SmartLite® iQ2™

L.E.D. Curing Light

CE

OPERATIONS GUIDE AND
DIRECTIONS FOR USE

INTRODUCTION

The SmartLite® iQ™2 unit utilizes light emitting diode (LED) technology for the polymerization of light cured materials in the 450 to 475 nm visible light range.

INDICATIONS

The SmartLite iQ2 unit is designed for curing camphorquinone-based visible light cured (VLC) materials.

CONTRAINDICATIONS

The SmartLite iQ2 Curing Light is contraindicated for use with persons who have a medical history indicating photobiologic reactions (including persons with solar urticaria or erythropoietic protoporphyria) or who are using photosensitizing drugs.

WARNINGS

1. The SmartLite iQ2 Curing Light emits high intensity visible light radiation. Prolonged continuous exposure to eyes, oral mucosa or exposed skin can result in injury or irritation. When curing, position the light probe tip directly over the polymerizable material and avoid extraneous exposure to soft tissue for prolonged periods. Wear suitable protective clothing and eye protection designed to filter blue-violet and ultraviolet radiation. Securely attach protective light shield before use.
   Eye exposure: Avoid prolonged exposure to unprotected eyes. Prolonged exposure may cause blurring or starring of vision, or result in visual after-image. In most cases these phenomena are temporary and do not require treatment. If vision abnormalities persist, consult a physician.
   Skin Contact: Avoid prolonged exposure to skin. If skin rash, sensitization or other reaction occurs, discontinue use and seek medical attention.
   Oral mucosa contact: Avoid prolonged exposure to oral soft tissues. Prolonged exposure may cause soft tissue irritation or burns. Most minor reactions require only thorough cleansing and palliative treatment. If irritation persists, seek medical attention.
2. The SmartLite iQ2 Curing Light is an electric device. To avoid electric shock:
   - Do not attempt to change the Curing LED, open, or alter the unit in any way (other than as directed in these *Directions for Use).*
   - Do not introduce any foreign objects into the housing of the unit
   - Connect the power plug into a suitably grounded and approved outlet. If using an extension cable, make sure that the ground line is not interrupted.
   - Always unplug the base/charger before disinfecting.
3. The SmartLite iQ2 unit is not suitable for use in the presence of a flammable anesthetic mixture with air or nitrous oxide. Use in well ventilated area.

SAFETY PRECAUTIONS

1. This product is intended to be used only as specifically outlined in these *Directions for Use.* Any use of this product inconsistent with the *Directions for Use* is at the discretion and is the sole responsibility of the practitioner.
2. DO NOT look directly at the light emitted from the curing probe. As with any bright light source, staring directly at the source may cause temporary effects such as after-image. Use provided light shield to decrease light exposure and after-image. *(See Warnings)*
3. It is recommended that all curing light users and patients employ suitable eye protection during operation of the SmartLite iQ2 unit. *(See Warnings)*
4. Persons who have had surgery for eye cataracts are especially sensitive to light and generally should not use or be exposed to the SmartLite iQ2 unit unless they employ suitable protective measures. These measures should include the use of spectacles that filter out blue-violet and ultraviolet light. *(See Warnings)*
5. Safety of the SmartLite iQ2 unit has not been established in people who have been fitted with an implanted heart pacemaker and have been cautioned against the use of small electrical appliances (such as electric shavers, hair dryers, etc.). In these cases we recommend that the SmartLite iQ2 unit not be used.
6. DENTSPLY Caulk provides light probes suitable for use with the SmartLite iQ2 unit. Other light probes are used at the discretion and sole responsibility of the practioner.
7. Curing probes are designed with a protective outer coating to prevent light from escaping through the external probe surface. Probes that are scratched or damaged in any way should not be used. Probes are made of fiberoptic glass and may be damaged if dropped or mishandled.
8. Curing Probes must be maintained in a clean, undamaged condition. A contaminated or chipped/scratched tip will reduce the effectiveness of the unit by reducing the amount of transmitted light. Refer to cleaning/disinfection/sterilization instructions and radiometer sections.
9. Check unit for adequate light output before each procedure. Failure to verify output may allow inadequate curing. *(See Radiometer Operation)*
10. DO NOT IMMERSE UNIT IN WATER OR DISINFECTANT. Wipe, do not spray solution onto plastic parts. Prevent liquids from entering openings on unit, especially the socket for the fiberoptic probe. Always wipe the unit with the fiberoptic probe installed.
11. Should the SmartLite iQ2 unit become damaged in any way, do not attempt to operate the unit unless thoroughly inspected and serviced by qualified DENTSPLY Service personnel.

