



**Warranty certificate  
and instructions for use of the light**

**FINNSUB BACKUP**



## 1. Introduction:

**Motto: Backup - Backup – not to stay in the darkness if your primary dive light shuts down**

Diver's requirements for backup light:

- maximum reliability – no way that it does not work when needed. You reach for it just when you absolutely need it. It's your "reserve parachute"
- robustness / quality without compromise
- enough running time - the way back can be extended
- enough power and suitable light beam
- resistance to the environment – technical dives take place in hard conditions
- handling even at extreme depths
- minimum loss of capacity when not in use. You don't want to find out that it's not running just because you don't charge it regularly, because you rarely use it
- can also be used as a classic "small flashlight" for sports dives

FINNSUB BACKUP – our solution:

Light head

- Case made of aluminum alloy with black anodized coating, cooling ribs, silicon ring for easier control
- Borosilicate glass
- Thread pitch allows the lamp to be turned on / off even at depths greater than -150m
- 3x o-ring between light head and body

Light body

- Case made of durable Delrin
- Design and functional ribbing for attaching bungee to the harness
- 4 holes for boltsnap attachment

Electronics + battery

- Light output 700 lumen
- the gel-filled head ensures that the light works even after it is flooded
- gold-plated light head contacts, galvanized contacts in the light body
- overheating protection
- losing only 5% of your capacity in 1/2 year when you are diving, but don't use the backup light
- FINNSUB Backup uses a standard Li-ion 18650 battery. The original FINNSUB battery from a renowned Japanese manufacturer has a capacity of 2.6 Ah and has undercharging / overcharging protection.

**Important and unique feature:**

Running time 2 hours in cold water 5 ° C. After this interval, the light switches itself to strobe mode, flashing in a pleasant cycle: 70% light and 30% dark. This will make it easy to continue the dive with minimal light reduction. Flashing in strobe mode takes several days (8-10 days, depending on battery level and water temperature) and can be used for instance in a cave to mark the equipment (tanks) to return for them later.

## **2. WHAT'S INCLUDED IN THE PACKAGE**

- dive light
- Li-ion accumulator with protective electronics
- charger
- black silicon ring for the light head
- service lubricant
- user manual

## **3. BEFORE THE FIRST USE**

**Carefully read the enclosed instructions and, in case of doubt, please contact your dealer!**

The battery is supplied in a 50% charge state for storage and ideal initial capacity adjustment. It must be fully charged before first use.

## **4. CHARGING**

Charge the dive light at an ambient temperature not exceeding 25° C and in a dry environment. Never charge at high ambient temperatures, in direct sunlight or in frozen environment! The supplied accumulator is equipped with the undercharging and overcharging protection. **Charge the dive light only by the supplied charger!**

**Charging procedure:**

1. Plug the charger into the power socket - the light is green. The supplied charger can be connected to a 220V or 110V supply. **Never connect the charger to a non-matching voltage! Be careful not to break the wires. If the conductors are obviously damaged, never use the charger.** This may result in electric shock and irreparable damage to the lamp! In such cases, the warranty claim will not be accepted.
2. Insert the battery into the charger. Pay attention to the correct polarity, ie. + battery pole on + charger contact and - battery pole on - charger contact. **Insert the battery into the charger with the label facing up, otherwise the protective film may be damaged.** When the charging cycle is started, the charger indicator light turns red and the battery is charging. When the light comes on green, the battery pack is charged at about 90%. To get full battery capacity, you can keep it charging (the complete charging cycle lasts for about 3 hours when the batteries are fully discharged).
3. Remove the battery from the charger and then disconnect the charger from the socket, save the power. **When disconnecting the charger from the mains and disconnecting the light contacts from the charging adapter, never pull the charging cable but hold the plug at the end of the cable and pull it out of the socket!**



### **Important warning**

Li-ion sources do not have the so-called memory effect. **We recommend recharging the battery after every use, regardless of whether it is fully discharged or not.**

## **5. LIGHT CONTROL, DESCRIPTION OF FUNCTIONS, USAGE**

Unscrew the torch head from the delrin body. Insert a charged battery into the torch body. Pay attention to the correct polarity, ie. + battery pole upwards towards the head of the lamp and - the battery pole down towards the bottom of the torch body.

Completely screwing the head into the lamp body will light it up. By briefly unscrewing the head from the torch body by about half a turn it will switch off.

