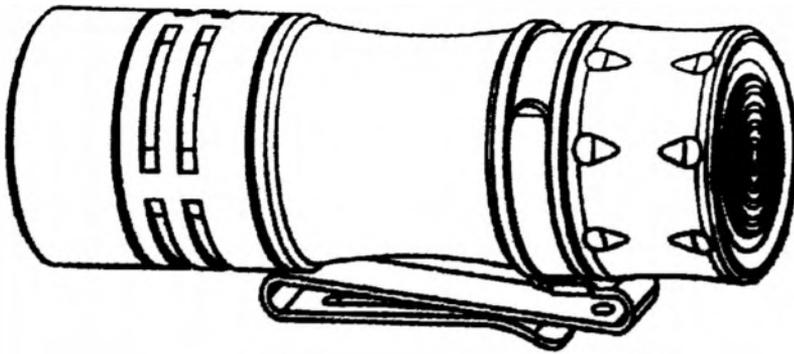
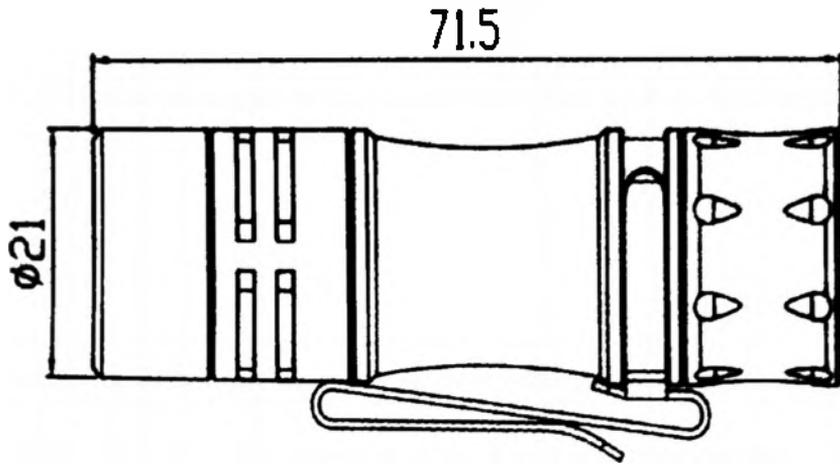


# Wurkkos

## TS10 user manual



Thank you for purchasing Wurkkos products.

Contact us if you need assistance.

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The **TS10** is a powerful Mini EDC flashlight. It uses 3 pieces main LEDs and 3 peices single color Aux LEDs to provide ,with Anduril 2.0 and powered by one 14500 battery. It will be your reliable partner for every day use and with fun.

## ANSI/NEMA FL1 Chart

(Advance UI)								
Modes	H8 (1400lm)	H7 (900lm)	H6 (580lm)	H5 (300lm)	H4 (130lm)	H3 (50lm)	H2 (10lm)	H1 (1lm)
Runtime	1h14min	1.5h	1.5h	1.5h	2h43min	6h43min		
Beam distance(m)	130	100	80	55	40	25	12	4.5
Intensity (cd)	4150	2525	1675	800	400	160	45	5
Impact Resistance	1 meter/3.28 feet							
Water Resistance	IPX8							
Note	The above mentioned parameters are based on tests according to international flashlight testing standards (ANSI/NEMA FL1) in our laboratory . Results may vary with different batteries or under different environmental conditions.							

## Specifications

Emitter: 3 pieces 90 CRI CSP LEDs and 3 pieces single color aux LEDs

Battery options: 1x 14500 Li-Ion battery

Operating voltage: 3.0V - 4.2V (14500 battery)

Dimension: 71.5 mm (length) × 21mm (head diameter)

Weight: 32 ± 1 grams (without battery)

Anduril2 User Interface

flashlight body: Aerospace grade 6061 grade aluminum alloy, CNC manufactured to hard-anodized to military grade specification type III, anti-abrasive finish to get solid built body, anti-crash geometry and better heat exchange.

