

TECHNICAL OVERVIEW

Power consumption: 1W-2.4W Max
Diameter of the light spot at a distance of 25cm: 2.75 - 7.75in
Vertical direction of illumination: +/- 25° adjustability
Initial charge time: 16-24 hours
Charge time: 6-8 hours
Operation time: 4 hours per charge
Power source: 3 x 'AAA' NiMH rechargeable batteries
Temperature: Reference color temperature of 5,000 Kelvin
Max wattage output: 0.03 – 2.45 W
Ambient temperature: In use 10 °C – +40 °C
During storage or transport: -40 °C - + 70 °C
Light source: Powerful white LED's, class 1M/EN 60825-1:1997
Life expectancy of LED chip: 50,000+ hours
Light bulbs: No replacement of LED light bulbs is necessary
Weight: 10 oz with battery pack
Input voltage: 6-12V DC
Length of the battery charger cable: 6 ft.

BATTERY OPERATING INSTRUCTIONS

- Initial charge time is 16-24 hours. Ignore the light on the charger for initial charge.
- Routine charge time is 6-8 hours. Green light may turn green before maximum charge is attained.

Battery Size (NiMH)	Rated Capacity (mAh)	Estimated Charging Time
AAA	850-1000	6-8 hrs

Note: Batteries will not be damaged if left in the charger for a longer time.

- Within 5-6 charge/discharge cycles, the batteries will reach its full capacity.
- To maximize capacity, fully discharge batteries every 6-8 weeks.
- It is normal for batteries to warm up when charging. They will cool down after they are charged.
- Store batteries in a cool, dry place at room temperature.
- The NiMH batteries in the unit gradually lose 1-3% of its power every day when stored. If they are not used for a few weeks, "top them up" to be sure of a full charge.
- Charge only in charger designed for NiMH batteries.

CONTACT

For product questions or to place an order, please contact:

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OTHER

Spare Parts and Accessories:
GEM03 Rechargeable Backup Batteries: **GEMB01**
GEM03 Spare Rapid Battery Charger: **GEM03RPG**
GEM03 AC/DC Unit Plug-in (6-12V): **GEM03PG**

Applicable standards:
EN 60825-1:1997
IEC 60601-1:1996, IEC 60601-2:1996
EN ISO 10993-1:1998

Limited Warranty

We guarantee this device for 6 months from date of purchase. We guarantee the proper function of the unit only if it is used as intended by the manufacturer. Any faults or defects which occur during the guarantee period will be repaired or replaced free of charge provided they are caused by faults in material, design or workmanship. In the case of a complaint of a defect in the product, the buyer must prove that any such defect was present at the time the product was delivered. This guarantee excludes any defects which occur because of normal wear and tear, incorrect use, the use of non-original GEM Focus™ spare parts, or non-authorized modification or repairs. Further claims are excluded. For repairs, please contact your supplier, who will return the goods to the manufacturer or the authorized agent.



HEADLIGHT USERS GUIDE

Thank you for purchasing the GEM Focus™ Headlight System. Please read the following instructions carefully before use.

PRODUCT CODE:
GEM03: GEM Focus™ (3xAAA NiMH rechargeable batt.)

IMPORTANT TIPS FOR USE: The GEM Focus™ is an LED operated device, please review the following recommended suggestion before operating:

- LED's emit a cool and bright white light, shining at a different color than other alternative procedural light sources. Therefore, the user is encouraged to adapt to the color differentiation that the LED creates among the user's target.

IMPORTANT SAFETY INSTRUCTIONS: Failure to read this very important instruction manual can result in injury, unexpected misuse consequences, product failure and a void in warranty. Please carefully read these instructions before using the GEM Focus™ and keep them in a safe place for future reference.

Safety Information: In accordance with local regulations this product should be disposed of as an electronic device separately.

General Safety: Do not shine the light directly into the patient's eyes and never hold magnifying glasses or any other optical system in front of the light.

Safety in use: Power off or use the rheostat dimming feature when not in use. The headlight bezel should not be left covered with a cloth or similar material while in use.

General Application Note: Please contact the manufacturer or your authorized dealer if there is uncertainty about an application.

Dental Application Note: An amber filter may be used to avoid premature hardening of composite.

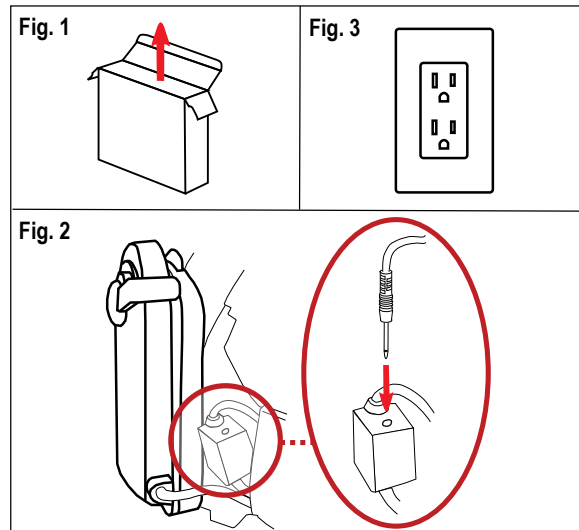
CHARGING INSTRUCTIONS

Prior to initial use:

- Charge batteries prior to first time use for 16-24 hours (see **Charging the instrument** below).
- PLEASE SEE **ADDITIONAL TIPS**.

