NITECORE ®
The All-Round Flashlight Expert

EH1/EH1S User Manual

Features

- Designed for high risk industries, including mining, underground1 and off-shore petroleum exploitation, petrochemical and chemical industries
- Intrinsically safe LED headlamps
- Explosion Group IIB, Operating Temp Class T5 (100°C)
- Featuring Advanced Temperature Regulation (ATR) technology to dynamically adjust output performance according to body temperature
- Utilizing a CREE XP-G2 S3 LED
- Powered by built-in 18650 battery/batteries for maximum output of 260 lumens
- USB magnetic charging cable for outputting 1000mA
- Intuitive user-interface with a button switch ensures easy one-handed operations
- Featuring 3 brightness levels and 2 special modes
- Featuring constant illumination/slow flashing red light
- Featuring power indicator and low battery alert
- Helmet mount included
- IP68 rating for dust and water resistance (3 meter submersible)
- 1.8 meter impact resistance

Accessories

Adapter, USB magnetic charging cable, adhesive mount

Technical Specifications

Features		Specifications	
Model		EH1	EH1S
Capacity		6.8Ah	3.4Ah
Voltage		3.6V	3.6V
Main LED Working Voltage		3.0V	3.0V
Brightness Levels	High	10h	5h
	Medium	40h	20h
	Low	120h	60h
Main LED Working Current	High	700mA	700mA
	Medium	230mA	230mA
	Low	60mA	60mA
Main LED Power	High	2.0W	2.0W
	Medium	0.69W	0.69W
	Low	0.17W	0.17W
Main LED Luminous Flux	High	260lm	260lm
	Medium	65lm	65lm
	Low	22lm	22lm
Initial Brightness (1m distance)	High	10500Lux	10500Lux
	Medium	2600Lux	2600Lux
	Low	880Lux	880Lux
Main LED Life Span		100000h	
Auxiliary Red LED Power		0.1W	
Auxiliary Red LED Life Span		40000h	
Short Circuit Protection Time		<320µS	
Battery Life Span (Recharges)		1200 times	
Charging Time		8h	4h
Dimensions		83mm × 70mm × 52mm	
Weight		191g(6.73oz)	151g (5.32oz)

Operating Instructions

To switch on: Press the button switch to turn the light on.
To switch off: Press the button switch three times to turn the light off.
NOTE: The EH1/EH1S headlamps cycle through 3 brightness levels before the light goes out.

Brightness Levels

With the light turned on, press the button switch repeatedly to reduce brightness from high, medium to low before the light is turned off.

Constant/Flashing Red Illumination

When the EH1/EH1S is in standby mode, press and hold the button for over 3s to activate its four auxiliary LEDs and enter constant illumination red light mode (3 lumens for 140 hours); In this mode, press the button again will set the red LEDs to flashing mode. To turn the light off, simply press the button again.

Special Modes (SOS/Location Beacon)

When the light is turned on, press the button for over 1s to enter SOS mode; In this mode, press the button again to enter Location Beacon mode. TO turn the light off, simply press the button again.

ATR Technology

The EH1/EH1S incorporates Advanced Temperature Regulation (ATR) technology to detect its operational temperature after working on high for 60 seconds. When the surface temperature exceeds 50°C, the EH1/EH1S will automatically lower its output in a gradual manner until the temperature decreases to under 50°C. When the temperature drops to a certain threshold, EH1/EH1S will gradually return to the selected brightness.

Power Tips

When the light is turned off, press and hold the button for more than 1 second to activate its auxiliary LEDs, indicating battery power levels:
(1) When 4 LEDs illuminate, battery power levels are above 90%;
(2) When 3 LEDs illuminate, battery power levels are around 60%;
(3) When 2 LEDs illuminate, battery power levels are around 40%;
(4) When 1 LED illuminates, battery power levels are below 20%.
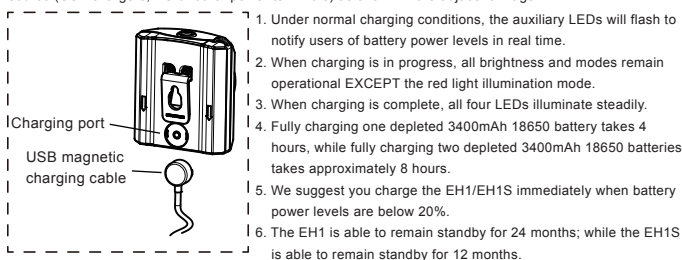NOTE: The LEDs will remain on for only 3 seconds in power indicating mode.

