

Manual



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Oceanex
The Ocean Explorers Equipment

Primary Dive Light Oceanex SUNBEAM V3.0

- test tube-design
- closed Goodman-handle with T-sliding block fitting SUEX-DPVs and emergency-knife-fixation; adjustable under water
- ergonomic added thumbloop made of alloy
- E/O-Cord (available without)
- 30W/ 4022lm/ 95.000 Lux
- programmable electronic device
- self changeable: test tube, reflector, electronic, E/O-cord
- optional switch & capacity indicator on the head

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Manual & Service

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1.) Safety advise

The Oceanex Sunbeam was developed as primary dive light, but also as video-light suitable for sport divers and technical divers. Due to its design type, it is more failsafe than other systems with test-tube designs, i.e. with halogen or HID-bulbs. However, malfunctions - which can never be excluded using technical equipment – while diving can put you in grave danger. Therefore you should never dive without a redundant light source. For sophisticated dives we recommend you to take next to a backup torch a second burning unit for you Sunbeam in your leg pocket. The units can be purchased separately and are easily changed underwater.



The Sunbeam is a very strong LED-Lamp. Please never look into the beam, directly, especially when operated outside the water. You potentially endanger your eyesight.

2.) Environment of usage

The Sunbeam was designed to be used in all underwater environments. As long as it is used in amateur sports- and tech- diving the Sunbeam is in its element. Professional divers in environments above 35 bar pressure; environments other than sweet- or saltwater or use scenarios below -20°C (-8°F) or above 50°C (122°F) air temperatures as well as below 5°C (41°F) and above 40°C (104°F) water temperatures should be avoided.

Caution! Please supervise sunbeam at surface, it could become hot. Don't burn your skin!

3.) Operational instructions

The Sunbeam V2.x is a LED-primary torch with electrical dimming. The circuit is shed in the electronic and without housing enforcement it is switched with fast intervals at the tank. The emitting light gets focused by an external reflector. Operating without the reflector as a video light is also possible.

The burning unit has **no deep discharge protection for the battery pack. At approximately 7V the system shuts down automatically when using UVAVIS batteries.** Please take extra care not to stress the accumulator's capacity and calculate its usage due to its input (4,8A at 6,23V) and duration of burning. Alternatively you can install a deep charge protection device on you battery pack.

The burning unit includes a **burntime maximizing system.** It steps down the power output in 2 steps, 50% and 10% when capacity is lower than 20% and 10%. It has to be calibrated to your common batter cells.

The electronic device of your burning unit offers different operational modes. You can operate your Sunbeam on 100%, 50%, 25% or 10% light output (depends on your order). We have chosen the colour temperature around 5.500 Kelvin, which is in contrast to HID-Systems a lot warmer light. That ensures a good signalling contrast to the surface light while in shallow water due to decompression. The steps can be set up to other values in our service.

4.) Getting started

a. Connection

Before turning on the battery pack please connect the E/O-Cord to your accumulator with a voltage range of 6-17V. As long as the battery pack is switched on you must not interrupt the cable connection.

b. Adjusting the Goodman-handle

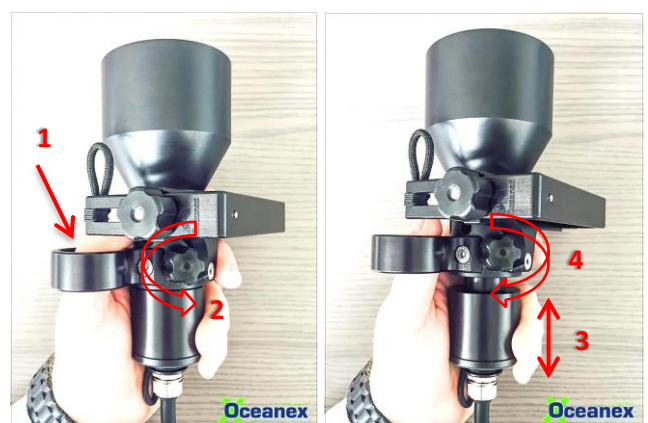
Your Goodman-handle has an in height adjustable construction to make sure it fits your hand with and without gloves perfectly. Please adjust it right before your dive even though a readjustment anytime under water is possible.

c. Circuit

Initially turn on the power supply on your battery pack. The lamp turns on. To switch thru the modes please turn off the switch and switch it on quickly again. With these short switch intervals you get to the next mode. The electronic saves the mode when switched off and starts with that mode when you turn it on again. Hidden SOS mode will be switched on after 10 fast switches.

d. Focusing

After switching on you Sunbeam and selecting your choice of light intensity you can focus the beam. Put the lamp into you left hand, put your left thumb through the thumbloop. Open the focus screw a little on the right side with your right hand. Pull the burning unit slowly out of the reflector head using your little and ring finger. Stop when you reached the aimed focus spot and fix the position while tightening the screw again. You can now use your Goodman handle as usual.



Recommendation: The tightest spot doesn't necessarily offer the best light! Focus as long until you have a sharp delimitation between the spot

and the corona. This setting guarantees the best visibility of your signs to your buddy. Train your focus abilities on land.

If you wish to have wide light corona with the light scattered to illuminate a wide area, loosen the focus screw and push the burning unit into the reflector head until it stops. Then fasten the focus screw again.

e. Use as video light

For a temporary use as video light, for example when operating an action cam, you should remove the burning unit from the reflector head and hold it in your hand. That results into a very homogeny light without any reflection rings. Due to its construction the intense light doesn't dazzle you at all and only very little divers approaching.



