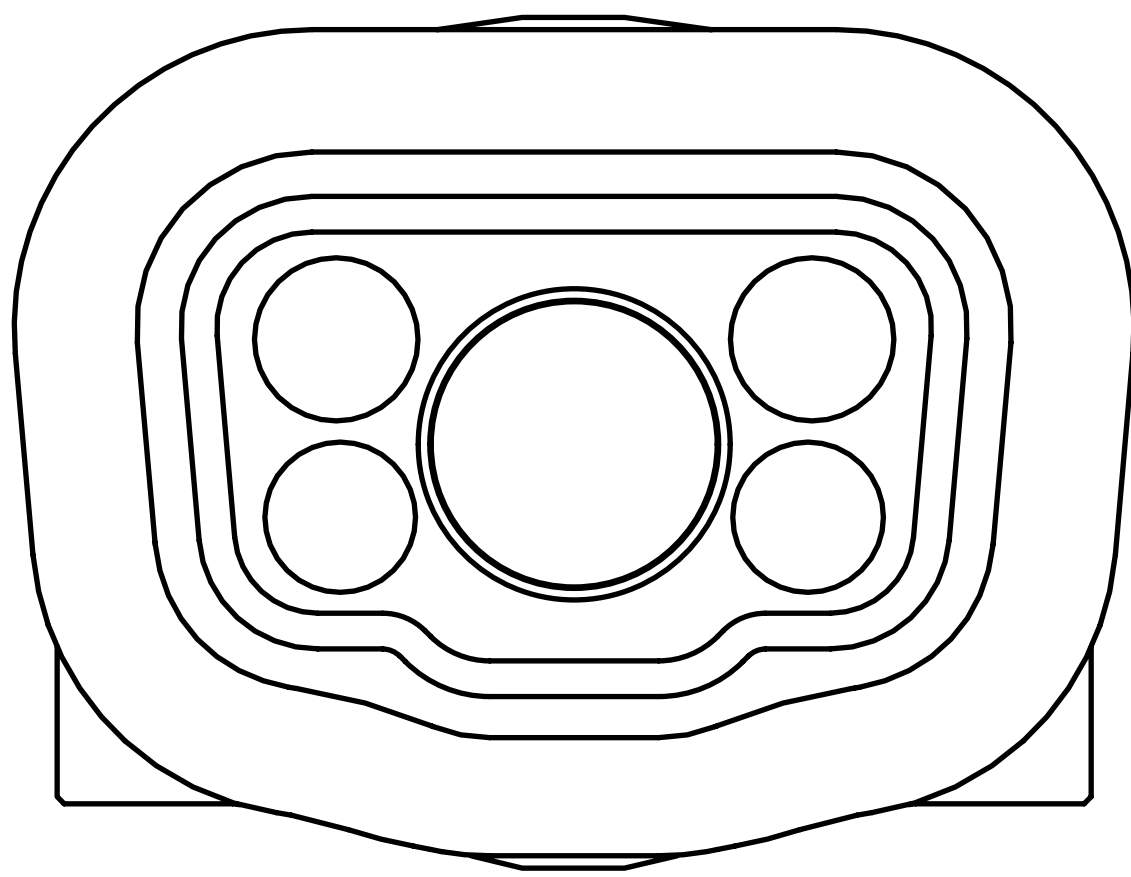


LUPINE
LIGHTING SYSTEMS



PENTA PRO

User manual



Deutsch | English | Français | Norsk | Italiano

We are very pleased that you have chosen our product, ensuring high-quality and above all safe outdoor lighting, which is handcrafted in our factory in Bavaria.

Our aim is to provide you with the best possible experience and outstanding service.

Enjoy your new light!



Wolf-Dieter Koch
Founder & CEO



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1. SAFETY INSTRUCTIONS

WARNING! Never intentionally direct the light beam into your own eyes or those of others. If a light beam hits the eyes, they should be consciously closed and the head moved out of the beam. No optical instruments that strongly focus the light should be used to view the beam. When used commercially or in public areas, users must be instructed according to accident prevention regulations for laser radiation.

This device can be operated by children from 8 years of age, persons with reduced physical, sensory, or mental capabilities, and persons with no previous experience with such devices, provided they are supervised by a person responsible for their safety. Do not use multiple lamps simultaneously as this increases optical radiation and the risk of retinal damage.



Caution! Risk group 2: Possibly hazardous optical radiation! Do not look into the lamp for extended periods during operation, as this can damage the eyes.

Glare hazard: The strong glare of the lamp can cause temporarily impaired vision and afterimages, which can lead to irritation, impairments, or accidents.

(Re)Charge the battery before first use.

This light may fail at any time. Therefore, it is helpful to always have a small emergency lamp ready. Do not attempt to repair the battery if it is externally damaged or has an internal defect!

Heat development: The lamp housing can become hot! Always ensure sufficient distance from flammable materials. Stationary operation (without cooling such as airflow) is possible at any time - it does not damage the spotlight. During stationary operation, the light will be dimmed after a few minutes. This is normal and reduces the lamp's temperature. Continuous operation at full power is recommended only with good cooling, otherwise the maximum brightness will decrease due to temperature regulation. **Always separate the battery and lamp head during transport.**

Waterproof: All components of the lamp are waterproof and can be used under the harshest conditions. The lamp meets IP67 protection class but is not a diving lamp and NOT suitable for permanent use underwater.



For more information, visit: www.lupine.de
EC Declaration of Conformity: www.lupine.de/ce/

2. TECHNICAL DATA

MODEL	Penta Pro Headlamp	
SENSORS	Tilt sensor, brightness sensor*	
OPERATION	2 buttons	
POWER	1,400 Lumens max. / 45 Lux	
RANGE	140 m	
BATTERY CAPACITY	25Wh / 3.5 Ah (SmartCore)	22Wh / 3.1 Ah (HardCase)
RUNTIME	1:45h - 625h	1:30h - 550h
CHARGING TIME	1:50h	1:40h
LIGHT MODES	White light, red light, diffuse light	
SPECIAL MODES	SOS, Flash	
MATERIAL	Aluminum 6061-T6, CNC-milled, black anodized	
WEIGHT	60g lamp head	
DIMENSIONS	47 x 36 x 27 mm	
LENS	Penta Lens System	
ILLUMINANT	1x Cree XP-G2 HE, 4x Cree XQ-E	
PROTECTION CLASS	IP67 waterproof, IK09 impact strength	
COLOR TEMPERATURE	4,500 Kelvin, 5,700 Kelvin	
TEMPERATURE MANAGEMENT	Real-time control with 2 temperature sensors	
BATTERY RESERVE	3-stage battery warning, then emergency reserve	
OPERATING TEMPERATURE	-25°C to +70°C	