Low Battery Alert

When battery power levels are low, the four auxiliary LEDs will flash quickly to notify users. In this mode, pressing the button will turn off the LEDs and prevent them from flashing again. Reactivating the headlamp will activate the low battery alert functionality.

Charging Instructions

The EH1/EH1S are capable of charging the built-in 18650 Li-ion batteries with the included USB magnetic charging cable.The headlamp can be charged by a specified charging rack.
Connect the included charging cable to the charging port on the back of the headlamp and a power source (USB chargers, PC or other power terminals) as shown in the adjacent image:

Charging port

USB magnetic charging cable

1. Under normal charging conditions, the auxiliary LEDs will flash to notify users of battery power levels in real time.
2. When charging is in progress, all brightness and modes remain operational EXCEPT the red light illumination mode.
3. When charging is complete, all four LEDs illuminate steadily.
4. Fully charging one depleted 3400mAh 18650 battery takes 4 hours, while fully charging two depleted 3400mAh 18650 batteries takes approximately 8 hours.
5. We suggest you charge the EH1/EH1S immediately when battery power levels are below 20%.
6. The EH1 is able to remain standby for 24 months; while the EH1S is able to remain standby for 12 months.

Problems & Solutions

Problem Description	Problem Diagnosis	Solution
The headlamp remains turned off when pressing the button.	Battery power is used up.	Charge the headlamp.
The auxiliary LEDs remain turned off during charging.	The charging cable is not connected correctly.	Connect the charging cable as shown above.
The auxiliary LEDs remain turned off during charging.	The charging management system is not operational due to inadequate battery voltage (2.5V).	Simply wait for 5 more minutes until battery voltage returns to 2.9V.

Precautions

1. Avoid direct eye exposure.
2. Do not charge the headlamp in combustible environment.
3. The operating temperature limit of the headlamp is between -20℃ and +40℃.
4. The headlamp is a maintenance-free product. Do not disassemble the headlamp under any circumstances, especially in combustible environment, otherwise it may compromise its explosion-proof capability.
5. The headlamp is half charged before delivery, please fully charge it before using.
6. Please charge the headlamp with the included cable or a specified charging rack.
7. If the headlamp needs to be stored for a long period of time, every two months the following maintenance procedures need to be performed on it: Fully charged→Fully discharged→Charged for 2 hours.
8. Please clean the charging port timely to ensure it is operational with the USB charging cable.
9. Non-functional headlamps should be recycled. Do not dispose of this type of lamp as it might cause environmental damage.

Warranty Details

Our authorized dealers and distributors are responsible for warranty service. Should any problem covered under warranty occurs, customers can contact their dealers or distributors in regards to their warranty claims, as long as the product was purchased from an authorized dealer or distributor. NITECORE's Warranty is provided only for products purchased from an authorized source. This applies to all NITECORE products.

A DOA/defective EH headlamp can be exchanged for a replacement through a local distributor/dealer within the 15 days of purchase. After 15 days, a defective / malfunctioning EH headlamp can be repaired free of charge for a period of 12 months (1 year) from the date of purchase.
Beyond 12 months (1 year), a limited warranty applies, covering the cost of labor and maintenance, but not the cost of accessories or replacement parts.
The warranty is nullified if the product(s) is/are broken down, reconstructed and/or modified by unauthorized parties.
For the latest information on NITECORE® products and services, please contact a local NITECORE® distributor or send an email to service@nitecore.com.

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