



LED CURING LIGHT LED 55

OPERATING AND SERVICE MANUAL



Preface

Thank you for purchasing the LED55 curing light. Please read this manual carefully, before you begin to use the curing light.

Features

1. High brilliance
The LED component part can be used largest ampere in the world.
2. Pure blue light
It can avoid side effect of IR heat energy.
3. Long life
This type of LED can be used over several years.
4. Noiseless
There is no cooling fan in this device, so this device works silently, and without any noise.
5. Save energy
This device consumes electric power less than 10 watts, the consume power just equal 1/10 power of the traditional halogen bulb set.
6. Light strength measurement
To measure the light strength of this device, we need use a digital radiometer that is used by professional dentistry.

Usage

This device can be used to solidify resin compound that is solidified by visible light. It delivers to dentistry for treating the patients` teeth.

Packing list

- | | |
|-------------------------------------|-------|
| 1. LED curing light handpiece | 1 set |
| 2. "O" type battery for handpiece | 1 pc |
| 3. Light guide rod with fix adapter | 1 pc |
| 4. LED curing light base station. | 1 set |
| 5. Mains adapter | 1 set |
| 6. Light cover plate | 1 pc |
| 7. "O" ring | 1 pc |
| 8. Screw driver for special use. | 1 pc |
| 9. Operating and service manual | 1 pc |
| 10. Check out card | 1 pc |
| 11. Warranty card | 1 pc |

Technical Specifications

Safety kind: class II,type B

1. Main adapter
AC 90~250 V., 50~60 Hz
2. Handpiece battery

DC 3.6 V.~4.2 V. (Lithium Ion,2200 mAh)

3. Base station
Voltage: DC 9 V. \pm 0.5
4. Power consumption \leq 10 Watts
5. Optical specification
Wavelength: 430~490nm.
6. Working time setting
20 second (It sounds once every 10 second)
7. Solidifying deep
After 20 second light radiat, the deep of resin solidification is more than 4 mm.
8. Working circumstance
Temperature: 5 ~ 40 degree centigrade.
RH : \leq 80 %
9. Storage circumstance
Temperature: -40~+55 degree centigrade
RH : \leq 80 %

Installation guide

1. Screw the battery into the handpiece.
2. Install the light guide rod
Insert the light guide rod with the fixed adapter to the hole. Which is on the top of handpiece. If the light guide rod is fixed tight, or with any gap when you operate it. Then you can use a screw driver to loosen three screws on the fix adapter, and force the light guide rod to the LED which is in the hole of the top of hand piece, tighten the three screws equally.

Connecting the power source

1. Plug in the main power adapter to power outlet. Then plug the other end of the power supply into the charger base.
2. Insert the handpiece to the base station to charge the battery.

Operating Method

LED curing light handpiece:

There is only one push button on the body of the curing light. It has a double color LED indicator on the upper position, and three different color LED indicators on the lower position.

- Mode select: pressure of push button for at least 2 seconds and hold then force the mode change, the cycling mode as follows:
Fast mode → Pulse mode → Step mode → Fast mode
- On the upper LED (double color) acts as the curing status indicator

LED color	Status indication
Green	Normal
Red	Battery voltage low
Red flashing	LED curing light handpiece is over temperature, handpiece is in rest mode

The three LED on the lower position act as working mode indicators.

LED color	Working mode
Green	Fast curing: Time setting 20 seconds (every 10 second, it sounds once)
Red	Pulse curing: interrupt radiating (every 10 second, it sounds once)
Orange	Step curing: soft start for 10 second from 0 to full power, then full power during the later 10 second

The base station:

It is used for charging the battery of the handpiece, and measuring the light strength.

The light measuring probe and double color LED are used for measuring light strength.

LED color	Light strength
Green	Normal
Orange	Light strength insufficiency

Screw the battery into the handpiece, then insert to the charge seat on the base station, a beep sound, and the green LED light flashed, it shows charging that the unit is charging. When the LED stops flashing the battery is fully charged.

Notice:

If the device is not used every day, the following work should be done.

1. Take off the battery from handpiece , and preserve them separately.
2. Preserve the mains adapter and base station separately.
3. When you insert the handpiece to the base station, you should hear a beep sound and see a green LED light flash. If this does not occur, please turn off the power source to the base station and plug it in again..

Maintenance

1. If the light guide is cracked, it may decrease the efficiency of solidifying, it should be changed

- a new one.
2. How to do the disinfection of the light guide?
Immerse the rod in 75% alcohol several minutes, or use a heating method.
 3. Keep the light guide rod's two terminals clean, for insurance the quantity of light passing.

Trouble shooting

Trouble sign	Cause and repair method
LED on the handpiece is not bright	A. Battery voltage low, please charge it. B. Battery damaged, change new one
LED light strength is insufficient	A. Battery voltage low. Charge it B. Light guide rod is damaged, replace it.
When the basic station works in charge Manner, the LED light flash and beep Sound are all not occurred.	Reset the base station

Warranty

TPC hereby warrants that for a period of one year from the date of purchase this instrument shall be free from defects in material and workmanship and will perform satisfactorily under normal use and service. The warranty stated herein is the sole warranty applicable to TPC products. TPC expressly disclaims any and all other warranties expressed or implied, including warranties or merchantability or fitness for a particular use. TPC liability with prospect to its products expressly limited to the remedies set forth above. The remedies are the buyer's exclusive remedies. TPC shall under no circumstances be liable for incidental or consequential damages.