*factory disabled

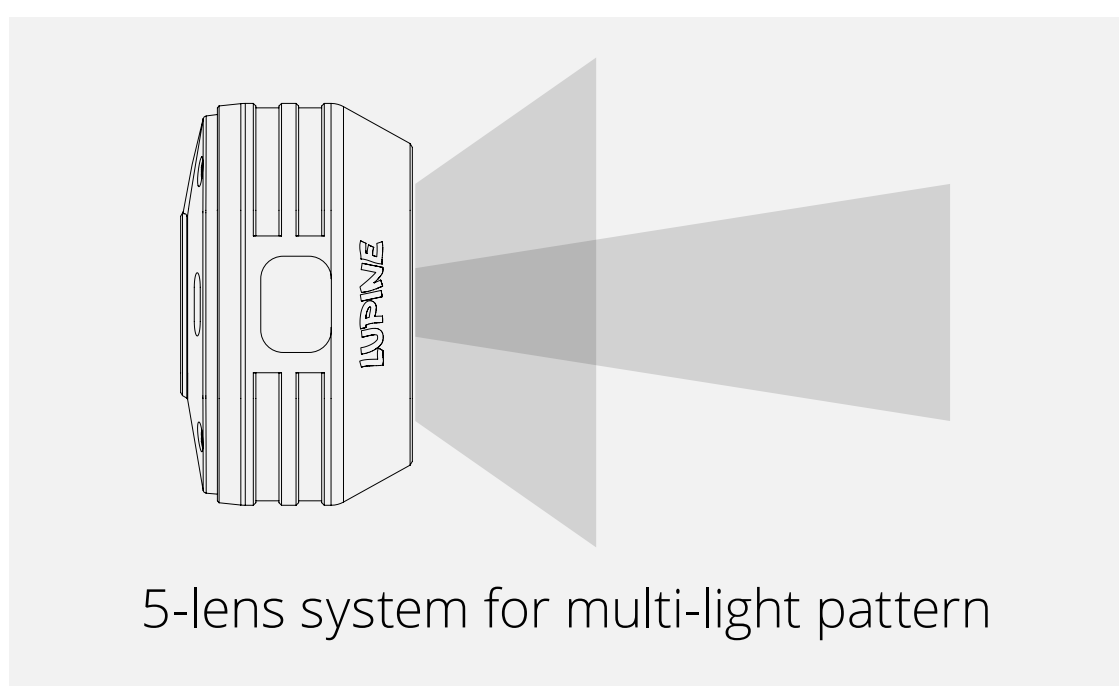
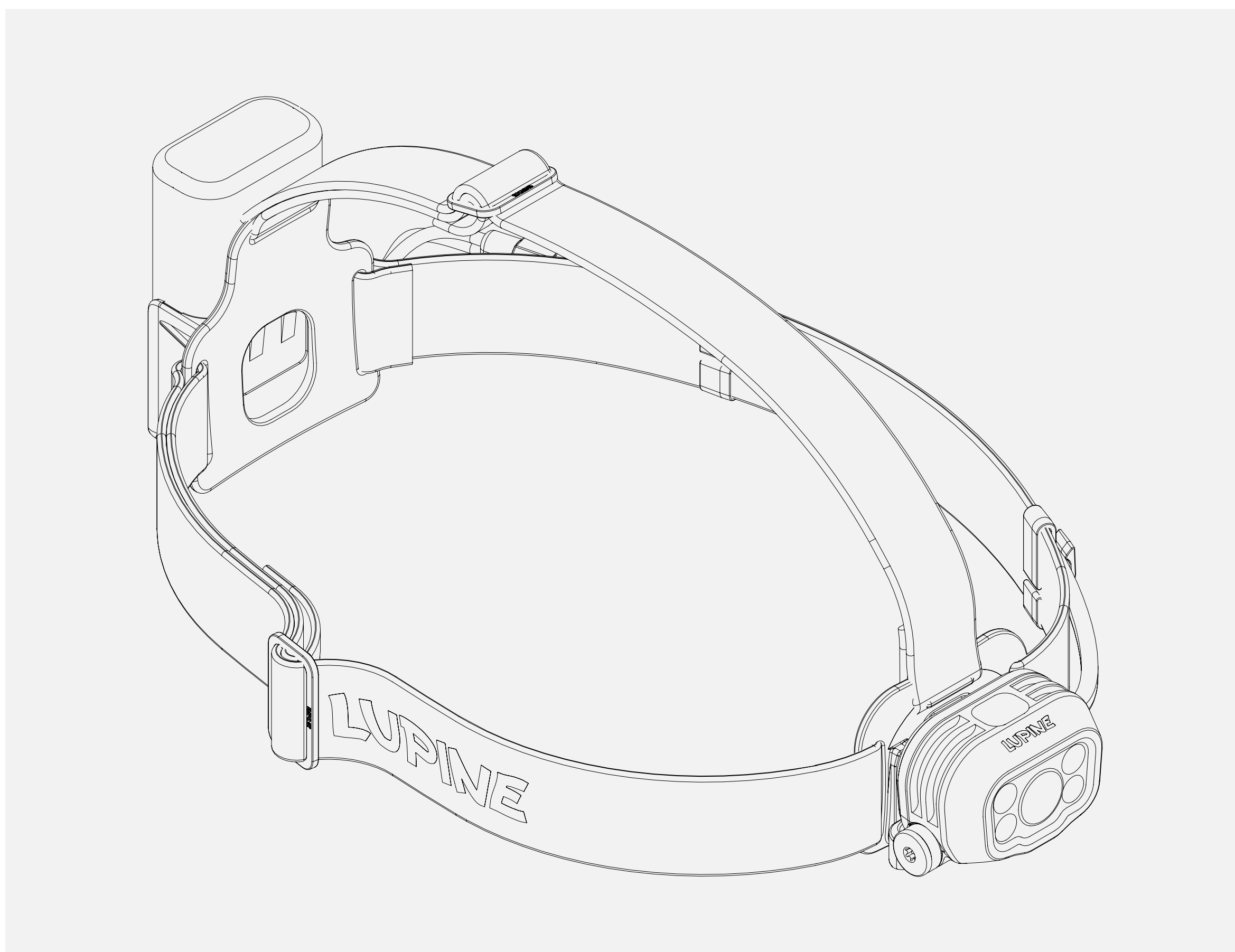
3. PRODUCT OVERVIEW

The Lupine Penta Pro consists of a compact lamp head with an external battery and offers a multi-light pattern thanks to the 5-lens system with broad close-range illumination and a defined spot for distance.

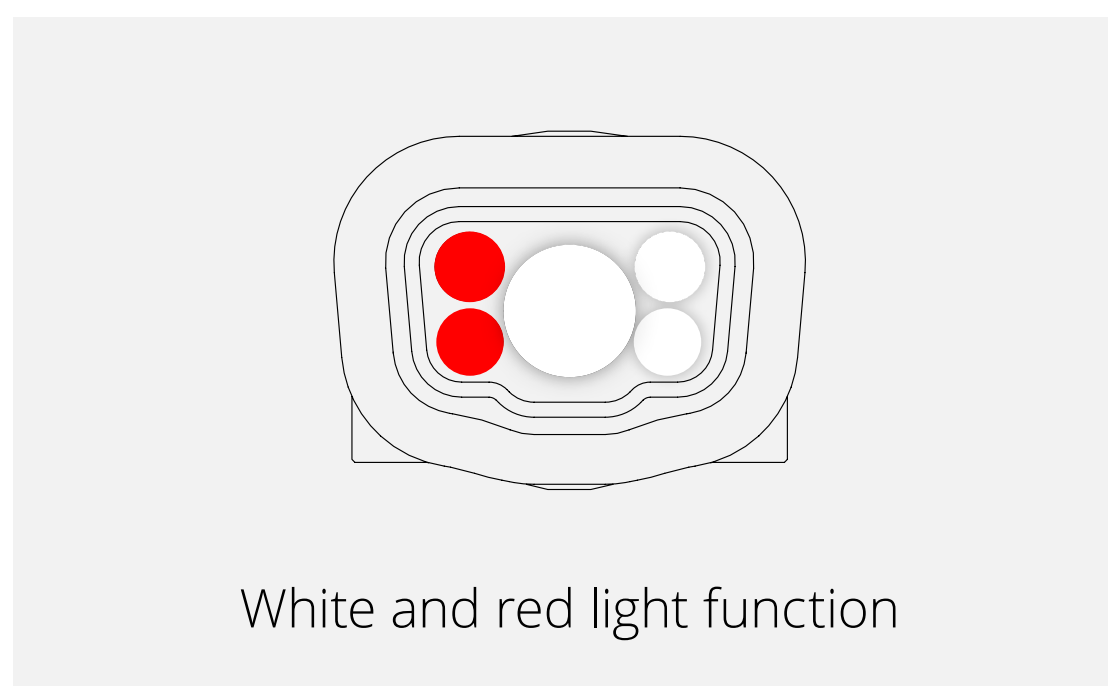
White and red light are available in various brightness and light levels. Detailed information can be found under „4.5 Operating the Lamp“

Operation is via the two buttons on the top and bottom of the lamp head. The main light is controlled by the upper button. The red light function is operated via the lower button. The detailed control scheme is on page 7.