Charging the instrument

You will find the charger in the carrying case with the GEM03 unit. To charge the unit, open the black box containing the 12V GEM Focus™ power cord (fig. 1). Plug the jack directly into the transformer located to the right of the battery pack on the cable (fig. 2). Plug the charger into a standard AC outlet for 6-8 hours to fully charge; **16-24 hours upon initial use** (fig. 3). Follow the **OPERATING INSTRUCTIONS** (right).



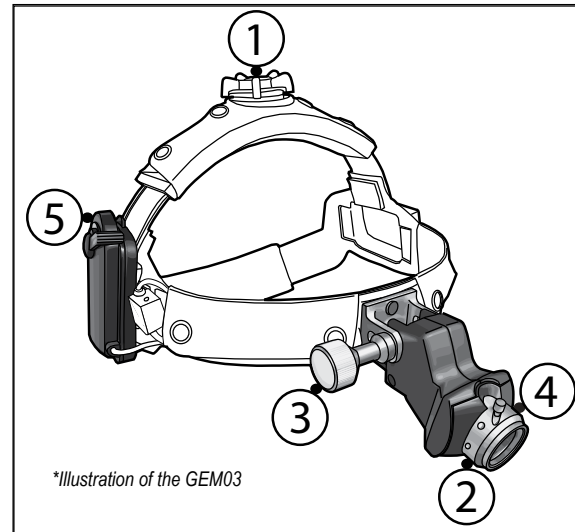
Warnings:

To avoid personal injury and property damage from, but not limited to, the risk of electric shock or fire:

- Charge only Nickel Metal Hydride (NiMH) rechargeable batteries. Charging any other types of batteries may cause them to leak, rupture or explode.
- Do not open battery, dispose of in fire, put in backwards, mix with used or other battery types or short circuit - may ignite, explode, leak or get hot causing injury.
- Use the charger only in dry locations. Keep away from rain, snow or excessive moisture.
- Never plug battery chargers into an extension cord.
- Do not operate the charger if damaged.
- Do not disassemble or modify any part of the charger.
- Unplug before attempting maintenance or cleaning.

OPERATING INSTRUCTIONS

PLEASE FOLLOW **CHARGING INSTRUCTIONS** (LEFT) BEFORE FOLLOWING **OPERATING INSTRUCTIONS**.



Please refer to the corresponding numbered diagram above.

- (1) Adjust the headstrap to fit head size. Place the instrument on your head and adjust for width and height by pushing in on the knobs and turning.
- (2) Power the unit on. While on your head, look down and push the button below the bezel to power the light on.
- (3) Select viewing angle. Loosen the thumbscrew slightly and adjust the nosepiece up or down, backwards or forwards. After adjustment, gently re-tighten the screw when the illuminated spot is aimed at the intended target.
- (4) Select beam pattern (spot size). Focus the beam to the desired spot size using the knob above the bezel.
- (5) Select the LED brightness. Use the rheostat on the battery pack to select the required brightness for the procedure.

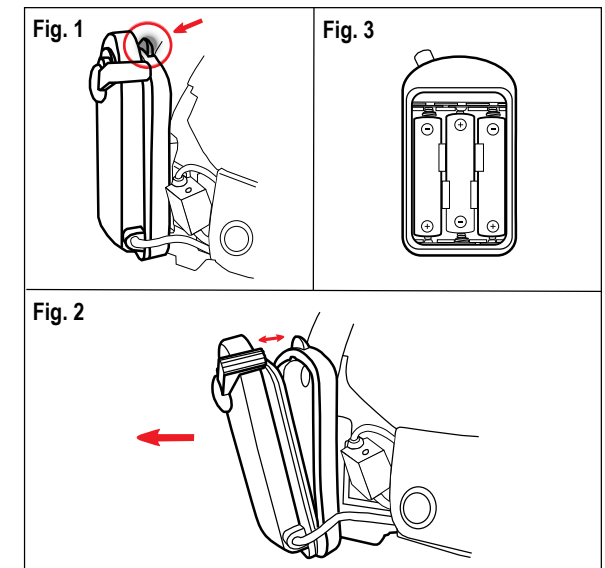
REPLACING THE BATTERIES

Important note: When the GEM Focus™ NiMH batteries approach the maximum amount of charge cycles, they should be replaced.

PLEASE SEE **REPLACING THE BATTERIES** (RIGHT) AND FOLLOW THE ORDERED INSTRUCTIONS.

REPLACING THE BATTERIES

You will find the batteries located in the battery pack. To change the batteries, find the battery pack and locate the lip at the top of the rubber backing (fig. 1). Remove battery pack from the headstrap by prying the top of the pack away from the rubber backing (fig. 2). Insert the three AAA batteries according to the positive (+) and negative (-) symbols (fig.3). Place pack back on rubber backing. The headlight will be ready for use again.



Attention:

Please dispose of used batteries responsibly. Please do not shine light directly into eyes. If light is directed toward your eyes, close your eyes and turn your head out of the direct light.

GENERAL MAINTENANCE INSTRUCTIONS

Cleaning: The instrument housing may be cleaned with a soft cloth moistened with alcohol or a non-aggressive disinfectant solution. Do not soak or spray with disinfectant. The black padding strips may be removed for cleaning by pulling apart the snaps, however, we recommend leaving the pads on for cleaning. The pads may be cleaned the same way; do not soak or spray with disinfectant either.