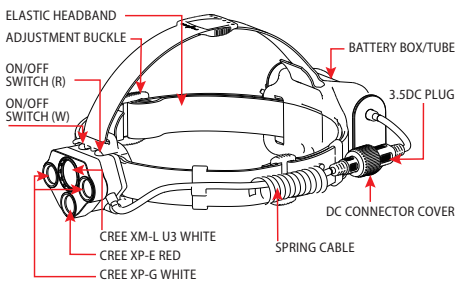# FEREI HL54 Ⅱ

Ultra Light weight LED Headlamp

PRODUCT FEATURES

1 High power LED headlamps, compact size, rechargeable. **2** Suits for outdoor activities and sports such as exploring, camping, rock climbing, cross-country running, etc. **3** Aircraft grade hard anodized aluminum alloy. **4** High Quality Aluminum reflector with optimized bi-polar beam. **5** Dual button switches to control White or Red light brightness modes with on/off, prevents accidental touch during stroage and transportation. **6** Elastic bungee headband capable of length adjustment, providing best fit and comfort for user. **7** Overheat regulation Driver Circuit to Controlled LED work temperature below 60˚C for headlamp stable work and long lifespan. **8** The driver module with low battery warning , When battery level gets below warning value, the headlamp goes into warning mode (10 times blinking within 8 seconds). After this warning , the headlamp work continues for 20-30 minutes until torch shuts completely off. This to give the user some time to change battery.**9** Wrong polarity of inserted battery protection **10** IPX4 weatherproof ensures normal use in rainy, foggy and humid weather. **11** White light with 1800 lumens output on MAX . Spot and Flood beam available .**12** 4 x LEDs producing dual color beam, four kinds operation modes available. **a)** Spot light (1 LED, white beam) and flood light (2 LEDs, white beam) togther over 1800lumens for both proximity and distance lighting. Three brightness modes adjustable: max – mid – min. **b)** Spot light (1 LED, white beam) for distance lighting conveniently. Three brightness modes adjustable: max – mid – min.**c)** Flood light (2 LEDs, white beam) for proximity lighting. Three brightness modes adjustable: max – mid – min. **d)** Red beam (1 LED) for signal, warning and rescuing purpose. Max and flashing available.

PRODUCT SCHEMATIC

*name of parts *picture not drawn to scale

ELASTIC HEADBAND
ADJUSTMENT BUCKLE
ON/OFF SWITCH (R)
ON/OFF SWITCH (W)
BATTERY BOX/TUBE
3.5DC PLUG
DC CONNECTOR COVER
CREE XM-L U3 WHITE
CREE XP-E RED
SPRING CABLE
CREE XP-G WHITE

USAGE AND OPERATION

1. HL54II headlamp is used with 2 x 18650 lithium batteries in casing BA2884. Please fully charge up the batteries before first time operation.
To install: Open batteries casing BA2884, put four 18650 batteries into the casing with +/- terminals matching the marks, then close the casing.
To charge the batteries: Connect the 5.5DC end of Ferei AC008 adapter/charger into BA2884, battery casing to get batteries charged. When in a charging state, the LED indicator on the adapter will illuminate red and when charging is complete the LED indicator will illuminate green.
2. Lighting modes: ①Spot+flood light simultaneously(Three white LED beam). ②Spot light only (middle one white LED beam).③Flood light only (side two white LED beam).④Red continued lighting (bottom side one red LED beam).⑤Red SOS blinking.

3. Customized brightness settings: Customized brightness setting from Max-->Med--> Min, 3 levels brightness available in ①②③ lighting modes.
4.Brightness memory: At any lighting modes , the customized brightness or modes could be memorized if turn on to staying for over 3 seconds.
5.To operate: A) Press the "W" mark on/off button switch to turn on/off white beam modes. **B)** Press the "R" mark on/off button switch to turn on/off red beam modes . **C)** Press "W" (White beam) button switch rapidly or continuously to active or convert between 1) 2) 3) white lighting modes . Under 1) or 2) or 3) lighting modes , press and hold on "W" button switch , these are three modes can be adjustable it's brightness : MAX – MID –MIN . When a desired brightness appears, just release the switch. To turn off the headlamp, just press the switch again after staying at this customized brightness for over 3 seconds; But if less than 2 seconds, press the switch will be to get conversion between MAX –MED-MIN lighting modes. **D)** Press " R" (Red beam) button switch and hold on switch to get red beam continued lighting and SOS (red beam blinking).
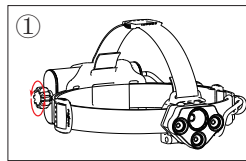**6.Brightness and mode memory:** In either any lighting mode or brightness , the lighting mode or brightness could be memorized if turn on to staying for over 3 seconds. Next time you turn on each mode again, the brightness or mode starts from the memorized lighting mode or brightness. If staying less than 2 seconds at any level brightness or mode, press the switch to get conversion to next brightness level.
7.Low battery warning: When the battery capacity gets very low (approx. 10%), the headlamp will emit 10 successive blinks in 8 seconds. This is a reminder that the battery should be recharged or replaced
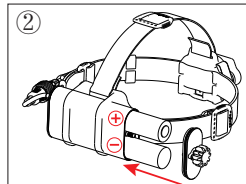**Note:** over discharging lithium batteries might cause the battery body to swell up and produce harmful gases. In order to avoid this, our product is equipped with low voltage circuit break to switch off the headlamp when voltage is too low.
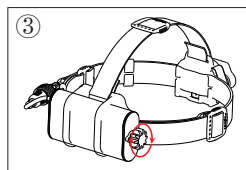
BATTERY INSTALLATION

