

# Cybird

ADVANCED LED CURING LIGHT

**EN** Owner's Guide



Federal Law restricts this device to sale by or on the order of a dentist.

## TABLE OF CONTENTS

I.	Introduction	3
II.	Safety	3
III.	Parts and Descriptions	5
IV.	Installation	6
V.	Operation and Controls	7
VI.	Troubleshooting	9
VII.	Cleaning, Disinfecting, and Sterilizing	9
VIII.	Technical Details	11
IX.	General Information	12
X.	CERTIFICATE OF LIMITED WARRANTY	13
XI.	Electromagnetic Compatibility	14

# Cybird Curing Light

## I. Introduction

Cybird is a LED curing light intended for rapid polymerization of light-cured materials by dental professionals. This product effectively reduces polymerization time on various light-cured materials and provides excellent treatment results every time. Cybird's body is made from industrial-grade aluminum which ensures its durability and excellent heat dissipation. The Cybird features multiple curing modes for maximum functionality.

### Indication For Use:

The Cybird LED Curing Light is intended to polymerize resinous dental materials, restorative composite materials and orthodontic brackets, bonding and sealing materials that are photo-polymerized in the 400-480 nm waveband of visible light

## II. Safety

Cybird Curing Light is designed and manufactured in conformity with applicable safety standards. To prevent damage to equipment and risks for patients, users, and third parties, please follow the safety notes and operate with care. Liability can not be accepted for damage resulting from misuse or failure to operate in compliance with the safety notes.

### 2.1. Explanation of Symbols

	Direct Current
	Manufacturer
	Manufacturer Date
	Serial Number
	Keep Dry
	Unstable
	Waste electrical and electronic equipment

	CAUTION! Related chapter and sections within operating manual
	ELECTRIC SHOCK! Caution for electric shock. Risk or fatal injury if instructions are not followed.
	Refer to instruction manual/booklet
	Type B applied part
	Fragile, Handle With Care
	Use no hooks/Do not puncture
	Relative Humidity



Temperature Limitations



Atmospheric Pressure



Do not look directly into light emitted from LED



Non-ionizing Radiation



Class II Equipment Double Insulated Equipment

### 2.2. Transport Damage

Check the device for any damage after receiving it. If damaged, report immediately to the transportation company within 24 hours from the date of receipt. Under no circumstances, work with a damaged curing light.

### 2.3. Operator's Obligations

Users must be trained and comply with state or local regulations in force for this type of device.

### 2.4. Safety Instructions

Before putting the device into operation, read this manual thoroughly and follow the instructions to avoid any misuse or damage especially related to user and patient's health. Do not use this device without proper eye protection for the operator, assistant and patient.

#### ELECTRIC SHOCK Hazard



#### WARNING

- Before using the device, check the Micro 5pins USB cable & socket for any damage. If they are damaged, do not connect the machine to the main power.
- Do not immerse the product in water. Moisture should be avoided. Electric shock could occur.
- Keep the product in a dry and clean place. Exposure to moisture increases the risk of electric shock.
- Failure to comply may result in injury or death to personnel.

Only use authorized spare parts and accessories supplied by DXM. Use of parts other than those recommended may damage circuitry and will void product warranty. Repair or disassembly of this device must be done by authorized personnel only.

### DXM is not responsible for any damage caused by the following:

- Improper repair or maintenance service performed by unauthorized personnel or facilities.
- Use of any unauthorized replacement parts or accessories



**WARNING**

- Cybird Curing Light produces high-output light energy. Do not look directly at the light emitted from this curing light. **Retinal damage may occur.**
- Patient, clinician and assistants should wear UV orange eye protection when this device is in use. **Retinal damage may occur.**



**CAUTION**

- After use, place the handpiece on the charger base securely. Failure to properly secure the handpiece in the charger base may result in an incomplete battery charge.
- Light output from this light may be significantly increased compared to other polymerization devices; therefore when using this device determine the curing time of your material using the enclosed test block.
- Do not drop the handpiece or light guide. Device damage may occur.
- Avoid electromagnetic radiation generated from other electrical appliances, as they may cause the product to malfunction.
- This product can be used for intra- and extra-oral polymerization of visible light cured dental materials.



