



18650 Underwater 1000Lm Mini LED

## **Recsea RML-18650**

MANUAL



Please read this manual before use.

NTF CORPORATION UH Division

<http://www.seatool.net>

## INTRODUCTION - RECSEA RML-18650

- ✘ Thank you for purchasing the RECSEA RML-18650 Underwater 1000Lm Mini LED.
- ✘ To ensure proper and safe use, please thoroughly read this manual.
- ✘ Improper use may cause leakage causing irreparable damage to the light.
- ✘ Please check, and test the light according to this manual prior to use.
- ✘ Neither NTF Corporation, Seatool/Resea nor their agents shall warrant or bear any responsibility for any incident related to water leakage, damage due to unauthorized modification, disassembly and repair; or any accident causing physical or material damage while using this product.
- ✘ This product is manufactured by machining methods. As a result, there may be minor scratching or tool marks. These are a normal part of the manufacturing process, do not effect operation of the housing or camera, and are not subject to warranty or any other claims.

### WARNING!

- ✘ Due to the intensity of the LED used in this product do NOT look directly into the light with the naked eye. Do not point or shine light into the eyes of others around you. There is the possibility of blindness or visual impairment.
- ✘ This product uses batteries and may cause short-circuit of terminals, electric shock or fire if used incorrectly.
- ✘ Do not store or leave product in reach of infants, small children or those who do not know how to properly operate it. The strap may cause choking and suffocation, small parts may be swallowed causing injury, and may cause blindness or visual impairment.
- ✘ This product uses one (1) 3500mAh 18650 Protected Li-ion 3.7V rechargeable battery (**battery and charger not included**). Other battery types are not recommended.
- ✘ **Remove battery during extended periods of non-use. Battery malfunction or damage may cause fire. If light is accidentally switch or left on the LED is capable of generating enough heat to cause burns and/or fires.**
- ✘ **When submerged and internal pressure is high there is a possibility that gas is emitted from the battery. Please be careful to avoid injury when opening.**
- ✘ This product is not absolute and is not recommended as the sole source of light during night or cave diving. Be sure to carry a spare in case of an emergency situation.
- ✘ The body of this product is made of corrosion-resistant aluminum. However, saltwater can cause rusting so be sure to rinse thoroughly using fresh water without fail.

### CAUTION!

- ✘ To prevent water leakage and damage, DO NOT disassemble (other than as instructed herein) or modify this product.
- ✘ Do not store the product in areas of high humidity, high or low temperatures, or areas of extreme temperature fluctuation. Doing so may cause deterioration of parts.
- ✘ When diving, use a method of water entry that protects the product from shock, which can cause water leakage.
- ✘ This product is designed to withstand depths of 300 meters (984 feet). Using this product at deeper depths may cause damage and water leakage. Use caution and monitor depth.
- ✘ When opening and closing battery compartment be mindful of dust and other contaminants, which may adhere to the O-rings, possibly causing water leakage and damage.
- ✘ Always check O-rings and perform O-ring maintenance in accordance with instructions prior to each use. Pay special attention to the grease condition and that the O-rings are seated uniformly in the O-ring grooves with no twists or bulges. Neglecting to check the O-rings prior to each use may result in water leakage and damage.
- ✘ The lens is manufacture of acrylic, be careful so as not to damage it when cleaning or during use.

## FEATURES OF THIS PRODUCT

- ✘ Small and durable, CNC precision machined corrosion-resistant aluminum body.
- ✘ Light intensity of 1000 Lumen (when using rechargeable battery). Use rechargeable battery for maximum brightness. Intensity reduction due to exhaustion of battery.
- ✘ Even illumination of 115° ultra-wide range.
- ✘ Maximum Operating Depth (MOD) of 300 meters (984 feet).
- ✘ May also be used on land (Possibility of heating during prolonged use.)
- ✘ Waterproof rear switch design.
- ✘ Dual O-ring system for added protection at greater depth.

