Teeth Whitening Lamp

Operation Guide

NATURAL+™

The ecological solution for teeth whitening

1 UNIT DESCRIPTION AND FUNCTION

The Natural+™ Lamp is intended to whiten teeth in the presence of bleaching gel used in a dental or cosmetic practice (in accordance with the local regulations).

The Natural+™ Lamp is optimized for use with Natural+™ gel and teeth whitening kits in terms of light wavelengths, intensity and treatment duration.

The device consists of an Illumination head, a Control box, a Headset and an AC/DC adaptor.

2 TECHNICAL DATA

1. **Operating voltage**: 100-240V/50-60Hz
2. **Power consumption**: 1.5 A
3. **Adaptor output power**: 12VDC/5A
4. **Dimensions**: Illumination head: Length - 95mm / Width - 88mm / Height - 48mm
   Headset: Length - 320mm / Width - 190 mm / Height - 350mm
5. **Weight**: Illumination head - 200g / Headset - 380g / Control box - 500g
6. **Light intensity**: Between 80mW/sq.cm and 320mW/sq.cm at 1cm distance from Polycarbonate window
7. **Emitting time**: 30min - 60min.
8. **Emitted light**: Blue: 430-490nm / Red: 610-670nm
9. **Light source**: Power Chip LEDs
10. **Cooling type**: Small size fan
11. **Intensity modes**: Curing / High / Normal / Low
12. **Classification (IEC 60601-1)**: CLASS1 TYPE B

3 CONTENTS & PART NO

(1) Headset unit	(A01)
(2) Illumination head	(A02)
(3) Control box	(A03)
(4) Earphone (audio) cable	(A04)
(5) Remote controller	(A05)
(6) Protective goggles	(A06)
(7) AC/DC adaptor	(A07)
(8) Control bar	(A08)
(9) Pole	(A09)

4 SAFETY & PRECAUTIONS

1. The unit must be used in strict accordance with the operation guide.
   The manufacturer accepts no liability for any damage resulting from the use of this unit for any other purposes.
2. Before start-up of the unit make sure that the operating voltage indicated on the unit label corresponds to the mains voltage. Operation of the unit at a different voltage may damage the unit. Electrical safety is ensured by protection class1 against electrical current damages according to EN60601-1 / 1990+A1 / 1993+A2 / 1995+A13 / 1996
   The device must be plugged in standard electric network ,power voltage 100-240VAC 50-60Hz. Mains outlet where the device is plugged in must be grounded.
   The Natural+™ Lamp should be operated in indoor premises under the following conditions:
   - Temperature: +10°c - +40°c
   - Relative air humidity: 30% - 75%

   The device must not be used in premises with high air humidity, condense or water on floor, walls or ceiling. The device must not contact liquids, such as water and solvents, aggressive or flammable substances and their vapors. In addition pouring on or wiping the device with such liquids is forbidden
   - Atm. pressure: 700 - 1060 hpa
   - Absence of chemically active or flammable substances.
3. Natural+™ Lamp is a source of exceptionally intensive light in blue and red ranges, to which human eye is highly sensitive. That is why serious measures must be taken towards patient, medical personnel and nearby people or animals. Irradiation of the eyes bears certain risk for their damage. Therefore, the light must not be directed towards eyes! Exposure must be restricted to the treated area.

ATTENTION: The emitted light is in the wavelength ranges 430nm - 490nm and 610nm - 670nm. During work use protection goggles and/or protection shield.

4. The unit must not be used on pregnant or nursing women, patient with oncologic diseases, severe periodontal pathology, recessions, dental hyperesthesia and patients aged under the age of 13 (or according to local regulations).
5. Solvents, flammable liquids and powerful heat sources must not be kept near the unit as exposure to one of these factors may damage the plastic of the unit.
6. Cleaning agents should not enter the unit as this might short-circuit the unit or cause potentially dangerous malfunctions.
7. Device's cables must be kept safe from treading and isolation damage, braking by sharp objects, heavy pulling, rodent, chemicals. If any damage is noticed, device must be taken to manufacturer's service. The device must not be used if cables are damaged.
8. Only factory-authorized technicians are authorized to open and repair the unit.
9. Be extremely careful during transportation, storage and handling of the unit!