### **Important warning**

Tighten the head lightly, the lamp will light up with a delay of approx. 0.25 sec. Remember to check the functionality of the torch on land before starting the dive! **If you do not observe the correct polarity when inserting the battery into the torch body (inserting the battery upside down), the torch will not light up if necessary!**

### **Overheating protection:**

It has two functions - to protect the lamp against damage and the user at the same time from the possible consequences of using full power outside the aquatic environment. When the critical temperature is reached (approx. 55-60 ° C on the surface of the light head), the lamp itself switches off. The torch can be turned on if the temperature drops to a safe operating level.



This dive light is not designed to be out of the water. Claim of the burnt LED due to use in direct sunlight and high ambient temperature outside the aquatic environment will not be covered by warranty!

### **Battery discharge status indication - strobe mode:**

Strobe mode ensures that the user does not remain in a critical situation without a light source, such as in a closed or night dive, and had enough time to safely stop the dive.

As soon as the battery pack is in a state close to full discharge, the lamp automatically switches to intermittent lighting (strobe mode), flashing in a pleasant cycle: 70% light and 30% darkness with progressively decreasing power and increasing the interval between blinks. This function does not have a specified length of operation - it is in the order of 8-10 days according to the ambient temperature, battery condition etc.) and can be used when using the lamp as a strobe.

## **6. TRANSPORT AND HANDLING, MAINTENANCE, STORAGE**

When transporting the torch especially in frost or too hot weather (e.g. in the tropics), remove the battery from the torch and keep it at normal room temperatures. This will preserve the maximum battery capacity.

Before each dive, make sure that the battery is properly charged and the dive light is working. Also, check the condition of the lamp with emphasis on the parts that have a major influence on the watertightness of the lamp - the damage of the glass on the light head, e.g. when the dive light falls on the stone, etc., a significant mechanical damage to the body of the light, e.g. its cracking caused by putting the cylinders on the lamp., cleanliness and lubrication of three O-ring seals and surfaces on which the o-rings move, for example if the torch fall down to the sand, etc.

In the event of a fault or a doubt about the status of the dive light, do not use it again and consult a specialist service! Claim of the dive light damaged by the penetration of water due to its mechanical damage will not be covered by warranty!

After each use, especially in salty water, rinse the dive light thoroughly with fresh water and then dry it. Particular care should be taken to remove small mechanical impurities and lubrication sealing o-rings and surfaces on which the o-rings move. Use the supplied service lubricant.

**If you are not using the dive light, it is necessary to charge the battery before storing!**

At the latest every 6 months, discharge the battery and recharge it fully! Discharge the dive light by switching it on and lighting it in an aquatic environment, e.g. in a cold water container.

After half a year of storage under storage conditions, the battery capacity will be reduced by about 5%.

The optimal storage temperature is 15-18 ° C in a dry and shady place. At higher and especially lower minus temperature, there may be an earlier need to recharge the battery.

Do not keep the dive light at higher ambient temperatures in direct sunlight (e.g. on a dashboard in a hot car) - there is a risk of its destruction, burns and fire!

Avoid the situation when you leave a fully discharged dive light in a frosty environment (e.g. in winter overnight in the car trunk) - there may be a significant drop in the battery capacity (shortening of the running time of the light) or its complete destruction!

## **7. TECHNICAL SPECIFICATION**

Light flux: 700 Lumen

Light temperature: 6500 K (cold white light)

Light beam angle: 5°

Accumulator: Lithium-ion ICR 18650 with protective electronics, capacity 2600 mAh

Input voltage: max. 4,2 V

Input current: max. 1400 mA

Running time: 2 hours in cold 5° water

Charging time: 3 hod.

Weight:

- 245 grams at the surface
- 95 grams under water

Dimensions :

- length 147 mm
- diameter of light body 34 mm
- diameter of light head 43 mm

The dive light is intended for use up to a maximum depth of 150 m.

\* The values shown are based on the supplied battery and supplied charger. When using the own battery and charger, we cannot guarantee the declared values and the above-mentioned properties.

## **8. BATTERIES, LIFE TIME AND REPLACEMENT**

The dive light is equipped with branded accumulator with the protective electronics. Battery life is up to 600 charging cycles, subject to proper handling, storage, and maintenance conditions. If you give your light a proper care, it will reward you with a long life.

