

DARKBEAM 501F-940

DARKBEAM 501F Infrared 940nm Light User Manual

Model: 501F-940

1. INTRODUCTION

This manual provides instructions for the safe and effective use of your DARKBEAM 501F Infrared 940nm Light. This device is designed as a supplemental illuminator for night vision equipment, emitting infrared light that is invisible to the naked eye. It is intended to enhance the performance of night vision scopes, monoculars, infrared cameras, and goggles for activities such as hunting, observation, and search operations in low-light or no-light conditions.

Key Features:

- 940nm Infrared LED:** Emits powerful infrared light that is highly concealed and nearly invisible to the naked eye, making it ideal for observing nocturnal animals without disturbance.
- Adjustable Focus Lens:** Allows for telescopic adjustment to switch between a narrow, long-range beam (spotlight) and a wider, short-range beam (floodlight) to suit various observation distances.
- USB Rechargeable:** Powered by an included rechargeable battery, with convenient USB charging capability.
- Durable Construction:** Made from aluminum alloy, providing waterproof and drop-resistant properties suitable for various outdoor and humid conditions.

2. SAFETY INFORMATION

Please read all safety warnings and instructions carefully before using this product. Failure to follow these instructions may result in injury or damage to the device.

- Infrared Light:** The 940nm infrared light is invisible to the human eye. Do not look directly into the LED when the device is powered on, as prolonged exposure to infrared light can be harmful to eyes.
- Battery Safety:**
 - Use only the specified rechargeable battery and charger provided with the device.
 - Do not expose the battery to extreme temperatures, direct sunlight, or fire.
 - Do not short-circuit the battery terminals.
 - If the device will not be used for an extended period, loosen the tail cap to disconnect the power supply and prevent accidental activation.
 - Charge the battery in a well-ventilated area and do not leave it unattended during charging.
 - Dispose of batteries according to local regulations.
- Water Resistance:** The flashlight is waterproof for humid conditions but is not suitable for submersion in water or for use while swimming.

- **Children:** Keep the device out of reach of children.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- DARKBEAM 501F Infrared 940nm Flashlight x1
- Rechargeable Battery x1
- USB Charger x1
- Hand Strap x1

4. SETUP

4.1 Battery Installation

1. Unscrew the tail cap of the flashlight by turning it counter-clockwise.
2. Insert the included rechargeable battery into the flashlight with the positive (+) end facing towards the head of the flashlight.
3. Screw the tail cap back on clockwise until it is securely tightened.

4.2 Charging the Battery

The included battery can be charged using the provided USB charger.

1. Remove the battery from the flashlight.
2. Connect the battery to the USB charger.
3. Plug the USB charger into any standard USB power source (e.g., power bank, laptop, USB wall adapter) with a 5V 2A output.
4. The charging indicator on the charger will show the charging status. A full charge typically takes approximately 3 hours.
5. Once fully charged, disconnect the battery from the charger.

INDUSTRY-GRADE DESIGN

HIGH QUALITY ALUMINUM



Figure 1: A detailed diagram of the DARKBEAM 501F flashlight highlighting its key components: the tail switch, telescopic focusing mechanism, hook hole, and the rechargeable battery. It also shows a close-up of the 940nm lamp bead.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

To turn the flashlight on or off, press the button on the tail cap. A full press will toggle the power.

5.2 Focus Adjustment (Zoom Function)

The flashlight features a telescopic lens for adjusting the beam width:

- **Zoom In (Spotlight):** Extend the head of the flashlight forward to narrow the beam. This concentrates the infrared light for longer-range illumination, clearly illuminating objects well past 164 yards.
- **Zoom Out (Floodlight):** Retract the head of the flashlight backward to widen the beam. This spreads the infrared light to cover a larger area for broader observation.

Telescopic focusing

The telescopic lamp cap can change the aperture size



Natural observation



Infrared camera auxiliary



Outdoor search

Figure 2: An illustration demonstrating the telescopic focusing feature of the DARKBEAM 501F. It shows the flashlight in both 'zoom in' (narrow beam) and 'zoom out' (floodlight) positions, with corresponding images of a squirrel showing the effect on illumination area and intensity. Dimensions of the flashlight in both states are also provided.

