

SciVision



bryant dental



LUCIDUM

USER MANUAL

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# Dentistry Reimagined

Bryant Dental® is empowering dentists with beautifully designed and expertly engineered technology.

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MagStrap®

LUCIDUM

dentair

IGNIS

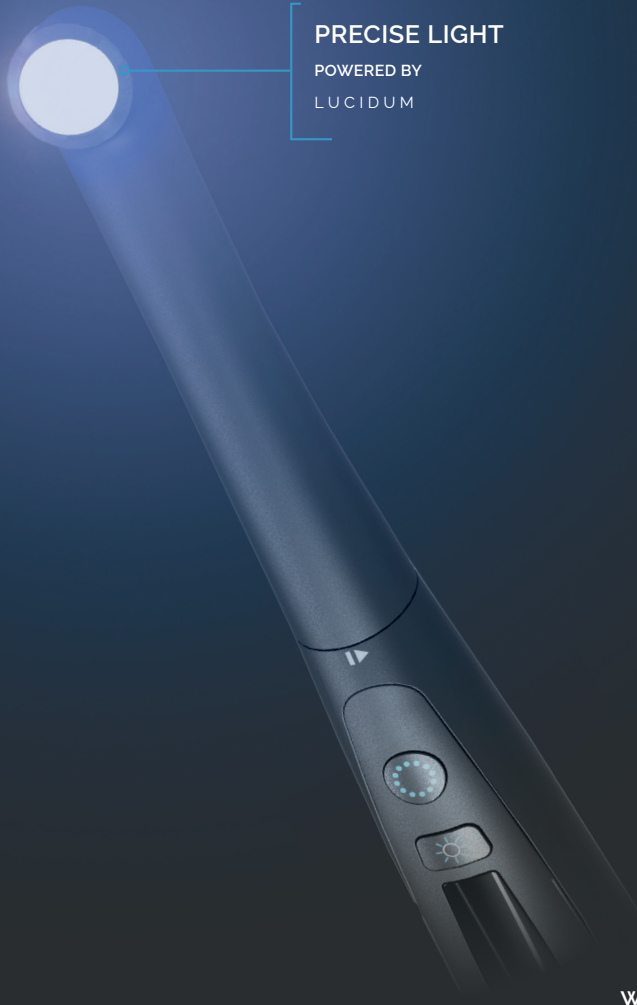
iShields

# Next generation dental curing light

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**PRECISE LIGHT**

POWERED BY  
LUCIDUM

# Introduction

Lucidum cordless LED curing light emits extremely high power light waves and must only be used as indicated in this manual.

When using the Lucidum cordless LED curing light in close proximity of the gingival tissue, do not expose the tissue for more than 20 seconds. If a longer curing time is required, consider a dual-cure product.

In extra-high power mode, do not expose the soft oral tissue for more than 9 seconds. The extra-high power mode has a 2 second safety delay to limit oral tissue heating during consecutive curing cycles. If a longer cure is needed consider a dual cure product.



**Please follow instructions for use before operating this device.**

**Do not** look directly into the light output. The patient, clinician and assistants should wear UV-blocking orange eye protection when this device is in use.

**Do not** bring the device within close proximity of the oral soft tissues. Please maintain a safe distance between the lens and the soft tissue.



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# Caution in operation and intended use



## CAUTION

The device will not operate if the batteries are put in backwards. Do not insert fingers, instruments or other objects into the battery compartment.

### Cautions for Usage

- » This dental curing light is to be used only by trained dental professionals such as Dentists and Dental Therapists.
- » It should not be used by anyone who has not been trained in the safe use of dental curing lights.
- » Only replace the battery after consulting with the dealer or manufacturer's repair engineer.
- » The equipment must not be disposed of as general household waste. Please check with your local authority for more information about disposal regulations. You are able to contact Bryant Dental to recycle your device.
- » Do not disassemble, repair, or modify the dental curing light.
- » If a malfunction or abnormality is found, stop using it immediately and contact your dealer or manufacturer.
- » Only use the power supply provided by the manufacturer and included with the device. Using a non-manufacturer-specific adapter can damage lithium battery and presents a safety hazard.



