

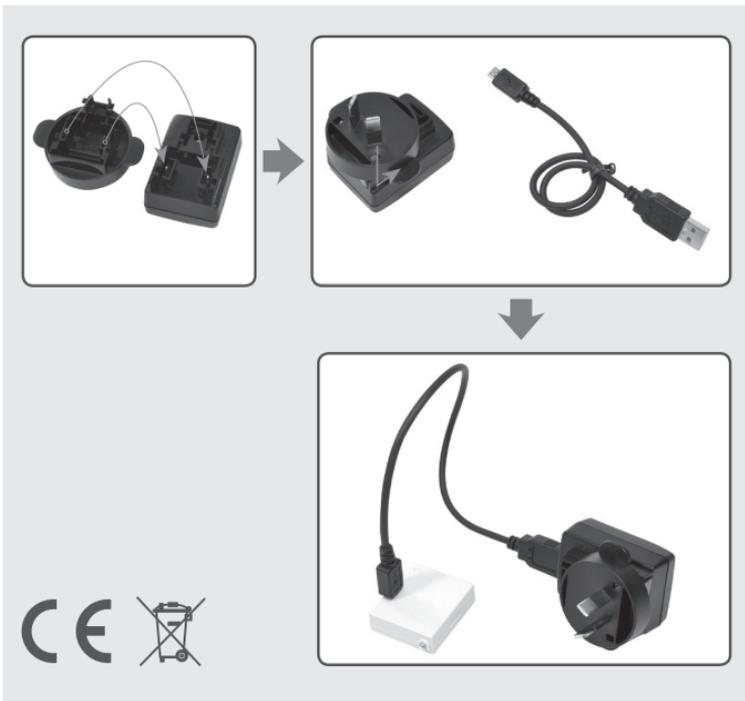
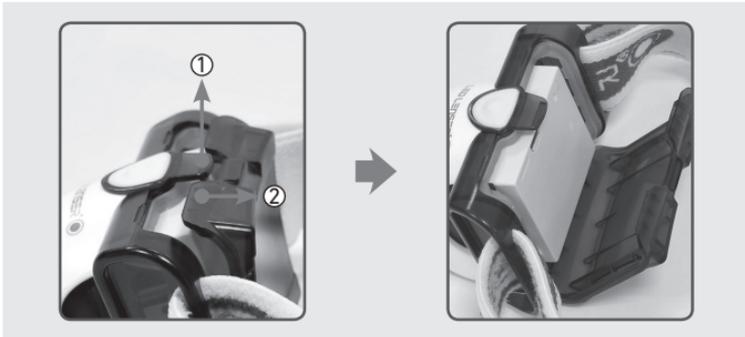
# LED LENSER® SEO 7R



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수동  
取扱説明書  
手冊

# LED LENSER® SEO 7R

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We are delighted that you have purchased one of our products.

These are usage instructions to help you familiarise yourself with your new purchase. All the documents accompanying the product must be read attentively before using the product, preserved carefully and if the product is transferred to a third party, the documents must be handed over as well. This ensures that maximum benefit is drawn from the product and questions from users are anticipated before they arise.

Above all, comply with the warnings and safety instructions and dispose of the packaging material properly.

#### Additional information for SEO with TEST IT function

Your LED LENSER SEO 7R headlamp with the item no. 6107-R (item no. 6007-R: No TEST IT function ) is packaged with a TEST IT function. This allows users to test the brightness while the product is still in the package. For testing, simply push the yellow TEST IT button on the front of the package. When testing, please do not look directly into the light.

The TEST IT button is connected to the battery housing of the SEO 7R via two wires and should be removed prior to use.

To remove the TEST IT button and wires, open the battery housing and remove the 3 x AAA batteries (see also "Changing of the Accumulator-Pack / NiMH-Accumulator / Alkaline batteries" further below). Separate the two TEST IT button wires from the battery housing by pulling on each wire until it releases from the battery housing. Insert the 3 x AAA batteries respectively accumulators noting the correct polarity. Close the battery housing. Please dispose and recycle the packaging and TEST IT button with the wires according to the local regulations.

