



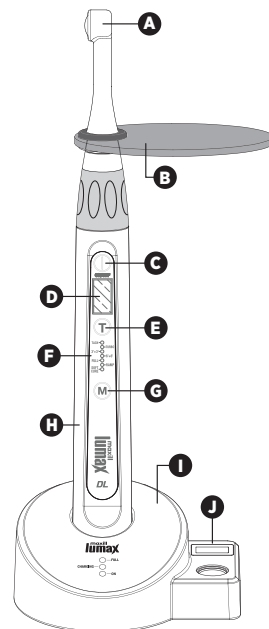
# LUMAX DL CURING LIGHT INSTRUCTIONS FOR USE

This curing light is intended for use by trained dental professionals for the purpose of light curing dental resins and composites

## SPECIFICATIONS

DIRECT LIGHT SOURCE HEAD	10 mm (dia.)	
LIGHT WAVELENGTH	390-430 nm 440-480 nm	
APPLICATION	General / Ortho	
MODE	TACK	2,000 mW/cm <sup>2</sup> for 1 second ± 10%
	TURBO	2,500 mW/cm <sup>2</sup> for 3 seconds ± 10%
	3' + 3'	2,000 mW/cm <sup>2</sup> for 3 + 3 seconds ± 10% (with 1 second blink in between)
	6' + 6'	1,500 mW/cm <sup>2</sup> for 6 + 6 seconds ± 10% (with 1 second blink in between)
	FULL	1,200 mW/cm <sup>2</sup> for 5, 10, 15, 20 seconds ± 10%
	RAMP	First five seconds from 0-1,200 mW/cm <sup>2</sup> ± 10%, next 5, 10, 15, 20 seconds 1,200 mW/m <sup>2</sup> ± 10%
	SOFT CURE	First five seconds from 0-900 mW/cm <sup>2</sup> ± 10%, next 5, 10, 15, 20, 25 seconds 900 mW/cm <sup>2</sup> ± 10%

- A** Direct Light Source Head
- B** Protective Light Shield
- C** On/Off Switch
- D** Display Screen
- E** Time Switch
- F** Mode Indicators
- G** Mode Switch
- H** Curing Light Handpiece
- I** Handpiece Charging Station
- J** Light Intensity Indicator



## CONTENTS:

- CURING LIGHT HANDPIECE WITH CHARGING STATION • 10 MM DIRECT LIGHT SOURCE HEAD • PROTECTIVE LIGHT SHIELD
- DISPOSABLE CURING LIGHT SLEEVES LARGE (100 PCS) • POWER ADAPTOR 100 - 240 V

## ENVIRONMENTAL FACTORS:

Operation: 10°C - 45°C / 30% - 75% relative humidity / 50 - 106 kPa atmospheric pressure

Transportation and Storage: -10°C - 55°C / 10% - 95% relative humidity / 50 - 106 kPa atmospheric pressure.

## INSTALLATION:

### A. CHARGING STATION:

- Plug in power adaptor connection to the charging station and the power supply.
- Turn on the "ON/OFF" switch at the back of the charging station.
- Station power indicator light will be on if power is connected and the "ON/OFF" switch is in "ON" position.

### B. CURING LIGHT HANDPIECE:

- Insert direct light source head into the curing light handpiece with a TWISTING motion. Ensure the direct light source head is fitted securely in the handpiece.
- Put the handpiece in the charging station as shown in above diagram. The "CHARGING" indicator light will be on if handpiece is fitted correctly into the charging station.
- The battery is not fully charged prior to shipment. Please charge the battery for a minimum of 2 hours prior to the first use.
- When curing light handpiece is fully charged, "FULL" indicator light in the charging station will turn on.
- Curing light circuit will automatically compensate for power during use for constant light intensity output.
- When battery is low, display screen will show "LO" and the curing light will cease working. Please recharge the curing light in the charging station.
- We recommend placing the curing handpiece into the charging station to charge whenever the curing light is not in use. Continually charging the curing light will not affect the life of the battery as the unit has a built-in safety function that will stop charging when the battery is full.
- The light intensity should be checked regularly with the light intensity indicator that is built into the charging station. The light intensity output should be within the ranges indicated in our specifications. This provides a general indication and a benchmark but not an accurate reading.
- To check light intensity, hold the direct light source head 90° against the round hole next to the light intensity screen in the charging station. Both direct light source head and the round hole should be clean before checking the output. Switch on the curing light, the output of the light will be shown on the light intensity screen when the charging station is "ON".
- If the curing light intensity indicates less than 20 percent of the range in our specifications, call maxill at 1-800-268-8633 for customer service. It may also indicate it is time to replace it with a new light.

## SETTINGS:

- Turn on the curing light by pressing ON/OFF switch.
- The curing light is preset in the factory at "FULL" mode for 10 seconds.
- To change the time, press time switch for 0.5 seconds. For FULL, RAMP or SOFT CURE modes, time can be adjusted in 5 second increments. TACK, TURBO, 3'+3' and 6'+6' modes have only one time option.
- To change the mode, press mode switch and hold for 3 seconds, then you can select TACK, TURBO, 3'+3', 6'+6', FULL, RAMP, SOFT CURE by continually pressing to locate the mode that you require.
- The mode will be locked in 30 seconds if there are no further changes to the settings. To change, press and hold the mode button for 3 seconds to unlock.
- Every start and end of the programme or every change of time or mode, will be signaled with a 'beep'.
- The light will automatically turn off if it is not in operation for 1 minute, the light will keep the last selected programme in memory once restarted.
- To start using the curing light, put on the disposable curing light sleeve to cover the whole curing light for cross-infection control.
- If curing light handpiece is off, press ON/OFF switch to turn on. The curing light is now ready for operation.
- Press ON/OFF switch to start light curing when preparation is ready.
- After the light curing process is finished, remove and dispose the curing light sleeve for every patient.