**WARNING**

- Take caution when using this product in the presence of a flammable anesthetic mixture or an oxidizer like oxygen or nitrous oxide. This device may act as an ignition source.
- DO NOT expose soft oral tissues at close proximity or burns may occur. Maintain a safe distance between the light guide tip and the soft tissue.
  - ※ (a) CQ=camphorquinone
  - PPD=phenylpropanedione
- If using the Cybird Curing Light in the High power Mode and in close proximity of the gingival tissue, DO NOT expose tissue for more than 20 seconds or minor burns may occur. If longer curing time is required, consider a dual-cure product (composite or adhesive). Irradiance output in the High power Mode is 1500 mW / cm<sup>2</sup>.
- In Plasma Mode, DO NOT expose soft tissue for more than 4 seconds or burns may occur. If a longer cure is needed, consider a dual-cure product (composite or adhesive). Irradiance output in Plasma Mode is 2500 mW/cm<sup>2</sup>.
- Barrier sleeves are single patient use only. Barrier sleeve must be used to prevent patient cross contamination.
- Persons having a history of photosensitizing drugs should not be exposed to light from this light.
- Adjust curing techniques in accordance with the increased energy. Pulpal and soft tissue damage may occur if excessive energy is applied to a restoration.
- The PC or notebook connected to the battery charger must conform to IEC 60950-1 or IEC 60601-1
  - Non-medical grade PC connected to the battery charger, and in the patient environment must be powered from a medically-isolated power source or must be a medically-isolated device. Non-medical grade PC powered from a non-isolated source can result in the leakage currents exceeding safe levels.
- Federal law restricts this device to sale by or on the order of physician or with the descriptive designation of any other practitioner licensed by the law of the State in which he practices to use or order the use of the device.

**Failure to comply with these warnings may result in injury to personnel.**

	Peak wavelength	photoinitiators
<b>Cybird</b>	405 & 465nm	CQ., PPD., Lucirin TPO... <sup>(a)</sup>

## 2.5. Safety Notes

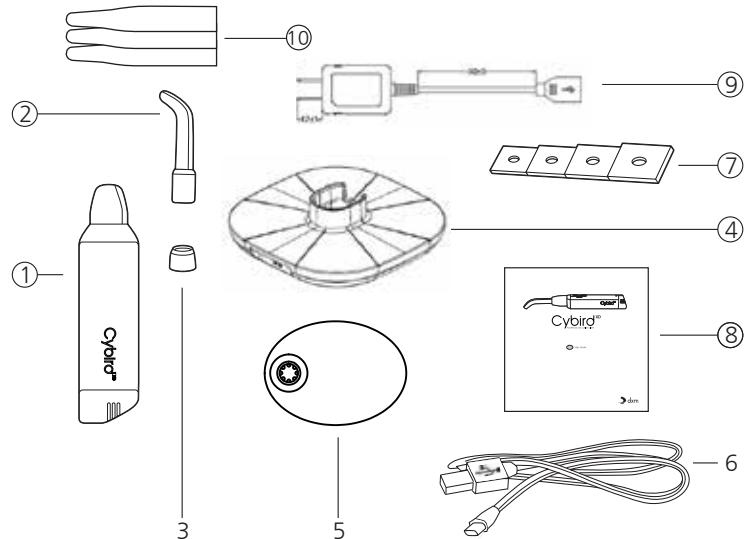
1. Before use, check if the device is working properly and has no visible damage.
2. The fiber-optic light guide is provided in a non-sterile condition and must be sterilized prior to patient contact.
3. In case of device malfunction, discontinue use and refer to the 'Trouble shooting' section in this Owner's Guide. If the problem persists, contact our service center immediately.
4. Do not attempt to repair, disassemble or remodel this product without the manufacturer's permission (DXM). Otherwise, product warranty will be voided.
5. The handpiece is not autoclavable. Do not sterilize the handpiece by immersion or heat sterilization such as dry heat, steam under pressure, or unsaturated chemical vapor (fiber-optic light guide and light shield can be autoclaved).
6. The product is not intended to supply heat to patient.
7. Using barrier sleeves will reduce the light output by 5-10%. Due to the high output power of the Cybird Curing Light, curing has been shown to be substantially equivalent.

## 2.6. Environment Protection

This appliance is labeled in accordance with European directive 2002/96/EC concerning used electrical and electronic appliances (waste electrical and electronic equipment - WEEE ). This guideline determines the framework for the return and recycling of used appliances as applicable throughout the EU. The symbol on the product, or on the documents accompanying the product, indicates that this appliance may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.

## III. Parts and Descriptions

As you remove each item from the box, ensure all box contents are in good condition. If items are missing or damaged, contact your supplier for immediate assistance.