Li-ion batteries are designed for a certain number of cycles – it means full charge and then full discharge. But it will never happen in real conditions. Approximately calculate what the 600 full cycles mean. If you use the lamp every third day and each time you discharge it half, you make about 60 full cycles per year, 600 cycles will take you over 10 years. Even after this time, the battery will have a maximum capacity of 70% of the original capacity. Sounds good, do you think so?

Unfortunately, the batteries are naturally aged even without use. However, it is still true that 5 years or more of a good battery is a real reachable time, if you follow the basic principles for using it.

Two of them are very important. Never leave fully discharged batteries, recharge them at least partially. And secondly, do not expose the battery to temperature below 0 ° C (preferably below 10 ° C). In a frosty environment, of course, it is possible to carry the charged lamp and store it in the short term, and it will not do any harm to it. However, it is not recommended to use the dive light with a frozen battery.

## **9. DISPOSAL OF AN OLD DEVICE**

Please dispose of the old and not working dive light and a charger in a proper way and in accordance with the local regulations for electronic waste and batteries. Take into account that this dive light is an electronic waste with Li-Ion batteries. Do not dispose of the lamp in communal or mixed waste, but dispose of it free of charge at designated collection points. If you wish you may return it to your nearest FINNSUB dealer.

Proper disposal of this product will help to conserve natural resources and to prevent potential negative impacts on the environment and human health.

## **10. FAQ**

### **How often do I need to charge the battery when I dive in cold water but do not use it?**

Cold water dives are not as important to the battery itself as its condition and storage conditions between dives. Observe the principles and storage conditions described above.

### **What happens if I put the battery in the torch wrong (the correct polarity is not observed)?**

Nothing happens on the battery or the torch, but the torch does not switch on when the light head is screwed. Always check the functionality of your dive light on land before the dive - it's your backup light.

### **What is the 10-day blinking for when the battery is discharged and the torch doesn't run?**

You will not stay in complete darkness, you can partly see and find the exit from the cave. At the same time, you are seen by other divers, and the blinking will definitely take their attention. This function can be used when using the flashlight as a strobe to:

- Cave entry / exit marking
- Marking a ship on the surface
- Way points
- Mark the location of the finding
- Equipment identification
- On a buoy, etc.

### **Can I use another commercially available 18650 Li-ion battery with its own charger?**

Yes, you can. However, if you use your own battery and charger, we cannot guarantee the manufacturer's declared values and the mentioned properties. Also, the claims on damaged lights caused by using your own battery and charger will not be covered by warranty!!

# Warranty certificate

## We warrant this product under the following conditions:

1. FINN SUB s.r.o. shall perform free of charge defects and damage to the product under the conditions set out in points 3 to 8, caused by proven material defects or by production if they are reported immediately upon detection within the specified warranty period. Derogations in a tolerant design and having no effect on safety and usability as well as chemical damage or unusual environmental conditions are excluded from the warranty.

2 The product for which a warranty claim is required in accordance with this Warranty Certificate will be handed over to your authorized FINNSUB dealer, complete with the warranty certificate duly completed or send it with a fault description and your contact details at:

FINN SUB s.r.o., Rakovecká 35, 635 00 Brno.

3. The warranty claim expires if repairs or interventions are performed by persons who are not for this purpose by FINN SUB s.r.o. determined. The claim also expires if the products are provided with additional parts or accessories not intended for this product. The claim also expires if a claim is made without a warranty card duly completed by an authorized reseller, with a clearly marked date of sale.

4. FINN SUB s.r.o. undertakes to inform the customer, through an authorized FINNSUB distributor, of the recognition or non-recognition of the claim, within 30 days of the Customer's claim. In the event of a recognized claim, FINN SUB s.r.o. undertakes to settle the claim within a maximum period of 30 days.

5. During the warranty period, we provide a warranty without charge of any additional charges (postage and packing) when sending the device back to the customer.

6. Additional claims are excluded unless the law specifies otherwise.

**Model** ..... **Serial no.** .....

**Customer** .....

**Address** .....

**Date of sale.** .....

**Shop** .....

Stamp of the seller:



**FINN SUB s.r.o.**  
**Rakovecka 35, 635 00 Brno**  
**[www.finnsub.com](http://www.finnsub.com)**