## CAUTION

- » Do not mix rechargeable batteries with non rechargeable batteries.
- » Do not attempt to charge non rechargeable batteries.
- » Use only safe rechargeable Lithium ion batteries or non-rechargeable batteries.
- » Do not store batteries in temperatures over 60°C or in direct sunlight.
- » Do not autoclave batteries, charger, AC power adaptor or hand-piece.

## Intended use

The source of illumination for curing photo-activated dental restorative material and adhesive.

## Storage and travel

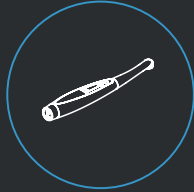
If storing the Lucidum for periods longer than 2 weeks or packing it for travel, always remove the batteries. If batteries are left in the unit for long periods of time without recharging they may become non-functional or non-chargeable.



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# Components



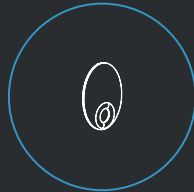
1 Cordless curing light wand



2 Charging cradle



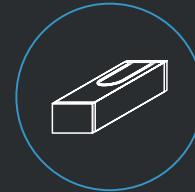
3 Medical grade AC SV DC power adaptor



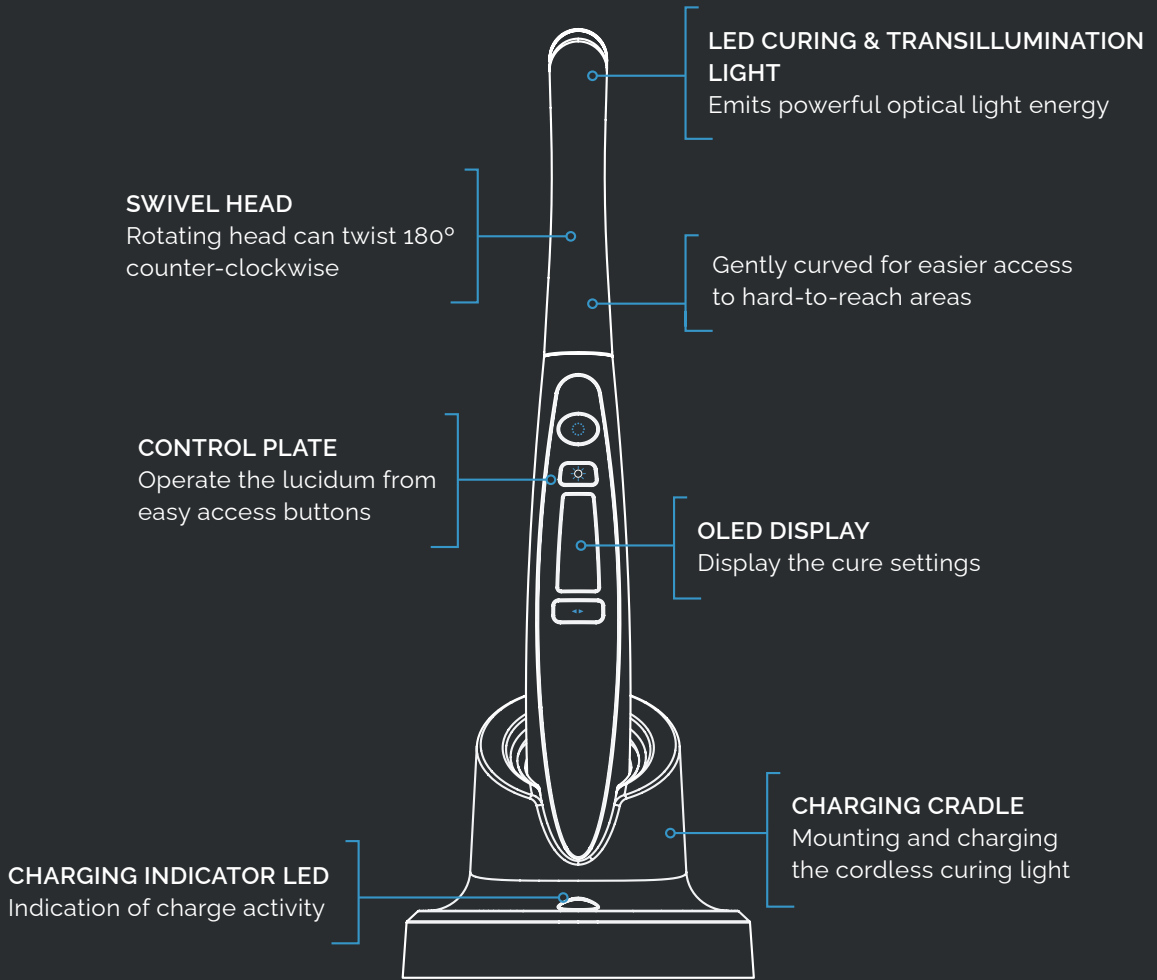
4 Light shield



5 Manual



6 Barrier Sleeves



# Unpacking guidance

## 1 Unpacking

- » Unpack the box and check all components are present.
- » Do not throw away any of the included components or this instruction for use.
- » Please keep the original packaging to assist with future maintenance or safe shipping.