**1. HANDPIECE** The handpiece is equipped with high-power LEDs and its control panel is located on the front part

**2. LIGHT GUIDE** (Clear sheath  $\phi$  11mm) The output of the Curing Light LED is emitted from the end of this piece (autoclavable)

**3. LIGHT SHIELD** (RED opaque elastomer) This shield protects the eyes of the operator from the light emitted from the light guide when in use (autoclavable)

**4. INDUCTIVE WIRELESS CHARGER BASE** (Micro 5pins USB cable Only) The Inductive wireless charger base is for the cordless curing light only. Always place the handpiece on the charger base when not in use

**5. EYE SHIELD** This shield protects the eyes of the operator from the light emitted from the light guide when in use

**6. POWER CABLE** Please use Micro 5pins USB cable(at all times)

**7. COMPOSITE CURING TEST BLOCK** Test curing times and depth of cure (Normally, use 2mm hole)

**8. OWNER'S GUIDE** Cybird LED Curing Light Owner's Guide

**9. POWER ADAPTER** Please use the original power adapter at all times

**10. BARRIER SLEEVES** Use for infection control

## IV. Installation

### IMPORTANT

- For proper operation, the USB cable and charger base must be installed and used in a dry environment. If the charger base becomes wet, unplug it immediately and dry thoroughly before plugging it in and inserting the handpiece.
- Do not place the handpiece into the charger base until it has reached room temperature. Humidity and condensation could damage the electronics.
- The power adapter is designed for use within a voltage range from 100-240V, 50-60Hz.

Ensure that the required voltage is available before connecting the power cord to the power adapter. Failure to do so may damage the electronics. Use only the power adapter supplied by DXM with the Cybird GOLD Curing Light.

- The power adapter is designed for use within a voltage range from 5V DC USB port. Ensure that the required voltage is available before connecting the Micro 5pins USB cable to the USB Port. Failure to do so may damage the electronics.
- Use only the Micro 5pins USB cable supplied by DXM with the Cybird Curing Light.
- Do not use the device unless the power cord is firmly inserted into the electrical outlet

### Connecting the Cybird charger base:

- Insert the power cable-Micro 5PIN (FIG.6) into the receptacle in the Inductive wireless charger base. (Fig.4)
- Place the charger base on a level and secure surface.
- Insert the power cable-USB port (Fig.6) into the power adapter (Fig.9)
- Power adapter Plug cord (Fig.9) into an electrical wall outlet.
- Insert the handpiece into the Inductive wireless charger base. Verify that the Inductive wireless charger base LED is illuminated orange which indicates that the device is charging. An illuminated green LED indicated the light is fully charged.

\* Reference #1

### Charging the battery pack:

- The handpiece should be placed on the charger base when battery is low or not in use.
- Before using the Cybird Curing Light for the first time, please charge its battery for 24 hours.
- Make sure the handpiece is properly connected and placed on the charger base. Do not force fit.
- When the battery is low or discharged, the handpiece will not operate or maintain low power output. Place the handpiece on the charger base immediately for 2-3 hours before attempting to use.
- Charging in progress: ORANGE light is ON
- Charging complete: GREEN light is ON

**NOTE:** Do not operate the device while being charged on the charger base.

### 4.1. Installation procedure

- Gently insert the light guide into the opening on the handpiece. When light guide is fully inserted.
- Place the barrier sleeve over the curing light. Put the Light shield and eye shield over the end of the light guide drawing the barrier sleeve taut.
- Power cable (USB Port) into the receptacle in the power adapter.
- Connect the Cybird Inductive wireless Chager Base to the power adapter. Insert the plug on the power adapter completely into the wall electrical outlet.
- Keep the handpiece on the charger base when not in use.



CAUTION

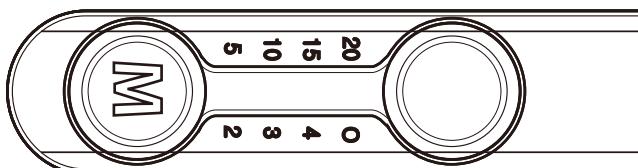
- If the eye shield obstructs view of the restoration, UV eye protection may be worn as an alternate means of protection.
- Do not expose the device or the power supply to extreme temperatures or open fire. Operate in ambient temperatures. (recommended temperature: -5°C ~ +40°C (23°F ~ 104°F). Malfunction may occur.

**CAUTION**

- The Cybird Curing Light will only function properly if all of its components are in good operating condition.
- Check the device components thoroughly before use.
  - Ensure no components are damaged or deformed.
  - Ensure the main plug and the electrical outlet socket are compatible.
  - Check to see if the power cord is damaged.
- When the battery level is critical, the LED display will turn to ORANGE and start blinking: Please fully recharge the Cybird handpiece by placing the handpiece on the charger base for 2-3 hours. Failure to fully recharge may reduce battery life.
- Built-in automatic cool-down protection mode: Cybird handpiece will not function if its surface temperature is above 45°C (113°F) for user's safety. The light will flash alternately between green and orange in the cool-down protection mode. Place the handpiece into the charger base and allow the light to cool down for 5 minutes then try again

## V. Operations and Controls

### Control Panel



Mode Switch

Shot Switch

### 5.1. Powering ON and OFF

- The battery charge level display:** Three green lights indicate a fully charged LED curing light. One or two green lights indicate the curing light is not fully charged. The unit beeps one time after displaying the battery charge level indicating the LED is ready to use.
- Power ON:** Press the Shot switch or the Mode switch to activate Cybird Curing Light.
- Power OFF:** Cybird Curing Light turns off automatically after 5 minutes if no operation is detected (Sleep mode).

