stomdevice

WOODPECKER®

CURING LIGHT LED.C
USER'S MANUAL

(Please read this manual before operating)



Industrial design patent No.: CN 200830300501.7

FDA CE

GUILIN WOODPECKER MEDICAL INSTRUMENT CO., LTD.

www.glwoodpecker.com

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и С

stomdevice

Content

1. Introduction 1
2. Principle and usage 1
3. Structure and components 1
4. Technical specifications 1
5. Instruction of recharging 2
6. Operation 3
7. Precaution 5
8. Contraindication 6
9. Maintenance 6
10. After service 6
11. Packing List 6
12. Troubleshooting 6
13. Storage and transportation 7
14. Environmental protection 8
15. Manufacturer's right 8
16. European authorized representative 8
17. Symbol instruction 9
18. Statement 10
19. EMC - Declaration of conformity 10

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

stomdevice

1. Introduction

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.

2. Principle and usage

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

2.2 This product is used to restore teeth and solidify material for whitening teeth.

3. Structure and components

LED.C (dental) is composed mainly of high power LED, optical fiber and main unit. (Picture 1)

4. Technical specifications

4.1 Power supply:

Rechargeable Lithium battery

Battery model: ICR18490

Battery voltage and capacity: 3.7V/1400mAh

Input of adapter: 100V to 240V~ 50Hz/60Hz

Built-in fuse of adapter: 1A/250V

4.2 Applied part: optical fiber

4.3 Light source:

Blue light

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Wave length: 420nm-480nm

Light intensity: 1000mW/cm^2~1200mW/cm^2

4.4 Working condition:

Environment temperature: 5℃ to 40℃

Relative humidity: 30%~75%

Atmosphere pressure: 70kPa to 106kPa

4.5 Dimensions: Φ23mm×263mm

4.6 Net weight: 124g

4.7 Consumption power: ≤8W

4.8 Protection type against electrical shock: class Ⅱ

4.9 Protection against electrical shock: type B

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

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

5. Instruction of recharging

5.1 Load the battery into the compartment of the pedestal charger. Be sure not to opposite the electrode.

5.2 Connect adapter to the AC100V~240V.Machine standby when indicator lighting green. Put the battery into the pedestal, when indicator turns yellow, starts recharging. After recharging indicator turns green, and shut off the electricity and take out the battery from the compartment.

5.3 The battery has no memory and can be recharged any time.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

5.4 The main unit should be in a full charge when it's used for the first time, the ordinary charge time for a full charge is 4 to 6 hours.

5.5 After recharging, shut off the electricity and take out the battery from the compartment.

Picture 1



6. Operation

6.1 Let the cathode of the battery face down to the battery compartment, and tighten it to the main unit (See Picture 1).

6.2 Take off the red cap from the optical fiber and then insert the metal part into the front of LED.C, make sure to screw the fiber to the end.

6.3 To install the light hood on as show in picture 1.

6.4 Press the time button to choose the solidification time.4 working time

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

stomdevice

modes are available: 5, 10, 15, 20 seconds.

6.5 Lightly press the mode key. Following three modes are available.

6.5.1 Full power mode: blue light shine in full power.

6.5.2 Ramping mode: The power of the blue light turns from weak to stronger, and reaches the highest power in 5 seconds.

6.5.3 Pulse mode: blue light work in the mode of pulse.

6.6 During the operation, aim blue light at the position needing solidification. Press the ON/OFF switch, the LED starts to work under the selected mode. Then it counts down to "0" second to end the solidification.

6.7 After the operation, please clean the fiber with calico in order not to affect the light intensity.

6.8 The depth of solidification of composite is no less than 4mm per 10 seconds.

6.9 The optical fiber can be spinned off by 360°and should be sterilized for 4 minutes with 134℃ and 2.0bar~2.3bar (0.20MPa~0.23MPa) before each use.

6.10 During operation, if the indicator light of mode twinkles, it means low volume, recharge it at once.

6.11 Please take out the battery and store it carefully when not operating regularly.

6.12 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

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

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.

7. Precaution

7.1 Please recharge the battery at least 4 hours before first time usage.

7.2 Connect adapter to the AC100V~240V.Machine standby when indicator lighting green. Put the battery into the pedestal, when indicator turns yellow, starts recharging. After recharging indicator turns green, and shut off the electricity and take out the battery from the compartment.

7.3 Avoid aiming at eyes directly.

7.4 It is advised to use the original pedestal charger, adapter and Lithium battery, because other brand pedestal charger, adapter and Lithium battery are likely to damage the circuit.

7.5 Please recharge the battery in cool and ventilated room.

7.6 It is forbidden to self-taking apart the battery, in order not to result in short-circuit or leakage.

7.7 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.

①WARNING: If the curing light works for 40s continously,the temperature of the top of optical fiber may reach 56℃.

②WARNING: Do not modify this equipment without authorization

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

of the manufacturer.

8. Contraindication

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

9. Maintenance

9.1 Only the optical fiber can be autoclaved under high temperature and pressure.

9.2 After operation each time, please shut off the power source and clean the optical fiber.

10. After 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 for units and parts.

11. Packing List

The components of the equipment are listed in the packing list.