5.3 Usage with Night Vision Devices

The DARKBEAM 501F is designed to work in conjunction with professional infrared equipment. It will not produce visible light for the naked eye. To utilize its full potential, pair it with:

- Night vision scopes
- Monoculars
- Infrared cameras
- Night vision goggles

When used with compatible night vision devices, the 940nm infrared light will illuminate your target area, allowing for clear observation in complete darkness.

POWERFUL 940NM LED

Note the following:

- 1.Almost invisible to the naked eye.
- 2.Not suitable for general lighting.
- 3.Need professional equipment cooperation.



Switch off

Switch on
(Mobile phone shooting)

by the naked eyes, you can see a dim faint red glow on the bulb, Better concealment (940nm)



**infrared
Cameras**



Goggles



Figure 3: An image illustrating the characteristics of the 940nm LED, noting it is almost invisible to the naked eye and requires professional night vision equipment for use. It shows the flashlight, a close-up of the LED when off, and a faint red glow when on (visible via mobile phone camera), along with icons for infrared cameras, goggles, and a coyote, indicating its application.

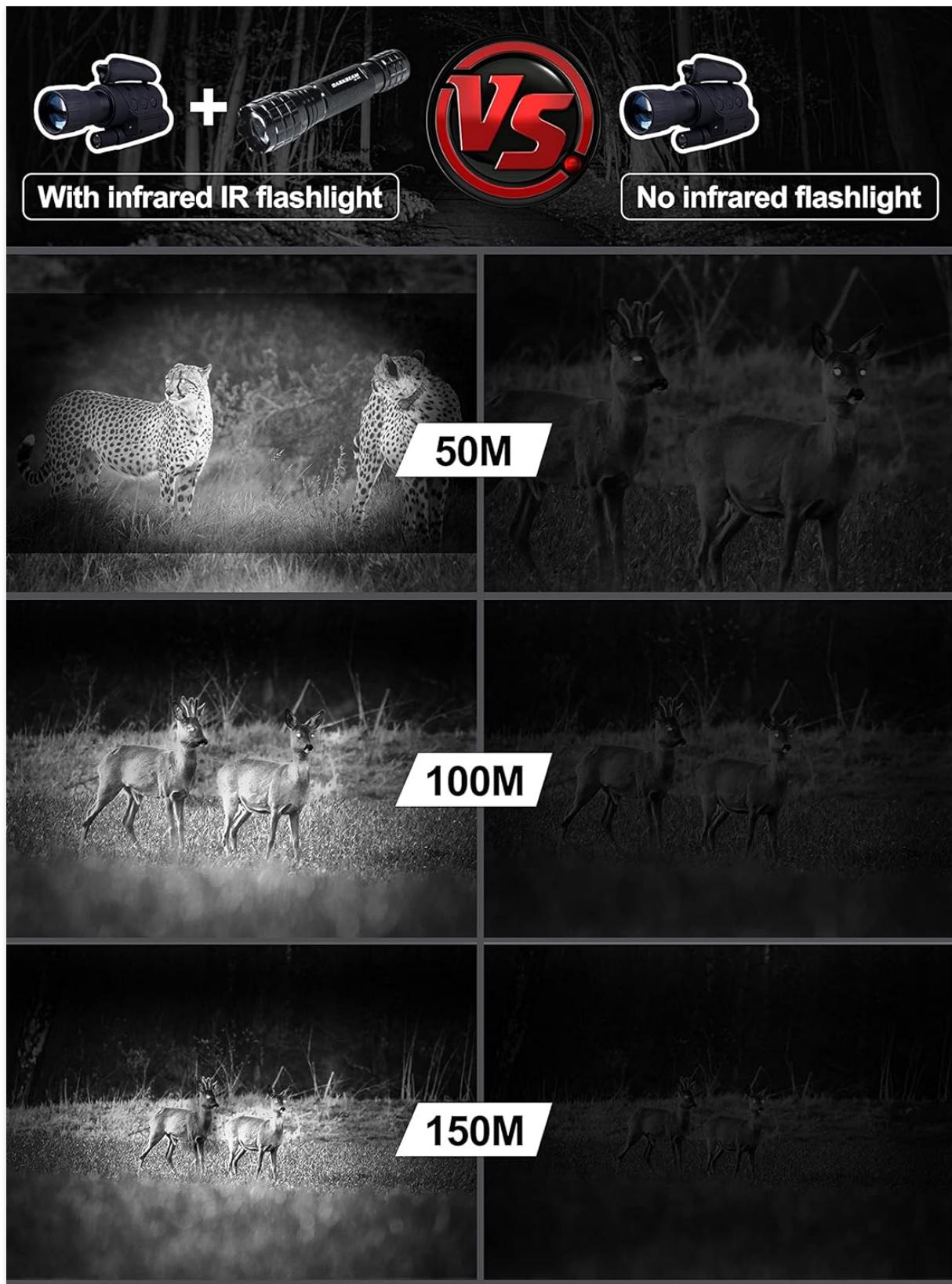


Figure 4: A series of images comparing visibility at 50M, 100M, and 150M distances with and without the DARKBEAM infrared flashlight, demonstrating its effectiveness in enhancing night vision equipment.

6. MAINTENANCE

6.1 Cleaning

To clean the flashlight, wipe it with a soft, damp cloth. Do not use abrasive cleaners or solvents, as these may damage the finish or internal components. Ensure the lens is clean for optimal performance.

6.2 Battery Care and Storage

- To preserve battery life, charge the battery every two months if the flashlight is not in use for a long period.
- Store the flashlight and battery in a cool, dry place away from direct sunlight and extreme temperatures.
- Always ensure the tail cap is loosened or the battery is removed when storing the flashlight to prevent accidental activation and battery drain.



Figure 5: An image showing the DARKBEAM 501F flashlight covered in water droplets, emphasizing its waterproof design suitable for humid conditions. Accompanying smaller images depict its use for natural observation, infrared camera auxiliary, and search operations.