**If the curing light is in "Sleep" mode, pressing any switch will "awaken" the light to the curing mode last used.**

### 5.2. Basic Controls

- Mode switch :**
  - Press the Mode switch quickly to select various time settings.
  - Press and hold the Mode Switch for 3 seconds to switch between curing modes. Two beeps are emitted.
- Shot switch :**
  - Press the Shot switch to start the selected curing program.
  - Press the Shot switch during operation to stop the program in progress

### 5.3. Mode Selection

- Plasma E. Mode / Ortho Mode:** When selected, the LED display turns to ORANGE color. The output will be 2,500 mW/cm<sup>2</sup>.
- High Power Mode:** When selected, the LED display turns to GREEN color. The output will be 1,500 mW/cm<sup>2</sup>

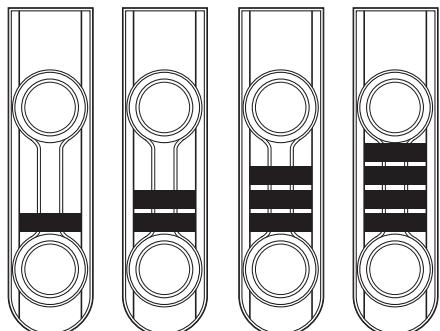
Press and hold the Mode switch for 3 seconds to change curing mode (GREEN and ORANGE light changes alternately).

## 5.4. Polymerization Time Setting

- **Plasma E. / Ortho Mode (ORANGE)** : Quickly press the Mode switch sequentially on ORANGE light to toggle the light through the 4 time settings

### Ortho Mode (Orange) :

Recommended for curing a full arch of orthodontic brackets, or 16 brackets total. When activated, the light will cure for approximately 3 seconds for each mesial or distal side. A visual half-second blink and an audible beep will indicate when each bracket side has been cured.

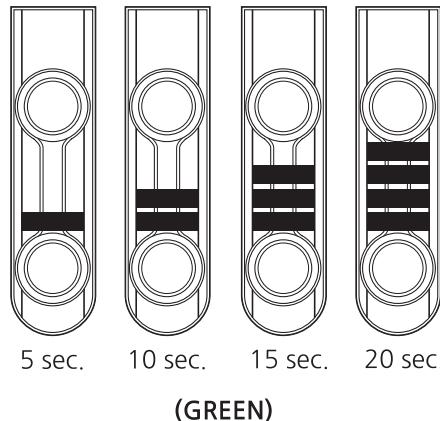


2 sec.    3 sec.    4 sec.    Ortho Mode

**(ORANGE)**

- **High Power Mode (GREEN):**

Quickly press the Mode Switch sequentially on GREEN light to toggle the light through the 4 time settings



## 5.5. Composite Curing Test Block Instructions For Use

Manufacturer's recommended composite curing times are typically based on curing 2mm increments with a minimum acceptable visible light output of 300 mW/cm<sup>2</sup>. For curing lights that provide significantly higher output, the test block enables the user to evaluate high power curing and adjust either the time or increment thickness based on the results. In general, the required curing energy is a constant function of the light output and time (mW/cm<sup>2</sup> x sec). Changes in one factor can be offset by adjusting the other. As an example, doubling the light output (mW/cm<sup>2</sup>) may reduce the curing time (sec) by half. This relationship can be used as a guideline for establishing composite curing test parameters.

The test block is used to determine the curing rate at varying thickness, of a selected combination of composite material and curing light. To use the test block.

1. Place the block on a mixing pad or similar smooth surface, test (bottom) side down.
2. Fill a selected opening (typically the 2 mm deep hole), flush to the top surface, with the composite to be tested.
3. For best results, cover both sides of the filled opening with a clear plastic matrix strip to eliminate the air inhibited layer common with resin curing.

4. Cure the material, from the top, for a chosen length of time.
5. After removing any clear matrix, check the hardness of the cured composite from the bottom by scraping the surface with a tungsten carbide carver or similar instrument.
6. Inspect this cured surface. Ideally, it should resist indentation and there should be no soft material that can be removed by the instrument.
7. Repeat the procedure as necessary to determine an optimum combination of curing time and increment thickness for the material.

**NOTE:** Darker shades within a line of composites normally require additional curing time. Please refer to the material manufacturer's instructions for use.

## VI. Troubleshooting

Please try the following procedures to rectify the common problems listed below.

Contact the manufacturer's customer service department for all other problems encountered.

