

Warnings

Battery

- Inspect battery pack prior to use.
- If the battery pack is dropped or receives a mechanical impact, ensure that the casing is not cracked or damaged.
- Do not use damaged battery packs.
- The electrolyte contained within the lithium cells can cause irritation to the respiratory tract, eyes and skin. In addition, cell venting could result in air contaminants, including corrosive or flammable vapors. All precautions should be taken to limit exposure to the electrolyte vapor.

Lamp Head

- Turn the lamp head off when not in use. The lamp housing can get hot.
- Do not use the lamp if ambient temperatures exceed 30°C (86°F).
- When lamp is in use, always keep the front of the light at least 6 inches from skin and any surface being illuminated.
- Avoid shining the lamp into patient's eyes.
- Do not allow contact of the lamp to the patient.
- Use a curing filter when working with any light-curable resins.

Charging

- When charging the battery pack, inspect the charging lights to ensure that charging is active.
- Do not simultaneously touch the charging unit (when plugged in) and the patient.
- Supplied Li-ion batteries can be dangerous and even explode if improperly charged. The battery pack is designed to be charged only by the supplied charging accessories.
- Do not position the battery charger so it is difficult to disconnect the power adapter from the wall.

General

- Check all components for burrs, nicks, and sharp edges prior to use.
- If unit is jarred or dropped, re-inspect prior to use.
- Do not use the PeriOptix headlight system or charge the battery in an oxygen-rich environment.
- Do not store liquids above the charger, battery pack or any other PeriOptix component or accessory.
- If a spill occurs to the charger, battery, lamp head or battery pack, discontinue use. Using the charger after liquid is spilled into the unit could result in electrical shock.
- Clean only as directed.
- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the PeriOptix system, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.
- Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.
- Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.
- Removing the power adapter from the wall outlet is the means of isolating the headlight from the supply means.
- Compliance with radiated emissions and immunity Standards: Complies with RF Emissions test per CISPR 11 Group 1 Class B; and Immunity test per IEC 60601 test level for ESD, EFT, Surge, Power Frequency, Voltage, Conducted RF and Radiated RF.

Warranty

DenMat warrants its products to be free of original defects in material and workmanship and to perform in accordance with specifications.

One-Year Limited Warranty

All components of headlight and battery pack system.

Warranty Exclusions:

- Breakage or failure due to tampering, misuse, neglect, accidents, modification or shipping.
- If the product is not used in accordance with manufacturer's recommendations or instructions.
- If repaired or serviced by other than DenMat technician.

Prompt inspection and reporting of missing or damaged product should be reported to shipping carrier and DenMat within 3 days of receipt of product.

If DenMat products or any component thereof are found to be defective or at variance with the product or component(s) it will be replaced at no cost to the purchaser. This warranty only applies to products purchased new from DenMat or its authorized distributors.

For any questions or problems, please contact your local distributor or call DenMat Customer Care at 800-433-6628 between the hours of 5am to 5pm (Pacific Time) Monday-Friday. Outside the U.S., please call 1-805-347-7990 or visit denmat.com



Headlight Systems Directions for Use

Instructions for MicroLine™ Mini, Solaris® and LumiPro™ Headlight Systems



Device Description and Intended Use

PeriOptix headlights are fully portable lighting systems worn by the operator and are intended to illuminate the working area. They can be worn on a headband or attached to all types of magnification loupes. They are powered by a small, lightweight battery pack that is clipped to the operator's waist. The rechargeable lithium-ion battery provides 8-10 hours of bright, focused light between charges.

Contents

1. Battery pack charger adapter
2. Battery pack charger cord
3. Battery pack
4. Lamp head with cable. (a. Solaris; b. Mini c. LumiPro)
5. Curing filter (a. Solaris; b. Mini c. LumiPro)
6. Elastic strap
7. Shirt clip



Cleaning Instructions

Proper cleaning and maintenance is imperative as well as protection from rough use and improper storage. Cleaning with a low-alcohol (<25%) solution is recommended. If using spray cleaner, do not spray liquid directly on the unit. Instead, spray onto a soft no-scratch cleaning cloth, such as the one provided, and wipe the product as per the solutions' directions for use. Using paper products can scratch lenses. Should you have any questions, please call DenMat Customer Care at 800-433-6628.



- DO NOT SUBMERGE PRODUCT OR SUBJECT TO SURFACE SATURATION WITH ANY LIQUID OR ULTRASONIC CLEANER. YOUR PRODUCT IS NOT WATERPROOF.
- DO NOT USE WITH ANY POWER ADAPTER, CHARGER CORD, OR BATTERY PACK OTHER THAN PROVIDED BY DENMAT.
- DO NOT STERILIZE VIA AUTOCLAVE, CHEMICLAVE, GLUTARALDEHYDE, IODOPHOR, OR ANY OTHER STERILIZATION METHOD.
- NO MODIFICATION OF THIS EQUIPMENT IS ALLOWED
- THIS UNIT CONTAINS A LITHIUM-ION BATTERY. AS A RESULT PLEASE BE SURE TO NOT STORE THE UNIT UNCHARGED FOR AN EXTENDED PERIOD OF TIME AS THIS MAY CAUSE THE BATTERY TO DISCHARGE AND REDUCE THE LIFETIME OF THE UNIT.