Automatic Stepdown: Turbo mode steps down to High mode automatically to prevent overheating.

Electronic reverse polarity protection from improper battery installation

Advanced Temperature Regulation (ATR) technology: As the temperature rises, TS10 is programmed to automatically step down and step up the brightness to prevent overheating.

Battery Type	Dimension & Quantity	Nominal Voltage	Compatibility
Rechargeable lithium-ion battery	14500 x 1	3.7 V	Yes
Rechargeable NiMH battery	AA x 1	1.2 V	NO
Disposable alkaline battery	AA x 1	1.5 V	NO

## Battery Specification

# Operation Instructions

## Quick Start

After putting a battery in the light and tightening the parts together, the light should quickly blink once to confirm it has power and is now operational. After that, basic usage is simple:

Click to turn the light on or another click to turn it off.

- Hold the button to change brightness.
- Release and hold again to change brightness the other way.

That is all the user needs to know for basic use, but there are many more modes and features available for people who want more.

Before reading the rest of this manual, it is recommended that users look at the Anduril UI diagram(s), which should be provided along with the flashlight.

## Button presses

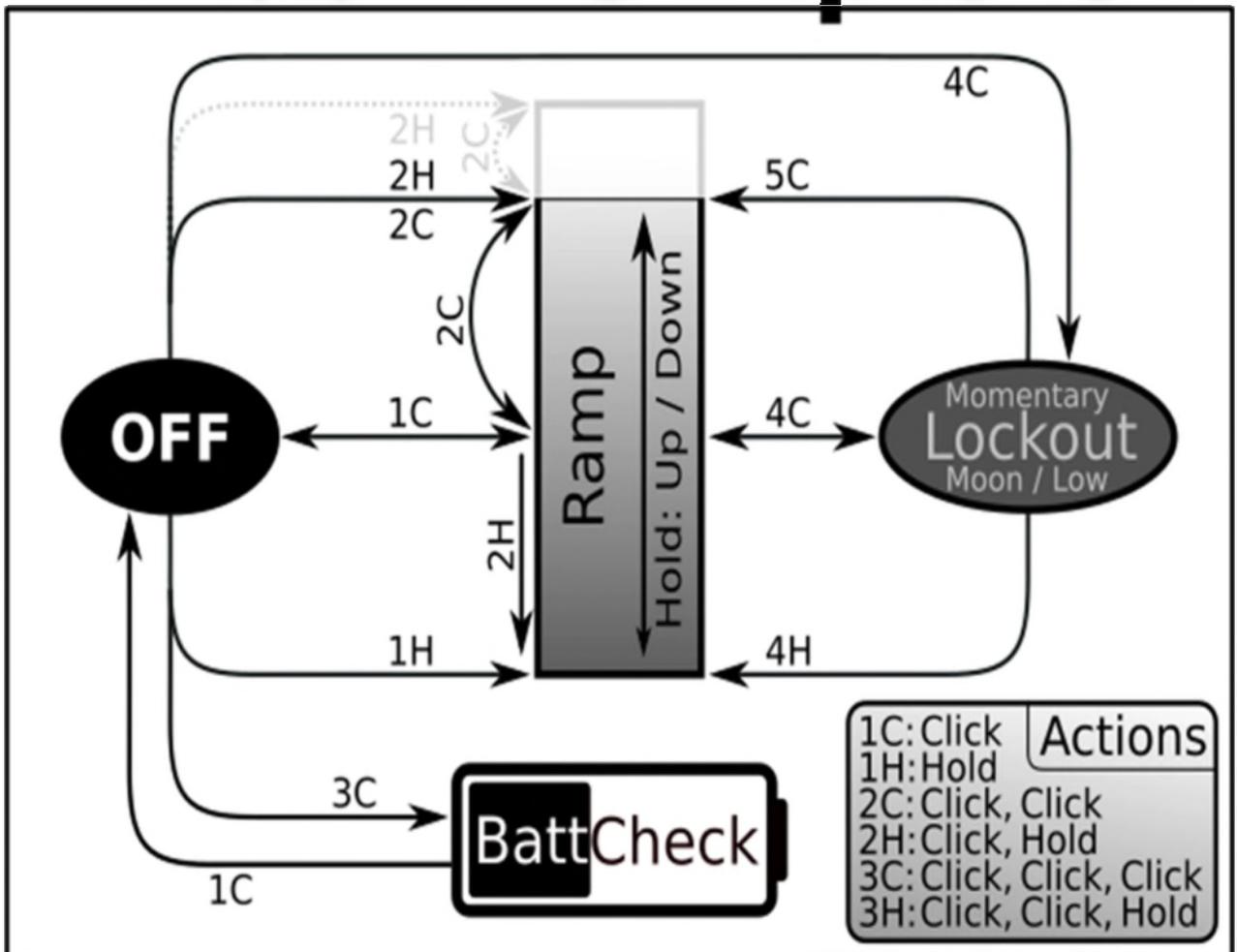
Button presses are abbreviated using a simple notation:

