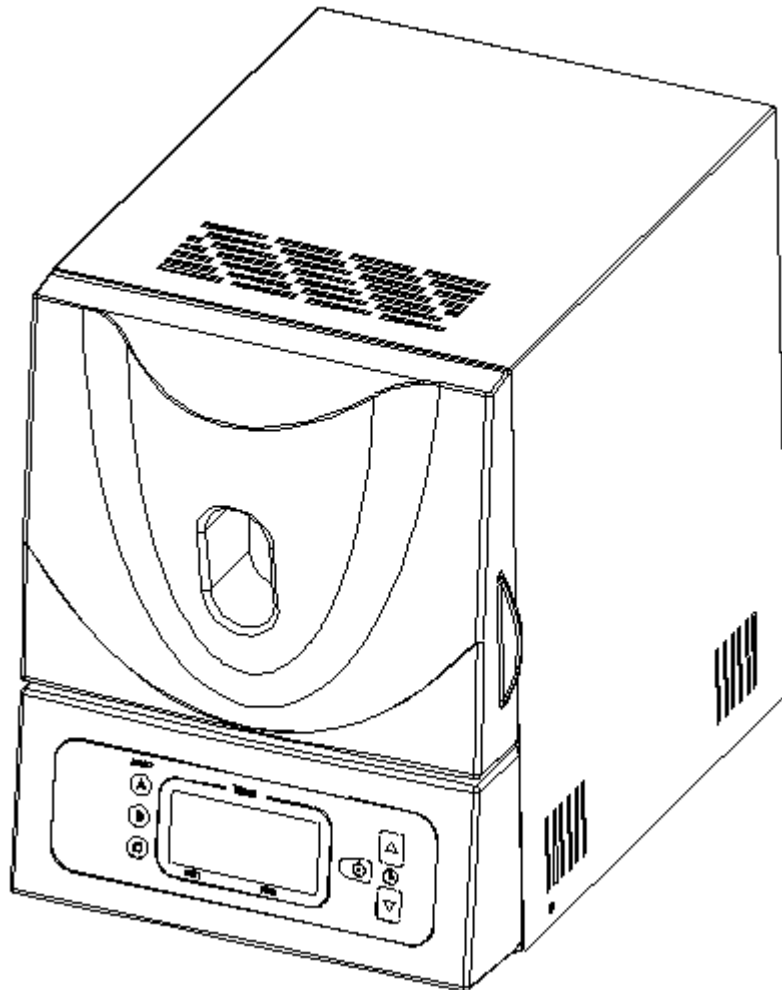# LED LIGHT CURING BOX
Model Name: LQ-Box

Rolence Enterprise Inc.
No. 18-3, Lane 231, Pu Chung Rd., Chungli, Taoyuan 32083, Taiwan
Tel: +886-3-463-1999 ; Website: **www.rolence.com.tw**

S-19-01-1120-U0001 V1.5

Table of Contents

⚠ **EQUIPMENT NOT SUITABLE FOR USE IN THE PRESENCE OF FLAMMABLE ANESTHETIC MIXTURE WITH AIR OR WITH NITROUS OXIDE.**

1. Introduction

1.1 Preface

Dear valued customer, thank you for selecting this LED Light Curing unit. It is a high quality technical product for dental lab professionals. The curing unit is developed for polymerization of dental composite and resin - harden impression tray, forming crown, bridge, artificial gingival and denture finishing etc. It is used in dental lab technology and equipped with state-of-the-art electronic components.

Inappropriate use may damage equipment and be harmful to human body. Please read the relevant safety instruction in this user manual. This will also help you use this equipment properly and easily.

1.2 Characteristic/feature

1. This unit consists of dental blue LEDs which have much longer lifetime than halogen lamps.
2. Digital display control panel provides simple and user-friendly operation.
3. Widened curing chamber room makes the in-and-out of the curing object easier.
4. Rotating turntable in the chamber room. Inner surface of the chamber is surrounded by glossy stainless steel which reflects the LED light and makes performance uniform.
5. Buzzer upon curing process complete.
6. Safety interruption of curing process if door is opened.

