





### FEATURES

- 1 High Intensity LED headlamp.
- 2 Extra spot beam.
- 3 Cool or neutral white LED version available.
- 4 IPX4 Water resistant.
- 5 1000 lumens for 4 hours.
- 6 8 Selectable brightness levels from 10% to 80%.
- 7 4 selectable blinking modes: police blinking, slow blinking, quick blinking, and SOS.
- 8 Smart IC motherboard provides multiple brightness settings ,and prevents overheat, over discharge or damages caused by polar reversing.
- 9 The light will emit 10 successive blinks in 8 seconds when Battery level indicating around 20% capacity.
- 10 Elastic bungee headband capable of length adjustment, providing best fit and comfort for user.
- 11 Optional Diffuser and USB cable charger available.
- 12 Optional BP2836B, BP4836B and BP6836B for longest runtime each 9 hours, 18 hours and 27 hours on High.

### GENERAL USAGE

- 1 Briefly press the rubber switch to turn the HL20II on/off.
- 2 The HL20II provides three lighting options:
  - **Minimum brightness:** 10% output.
  - **Custom brightness:** eight selectable modes ranging from 10% to 80% output.
  - **Maximum brightness.**
- 3 **Strobe / SOS:** police strobe, slow strobe, rapid strobe and SOS.
- 4 **Operating Instruction**
  - To turn the HL20II on, briefly press the rubber switch. The default setting is maximum brightness (100% output).
  - To access custom brightness mode: with the HL20II turned on (in either max or custom mode), hold the switch down for more than 2 seconds and the HL20II will cycle through 8 levels of output. When a desired output is displayed simply release the button to set the brightness.
  - The HL20II has 3 hidden strobe modes and 1 SOS mode. To access these modes simply hold down the power button for 2 seconds with the unit turned off and release. To cycle to the next strobe / SOS mode once again hold for 2 seconds and release. To exit strobe / SOS mode simply press the switch once (turns the HL20II off). The brightness level of strobe / SOS mode is determined by the brightness set in custom mode.
- 5 **Low battery warning:** When the battery capacity gets very low (approx. 20%), the HL20II will emit 10 successive blinks in 8 seconds. This is a reminder that the battery should be recharged or replaced.
- 6 **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 HL20II and its user.
- 7 The HL20II is also designed with intelligent over-discharge detection. If battery voltage reaches a critical lower limit, the HL20II will automatically turn off, at which time the battery should be recharged as soon as possible. Over-discharge of 18650 cells can cause irreversible damage to the battery and in extreme cases, cause the battery to inflate and / or emit a harmful gas. It is for this reason that the HL20II is designed to operate only with 18650 batteries that are above the lowest acceptable voltage limit.

### INSTALL / REMOVE AND RECHARGE THE BATTERY

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- 1 Unscrew the flat cap of battery holder.
  - 2 Put the battery with the correct polarity inside of battery holder.
  - 3 Tighten the flat cap on the screw of battery holder.
  - 4 Connect the DC plug of AC or DC Charger with the DC jack of battery holder to recharge the battery.

### INSTALL AND CONNECT THE BATTERY HOLDER

\* PHOTOS ARE FOR REFERENCE ONLY, PRODUCTS IN KIND PREVAIL!

#### Installation:

Put the 18650 battery holder in to the silicon sleeve as shown in the image below.



Connect the DC plug with DC jack of battery holder, and then clockwise to tighten the fixed DC connector as shown in the image below.