ADVERSE REACTIONS

1. Prolonged unfiltered exposure to the light source may cause damage to the eye. *(See Warnings)*
2. Prolonged contact with soft tissue may cause injury or irritation to the tissue. *(See Warnings)*
3. Medical conditions such as solar urticaria, erythropoietic protoporphyria or cataract surgery may be aggravated by exposure to emitted light. *(See Contraindications, Precautions)*
4. Electrical appliances can interfere with some cardiac pacemakers. *(See Precautions)*

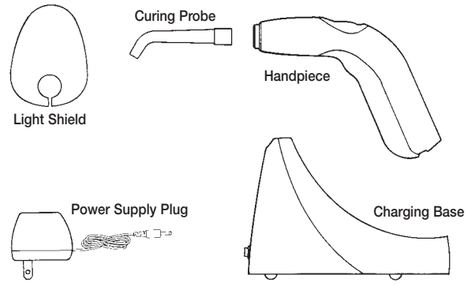
INSTALLATION

NOTE: Upon receiving the SmartLite iQ2 unit, check the packaging and parts for any possible damage that may have occurred in transit. If damage is apparent, please contact your authorized DENTSPLY distributor from which the light was purchased.

Package should contain:
1 – SmartLite iQ2 Unit handpiece
1 – 12mm-8mm tapered fiberoptic curing probe
1 – Light shield
1 – SmartLite iQ2 Unit Charging base
1 – Power supply plug
1 – SmartLite iQ2 Unit DENTSPLY Caulk VLC Materials Curing Guide
1 – SmartLite iQ2 Unit Operations Guide and DFU

If parts are missing, please contact your authorized DENTSPLY distributor immediately.

NOTE: Verify the line plug of the power supply plug is properly rated for your facility, and that all connections comply with safe practices and all local requirements. Always use unit in conjunction with a properly grounded outlet.



1. Align the probe with the socket of the handpiece and insert until it is seated fully and snaps in place *(Figure 1).* (To remove an attached probe, grasp it at the base near the handpiece and pull firmly but carefully until it releases from the socket.) Slide the light shield over the probe onto the chuck on the nose of the handpiece *(Figure 2).*

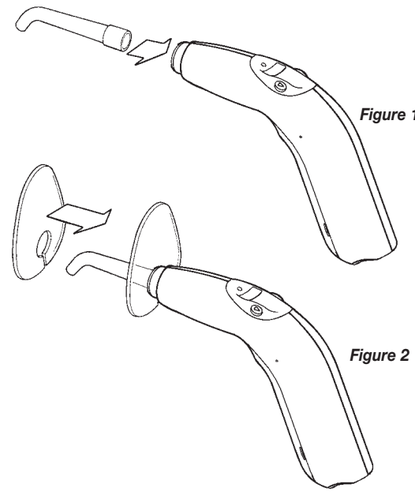


Figure 1

Figure 2

2. Plug the detachable power supply plug into the receptacle on the back of the charging base *(Figure 3).* The power supply plug may now be plugged into an AC supply. The power indicator light on the charging base *(Figure 3)* will illuminate (green) if power is available for charging.

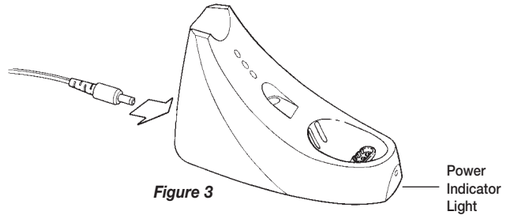


Figure 3

3. Place the handpiece onto the charging base so that the recharging pins on the charging base make contact with the charging pads on the bottom of the handpiece *(Figure 4).* The battery indicator light on the handpiece will illuminate green if the handpiece is placed in the charging base properly.