- **If the Shot or Mode button lights up but doesn't work properly**
  - The curing light may be discharged and needs recharging.
  - Place the handpiece on the charger base to recharge until the orange light changes to the green illuminated light indicating a fully charged curing light.
  - If the curing light does not activate, the unit requires service. Please contact your supplier or authorized service center.
- **If the Shot or Mode button doesn't light up**
  - Place the handpiece on the charger base to recharge until the red light changes to the green illuminated light indicating a fully charged curing light. This will resolve a low-power problem.

- Ensure that the micro 5pins USB cable into the charger base securely. Ensure to Plug the other end of the USB socket(A type) into an USB port.

- **If the Cybird LED Curing Light doesn't polymerize light-cured materials well**

- Ensure that a blue LED light is emitted from the light guide. Do not look directly into the light output.

- Make sure the light guide is inserted into the opening on the handpiece completely. Even a slight gap between the light guide and LED may reduce the polymerization light output up to 50%.

- Check the light guide for any damage. If the light guide has an inner crack even though its surface looks good, it may interrupt proper light emission.

- Check if there's any debris, such as resin residue or sealant on the tip of the light guide.

- Ensure that appropriate mode and time setting is selected according to the type of light-cured material being used.

- Make sure the light cured dental material is stored according to the manufacturer's suggested storage and that the date on the material's package has not expired.

- Check curing depth and time using the enclosed test block. See Composite Curing Test Block Instructions.

- **If the LED light is flickering or unstable**

- Please contact our customer service representative for assistance.

## VII. Cleaning, Disinfecting, and Sterilizing

Cleaning and Disinfection Instructions must be followed after each use.

**Suggested surface disinfectant :**

- Cavicide® (or equivalent quaternary/alcohol blend disinfectant)
- Polyethylene film barrier sleeves supplied with the Cybird GOLD LED Curing Light are single use and non-sterile.
- The purpose is to aid in infection control by addressing cross contamination.
- Ensure that a new undamaged barrier sleeve is installed each time the Cybird GOLD LED Curing Light is used

**Do NOT use:**

• Glutaraldehyde	• Phenol or phenolic cleaner
• Denatured alcohol	• Ammonia complex
• Lysol®	• Iodine complex solutions

**Disassembly and Inspection:**

1. Remove the red elastomer rubber light shield or eye shield from glass fiber-optic light guide. Examine for damage.
2. Remove and discard used polyethylene barrier shield.
3. Remove light guide from handpiece by gently pulling it straight out. Examine light guide ends for damage or composite material adhering to the tip. Examine light shield for tears or distortion. Replace if any damage is noted on either component.

\*CaviCide, CaviWipes and Lysol are not registered trademarks of Coltene/Whaledent Inc.

**Handpiece and Charger Base****Cleaning:**

1. Initial cleaning of handpiece must begin immediately after use to prevent drying of soil and contaminants in and on the device
2. All exterior surfaces of the handpiece or charger base may be wiped with CaviWipes® or a cloth soaked in surface disinfectant to remove gross soil. Do not allow cleaning solution to invade the interior of these components since this may adversely affect the electronics.

**Disinfecting:**

1. All exterior surfaces of the handpiece or charger base must be wiped and wetted with CaviWipes® or a cloth soaked in surface disinfectant.
2. Allow the CaviCide® surface disinfectant to reside on the surface for a minimum of 3 minutes. Do not allow the disinfectant to dry on the surface.

**Drying:**

1. Use a clean dry cloth to dry the exterior surfaces. Do not allow fluids to accumulate in the charger base socket as this may adversely affect the electronics.

**Rinsing:**

1. Using clean tap water on a clean cloth, wipe away residual disinfectant

**Light Guide (Fiber Optic Glass)****Cleaning:**

1. Initial cleaning of the fiber optic light guide must begin immediately after use to prevent drying of soil and contaminants in and on the device.
2. All exterior surfaces may be wiped with CaviWipes® or a cloth soaked in surface disinfectant to remove gross soil. Use a soft brush to remove contaminants in the junction between the glass rod and metal ferrule if necessary.
3. Clean thoroughly using an ultrasonic cleaner such as the Coltene/Whaledent BioSonic® Ultrasonic Cleaning System with Biosonic® US32 Solution Concentrate or equivalent. Minimum cycle time 10 minutes.

**Sterilizing:**

Package in an FDA cleared wrap prior to sterilization. Sterilization can be performed with either of the following cycles:

1. In a pre-vacuum autoclave at 132°C / 270°F for 4 minutes with a 30 minute drying time.

## Light Shield (Elastomer Rubber)

### Cleaning:

- Initial cleaning of the light shield must begin immediately after use to prevent drying of soil and contaminants in and on the device.
- All exterior surfaces may be wiped with CaviWipes® or a cloth soaked in surface disinfectant to remove gross soil. Examine the light shield for damage and discard if any cuts, tears, or distortion is noted.
- Clean thoroughly using ultrasonic cleaner such as the Coltene/Whaledent BioSonic® Ultrasonic Cleaning System with BioSonic® UC32 Solution Concentrate or equivalent.  
Minimum cycle time 10 minutes.
- The elastomer rubber light shield and Tacking Tips can be cleaned, sterilized and reused Prior to re-use inspect for damage and discard if damage is detected.