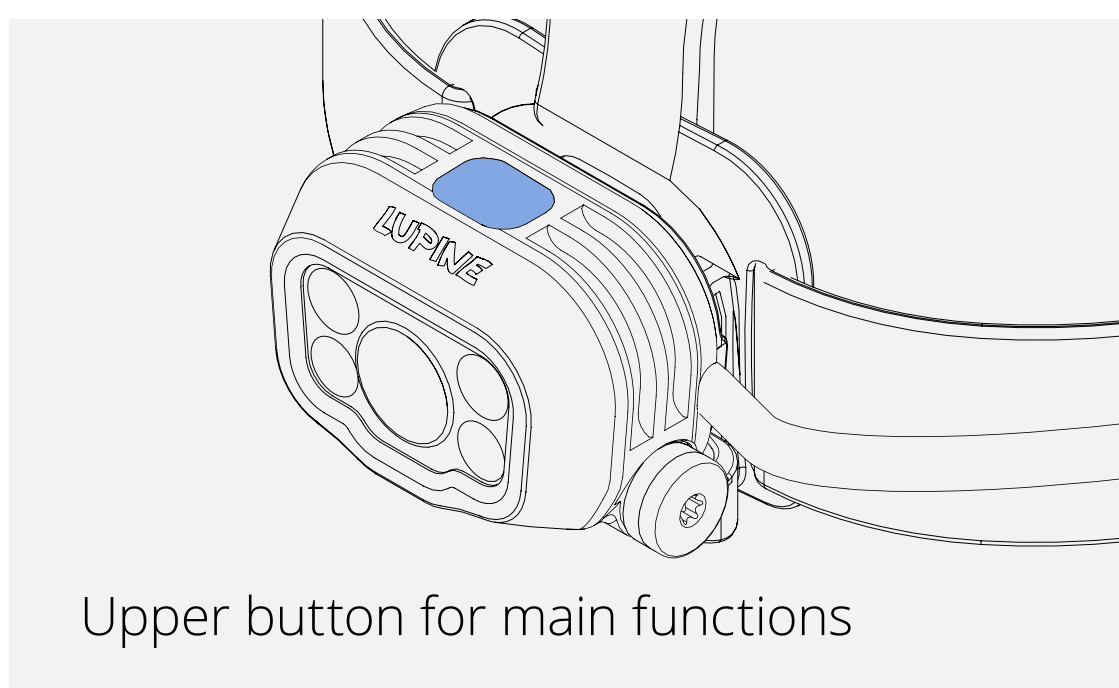
The SmartCore battery model has an additional button on the battery that activates the capacity indicator and controls additional functions described on page 7.