1. Twist the screw bolt of aluminium battery box to take down the cover .please pay attention do not to lose the O-ring which is for water proofing the battery box .
2. Put 2 pieces 18650 batteries into the battery box with correct polarity. (Note : Please pay ttention to the positive "+" and negative "-" poles outside of battery box tube and battery).
3. Tighten the screw bolt to make the battery cover with correct polarity on to the battery box .

① ② ③

TEMPERATURE CONTROL AND RUNTIME INSTRUCIONS

The headlamp has the overheat regulation Driver Circuit to Controlled LED work temperature for stable work and long lifespan. When headlamp temperature is exceeds 60˚C, the overheat protection regulation is activate, the brightness reduce to lower to cool down the light , the runtime will be longer. But if the headlamp to using at running or cool and cold condition, it's brightness increases to setting level, the runtime will be shorter .

MAINTENANCE

1. Cleaning the glass lenses regularly with a soft cloth to ensure the best light transmittance. (Do not use any corrosive detergent). 2. Please keep the battery box cleaning, free of dust or debris. 3. Please take out the batteries if the headlamp is out of service for long period of time.

CAUTION

To avoid unnecessary incidents, please take notice of the following precaution points:
1 Do not use damaged batteries or batteries suspected to be damaged.
2 Do not used batteries with damaged +/- terminals.
3 Please use certified 18650 lithium batteries.
4 Please avoid storing batteries inside headlamp for over 30 days.
5 Please do not disassemble any parts of headlamp nor attempt to"fix" a malfunctioned headlamd.
6 Before under-water or diving use , must check the O-ring rubber still inside of battery casing , and also must make sure the connector and battery pack cover is tighten .lease do not disassemble any parts of headlamp nor attempt to "fix" a malfunctioned headlamp.

WARNINGS

1 Do NOT allow children to use LED light unless under the supervision of an andult.
2 Do NOT look directly into the LED light.
3 Please avoid placing the lens directly on top of a surface when the light is on.
4 Slight warming is normal when the light is in use.
5 You must not disassemble the headlamp, especially the sealed parts.
6 Please wipe the headlamp dry immediately after it is placed in water or put into contact with corrosive matters.
7 When the headlamp is not used for long period ,full charging batteries every 3 months and discharge 20 minutes before storage.
8 FEREI has final rights to explain the instructions of the user manual.

Patented product, counterfeiting not allowed

PRODUCT SPECIFICATIONS - HL54 Ⅱ						
RANGE	WATERPROOF RATING	MAXIMUM INTENSITY	DROP PROOF	DIMENSION	TYPE OF BATTERY	WEIGHT
162 METERS	IPX4	6570 CD	2 METER	49 x 46 x 29.5 MM	2 x 18650	166G (WITHOUT BATTERY)

LED	SPOT+FLOOD(3 x LED WHITE)		SPOT(1 x LED WHITE)		FLOOD(2 x LED WHITE)		RED LED	
ANSI/FSC	MAX	CUSTOMIZED SETTING	MAX	CUSTOMIZED SETTING	MAX	CUSTOMIZED SETTING	LIGHTING	SOS
PERCENTAGE BRIGHTNESS	100%	10%	50%	100%	10%	50%	100%	10%	50%	100%	100%
LUMINOUS FLUX (LUMEN)	1800	250	900	1000	100	500	800	85	400	—	—
RUNTIME (H) - TESTED IN 28°C INDOOR ON TABLE	4	7	5	5	9	6.5	5	26	6.5	35	40
NOTE: THE ABOVE RUNTIME FLGURE WAS INDOOR STATIC TESTED AT 28°C USING 2 × 18650 LITHIUM BATTERY.											