

English

OWNER'S MANUAL

Curing Light
Optilight Color



PRESENTATION OF MANUAL

INSTRUCTIONS FOR USE

Technical Name: Equipment for resins' photopolymerizers.

Trade Name: Curing Light Optilight Color

Model: Optilight Color

Brand: Saevo

Manufacturer / Distributor:

Alliage S/A Indústrias Médico Odontológica

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CAUTION

For improved safety:

Read and understand all the instructions contained in the Instructions for use before installation or operation of this equipment.

The Instructions for Use must be read by all persons that operate this equipment.

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IDENTIFICATION OF EQUIPMENT

Dear Customer

This manual offers a general presentation of your equipment. Outlines important details that might orientate you in its correct use, as well as in the solution of small problems that might effectively occur.

We advise its complete reading and conservation for further consults.

IDENTIFICATION

Technical Name: Equipment for resins' photopolymerizers.

Trade Name: Curing Light Optilight Color

Model: Optilight Color



IDENTIFICATION OF EQUIPMENT

Indication of Equipment

This equipment is for dental use only aiming to photo polymerize photo sensitive substances through the emission of a blue light.

It is used in various dental procedures such as restorative procedures, bracket bonding and activation of photoactivated materials such as sealants, dental bases, for exclusive dental use, and must be used and handled by a qualified person (duly regulated professional, according to local law of the country). following the instructions in this manual.

Contraindications

Systemic diseases (cancer, cardiovascular diseases serious diseases, the blood system, the immune system The disease, ...).

Ongoing and topical treatment of certain systems (anticoagulant therapy, chemotherapy, radiotherapy, ...).

Ask patients if they have a cardiac pacemaker or other system implanted before you Intended use start the treatment.

Physical Principle used by the Equipment

The physical principle is the emission of a light for polymerizing photo sensitive substances, since the equipment is featured with a cold light emitter (LED) with the wavelength comprised within 420nm a 500nm (blue light), which has the ideal intensity for integrating with camphorquinone.

Description of the Equipment

Optilight Color is the latest generation of LED photo activation devices.

This abbreviation is the acronym for Light Emitting Diode, a totally different way of emitting light, in comparison to the halogen conventional devices. Unlike traditional equipments, which generate light in wide wave spectrum and a lot of heat, this technology allows the emission of cold light in a precise wavelength for the activation of several dental products apply.

LED technology, recently introduced in odontology, has brought several advantages to photopolymerizers on direct restoration in composed resin. Besides infinitely more durable, LEDs have become the most compact, ergonomic and easy-to-install and transport equipments. The cold light emission and in precise wavelengths assure a safe polymerization of activated composite by the camphorquinone, without the risk of tooth warming, pulp injuries or discomfort for both operator and patients.

The safety and efficiency of the LEDs, now with high energy emission, are available to all the clinical procedures that require light power for photo activation.

The wavelength from 420nm to 500nm associated with the high energy emitted by Optilight Color enables the multi functionality of this device:

- Direct restoring processes: composite resins, ionomers and adhesives.
- Indirect restoring: laminated adhesive cementation, inlays, aesthetic pins and metalfree diadems.
- Activation of material photo active as sealants, surgical cements and the basis of a foraging.

Designed and built within the most advanced technology in order to provide results within the specifications set by the highest world odontology authorities.

Equipped with a power supply with an automatic bi-volt key that allows to use the equipment in any supply voltage between 100 to 240V ~ - 50/60Hz.

Digital control on the display in the handpiece itself.

Variation of choosing the operation time (5,10,15 and 20 seconds).

It has 3 application modes: Continuous, Ramp and Pulse:

- **Continuous:** Maximum mode and continuous light intensity (same luminosity from the beginning to the end of the polymerization).
- **Ramp:** Gradual light intensity mode, increases gradually.

IDENTIFICATION OF EQUIPMENT

- **Pulse:** Pulse mode has cycles that oscillate at a fixed frequency.