- 1C: One click. Press and then quickly release the button.
- 1H: Hold. Press the button, but keep holding it.
- 2C: Two clicks. Press and release quickly, twice.
- 2H: Click, hold. Click two times, but hold the second press.
- 3C: Three clicks. Press and release quickly, three times.
- 3H: Click, click, hold. Click three times, but hold the final press.

The same pattern is used with higher numbers too. For example, 10C means ten clicks... and 10H means ten clicks but hold the final press.

**Simple UI Diagram** Not everything is covered in the diagram, please read the text.

# Andúril Simple UI



## Simple UI

By default, the light uses a simple UI. This is useful if you lend the light to someone else, or if you just don't want to bother with any crazy disco modes.

Simple UI has all the basic functions needed to work as a flashlight, but the minimum and maximum brightness are limited to make it safer, and any complex or advanced functions are blocked.

Functions available in Simple UI include:

- 1C: On / off
- 1H: Ramp up (or down, if button was released less than a second ago)
- 2H: If light is on : ramp down  
If light is off: momentary high mode
- 2C: Double click to go to / from highest safe level
- 4C: Lockout mode.

Some other modes and functions are available too. When the light is off, these are the options:

- 3C: Battery check mode. (displays voltage once, then turns off)
- 4C: Lockout mode.
- 10H: Switch to Advanced UI.
- 15C or more: Version check.

In Lockout mode with Simple UI, there are a few functions:

- 1H: Momentary moon
- 2H: Momentary low
- 4C: Unlock and turn on
- 4H: Unlock and turn on at low level
- 5C: Unlock and turn on at high level

To change between Simple UI and Advanced UI, turn the light off and then do one of these:

In Simple UI:

- 10H: Go to Advanced UI.

In Advanced UI:

- 10C: Go to Simple UI.
- 10H: Configure Simple UI.

If you get lost, or if you want to auto-calibrate the temperature sensor, do a Factory Reset. The process for this is:

- Loosen body tube
- Hold button
- Tighten body tube
- Keep holding button for about 4s

The light should flicker while getting brighter, then briefly burst to full power. Hold until it reaches full power to do a reset, or let go of the button early to abort.

## Advanced UI

Advanced UI has all the advanced functions which are fun to play with but also hard to learn. Please refer the UI diagram below. Please ask us for pdf file so you can read easily. We can also send video link to show how to play with Anduril2

# Andúril 2

**Actions**  
 1C: Click  
 1H: Hold  
 2C: Click, Click  
 2H: Click, Hold  
 3C: Click, Click, Click

**Factory Defaults**  
 Default UI: Simple UI  
 Default Ceiling Simple UI: 150/150  
 Default Ceiling Advanced UI: 120/150