### Rinsing:

- Using clean tap water on a clean cloth, wipe away residual disinfectant.

### Sterilizing:

Package in a FDA cleared wrap prior to sterilization. Sterilization can be performed with either of the following cycles:

- In a gravity autoclave at 121°C / 270°F for 30 minutes with a 30 minute drying time.

### Reassembly & Storage

- After all parts have been allowed to dry completely, gently insert the metal end of the glass fiber optic light guide into the circular opening of the handpiece. Make sure the light guide is completely inserted until it stops. This will position the light guide properly with the internal LED light source.
- Slip the entire assembly into a new undamaged polyethylene film barrier sleeve. be careful not to cause damage to the barrier sleeve film.
- Fold the end of the barrier sleeve film over the tip of the fiber optic light guide making sure the seam in the barrier sleeve does not pass across the light exit face of the light guide. This will allow optimum light output.

- Slide an eye shield onto the light guide. This will hold the polyethylene barrier sleeve taut over the tip of the light guide and hold it in place ready for the next use.
- Verify the polyethylene film barrier sleeve is still intact and has not suffered damage such as tears or cuts. Store the reassembled Cybird GOLD Curing Light in a clean dry location, preferably on the Cybird GOLD LED inductive wireless charger base so that the battery will be completely charged prior to the next use.

## VIII. Technical Details

### 8.1. Power Supply

- Input: AC 100V-240V / 50~60 Hz
- Output: 5V  , 2A

### 8.2. Dimensions

Components	Cybird Curing Light
Handpiece	140 x 30 x 22.6(mm)
Charger Base	120 x 120 x 45(mm)
Battery Pack	77x 29 x 22.6(mm) 3.7V, 2600mAh
Power Cord	1.5M

### 8.3. Environment

#### A. Operating Conditions



Temperature : -5°C ~ +40°C (23°F ~ 104°F)



Relative Humidity : 10% ~ 85%



Ambient Pressure : 80 ~ 106 kPa (23.62 inHg ~ 31.30 inHg)

#### B. Transportation and Storage Conditions



Temperature : -10°C ~ +45°C (14°F ~ 113°F)



Relative Humidity : 10% ~ 90%



Ambient Pressure : 60 ~ 106 kPa (17.72 inHg ~ 31.30 inHg)

## IX. General Information

### 9.1. Warranty Information

The manufacturer offers 2 year warranty(Battery : 1 year warranty) from the date of purchase.(except for consumables such as light guide and light shield)

- The manufacturer will not accept any liability or provide service for Cybird in case of :
  - Noncompliance with this operations manual
  - Operating and handling without care
  - Damages caused by natural disasters
  - Damage resulting from not using designated power supply

Our products are carefully manufactured to meet stringent quality assurance requirements. Our products are manufactured from new parts or new and serviceable used parts. Regardless, our warranty terms apply. This product has been developed specifically for use in dentistry and is intended to be operated only by qualified dental professionals in accordance with the instructions contained in this guide. However, notwithstanding anything contained herein to the contrary, the user shall at all times be solely responsible for determining the suitability of the product for the intended purpose and the method of its use. Any guidance on application technology offered by or on behalf of the manufacturer, whether written, verbal or by demonstration, shall not relieve the dental professional of his/her obligation to control the product and to make all professional judgments regarding its use.

Any claim for damage or breakage to the product in transit should be made to the carrier promptly upon discovery. DXM does not warrant the product against shipping damage.

### 9.2. Manufacturer Details

Product Name	Cybird GOLD LED Curing Light		
Manufacturer	DXM Co., Ltd.	Category	L.E.D. Curing Light
Address	(Baekseok-dong, Ilsantechnotown Bldg.), 1003, 138, Ilsan-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, Korea (10442)		
EU Representative	DONGBANG ACUPRIME	Telephone	+44 1392 829500
Address	1 Forrest Units, Hennock Road East, Marsh Barton, Exeter EX2 8RU, U.K.		
Usage	This medical device is used for polymerization of light cured material by dental professionals		
Net Weight	350g	Packing	1 LED Curing Light
Serial No.	See label	Production Date	See label
Operation	Refer to owner's guide	Input Power	5V _____, 1.5A or more
Storage	Refer to owner's guide	Output Power	5 W
Wireless charging frequency range	150-175 kHz	Degree of protection against electric shock	Type (B) 
Type of protection against electric shock	Class II Equipment <input checked="" type="checkbox"/> Double Insulated Equipment	Degree of protection against the ingress of water	IPX0

## X. CERTIFICATE OF LIMITED WARRANTY

DXM warrants this product to be free from defects in workmanship and materials for a period of twenty four(24) months from the date of original purchase. During such warranty period, DXM undertakes to repair or replace this product, at its option, if such product does not function properly under normal use and service, which malfunction is due solely to a defect in workmanship or material.