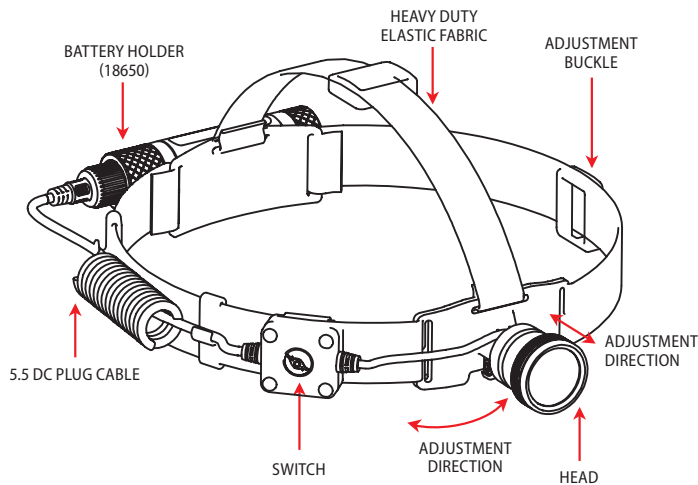
### INTELLIGENT TEMPERATURE CONTROL INSTRUCTIONS

The headlight is designed with the Intelligent temperature control system. As we know, LED is a component which can make heat and is sensitive to the temperature, it will be damaged or its working life will be shortened by the overheat temperature, especially the powerful and brightness LED. So the Intelligent temperature control system works when the flashlight's designation and structure cannot realize the heat-radiation temperature from the high brightness LED lighting. The system controls the temperature of the LED lamp wick, obviously, the flashlight gets different Thermal Conductivity with different structure, and generally speaking, the surface temperature of the flashlight constant between 50°C to 60°C, when the flashlight runs heat, the Intelligent temperature control function will help to reduce the power to cool down the lamp wick, the brightness of the light will corresponding fell and get lower. And in comparison outdoor using with the indoor using, outdoor area using will get wind to cool it down and heat-radiation is better, the LED will crank up the power and the lights become brighter, and the process of ascension brightness will smooth and slow without flashes.

At the same time, the intelligent temperature control system will lead the run time get longer (may be the standard of twice to five times). Particularly, the run time will depend on the temperature, running speed even the wind strength, so the actually run time will be a little different according to the environment of the flashlight using.

### DIAGRAM

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### 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 batteries 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 flashlight may become hot during extended use.
- Do not dismantle or disassemble any structural parts of the light, especially the seal parts.
- 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.

### HL20II - PRODUCT SPECIFICATIONS

LED		CREE XP-L HI (COOL WHITE)											
ANSI/FSC	MAX	CUSTOMIZED SETTING								POLICE STROBE	SLOW STROBE	FAST STROBE	SOS
LIGHT PER	100%	10%	20%	30%	40%	50%	60%	70%	80%	USER-DEFINED			
OUTPUT (LM)	1000	100	200	300	400	500	600	700	800	USER-DEFINED			
RUNTIME (INDOOR STATIC TESTING AT 28°C MAX OUTPUT)	4	40	20	13	10	8.6	6.7	5.8	5	>10			
RANGE (M)	OVER 305 METERS												
MAXIMUM INTENSITY	23256 CD												
LED		CREE XP-L HI (NEUTRAL WHITE)											
ANSI/FSC	MAX	CUSTOMIZED SETTING								POLICE STROBE	SLOW STROBE	FAST STROBE	SOS
LIGHT PER	100%	10%	20%	30%	40%	50%	60%	70%	80%	USER-DEFINED			
OUTPUT (LM)	940	94	188	282	376	470	564	658	752	USER-DEFINED			
RUNTIME (INDOOR STATIC TESTING AT 28°C MAX OUTPUT)	4	40	20	13	10	8.0	6.7	5.7	5	>10			
RANGE (M)	OVER 208 METERS												
MAXIMUM INTENSITY	10816 CD												
WATERPROOF RATING	IPX4												
ANTI-DROP	1M												
DIMENSION	30 MM (HEAD DIAMETER)												
BATTERY	1 X 18650 BATTERY												
WEIGHT	140 G (EXCLUDING BATTERY)												

NOTE: THE ABOVE PARAMETERS ARE TESTED BY USING 1 PCS 3400 MAH 18650 LI-ION BATTERY

Patented product, counterfeiting not allowed.

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