www.DiveRite.com

# LT8800LED-RX2
# LED CANISTER LIGHT

## PRODUCT DESCRIPTION


RX2 LED Canister Light with Goodman Handle

The LT880LED-RX2 LED canister light is Dive Rite's most advanced lighting system, utilizing an intelligent 'smart-controller' microprocessor control unit that keeps the light operating at peak efficiency. The smart controller features include:

- Battery State-of-Charge Monitoring
- Low Battery Indication at Turn On
- Temperature Monitoring for Device Protection
- OFF – HIGH – LOW Selection via Rotary Switch

The RX2's dual power selector switch is located on the light head (instead of the canister body), providing easy access to switching power modes on the fly. At full power, the RX2 has a four hour burn time and eight hours at half power. Additionally, using smart technology, the RX2 microprocessor "thinks" for the diver and automatically switches from full power to half power to extend battery run-time while maintaining usable light. A key added safety-feature is the battery-check function. The diver can easily check battery state-of-charge by simply switching the unit on (off then back on if already on). If the unit flashes three rapid pulses, the diver knows that the battery is low, before the dive.

The RX2 employs 4 Luxeon® Rebel™ LEDs, with a system lumen rating of 880 lumens at full power. At one meter, the RX2 boasts a LUX rating greater than 11,000 lumens with a tight 10-degree beam, making it usable as a signaling light, yet it covers enough area to illuminate the surrounding environment for better awareness as well as viewing pleasure.

Heat-sensing technology enables the RX2 to be used out of the water safely and reliably because it continuously monitors heat emission from the LEDs. The light will automatically reduce output preventing the LEDs from overheating, an otherwise-common issue for LEDs in an enclosed fixture. This allows the diver to also use the light for any land-based activity requiring illumination.

The RX2 comes standard with a Goodman metal hand mount (Elastic hand-mount accessory is available). The included NiMH batteries do not contain lithium, therefore are not subject to TSA travel restrictions. A NiMH charger comes standard with a US power cord and automatically adjusts to 110/220 volts AC and 50/60 Hz frequency.

The Dive Rite RX2 is proudly designed, manufactured, and assembled in the USA, and is RoHS compliant to European environmental standards.

*NOTE: Always use a fresh, properly-charged battery in order to achieve rated burn times.*

## Dual-Power Mode

The diver can manually switch from full-power to half-power mode by rotating the knurled switch-ring on the light-head from the full-power position (fully clockwise) to the half-power position (one click counter-clockwise), after pausing momentarily at the OFF position.

The RX2 is also designed to automatically taper off its light output from full power as the battery charge decreases during use. When the battery reaches 11.2v, the light will automatically change to 50% power and notify the diver of the power-change with three, rapid flashes. At 10.2v-8v the light will auto switch to 25% power. As the battery is fully drained, the light will not go dark immediately but continue to gradually taper its output.

**NOTE:** *No indicator is given to the diver when switching from half power to quarter power mode.*

# CYCLING A NEW BATTERY

The NiMH battery needs to be properly conditioned. Also if you've had your light for awhile and the battery is no longer getting its full burn time, cycling the battery will often recover any lost burn-time. This is done through a complete 3-5 time charge and discharge until the rated burn time is achieved.

**To cycle a NiMH battery:**

1. Fully charge the battery by connecting the battery to the charger *first* and then plugging the charger into the outlet.
2. Once the battery is fully charged, assemble the light and then place the light head in a sink or bucket of water to dissipate the heat
3. Allow the light head to completely discharge until it goes out and then turn it off immediately. Never leave the light turned-on after the battery has fully discharged.
4. Charge the battery and repeat the same discharge cycle. How many cycles the battery needs is up to individual difference in the battery. It should need between 3-5 cycles. As long as the burn time increases, keep cycling.

Charge the battery regularly. Put the battery on a charger at least once a month if it hasn't been dived. This will keep the battery conditioned and ready.

## Cautions

- Disconnect your light head from the battery pack when traveling. If the light accidentally turns on, the light head could overheat and cause damage to the light head or potentially cause a fire.
  Turn your light off if it dims significantly, or you risk permanent battery damage.
- The output of your light is extremely bright and may cause eye damage.

# CHARGING THE BATTERY

Before using your light, make sure the battery is fully cycled.

**Battery charging note:**

- The battery may not attain full burn time until you have charged and discharged the battery several times. The battery needs to be cycled (charged and discharged) three to five times before maximum burn times are reached.

**To Charge the Battery:**

1. Remove the battery from the canister.
2. Connect the charger plug into the battery pack plug.
3. Plug the charger into a wall outlet.
4. Allow the battery to fully charge. The LED on the charger indicates when the battery is fully charged.
   The red LED senses power. The green LED flashes three times to sense battery voltage, rapid flashes while charging the battery, and is on steady when the battery is fully charged.
5. Unplug the charger from the wall socket.
6. Disconnect the charger from the battery.

# MAINTAINING THE BATTERY

The battery is maintenance free. After each dive, you should fully re-charge the battery. It does not matter how much or how little you use the battery during a dive. The battery will not develop a memory of a particular dive time.