The advantages of Optilight Color:

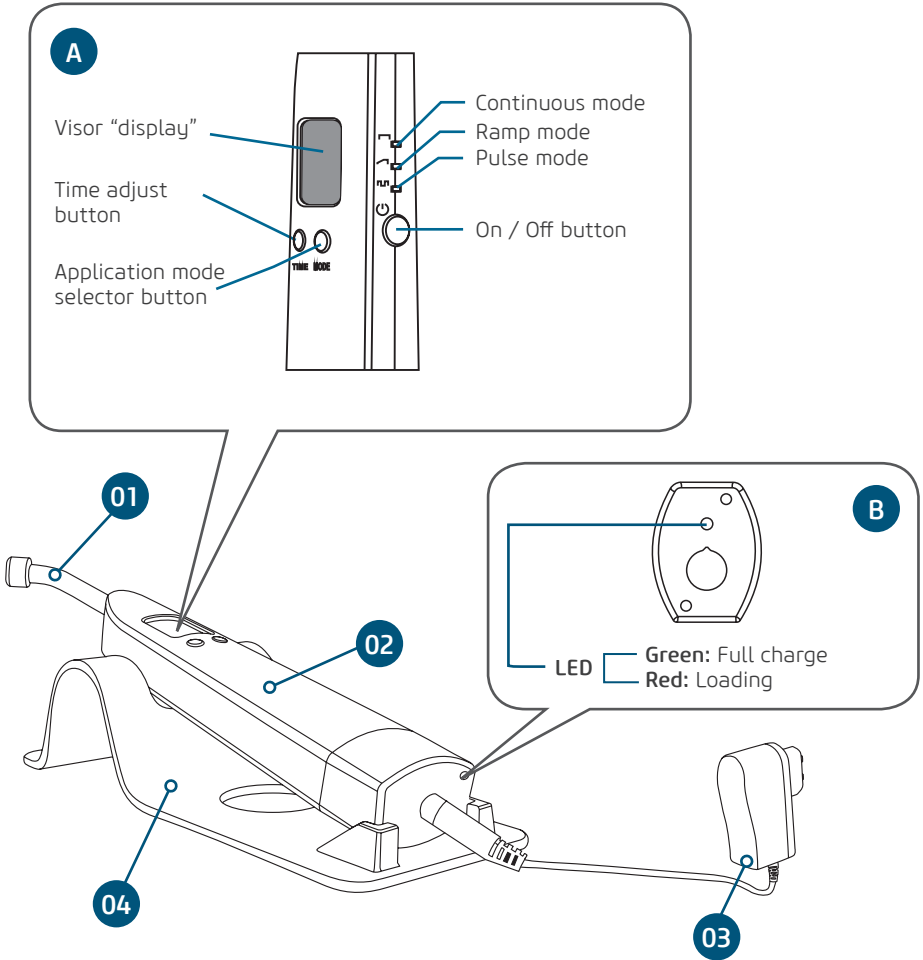
- Light spectrally more selective than ordinary light bulbs.
- Cold light, it does not heat the resin and the tooth.
- Compact and lightweight equipment which provides a comfortable handling.
- Wireless equipment that allows free movement and overall control.
- Low energy consumption.
- Higher lifetime of the light emitter element (equivalent to 36.000.000 10-second cycles).
- It does not use optical filter.
- It does not require a forced ventilation system, therefore avoiding noise emission.

We observe that the light emitted by the Optilight Color is completely contained within the absorption interval of the photo initiator and is, therefore, 100% used while conventional devices, which use halogen lamps have a big part not used in the process.

Optilight Color does not produce heating because uses semiconductors LEDs as light emitters.

Light conductor through optic fiber, rotatory, removable and easy to sterilize, with frontal protector against risks and accumulation of undesirable residues. The reduced weight of the pen and its ergonomic design ensure a more practical and comfortable work for the practitioner.

MODULES, ACCESSORIES, OPTIONS AND MATERIALS OF CONSUMPTION

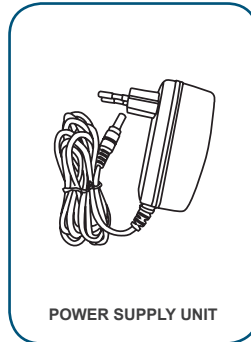
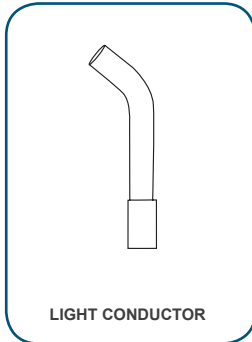
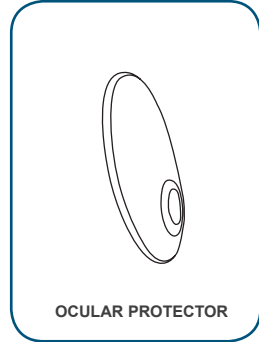
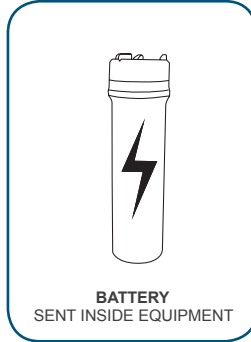
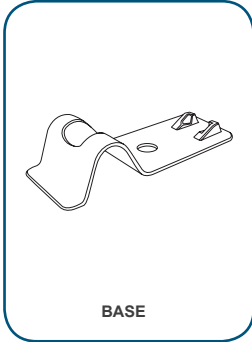