**Toggle**  
 Smooth / Stepped Ramp

**Ramp Config Menu for current ramp mode or for Simple UI via 10H from OFF in Advanced UI**

- Release 7H (or 10H in Simple UI) after **single flash**  
 ▶ **Set Floor Level**  
 Click n times for level n of 150
- Release 7H (or 10H in Simple UI) after **double flash**  
 ▶ **Set Ceiling Level**  
 Click n times for the nth highest level of 150
- Release 7H (or 10H in Simple UI) after **triple flash**  
 ▶ **Set number of steps\***  
 Click n times for the number of steps

\* n/a in Advanced UI Smooth Ramp configuration

**Manual Memory Configuration Menu**

- Release 10H after **single flash**  
 ▶ **Disable manual memory**  
 Click any value to disable manual memory
- Release 10H after **double flash**  
 ▶ **Configure manual memory timer**  
 Click n times for n minutes (0 clicks = timer off)

Automatic: last-ramped brightness  
 Manual: user's saved brightness  
 Hybrid: remember last-ramped brightness for n minutes

**Toggle**  
 Smooth / Stepped Ramp

**Momentary Turbo**

**Strobe Modes**

- Lightning Storm
- Candle Mode
- Tactical Strobe
- Party Strobe
- Bike Flasher

**Set Candle Runtime**  
 1 blink = 5 min runtime

**Actions:**  
 1H: brighter/faster (except Lightning Storm)  
 2H: dimmer/slower (except Lightning Storm)  
 5C: go to Momentary Mode / Strobe

Turns off the light automatically. Keep holding to add 5min increments of runtime to the sunset timer.  
 1 blink = 5 minutes