#### Product

LED LENSER  
6007-R LED LENSER® SEO 7R  
6107-R LED LENSER® SEO 7R (Blister)

Version of the operating manual: 1.1

#### 1. Battery set:

- 1 x Accumulator-Pack (scope of delivery of 6007-R and 6107-R) or
- 3 x Alkaline batteries AAA/LR03/Micro (1.5 V DC) (scope of delivery of 6107-R) or
- 3 x NiMH-Accumulator AAA/LR03/Micro (1.2 V DC) (not scope of delivery)

#### 2. Switching on and off

In the upper part of the headlamp housing of the SEO 7R, between battery box and the part with the reflector lens, there is the switch button. This switch button is used to turn the SEO 7R on. It is also used to activate the various Light Programs and Lighting Functions (see section 5) and to switch between white light and red light (see Point 5). In addition, you can also activate the "Transport Lock" (see Point 7).

#### 3. Focus

In the front, narrower region of the headlamp

housing is the reflector lens through which the light of the white LED (see Point 5.1) is focused. The reflector lens is held by a plastic ring. You can rotate that plastic ring using two fingers, and thus adjust the focus quickly and easily. This so-called Speed Focus allows to adjust the angle of the white light beam continuously. Depending on whether you want to illuminate an area in the distance or in front of you, you also can adjust the angle of light beam to the horizontal. For this you can simply tilt the part of the head lamp, which contains the reflector lens and the white LED. The screening allows using also intermediate positions.

#### 4. Smart Light Technology (SLT)

The SEO 7R is equipped with our Smart Light Technology (SLT). Thanks to the use of a microcontroller, the light output of the LED can be controlled and the user can use various Light Programs and Light Functions. By using a single switch it was possible to design the interface to be simple and user-friendly. The SEO 7R can give the user light in different ways. There are thus two Energy Modes, two Light Programs and a number of Light Functions available. To switch the pocket torch on and off and to select the various Light Functions etc., the switch (see Point 2) has to be used.

What basically applies is that the brightness of the SEO 7R is monitored by the in-built temperature control unit.

#### 5. Light Programs and Light Functions

In the SEO 7R are two LEDs (LED = Light Emitting Diode) installed.

The white LED is very strong, ideal for normal use, for example if the Speed Focus or the adjustment of the angle of light beam to the horizontal should be used. This very bright white light might be not good when your eyes have become accustomed through the so-called dark adaptation to low ambient light. Otherwise than with the use of the white light, it remains the current adjustment of the eye to low brightness obtained when the red light of the second LED is used. The focus and the angle of the light to the horizontal of the red LED, which is located laterally next to the reflector-lens, can not be adjusted.

In order to switch between the white and the red LED, when the SEO 7R is off, press and hold the switch button for 2 seconds. The head lamp will change from red to white or from white to red, and then release the switch button before the lights go out, because if you press too long the switch button you activate the "Transport Lock" (see section 7)!

The points below deal with the Light Functions of the white LED (Light Program White / Point 5.1) and the red LED (Light Program "Red Night Vision" / Point 5.2).

#### 5.1 Light Program White

If the Lighting Program White is enabled (see Point 5), you can use the white, focusable light of the head lamp.

When the switch button is pressed, if the SEO 7R is off, the head lamp glows in the Light Function Power at full brightness. When you switch a second time within 2 seconds, the SEO

7R glows with lower brightness (Light Function Dim). If you at this second turn do not switch briefly but keep the switch button pressed you can change the brightness infinitely. For the time that the switch button is pressed, the brightness varies between full and reduced brightness. At both ends of the SEO 7R goes off shortly, and then again to be lighter or darker (a blinking signal happened at both ends). When you release the switch button you lock the current brightness. This brightness is retained for the Light Function Dim even if you turn the head lamp off.

After the Light Function Dim (altogether 3 times fast switching) comes the Light Function „Automatic Dim“. A sensor detects the brightness of the environment and can adjust the brightness of the SEO 7R. If this Light Function is activated, the brightness is reduced if you e.g. illuminate objects at close range. This reduces the risk of glare and makes working e.g. at a desk easier. But if you illuminate distant objects or the environment turns darker, the brightness of the head lamp is increased.

The last Light Function that can be used in the Light Program White is the Light Function Signal (slow even flashing). If the SEO 7R is off, you get to it by switching the switch button 4 times while you do not wait longer than 2 seconds between each switching.

Additional switching turns SEO 7R off and the circle starts again with the Light Function Power when you press the switch button again. So the Light Functions are in a loop. But please note that you turn off the head lamp by every switching if since the previous switching more than 2 seconds have elapsed. For example in case you let pass more than 2 seconds after you turned the Light Function „Automatic Dim“ on the next switching will not change to head lamp to Light Function Dim but will turn the SEO 7R off.