## PACKAGE CONTENTS

Be sure all items listed here are included:

- Light
- YS Type Holder
- Wrist Strap
- O-ring Removal Pick
- Reserve O-rings
- O-ring Grease

## GETTING TO KNOW YOUR RECSEA RML-18650 MINI LED



**Occasionally clean Electrical Contacts and Positive Contact with a clean cotton swab.**

## OPENING AND CLOSING

- ✘ Please do the following operations in a clean area with low humidity and dust.
- ✘ **Do NOT use pliers or other tools to open, close or tighten.**

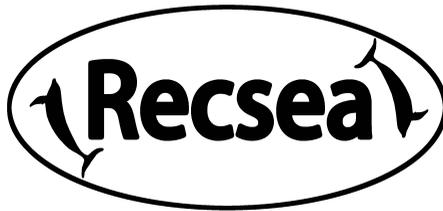
To OPEN, hold front or rear section of the light and turn opposite end of the light counterclockwise.

To CLOSE, hold front or rear section of the light and turn opposite end of the light clockwise until fully closed.

## WARRANTY INFORMATION

Warranty Period	One year from purchase
Purchase Date	Year                      Month                      Day
Product Name	18650 Underwater 1000Lm Mini LED
Product Number	RML-18650
Dealer Name	
Serial Number	

※Dealer: Stamp your company name and contact information, purchase date, model and serial number.



Seatool

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## TURNING ON / OFF

To turn ON, turn OFF/ON switch clockwise.

To turn OFF, turn OFF/ON switch counterclockwise .

## INSTALLING BATTERY

- ※ Please perform proper O-RING MAINTENANCE prior to installation.
- ※ Please conduct the following operations in a clean area with low humidity and dust.

1. Open light as instructed above.
2. Insert negative (-) end of the 18650 Li-ion 3.7V battery into the light's rear section with OFF/ON Switch. The positive (+) end of the battery should be visible.
3. Attach light's front section with LED and screw closed as instructed above.

## LIGHT MAINTENANCE

**CAUTION!** Allowing saltwater and contaminants to dry on light can damage functions and O-rings possibly causing water leakage. Clean with fresh water only, using a soft, dry cloth to wipe away water.

1. After use in salt water, wash off salt and other contaminants by soaking light thoroughly in a bucket of fresh water (lukewarm) for 10 to 20 minutes.
2. Manipulate the OFF/ON Switch several times to flush out salt deposits and other contaminants.
3. Wipe any water off light with a soft dry cloth.
4. Open light and remove battery taking care water does not enter either end of the light.
5. Using the O-ring Removal Pick, remove O-rings.
6. Clean O-ring grooves and Contact Surface using a clean cotton swab.  
DO NOT clean light or LED lens with volatile organic solvents or chemical cleaning agents such as thinner, gasoline, and benzine, etc.
7. Perform O-RING GREASING & MAINTENANCE as instructed below before installing a new or charged battery and closing.

## HANDLING PRECAUTIONS

- ※ The LED Lens is manufactured using hard coat acrylic. When cleaning use a clean soft cloth taking care not to scratch it.

## ATTACHING LIGHT TO HOUSING ACCESSORY SHOE

- ※ Please refrain from using lights attached to the Accessory Shoe as a carrying handle.

Using the YS Type Holder provided and a commercially available YS shoe base, the LED light can be attached to a housing accessory shoe.

## O-RING GREASING & MAINTENANCE (※1)

**CAUTION!** This light uses two (2) O-rings. Please be sure to install O-rings as shown on page 2 of the manual. Failure to do so will result in water leakage.

1. Using the O-ring Removal Pick, remove O-rings.
2. Clean sand, salt, other contaminants and old grease from O-rings.
3. Clean O-ring groove and O-ring Contact Surface using a clean cotton swab.
4. Visually and physically check O-rings by running it through finger tips, feeling for cuts, cracks or any defects. Such defects will cause water leakage, so be sure to replace the O-ring if required. Be careful not to stretch or pull the O-rings too much.