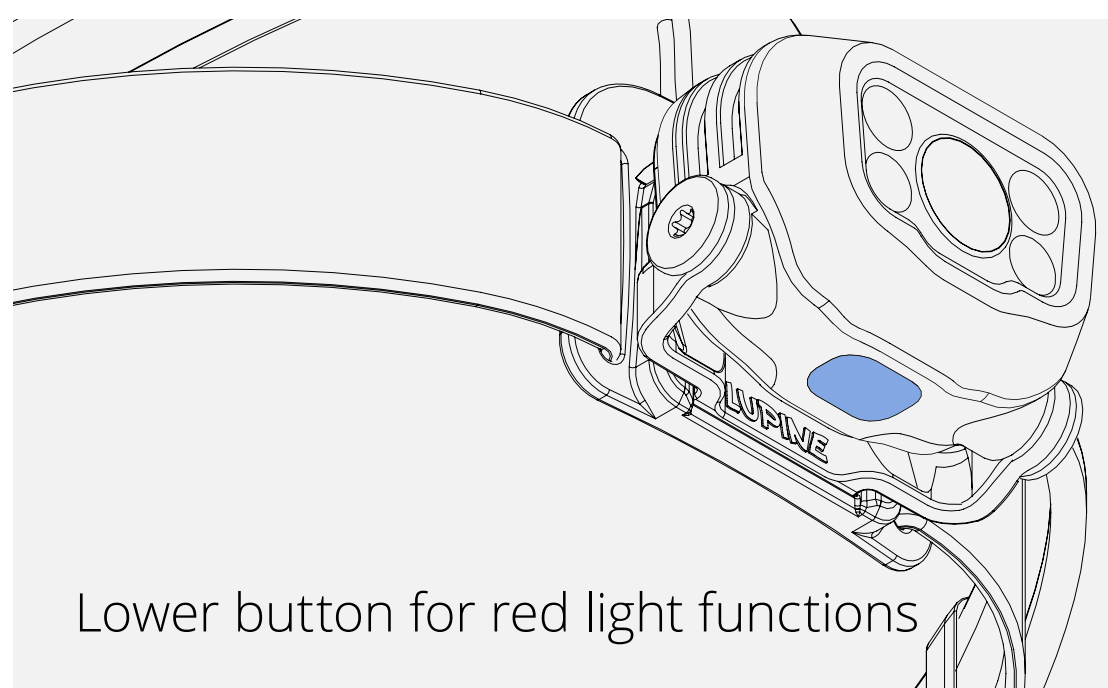
5-lens system for multi-light pattern



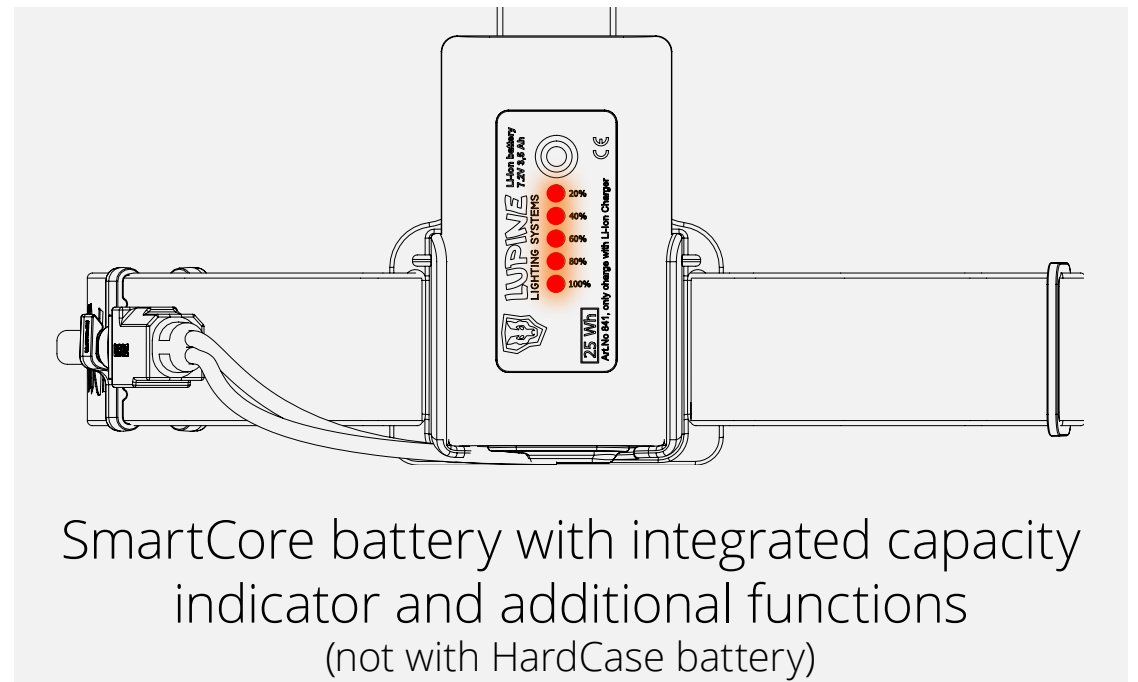
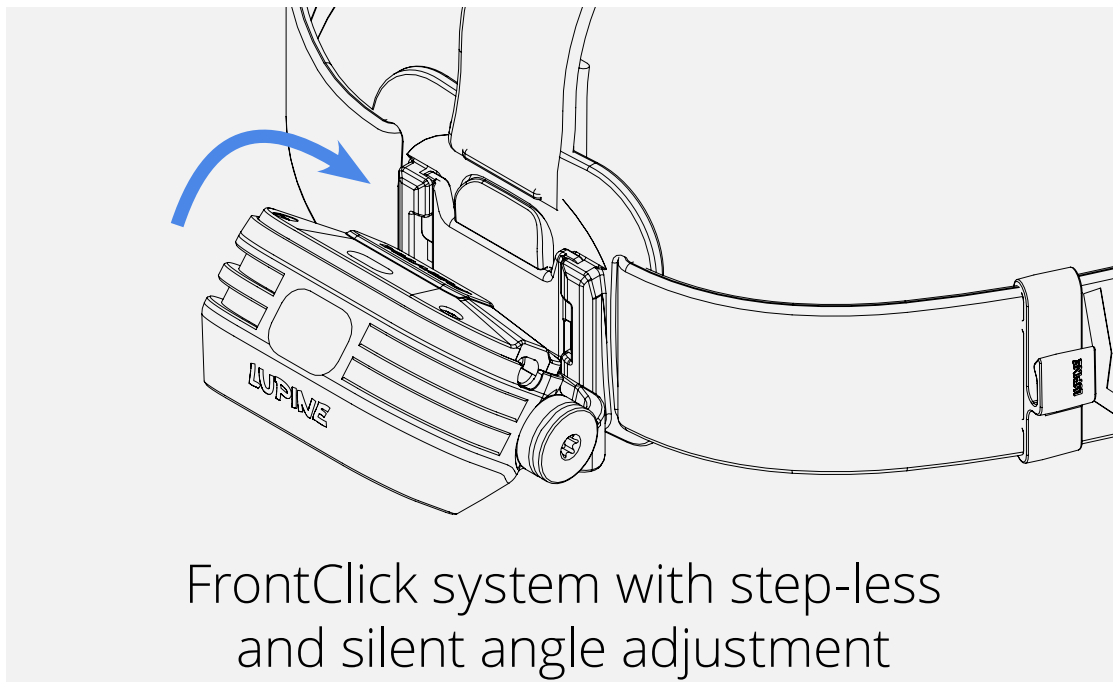
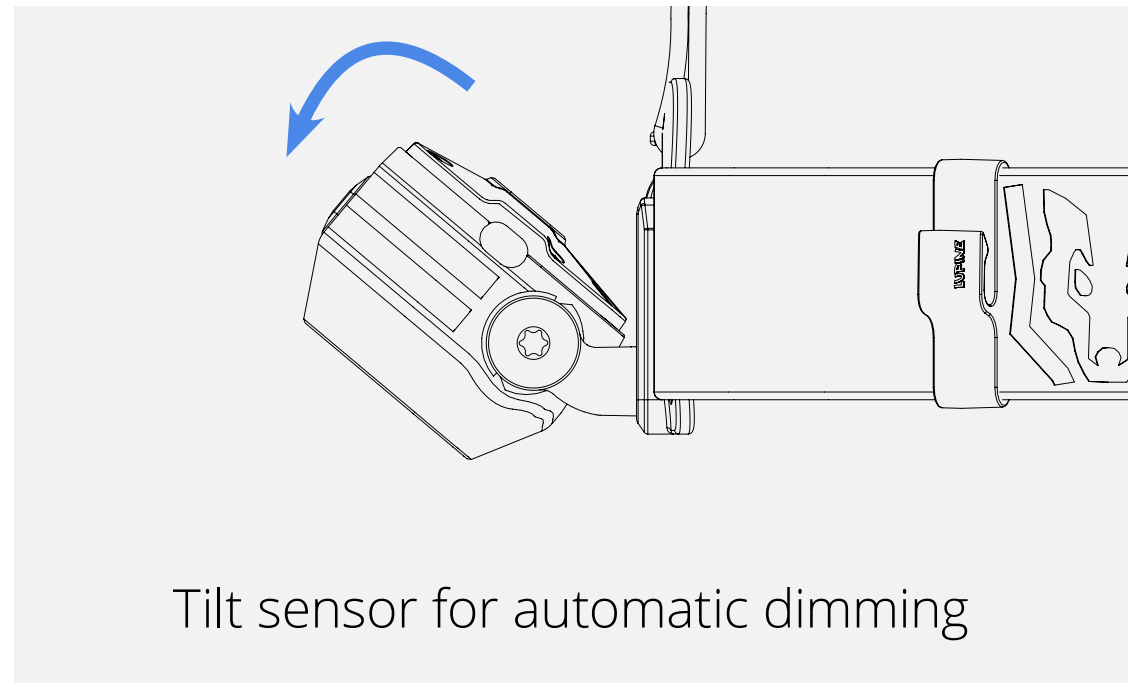
White and red light function



Upper button for main functions



Lower button for red light functions



4. USAGE

4.1 CHARGING THE BATTERY:

Fully charge the lamp's battery before first use to ensure full brightness and duration. To charge, connect the battery to the included „Wiesel“ charger via the appropriate connector. Then plug the charger into an outlet. The charging process starts automatically.