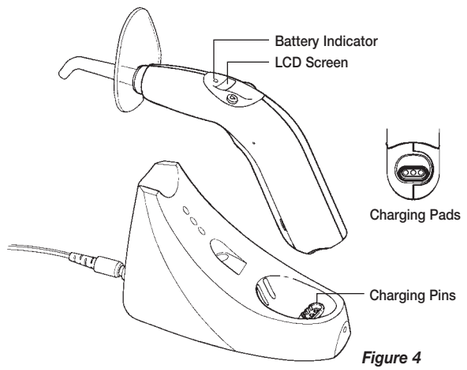


Figure 4

Blinking green: Charging
Solid green: Fully Charged

If the battery indicator light does not illuminate, check for proper placement of the handpiece on the charging base. If proper contact is NOT made between the handpiece and charging base, error code E2 *(see Errors)* will appear on the LCD screen.

NOTE: Allow the handpiece to charge for at least 2 hours before first use.

HANDPIECE STATES

The SmartLite iQ2 unit handpiece has five general states that will affect display modes and functions.

1. **Ready State:** The handpiece is removed from the charging base and is ready to operate.
2. **Sleep State:** If the handpiece is off of its charging base (or if the power is interrupted to the charging base while the handpiece is on it) for more than ten (10) minutes, it automatically powers down into a “sleep” state in order to minimize battery drain.
3. **Curing State:** The handpiece is removed from the charging base, the curing LED has been activated and is in a curing cycle.
4. **Charging State:** The handpiece is properly placed on a powered charging base.
5. **Error State:** In the event of a malfunction of the device, the LCD will show an error code (e.g. “E1”) in place of the curing mode indicator. In an error state the activation or function buttons will not operate. *(Please see Errors section for more information.)*

OPERATION

The SmartLite iQ2 unit will initiate polymerization (curing) of materials that are activated by photoinitiators with a maximum absorption in the wavelength range between 450-475nm (typically camphorquinone).

NOTE: Light curing times for most DENTSPLY restorative and preventive materials may be reduced from standard curing times noted in the materials *Directions for Use.* Minimum recommended curing times for the SmartLite iQ2 unit are provided on the DENTSPLY VLC *Materials Curing Guide* provided with the light.

NOTE: When curing non-DENTSPLY VLC materials, always refer to the manufacturer's directions for curing times. DENTSPLY makes no recommendations for curing times of non-DENTSPLY VLC restorative materials and curing times for those materials are at the sole discretion of the clinician.

NOTE: As with any curing instrument, curing times should be extended when curing through tooth structure or when the distance from the curing light probe to the material exceeds 3mm.

Handpiece Liquid Crystal Display (LCD)

The LCD display provides information about the curing mode, exposure times and battery status of the SmartLite iQ2 unit.

- When the unit is off the charging base and in the ready state the LCD shows the mode and battery charge level. *(Figure 5)*

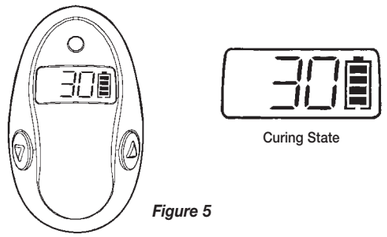


Figure 5

- During a curing cycle, the LCD shows the battery level and either a countdown or count up timer depending upon the selected curing mode *(see Selecting a Curing Mode).*

When the handpiece is on the base and the charging base is properly connected to an AC power source the LCD shows only the battery level indicator. If the battery is recharging, the black bar in the battery icon will cycle from low to high *(Figure 6).*

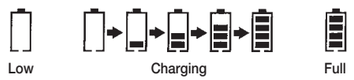


Figure 6

- In the Sleep State the LCD becomes blank.
- In an Error State the LCD will display an error code *(see Figure 9).*

Selecting a Curing Mode

The unit has several different curing time modes. Any one of the various modes may be selected simply by pressing the UP or DOWN buttons on the top of the handpiece next to the LCD window *(see Figure 5).* Pressing and holding either one of these buttons will automatically scroll through the modes. Each button activation is accompanied by a single audible tone.

1. **Standard Modes:** The SmartLite iQ2 unit has five pre-set curing cycles (10, 15, 20, 30, and 40 seconds) The cycle time is displayed on the LCD and upon activation a countdown timer begins.
2. **Continuous Mode:** The SmartLite iQ2 unit has a 60-second "continuous" mode. The continuous mode is displayed as "000" on the LCD and upon activation a count up timer begins and an audible tone sounds every 10 seconds.