1.3 Signs and symbols

The signs and symbols in the user manual and on the curing unit facilitate the finding of important points and have the following meanings:

⚠ **:** Caution, attention.

∿ **:** Alternating current.

| **:** On (supply)

◯ **:** Off (supply)

☉ **:** Turn on/off the light by pressing this button.

🕒 **:** Use this button to preset the curing time. The increment is 10sec, and the longest curing time setting is 9 min 50 sec each cycle.

CE **:** This product corresponds with CE standards.

2. Safety First

2.1 Indications

The LED lab curing unit must only be used to cure light-curing composite and resin. Uses other than the one foresaid purpose are contraindicated. The manufacturer does not assume any liability for damage resulting from misuse.

2.2 Health and Safety Instructions

1. Direct view into the light without a filter or goggles may lead to eye harm.

2. Do not place the unit in the immediate vicinity of heaters or other sources of heat.

3. Place the apparatus away from combustible objects.

4. Make sure that no foreign objects may enter the air vent.

5. The unit must be used indoors.

Note:

2.3 Working Environment

In order to ensure optimum performance, please keep this unit in a clean environment. Dust might attach on the LED, causing malfunction of the LED or other damage.

3. Product Description

3.1 Product Specification-Technical Data:

Power Supply Voltage:

100-240 VAC   50/60 Hz

Wattage: MAX 200 W

Dimension:

Height:	245.5 mm
Width:	197 mm
Depth:	268 mm
Weight:	6.5KG

Operating Environment:

AMBIENT TEMPERATURE:	+10℃ ～ +40℃
RELATIVE HUMIDITY:	30% ～ 75%
AMBIENT PRESSURE:	700hPa ～ 1060hPa

Transportation And Storage Conditions:

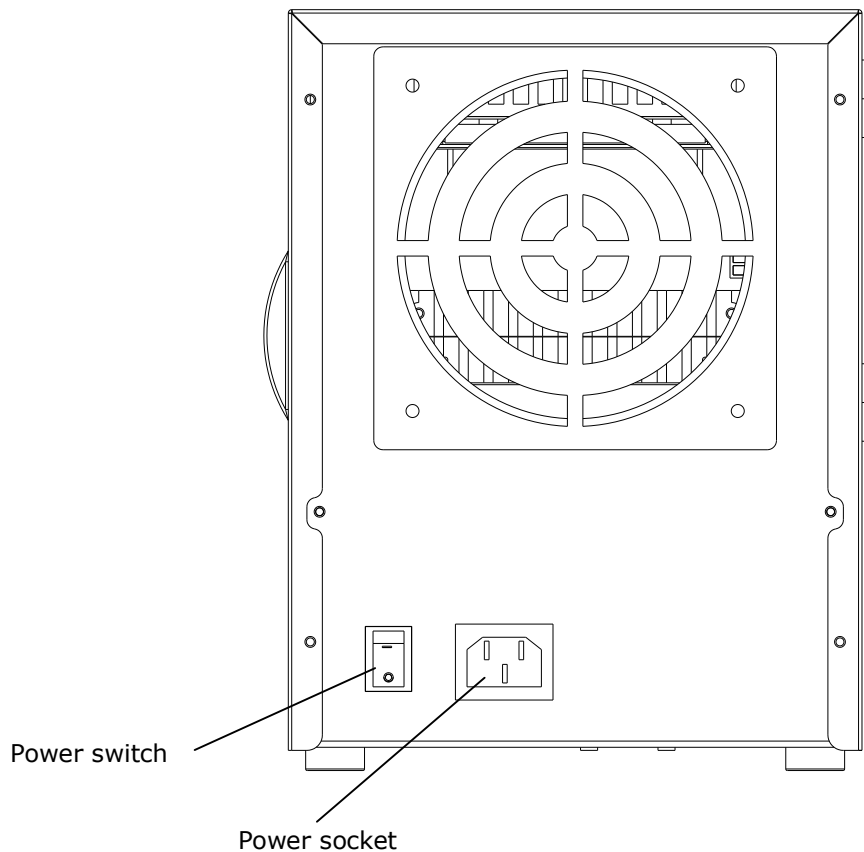|	
AMBIENT TEMPERATURE:	－10℃～+70℃
RELATIVE HUMIDITY:	10%～90%
AMBIENT PRESSURE:	500hPa～1060hPa