12. Troubleshooting

Faulty	Possible cause	Solution
Non-indication Non-act.	1. Battery has run down. 2. Battery is fixed upside down. 3. The LED.C works continuously too long and the heat protection system works.	1. Charge the LED.C. 2.Refix the battery, pay attention to the ends of the battery. 3. Stop the operation for several minutes.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Faulty	Possible cause	Solution
Light intensity insufficient.	1. The optical fiber is not inserted till the botton. 2. The optical fiber has cracked 3. There is resin remained on the surface of optical fiber. 4. Low battery.	1. Insert the optical fiber again correctly. 2. Change the optical fiber. 3. Wipe off the resin. 4 Charge the LED.C.
Show "Er".	1. The battery's voltage is low. 2. The LED.C is damaged.	1. Charge the LED.C. 2. Contact the local distributor or us.
Battery lasting time becomes shorter.	The battery's capacity becomes smaller.	Change a new battery.
Indicator light of pedestal doesn't shine in the process of recharging.	1.Power supply cord is not connected well. 2. Battery is fixed upside down.	1.Check the power supply cord and connect it well. 2.Refix the battery, pay attention to the ends of the battery.

If all the above solutions have been completed, the machine still can not work normally. Please contact our special repair shop or us.

13. Storage and transportation

13.1 This equipment should be handled carefully, kept away from

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

shaking point, installed or stored at shadowy, dry, cool and ventilated places.

13.2 Don't store it together with articles that are combustible, poisonous, caustic and explosive.

13.3 This equipment should be stored in the environment where the relative humidity is10%~93%, the atmosphere pressure is 70kPa to 106kPa and the temperature is -20℃ to +55℃.

13.4 Excess impact or shake should be avoided during transportation.

13.5 Don't mix it with dangerous articles during transportation.

13.6 Keep it away from sun or snow or rain during transportation.

14. Environmental protection

Please dispose according to the local laws.

15. Manufacturer's right

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 real equipment, take the real equipment as the norm.

16. European authorized representative

EC REP MedNet GmbH
Borkstrasse 10 · 48163 Muenster · Germany

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

17. Symbol instruction



Trademark


CE marked product


Type B applied part



FDA marked product



Ordinary equipment


Class II equipment


Date of manufacture


Alternating current


Manufacturer


Recovery


Used indoor only


Keep dry


Screw inside/ outside


Handle with care



Temperature limitation for storage



Humidity limitation for storage



Atmospheric pressure for storage


Appliance compliance WEEE directive


Consult the accompanying documents

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

EC REP Authorised Representative in the EUROPEAN COMMUNITY

18. 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.

19. EMC - Declaration of conformity

The device has been tested and homologated in accordance with EN 60601-1-2 for EMC. This does not guarantee in any way that this device will not be effected by electromagnetic interference Avoid using the device in high electromagnetic environment.

https://stomdevice.ru - стоматологическое и электротехническое оборудование с доставкой по России и СНГ

Guidance and manufacturer's declaration - electromagnetic emissions		
The models LED.B & LED.C are intended for use in the electromagnetic environment specified below. The customer or the user of the models LED.B & LED.C should assure that it is used in such an environment.		
Emissions test	**Compliance**	**Electromagnetic environment - guidance**
RF emissions CISPR 11	Group 1	The models LED.B & LED.C use RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR11	Class B	The models LED.B & LED.C are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions IEC 61000-3-3	Complies	

Guidance & Declaration — electromagnetic immunity			
The models LED.B & LED.C are intended for use in the electromagnetic environment specified below. The customer or the user of the models LED.B & LED.C should assure that it is used in such an environment.			
Immunity test	**IEC 60601 test level**	**Compliance level**	**Electromagnetic environment - guidance**
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±6 kV contact ±8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	±2kV for power supply lines ±1 kV for input/output lines	±2kV for power supply lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV line to line ±2 kV line to earth	±2 kV line to earth	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11.	<5 % U_T (>95% dip in U_T) for 0.5 cycle 40 % U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95 % dip in U_T) for 5 sec	<5 % U_T (>95% dip in U_T) for 0.5 cycle 40 % U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95 % dip in U_T) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the models LED.B & LED.C require continued operation during power mains interruptions, it is recommended that the models LED.B & LED.C be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.
NOTE U_T is the a.c. mains voltage prior to application of the test level.			

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Guidance & Declaration - Electromagnetic Immunity

The models LED.B & LED.C are intended for use in.the electromagnetic environment specified below. The customer or the user of the models LED.B & LED.C should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3V 3 V/m	Portable and mobile RF communications equipment should be used no closer to any part of the models LED.B & LED.C, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. **Recommended separation distance** $d=1.2\times P^{1/2}$ $d=1.2\times P^{1/2}$ 80 MHz to 800 MHz $d=2.3\times P^{1/2}$ 800 MHz to 2.5 GHz where *P* is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and *d* is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey,[a] should be less than the compliance level in each frequency range.[b] Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE I At 80 MHz end 800 MHz. the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

[a] Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the models LED.B & LED.C are used exceeds the applicable RF compliance level above, the models LED.B & LED.C should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating the models LED.B & LED.C.

[b] Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3V/m.

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ

Recommended separation distances between portable and mobile RF communications equipment and the models LED.B & LED.C

The models LED.B & LED.C are intended for use in electromagnetic environment in which radiated RF disturbances is controlled. The customer or the user of the models LED.B & LED.C can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the models LED.B & LED.C as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150kHz to 80MHz $d=1.2\times P^{1/2}$	80MHz to 800MHz $d=1.2\times P^{1/2}$	800MHz to 2,5GHz $d=2.3\times P^{1/2}$
0,01	0.12	0.12	0.23
0,1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance *d* in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where *P* is the maximum output power rating of the transmitter in watts (W) accordable to the transmitter manufacturer.

NOTE I At 80 MHz and 800 MHz. the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

https://stomdevice.ru - стоматологическое и электротехническое оборудование с доставкой по России и СНГ

stomdevice

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

EC REP MedNet GmbH
Borkstrasse 10 · 48163 Muenster · Germany

ZMN/WI-09-137 V3.3-20170112

https://stomdevice.ru - стоматологическое и зуботехническое оборудование с доставкой по России и СНГ