Activating and Stopping a Curing Cycle

1. The fiberoptic probe can rotate 360 degrees within the handpiece. Rotate the probe in its socket until the tip of the probe is positioned as desired.

NOTE: When using the 12mm-8mm probe (provided with unit) the DENTSPLY VLC *Material Curing Guide* may be used to determine minimum curing times.

The output power of the unit should be measured/tested before use with the radiometer built into the charging base. See *Radiometer Operation* below.

2. **Starting the Curing Cycle:** Pressing the raised button in the trigger position of the handpiece *(Figure 7)* activates the SmartLite iQ2 unit. At the start of any curing cycle a single audible tone will sound; at the end of the cycle the curing LED will turn off automatically and a double audible tone will sound.

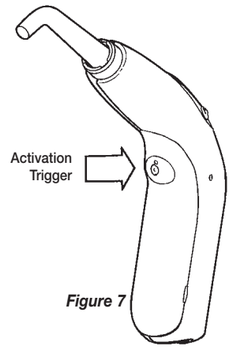


Figure 7

3. **Cycle Interrupt:** If the handpiece is triggered during a curing cycle, the curing LED will shut off and the unit will sound a double audible tone.

NOTE: During a curing cycle the Mode Selector switches are disabled and will have no effect on the unit.

If the handpiece enters an error state at any time a triple audible tone will sound and the curing LED will shut off. Triggering the unit while it is in an error state will result in a triple audible tone. See *Errors* for information.

Radiometer Operation

In order to provide performance characterization of the curing unit, including the curing probe, the SmartLite iQ2 unit charging base has been designed with an on-board radiometer. It is recommended to test the light on the radiometer before each procedure to ensure optimal curing performance of the entire light system.

1. Remove the handpiece from the charging base and place the output end of the fiberoptic probe onto the radiometer detector *(Figure 8).*

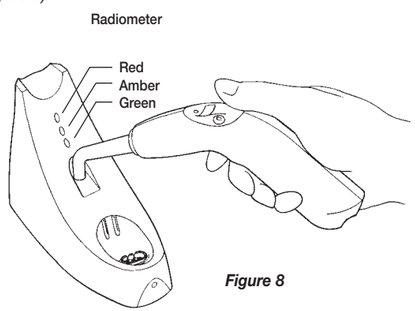


Figure 8

2. Activate the curing cycle (see *Operation* above). The radiometer will light one of three radiometer indicator lights on the charging base immediately above the radiometer detector corresponding to three power levels *(see Figure 8):*
   Green: Unit is providing full curing power and will cure in accordance with the minimum curing times on the DENTSPLY *VLC Materials Curing Guide* (provided) and as recommended in this operations guide.
   Amber: Output is compromised. Check fiberoptic probe for complete seating, damage, and/or foreign matter on the probe that may interfere with light emission (see *Curing Probe Care).* In this output range, it is recommended that the curing time be doubled. Upon completion of procedure, please contact DENTSPLY Caulk at number below.
   Red: Do not use the unit. Check fiberoptic probe for complete seating, damage, or foreign matter on the probe that may interfere with light emission (see *Curing Probe Care).*

NOTE: If amber or red conditions persist, contact DENTSPLY Caulk Professional Services at 1-800-532-2855 ext. 249. Customers outside the USA should contact their nearest DENTSPLY location, as listed in back of this manual.

If none of the radiometer LED's illuminate ensure that there is power to the base charger by checking that the power indicator light is on *(see Figure 3).* Next verify that there is light emitting from the curing probe (do not look directly at the output end of the curing probe). If there is no light check that the unit is not in an Error State. For information on Error States, *see Errors section.*

NOTE: If any of these conditions persist, contact DENTSPLY Caulk Professional Services at 1-800-532-2855 ext. 249. Customers outside the USA should contact their nearest DENTSPLY location, as listed in back of this manual.

NOTE: The radiometer on the SmartLite iQ2 unit charging base has been designed for use with the SmartLite iQ2 unit handpiece *only.* Use of any other curing light source may damage the radiometer detector or provide misleading information to the user and is not recommended.

NOTE: Curing Probes: The radiometer on the SmartLite iQ2 unit charging base has been designed for use with the 12-8mm curing probe supplied with the unit *only.* Using with other probes may lead to misleading readings and are not recommended for use with the radiometer.