## 5.2 Light Program „Red Night Vision“

If the Lighting Program „Red Night Vision“ is enabled (see Point 5), you can use the red light of the head lamp.

When the switch button is pressed, when the SEO 7R is off, the head lamp glows in the Light Function Power at full brightness in red. When you switch a second time within 2 seconds, the SEO 7R blinks in the Light Function Signal (slow even flashing).

The Light Function Signal is the last Light Function that can be used in the Light Program „Red Night Vision“ so additional switching turns SEO 7R off and the circle starts again with the Light Function Power when you press the switch button again.

So the Light Functions are in a loop. But please note that you turn off the head lamp by every switching if since the previous switching more than 2 seconds have elapsed. For example in case you let pass more than 2 seconds after you turned the Light Function Power on the next switching will not change to head lamp to Light Function Signal but will turn the SEO 7R off.

## 6. Energy Modes

By selecting one of the two Energy Modes

a decision on how the energy contained in the accumulator respectively in the batteries is used.

**1. Energy Saving:** The light output is controlled by the integrated Smart Light Technology (SLT). The brightness is matched to the real conditions that occur during normal use of the lamp, thus providing a longer burn time.

**2. Constant Current:** This Energy Mode allows the continuous use of all the Light Functions with a more or less constant light output. This Energy Mode is to be preferred when a high brightness level is more important than a long burn time.

### Changing of the Energy Modes

For changing the Energy Modes, one of the Light Functions in the Light Program White has to be activated, e.g. Light Function Signal (SEO 7R flashes slowly and evenly). Then you switch the switch button and keep it pressed for approx. 2 seconds. The SEO 7R turns off and turns on after a short moment. Then the head lamp turns off suddenly or the brightness fades to zero.

In case the brightness reduces gradually to zero, the SEO 7R is in the Energy Mode Energy Saving. But if the brightness of the SEO 7R remains constant for a moment to then suddenly drop to zero, the head lamp is thereafter in the Energy Mode Constant Current.

With this procedure, you can switch between the two Energy Modes. It is not possible to determine in which Energy Mode the SEO 7R is. To find this out, you must carry out the procedure. If the SEO 7R is thereafter not in the desired Energy Mode any more, you must repeat the procedure again.

## 7. „Transport Lock“

Under Point 5 it has been described how to switch between the white and the red LED. This takes place when the SEO 7R is off and the switch button is pressed only for approx. 2 seconds. The head lamp will change from red to white or from white to red. But when the switch is pressed longer (approx. 5 seconds) until the light turns off you have enabled the „Transport Lock“. Then the SEO 7R can not be turned on again but the red LED flashes for a short moment to indicated that this function is activated in case the switch button is pressed. The SEO 7R therefore cannot be switched on, either intentionally or unintentionally and inadvertently consume energy. Only when you hold the switch button pressed for 5 seconds again this function („Transport Lock“) is deactivated again and the lamp is in the Light Program White.

## 8. Reset function

If the Accumulator-Pack, the alkaline batteries or NiMH-Accumulator are taken out the battery box you have "reset" the SEO 7R. You have thus reset a few functions:

- The „Transport Lock“ (see Point 7) is deactivated
- The Light Function Dim (see Point 5.1) is set to low brightness
- As Energy Mode Energy Saving is active (see Point 6).

- The Light Program White (see Point 5.1) is activated

### 9. Charging

The SEO 7R indicates by the flashing of the red LED that it is running out of energy in near future. Please charge the Accumulator-pack in time. Charge the Accumulator-pack of your SEO 7R in a dry place and only by using the charger that is included in the delivery or by a USB port (see below).

The following information applies only to the included accessories. You cannot charge any other accumulators or batteries in the SEO 7R. In case NiMH-Accumulators (see Point 1) are used, they must be charged in approved external chargers.

In the scope of delivery of the SEO 7R there is a plug and a charger. In case both are not connected already please connect them so that the connection clicks.

The charger of SEO 7R has a USB port, which must be connected with the corresponding port at the supplied charging cable in order to charge Accumulator-pack. The other side of the charging cable (micro USB) must be connected to the Accumulator-pack which is scope of delivery. You will therefore have to open the battery box. The supplied Accumulator-pack has two charging ways, either it loaded in the battery box of SEO 7R or can be removed out of the battery box for charging. Only the supplied Accumulator-pack can be charged with the charger.

