



IsoLED Plus HEADLIGHT User's Guide



1.0 Purpose and Features of the product

1.1 Purpose

The headlight is used for examination, diagnostics and surgical operations for multifarious uses including microsurgery.

1.2 Features

- 50,000 hours of LED life provides for a maintenance free device with an end life of approximately 20 years.
- The unit has infinite mobility, not confined by access to power sockets, and its charge will last more than 3 1/2 hours at full intensity.
- Its light beam is extremely homogeneous and free of imperfections.
- Its high CRI rating of 96 is very desirable in color-critical applications such as neonatal care, medicine and surgery, as it shows the true colors of tissues and skin, thereby reducing the time to diagnosis and surgery.
- The light-weight battery packs have a retention clip to be used on the user's belt or pocket.
- The wall mounted Battery Charger comes with a Charge Monitor that alerts the operator when the Battery is fully charged.
- The unit comes with two (2) Battery Packs, allowing for "Hot Swap" and the extension of its operating time to > 7 hours.

2.0 Operating Instructions

2.1 Charging the Battery

1. Plug the charger's male connector into the receptacle on the Battery Pack.
2. Plug the AC connection into a 100-240 VAC source.
3. The charger indicator light will illuminate red while charging and turn green when charging is complete (approximately 3.6 hours).
4. An 85% partial charge may be performed in 2 hours.
5. Disconnect the charger from the AC source and unplug the charger from the control unit.

2.2 Illuminator and Headband Operation

1. Plug the Cable Assembly into the illuminator unit receptacle. There are red orientation dots that must be aligned.
2. The cable should be routed and snapped into place through a set of two cable clips. For dual ratchet headsets one is located on the top on the crown and one on the rear of the headband. The user has the choice of using the set on the left or the right.
3. For softband/Velcro headsets, the cable should be routed through two clips along the circumference.
4. The illumination spot size may be adjusted by turning the grooved dial on the headlight.
5. The linkage assembly on the headband allows for personal positioning control. The joystick is used to further adjust the position of the light beam.

2.3 Control Unit / Battery Pack Operation

1. Assure the Cable Assembly is plugged into the illuminator unit receptacle. There are red orientation dots that must be aligned.
2. Plug the other end of the Cable Assembly into the Control Unit/ Battery Pack receptacle, once again aligning the red dots.
3. Clip the control unit where desired or place in a pocket.
4. Turn the ON/OFF and intensity control knob clockwise to turn unit On (switch will close). This knob also controls the intensity.
5. To turn unit Off, turn control knob counter-clockwise until switch opens.
6. When battery has discharged to a level too low to maintain operation, the Illuminator will dim

or flicker and the green LED on the control panel will turn off.

- The unit's operational time could be extended from 3½ hours at full intensity to greater than 7 hours by using the illuminator at half intensity.

3.0 SPECIFICATIONS

Illumination	> 31,000 lux @ 30 cm
LED Life	>50,000 hours
Color Temperature	4,500 °K
Color Rendition	96 Typical
Index (CRI)	
Light Degradation	None
Spot Size	10 to 100 mm @ 400 mm working distance
Intensity Range	20% to 100%
Operating Time	>3.5 hours typical at maximum intensity
Normal Recharge Time	3.6 hours
Quick Recharge Time	2 hours, for 3 hours of maximum intensity
Battery Charger	Universal: 100 to 264 VAC, 50 to 60 Hz, 8.4 VDC @ 1.3 A
Weight (headlight)	290 grams
Weight (Battery Pack)	190 grams
Size (control unit/battery pack)	4.25" x 2.7" x 1.1"

4.0 Battery use and care

The capacity of Li-ion rechargeable batteries will be changed by its' environmental temperature. The appropriate temperature is (10 °C~40 °C) range. Do not expose the battery to extreme temperatures, if the battery is used in high or low temperatures, the battery capacity will be reduced.

Dispose of worn battery safely.

5.0 Care and Maintenance

5.1 Headlight, Headgear and Cable

Exterior surfaces of headlight, headgear and cable can be wiped clean with 10% bleach, 70% isopropyl alcohol or Mild soap.

Headbands and headlight modules cannot be immersed into disinfecting liquids or sterilizers.

Keep ends of cable clean by wiping with a damp cloth. Allow to dry before use.

Clean the optics only with lens tissue available at any camera store. Follow the instructions on the package.

To insure long life for the headgear, cable and power source, store them in a cool dry environment.

5.2 Joystick

Joystick can be sterilized after unscrewing from headlight.

DO NOT AUTOCLAVE ANY OTHER PARTS OF THE HEADLIGHT SYSTEM !

6.0 Warnings and Cautions

6.1 Warnings

Users of this headlight should be trained in the appropriate surgical procedures.

They should read and understand the owner's manuals for this Headlight and all equipment used in conjunction with it.



Warning: This product must not be used in the presence of flammable gases.



Warning: This product should not be immersed in fluids.



Warning: Do not shine the light directly into the patient's eyes.

9.0 List of Spare Components

Item	Qty.	Description	Part No.
1	1	Battery Pack	IL-2295
2	1	Headlight Illuminator	IL-2298
3	1	Headlight Cable Ass'y	IL-2348
4	1	Sweatbands (pack of 4 sets)	IL-2297
5	1	Battery Charger	IL-2187
6	1	Joystick (pack of 2)	FO-0911
7	1	Replacement Head Gear	FO-2072