- 01 - Light conductor
- 02 - Handpiece
- 03 - Power supply unit
- 04 - Base
- A - Commands
- B - Indicative LED for the battery level

NOTE: Available in colors.

MODULES, ACCESSORIES, OPTIONS AND MATERIALS OF CONSUMPTION

Accessories that come with the product:



The content of this page is for informative purpose, so the equipment can present itself different from the illustration. Therefore, when buying the product, verify the technical compatibility between the equipment, coupling and accessories.

The use of any part, accessory or material neither specified nor foreseen in those use operation instructions and it is of the user's entire responsibility.

TECHNICAL SPECIFICATIONS

General features

Voltage (Power Supply Unit)

Ve: 100 - 240V~ / 50/60Hz (Bivolt)
Vs: 5V - 1.5 A

Light source (1 LED)

Power (Maximum): 6W
Light power: 1200 mW/cm² ± 200 mW/cm²
Semi-conductor LED (InGaN)
Wavelength: 420nm - 500nm

Li-ion battery

DC 3.7V 2200mAh

Time for full battery charge

4h (New batteries with charge time of at least 8h)

Light conductor

Optic fiber 100% coherent that ensures the light passage without losses (ø8mm 60° curve)

Timer

5,10,15 and 20 seconds

Time Sounder

A “beep” in every 05 seconds

Triggering

Through the handpiece's button

Handpiece's body

Injected in ABS

Net weight

0,389 kg

Gross weight

0,640 kg

Protection against the electrical shock

Class II Equipment

Applicated part

B Type

Protection grade against the penetration of nocive water

IP00

TECHNICAL SPECIFICATIONS

Electromagnetic emission

Electromagnetic emission

The Optilight Color is made to be used in the electromagnetic environments specified below. The client or the user of the Optilight Color must be sure that it is used in such environment.

Emission test	Compliance	Eletromagnetic environment - Guide
RF emissions ABNT NBR IEC CISPR 11	Group 1	The Optilight Color use 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.
RF emissions ABNT NBR IEC CISPR 11	Class B	The Optilight Color is suitable for use in all establishments, including domestic establishments and those establishments directly connected to the public low-voltage power supply network with specific requirement.
Emissions of harmonics IEC 61000-3-2	Class A	
Fluctuation of Voltage / Emissions of flicker IEC 61000-3-3	Complies	

TECHNICAL SPECIFICATIONS

Guidelines and manufacturer's declaration - electromagnetic immunity

The Optilight Color is made to be used in the electromagnetic environments specified below. The client or the user of the Optilight Color must be sure that it is used in such environment.


Immunity test	ABNT Test level NBR IEC 60601	Level of compliance	Electromagnetic environment Directives
Electrostatic discharge (ESD) IEC 61000-4-2	± 6 kV Contact ±2 kV, ±4 kV, ±8 kV, ±15 kV	±8 kV Contact ±2 kV, ±4 kV, ±8 kV, ±15 kV Air	Floors should be wood, concrete or ceramic tile. If floor are covered with synthetic material, the relative humidity should be at least 30%.
Quick electric transitory phases / train of pulses ("Burst") IEC 61000-4-4	± 2 kV for power supply lines ± 1 kV for Input/output lines	± 2 kV for power supply lines ± 1 kV for Input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surges IEC 61000-4-5	±0.5 kV & ±1 kV differential mode ±0.5 kV, ±1 kV & ± 2 kV common mode	±0.5 kV & ±1 kV modo diferencial ±0.5 kV, ±1 kV & ± 2 kV modo comum	Mains power quality should be that of a typical commercial or hospital environment.
Reduction, interruption and variance of voltage in power supply input lines IEC 61000-4-11	< 100% Ut (>100% dip in Ur) for 0,5 cycle 100% Ut (100% dip in Ut) for 1 cycle 30% Ut (70% dip in Ut) for 25/30 cycles < 100%Ut (>100% dip in Ut) for 250/300 cycles	< 100% Ut (>100% dip in Ur) for 0,5 cycle 100% Ut (100% dip in Ut) for 1 cycle 30% Ut (70% dip in Ut) for 25/30 cycles < 100%Ut (>100% dip in Ut) for 250/300 cycles	Mains power quality should be that of a typical commercial or hospital environment. If the user of themodel Optilight Color requires continued operation during power mains interruptions, it is recommended that the model Optilight Color be powered from an uninterruptible power supply or a battery
Magnetic field in frequency of power supply (60Hz) IEC 61000-4-8	30 A/m	30 A/m	Power frequency magnetic fields should be at levels characteristic of a typical location in a typical commercial or hospital environment.

