unit battery protection system works.	1. Charge the equipment/Change a new battery. 2. Change a new battery. 3. Place the main unit into the socket on the charger for activation.
Wink shown on the screen.	Low power.	Reconnect the charger.
Light intensity is weak.	1. The optical fiber is not installed well. 2. There is crevice on the optical fiber. 3. There is resin on the tip of the optical fiber.	1. Reinstall the optical fiber. 2. Change a new optical fiber. 3. Clear the resin.

6

Faulty	Possible cause	Solutions
The equipment is not charging when the adapter is connected.	1. The adapter is not connected well. 2. Faulty of adapter or incompatible. 3. The charging point is impurity.	1. Reconnect. 2. Change the adapter. 3. Cleaned by the alcohol.
Effective duration of the battery become short.	The capacity of the battery decreased.	Change a new battery.
The mode indicator twinkles when charging.	1. Low voltage. 2. Short-circuit of the battery.	1. Back to normal after 15 minutes charging. 2. Change a new battery.

If such handlings are completed, the equipment still cannot work normally, please contact with the local dealer or the manufacturer.

8 Environmental protection

Please dispose according to the local laws.

9 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 REFINE MEDICAL INSTRUMENT CO., LTD. The industrial design, inner structure, etc, have claimed for several patents by REFINE, any copy or fake product must take legal responsibilities.

7

After service card

Name of Customer			
Address			
Post Code		Tel	
E-mail			
Purchase Date		Production Date	
Distributor			
Model		Product No.	

 Guilin Refine Medical Instrument Co., Ltd.
No.8-3, Information Industrial Park, High-Tech Zone, Qixing District, Guilin, Guangxi, 541004, P.R. China
Tel: +86-773-7796886 Email:refine@refine-med.com
Website: http://www.refine-med.com

 MedNet EC-REP GmbH
Borkstrasse 10 · 48163 Muenster · Germany

Product life: 5 years
Production date: please refer to packaging label.

8