5 ASSEMBLING A NATURAL+™ TEETH WHITENING LAMP

Natural+™ Lamp is designed for use as a free-moving LED bleaching unit and should be set up according to the following steps:

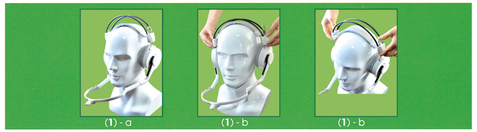
1. Unpack the transport box and take out the component parts.
   (Control box, adaptor, illumination unit, headset and protective goggles)
2. Connect the cable of the adaptor to the control box.
   (bottom left side of the control box)
3. Connect the cable of the illumination unit to the control box.
   (bottom right side of the control box)

- The left side jack is connected to the adaptor. (4 pin) (ADAPTOR)
- The right side jack is connected to the illumination unit. (5 pin) (LIGHT)

4. Fixing the Controller: The Control Box could be bind to any pole (e.g. in the dental unit) as seen in the picture.

6 PREPARATION AND SEQUENCE OF OPERATION

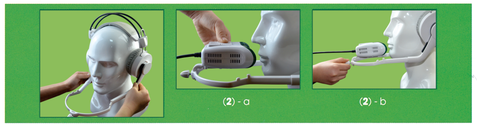
1. Wearing the head set



a. Lengthen the guide of the ear pads and move the light guide down while pressing the black buttons on both sides of end of the light guide, then place the head set on patient's head.

b. Shorten the guide of the ear pads so the arch fits comfortably on patient's head.

2. Move the Light guide up while pressing the black buttons on the both sides of end of the light guide for the proper positioning of the illumination head.



a. Insert the metal guide of the illumination head into the guide hole.

b. Tighten the screw on the light guide for the fixation of the illumination head.

3. Control Bar

a. You can control the angulation of the illumination head using the control bar. The control bar has 4 position of angulation. (I, II, III, IV)

b. The control bar can be situated in 2 positions as seen in the picture.

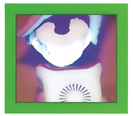
4. Alternative mounting option using pole:
   a. Connect the pole to the dental unit tray
   b. Insert the metal guide of the illumination head into the guide hole.
   c. Tighten the screw on the pole for the fixation of the illumination head.
   d. Ajust the pole so the illumination head is facing the patients mouth
5. Once the patient is wearing the headset and the attached illumination unit is aligned to illuminate the treated area you may turn the light on.

ATTENTION: Before the bleaching system is turned on a cheek retractor should be placed in the patient mouth as seen in the picture.

7 FUNCTION OF THE CONTROLLER

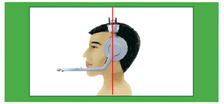
1. **Power Button**: Power on / Pause / Power off
2. **Up/Down button**: Treatment duration control
   - Timer up: increase treatment duration
   - Timer down: decrease treatment duration

   Each press changes time by 1minute.
3. **Intensity modes**: Curing / High / Normal / Low (4 modes)
   - Changes the intensity of the emitted light.
   - Mode choice depends on the teeth condition of the patient, patient sensitivity and bleaching gel concentration.
4. Timer can be changed even while system is in use.
5. **Curing Mode**: If you want to cure the gingival barrier in the patient's mouth or cure the block out resin on the model for the reservoir of a bleaching tray, you can choose curing mode.

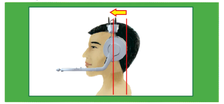


8 THE POSITIONING OF THE HEADSET FOR PROPER ANGULATION OF THE ILLUMINATION HEAD

1. Small size head



2. Big size head



3. You can adjust the angulation of the illumination head by adjusting the angle of the headset

9 SERVICE DATA:

Serial number:

Lot number:

Date of production:

Packer:

Date of purchase:

Accepting data	Service data	Service	Signature

Manufactured for Meodental Ltd. CE FDA

Product Name:	LED Teeth Whitening Lamp
Model Name:	Natural+™ Lamp
Input Power:	100-240V, 50-60Hz, 1.5A

Please read the operation guide carefully before use.

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EC REP