BATTERY LEVEL INDICATORS

LCD Display

The LCD displays information about the battery status in a battery shaped icon. Black bars in the icon indicate the battery level *(see Figure 6).* Bars are a relative indicator of battery strength.

3 and 4 Bars: No recharge required
2 Bars: Recharge recommended after completion of procedure
0 and 1 Bar: Recharge required prior to use

Battery Indicator Light

The battery indicator light *(see Figure 4)* on the top of the handpiece above the LCD window provides information about the battery level and charging status of the handpiece. The information from this light also depends upon whether the handpiece is on or off the charging base as described below:

- When the handpiece is removed from the charging base, the battery indicator light indicates charge level showing a green, amber, or red light corresponding to the level of charge of the battery:
  Green: No recharge required
  Amber: Recharge recommended after completion of procedure
  Red: Recharge required prior to use

NOTE: The SmartLite iQ2 unit has been designed to provide full output power regardless of the charge status of the battery. In the event that there is insufficient battery power to drive the SmartLite iQ2 unit, the unit will automatically shut down, three audible tones will sound, and the LCD will display error code E1. *See Errors.*

- When the handpiece is placed onto the charging base, the battery indicator light will be green, regardless of the state of the battery.
- In the sleep state the battery indicator light turns off.

RECHARGING

The SmartLite iQ2 unit has been designed to provide sufficient battery power for multiple days of use in a busy dental operatory with a fully charged battery. For best results return the handpiece to the charging base at the end of each day, or preferably after each procedure.

1. Place the handpiece into the charging base. Be sure that the bottom of the handpiece is properly seated so that the charging pins of the charging base come into contact with the charging pads of the handpiece *(see Figure 4).*
2. When the handpiece is properly seated in a powered charging base, the battery indicator light on the handpiece will be green:
   Blinking indicator light: Charging
   Solid indicator light: Fully Charged
3. When the handpiece is properly seated in a powered charging base, the LCD battery icon will display one of the following: *(see Figure 6).*
   Cycling Battery Icon: Charging
   Solid Battery Icon: Fully Charged
4. When the handpiece is on the charging base, the curing time of the LCD display is disabled. Simply remove the handpiece from the charging base to restore these displays.

SLEEP STATE

The handpiece of the SmartLite iQ2 unit will enter a "Sleep" state to minimize battery drain whenever it has been removed from its charging base for more than 10 minutes without activation. It will also enter this state 10 minutes after loss of power to the charging base when the handpiece is on the charging base.

1. In Sleep State the LCD and battery indicator light on the top of the handpiece will turn off.
2. To wake the unit from Sleep State and return it to Ready State, it is necessary only to press any button on the handpiece.
3. Placing the handpiece on a properly powered charging base will also wake the unit.

NOTE: The last used curing mode will be retained while the unit is in its sleep state.

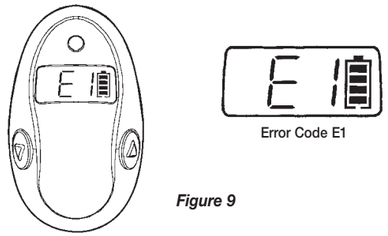
NOTE: The unit will not enter "sleep" state while in a properly powered charging base.

ERRORS

The SmartLite iQ2 unit has been designed to operate with consistent output power and for long life. In order to ensure the proper operation of this light under normal use, several self-diagnostic tests have been incorporated into the unit. These diagnostic tests and the resulting error codes are described

below. Note that any error code is accompanied by a triple audible tone from the handpiece upon the start of the condition and whenever the handpiece is triggered while in an error state.

In the event of a malfunction of the device, the LCD will show an error code (e.g. “E1”) in place of the curing time indicator *(Figure 9).*



Error Code E1

Figure 9

NOTE: The handpiece functions will fail to activate if any error code is displayed in the LCD. See Error Codes below for more information.

1. **Error Code E1:** This code results from an inability of the battery to provide sufficient current to drive the SmartLite iQ2 unit. *Check to ensure that the handpiece battery is adequately charged.* The unit will automatically exit the error state upon being recharged.
2. **Error Code E2:** This code results from improper contact between the charging base and handpiece. *Check to ensure that the handpiece is seated properly on the charging base.* The unit will automatically exit the error state upon being properly seated on the charging base.
3. **Error Code E3:** This code results from overheating of the internal components of the light. It will be necessary to allow time for the unit to cool before further use. The unit will automatically exit the error state upon reaching operational temperature.