NOTE Ut is the a.c. power supply voltage before the application of the test level

TECHNICAL SPECIFICATIONS

Guidance and manufacture's declaration – electromagnetic immunity

The Optilight Color is intended for use in the electromagnetic environment specified below. The customer or the user of Optilight Color should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz 6 Vrms in ISM	3 Vrms 150 kHz to 80 MHz	Portable and mobile RF communications equipment should be used no closer to any part of the Optilight Color, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.
Radiated RF IEC 61000-4-3	ban 3 V/m 80 MHz to 2.7 GHz	6 Vrms in ISM bands	
	385MHz 5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1- 2:2014)	3 V / m 80 MHz to 2,7 GHz 385MHz 5785MHz Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communication equipment (Refer to table 9 of IEC 60601-1- 2:2014)	Recommended separation distance: $d = 1,2\sqrt{P}$ $d = 1,2\sqrt{P}$ 80 MHz to 800MHz $d = 2,3\sqrt{P}$ 800 MHz to 2,5MHz where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m). Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey ^a , should be less than the compliance level in each frequency range. ^b Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1 At 80MHz and 800MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

a. Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic sitesurvey should be considered. If the measured field strength in the location in which the Optilight Color is used exceeds the applicable RF compliance level above, the Optilight Color should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as re-orienting or relocating the **Optilight Color**.

b - Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

TECHNICAL SPECIFICATIONS

Recommended separation distances between portable and mobile RF communications equipment and the Optilight Color

The Optilight Color is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Optilight Color can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Optilight Color as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter (W)	Separation distance according to frequency of transmitter		
	150 kHz to 80 MHz $d= 1,2\sqrt{p}$	80 Mhz to 800 MHz $d= 1,2\sqrt{p}$	80 MHz to 800 Mhz $d= 2,3\sqrt{p}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3,8	3,8	7,3
100	12	12	23

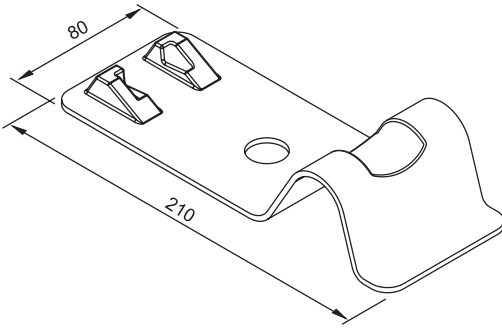
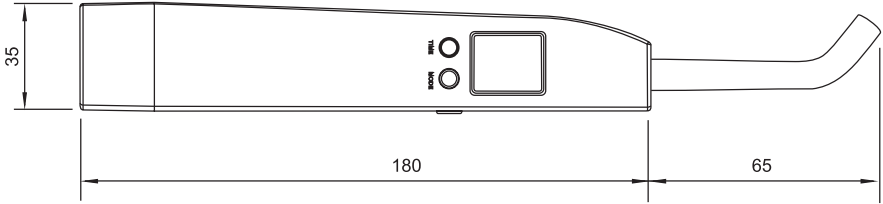
For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80MHz and 800MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

TECHNICAL SPECIFICATIONS

Dimensions (mm)



TECHNICAL SPECIFICATIONS

Packing symbols



Stacking Limit by number



Keep dry



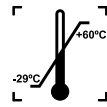
This side Up



Keep away from sunlight



Fragile, handle with care



Temperature limitation

Product symbols



Type B



General warning



Attention



Recyclable



Refer to the instruction manual



Grounding (at several points of the equipment) indicates the condition of being grounded.