You should avoid fully discharging the battery (a condition known as deep discharge). To avoid battery damage due to deep discharge, follow the burn time specifications on this data sheet. Keep light usage within the time listed. This greatly extends battery life.

**Note:** Refer to Dive Rite's website for more information about making your battery last.

### Pre-Dive Inspection

Prior to taking the light underwater, ensure that all o-rings and latches on your light are secure.

### Post Dive Care

- Inspect the light head for any leakage or other damage
- Rinse the light head thoroughly in fresh water and allow it to dry.

### Inserting The Battery Pack

The battery pack sits vertically in the canister with the power cable extending from the top of the canister.

**To insert the battery pack:**

1. Align the bottom of the battery pack with the top of the canister.
2. Slide the battery pack into the canister. Do not drop the battery into the canister.
3. Orient the power cable so that it is not pinched or obstructed in any way.

**Attaching The Canister Lid**

The canister lid must be firmly attached to the canister using the locking latches on the side of the canister.

**To attach the canister lid:**

1. Inspect the o-ring for any dirt or grease and clean the o-ring if necessary with soap and water.
2. Plug the canister lid cable connector into the battery cable connector.
3. Tuck the connectors and wiring harness inside the canister.
4. Place the lid onto the top of the canister making sure the o-ring rests on the top of the canister and the lid latch attachments align with the locking latches.
5. Close and seal the lid using the locking latches, and then close the latches simultaneously to evenly seal the o-ring.

### Dealing With A Flooded Light-Head

Determining if a light is flooded can be as obvious as pouring water out of your canister or as subtle as seeing a small amount of water in the lens.

**What to do:** If your light head floods, do not continue to use the light. Turn the light off and disconnect the battery pack. DO NOT TAKE THE LIGHT APART!

Arrange with your dealer to return the light to Dive Rite for repair. Flooding damage cannot be fixed or corrected in the field. Trying to repair the light in the field can void your warranty.

**Dealing with a flooded light head:**

1. Turn the light off. The longer current flows, the more damage can take place.
2. Disconnect and remove the battery from the canister.
3. Pour out any water from the canister, and allow to dry.
4. Return all affected parts back to Dive Rite for repair.

# MOUNTING THE CANISTER

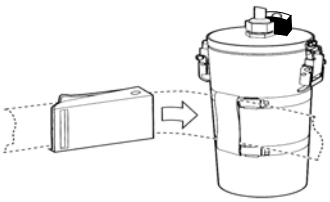
The canister can be waist mounted on any standard BC harness, TransPac harness, or to the side of a dive tank.

**Waist-mounting the canister**

The canister is equipped with a webbing loop for waist mounting the canister to a BC harness. You will need a standard cam-style buckle to waist mount your light.

**To waist-mount the canister:**

1. Slide the BC or backpack waist harness through the webbing loop slot on the canister.
2. Position the canister on the waist harness on your hip so that it is comfortable and easy for you to access.
3. Slide the cam buckle onto the waist harness up to the light's webbing loop.
4. Cam the buckle in place. This keeps the canister from sliding on the waist harness.



**Tank-mounting the canister**

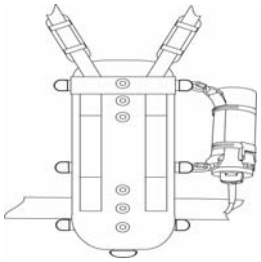
The webbing loop on the canister can be used to attach to a 2-inch (50 mm) tank BC cam strap. This is a good method for mounting a light to a single tank. If your tank cam strap is not suited for holding a heavy light, you can use a separate 2-inch cam strap (P/N 2032) to secure the light to the tank.

**To tank-mount the canister:**

1. Position the canister so that the light cord is facing down, towards the bottom of the tank. This allows you to route the light cord next to your waist.
2. Place the canister on the right-hand side of the tank.
3. Slide the cam strap webbing through the canister webbing loop. Position the canister as close to your body as possible.
4. Wrap the cam strap around the tank and secure it using the cam strap buckle.

**TransPac mounting the canister**

You can attach the canister to a TransPac using two of the D-rings on the backside of the TransPac harness. There are a number of different ways to attach the canister to the D-rings, such as double-ended bolt snaps, carabiners, surgical tubing, etc. Your body size and desired position of the canister will control what hardware you need and how you use the hardware.



# SPECIFICATIONS

### RX2 Light Head

Lens: Glass port with engineered optics
LEDs:
- Luxeon® Rebel 4-LED array with 10,000 hour life, with 880 system lumens @ 6500 Kelvin.
- Lux rating: 11,000 at 1 meter, 2,800 at 2 meters, 1,320 at 3 meters
- Color-Corrected Temperature (CCT): 6,500 Kelvin
- Power Consumption: 12Watts at maximum output using 12v 4500mA NiMH slimline battery. Burn-time of 4-hours at full power with fresh battery, 8-hours of burn time at half-power with fresh battery
- RoHS compliant to European standards

Head Size:
Length: 4 in. (10.16 cm)
Diameter: 2 in. (5.08 cm)

### Slimline NiMH Battery & Charger

Battery pack
Rating: 12 V, 4500 mA NiMH
Burn time: up to 8 hours
Plug: Standard 2-pole trailer plug
Does not fall under TSA travel restrictions
**Note:** To obtain maximum burn times, the batteries must be cycled 4 to 6 times before the cells are at peak performance. During the first few charge and discharge cycles, burn times may not reach the full rate.