NOTE: If any of these conditions persist, contact DENTSPLY Caulk Professional Services at 1-800-532-2855 ext. 249. Customers outside the USA should contact their nearest DENTSPLY location, as listed in back of this manual.

MAINTENANCE

Battery Care

Under normal use there is no special care required for the battery. However, if the unit is in storage for an extended period of time and disconnected from a power source, it is recommended that the handpiece be recharged at least once per year.

Battery Replacement

Replacement batteries are available through your authorized DENTSPLY distributor. Use only the replacement battery specified by DENTSPLY.

1. To replace the battery, open the battery door located in the handle of the handpiece *(Figure 10).* To open the battery door, squeeze with thumb and forefinger on sides of the battery door and pull outward *(Figure 11).*
2. To remove the battery, gently pull battery plug out of the receptor and replace with new battery *(Figure 12).* Do NOT remove the protective foam from the new battery.

NOTE: Allow new battery to charge for at least 2-hours prior to first use.

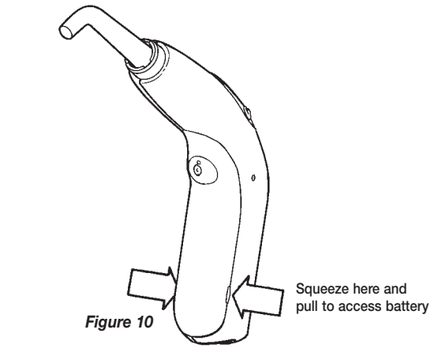


Figure 10

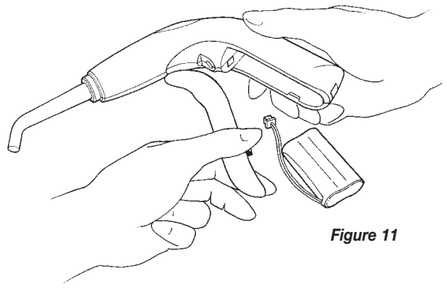


Figure 11

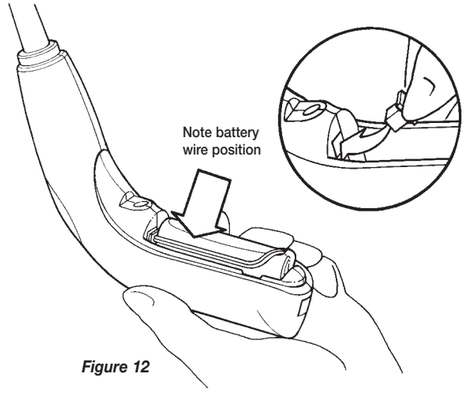


Figure 12

3. If the battery is changed or otherwise disconnected from the handpiece for any reason, the curing mode selection will be lost and the unit will revert to the default settings.

Battery Disposal

The battery used in the SmartLite iQ2 unit may be disposed of through normal refuse-disposal channels per local regulations. IN ORDER TO AVOID INJURY OR CHEMICAL HAZARD, DO NOT DESTROY OR TAMPER WITH THE BATTERY PACK.

CLEANING/DISINFECTION/STERILIZATION

Curing Probe Care

- The use of clear (non-opaque), non-powdered barriers is acceptable and does not affect the curing capability of the curing light.
- Do not remove curing probe from handpiece until handpiece cleaning and disinfection is completed as outlined.
- Remove probe from handpiece as described in the *Installation* section. The removed curing probe may be cleaned by scrubbing with hot water and soap or detergent. Any adherent contaminants such as cured resin materials on the light probe should be removed with a rigid plastic or sharp metal instrument to ensure proper light transmission and curing of VLC materials. Take care not to scratch the polished ends of curing probes.
- Always protect ends of the light probes from abrasive materials. Should the polished ends become marred or scratched, light transmission and curing performance will be diminished.
- The curing probe exposed to splatter or spray of body fluids or that may have been touched by contaminated hands, or oral tissues, should be steam autoclaved.

