



V400

LED Light Curing Device

OPERATION MANUAL

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1. Introduction

1.1 Introduction

URIT Medical Electronic Co.,Ltd is the professional dental equipment manufacturer, which has strong self-developing ability and completely quality control system.

1.2 Principle and scope

LED Light Curing Device adopts the principle of ray radiation to solidify the light-sensitive resin by shooting at it in a short time.

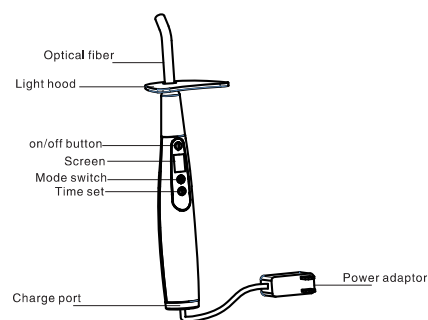
It is used to shoot on the restorative material based on polymer and solidify it in a short time.

1.3 Product feature

- Constant light intensity, the solidification effect is not affected by the consumption of remaining power
- Super capacity battery. A full charge can be used for more than 700 times continuously under 10 s working mode.
- Ergonomics design, excellent and comfortable handle feel during the treatment
- Auto power-off

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2. Structure and components



Power adaptor:

AC100~240 V 50/60 Hz

Input power: 10 VA

Out power: DC 4.2 V/0.5 A

LED light feature:

5W blue LED light

Wave length: 400 nm~515 nm

Class: II class

Accessible emission limit (AEL): $3.9 \times 10^{-3} \text{ J}$

Checking: LED light is working when correctly

operate

Radiation: $1000 \text{ mW/cm}^2 \sim 1400 \text{ mW/cm}^2$

Optical effective area of optical fiber: 50 mm^2

Working condition:

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

Relative humidity: $\leq 80\%$

Atmosphere pressure: 75 kPa to 106 kPa

Device safety class:

Operation mode: Short time operation device

Protection type against electrical shock: Internal power

Protection against electrical shock: type B

Protection against harmful ingress of water or

particular matter : ordinary equipment (IPX0)

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

4. Install and uninstall

4.1 Take off the red cap from optical fiber and insert the metal part into the front of the main unit (Make sure to screw the fiber to the end).

4.2 Install the light hood on the optical fiber.

4.3 Uninstall the LED, just reverse the procedure above.

4.4 The battery has no memory and can be recharged at any time. Plug the power adaptor into the AC 100 V~240 V power supply, then connect the output plug of the adapter to the rear charging port of the curing light.

4.5 battery replacement must by professional personnel or the manufacturer designated personnel for replacement.

5. Operation

5.1 Choose one of three operation modes by pressing the

mode switch button on the curing light.

• Full power: The screen shows 01, the blue light radiates in full power. (recommending mode for clinical)

• Progressive: The screen shows 02, the blue light power increase stronger continually, after 5 seconds reaches to the highest power.

• Pulse: The screen shows 03, the blue light works on the pulse condition.

5.2 Press the "T" timeset button to choose from 3.5, 10, 15, 20, 25, 30, 35, 40 seconds for working time.

5.3 During the operation, aim blue light at the position needing solidification. There is a "Di" sound and the LED starts working. Then it counts down to "0" to end the solidification.

5.4 Press "I" on/off button to stop during the operation.

5.5 When the shooting period is done, press the "I" on/off button again for next shooting period. If the device becomes hot, the user should stop using the device and wait till the device cooling down. Recommending shooting period is not over 10 times.

5.6 Low battery alert: This device contains the low battery

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checking function. When the battery is low of power, the screen will blink.

5.7 The battery has no memory and can be recharged at any time. Plug the power adaptor into the AC 100 V~240 V power supply, then connect the output plug of the adapter to the rear charging port of the curing light to charge. The charging indicate turns green, which shows the stand by status. The charge indicate turns red for charging. When the charging is finished, it turns green.

5.8 The device will be automatically power off after 1 minutes in idle, and press any button to start.

5.9 The solidification effect for composite resin is not less than 4mm in 10 seconds.

6. Precaution

- 6.1 For the first time using, please charge the device for at least 4 hours.
- 6.2 The optical fiber is fragile glass, and knock, impact and crash are forbidden.
- 6.3 During the operation, the light should be aimed straightly on the resin, to ensure solidification effectively.