The last step is to connect the plug into a socket (Input: 100 V to 240 V / 50 Hz to 60 Hz). When charging is completed (after maximum 2 to 3 hours), unplug the charger from the socket again and the charging cable (micro-USB) of the Accumulator-pack. But it is no problem to go on loading the Accumulator-pack although it is already full.

Instead of connecting the charging cable to the USB port of the charger, you can also connect it to a different USB port (5 V / 900 mA) e.g. of a computer.

While using our optionally available car USB charger connection (Led Lenser Car Charger: Item no. 0380), the SEO 7R also can be charged at the cigarette lighter and sockets in vehicles. These accessory units match themselves automatically to the respective input voltage (12 V / 24 V). These alternatives are suitable to charge the Accumulator-pack in case a power outlet is not available.

**Note** – Please ensure that there is no short-circuit at the charging contacts. The charging contacts may not be touched with moist or metallic objects.

### 10. Charge indication

In case you are charging the Accumulator-Pack of the SEO 7R with the corresponding charger and charging cable respectively by a USB port (see Point 9) the status LED at it glows white charging in red and the light changes to green when the charging is completed.

### 11. Changing of the Accumulator-Pack / NiMH-Accumulator / Alkaline batteries

Prior to the change, please turn off the SEO 7R. On the wide side of the head lamp housing there is the cover of the battery box. Nearby the switch button there is a plastic lip. If this lip is carefully pressed with e.g. your thumb up a little, the battery box cover can be folded down by using the small notches that are left and right next to the switch button.

You can now remove the Accumulator-Pack (Alkaline batteries / NiMH-Accumulators) and insert a new one.

Also NiMH-Accumulators and alkaline batteries can be inserted. But then the charger cannot be used!

During insertion, it is always necessary that this is in the correct direction. Therefore, pay attention to the polarities (+ and -). Both in the battery box and also on the Accumulator-Pack / NiMH-Accumulators / alkaline batteries. Otherwise, the hypothetical risk that Accumulators / batteries are damaged and may explode.

The supplied Accumulator-Pack can only be recharged with the original charger or by a USB port (see Point 9)!

After replacing the cover of the battery box has to be closed again.

### 12. Headband

If the headband is not already connected to the lamp unit, proceed as follows.

Thread the end of headband with the narrow plastic part from the front through the eyelet on the left side of the head lamp housing.

Note the orientation of the lettering on the headband. Run the headband then over the cover of the battery box to the eyelet on the other side of the battery box and run it through it to the front.

This end of the headband has got to be pulled through the hole beside the clipper at the plastic part on the other side of the headband. This elongate hole has got 4 small bars through which the narrow plastic part has to be run from the side.

This allows that the complete end is pulled through this hole and both ends of the headband are connected to each other. By using the eye of the clipper the SEO 7R can e.g. attached to an ear of a belt or a backpack for transportation.

The third plastic component at the headband can be used to adjust the length of the headband in order to fit different head circumferences.

### 13. Rechargeable batteries / Accumulators

Non rechargeable batteries or other accumulators that are not of the same type as the accumulator that is scope of delivery are not allowed to be charged by the charger. Never use non rechargeable batteries and accumulators together. Change always all nonrechargeable batteries and accumulators at the same time. Use in the SEO 7R only the Accumulator-Pack (scope of delivery), alkaline batteries AAA/LR03/Micro (1.5 V DC) or NiMH-Accumulator AAA/LR03/Micro (1.2 V DC).

(Energy Saving or Constant Current), you take it for an extended period, please take out the Accumulator-Pack respectively the NiMH-Accumulators / alkaline batteries in order to avoid damage.

Used batteries and accumulators have to be taken out of the item and disposed of in keeping with the national laws.

In general, for the disposal of batteries as well as particularly for Lithium batteries, accumulators and accumulator packs, the applicable rule is that they may only be disposed of in discharged state and in a technically correct manner. Additionally before disposal it has to be ensured, by sticking non-conducting adhesive tape over the contacts that short-circuits are not possible.

Basically, the possibility of short-circuits of accumulators and batteries must be eliminated and they may neither be opened, nor enter the human body in any way, nor may they be thrown into a fire.

#### 14. Cleaning

For cleaning, please use a dry, lint-free, clean cloth.

If salt water is spilled on the head lamp, it must be immediately entirely removed with such a cloth.