Replacement Parts	Solaris	Mini	LumiPro
Lamp Head	LED3	LED4-2	LED6
Replacement Lamp Head Cable	LED3-C	LED4-C	LED6-C
Curing Filter	LED3-F2	LED4-F4	LED6-F
Battery Pack	LED3-BP1A	LED4-BP1A	LED6-BP1A
Battery Pack Charger Cord		LED-BP-CC	
Battery Pack Charger Adapter		LED-BP-CA	

Operating Environment:

- 10° - 30°C (50° - 86°F)
- 95% or less relative humidity
- 70kPa - 106kPa

Transport/Storage:

- 0° - 40°C (32° - 104°F)
- 95% or less relative humidity
- 70kPa - 106kPa

Technical Data:

Headlight System: Internally powered by 3.7Vdc, 6700 mAh rechargeable lithium-ion battery pack

Solaris (LED3-BP1A): 730mA
Mini (LED4-BP1A): 540mA
LumiPro (LED6-BP1A): 470mA

Power Supply: 100 - 240V~, 50/60 Hz, 0.5A

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Operating Instructions

1. Charging the battery pack.

- Plug charger cord (FIG. 1, ITEM 2) into the charger adapter (FIG. 1, ITEM 1).
- Plug the charger adapter (FIG. 1, ITEM 1) into a power outlet and connect to the battery pack (FIG. 1, ITEM 3) charging port (FIG. 2, ITEM 1). The green charging status light (FIG. 2, ITEM 6) will blink to indicate that charging has begun.
- Once the battery pack is fully charged, the green charging status light (FIG. 2, ITEM 6) will stay solid.

NOTE: When the battery pack has 10% or less of full power, the red low battery indicator (FIG. 2, ITEM 4) will turn on. The low battery indicator turns off when the battery pack is charging and has reached more than 10% of full power.

2. Mounting the Light to Loupes

Attach the lamp head to loupes using the supplied mount and hardware if purchased with loupes. If your light was purchased after loupes, contact DenMat to order the appropriate mount and hardware.

- Flip-Up Style Loupes:**
Slide clip onto front of interpupillary cross bar of loupes, with one circular cut-out on top and one cut-out on the bottom of the cross bar. The clip should securely snap into place.
- Through-The-Lens (TTL) Loupes:**
Line the screw holes of the mount to the drilled holes on the frame. Use the phillips screwdriver provided and tighten screws until secure.
- Universal Mount:**
Open the clip and slide down over the top of the nose bridge. The padded arms of the clip should grasp each side of the eyeglass lenses. Tighten thumb screw to secure clip to frame.

3. Installing the lamp head and battery pack

- Attach the lamp head cable to the loupe frames with the small elastic strap. (FIG. 1, ITEM 6).
- Use the shirt clip (FIG. 1, ITEM 7) on the lamp head cable to position the cord on your shirt or lab coat as desired.
- Clip the battery pack to your waist band or pocket, install the lamp head cable to the lamp head port (FIG. 2, ITEM 3).

4. Lamp head operation

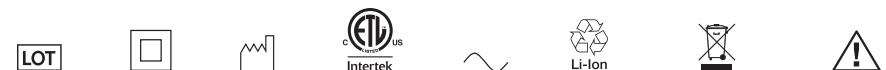
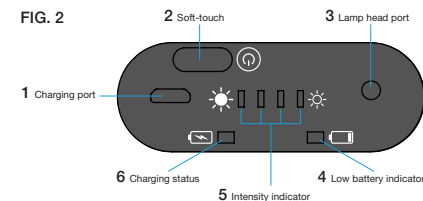
- To turn on/off the lamp head, press and hold the power button (FIG. 2, ITEM 2) for 2 seconds.
- Adjust the lamp head intensity by tapping the power button (FIG. 2, ITEM 2). The intensity indicators (FIG. 2, ITEM 5) indicate the intensity of the lamp head. Each intensity indicator light represents 25% of full intensity.

5. Adjust the direction of the LED beam.

- To adjust the tension of the lamp head position, use the supplied phillips screwdriver to tighten or loosen the two small link screws as needed.

6. Precautions

- The use of charger adapters and cords other than those provided for use with the device may result in increased emissions or decreased immunity and may cause the system to be non-compliant with the requirements of IEC 60601-1-2. Only the power supply that ships with your device should be used to power the lamp heads.



For definitions of symbols visit denmat.com/symbols