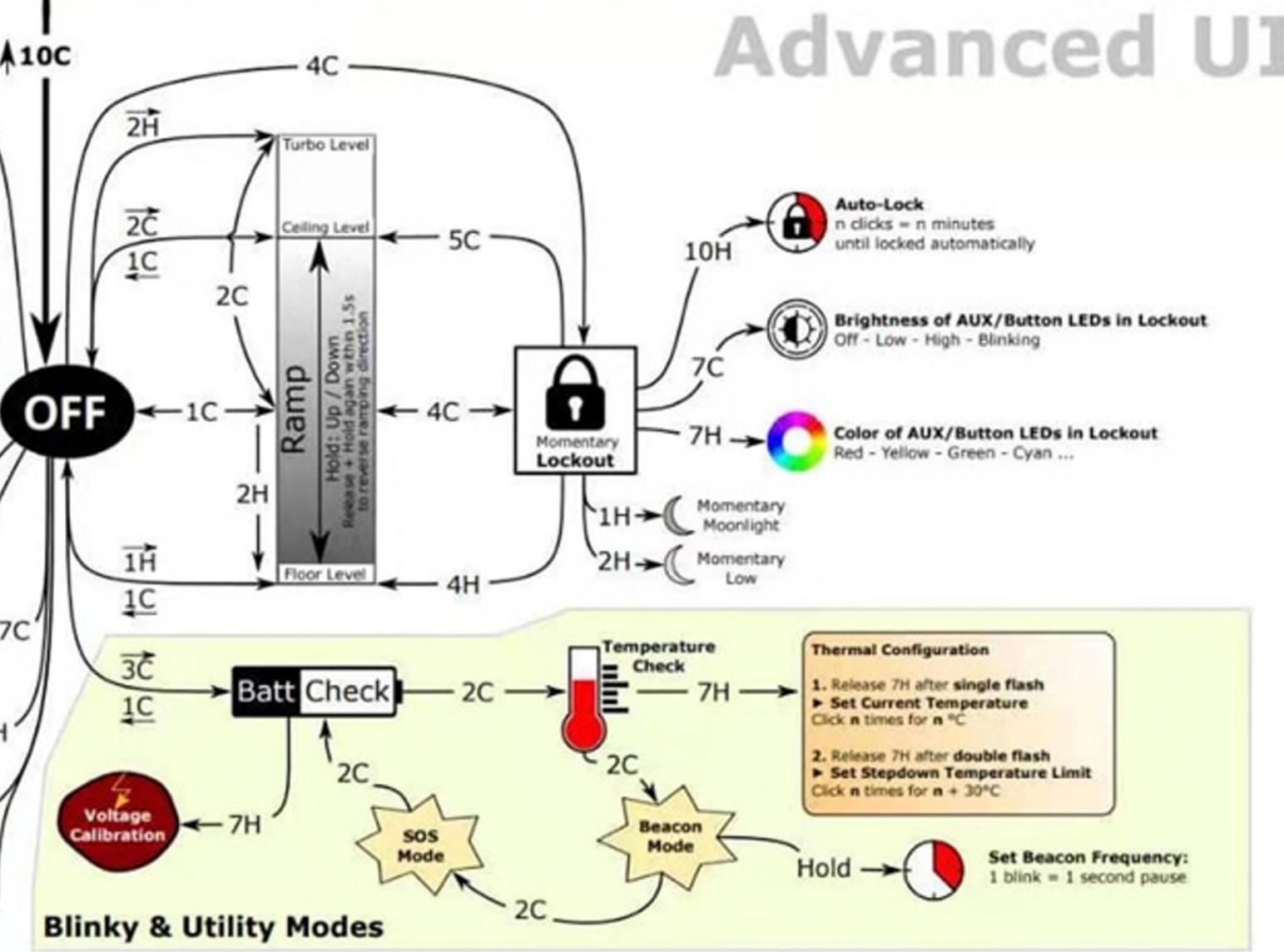
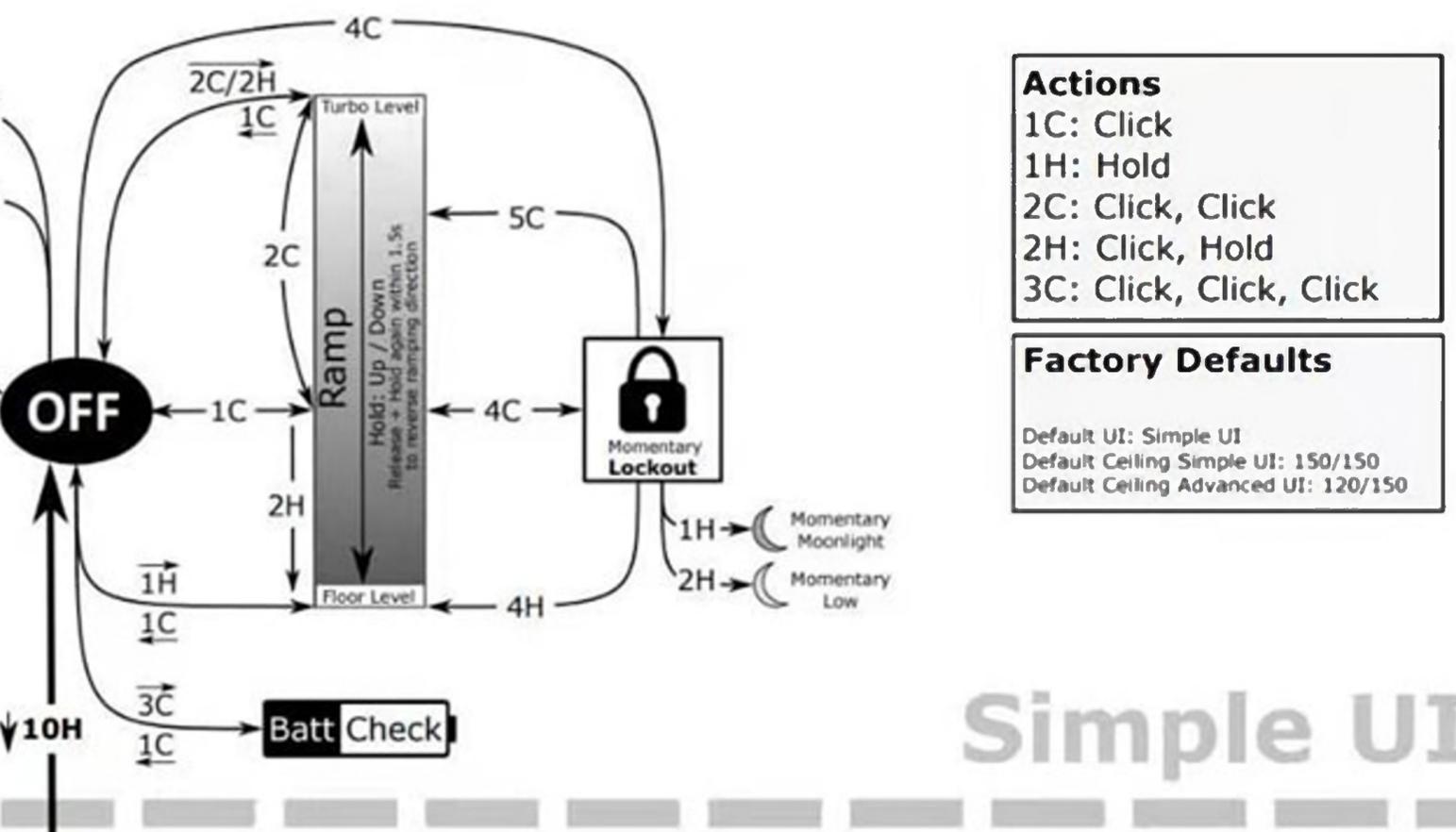
**Sunset Mode**