## CURING LIGHT MODE APPLICATIONS

<b>TACK</b>	Tack cure, a very short initial curing for temporary processing before final cure. E.g. veneer bonding or temporary cement for in-position and easy removal of excess material.
<b>TURBO</b>	Super fast curing for resin and composite under 2 mm thickness. Also recommended for ceramic brackets, veneers bonding etc.
<b>3' + 3'</b>	3 Seconds Mesial + 3 Seconds Distal for metal brackets resin bonding (with a 1 second blink in between)
<b>6' + 6'</b>	6 Seconds Mesial + 6 Seconds Distal for metal brackets with bonding resin requiring more curing time, and buccal tubes bonding (with a 1 second blink in between)
<b>FULL</b>	For general applications
<b>RAMP</b>	With first 0-5 seconds ramped for general application
<b>SOFT CURE</b>	With first 0-5 seconds ramped for more gentle processing, designed for patients sensitive to heat

## DEPTH OF CURE

MODE	Intensity mW/cm <sup>2</sup>	Time	Depth Measurements	ISO 4049 Depth Measurements (-50%)
TURBO	2,500 ± 10%	3 seconds	4.5 mm	2.25 mm
FULL	1,200 ± 10%	10 seconds	5.2 mm	2.60 mm
RAMP	1,200 ± 10%	10 seconds	4.9 mm	2.45 mm
SOFT CURE	900 ± 10%	15 seconds	5.1 mm	2.55 mm

**Remarks:** Above data is based on test results using an A2 shade composite. The light tip was placed above and pointed perpendicular to the composite. Tests were done as per ISO 4049 Standard. The samples were measured and the data was divided by two (50% of the total composite depth cured). ISO 4049 Standard requires that the results for class II restorative materials should be at least 1.5 mm for non-opaque shades and 1.0 mm for opaque shades. All resins and composites have different curing times. It is recommended that you should test your resins and composites performance to determine curing times required.

## DATA IS ONLY FOR REFERENCE ALWAYS FOLLOW THE INSTRUCTIONS FROM YOUR RESIN AND COMPOSITE MANUFACTURERS

- There are many variables (distance and angle between the tip and composite, area, shade, thickness and type etc.) affecting composite curing times. It is recommend to place and cure only 2 mm for each composite placement.
- Using a barrier sleeve for the curing light will reduce 5-10% of curing light intensity.
- The light tip should be placed approximately 1-2 mm above the resin or composite and pointed perpendicular to tooth surface.
- High intensity lights will produce more heat, when using the light for more than 10 seconds, do not keep the light tip in one position.
- Do not expose soft tissue to curing light for more than 2 seconds or burns may occur.

## CLEANING AND DISINFECTING:

Switch off the curing light and disconnect the charging station from the power supply. The handpiece, direct light source head and charging station can only be wiped with a non alcohol based disinfectant wipe.

Always follow disinfectant manufacturer's recommended instructions.




## TROUBLE SHOOTING:

L0	Battery is low. Curing light will not operate. Recharge battery.
E1	LED bulb loose or other problems. Call qualified technician to repair.
E2	Battery failure. Replace battery.
E3	Light temperature too high. Wait for a few minutes and restart.

## WARNINGS:

- For use by trained dental professionals only for the intended use.
- This device must be used in strict conformity with these INSTRUCTIONS. The manufacturer rejects all liabilities if these rules are not followed or if the unit is used for any other applications.
- The light radiation produced by this type of device can be dangerous and must not be pointed at the eyes. The light produced by this device must be directed only at the zone to be treated in the oral cavity. Always use protection shields and eyewear during curing light in operation.
- Do not use the unit near a heat source. Do not use solvents, detergents or flammable products, which may damage the unit or cause a short-circuit.
- Prevent any liquid from entering the handpiece, charging station or power adaptor.
- Never modify the device or any of its component. Any modification may compromise its safety and effectiveness.
- The LED Lamp is not field-repairable. Do not disassemble this product. Unqualified repairing or tampering with internal parts may lead to serious injury and will VOID manufacturer's warranty.
- Use only with adapter provided by manufacturer.
- Before every use, check the device. Do not use the device if it is damaged in any way. The continuous use of a damaged unit may cause injury or improper results.
- Do not station the device in a position where it is difficult to disconnect from the electricity supply.
- If not using the device for a long time, please charge for at least 2 hours before use.
- US Federal Law restricts this device to sale by or on the order of a healthcare professional/dentist.

## SYMBOLS:

 Electronic Waste: properly dispose of when use is discontinued	 Follow Instructions for use	 Batch code
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## WARRANTY:

Curing light is warranted to the original purchaser against any defective workmanship and materials under accepted installation, use, and service for a period of 24 months from date of purchase.

# maxill inc.

[www.maxill.com](http://www.maxill.com) 1-800-268-8633

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