## 2 Check before use

- » Check program cycles by pressing the ◀▶ button.
- » Check the transillumination light by pressing the ☀ button.
- » Check curing LED emission by pressing the 🔵 button.
- » Check charging by mounting the light cure on the charger cradle.



### CAUTION

- » DO NOT IMMERSE OR EXPOSE THE DEVICE TO WATER.
- » DO NOT LOOK/STARE DIRECTLY INTO THE LIGHT OUTPUT.



### Risk group 3

- » WARNING IR emitted from this device may cause injury.
- » Avoid eye exposure.
- » CAUTION UV emitted from this device. Eye irritation may result.
- » Only for use in the dental industry.

### 3 Storage & transportation

- » Do not store the device in conditions of high moisture or high temperature.
- » Do not store the device in places with direct sun exposure.
- » Do not store the device in locations near chemical or gas supplies.

### 4 Operating conditions

#### Air Pressure:

- » 80 kPa - 106 kPa

#### Temperature:

- » 5°C - 40°C

#### Moisture:

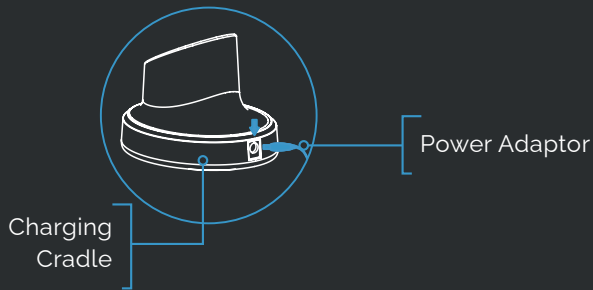
- » 10% - 85%




# Installation

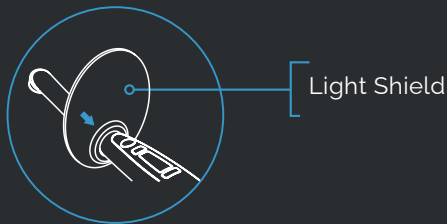
## 1 Connect the charging cradle with the power adaptor

Place the charging cradle on a flat surface without any moisture and connect it to the power adaptor. Only the power adaptor supplied with your Lucidum should be used.



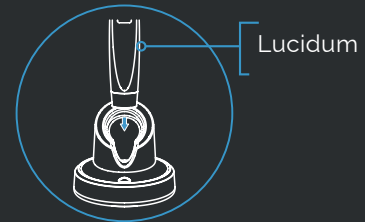
## 2 Connecting the light shield to the light wand.

