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## BLUEMAXX™ Rechargeable Forensic LED Light BM500LED

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### **Background and Purpose**

The BLUEMAXX™ BM500LED is a rechargeable LED-based illuminator which emits high intensity blue light at 455nm (nanometers). This wavelength can produce fluorescence in physiological fluids and other materials treated with certain powders and dyes; in general, materials having optical excitation bands between 390 and 520nm.

The kit has a pair of orange goggles that effectively filters the blue light, permitting visual observation and photography of the fluorescence effect. The light is an essential tool for area searches and photography of evidence at a crime scene, and provides best results when used under subdued ambient lighting conditions.

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## **Unpacking / Set-up**

Next unthread (rotate counter-clockwise) the tail cap from the body tube and install the battery pack with the Positive (+) terminal of the pack (the raised “bump”) facing toward the head-end of the light. Then fasten the tail cap by threading it (rotate clockwise) into the body tube (shown below).

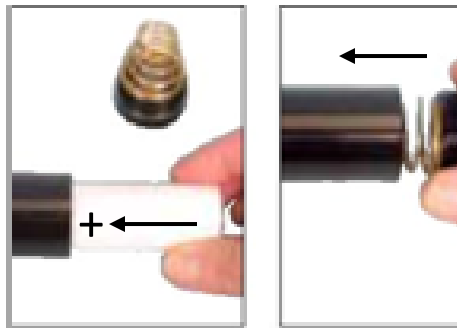


FIG 1: Battery Installation

## **Safety Precautions**

**CAUTION:** Due to the intensity of the light, do not look directly into the beam. Reversing the battery may permanently damage the flashlight and the battery pack.

## **Electrical Info**

Battery: 6volt, 3.5 amp-Hr nickel metal hydride (Ni-Mh) battery pack  
Switch: Recessed, push-on – push-off soft touch button  
Illuminator: High output LED  
Charger: Input : Universal voltage 100-240VAC, 50/60Hz, Output: 12VDC  
Charge Rate: 220 – 400 mA (typical)  
Charge Time: Completely discharged battery : 12-16 hrs

## **Light Operation**

The ON-OFF button is located at the base of the head cap. Press for ON. Press again for OFF.

## **Beam Adjustment**

The head of the flashlight can be rotated slightly left or right in order to achieve the best beam pattern for your use.

## **Charger Operation**

The Charger Cradle may be used free-standing or permanently mounted to a surface, such as a desk, wall or in a vehicle. Recessed mounting holes inside the cradle accept up to #8 mounting screws, which should be a minimum of 1 inch (25mm) long.

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Insert the Charger Plug head into its port at the front of the Cradle. Align the charge rings of the light with contacts in the cradle and snap the BLUEMAXX into the Charging Cradle. The Retainer Tabs will hold the light securely. The Contact Rings on the flashlight body will now be touching the metallic Charging Contacts in the bottom of the Cradle, allowing the battery to charge. To remove the light from the Charging Cradle, press the red release button then lift the light straight up and out.



FIG 2: Charging Cradle Features



FIG 3: Light Installed in Charging Cradle

Plug the universal power supply into a wall socket: domestic: 100-125VAC or international: 208-240VAC (using the supplied adapter on the power supply AC contact blades).



FIG 4: Power Supply – Domestic



FIG 5: With International adapter blade

While charging, the Charging Indicator (on the top edge of the Charge Cradle) will be red/orange. When the charge is complete, the Charging Indicator will be green.

**CAUTIONS:** While charging, do not let any conductive objects touch the Contact Rings on the body of the flashlight. Only charge your BM500LED when the battery has completely discharged (charging time in this case will be 12 - 16 hours). Do not store your BM500LED in the charging cradle between uses as it will shorten the life of your battery pack.

## Cleaning and Maintenance

If the flashlight front cover filter becomes foggy or dirty, clean with a lens specific cloth only. Do not use cleaners or water, as they will damage the filter coating. If the filter is damaged or broken, please contact Sirchie Customer Service to order a replacement

## Technical Specifications

- Illuminator: High output white LED with blue narrow-band 455nm filter cover glass
- Reflector: Parabolic, calibrated for 8"-10" (20.3cm - 25.4cm) spot at 10' (3m)
- Beam Pattern: Adjustable with 1/8 turn of head
- Construction: Rugged machined aluminum w/knurled grip, anodized inside and out (corrosion, water, and shock resistant)
- ON-OFF Switch: Recessed, push-button (push ON, push OFF)
- Battery: Rechargeable 6 volt at 3.5 amp-Hr, nickel metal hydride (Ni-Mh) battery pack.
- Flashlight Length: 12.6" (32cm); Weight w/Battery pack: 32 oz. (907.2g)
- Light filter: Blue Additive Dichroic, T(ave)=60% (+/-7.5%) 380-480nm  
T=50% @ 490nm(+/-10nm) T(ave)<1% 520-780nm
- Set of orange filter goggles
- Charger Cradle: Black ABS plastic "cradle/clamp" type
- Charger Power Supply: Universal voltage input 100 – 240VAC (with adapter blade for International operation), 50/60Hz; Output 12VDC @ 450mA
- Charging Contact: 360-degree positive contact around flashlight body
- Charging Indicator: Bi-color LED: red = charging, green = charge complete
- Charging Rate: 220 – 400 mA (typical); Charging Time: 12 - 16 hrs (fully discharged battery)

## Trouble Shooting Guidelines

<b>Symptom(s)</b>	<b>Possible Cause(s)</b>	<b>Remedy Action(s)</b>
No illumination	Battery missing	Install battery
	Battery installed backward	Re-install observing correct polarity
	Battery discharged	Charge battery
	Battery defective	Contact Sirchie Customer Service
	Switch defective	
	LED defective/burned out	
	Front cover filter opaque/damaged	
Flashlight damaged internally		
White light emitted	Blue filter missing/damaged	Replace blue dichroic filter