

# NITECORE®

## KEEP INNOVATING

# TM38/TM38 Lite

## User Manual

### Features

- The world's smallest LED rechargeable searchlight with a maximum throw of 1400 meters
- Utilizes a Cree XHP35 HI D4 LED
- Integrated multi-function OLED display
- Thermal protection circuit prevents overheating
- Intelligent charging circuit with security detection charges safely and rapidly
- 5 brightness levels and 3 special modes selectable
- Innovative single button two-stage switch provides a user-friendly interface (Patented:ZL201120062948.1)
- Integrated power indicator in the switch displays remaining battery power (Patented: L201220057767.4)
- Optimal heat dissipation to improve overall performance
- Toughened ultra-clear mineral glass with anti-reflective coating
- Integrated "Precision Digital Optics Technology" provides extreme reflector performance
- Constructed from aerospace-grade aluminum alloy
- HAIH military grade hard-anodized
- Waterproof in accordance with IPX8 (submersible to two meters)

### Dimensions

TM38:	TM38 Lite:
Length: 278mm (10.94")	Length: 195mm (7.68")
Head diameter: 90mm (3.54")	Head diameter: 90mm (3.54")
Tube diameter: 50mm (1.97")	Tube diameter: 50mm (1.97")
Weight: 1260.3g (44.46oz) (with battery pack)	Weight: 780g (27.51oz) (without batteries)

### Accessories

Standard charger adapter (3.5mm), quality sling, lanyard, spare O-ring, spare rubber cover of charging port

### Battery Options

TM38: NBP68 HD ultra-high performance Li-ion rechargeable battery pack

Specifications	Parameters
Capacity	98Wh (3400mAhx8)
Voltage	3.7V
Charging Current	2A (Trickle charge) / 4A (Rapid charge)
Charging Port	3.5mm 12V DC Adapter / 4.0mm 12V DC Adapter

TM38 Lite:

	TYPE	Nominal voltage	Compatibility
18650 Rechargeable Li-ion battery	18650	3.7V	Yes (Recommended and can be recharged)
IMR18650 battery (button top battery)	IMR18650	3.6V	Yes (Recommended and can be recharged)
Primary Lithium battery	CR123	3V	Yes (Not recommended and CANNOT be recharged)
Rechargeable Li-ion battery	RCR123	3.7V	NO

\*Nitecore 18650 are recommended to ensure complete compatibility.

### Brightness & Runtime

TM38:

FLI STANDARD	TURBO	HIGH	MID	LOW	LOWER	STROBE	SOS	BEACON
	1800 LUMENS	800 LUMENS	400 LUMENS	200 LUMENS	50 LUMENS	1800 LUMENS	1800 LUMENS	1800 LUMENS
	*4h	11h	22h	40h	120h	---	---	---
	1400m	900m	650m	460m	250m	---	---	---
	490000cd	202500cd	105625cd	52900cd	15625cd	---	---	---
	1m (Impact Resistant)							
	IPX8, 2m (Waterproof AND Submersible)							

NOTE: The above data has been measured in accordance with the international flashlight testing standards ANSI/NEMA FL1 using the Nitecore NBP68 HD battery pack under laboratory conditions. The data may vary during real-world use due to battery type, individual usage habits and environmental factors.

\*The runtime for TURBO mode is the testing result before starting temperature regulation.

TM38 Lite:

FLI STANDARD	TURBO	HIGH	MID	LOW	LOWER	STROBE	SOS	BEACON
	1800 LUMENS	800 LUMENS	400 LUMENS	200 LUMENS	50 LUMENS	1800 LUMENS	1800 LUMENS	1800 LUMENS
	*2h	5h30min	11h	20h	60h	---	---	---
	1400m	900m	650m	460m	250m	---	---	---
	490000cd	202500cd	105625cd	52900cd	15625cd	---	---	---
	1m (Impact Resistant)							
	IPX8, 2m (Waterproof AND Submersible)							

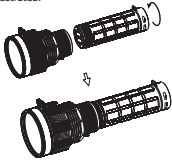
NOTE: The above data has been measured in accordance with the international flashlight testing standards ANSI/NEMA FL1 using 4 x 18650 Li-ion batteries (3.7V 3400mAh) under laboratory conditions. The data may vary during real-world use due to battery type, individual usage habits and environmental factors.