Wave Length:	390-470nm
Standard Color:	White

3.2 Unpacking and checking the contents

1 Main curing box equipment

1 Power cord

1 Protective Goggle

1 User manual

3.3 Assembly and initial start-up

1.   Make sure that the voltage indicated on the rating plate complies with local standard.

2.   Selecting location: Place the unit on a flat surface. Make sure it is not exposed to the immediate vicinity of heaters or other source of heat. Protect the unit from direct sunlight. Make sure the air may properly circulate between the wall and the unit.

3.   Connect the power cord with the power socket.

Power switch

Power socket

3.4 Optional Accessories

Optional accessories can be purchase from authorized Rolence dealers, including:

1. Extra eye protection goggles.

2. Digital Light Meter:

Effective range of digital light meter is 0 ~ 5,000mW/cm2 of dental blue wavelength.

4. Operation

Preparation: Turn on the power switch on the back. Put the light-cured object in the effective place/middle of the turntable. Make sure the door is well closed.

4.1 Switching on/off

Control panel consists of digital display timer, "on/off" button, "△"up, and "▽"down time adjusting button. Select your preferred curing time by pressing "up" and "down" button. Activate on/off button to start/stop curing process.
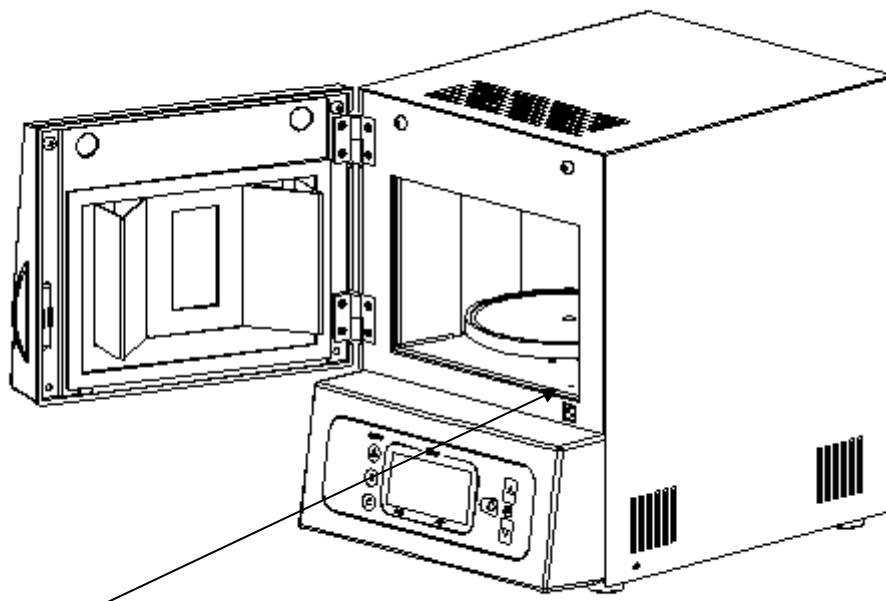
4.2 Curing

This unit supports 2 types of curing process: (1) Regular Continuous Mode and (2) Flashing Mode – 10 Hz on & off flashing. To activate the Regular Continuous Mode curing, press the On/Off button. To activate the Flashing Mode curing, hold down the On/Off button for more than 4 seconds until you hear a beeping sound. The UV Oven will then start the Flashing Mode curing process.

The maximum curing time per cycle can be set at 9min 50sec. When curing process starts, the digital timer counts down - indicating the remaining time of the process. In an emergency, stop the process by re-pressing On/Off button.

4.3 Buzzer

Audible 5-short beeping sounds upon curing process completed.

