

PRODUCT SPECIFICATIONS:

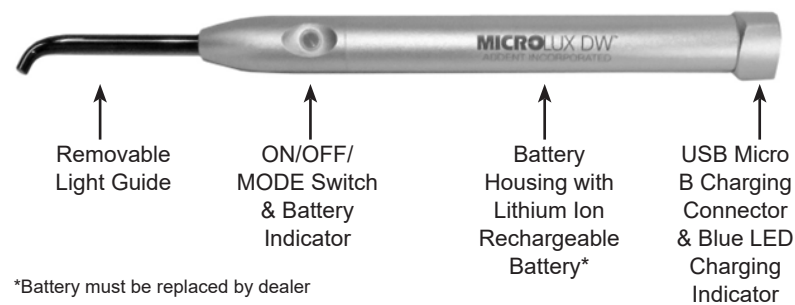
Equipment Class:	Internally Powered Equipment
AC Supply Connection:	100-240 Volts AC ± 10%, 50/60 Hz.
USB Power Supply Output:	5 VDC, 2A
Battery Specification:	Li-Ion two cell battery pack Output: 3.7V, 700mAh Performance: Approximately 360 one-minute exams in visible mode starting with 100% charge. Performance: Approximately 90 one-minute exams in Near UV mode starting with 100% charge. Battery Pack life: 500 full recharge cycles, approximately 5 years worth of use. Safety: Batteries are protected from over charging, over discharging and short circuiting by means of a built-in safety circuit.
Charging Circuit Performance:	Fully discharged battery pack charges to 100% in approximately 2.5 hours.
Light Source:	High intensity dual chip light emitting diode (LED)
Light Output - Visible white light transillumination/illumination Mode:	35 mW (500 mW/cm ²) minimum using 3 mm standard light guide Color Temperature: Approximately 6200° Kelvin
Light Output - Near UV (405nm) Mode:	70 mW (1000 mW/cm ²) minimum using 3 mm light guide with filter
Hand Piece Dimensions and Weight:	Length: 6.25 in (159 mm) Diameter: 0.61 in (15.5 mm) Weight 2.3 oz (65 grams) with light guide
Safety:	This device complies with ANSI/AAMI/EN/IEC 60601-1, "Medical Electrical Equipment – Part 1: General Requirements for Basic Safety and Essential Performance (2006/A2:2021)."
EMC:	This device complies with ANSI/AAMI/EN/IEC/EN 60601-1-2, "Medical Electrical Equipment, Part 1-2: General Requirements for Basic Safety and Essential Performance – Collateral Standard: Electromagnetic Disturbances – Requirements and Tests, 4th Ed. (2015/A1:2021)"

REPORTING OBLIGATION

Any event such as death or serious injury that has occurred to the patient, user or other persons in relation to use of this device should be reported to AdDent, Inc. and the competent authority of the Member State in which the user and/or patient is established.

REPLACEMENT PARTS / ACCESSORIES:

P/N 600045 Micro Tip 2mm Light Guide
P/N 630003 3mm Light Guide (for visible white light)
P/N 630099 3mm light guide with filter (for near UV light)
P/N 110066 Pedo Light Guide, 2mm
P/N 640056 Lighted Mirror Attachment (Package of 5)
P/N 640072 Proximal Caries attachment with 5 fiber light guides
P/N 640071 Proximal Caries refill kit with 45 fibers
P/N 640035 Endo-Lite with 5 Fiber Light Guides
P/N 640039 Endo-Lite Refill Kit (Qty 45)
P/N 640041 Perio Kit with 5 Fiber Light Guides
P/N 640042 Perio Guide Refill Kit (Qty 45)
P/N 600027 Box of 250 Protective Sleeves
P/N 650026 Yellow Glasses
P/N 130002 Medical grade power supply



*Battery must be replaced by dealer

MANUFACTURER

AdDent INCORPORATED *Advancing Dental Excellence*
AdDent, Inc.
43 Miry Brook Road, Danbury CT 06810 USA
Phone: 203-778-0200
Fax: 203-792-2275
Email: info@addent.com
Website: www.addent.com



EMERGO EUROPE
Westervoortsedijk 60,
6827 AT Arnhem
The Netherlands



ISO 13485 COMPLIANT

MICROLUX DW

ADDENT INCORPORATED

MICROLUX DW DIAGNOSTIC SYSTEM INSTRUCTIONS FOR USE

Warranty registration at www.addent.com

MADE IN THE USA

MICROLUX DW TRANSILLUMINATOR/ ILLUMINATOR

(1) Microlux DW unit, (1) wall plug-in USB power supply, (1) USB charging cord, (1) 3mm standard light guide with silver ferrule, (1) 3mm DW light guide with filter and black ferrule, (1) pair of yellow glasses, and (1) Instructions for Use.