\*The runtime for TURBO mode is the testing result before starting temperature regulation.

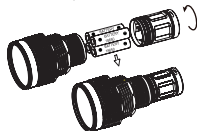
### Operating Instructions

#### Battery Installation

TM38: Screw on the NBP68 HD battery pack as illustrated.



TM38 Lite: Install 4 x 18650 Li-ion batteries with the positive ends (+) pointing toward the light head and tighten the tube. In emergency situations, one to three 18650 Li-ion batteries may be used. Please see note 1 in the WARNING section below.



#### WARNING

- Using less than 4 x 18650 Li-ion batteries might trigger the overload protection circuit in Li-ion batteries, which may lead to explosion or turbo mode malfunctioning. Nitecore recommends this feature is used with caution and only when necessary.
- Insert batteries with the positive (+) ends pointing toward the light head.
- Do not mix rechargeable and non-rechargeable batteries.
- Do not mix batteries of different types/brands.
- Do not mix batteries of different charge levels.
- Please ensure that all 18650 batteries used in the TM38 Lite have a button top configuration.

#### OLED Display

After tightening the battery pack or loading batteries, "NITECORE" will be displayed on the OLED screen for 2.5 seconds followed by a 4-second display of battery voltage (to nearest 0.01V) after which the TM38/TM38 Lite will enter standby mode. When the TM38/TM38 Lite is turned on, the OLED display will activate automatically and show output lumen, brightness level, battery voltage, battery status, remaining runtime and temperature. After displaying these readings, the OLED display will be off automatically. To reactivate the OLED, simply press the display switch. To cycle through the information, press the display button repeatedly.

### Mode Selection

NOTE: The TM38/TM38 Lite has two modes: Daily Mode and Search Mode. These modes can be selected by the 2-stage switch according to how hard the switch is pressed. A half-way press will activate daily mode, and a full press will activate Search Mode. Please refer to instructions below.

Daily Mode: With the light turned off, press the switch halfway and release within one second to enter this mode with constant-on illumination. Alternatively, press and hold the switch halfway for more than one second to activate momentary illumination with the previously used daily mode brightness.  
Search Mode: With the light turned off, press the switch all the way down and release within one second to enter this mode with constant-on illumination. Alternatively, press and hold the switch all the way down for more than one second to activate momentary illumination with max brightness.

### Brightness Selection

- In daily mode, press the switch halfway repeatedly to cycle through brightness levels of lower, low, medium or high. Alternatively, press and hold the switch halfway for more than one second to enter turbo mode directly. A second half-way press will resume the brightness level last used. The selected brightness level will be memorized when the light is turned off.
- In search mode, press the switch halfway to switch between high and turbo mode. This mode does not have memory effect.

NOTE: In turbo mode, the thermal protection will activate. Please refer to the "Thermal Protection" section for details.

### Special Modes (Strobe / SOS / Location Beacon)

When the flashlight is on, press the switch all the way down twice in quick succession to access strobe mode. In strobe mode, press the switch halfway repeatedly to cycle through SOS, location beacon and strobe modes. To exit special modes (and enter standby mode), simply press the switch all the way down and release.

NOTE: When in any of the special modes, the OLED display will remain on displaying the specific mode being used.

### Lockout/Unlock

When the flashlight is on, press and hold the switch all the way down for more than one second until the flashlight is switched off and enters lockout mode.

Lockout mode consumes almost no battery power and prevents accidental activation of the flashlight. To exit lockout mode, simply press and hold the switch all the way down for more than one second again.

NOTE:

- In lockout mode, the OLED display will show "LOCK OUT" as a reminder when the switch or the display button is pressed.
- When the TM38/TM38 Lite is kept in a backpack or left unused for extended periods, Nitecore recommends users loosen the head to cut off power, thus saving battery power and preventing accidental activation of the flashlight.