7. TROUBLESHOOTING

If you encounter issues with your DARKBEAM 501F Infrared 940nm Light, refer to the following table:

Problem	Possible Cause	Solution
Flashlight does not turn on.	Battery is not installed correctly.	Ensure the battery is inserted with the correct polarity (+ end towards the head) and the tail cap is fully tightened.
	Battery is depleted.	Charge the battery fully using the provided USB charger.
	Tail cap is loosened.	Tighten the tail cap to ensure proper electrical contact.
No visible light from the flashlight.	This is an infrared flashlight.	The 940nm light is invisible to the naked eye. It requires a night vision device (scope, monocular, camera, goggles) to be seen. A faint red glow might be visible directly on the LED itself, or through a mobile phone camera.
Weak or inconsistent illumination through night vision device.	Battery is low.	Recharge the battery.
	Lens is dirty.	Clean the lens with a soft cloth.
Flashlight gets hot during use.	Normal operation.	Some heat generation is normal during operation, especially during prolonged use. If it becomes excessively hot, turn it off and allow it to cool. Ensure proper ventilation.

If the problem persists after attempting these solutions, please contact DARKBEAM customer support for assistance.

8. SPECIFICATIONS

Feature	Specification
Model Number	501F-940
Light Source Type	LED
Infrared Wavelength	940nm
Brightness / Wattage	5 Watts
Power Source	Battery Powered (Rechargeable Lithium Ion)

Feature	Specification
Runtime	Approximately 3 hours (continuous use)
Light Path Distance	Up to 164 Yards (with night vision device)
Material	Aluminum
Water Resistance Level	Waterproof (for humid conditions)
Product Dimensions	2.5"D x 3.5"W x 9"H (approximate)
Item Weight	0.28 Pounds / 4.5 ounces

9. WARRANTY AND SUPPORT

DARKBEAM stands behind the quality of its products. We provide prompt and satisfying support for our customers.

Warranty: This product comes with a 180-day money-back guarantee and a one-year warranty.

Customer Support: For any questions, concerns, or warranty claims, please contact DARKBEAM directly. Refer to the product packaging or the retailer's website for specific contact information.