Slide light shield on and through to just in front of the  button.



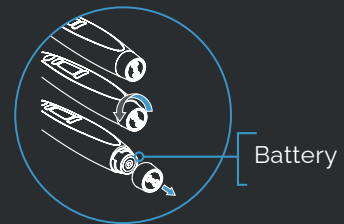
## 3 Charging

Amber LED: Charging  
Green LED: Fully charged



## 4 How to change the battery

Open the battery cap by turning it counterclockwise and change the battery.



## 5 Using barrier sleeves

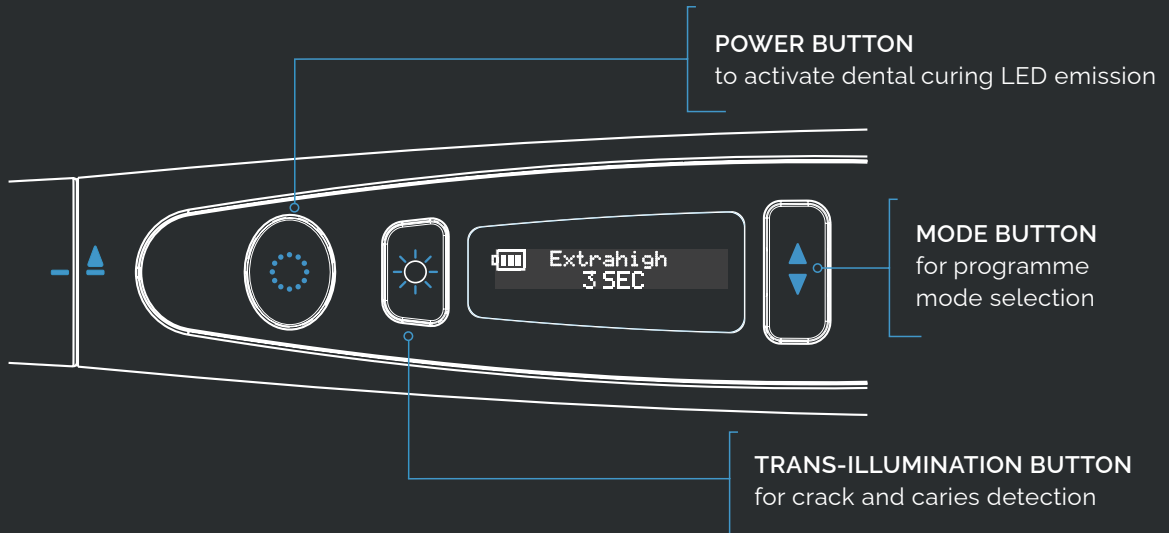
The barrier sleeves prevent cross contamination and moisture ingress as well as keeping dental materials from adhering to the lens surface or wand body.

Additional sleeves can purchased from Bryant Dental or your authorised dealer.



# Operation

## 1 Description of buttons

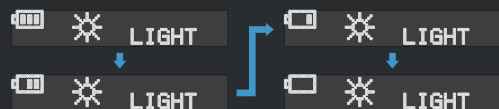


## 2 Power ON

Any button on the device will turn the device on, which will be indicated with a beep sound.


## 3 OLED Display - Battery

Low battery is indicated with flickering of the battery symbol on the display. Batteries will take about 1-3 hours to charge. Please store the Lucidum light in the charging cradle when not in use.



## 4 Mode information

### Curing mode:

Powerful 10W 385-515nm LED activation. This can be started and stopped using the  button.

### Transillumination mode:

White LED can be started and stopped by pressing the  button.



### Cool down:

Lucidum will enter a protected 2s cool down mode by sensing any temperature rise above 73.2°C.



### Sleep mode:

The device will enter sleep mode after 2 minutes of inactivity. Pressing any button will wake the device up.

### Curing mode:

There are 6 curing modes with different properties and outputs which are detailed on the next pages.

### Selection mode:

Curing mode can be selected by pressing the  button.