This warranty does not cover any of the following :

- Damage caused by accident, abuse, misuse, neglect alteration, transit, failure to follow manufacturer's instructions, lack of reasonable and proper maintenance and care, or Acts of God.
- Normal wear and tear(i.e. : bulbs, fuses, etc)
- Minor imperfections that do not materially affect the product's performance.
- Use of the product by anyone other than a licensed practitioner or qualified dental hygienist.

This warranty shall become null and void if any repair or servicing of the products is made or attempted by any person not authorized by DXM, or if any repair or servicing.

This warranty is in lieu of any and all other warranties relating to the product, expressed or implied, including, without limitation, implied warranties of merchantability and fitness for a particular purpose. In no event shall DXM be liable for direct, indirect tort, exemplary, punitive, special, incidental, or consequential damages arising from the possession or use of the product, including but not limited to loss of use of the product, lost revenues or profits, or the cost of substitute equipment. The limitations provided for herein shall inure to the benefit of DXM's suppliers and subcontractors.

If this product becomes defective during the warranty period, it must be delivered together with a photocopy of this Certificate of Limited Warranty and a written claim to the DXM dealer from which it was originally purchased. All warranty claims must include a detailed written description of the claimed defect. The purchaser will be responsible for all costs and risks of transit, and we therefore suggest that the product be carefully packed and that it be shipped to the dealer insured for its full value.

**Please be sure to include the following information in case of return:**

- ◆ Name of address of purchaser :
- ◆ Distributor's name and address :
- ◆ Model name / number :
- ◆ Date of purchase :
- ◆ Serial Number :

## XI. Electromagnetic Compatibility

10. The following are guidance and manufacturer's declarations regarding electromagnetic compatibility for the Cybird Curing Light.

### 10.1 EN/IEC 60601-1-2 Table 1

Guidance and Manufacturer's Declaration Electromagnetic Emissions		
The Cybird Curing Light is intended for use in the electromagnetic environment specified below. The customer or the end user of Cybird Curing Light should assure that it is used in such environment.		
Emissions test	Compliance	Electromagnetic environment-guidance
Radiated disturbance	CISPR 11 Group1 Class B	The Cybird Curing light uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
Mains terminal disturbance voltage	CISPR 11 Group1 Class B	The Cybird Curing light is suitable for use in all establishments, including domestic establishments and those directly connected to the public low voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions	IEC 61000-3-2 Class A	
Voltage fluctuations flicker emissions	IEC 61000-3-3 Complies	

## 10.2 EN/IEC 60601-1-2 Table 2

Guidance and Manufacturer's Declaration-Electromagnetic Immunity			
The Cybird Curing Light is intended for use in the electromagnetic environment specified below. The customer or the end user of the Cybird Curing Light should assure it is used only in such an environment.			
Immunity test	IEC 60601 test level	Conformance level	Electromagnetic environment-guidance
Electrostatic discharge(ESD) IEC 61000-4-2	Discharge by 8 kV direct contact 15 kV of Air-gap discharge	Discharge by 8 kV direct contact 15 kV of Air-gap discharge	Floors should be made of wood or concrete or have ceramic tiles. When the floor is made of synthetic material, the relative humidity must be at least 30%.
Radiated RF Electromagnetic Field immunity IEC 61000-4-3	10 V/m 80 MHz-2.7 GHz 80% AM at 1 kHz	10 V/m 80 MHz-2.7 GHz 80% AM at 1 kHz	The Cybird Curing Light is suitable to use in Home healthcare environment.
Immunity to Proximity Fields from RF wireless Communications Equipment Table 9 in IEC 60601-1-2	28 V/m Max. 385-5785 MHz in according to table 9	28 V/m Max. 385-5785 MHz in according to table 9	RF communication equipment is used on closer than 30 cm to any part of the Cybird Curing Light, including cables specified by DXM.
Electrical fast transient/burst IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for I/O lines 100 kHz repetition frequency	± 2 kV for power supply lines	The quality of supplied power should be suitable for general business site or hospital environment.
Surge IEC 61000-4-5	± 1 kV line to line ± 2 kV line to earth	± 1 kV line to line	The quality of supplied power be suitable for general or domestic environment.