  Alternatively, the curing probe may be disinfected with a hospital-level disinfectant. Acceptable disinfectants are those that are EPA-registered as tuberculocidal. Iodophors, sodium hypochlorite (5.25%), chlorine dioxide and dual or synergized quaternary ammoniums are approved disinfectants. Do not immerse curing probe in disinfectant. Disinfect the probe by spraying or wiping. Spraying with glutaraldehyde is not recommended. Water-based disinfectant solutions are preferred. The disinfectant manufacturer’s directions should be followed properly for optimum results.
- Use of alcohol or glutaraldehyde based disinfectant solutions will void the SmartLite iQ2 unit warranty.
- It is recommended that probe performance be verified prior to next use using the built-in radiometer on the base/charger unit.

NOTE: If debris cannot be removed or if the probe is damaged (chips, scratches, etc.) it is recommended that the curing probe be replaced.

Handpiece and Charging Base Care

- Disconnect the power supply plug from the power outlet and charging base prior to cleaning.
- Keep the curing probe installed in the handpiece when disinfecting the unit.
- Prior to disinfection, thoroughly wipe all surfaces and the disconnected power supply plug, clean with a damp towel (with mild detergent if needed). Properly discard used towel.
- Handpiece and/or charging base exposed to spatter or spray of body fluids, or touched by contaminated hands or oral tissues, should be disinfected with a hospital-level disinfectant. Acceptable disinfectants are those that are EPA-registered as tuberculocidal. Sodium hypochlorite (5.25%), chlorine dioxide and dual or synergized quaternary ammoniums are approved disinfectants. Do not immerse units in disinfectant. Disinfect the units by spraying disinfectant solution onto a paper towel and wiping or wiping with impregnated wipes. Do not spray disinfectant directly onto the units or allow solution to penetrate the casing. Spraying with glutaraldehyde is not recommended. Some phenolic-based agents and iodophor-based products may cause surface staining. Agents containing organic solvents such as alcohol may tend to degrade the plastic surfaces. The disinfectant manufacturer’s directions should be followed properly for optimum results. Water-based disinfectant solutions are preferred.
- Use of alcohol, phenolic, iodophor or glutaraldehyde based disinfectant solutions will void the SmartLite iQ2 unit warranty.
- DO NOT immerse unit in water or disinfectant. Wipe – do not spray – solution (with curing probe in place) onto plastic parts. Prevent liquids from entering openings on unit.
- Reconnect the power supply plug to the power outlet and the charging base unit when the cleaning and disinfection process is completed.

Protective Light Shield Care

- Remove the light shield from the curing probe prior to cleaning and/or disinfection.
- The light shield may be cleaned by scrubbing with hot water and soap or detergent. The light shield exposed spatter or spray of body fluids or that may have been touched by contaminated hands, or oral tissues, should be disinfected with a hospital-level disinfectant. Acceptable disinfectants are EPA-registered as tuberculocidal. Sodium hypochlorite (5.25%), phenolics and dual or synergized quaternary ammoniums are approved disinfectants. Disinfect the light shield by spraying with or immersing hospital-level disinfectant for the contact time recommended by the disinfectant manufacturer for optimum results. Spraying with glutaraldehyde is not recommended. Agents containing organic solvents, such as alcohol, should be avoided, as they may tend to dissolve the plastic. Water-based disinfectant solutions are preferred.
- The disinfectant manufacturer’s directions should be followed properly for optimum results.
- Following disinfection, thoroughly rinse and dry the light shield before storage. Autoclaving the light shield is not recommended.

WARRANTY

This product is designed for use in a dental office and this warranty is not applicable to other uses. DENTSPLY warrants this product against defective materials and workmanship for a period of twenty four (24) months from the date of purchase. In the event of such a defect, DENTSPLY will repair or replace the product or necessary parts therein, at its discretion, and such repair or replacement shall be the sole remedy of this warranty. This warranty extends only to the original purchase and is subject to these conditions:

1. Fiberoptic curing probes are excluded from this warranty.
2. The unit must not be subjected to abuse, improper installation or application, nor repair service by other than trained DENTSPLY service personnel.

THERE ARE NO WARRANTIES, EXPRESS OR LIMITED, WHICH EXTEND BEYOND THIS DESCRIPTION. DENTSPLY neither assumes, nor authorizes any person to assume for it, any other liability in connection with the sale and use of this product.