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- 6.4 Make sure install the original manufacturer light hood correctly in order to avoid the harm of blue light to the eyes. It is forbidden to aiming light at eyes directly.
- 6.5 Please use the original manufacturer power adaptor. The other power adaptor may cause the damage to the battery or circuit of the device.
- 6.6 It is forbidden that plug any metal or other conductor into the bottom of the device in order to avoid the damage to the battery or internal circuit of the device.
- 6.7 Please charge the device at dry and ventilated place.
- 6.8 It is forbidden to take the battery apart.
- 6.9 It is forbidden to impact and shake the battery. Do not short the battery, and do not place the battery with any metal item together.
- 6.10 Take off the battery from the device when do not use the device for long time.

7. Contraindications and applicable groups

It is forbidden to use this device for the patient has biological response.

The heart disease patients, pregnant women and children should be cautious to use this device.

The patients with a cardiac pace maker or a defibrillator

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should not be treated with this product.

Applicable to all groups except contraindications.

8. Maintenance

- 8.1 Please contact the local dealers or distributors for the repair of this device.
- 8.2 User could replace the original manufacturer light hood, fiber hood and battery. Please contact the local dealers or distributors for replaceable parts.
- 8.3 Only the optical fiber can be autoclaved under high temperature of 135 °C, and pressure of 0.22 MPa. The rest of parts could be cleaned or disinfected by clean water or disinfectant. Do not soak the device. Do not use volatile and diffuent detergent to clean the device.
- 8.4 In order to make sure the performance, clean the optical fiber if there is any resin left on it after the treatment.

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9 Trouble shooting

Faulty	Possible cause	Solution
Non-indication Non-act	<ul style="list-style-type: none"> Continuous use for a long time and then heat protection circuit working Power cable not connected or power off. Device damaged. 	<ul style="list-style-type: none"> Stop using the device for few minutes, then it could be back to normal. Check the power connection between device and power. Contact the local dealer or VRN.
Screen shows "Er"	Device malfunction	Send it back to dealer or VRN
Light intensity insufficient	<ul style="list-style-type: none"> Optical fiber is not inserted well to the bottom. The optical fiber has cracked. There is resin remain on the surface of the optical fiber. 	<ul style="list-style-type: none"> Install the optical fiber well. Change the optical fiber. Remove the resin.
The device is not charging when the adaptor is connected.	<ul style="list-style-type: none"> The adaptor is not connected well. Faulty of adaptor or incompatible. The charging point is impurity. 	<ul style="list-style-type: none"> Reconnect. Change the adaptor. Cleaned by the alcohol.

If all the above solutions have been completed, the device still can not work normally, then please contact the local dealer or URIT.

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10 Storage and transportation

- 10.1 This equipment should be handled carefully, kept away from shaking point, installed or stored at shadowy, dry, cool and ventilated places.
- 10.2 Do not store it together with articles that are combustible, poisonous, caustic and explosive.
- 10.3 This equipment should be stored in the environment where the relative humidity is less than 90 %, the atmosphere pressure is 75 kPa to 106 kPa and the temperature is -20 °C to 55 °C.
- 10.4 Excess impact or shake should be avoided during the transportation.
- 10.5 Do not mix it with dangerous articles during transportation.
- 10.6 Keep it away from sun or snow or rain during transportation.

11 After service

Please contact the local dealer or agent for the after service details.

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12 Environmental protection

There is not any harmful element in this device. It can be disposed according to the local laws.

13 Symbol instruction

	Atmospheric pressure limitation		Type B applied part
	Refer to instruction manual/ booklet		Fragile, handle with care
	Serial number		Do not dispose of the product into the ordinary municipal waste or garbage system
	Caution		VRN Manufacturer's logo
	Humidity limitation		Temperature limit
	This way up		Keep dry
	Use-by date		CLASS II equipment
	Environment-friendly use period		Date of manufacture
	Manufacturer		

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14 Statement

We reserve the rights to change the design of the equipment, the technique, fittings, the instruction manual and the content of the original packing list at any time without notice. If there are some differences between blueprint and actual equipment, take the actual equipment as the norm.

15 Accessories list

No.	Attachment Name	Quantity
1	optical fiber	1
2	light hood	1
3	charger	1

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