5. Squeeze a rice grain sized bead of silicone grease between your thumb and forefinger. Taking care not to pull or stretch the O-rings too much, uniformly spread grease on O-Ring. Too little grease may cause the O-ring to twist in the groove, possibly causing water leakage.
6. Place O-rings in the O-ring grooves, making sure they are uniform, not twisted or bulging out, possibly causing water leakage.
7. Visually check O-ring Contact Surface, tracing a finger over it to making sure no hair, lint or other contaminants are attached.
8. **Clean any grease or other contaminants from Electrical and Positive Contacts.**

**IMPORTANT NOTES:**

- ✘ When light is not used for long periods, remove O-rings and place them in a bags to keep them free of dust and other contaminants and store in a place out of direct sunlight. Please also be careful of prolonged exposure to direct sunlight during use. The O-rings and parts of the light may become deformed, causing water leakage.
- ✘ After extended periods of non-use, soak closed light (without battery) in lukewarm water for half a day. Manipulate the OFF/ON Switch several times. Using a soft, dry cloth wipe away water.

**CAUTION!**

- ✘ The O-rings are an essential part of waterproofing for this light. Not properly greasing the O-ring as directed may cause the O-ring to twist in the O-ring groove, possibly causing water leakage.
- ✘ Always perform the above O-ring, O-ring groove and O-ring Contact Surface maintenance and greasing every time the light is opened/closed.
- ✘ Please pay close attention and make sure the O-rings are not twisted or bulging, free of any contaminants (dirt, hair, etc.), and that foreign objects do not obstruct proper closing of the light.
- ✘ DO NOT clean the light with volatile organic solvents or chemical cleaning agents such as thinner, gasoline, and benzene, etc.
- ✘ Light LCD Lens is manufactured using hard coat acrylic. When cleaning use a clean soft cloth taking care not to scratch it.

**SPECIFICATIONS**

Maximum Depth	300 meters (984 feet)
LED Illumination	CREE XM-L U2 Cool White 1000Lm 115°
Recommended Battery	3500mAh 18650 Protected Li-ion 3.7V Rechargeable Battery
Burn Time	Approx. 60 Minutes (Depending on battery quality, charge, and water temperature)
Material	Body: Corrosion-resistant aluminum alloy, anodized Knobs: POM Lens: Hard Coat Acrylic Screws: Stainless Steel, Galvanized
Size	Dimensions: 30Φ L126mm Weight: Approx. 190g (Land w/Battery) 100g (Freshwater w/Battery)
Accessories	YS Type Holder, Wrist Strap, Reserve O-rings, O-ring Removal Pick, O-ring Grease

## CONSUMABLE PARTS

※ For replacement of consumable parts such as O-rings please contact your dealer or Seatool/Recsea.

## OPTIONS

The following items are optional. Please contact Seatool/Recsea or your local dealer if you wish to purchase.

- Dual RLM LED Holder OP-RLM-WHBJ
- Spot Adapter AD-SA-RLM18650
- RML-18650 O-ring Set
- Seatool O-ring Grease 3 ml Tube

## AFTER-SALE SERVICE

Warranty period is one (1) year from purchase for general users, ninety (90) days for commercial or industrial users. Seatool/Recsea will repair manufacturing defects free of charge during the warranty period when product is used in accordance with this manual. This warranty is only valid for lights purchased from authorized Seatool/Recsea international dealers. Damage due to customer use, and for any consumable parts, the repairs will be charged at normal rates. Shipping costs to and from dealer, or Japan if necessary, shall be born by the customer for warranty and all other cases. Please obtain insurance for all your equipment. Any repairs due to the following will be charged at normal rates:

- 1) Repaired, modified or disassembled by person or company other than Seatool/Recsea;
  - 2) If damaged in fire, natural disaster such as earthquake, flood, lightning, etc.;
  - 3) Damage caused by dropping, impact, vibration;
  - 4) When returned for warranty service not accompanied with Warranty Information copy, or if Warranty Information is altered.
- ※ Warranty does not cover any losses resulting from inoperability of this product, including those related to lost profits or any related expenses.
- ※ Seatool/Recsea will stock parts necessary for repair for five (5) years from stop of production.
- ※ This product uses some degradable parts, such as dial and O-rings. Seatool/Recsea recommends an overhaul once per year, more frequently if used often or if not used for an extended period of time. Overhaul service is charged at normal rates.

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