PRECAUTIONS

Not Sterile. The following Microlux DW accessories are patient contact parts and are provided in a non-sterile condition:

- 2mm, 3mm and Pedo Glass Fiber Optic Light guides
- Lighted Mirror Attachment
- Endo-lite, Perio Probe and Proximal Carries stainless steel attachments

They must be sterilized prior to initial patient contact and between patient applications. Refer to instructions.

The Endo-lite, Perio Probe and Proximal Carries plastic fibers are SINGLE USE patient contact parts. They must be disinfected prior to patient contact. Fibers must be disposed of after use. Refer to instructions.

CAUTION: Do not autoclave the Microlux DW LED hand piece. Doing so will damage the unit and void your warranty. Refer to instructions for C. Disinfecting.

CAUTION: Do not immerse the Microlux DW LED hand piece in solution. Doing so will damage the unit and void your warranty.

CAUTION: Do not autoclave the Endo-lite, Perio Probe and Proximal Carries stainless steel attachments with the plastic fiber insert in place. Doing so will damage the attachments.

CAUTION: The light guides are fragile – handle with care. Insert the glass light guide into the aluminum nose cone with firm pressure. The stainless steel ferrule at the end of the light guide should be covered by the aluminum nose cone and a slight click may be heard. To remove, rotate slightly and pull on the light guide at the same time.

INTENDED USE

The Microlux DW Transilluminator/Illuminator is intended to be used by a dentist or dental professional as an adjunct to traditional oral examination. It is used for trans-illumination of the teeth, using high intensity visible white LED light, thus aiding clinical dental examinations. Trans-illumination helps to visualize crown fractures, caries and root canal orifice. The unit is also used for fluorescence illumination of the teeth, using high intensity 405 nm LED light. Fluorescence illumination helps to visualize caries, biofilm, bacteria and composite removal.


P/N 660155 REV. A 2023/09

OPERATION AND FIRST TIME USE

Note: The Microlux DW accepts all original Microlux light guides.

CHARGING THE UNIT - The Microlux DW unit should be fully charged prior to first time use.

A wall plug-in USB power supply is provided to charge the unit. The power supply operates from wall Voltages from 100 to 240 Volts, AC. Connect the USB cord to the power supply and plug the power supply into a wall outlet. Plug the opposite end of the USB cord into the connector located on the end cap of the Microlux DW. While charging the unit, the LED charge indicator on the end cap of the Microlux DW will illuminate solid blue. When the unit is fully charged, the blue LED indicator will turn off.

 Do not attempt to use the Microlux DW while it is charging. The output LEDs will not operate when the unit is connected to the USB power supply.

THEORY OF OPERATION

The Microlux D/W uses a powerful dual chip LED to provide for visible transillumination as well as illumination in the 405 nm range. The use for 405 nm wavelength permits visualization of:

- Biofilm
- Caries bacteria
- Dental plaque
- Differentiation between composite and tooth structure
- Tooth fluorescence vs non fluorescence of restorative materials

There are two modes of operation:

1. Visible white light illumination and transillumination mode
2. Near UV (405 nm) output mode

The unit comes with two different light guides for use as follows:

- **MODE 1** Visible White Light illumination and transillumination use clear 3mm lightguide with silver ferrule.
- **MODE 2** Near UV output use filtered 3mm light guide with black ferrule.

PLEASE BE SURE TO USE THE CORRECT LIGHT GUIDE FOR EACH APPLICATION

1. To activate the Microlux DW unit, press the clear on/off button once. The LED providing **MODE 1** white light illumination and transillumination will turn on.
2. Pressing the clear button a second time will activate **MODE 2** the near UV LED output mode (Use yellow glasses to enhance fluorescence in near UV mode).
3. Pressing the clear button a third time will turn the unit off.
4. Pressing and holding the clear button for two seconds in any mode will turn the unit off.

Note: To preserve battery power, the unit will automatically turn off after 3 minutes in either mode.

BATTERY INDICATOR

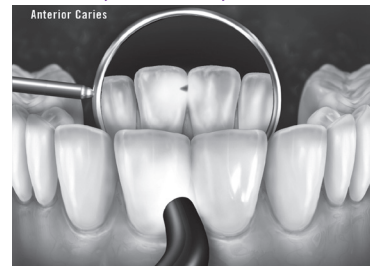
After activating the unit in any mode, a multicolor LED battery indicator illuminates the clear on-off button as follows:

Green - Battery charged, normal operation.

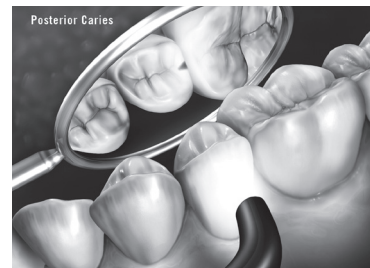
Amber - Battery has approximately 10 minutes charge remaining.

