

Operating Manual

SCALEO *infinity*



Please read the following manual carefully before using your product. Please do not discard.



CAUTION. IMPORTANT SAFETY INFORMATION - Read all information before operation.

This operating manual covers operating, maintenance and safety instructions. Please read the entire operating manual carefully before using the **SCALEO infinity** and keep the operating manual in a safe place for future reference at all times.



CAUTION! This product contains magnets. The function of pacemakers can be affected.

- Make sure that the battery you are using corresponds with the specifications (see technical specifications) and functions properly.



CAUTION! The lamp can get very hot. Warning! Risk of burning!

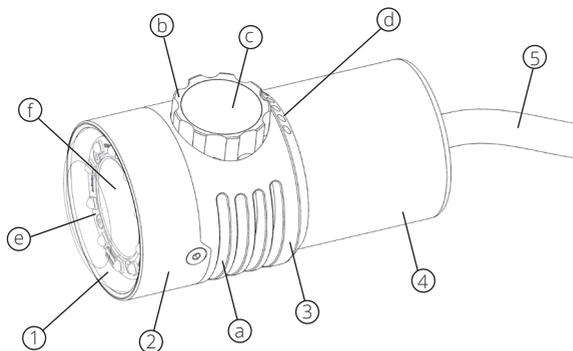
- In case of smoke or steam, immediately turn off the lamp and disconnect it from the power source.



CAUTION! Do not direct the lamp while using it at your eyes or the eyes of other people or animals. There is a danger of damaging or destroying the retina.

- The instructions in the following operating manual must be strictly followed. Otherwise it can lead to damages, personal injuries or even death!
- During operation always maintain an adequate distance to flammable materials. Do not cover the lamp with any items during operation. Warning! Risk of fire!
- Dismantling or modifying the lamp can affect the safety of the product. Modifications of the lamp that are not approved by this operating manual must be carried out by qualified experts.
- Keep the diving torch out of the reach of children and animals.
- The lamp should be disconnected from its power source when transported or stored.
- Keep away the lamp from high heat and open flames. It can cause overheating, brands, explosions, destruction, electric shocks and injuries.
- Store the diving torch away from direct sunlight and high heat as this could cause overheating or damage.
- In case of damage to the dome port, o-rings or cable, operation must be stopped immediately. Do not use the lamp again until it has been repaired by qualified experts.

PRODUCT DETAILS



1. Dome port
2. Retaining ring
3. Lamp head
 - a. Cooling fins
 - b. IFC rotary knob
 - c. IFC button
- d. Control lights
- e. LED ring
- f. Reflector & LED spot
4. Cable cover
5. Cable or E/O-Cord

USAGE, PERFORMANCE CHARACTERISTICS & TECHNICAL SPECIFICATIONS

The lamp is designed for operation under water, in particular for diving under water. The lamp is designed and tested for depths up to 200 meters. The operation on shore is not intended.

Dimensions: 99 x 52 x 62 mm

Weight: under water 133 g
above water 323 g

Permissible water temperature: -4°C to 30° C

Power supply: External battery tank

Driver architecture: Buck / Boost driver circuit

Dimming: Analog dimming
Continuous 0-100 %

Input voltage range: 8 - 17 V DC

Max. power: 9 Ampere

Efficiency: 96 %

	Spot	Wide angle
Light sources	1 x Cree XHP35 LED	10 x Cree XP-G3 LEDs
Light angle	5°	120°
Light output	13 Watt (24 Watt*)	60 Watt
Color temperature (in Kelvin)	5000 K	5000 K
Luminous flux	1 100 Lumen (1 650 Lumen*)	6 000 Lumen
Illuminance @1m	42 000 Lux (63 000 Lux*)	2 700 Lux

*Spot selected

COMMISSIONING

You will already find the lamp completely assembled. To put the lamp into operation it is necessary to install a battery that corresponds to the technical specifications in terms of current and voltage. Depending on the configuration, you can connect the **SCALEO *infinity*** with the E/O-Cord or permanently with a battery pack. Alternatively, the Scaleo can also be operated with the compact slip battery pack. More information can be found in the separate operating manual.

All common battery tanks are allowed to use if:

- they have an output voltage range between 8 V and 17V DC
- that have a battery management system
- their discharge current is rated for at least 9 ampere.

We recommend battery tanks from UWAVis.

OPERATION

1. ADAPTING THE LIGHT INTENSITY

You can regulate the light intensity of the spot and wide angle by using the rotary-switch Infinite Flux Control (IFC). Both light cones can be infinitely dimmed continuously from 0 - 100 % of the intensity and are independently combinable depending on the software variant.

There are two software variants for controlling the lamp: standard and cave software. If you press the button for 8 seconds during on state the lamp switches between standard- and cave-software.