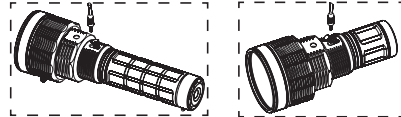
### Switch off/Standby mode

When the flashlight is on, press the switch all the way down and release within one second to enter standby mode. In this mode, the light will consume small amounts of power to maintain the settings in the MCU (micro control unit) while appears to be turned off. When in standby mode the power indicator light will blink once every two seconds to indicate the location of the light.

NOTE: When in standby mode, a single press of the OLED display button will activate the OLED and display battery voltage for 10 seconds.

### Charging TM38/TM38 Lite

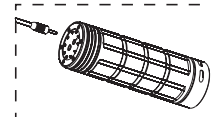
Connect the charging cable of the TM38/TM38 Lite to the flashlight and the A/C power adapter to the wall outlet as shown in the adjacent images.



- Under normal charging conditions, the on/off switch's blue indicator light will blink twice every second with the OLED screen displaying "Charging..." and battery voltage.
- If a problem is detected during charging (e.g. faulty or incorrectly inserted batteries), the flashlight will stop charging automatically. The blue indicator will blink rapidly and the OLED display will show the word "ERROR" to notify users.
- When charging is completed, the flashlight will stop charging automatically with the blue indicator remaining on and "Chg. Finished" along with battery voltage being displayed on the OLED screen.

NOTE: It takes TM38 Lite about 7 hours to fully charge four 18650 Li-ion batteries (3.7V 3400mAh).

The TM38's NBP68 HD battery pack can also be recharged independently with a Nitecore Adapter. As shown, plug one end of the adapter to the battery pack charging port (2A, 3.5mm), and plug the other end to an outlet. The integrated blue charging indicator of the NBP68 HD battery pack will blink rapidly when the battery pack is being recharged, or blink slowly when battery power reaches 98%, or illuminate steadily when the battery pack is fully charged.



NOTE:

- Charging the TM38 or the NBP68 HD battery pack directly will require charging time of approximately 15 hours.
- Charging time can be reduced to 8 hours if the NBP68 HD battery pack is recharged via the rapid charging port (4A, 4.0mm) using an optional 2A adapter.

### Power Tips

- With the light switched on, the power indicator will blink once every two seconds when power level drops to 50%.
- With the light switched on, the power indicator will blink rapidly when power level is low. Batteries/battery pack should be replaced or recharged when any of the following occurs: The power indicator blinks rapidly, output appears to be dim or the flashlight becomes unresponsive.

NOTE: When the light is being used in lower mode, the blue power indicator will be off to conserve power.

### Thermal Protection

Extended operation in turbo mode will cause the temperature of TM38/TM38 Lite to continually rise, making it too scalding to hold. Thus, Nitecore does not recommend using the TM38/TM38 Lite in turbo mode for extended periods. Equipped with an integrated thermal protection circuit, the TM38/TM38 Lite will automatically reduce its output to prevent overheating once temperature has reached 60 degree Celsius.

Precaution: Do not attempt to cool a heated TM38/TM38 Lite by submerging it in liquid. This may cause irreparable damage to the TM38/TM38 Lite due to air pressure difference inside and outside of the tube.

### Maintenance

Every 6 months, threads should be wiped with a clean cloth followed by a thin coating of silicon-based lubricant.

### Warranty Service

All NITECORE® products are warranted for quality. DOA/defective products can be exchanged for replacement through a local distributor/dealer within the 15 days of purchase.

After 15 days, all defective / malfunctioning NITECORE® products will be repaired free of charge for a period of 60 months from the date of purchase. After 60 months, a limited warranty applies, covering the cost of labor and maintenance, but not the cost of accessories or replacement parts.

The warranty is nullified in all of the following situations:

- The product(s) is/are broken down, reconstructed and/or modified by unauthorized persons.
- The product(s) is/are damaged through improper use (i.e. reverse polarity installation).
- The product(s) is/are damaged by leakage of batteries.

For the latest information on NITECORE® products and services, please contact your national NITECORE® distributor or send an email to service@nitecore.com

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