The indicator on the charger shows the current charging status:

- Charging Battery
- charged

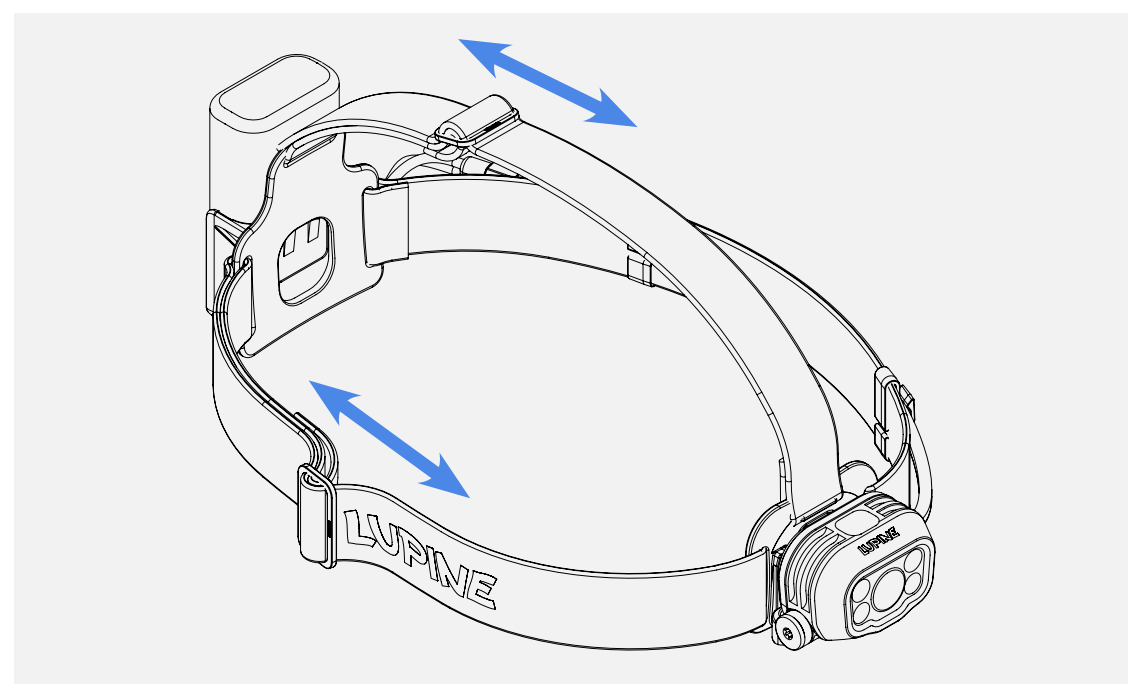
Caution! Always store the battery dry and at room temperature, preferably charged to 80 to 100 percent capacity. Use the included (or another) Lupine charger for charging. Depending on storage temperature and usage, recharge the battery at appropriate intervals!

- ⚠ Only rechargeable Li-ion batteries may be charged with the included charger. It is **NOT suitable for charging Ni-MH batteries!** The power supply must only be opened by the manufacturer.

4.2 ADJUSTING THE HEADBAND

The supplied headband provides excellent hold due to the additional upper band. To individually adjust it to the respective head size, move the adjustment buckles located on the sides and top.

To adjust the headband, proceed as follows:



Tighten: Slide the adjustment buckles towards the front.

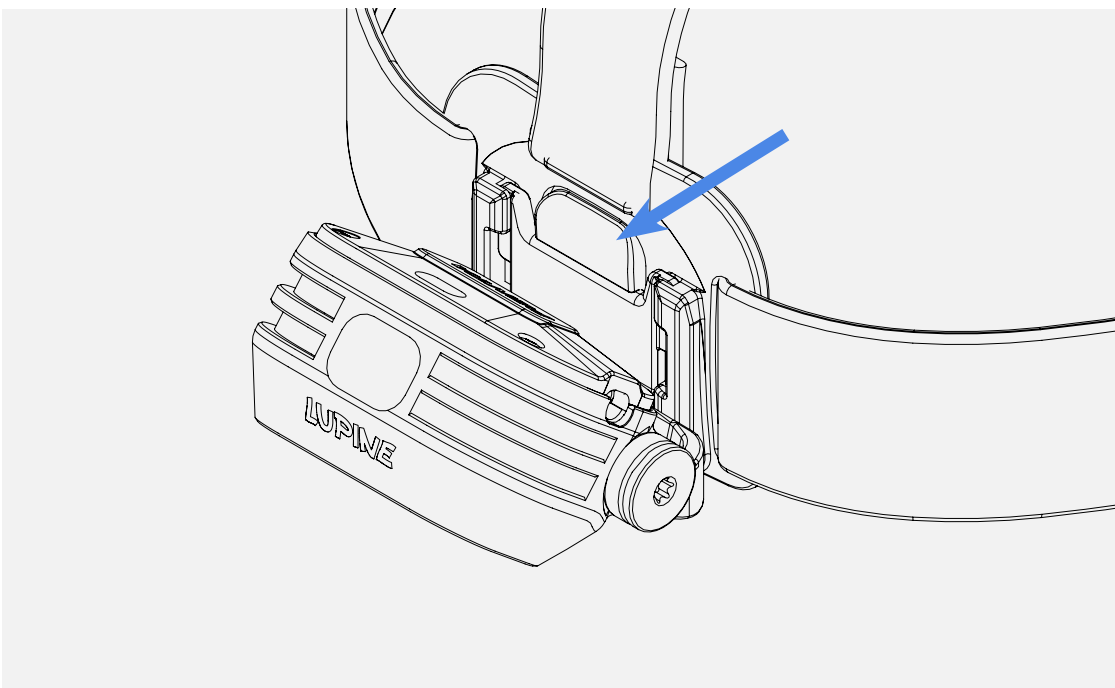
Loosen: Slide the adjustment buckles towards the battery holder.

It is easiest to adjust the headband when it is not being worn. After finding the correct size, adjust the front-click, battery, and cable holders accordingly.

4.3 ATTACHING THE LAMP HEAD

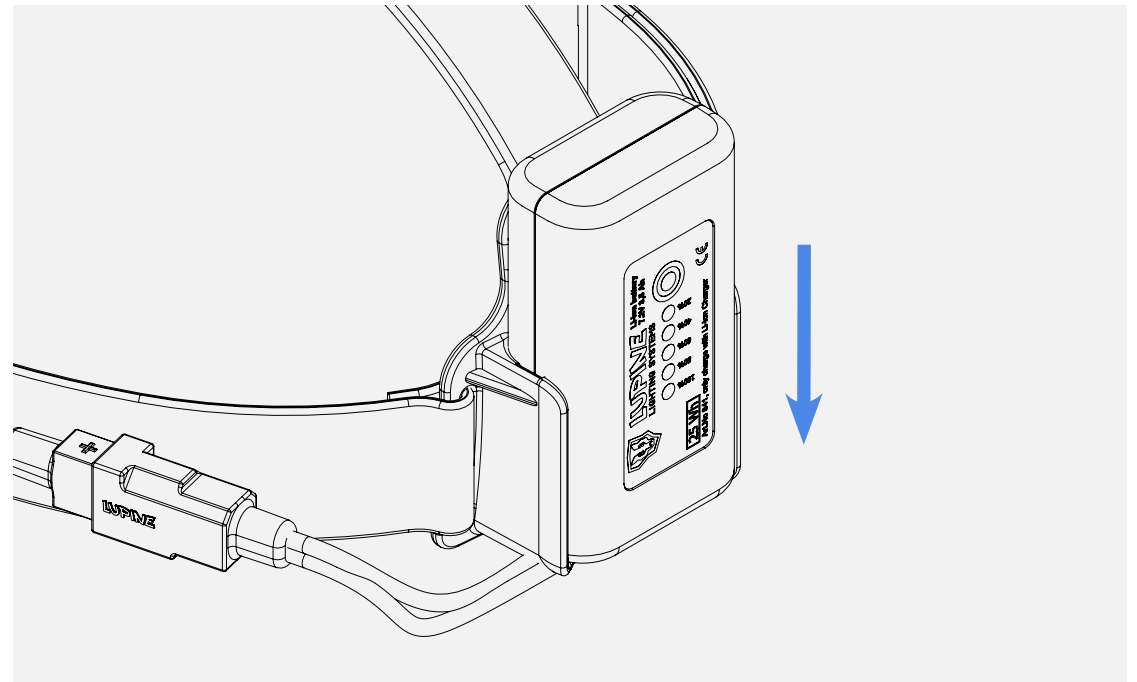
The Penta Pro features our FrontClick system for quick attachment to the headband. To do this, insert the lamp head's mount into the mounting plate on the band. Position it so that the long bar with the retaining screws is centered in the recesses. Then slide the lamp head downward towards the Lupine logo until it clicks into place.