5.) Maintenance

Your "Sunbeam" is more or less maintenance-free. The LED is build for a lifespan of 50.000 hours and should last a divers lifetime. It was important to us to build in a high quality electronic too, so we have chosen our suppliers for their high quality components used in their parts. All parts were tested in details and had to proof their longevity.

We advise to rinse the lamp after use with clear sweet water to remove dirt and salt deposits and also to minimize corrosion and the wear out on the O-rings.

IMPORTANT! Don't wipe the reflector with a tissue or similar as it will leave scratches. Only rinse it with clear water. With the time it will get scratched, so don't force it. If you need a new reflector simply contact us. We can supply you with all parts. The reflector is easily fitted and secured with only one O-ring.

Please always disconnect your lamp from your battery canister so you don't switch on the lamp accidently.

Please visually test all O-rings on a regular basis. O-rings age and need to be replaced on occasion. Only open your lamp as advised under point 6, when errors occur or you need to replace O-rings due to usage. In that case replace ALL O-rings and check the squeeze seals on the E/O-cord for tears. In case you don't

feel comfortable to do the service yourself, please contact us for a service assignment and send in the lamp. O-rings are;

1. Test-tube (2x)
2. End caps (2x)
3. Transition end caps to squeeze screw (1)
4. Electronic unit inside (2x)

6.) Opening of the lamp

a. Preliminary remarks:


In the process of assembling we concentrated on robustness and longevity next to the quality of light and focus. Therefore opening your lamp is usually not necessary.

b. Electronic and cable:

In the rare case when you have to open you lamp, for example when the guarantee expired and you need to access a faulty part or you don't want to take advantage of our service, please follow the instructions below

- i. First of all please check the accumulator carefully and the connection for errors, so you don't have to unnecessarily open the burning unit. Test the sunbeam with another battery canister.
- ii. Loosen the focus-screw until you can pull the burning unit out of the reflector head.
- iii. Before opening the burning unit ALWAYS loosen the union-nut of the cable screw until you can easily turn the E/O cord in the end caps. Remove the loop at the end of the burning unit by simply cutting the caveline.
- iv. Loosen the two screws at the end of the reflector head so they stick out 3mm. Use the reflector head as tool. To do so you need to pull it off, turn it 180° and refit it again. Open the burning unit. In case it is hard to open warm up the burning unit by using or with an external heat source (hairdryer).
- v. Unscrew the end cap completely and pull it off carefully. Do NOT pull on the E/O-cord, but push it inside the cap.
- vi. Check the main chamber in case of moisture.



- vii. Push the E/O-cord through the cable screw until the electronic unit appears. Loosen the screw connection with a small Philipps screwdriver.
 - viii. When you change the E/O-cord make sure you watch the correct polarity. Standard for a new E/O-cord is plus black on the cable and minus white on the cable (!). Other cables might have other colour codes.!
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- ix. If it was not a faulty cable, that caused the problem, it must be the electronic unit. To prevent corrosion and problems in contact with water it is sealed. You can replace the unit. To order please mail us with the lamp details like model, the driver and the date of purchase. You can also send in the lamp for repairs. Please contact us on the phone or e-mail before shipping. We will find a fast solution so you can go diving again soon and don't have to worry about the service of your lamp.
 - x. To rebuild the lamp go through the steps in opposite order

c. **Test-tube:**

The test tube of the lamp was fitted under negative pressure to prevent condensate and secure it when it heats up. Please don't pull it off if not necessary. In case of a broken test tube, the lamp will function as normal until the end of your dive, it will even last another dive. To replace the broken tube please follow the instructions below:

1. Check the sealing on the LED for any damage that could cause a short circuit. Please contact us if you are not sure.
2. Check the O-rings for any damage and replace them accordingly.
3. Take the new test-tube and clean it with alcohol on the in- and outside. Wipe them out and allow them to dry. Switch on the lamp without reflector head to heat it up. CAUTION! You need to make sure that the LED and the test-tube is warm and absolutely dry before you proceed to prevent moisture.
4. Lay a piece of thread from the LED over the O-rings down the lamp and leave enough length to have a grip on it.
5. Pull the test tube over until short before the first O-ring, but not over it.
6. Turn on the lamp and wait for it to warm up. CAUTION! Do not look into the LED light.
7. Turn off the lamp and push the test tube down to the lower O-Ring on the heated burning unit.
8. Listen to the gas wiping out of the test tube.

9. Pull out the string and turn the test tube a little to let the O-rings seal it completely. Make sure that there is no gas left in the test tube that pushes it up.
10. Check that there is no condensate when using the lamp; otherwise repeat the steps 3 to 9.

7.) Concluding remarks

A lot of Know-how was put into the development of the "Sunbeam". We developed the features of this lamp from our own diving experience, we simply added what we found was not available on the market yet. The prototype of the "Sunbeam" has spend countless hours in the North Sea, in mines and in French cave systems, before the final version of it found the way into your hands. Meanwhile you find SUNBEAMs in whole Europe, Canada, USA and Mexico under water where the supply light. You have chosen a brand new dive lamp that connects successful styles with the most modern Light technique and clever innovations.

We are continuously developing new ideas and features for the lamp. Suggestions from other scuba divers were the main drive for us to finally construct the lamp. Our aim was to create our Sunbeam as a lamp without compromises. The result was a high-tech product, which can save lives for being a reliable tool under water. We hope to satisfy your expectations too.

In case you don't feel completely comfortable with our product, please don't hesitate to contact us

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