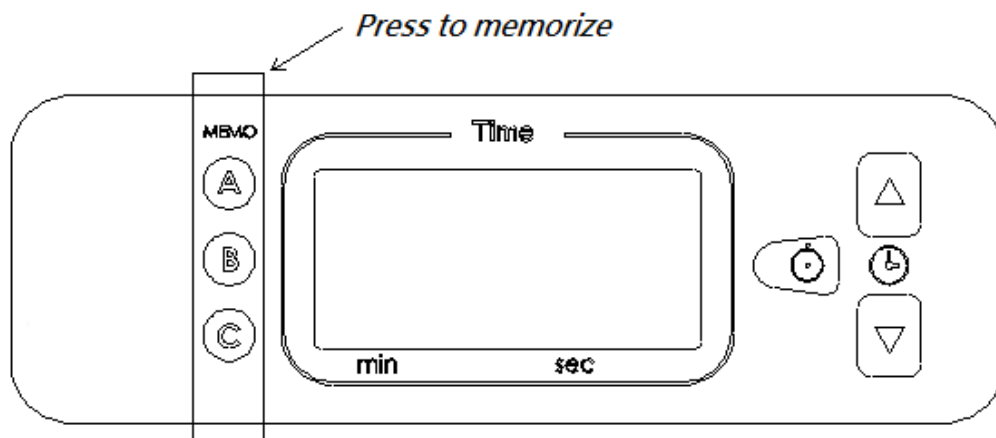Safety switch

4.4 Safety switch

The system will be automatically suspended to protect operator when opening the door during curing. In case operator needs to calibrate light intensity, keep safety switch pressed to make system continue running and lighting.

⚠ If you do not wear a goggle, do not press the safety switch when the system is suspended by opening door. Every time when need to look into the chamber, please wear a goggle for safety purpose.

4.5 Memory Function

The system features memory function to memorize the curing time. 3 settings are available on the left side of control panel showing as three buttons, Ⓐ, Ⓑ and Ⓒ. Press down each button for 5sec, wait till the beeping sound and flashing numbers showing the current curing time is well memorized. Press button to recall preferred setting before use.

5. System maintenance

5.1 Maintenance

Disconnect power cord before cleaning, since there is still a risk of electrical shock. The inner surface of the chamber is surrounded by glossy stainless steel to reflect the LED light. To maintain the light curing efficiency, please make sure the stainless steel is cleaned before curing.

5.2 Cleaning

Please use neutral detergent for cleaning outer surface and chamber. Do not touch LED, as hand sweat considerably shortens the life cycle of the LED. The time for these maintenance/cleaning

procedures depends on the frequency of use and the working habits of the users. It is recommended to clean chamber and stainless steel reflector throughout every 2 weeks at least.

5.3 Changing LED

Total 36 LEDs are used in this unit. To replace the LED, please refer to the Service Manual. All LED parts can be purchased from authorized Rolence distributors.

5.4 Calibration

In order to ensure optimum performance, it is recommended to calibrate LED intensity every year. Please send the unit to authorized Rolence distributor for calibration.

6. Warranty

6.1 Malfunction

Rolence hereby warrants that for a period of one year from the delivery date, this device shall be free from defects in material and workmanship. In case the machine is found malfunctioned under normal use, Rolence will offer service of free maintenance and parts for replacement.

6.2 Repair

Repairs must be only carried out by an authorized Rolence engineer/dealer. If repairs during warranty period are not carried out by an authorized engineer/dealer, warranty will expire immediately.

6.3 Warranty Exception

The warranty stated herein is the sole warranty applicable to Rolence products. Rolence expressly disclaims the liability for warranty even within warranty period, if

(1) Damages caused by natural disaster.
(2) Operator's fault or wrong operation.
(3) Application use other than curing light-cured material purpose.
(4) A malfunction or damage caused by repair, adjustment, modification which is not carried out by authorized Rolence engineers/dealers.
(5) A malfunction caused by abnormal power source or voltage.
(6) It is a consumption part.
(7) Bad working environment causing malfunction, like dust attach on the LED.

(This manual subjects to change without notice.)