Immunity to conducted disturbances induced by RF fields IEC 61000-4-6	3 V 0.15-80 MHz 6 V in ISM & Amateur radio bands between 0.15 and 80 MHz 80% AM at 1kHz Power supply line & I/O lines	3 V 0.15-80 MHz 6 V in ISM & Amateur radio bands between 0.15 and 80 MHz 80% AM at 1kHz	The strength of RF field in the frequency range higher than 150 kHz~80MHz, the strength of the RF field is smaller than 3 V
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0 % UT: 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°  0 % UT; 1 cycle and 70 % UT; 25/30 Cycles Single phase: at 0°  0 % UT; 250/300 cycle	0 % UT: 0.5 cycle At 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°  0 % UT; 1 cycle and 70 % UT; 25/30 Cycles Single phase: at 0°  0 % UT; 250/300 cycle	The quality of supplied power is suitable for general domestic or home health care environment. For the user to operate the equipment continuously even the electric power supply is interrupted, it is recommended that the uninterruptable power supply device (UPS) or battery is prepared.
Magnetic field of supply frequency (50/60Hz) IEC 61000-4-8	30 A/m	30 A/m	If LED Lighting degradation of performance occurs, it may be necessary to position the Cybird Curing Light further from sources of power frequency magnetic fields or to install magnetic shielding. The power frequency magnetic field should be measured in the intended installation location to assure that it is sufficiently low.

## Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### FCC Caution:

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter.

### IMPORTANT NOTE:

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

### IC Statement

This Class B digital apparatus complies with Canadian ICES-003.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter. The device could automatically discontinue transmission in case of absence of information to transmit, or operational failure.

Note that this is not intended to prohibit transmission of control or signaling information or the use of repetitive codes where required by the technology.

(FR) Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

### IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.



DXM Co., Ltd.

(Baekseok-dong, Ilsantechnotown Bldg.), 1003,  
138, Ilsan-ro, Ilsandong-gu, Goyang-si,  
Gyeonggi-do, (10442), KOREA  
Tel. : +82 70 4804 8275  
Fax : +82 31 909 8276  
[dxmoverseas@gmail.com](mailto:dxmoverseas@gmail.com)  
[overseas@dxm.co.kr](mailto:overseas@dxm.co.kr)

Dentazon Corp. - US Headquarters  
20610 Manhattan Place  
Suite 108 Torrance,  
CA 90501 USA  
Tel. : +1 310 328 1600  
Fax : +1 310 328 1604  
[dentazon@gmail.com](mailto:dentazon@gmail.com)  
[info@dentazon.com](mailto:info@dentazon.com)

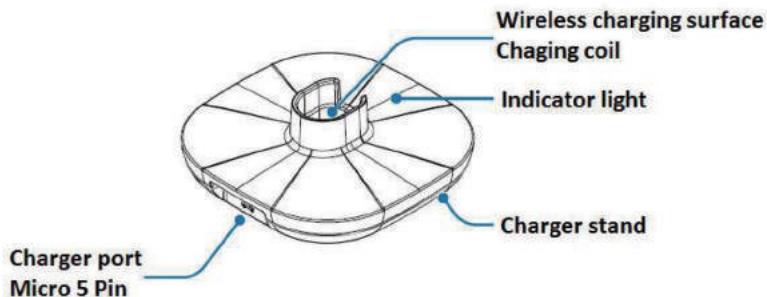
**EC REP**

Authorized EU Representative:  
DONGBANG ACUPRIME  
1 The Forrest Units, Hennock Road East,  
Marsh Barton, Exeter EX2 8RU, U.K  
Tel. : +44 1392 273908  
Fax : +44 1392 823232



[www.dxm.co.kr](http://www.dxm.co.kr)

## \* Reference



### Operations and Controls

#### Charging the battery pack (Inductive charging)

1. Make sure the hanpiece is properly connected and placed on the charger base.  
When the charger is correctly connected on the charger base, the indicator flashes orange light and then immediately turns off.
2. Place the handpiece on the charger base and check the charging progress by the indicator.  
As the handpiece is connected on the charger base the device is charging.

\* Take caution to prevent pinching fingers when you put the handpiece into the charger base.

### Indicator light identification

The indicator light alerts you to the wireless charge

Color	Status
Flashing Orange and turn off	When connected to a power outlet
Flashing Blue	When charging
Flashing Orange	When not charging properly due to a general error
Blue	When fully charged
Off	When the handpiece is removed from the wireless charger or when the wireless charger is not connected to a power outlet

\* If the indicator light does not work as described, disconnect the charger from the wireless charger and reconnect it

### Product Spec.

Main chipset	STWBC (STi)	Coil Type	A11 (WPC standard)
Power Input	5V / 1.0A	Power Output	5W (5V, 1.0A)
Charging efficiency	63%	Temperature sensor	NA
Output USB Charger	NA	LED Indicator	Dual LED
Dimensions	120 x 120 x 45 (mm)	Weight	119 g