**Momentary Mode**

**Brightness of AUX/ Button LEDs in Standby**  
 Off - Low - High - Blinking

**Color of AUX/ Button LEDs in Standby**  
 Red - Yellow - Green - Cyan ...

Version Check **V** ← 15C  
 Factory Reset **↻** ← 13H



Simple UI  
 Advanced UI

**Blinky & Utility Modes**

**Thermal Configuration**

- Release 7H after **single flash**  
 ▶ **Set Current Temperature**  
 Click n times for n °C
- Release 7H after **double flash**  
 ▶ **Set Stepdown Temperature Limit**  
 Click n times for n + 30°C

**Set Beacon Frequency:**  
 1 blink = 1 second pause

## Safety Instructions

- ❖ Operating the flashlight for a long time in Turbo or High mode will warm it up. This is normal.
- ❖ When installing the battery, make sure the anode (+) side always faces towards the head/LEDs.
- ❖ Unscrew the tailcap half a turn to avoid unwanted activation during transport. It also prevents the battery from draining while the flashlight is in standby.
- ❖ Avoid hitting or dropping the flashlight.

## Troubleshooting and Maintenance

- ❖ Disassembling the sealed head can damage the flashlight and voids the warranty.
- ❖ Wurkkos Ltd. recommends using high-quality brand batteries. Damage by battery leakage voids the warranty.
- ❖ Remove the battery if the flashlight will not be used for an extended period of time.
- ❖ To prevent self-discharge or accidental activation during storage or transportation, unscrew the tailcap by half a turn or remove the battery.
- ❖ Every 6 months threads should be wiped with a clean cloth followed by a thin layer of silicone grease.
- ❖ To maintain a proper level of waterproofness, replace worn-out o-rings with an approved spare.
- ❖ Troubleshooting: Clean battery contacts regularly as dirty contacts may impair the performance of the flashlight. If you experience problems (flicker, shine intermittently or failure turn on) the following root causes and solutions should be tried:

Reason A: The battery needs a replacement.

Solution: Replace the battery with an approved type of a fully charged battery.

Reason B: Threads, PCB board contact or other contacts are dirty.

Solutions: Please clean the contact points with a cotton swab soaked in rubbing alcohol.

Reason C: The flashlight will not turn on upon first use.

Solution: Please do not forget to remove the insulation sticker from the battery on first use.

If the above methods do not work please refer to the warranty policy before contacting your authorized distributor.