## 5 Head rotating

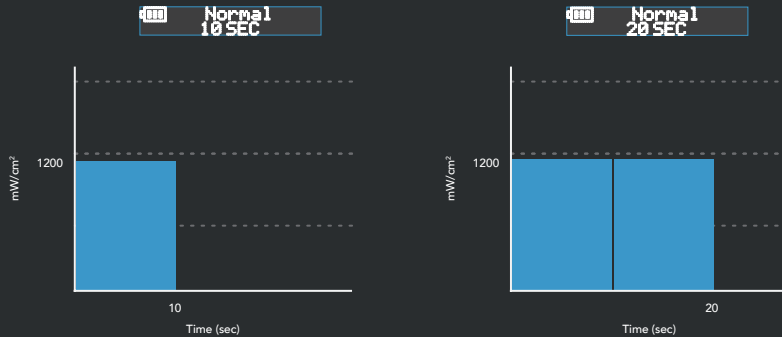
You can rotate the device head by gently twisting in a counter-clockwise direction.



# Curing mode description

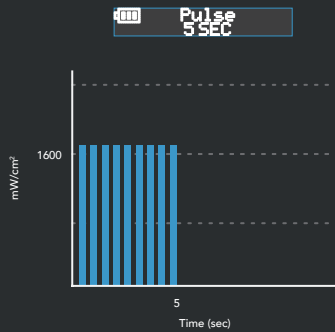
## 1 Normal Mode

Curing time: 10 sec, 20 sec. The recommended pause time is 3 sec.



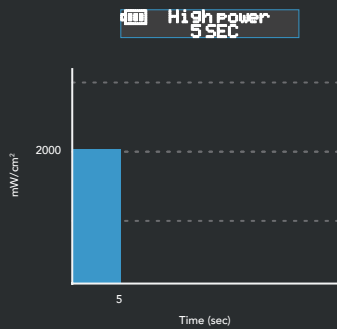
## 2 Pulse 0.6 sec x 5

Curing time: 5 sec. pulse 1 sec cycle is 0.6 sec on & 0.4 sec off.



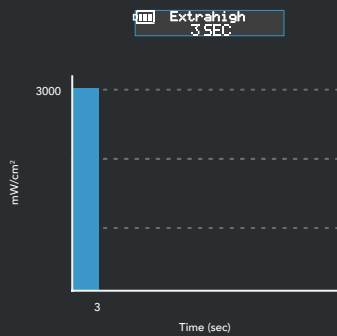
### 3 High power mode

Curing time: 5 sec. The recommended pause time is 3 sec.



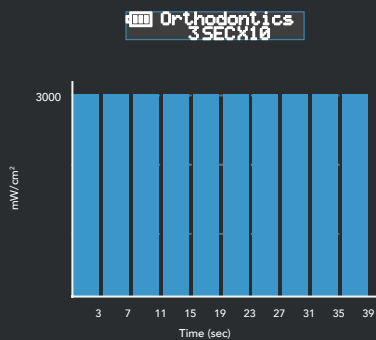
### 4 Extra High 3 Sec Mode

Curing time: 3 sec. The recommended pause time is 3 sec.



## 5 Orthodontics 3 sec x 10 mode

Curing time: 3 sec On/1 sec Off (10x continuous operation).



# Maintenance and cleaning

The aluminium case of the Lucidum curing light is an anodized surface.

After each use, moisten a gauze or soft cloth with an anti microbial surface disinfectant and wipe the surface and lens.

Periodically check the lens for cured dental resins. If necessary, use a non-diamond instrument to carefully remove any adhered resin.

The barrier sleeve must be used to prevent cross-contamination and moisture ingress into the lens module.