SN

Serial number

#

Model Number



Manufacturing date

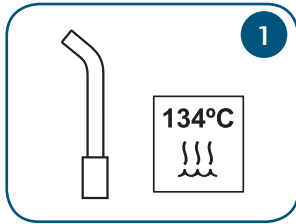


Manufacturer

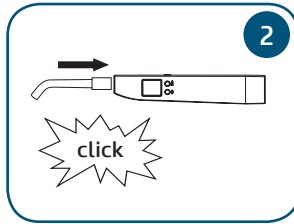
MODEL

Model

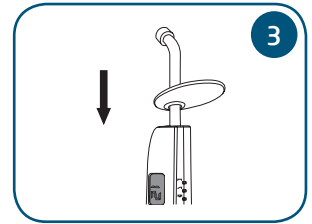
INSTALLATION OF EQUIPMENT



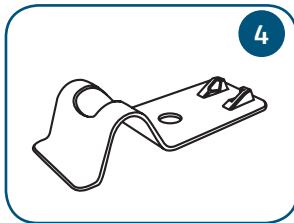
1-Before using it, please, sterilize the light conductor, disinfect the handpiece, the wire and the base.



2- Insert the light conductor in the handpiece until you hear a slight click and feel that it was correctly embedded.



3-Insert the ocular protector on the light conductor.



4- Place the base on a stable site, connect the power supply unit's cable to the handpiece and immediately connect the power supply unit to an electrical socket.

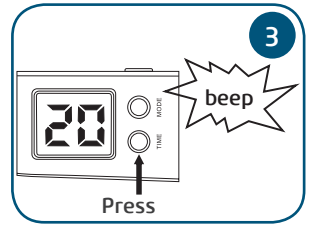
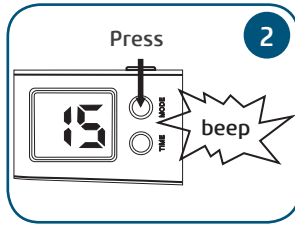
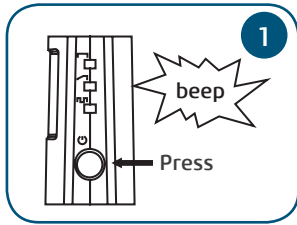


5- Let the battery charging for at least 4 hours.

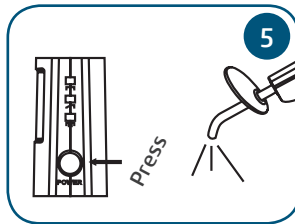
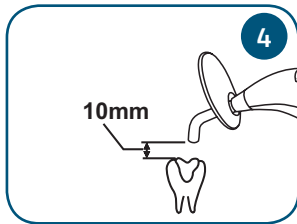


Charge the battery during 08 hours before using the equipment for the first time.

OPERATION OF EQUIPMENT




- Press the button to turn on the equipment (fig.1).
- Select the application mode pressing the selection button (fig.2), which variations are:
 - Continuous: Maximum mode and continuous for light intensity (same luminosity from the beginning to the end of the polymerization).
 - Ramp: Gradual mode, light intensity increases gradually.
 - Pulse: Pulse modes are cycles that oscillate at a fixed frequency.
- The chosen application mode shall be seen in the LEDs' sequence.
- For setting time, press the button and chose a time between a time from 5 to 20 seconds, which will be seen on the display (fig.3).

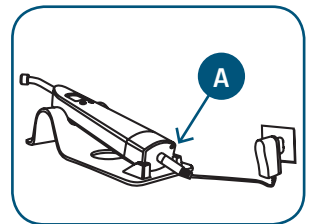


- For starting the polymerization cycle, press the trigger. Just trigger again to interrupt (fig.5).

-After selecting the application mode and the choice of time, remove the light conductor protection cover and take the handpiece to the patient's mouth and position the light conductor at a safe distance (fig.4).

ATTENTION

- **Low battery:**
 - When the display shows the symbology  and sound the beep indicating low battery, please recharge it.
 - The LED charge's indicator (A) gets red when the battery is charging and green when the charging is complete.
 - Always keep the handpiece over the base, getting energized, when not using it;
 - The approximate time for the recharge is 4 hours. After the recharge, the LED's charge indicator (A) will change for green, indicating the complete recharge;
 - The battery does not have a memory effect and can be recharged, even if it's not completely discharged.



