

## SOFIRN SD09L

# SOFIRN SD09L Scuba Diving Flashlight User Manual

Model: SD09L

## 1. INTRODUCTION

The SOFIRN SD09L is a high-performance LED diving flashlight engineered for demanding underwater environments. With an impressive output of 6800 lumens and a robust IP68 waterproof rating, it is designed to provide reliable illumination for scuba diving, cave exploration, night fishing, and other aquatic activities. This manual provides essential information for the safe and effective use, setup, operation, and maintenance of your SD09L flashlight.



Image 1.1: The SOFIRN SD09L flashlight illuminating the underwater environment during a dive.

## 2. PACKAGE CONTENTS

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Please inspect the package contents upon receipt. The following items should be included:

- SOFIRN SD09L Scuba Diving Flashlight
- Rechargeable Batteries (pre-installed or separate)
- Lanyard
- Charging Cable (if applicable)
- User Manual (this document)

## 3. PRODUCT FEATURES

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- **Ultra-Bright Illumination:** Delivers up to 6800 lumens using 3 high-performance SST40 LEDs, with a beam distance of up to 542 meters.
- **Durable Construction:** Crafted from aerospace-grade A6061-T6 aluminum, rated IP68 for water resistance, and capable of functioning at depths up to 100 meters.
- **Ergonomic Design:** Features an upgraded slot for a thicker and sturdier wrist strap, ensuring a secure and comfortable grip during use.
- **Extended Runtime:** Provides up to 20 hours of continuous operation on its low mode (500 lumens), supported by a built-in power indicator.
- **Versatile Usage:** Suitable for various activities including scuba diving, cave exploration, night fishing, camping, and search & rescue operations.



Image 3.1: Key features of the SOFIRN SD09L, including accidental activation prevention, extended runtime, and portability.

## 4. SPECIFICATIONS

Attribute	Detail
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Model	SD09L
Light Output (Max)	6800 Lumens
LED Type	3*SST40 LEDs
Beam Distance	Up to 542 meters
Material	Aerospace-grade A6061-T6 Aluminum
Waterproof Rating	IP68 (Submersible up to 100m)
Power Source	2 Rechargeable Batteries (included)
Dimensions (L x W x H)	9.89" x 1.02" x 1.89" (251.1mm x 26mm x 48mm)
Weight	7.7 ounces (approx. 218g)
Color	Black
Included Components	Lanyard

## HANDHELD BODY

**2\* Powerful batteries power the LEDs**



Image 4.1: The SOFIRN SD09L flashlight demonstrating its handheld body and key dimensions.

# ULTRA - LONG RUNTIME



Mode	Low	Medium	High	Turbo	Strobe
 Luminous Flux [LM]	500LM	1200LM	3400LM	6800LM	3400LM
 Runtime [H]	20H	9H	3H	5H	-

Image 4.2: Detailed luminous flux and runtime specifications across different operating modes.

## 5. SETUP

### 5.1 Battery Installation

1. Unscrew the tail cap of the flashlight by turning it counter-clockwise.
2. Insert the two rechargeable batteries with the positive (+) end facing towards the flashlight head.
3. Ensure the O-rings are clean and lightly lubricated.
4. Carefully screw the tail cap back on clockwise until it is securely tightened. Do not overtighten.

### 5.2 Charging

If your batteries are not pre-charged or require recharging:

- Connect the charging cable to the flashlight's charging port (if applicable) or use an external battery charger for the included rechargeable batteries.

- Monitor the charging indicator. Once charging is complete, disconnect the cable.

## 5.3 Pre-Dive Check

Before each dive, perform the following checks:

- Verify that the tail cap is fully tightened to ensure a waterproof seal.
- Check the O-rings for any signs of damage, dirt, or dryness. Lubricate if necessary.
- Briefly turn on the flashlight to confirm it is functioning correctly and the battery level is sufficient.

## 6. OPERATING INSTRUCTIONS

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### 6.1 Power On/Off

Press the side switch once to turn the flashlight ON. Press the side switch once again to turn the flashlight OFF.