## CAUTION

- » DO NOT AUTOCLAVE BATTERIES, CHARGER, POWER ADAPTER OR CURING LIGHT WAND.
- » DO NOT INSERT FINGERS, INSTRUMENTS OR OTHER OBJECTS INTO THE BATTERY COMPARTMENT OF THE WAND.
- » DO NOT ATTEMPT TO CLEAN THE GOLD CONTACTS OR ANY PART OF THE BATTERY COMPARTMENT.
- » DO NOT IMMERSE IN ANY KIND OF ULTRASONIC BATH OR ANY LIQUIDS.
- » DO NOT WIPE DOWN LUCIDUM CORDLESS CURING LIGHT WITH CAUSTIC OR ABRASIVE CLEANERS.

# EU representative



When you plan to dispose of the device, please return to Bryant Dental® for recycling. The European Union Waste Electrical and Electronic Equipment (WEEE) Directive forbids the disposal of waste electrical and electronic equipment as unsorted municipal waste, requiring that it be collected and recycled or disposed of separately.

Hazardous substances are present in electrical and electronic equipment and present potential risk to human health and the environment if disposed of in municipal and fills, which are not designed to prevent migration of substances into the soil and groundwater.

Lucidum® battery packs contain Lithium Ion cells. Recycle or dispose of the batteries according to national, state, and local regulations.

Compliant with RoHS Directive.  
2011/65/EU.



# EMC related cautions and warning

1. If RF interference is detected, then the operator must determine if an artifact caused by the interference will negatively impact lighting performance.
2. **WARNING:** You must only use the accessories, cables, and replacement parts for internal components specified by Bryant Dental to reduce the risk of increased RF (radio frequency) emissions or decreased immunity of the device.
3. **NOTE:** The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.
4. Radio frequency (RF) is a form of electromagnetic energy tested by the EMC standards. The device operates in the range of RF frequencies and are therefore susceptible to interference generated by other RF energy sources. Sources of RF interference include medical devices, information technology products, and radio/television transmission towers. To reduce interference from an RF energy source:
  - \* Increase the separation (distance) between the device and the interfering device (RF energy source).
  - \* Connect the device and the interfering device (RF energy source) to separate outlets on separate circuits, if possible.

5. The electromagnetic compatibility (EMC) testing of this system was performed according to the international standard for EMC of medical devices (IEC 60601-1-2). This International Electrotechnical Commission (IEC) standard has been adopted in Europe as the European Norm (EN) standard (EN 60601-1-2).
6. In some environments, it is difficult to identify the source of radiated interference. To identify the source of the interference, determine the answers to these questions and then contact your service representative with the information you have collected.
  - \* Is the interference intermittent or constant?
  - \* Is the interference present with only one mode?
  - \* Is the interference present if the device is moved to a different location in the facility?
  - \* Is the interference mode-dependent? That is, does the interference occur only in one mode?
7. **WARNING:** Equipment connected to the device and in the patient environment must be powered from a medically-isolated power supply (supply mains) or must be a medically-isolated device.







LUCIDUM



**SN** See device handle    **LOT** See device handle

### Specification and general information:

Operating Voltage	5V $\overline{\text{---}}$ 2.0 A
Battery	3.7V Lithium-ion 2,600 mAh
Curing Light Source	10W Dental Broadband LED
Wave Length Range	385 nm - 515 nm
Curing Light Output	3,000 mW/cm <sup>2</sup> +/-10%
Dimensions of Handpiece	227.77 x 26.41 x 27.93 (mm)
Dimensions of Charging Cradle	88.74 x 106.74 x 78.9 (mm)
Weight of Handpiece	166g
Weight of Charging Cradle	208g



Type B applied part



FDA Certification



Follow instructions for use



Moisture limitation



Atmospheric Pre limitation



Do not use if package is damaged



This device is not sterile



Temperature limit



Fragile, handle with care



Do not dispose



Keep dry



Meets requirements of the Medical Device Directive



Warning and precautions.

Read all instructions before operating this unit. The manufacturer accepts no liability for any damage resulting from the improper use of this device and/or for any purpose other than those covered by these instructions.



Possible hazardous optical radiation emitted from this product. Do not stare at the operating lamp. May be harmful to your eyes - Risk Group 3.



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