OPERATION OF EQUIPMENT

Automatic shutdown:

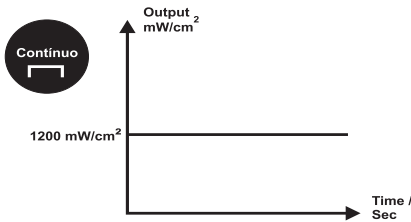
The equipment will turn off automatically when not in use for more than 3 minutes. For turning it on again, press the On / Off button.



IMPORTANT:

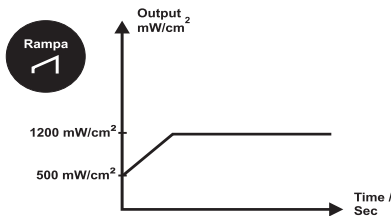
- Never address the light beam to the eyes;
- Protect the visual field using the ocular protector;
- The ocular protector has the goal of filtrate only the blue light that operates in the photo polymerization of resins for protecting the sight and still allows that the room light has a path to the operative field.
- After using it, keep the light conductor protected by the protection cover.

Application types: Continuous, Ramp and Pulse



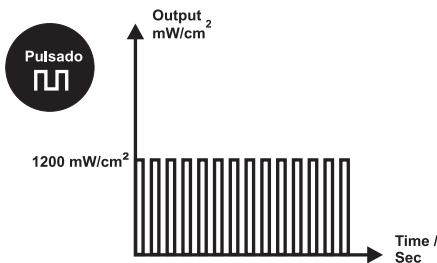
- **Continuous:**
Maximum and continuous mode of light intensity (same luminosity from the beginning to the end of polymerization).

• **Maximum power** = 1200 mW/cm²*



- **Ramp:**
Gradual mode, the light intensity increases gradually.

• **Gradual increasing** = 500 - 1200 mW/cm²*



- **Pulse:**
Pulse modes are cycles that oscillate at a fixed frequency.

• **On/Off at each 1sec. maximum power** = 1200 mW/cm²*

* Tolerance of ± 200 mW/cm²

PRECAUTION, RESTRICTION AND WARNING

Recommendations for the equipment's conservation

Your equipment has been designed and improved following modern technology standards. All devices need special care, which a lot of times are forgotten for several reasons and circumstances, because of that, here are some important reminders for your everyday.

Seek to observe these little rules that incorporated to the job's routine, will provide a big time economy and will avoid unnecessary expenses.

Transport conditions, warehousing and operation

This equipment must be transported and stored observing the following directions:

- Avoid falls and impacts;
- Keep it dry, do not expose it to rain, water drops or wet floor;
- Keep it away from water and direct sunlight, and in its original wrapping;
- Don't move it over irregular surfaces, protect it from rain and observe the maximum stack quantity specified in the packaging;

ATTENTION: The equipment must be only used with the power cable supplied by Alliage, otherwise, it can cause the increasing of the emission or reducing of the equipment's immunity.

Environmental condition for transportation or storage:

- Room temperature range for transportation or storage -29°C to +60°C.
- Relative humidity range for transportation or storage 20% to 90%.
- Atmospheric pressure range 500hPa to 1060 hPa (375 mmHg to 795 mmHg).

Environmental condition for storage (among the operations):

- Room temperature range for storage -10°C to +55°C.
- Recommended room temperature range +15°C to +30°C.
- Relative humidity range for storage 30% to 75%.
- Atmospheric pressure range 700 hPa to 1060 hPa (525 mmHg to 795 mmHg).

Environmental operation condition:

- Room temperature range for functioning +10°C to +40°C.
- Recommended room temperature range +21°C to +26°C.
- Relative humidity range for functioning 30% to 75%.
- Atmospheric pressure range 700 hPa to 1060 hPa (525 mmHg to 795 mmHg).
- Operation altitude: ≤2000m.



ATTENTION

The Equipment maintains its condition of safety and efficacy, provided that it is maintained (stored) as mentioned in this instruction of use. Thus, the equipment will not lose or alter its physical and dimensional features.

Sensitivity to predictable environmental conditions in ordinary situations of use

- The equipment has been designed not to be sensible to interferences as magnetic fields, external electrical influences, electrostatic discharges, the pressure or the variation of pressure, since the equipment is installed and kept clean, conserved, transported and operated conforming this operation instruction.

