

FEATURES

- 1 Extra Light weight rechargeable LED headlamp & bicycle light.
- 2 TIR optics with flood beam .
- 3 DC plug spring cable design for three possibility to use : Battery holder body rear to on head without bag , or move the body in bag , and Battery holder body front on head without DC plug cable.
- 4 Whole headlamp are strong and comfortable.
- 5 Cool or neutral white LED version available.
- 6 IPX4 Water resistant, 1 Meters waterproof.
- 7 Use 1 x CREE XHP 50 LED, Light output of LED is 2300 lumens.
- 8 Selectable brightness levels from MIN to MAX and Emergency mode (Moonlight).
- 9 Smart components and special auto designed provides multiple brightness settings, prevents overheat (active temperature control), over discharge and wrong polarity of inserted battery protection.
- 10 Blinking 10 times to warning indication shows the battery level around 20% capacity.
- 11 Rubber sleeve holder and comfortable head-band for reliable fixation.
- 12 Aircraft grade hard anodized aluminum alloy for lamp & battery holder.
- 13 Multi-Power source "5 in 1" is for different runtime activities : 1 x 18650 holder / 2 x 18650 holder (BA2842) / FEREI power pack BP2836B, BP4836B and BP6836B.

GENERAL USAGE

- 1 The light runs 1 piece 18650 with PCB Li-Ion battery or other 3.7V to 4.2V power bank / batteries pack.
- 2 Please fully recharge the battery before use.
- 3 Brightness level lighting modes:
 - ① Minimum
 - ② Medium
 - ③ Maximum
 - ④ Emergency mode: 5lm (Moonlight)
- 4 Customized brightness settings: customized brightness setting from LOW to MAX: 25lm / 50lm / 85lm / 150lm / 250lm / 450lm / 850lm / 1500lm, 8 levels brightness available in all modes except Emergency.
- 5 Operation: to turn on the light , press button switch rapidly or continuously to active or convert between lighting modes ①②③. With headlamp already on, press and hold on/off button switch to cycle through the customized brightness settings- from MIN to MAX. When a desired brightness appears, simply 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 lighting modes ①②③. At the light off , Longer time press the button switch (over 2 seconds), the emergency mode turn on. To turn off the light, just press the button switch again.
- 6 Brightness memory: In either any lighting mode, the brightness could be memorized if staying for over 3 seconds. Next time you turn on the light again, the brightness starts from the memorized lighting mode/ brightness. If staying less than 2 seconds at any level brightness or mode, press the

DIAGRAM

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- switch to get conversion to next brightness level.
- 7 Low battery warning: When the battery capacity gets very low (approx. 20%), the HL70 will emit 10 successive blinks in 8 seconds. This is a reminder that the battery should be recharged or replaced.
- 8 Reverse polarity protection: When a battery is inserted incorrectly, a special protection circuit will activate and automatically prevent operation to ensure the safety of the HL70 and its user.
- 9 Over discharge prevention: the light will switch off automatically in order to prevent damages to lithium battery and/or light done by over discharging (complete depletion of battery capacity).
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 light when voltage is too low.

INSTALL / REMOVE AND RECHARGE THE BATTERY



- 1 Unscrew the battery tube from the head of HL70 light.
- 2 Prepare the DC jack tube connector.
- 3 Put the battery with the correct polarity inside of battery tube.
- 4 Screw the battery tube into the DC jack tube connector and tighten them together to be a battery charger holder.
- 5 Connect the DC plug of AC or DC charger in to the battery holder to recharge the battery .

MOVE THE BATTERY & HOLDER TO BACK OF HEAD



- 6 After done the 1 to 4 procedure, screw the DC spring cable connector to head of HL70 light.
- 7 Install the silicon sleeve for battery holder on the headband of HL70 light .
8. Mount the battery charger holder in to the silicon sleeve
9. Connect the DC plug of spring cable with DC jack of battery holder, and then clockwise to tighten the fixed DC connector, as shown in the image above.
10. Fix the spring cable to the hook on headband .

TOP HEADBAND MOUNT (OPTION)



11. Use the shorter headband (about 430mm) pass through each top hole of two silicon holder (front and back) .
12. Make the back side of short headband each adjustment buckle.

REMOVE THE BATTERY HOLDER TO BAG OR USE HIGH CAPACITY BATTERY PACK FOR LONGER RUNTIME



- Move the 1 x 18650 battery holder to bag .
- Connect BA2842 battery casing or it's silicon sleeve to use 2 x 18650 (OPTION).
- Use DC spring caring cable to connect different capacity battery pack BP2836B, BP4836B and BP6836B for longer runtime (OPTION).

MOUNTING THE HL70 LIGHT ON BICYCLES AS THE FRONT LIGHT



- Unscrew Quick-Release Clamp from the CNT007 Adapter to using a 2-mm L-shaped.
- Using a 2 mm L-shaped to fasten the CNT007 Adapter on the body of HL70 Light .
- Mount the HL70 light to the HQ32 Multifunctional Clamp using a 4-mm L-shaped hex wrench and screws (M5 x 16 mm).

