

Ortholux™ LED Curing Light

Frequently Asked Questions

Ergonomics

1. What is the proper way to hold the Ortholux™ LED curing light?

- A. The handpiece should be held like a pencil, as shown in the picture (ref. Figure 1).



Figure 1

Battery

2. How many patients can be bonded with one full battery charge?

- A. Up to eight full 7x7 hook ups can be completed on one full charge. However, the unit will temporarily shut down to cool off after two to three **consecutive full hook ups**.

3. What should I do if the unit automatically shuts off for cool down?

- A. Place the handpiece back in its charger or table holder and wait for about 20 minutes for the LED light to cool before resuming use.

4. What about the memory effect? Should the light always be charging while not in use?

- A. For optimum performance, the nickel metal hydride battery should be conditioned over its **first 3 charge/discharge cycles**. To do this, completely charge the unit before initial use and then use the curing light, without intermittent charging until fully discharged – (i.e. place the handpiece on the table holder instead of the charger). Repeat this 2 more times. After conditioning, the curing light may be charged or discharged at any time.

5. What is the lifetime of the battery?

- A. The nickel metal hydride battery is rated for approximately 10,000 total charges (both partial and full) before it needs to be replaced. This corresponds to about 2 years of use.

LED

6. Does the Ortholux LED curing light emit ultraviolet (UV) light?

- A. No. The Ortholux LED curing light emits a visible blue light.

7. Is the Ortholux LED curing light a laser?

- A. No. It is a light emitting diode. The diode produces a high intensity blue light in the 430 to 480 nm wavelength range.

8. How does the Ortholux LED curing light cure so quickly?

- A. Light cure adhesives contain photoinitiators, such as camphorquinone (CPQ), that polymerize when exposed to light in the 430 to 480 nm wavelength range. Increasing the light intensity in this range speeds the polymerization process, resulting in a faster cure (ref. Figure 2).

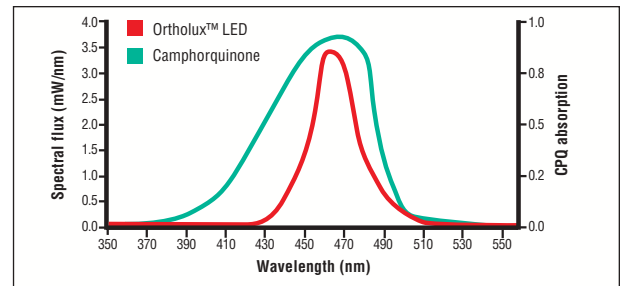


Figure 2

9. How do I verify the light intensity?

- A. Simply use the light meter located near the base of the charging unit. Refer to the Instructions For Use (011-593) for additional details.

10. How consistent is the light intensity over repeated use?

- A. The light emitting diode intensity is engineered to be highly consistent over the operating lifetime of the diode. However, light intensity can be reduced by contamination or damage to the light guide and should be checked periodically using the built-in light meter.

11. What are the factory settings for light intensity?

- A. The light is set for an intensity of approximately 1000 mW/cm². This cannot be changed.

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Curing times

12. How long should I cure *metal* APC™ II Adhesive Coated Appliances or metal brackets coated with Transbond™ XT Adhesive?

- A. Metal brackets should be cured for 5 seconds mesial and 5 seconds distal (total 10 seconds) with the light guide held as close as possible without touching the teeth or appliances. Light source must be held steady while curing. For time efficiency, metal appliances can be cured at the interproximal contact of each tooth for 5 seconds, simultaneously curing the mesial and distal sides of two adjacent brackets.

13. How long should I cure *ceramic* APC II Adhesive Coated Appliances or ceramic brackets coated with Transbond XT Adhesive?

- A. Ceramic brackets should be cured for 5 seconds by placing the light guide perpendicular and 2mm above the bracket. Light source must be held steady while curing.

14. How long should I cure APC II Adhesive Coated buccal tubes or buccal tubes coated with Transbond XT adhesive?

- A. Buccal tubes should be cured for 10 seconds mesial and 10 seconds occlusal. Light source must be held steady while curing.

15. How long should I cure *bands* using Unitek™ Multi-Cure Glass Ionomer Band Cement or Transbond™ Plus Light Cure Band Adhesive?

- A. Bands should be cured for 5 seconds per cusp (total 20 seconds) with the light held on the occlusal.

16. Can the light be used to cure continuously?

- A. The light does not have a continuous curing mode. However, you can cure using the 20 seconds mode and the handpiece will beep every 5 seconds until the 20 seconds have elapsed.

17. How do bond strengths compare when using the Ortholux LED light versus a standard halogen curing light?

- A. Bond strengths are comparable—refer to Figure 3 for a comparison of bond strengths after 24 hours.

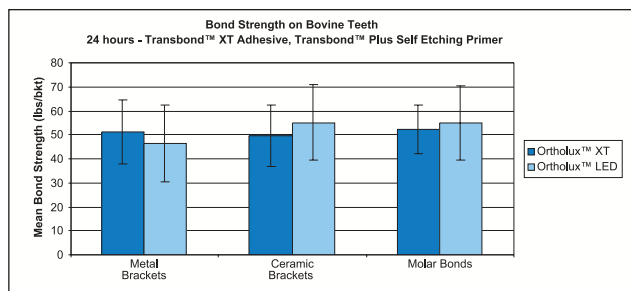


Figure 3

18. Can I cure other adhesives and cements using the Ortholux LED curing light?

- A. Yes. Light cure adhesives containing photoinitiators such as camphorquinone that cure in the 430 to 480 nm wavelength range can be cured using this light.

19. What are the curing times for other light cure adhesives and cements?

- A. Reference adhesive and cement manufacturers' instructions for curing times using LED curing lights.

Maintenance

20. Which disinfectants can be used on the Ortholux LED light?

- A. The Ortholux LED light may be disinfected using standard surface disinfectants, including 3M™ TB Quat, DisCide™ Ultra, BIREX™ SE, Sani-Cloth™ Plus, and Cavicide™ disinfectant.

21. Why should I not spray directly onto the light and why should I wipe the light dry?

- A. If sprayed directly and if not wiped dry, the disinfectant may penetrate into the components and cause damage. The charging unit contact pins must be wiped dry.

22. How can I sterilize the light guide?

- A. Clean the tip before sterilization. Adhering polymerized composite can be removed with alcohol. Steam autoclave at 121°C (250°F) for 30 minutes. Allow light guide to cool for 20 minutes prior to handling. To prevent potential discoloration or damage, do not sterilize by chemical means or hot air.

23. Why should I always place the handpiece on the charger or table holder when not in use?

- A. The curing tip is made of glass and is fragile. If the handpiece is left on a tabletop or a hard surface, there is a possibility for it to drop or hit other hard surfaces and crack. Always ensure the handpiece is completely secure before moving, transferring the light or when not in use.



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