PRECAUTION, RESTRICTION AND WARNING

Precautions and warnings “during installation” of the equipment

- Check the voltage of the equipment when performing the electrical installation.
- Place the equipment at a place that will not get wet.
- Install the equipment at a place where it will be not damaged by pressure, temperature, direct solar light, powder and salt.
- The equipment shall not be submitted to bending, excessive vibrations or shocks (including while transporting and handling).
- This equipment was not designed for the use at an environment where fumes, inflammable anesthetic mixtures with the air or oxygen and nitrous oxide can be detected.
- Before the first use and/or after long work interruptions such as vacations, clean and disinfect the equipment.
- This equipment is not sensible to electrical interference; electrostatics and pressure, since cleaning items, maintenance, transport and operation of this manual are observed. However, an electromagnetic environment can interfere in its normal operation.

Precautions and warnings “during the use” of the equipment

- The equipment must only be operated by technicians duly qualified and trained (Dental Surgeons and Capacitated Professionals).
- In case of a casual maintenance, only use the services of a Alliage' Authorized Technical Assistance.
- Do not submit the plastic parts to contact with chemical substances used in the dental treatments routine Such as: acids, mercury, acrylic liquids, amalgams, etc.
- Avoid that the light conductor's terminal touch the resin to be polymerized.
- When using the photopolymerizers, check if the outlet of the conductor has no residues that can occlude the light beam.
- Use appropriated techniques for minimizing the effects of the contraction of the photo polymerized material and also of the temperature on the applied region; these techniques consist of a proportional detachment from the expected effect, which means that detaching the tip from the activated region, the power and the temperature tends to diminish.
- A minimum distance of 10mm between the Light conductor and the tooth is recommended.

Manufacturer shall not be responsible for:

- Use of the equipment differing from that for which it is intended.
- Damages caused to the equipment, the professional and/or the patient by the incorrect installation and erroneous procedures of maintenance, differing from those described in these Instructions for use which come with the equipment or by the incorrect operation of it.

Precautions and warnings “after” the use of equipment

- Turn the equipment off while in not in use for a long time.
- Carry out the cleaning and disinfection after the use of the equipment, including in the first use.
- Do not change any part of the equipment. Do not disconnect the cable or other connections unnecessarily.
- The batteries should not be stored inside the equipment if it becomes unused for some time. When it' is not using the equipment, we advise you to remove the batteries, because they are corrosive and can, throughout time, release the acid and cause damage to it.
- When observing the presence of irremovable stains, cracks or fissures on the light conductor and ocular protection, provides the replacement of the damaged components.

PRECAUTION, RESTRICTION AND WARNING

Precautions and warnings during “cleaning and disinfection” of the equipment

- When disinfecting the handpiece, remove the light conductor; use neutral soap or alcohol 70% vol. Never use povidone iodine, glutaraldehyde or chlorinated products, which with time can produce superficial attacks over the instrument's body. Never soak the instrument in disinfection baths.
- The conductor must be clean and sterilized at 134°C before being used in the next patient.
- Before cleaning the equipment, disconnect it from the electricity.
- Avoid spilling water or other liquids inside the equipment, what might cause short circuits.
- Do not use micro-abrasive material or scouring pad in cleaning, do not use organic solvents or detergents that can contain solvents like ether, stain remover, etc.

Precautions in case of alteration in the functioning of equipment

- If the equipment has any abnormality, check if the problem is related to any item listed in the topic of unforeseen events (failures, causes and solutions). If it is not possible to resolve the problem, turn off the equipment, remove the power supply cable from the socket and contact your representative (Alliage).

Precautions for the Reduction of the Environment Impact

Alliage S/A aims to achieve an environmental policy that encourages the environmentally conscious supply of medical products that continuously minimize environmental impact and are more environmentally friendly and human health friendly.

To keep a minimum impact on the environment, observe the following recommendations:

- After installation, forward the recyclable materials for the recycling process.
- During the life circle of the equipment, turn it off when it is not being used.

The biomedical waste comprises nonhigh material susceptible to cause disease or house pathogenic organisms that must be stored in a yellow bag properly labeled with the symbol of biological hazard, or stored in a container resistant to perforation, tight and even collection and incineration.



The packaging consists of cardboard, plastic and expanded polystyrene (EPS) which are 100% recyclable materials.

Dimensions:

Main unit: 0,230 X 0,130 X 0,055 / MASS: About: 0,550 Kg.

Precautions to be adopted against foreseeable or uncommon risks, related to the deactivation and abandoning of equipment

In order to avoid environmental contamination or undue use of the Equipment after it has become useless, it should be discarded in the suitable place (as per the local legislation of the country).