Charger
Rating: 120/220 VAC 50/60 Hz, auto sensing
Indicators: Red and green LED
Plugs: Standard 2-pole trailer plug and a standard 2-pronged wall outlet plug (others cord-types available upon request)

### Light Canister

The canister is formed from a single piece of Delrin. The Delrin material and round design make it extremely strong under extreme pressure. The canister lid contains the power cable that connects the light head to the NiMH batteries, an o-ring seal, which keeps water from entering the canister, and compression style locking latches, which prevents accidental opening of the latches. The canister webbing loop is used to mount the canister to a BC or harness.

Slimline Light Canister Size:
Height: 9 inches (22.86 cm)
Diameter: 2.6 inches (6.60 cm)
Weight: 3.8 pounds (1.72 kg) with battery, -1.25 pounds (-0.56 kg) negative in freshwater
Canister seal: single compression style o-ring
Canister locking: compression style locking latches
Mounting: 2-inch belt loop, webbing
Battery size: 12 V, 4500 mA NiMH
Depth rating: 500 feet (152 m)
Buoyancy: -1.25 lb

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| **DEVELOPED BY** | Dive Rite<br>175 NW Washington Street<br>Lake City, FL 32055<br>Phone: 386.752.1087<br>Fax: 386.755.0613<br>Web: www.DiveRite.com |
| **COPYRIGHT NOTICE** |  |
| **LIMITED WARRANTY** | Lamartek, Inc. dba Dive Rite will - at its sole discretion - repair or replace dive light components proved to be damaged by faulty manufacture or material, at no cost, for a period of up to one year (365 days) from the date of purchase.<br><br>***ALL WARRANTY CLAIMS MUST BE RETURNED TO THE STORE WHERE PURCHASED OR DIRECTLY TO DIVE RITE. A COPY OF THE PUCHASE RECEIPT MUST BE INCLUDED WITH THE PRODUCT.***<br><br>• Canister bodies and the metal portions of light heads are warranted for the life of the product.<br><br>• Batteries are warranted against defects in manufacture or material for of up to 90 days from date of purchase. This warranty does not cover loss of battery "burn time" - a condition that results almost exclusively from mis-use or abuse. Users must read and study the rated "burn time" information appearing in Dive Rite's website. Failure to do so can easily result in expensive damage not covered under warranty.<br><br>• Attempting to charge damaged batteries can further result in damage to chargers. This is not covered under warranty - nor is damage to chargers caused by nonstandard alternating current voltages or cycle rates. Chargers returned under warranty must be accompanied by the battery they were being used to charge. If the battery is determined to be the cause of charger damage, no warranty coverage will be provided.<br><br>• The warranty also specifically excludes bulbs, lenses, fuses, O-rings, or other conditions ***resulting from misuse, negligence, failure to properly lubricate o-rings, alteration, accident, or unauthorized repair***.<br><br>• If you have any problems with the light-head (ie, flood, etc), do not continue to use the light. Arrange with your dealer to return the light to Dive Rite for repair. Flood damage can not be fixed in the field. ***Opening the light head will void your warranty.***<br><br>• This warranty applies only to the original retail purchaser. It does not cover commercial or rental use, nor does it extend to units purchased from other than an authorized Dive Rite dealer.<br><br>• To make a claim under this warranty, the owner must have registered his/her warranty using Dive Rite's website (www.diverite.com). All warranty repairs (international or domestic) *must* be accompanied by a copy of the purchase receipt. For warranty repairs (international or domestic) the product must be returned to the *store* where the item was purchased or directly to Dive Rite. A Return Authorization must be obtained by calling Dive Rite corporate offices (386-752-1087) to send items to Dive Rite. No warranty service will be performed for other than registered owners.<br><br>***Note:*** *Local dealers and distributors are not responsible for service of items purchased from unauthorized dealers, internet dealers, or dealers from other territories.*<br><br>• This warranty becomes void if dive light components are damaged by anything other than normal recreational diving use, of if they have been serviced or repaired by other than authorized Dive Rite dealers.<br><br>• Repairs made under this warranty will not extend the warranty period.<br><br>• All further claims, especially for damage after diving accidents, are excluded from coverage under this warranty.<br><br>• Lamartek, Inc., dba Dive Rite, has no obligation to honor any extension of this warranty.<br><br>All Dive Rite light systems are pressure and burn tested at the factory prior to delivery. When light systems are returned to Dive Rite for warranty service, the first thing we do is assemble the light precisely as outlined in this manual, including proper lubrication and installation of o-rings. We then pressure test the light, just as we did when it was new. If the light passes this second pressure test, we have to assume that any reported flooding must have resulted from failure to properly assemble and/or maintain the light as outlined in this manual - in which case no warranty coverage is provided. |