Red - Battery discharged, output LEDs will turn off and battery requires recharging.

CARIES, CRACKS, CALCULUS

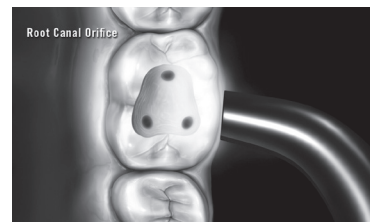


Anterior Caries: Anterior caries can be visualized by placing the probe on the labio-cervical region of the tooth and examine from the lingual. **Shown above: 3mm P/N 630003, 2mm P/N 600045, Pedro P/N 110066.**



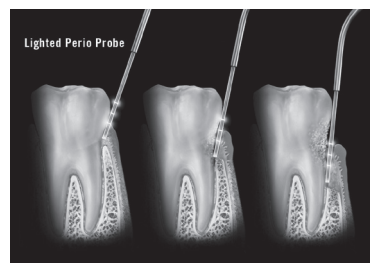
Posterior Caries: To visualize posterior proximal decay, place the probe on the cervical area of the tooth. Caries appear as a dark shadow on the occlusal surface. **Shown above: 3mm P/N 630003, 2mm P/N 600045, Pedro P/N 110066.**

ROOT CANAL ORIFICE



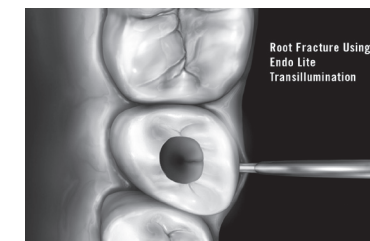
Root Canal Orifice: To help locate root canal orifice, place the light source on the buccal or lingual cervical region of the tooth. **Shown above: 3mm P/N 630003, 2mm P/N 600045, Pedro P/N 110066.**

MICROLUX PERIO PROBE



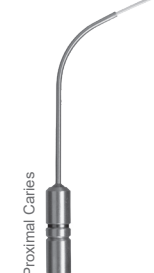
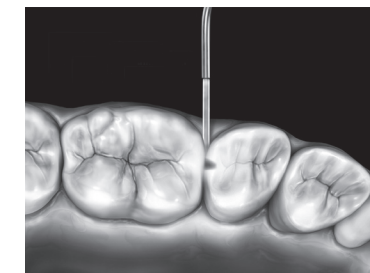
Periodontal Disease: To detect the depth of the periodontal pockets and gingival recession, use the lighted Perio Probe and insert the tip in the gingival sulcus. The depth indications are 3, 5, and 7mm. **Shown above: Perio Probe P/N 640041.**

MICROLUX ENDO-LITE



Root Fracture: Root fractures can often be detected by using the Endo Fiber tip. Place it either buccally or lingually in the gingival sulcus. A fracture line will appear dark via transillumination from the outside to the inside of the canal. **Shown above: Endo-Light Guide P/N 640035.**

MICROLUX PROXIMAL CARIES ATTACHMENT



Posterior Caries: Caries can be detected using the Proximal Caries fiber tip. Place the lighted fiber tip interproximally under the marginal ridge. View from the occlusal. This method often shows caries with high definition. **Shown above: Proximal Caries P/N 640072.**

CLEANING/ DISINFECTING/ STERILIZING

A. Cleaning: 2mm, 3mm and Pedro Glass Fiber Optic Light guides, Endo-lite, Perio Probe and Proximal Carries stainless steel attachments.

- Immerse/thoroughly drench light guides and stainless steel parts in a surface decontaminate cleaner (soap and water cleaning solution).
- After 10 minutes, scrub with an instrument cleaning brush until visibly free from debris.
- Rinse all parts with warm water.

B. Sterilizing: 2mm, 3mm and Pedro Glass Fiber Optic Light guides, Lighted Mirror Attachment, Endo-lite, Perio Probe and Proximal Carries stainless steel attachments.

- Sterilize in a steam autoclave using distilled water at a temperature of 270°F (132°C) for 20 minutes.
- Do not add chemical solutions to the autoclave.
- Do not use a chemical autoclave.

C. Disinfecting: The Microlux DW LED hand piece and Endo-lite, Perio Probe and Proximal Carries plastic fibers can be disinfected following these guidelines:

- Wipe all surfaces with a disinfectant comprising 72% - 55% alcohol and .33% -.5% quaternary ammonium and follow the manufacturer's directions. Some popular disinfectant wipes in this category are:

1. Monarch Surface Disinfectant Wipes (Air Techniques)
2. Opticide 3 Wipes (Biotrol)
3. Super Sani-Cloth Wipes (PDI)

- Wipe, do not spray, solution onto the Microlux DW hand piece. Prevent liquids from entering openings on unit.