A: Standard-software:

- Spot** Click **one time** on the IFC button to release the key lock and activate the spot mode. Then turn the IFC knob clockwise to increase the light intensity of the spotlight or counterclockwise to decrease it.
- Wide angle** Click **two times** quickly on the IFC button to release the key lock and to activate the wide angle mode. Then turn the IFC knob clockwise or counterclockwise to regulate the light intensity of the wide angle.
- Key lock** After 3 seconds of inactivity the key lock will be activated automatically. If you turn the IFC knob without clicking the IFC button before, the key lock mode will remain activated. In this mode the light intensity can not be regulated and the control lights will show the battery status.

B: Cave-software:

In contrast to the standard software, the cave software can not operate both light sources at the same time. For this purpose, a faster change between spot and wide angle setting is possible by clicking. There is no key lock on the cave software.

2. CONTROL LIGHTS

Depending on the mode, the control lights either show the battery status (after 3 seconds inactivity or key lock mode) or the light intensity of the spot or wide angle (while adjusting).

Spot The light intensity of the spotlight is displayed with red LED control lights.

Wide angle The light intensity of the wide angle is displayed with green LED control lights.

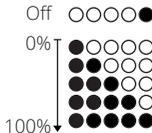
Battery status After 3 seconds or rather the lamp is in key lock mode, the current status is indicated by flashing. **CAUTION:** This will only provide a rough orientation and show how many percent of the battery capacity still remain. The actual operation time until the lamp turns off depends on the capacity of the battery (Wh) that is being used and on the light intensity that is regulated while using the **SCALEO infinity**.

At full power of spot and wide angle the **SCALEO infinity** consumes 73 Watt.

$$\frac{C [\text{Wh}] \text{ Battery}}{P [\text{W}] \text{ SCALEO infinity}} = t [\text{h}] \text{ (max. diving time)}$$

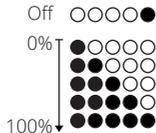
Spot mode

Red LED display



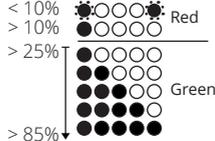
Wide angle mode

Green LED display



Key lock mode

Flashing LED display



CAUTION!

The display of the battery status decreases every 15 percent. If there is less than one quarter of the battery capacity available, the color will change to red. Below 10 percent two LEDs will start flashing fast and the emergency lighting mode will be activated.

2. TURNING ON AND OFF

To turn off the lamp, there are several options that will have the following outcomes:

Turning on and off via IFC

To turn off the lamp by using the IFC, you need to push the IFC button for at least 3 seconds. The lamp will turn off and save the current setting. To turn on the lamp, you need to push the IFC button again for at least 3 seconds.

- The light-settings are being saved during switching on and off (3 seconds pressing the button). After reboot for example through switching off at battery canister or loose connection this settings (including on/off state) are loaded again.
- When the lamp is turned off by using the IFC it will still consume a small amount of energy. In standby mode the lamp consumes about 3 mA.

Turning on and off via power source

If the lamp is turned off by using the power source, e.g. by using the battery switch, the lamp will completely shut down and the last settings will not be saved. When switched on again via the power source, the lamp will restore the settings that were saved by switching on or off with the IFC.

CARE INSTRUCTIONS

To ensure that you will continue to take pleasure in your SCALEO infinity, we recommend to read the following care instructions.

- Rinse off the lamp thoroughly after every dive with clean freshwater and dry it off afterwards. Do not use any further cleaning agents.
- Make sure to protect the dome port from shocks, sand and sharp items in order to avoid scratches.
- Before every dive make sure to check if the retaining ring and the lamp head are tightly screwed together, the cable cover sits firmly and the pressure piece of the cable cover is locked properly.
- In the event that the o-rings are visibly damaged or assumed damaged, they must be replaced by the service of the RP-Engineering GmbH or a qualified dealer.

CS: Na následujícícm odkazu najdete návod k použití v češtině.

DE: Unter folgendem Link finden Sie die Bedienungsanleitung auf Deutsch.

EL: Μπορείτε να βρείτε εγχειρίδιο στην ελληνική γλώσσα, στον επόμενο σύνδεσμο.

EN: You will find the manual in English in the following link.

ES: En el siguiente enlace se puede encontrar el manual de instrucciones en español.

FI: Löydät ohjekirjan suomenkielisenä seuraavan linkin alta.

HR: Slijedeći link odvest će Vas do upute za upotrebu na hrvatskom jeziku.

HU: Az alábbi linkre kattintva találja a használati útmutatót.

IT: Al seguente link trovate le istruzioni per l'uso in italiano.

LT: Šios nuorodos pagalba rasite vartojimo instrukciją lietuvių.

NO: Betjeningsanvisningen finner du under følgende lenke på norsk.

PL: Pod poniższym linkiem znajduje się instrukcja obsługi w języku polski.

SL: Na spodnji povezavi so navodila za uporabo v slovenščini.

SV: Under följande länk finns bruksanvisningen på svenska.:

<http://www.scaleo-light.de/bedienungsanleitung>



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This device conforms to the European Directive of Electromagnetic Compatibility (EMC) 2014/30/EU.



This device conforms to the European Directive 2012/19/EU of old electrical and electronic equipment (WEEE).