HELMET LIGHT MOUNTING



- After done the 1 to 2 procedures, Separate the screw from HM70 helmet mount.
- Attach the HL70 light to helmet mount
- Fasten the light and the helmet mount together to using the screw.
- Choose the suitable location to stick the light on helmet.

INTELLIGENT TEMPERATURE CONTROL INSTRUCTIONS

This product is designed with a temperature control circuit.

The LED is a heating device that is sensitive to temperatures, especially high levels of power and brightness.

High temperatures will easily damage or shorten the life of the LED.

Ferei designs its products with an intelligent temperature-control circuit. It measures the temperature with in the LED filament. As the structure of the lamp differs, the thermal conductivity of the entire lamp is not the same. In general, the constant surface temperature of the lamp is 50 C to 60 C .

When it exceeds its programmed temperature, it will automatically reduce its power to cool down, and the brightness decreases by small steps.

After cooling-down (provided that battery voltage is sufficient) the power with brightness increases again. The process of improving its brightness is relatively discrete and will not produce a flashing effect.

This stepping goes cyclically to maintain the user's safety and the light's functionality. In conditions of good air-cooling the lamp delivers light without stepping down even in high levels brightness mode.

There are no preset timers for stepping, but real-time active temperature measurements, so the actual runtime of the lamp base on active temperature control to faster or slower battery discharge, may be slightly longer or shorter runtime than the lamp of data provided.

PRODUCT SPECIFICATIONS										
MODEL NAME	HL70									
LED	CREE XHP50B(COOL WHITE)									
ANSI/FSC	MAX	CUSTOMIZED SETTING							EMERGENCY MODE	
LIGHT PER	100%	1.67%	3.3%	5.67%	10%	16.7%	30%	56.7%	0.33%	
OUTPUT(LM)	1500	25	50	85	150	250	450	850	5	
RUNTIME(IN DOOR STATIC TESTING AT 28° C AT MAX OUTPUT)	1.2	52	24	16.8	12	7.8	3.5	2	294(H)	
RANGE (M)	OVER 104 METERS									
MAXIMUM INTENSITY	2704 CD									
LED	CREE XHP50B (NEUTRAL WHITE)									
ANSI/FSC	MAX	CUSTOMIZED SETTING							EMERGENCY MODE	
LIGHT PER	100%	1.67%	3.3%	5.67%	10%	16.7%	30%	56.7%	0.33%	
OUTPUT (LM)	1500	23.4	42	79.4	140	234	420	793	5	
RUNTIME(IN DOOR SAITIC T ESTING AT 28° C AT MAX OUTPUT)	1.2	52	24	16.8	12	7.8	3.5	2	294(H)	
RANGE (M)	OVER 101 METERS									
MAXIMUM INTENSITY	2704 CD									
WATERPROOF GRADE	IPX4									
IMPACT RESISTANCE	1M									
DIMEN SION	30 MM (HEAD DIAMETER)									
BATTERY	1 x 1865 0/ 2 x 18 650 or BP28/BP4836B/ BP6836B BATTERY PACK									
WEIGHT	44G (Nude)									
NOTE: THE ABOVE PARAMETERS WERE TESTED BY USING 1 X 3400MAH HIGH POWER CAPACITY BATTERY.										

WARM TIPS

In order to avoid accidents, please pay attention to the following tips:

- Never use damaged, discolored or leaking batteries.
- Never use batteries with a damaged sleeve or foil covering.
- Always use 18650 battery with safety certificates.
- If the light gets unusually hot when in use, turn it off and check battery appearance.
- Never store the battery into the battery holder.
- Recharging is finished when the LED indicator turns to green.
- The battery remains at a normal temperature during recharging. If it gets unusual hot, stop recharging and take the battery out.
- Do not disassemble the charger kit by yourself if the battery couldn't be recharged.
- The battery can be used at any time once being recharged. If it is left unused for long periods, it should be recharged for 4 hours every three months. After being charged they should be slightly discharged for 10 -20 minutes before storage.
- Be sure to always recharge the battery in a safe place and do not leave unattended while charging.

MAINTENANCE

- Wipe the glass lens with a soft cloth at regular intervals to ensure maximum light transmittance (avoid using corrosive detergents).
- Ensure the cable plug and inside of the battery box

remain free of dirt and debris.

- Unplug the cable from the battery box when unused for extended periods.

WARNING

- It is a lighting tool, not a toy. Keep it away from children.
- Should not be aimed directly at the eyes of humans or animals.
- Do not place the light face / lens down when turned on.
- The surface of the (ashlight may become hot during extended use.
- Do not dismantle or disassemble any structural parts of the light, especially the sea lparts.
- Dry the light surface with soft cloth immediately after exposure to water or any corrosive substance.
- Always remove batteries during long periods of inactivity (more than 30 days).
- Ferei reserves the right of interpretation of this manual.

Patented product, counterfeiting not allowed.

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