### 6.2 Mode Selection

When the flashlight is ON:

- **Cycle Modes:** Press and hold the side switch to cycle through Low, Medium, and High brightness levels. Release the switch to select the desired mode.
- **Turbo Mode:** Double-click the side switch to activate Turbo mode. Double-click again to return to the previous brightness level.
- **Strobe Mode:** Triple-click the side switch to activate Strobe mode. Triple-click again to return to the previous brightness level.



# 6800 LUMENS SUPER BRIGHT



Low



Medium



High



Turbo



Image 6.1: Visual representation of the SOFIRN SD09L's brightness levels from Low to Turbo.





Image 6.2: The SOFIRN SD09L demonstrating its ultra-long runtime of 20 hours on low mode (500 lumens).

### 6.3 Power Indicator

The LED indicator on the flashlight provides real-time battery status:

- **Stable Green:** 75% - 100% battery remaining.
- **Flashing Green:** 50% - 75% battery remaining.
- **Stable Red:** 25% - 50% battery remaining.
- **Flashing Red:** Less than 25% battery remaining. Recharge immediately.

## RELIABLE POWER DISPLAY

### Charger Included



Image 6.3: Visual guide to the SOFIRN SD09L's reliable power display and battery level indicators.

## 6.4 Lockout Function

To prevent accidental activation, especially during transport or storage:

- **Activate Lockout:** From the OFF state, rapidly click the side switch four times. The flashlight will flash briefly to indicate lockout mode is engaged.
- **Deactivate Lockout:** Rapidly click the side switch four times again. The flashlight will turn on in Low mode, indicating lockout mode is disengaged.

## 7. MAINTENANCE

### 7.1 Cleaning

- After each dive, rinse the flashlight thoroughly with fresh water to remove salt, sand, and debris.
- Wipe the flashlight dry with a soft cloth.

## 7.2 O-Ring Care

- Regularly inspect the O-rings for cuts, cracks, or dirt.
- Apply a thin layer of silicone grease to the O-rings to maintain their elasticity and waterproof seal.
- Replace damaged O-rings immediately to prevent water ingress.

## 7.3 Battery Care

- Charge batteries fully before extended periods of non-use.
- For long-term storage, store batteries partially charged (around 50-70%) in a cool, dry place.
- Avoid fully discharging batteries, as this can reduce their lifespan.

## 7.4 Storage

- Store the flashlight in a cool, dry place, away from direct sunlight and extreme temperatures.
- Consider removing batteries if storing for several months to prevent potential leakage.

# 8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Flashlight does not turn on	Low or dead battery Improper battery installation Lockout mode engaged	Charge or replace batteries Ensure batteries are inserted correctly (+ towards head) Deactivate lockout mode (four clicks)
Light is dim or flickers	Low battery Loose connections Dirty contacts	Recharge batteries Tighten tail cap and head Clean battery contacts and O-rings
Water ingress	Damaged or dirty O-rings Tail cap not fully tightened	Inspect, clean, lubricate, or replace O-rings Ensure tail cap is securely tightened before diving

# 9. SAFETY INFORMATION

- **Eye Safety:** Never look directly into the flashlight beam, especially on high or turbo modes, as it can cause temporary vision impairment or permanent eye damage.
- **Children:** Keep the flashlight and its components out of reach of children to prevent accidents.
- **Disassembly:** Do not attempt to disassemble the sealed head of the flashlight, as this may damage the device and void the warranty.
- **Batteries:** Use only the recommended type and size of rechargeable batteries. Do not mix old and new batteries or different types of batteries.
- **Temperature:** Avoid exposing the flashlight to extreme temperatures or direct heat sources.
- **Underwater Use:** Always perform a pre-dive check to ensure the flashlight is properly sealed before entering the water.

# 10. WARRANTY AND SUPPORT

SOFIRN products are manufactured to high-quality standards. For warranty claims, technical assistance, or any questions regarding your SOFIRN SD09L flashlight, please contact SOFIRN customer support directly. Please retain your proof of purchase for warranty service.

For the most up-to-date support information, please visit the official SOFIRN website or contact their customer service department.



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