- Pay attention to the local legislation of the country for the conditions of installation and disposal of residue.

CORRECTIVE AND PREVENTIVE MAINTENANCE AND PRESERVATION

Additional procedures for reuse

The equipment can be reused in undetermined, i.e. unlimited, quantities, only needing to be cleaned and disinfected.

Cleaning

- 1) Handpiece and battery: Wipe dry with a clean, damp cloth to remove visible residue.
- 2) Light conductor: Rinse with tap water and dry with a dry cloth.



Attention

When cleaning manually, the Light conductor should check the end face for dirt. If it is, please use a plastic tool to remove it carefully. Do not use metal equipment. Do not touch any hard objects on the end of the Light conductor to avoid scratching.

Disinfection

The Handpiece and battery can be surface wiped with 75% ethanol.
Light conductor and ocular protector can be immersed in 75% ethanol for 30 minutes.



Attention

Do not use chlorine-containing disinfectants and do not use ultrasonic cleaning.

Drying

After cleaning and disinfection, please dry, it is recommended to use compressed air to dry.

Sterilization

- 1) Sterilizable parts: Light conductor.
- 2) Please use a sterilization bag that meets national regulations before packaging.
- 3) Sterilization method: Recommended for autoclaving.
- 4) Sterilization conditions: 134 ° C, not less than 4 minutes or 121 ° C, not less than 20 minutes.



Warning

- 1) Handpiece/ocular protector are strictly prohibited.
- 2) The maximum sterilization temperature should not exceed 136 °C.

CORRECTIVE AND PREVENTIVE MAINTENANCE AND PRESERVATION

Preventive Maintenance

The equipment must suffer routinely measurements, following the current legislation of the country. But, never with a period superior to 3 years.

For protecting your equipment, look for a Alliage technical assistance for periodic reviews as preventive maintenances.

Corrective Maintenance

The supplying of the circuits' diagram, Part lists or any other information that permits the technical assistance by the user, can be requested, since previously agreed between the buyer and Alliage.



Attention

In case of the equipment presents any abnormality; check if the problem is related to some of the listed items under the item Unpredictable (situation, cause and solution).

If it's not possible to solve the problem, shutdown the equipment and demand the presence of a Alliage' technician from the nearest resale, or ask through the Attendance Service Alliage: + 55 (16) 3512-1212.

UNFORESEEN EVENTS – SOLUTION OF PROBLEMS



Attention

Upon coming across any problem in operation, follow the instructions below to check and repair the problem, and/or get in touch with your representative.

Problem	Probable cause	Solution
-Equipment inoperative. “Display with no show”.	-Handpiece battery without charge. -Overheating Protection. -activated “Error code: Er”.	-Recharge the handpiece on the base for 4 hours. -Wait the cooling for some minutes.
- The battery doesn’t charge.	-Bad connection between the supply source and the handpiece. -Battery failure.	-Restore the connection. -Get in touch with Alliage’ technical assistance.
-The equipment is not polymerizing the resins.	-Non appropriated resin for the wavelength of LED photopolymerizers. -Light conductor incorrectly. -Resin residue in the light conductor. -Light conduct or with protection cover.	-Buy the appropriated resin for the wavelength of the polymerizer, that is, which contains photo initiators with camphorquinone. -Correctly attach the light conductor fixed. -Clean the light conductor. -Remove the protection cover of the light conductor.
-Inadequate Luminous power.	-Light conductor incorrectly fixed. -Problems with light conductor. -Reduced battery’s capacity.	-Fix correctly the light conductor. -Substitute the light conductor. -Contact Alliage’ technical assistance.

EQUIPMENT'S WARRANTY

This equipment is covered by the warranty periods, terms and conditions contained in the Warranty Certificate that comes with the product.

FINAL CONSIDERATIONS

Among the care you have to take with your equipment, the most important is regarding of the spare parts replacement.

To ensure the lifetime of your device, only replace original spare parts from Alliage. They have the assurance of the standards and technical specifications required by the Alliage representative.

We call your attention to our authorized resellers' chain. Only this chain will keep your equipment constantly new, because it has trained technical assistant and specific tools for the correct maintenance of your device.

Whenever you need, demand the presence of a Alliage' technician from the nearest resale, or ask through the Attendance Service Alliage: + 55 (16) 3512-1212.

REGISTRATION ANVISA #: 10069210078