To remove the lamp head, press the safety mechanism downward and slide the lamp head upwards. The two parts can then be easily separated.



4.4 ATTACHING THE BATTERY

The battery is also connected to the headband using the FastClick quick-mount system. Simply slide the battery pack into the holder with the cable facing down until it clicks.



4.5 OPERATING THE LIGHT

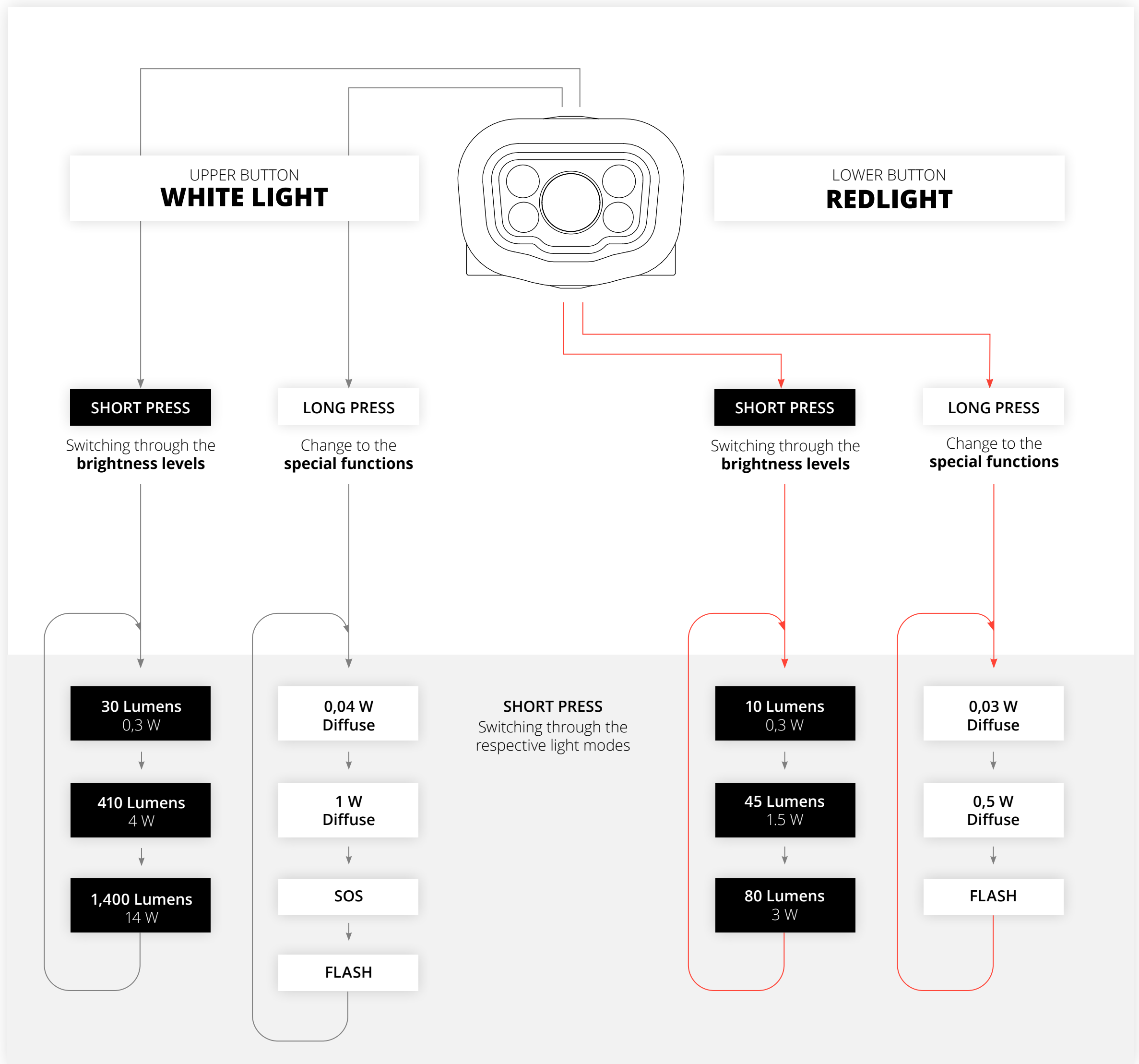
Switching on: To switch on the standard functions, briefly press the upper button for white light or the lower button for red light. The respective light levels can then be cycled through with another short press. Switch between white and red light by pressing the upper/lower button

Special functions: Activate special functions by holding the upper or lower button for about 2 seconds. In this mode, each further short press cycles through the light levels.

Switching off: If the lamp is on, it can be turned off by holding the respective button for 2 seconds (upper button for white light, lower button for red light).

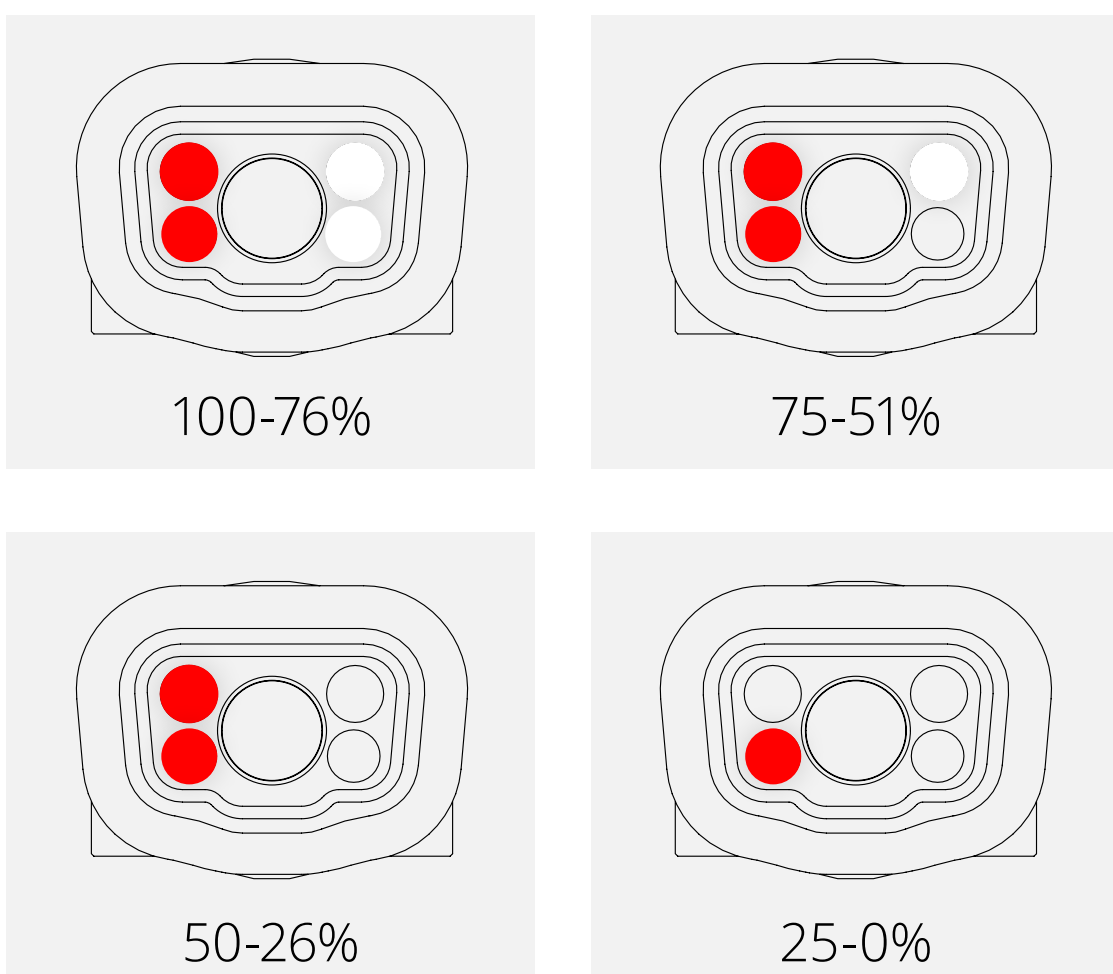
Button lock: The Penta Pro has a button lock that can be activated by holding both buttons simultaneously for 3 seconds in the off state. This is confirmed by the red diffuse LED blinking. Deactivate the button lock the same way. The white diffuse LED then blinks.