The headband can be washed in a washing machine at 30 °C.

#### 15. Scope of delivery

The SEO 7R incl. headband is supplied with the following accessories:

- 1 x Charger plus plug
- 1 x Charging cable to connect charger and Accumulator-Pack
- 1 x Accumulator-Pack
- 1 x Operating manual

Additional accessories for the SEO 7R are being designed. You can get information on these additional accessories over and above the supplied kit on our Internet page.

#### 16. Caution

Do not swallow any small parts or batteries/ accumulators that are present. The products or parts thereof (including batteries / accumulators) must be stored outside the reach of children.

For reasons of safety and approval (CE), the product must not be modified and/or changed.

The product is to be used exclusively as an accumulator or battery powered lamp. If the SEO 7R is used for any other purpose, or used incorrectly, it can get damaged and hazard-free use is not guaranteed any more (danger from fire, short-circuit, electric shock etc.).

There is then no liability for harm to persons or damage to property, and the warranty of the manufacturer is also rendered null and void. The temperature range in which the SEO 7R can be operated is -20 °C to +50 °C. Ensure that the SEO 7R is not subjected to more extreme temperatures, intense vibrations, explosive atmosphere, solvents and/or vapours.

Also continuously exposed to direct sunlight, high humidity and/or moisture have to be avoided. Changes, repairs and maintenance

over and above those described in the documents accompanying the product may only be carried out by authorised technical personnel.

Once it is found that the product is filled with full batteries / accumulators in correct orientation (polarity!) and correctly closed, but nonetheless a normal, safe operation is not possible or the product shows damage, it must be rendered inoperative and not used any further. In this case, for warranty matters, contact your dealer.

#### 17. Safety instructions

- This product is not a children's toy.
- Since it has small parts that can be swallowed, it is not suitable for persons below 5 years.
- The article may not be used for examinations of the eyes (e.g. for the so-called pupil test).
- When using it, the accumulation of heat, e.g. by covering, must be avoided.
- If the product does not work correctly, the first thing that must be checked is whether this is due to discharged battery/ accumulators or because these are not inserted correctly.
- If using in traffic, please follow the respective legal regulations.

The hazard that poses the main threat in this product through optical radiation is the Blue-Light-Hazard (400 nm to 780 nm). Thermal hazard threshold values are clearly not reached.

The risk for the viewer depends on the use or on how the product is installed. However, there is no optical hazard as long as the aversion responses limit the time of exposure and as long as the information contained in this instruction manual is observed.

The aversion reactions are triggered by the exposure and they are to mean all natural reactions that protect the eye from hazards through optical radiation. This includes in particular conscious aversion reactions such as eye or head movement (e.g. turning away).

When using the product it is of particular importance to bear in mind that the aversion reactions of persons at whom the light is directed at may be weakened or completely suspended as a result of medication, drugs or illness.

Because of the blinding effect of the product, improper use may lead to reversible, i.e. temporary impairment of sight (physiological blinding) or afterimages, or it may trigger feeling unwell in the sense of feeling queasy and tired (physiological blinding). The intensity of the temporary feeling of being unwell or the time until it subsides depend primarily on the difference in brightness between the blinding-light source and the surrounding area. Photosensitive persons in particular ought to consult a medical consultant prior to using this product.

As a matter of principle the rule is that high-intensity light sources carry a high secondary hazard potential due to their blinding effect.

Just like looking into other bright light sources (e.g. headlights of a car), the temporary limited impairment of vision and afterimages may lead to irritation, inconveniences, impairments and even accidents, depending on the situation.

The information applies to the use of a single product. If more light-emitting products of the same type or of a different type are used together, the intensity of the optical radiation may increase.

Every longer viewing/eye-contact with the source of radiation of this product by the user or other persons, with and without other light-bundling instruments, is to be avoided as a matter of principle! Instead, the eyes are to be closed deliberately in such cases and the head ought to be turned away from the light beam.

In case of a commercial use or the product's use by public bodies, the user must be instructed as to all applicable laws and regulations that correspond to the individual case of usage.

**Important rules of conduct:**

- Do not aim the light beam directly into the eyes of a person.
- The user or any other person should not look directly into the light beam.
- In the event of optical radiation hitting the eye, the eyes must deliberately shut and the head is to be turned away from the beam.
- The instruction manual and this information must be stored safely and must be passed on together with the product.
- It is prohibited to look straight into the light that is being emitted by this product