DAMAGES ARE LIMITED STRICTLY TO REPLACEMENT OF THE PRODUCT. DENTSPLY EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGES RESULTING FROM ITS USE.

Claims covered by this warranty will be honored when this warranty is presented within 30 days from discovery of defect.

During the warranty period, DENTSPLY International reserves the right to repair or replace this product.

SERVICE

For product service please contact DENTSPLY Caulk customer service at 1-800-532-2855 ext. 249. Customers outside the USA should contact their nearest DENTSPLY location, as listed in back of this manual.

POWER SUPPLY

This device should only be used with a power supply which appears below:

DENTSPLY

Reorder#	***Model***	***Voltage***
644031	GTM3T48-12-1200D (US)	120v
644029	GTM3T48-12-1200D-3 (EU)	230v
644036	GTM3T48-12-1200D-4 (UK)	240v
644030	GTM348-12-1200D (Japan)	100v

TECHNICAL DATA

Model 200

AC Input Rating:	Reorder #644025:	120v
	Reorder #644026:	230v EU
	Reorder #644027:	240v UK
	Reorder #644028:	100v
DC Output Rating:		12vDC, 1200ma
Protection from electric shock:		Type BF Applied Part
		IEC Equipment Class II/Internally Powered
Protection against ingress of water:		(Ordinary Equipment) IXPO
Operation Mode:		Continuous operation with intermittent loading: (1 min./5 min. = 1 min. On/5 min. Off)

Operating Environment:

NOTE: Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with nitrous oxide

Temperature:	50°-86°F (10°-30°C)
Relative Humidity:	10% to 75% (non-condensing)
Atmospheric Pressure:	700 to 1060 hPa

Transport and Storage Conditions:

Temperature:	14°-140°F (-10°- +60°C)
Relative Humidity:	10% to 100%
Atmospheric Pressure:	500 to 1060 hPa

Dimensions:

Charging Base Height:	4.8 inches (12.2 cm)
(with handpiece):	5.9 inches (15 cm)
Charging Base Width:	2.9 inches (7.4 cm)
Charging Base Length:	7.2 inches (18.3 cm)
Charging Base Weight:	12 ounces (0.34 kg)
power supply plug length:	72 inches (183 cm)
Handpiece Length (w/o probe):	6.6 inches (16.8 cm)
Handpiece Width:	1.4 inches (3.5 cm)
Handpiece Height:	5.0 inches (12.7cm)
Handpiece Weight (w/o probe):	8.0 ounces (0.23 kg)

Complies with the following Directives/Standards:

93/42/EEC	MDD CE Directive
IEC 601-1	1988 – Medical Electrical Equipment (General Requirements for Safety)
IEC 601-1 Am.1	1991 – Amendment 1 to IEC 601-1
IEC 601-1 Am.2	1995 – Amendment 2 to IEC 601-1
EN 60601-1	1993 – Medical Electrical Equipment (General Requirements for safety) Amendments 1-13.
EN 60601-1-2	1993 – Medical Electrical Equipment Part 1: General requirements for safety 2: Collateral standard: Electromagnetic compatibility – Requirements and tests
CAN/CSA C22.2 No.601.1-M90	M90-Medical Electrical Equipment Part 1: General requirements for safety (Amendment 1 and 2)
UL 2601-1	2nd Edition – Medical Electrical Equipment: Part 1: General Requirements for safety
IEC/EN 60825-1	Laser Testing Edition 1.2:2001

GLOSSARY OF SYMBOLS

Attention, Consult Accompanying Documents

Alternating Current

Direct Current and Alternating Current

Type BF Applied Part

Lamp On/Off

ACCESSORIES AND SPARE PARTS

Description	***Reorder No.***
Light Shield	644804
Replacement SmartLite iQ2 Battery	644033
Curing Probe: 12 x 8mm Tapered 60° angle	644718
SmartLite iQ2 Unit Power Supply 120v	644031
SmartLite iQ2 Unit Power Supply 100v Japan	644030
SmartLite iQ2 Unit Power Supply 230v EU plug	644029
SmartLite iQ2 Unit Power Supply 240v UK plug	644036
SmartLite iQ2 Unit Handpiece assembly only	644035
SmartLite iQ2 Unit Charging Base assembly only	644032
SmartLite iQ2 Unit Battery Door Replacement	644034