Operating Scheme



5. BATTERY CAPACITY AND WARNING

The battery capacity can be checked directly on the lamp. To do this, briefly press both the upper and lower buttons simultaneously. The four small LEDs around the main spot will light up briefly, indicating the charge in 25 percent increments.



SmartCore Battery: For the SmartCore version of the Penta Pro, the capacity can be read directly on the battery case.

Five red LEDs indicate the charge in 10 percent increments (solid = 20%, blinking = 10%). Additionally, an audible beep sounds for each LED.

Battery Warning: To prevent being left in the dark, the Penta Pro has a warning system that activates through the Penta lens system when the battery capacity is low:

- 1. Warning:** approx. 40% capacity → red LEDs blink 5 times
- 2. Warning:** approx. 25% capacity → red LEDs blink 7 times
- 3. Warning:** approx. 10% capacity → Main light flashes 10 times, lamp then switches off

Emergency reserve: Once the battery reaches only 10% remaining capacity, the lamp will switch off after the 3rd warning with 10 flashes. Pressing the main button afterwards activates the emergency reserve mode. This mode allows operation of the main light at the lowest level of 0.3 watts.

6. SENSORS

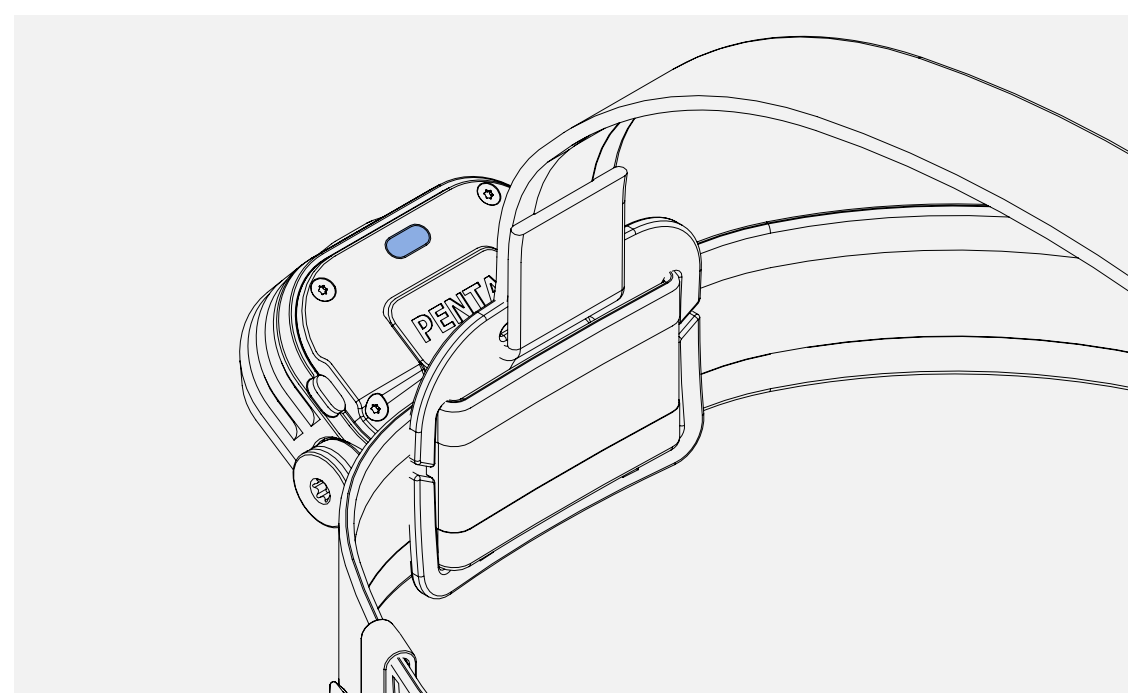
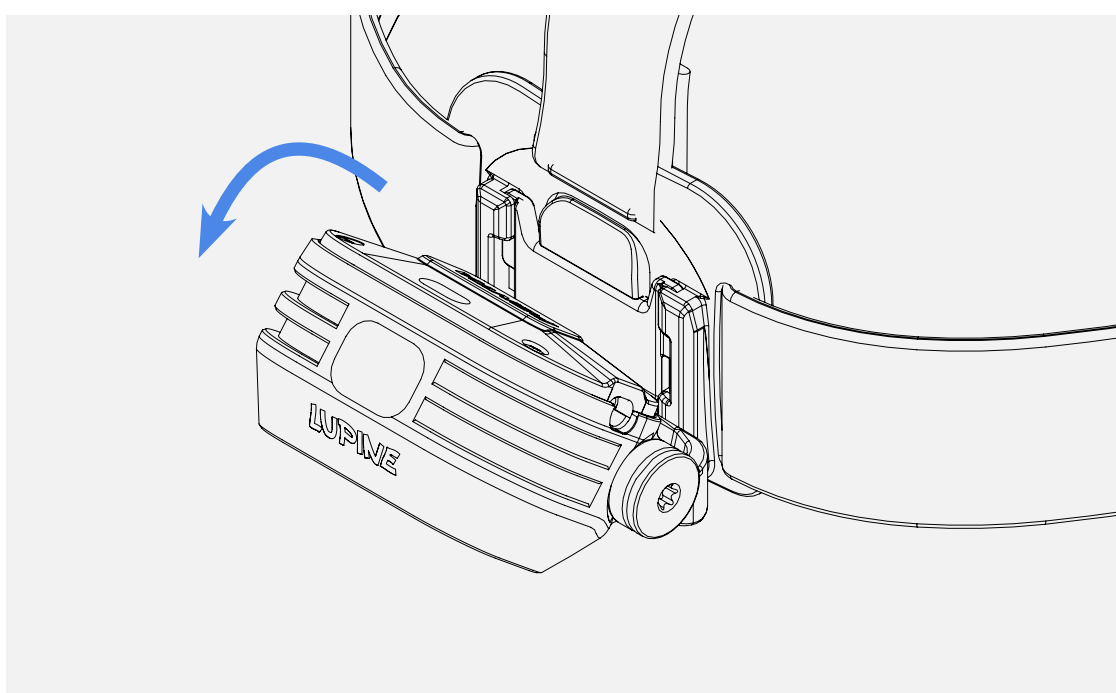
The Penta Pro is equipped with two sensors responsible for automatic functions. However, out of the box, only the tilt sensor is activated! The brightness sensor must be configured through the configuration scheme (see page 9).

Tilt sensor: In the brightest white light mode, when tilting the lamp head downwards, the light dims to enter a kind of reading mode. When tilted back up, the lamp returns to the previously selected brightness level.

Temporary deactivation of the tilt sensor: When the tilt sensor is active, a short press of the upper button can deactivate the function. It remains inactive until the next tilt of the lamp.

Brightness Sensor: The sensor measures ambient light and dynamically controls the brightness of the standard white modes based on the amount of light.

(ATTENTION: By default, this sensor is deactivated.)



7. RUNTIME

FUNCTION	BATTERY	
	3.1 Ah (HardCase)	3.5 Ah (SmartCore)
WHITE LIGHT		
0,3W	63 h	71 h
1W	20 h	22 h
3W	7 h	8 h
4W	5 h 30 min	6 h
6W	3 h 30 min	4 h
14W	1 h 30 min	1 h 45 min
RED LIGHT		
0,3W	63 h	71 h
1,5W	14 h	16 h
3W	7 h	8 h
SPECIAL FUNCTIONS		
0,5W	44 h	50 h
0,04W	440 h	500 h
0,03W	550 h	625 h

ATTENTION: The runtime depend, among other factors, on the ambient temperature.

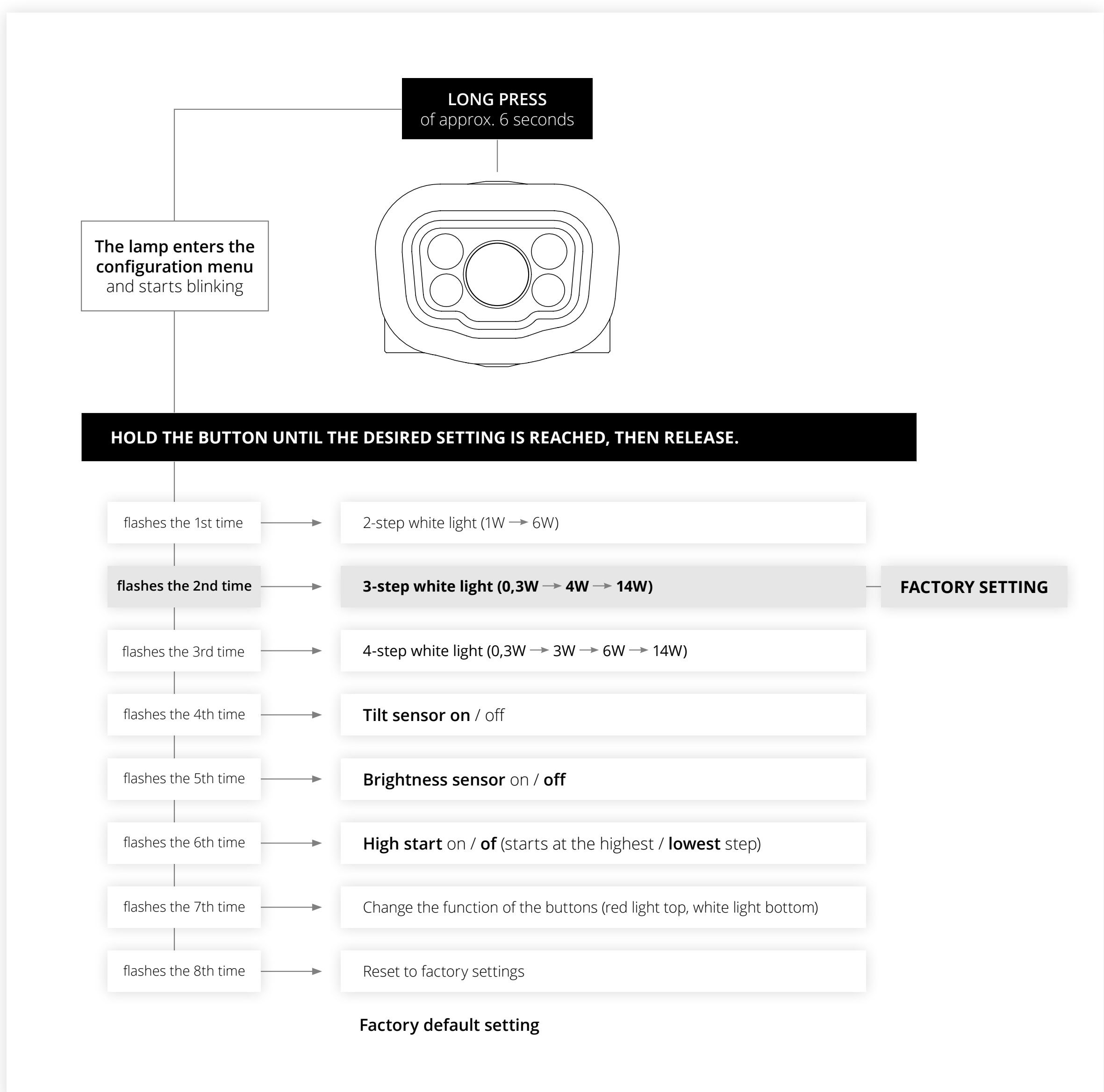
8. INDIVIDUAL CONFIGURATION

The Penta Pro is factory-configured to have three brightness levels for the main light. For individual customization, additional settings are available, allowing the lamp to be tailored to specific usage scenarios.

To start the individual configuration, press and hold the upper button for approximately 6 seconds. The lamp will begin to blink. Once the desired setting is reached, simply release the button. The configuration will then be automatically saved.

ATTENTION! To revert to the factory settings, release the button after the lamp blinks 8 times. This will restore the 3-level brightness mode.

CONFIGURATION SCHEME: The following settings can be selected



BY THE WAY!

You can find compatible accessories in our store:

<https://www.lupine-shop.com/en/Accessoires-by-Category/>

9. WARRANTY & SERVICE

Lupine Lighting Systems GmbH warrants the product to be substantially free from defects in material and workmanship under normal use for a period of two (2) years.

The warranty does not apply if the product has been altered, installed, operated, repaired or maintained other than in accordance with the instructions supplied by Lupine, or if it has been subjected to abnormal physical or electrical stress, misuse, negligence or accident. In addition, the warranty does not cover normal wear and tear. Lupine is not responsible for any direct or indirect consequences or damages resulting from the use of this product. In no event shall Lupine's liability exceed the amount paid for the product.

Lupine's liability under this warranty is limited to the repair or replacement of the product. This limited warranty applies only to the original purchaser.

If the product proves to be defective during the warranty period, please contact our service department at info@lupine.de or by telephone on +49 (0) 9181 509 490.

Please have the original proof of purchase ready for any questions. In addition, Lupine offers a special service to find an adequate solution for all customers even beyond the warranty period.

Lupine ensures that any repairs are carried out particularly quickly: Once the goods have been received, an immediate fault analysis and customer communication takes place and a corresponding repair is carried out so that the product is shipped again within 48 hours. Repairs are also possible for up to 10 years after purchase of the product thanks to the availability of spare parts.

Further questions about the product, operation and service are answered on our website: www.lupine.de

Our helpful FAQs can also be found there: <https://www.lupine.de/deu/service/faq/>

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