NITECORE®

The All-Round Flashlight Expert

MH20 User Manual

Features

· The smallest, lightest 1x18650 USB rechargeable flashlight
· Utilizes a CREE XM-L2 U2 LED
· Max output of up to 1000 lumens
· Integrated "Precision Digital Optics Technology" provides extreme reflector performance
· Boasts a peak beam intensity of 12,500 cd and a throw distance of up to 220 meters
· Features advanced temperature regulation (ATR) technology
· Innovative single button 2-stage switch accesses multiple functions and modes
· Integrated power indicator notifies battery voltage (accurate to 0.1V)
· Intelligent charging module with a micro USB port charges Li-ion battery rapidly
· High efficiency constant current circuit enables maximum runtime of 235 hours
· Direct access to ultra-low and turbo output
· Detachable two-way anti-rolling clip
· Toughened ultra-clear mineral glass with anti-reflective coating
· Constructed from aero grade aluminum alloy
· HAIII military grade hard-anodized
· Waterproof in accordance with IPX-8 (2 meters submersible)
· Impact resistant to 1.5 meters
· Tail stand capability

Dimensions

Length: 4.13" (105mm)
Head diameter: 1.25" (31.8mm)
Tail diameter: 1" (25.4mm)
Weight: 3.08oz (87.3gram) (without battery)

Accessories

USB cable, quality holster, clip, lanyard, spare USB port cover, spare O–ring

Battery Options

	TYPE	Nominal voltage	Compatible
18650 Rechargeable Li-ion battery	18650	3.7V	Yes (Recommended and can be recharged)
Primary Lithium battery *	CR123	3V	Yes (Compatible but can NOT be recharged)
Rechargeable Li-ion battery *	RCR123	3.7V	Yes (Compatible but can NOT be recharged)

⚠ ***Warning:** Charge 18650 rechargeable Li-ion batteries only. Do not charge CR123 or RCR123 batteries.

Output & Runtime

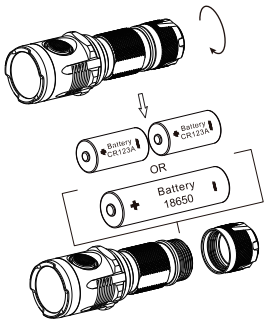
FL1 STANDARD	TURBO	HIGH	MID	LOW	LOWER
	1000 LUMENS	410 LUMENS	230 LUMENS	50 LUMENS	1 LUMEN
18650	2h	2h45min	5h45min	15h45min	235h
2xCR123	2h15min	2h30min	4h30min	14h15min	150h
	220m (Beam Distance)				
	12500cd (Peak Beam Intensity)				
	1.5m (Impact Resistant)				
	IPX-8, 2m (Waterproof AND Submersible)				

NOTICE:
The stated data has been measured in accordance with the international flashlight testing standards ANSI/NEMA FL1, using 1 x Nitecore 18650 battery (3.7V, 2600mAh) or 2 x Nitecore CR123 batteries (3V, 1700mAh) under laboratory conditions. The data may vary in real–world use due to different battery use or environmental conditions.

Operating Instructions

Battery installation

Insert 1x18650 battery or 2xCR123 batteries as illustrated.
NOTE: After loading batteries, the blue power indicator will blink to indicate battery voltage. Please refer to the "Power Tips" section of this manual for details.
WARNING:
Ensure batteries are inserted with the positive (+) ends pointing towards the head. The MH20 will not be operational with incorrectly inserted batteries.



On / Off Operation

NOTE: The MH20 utilizes a 2-stage switch similar to a camera shutter button. The light's numerous functions are selected according to the depth the switch is pressed.
To switch ON: Press the switch all the way down until a click is heard.
To switch OFF: Press the switch all the way down once again to switch the light off and enter standby mode

Standby Mode

When in standby mode, press the switch halfway to activate the blue power indicator to flash once every three seconds, thus helping users locate the MH20 in dark conditions. Press the switch halfway again to turn the power indicator off. When using 1x18650 battery, the MH20 will operate for over 12 months with the power indicator on, or remain standby for over 24 months with the power indicator off.
NOTE: When MH20 is transported or left unused for extended periods, Nitecore recommends loosening the head to lock out and cut off power, thus saving battery power and preventing accidental activation of the flashlight.

Brightness Levels

With the MH20 switched on, press the switch halfway repeatedly to cycle through the following brightness levels: ultra-low, low, medium, high and turbo. Alternatively, press and hold the switch halfway for over one second to enter turbo output directly.

Direct Access to Ultra-low/Turbo

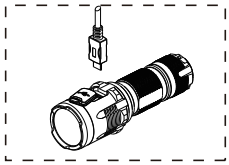
With the light switched off, press and hold the switch halfway for over one second to access ultra-low output (1 lumen).
With the light switched off, press and hold the switch all the way down for over one second to access turbo output (1000 lumens).

Special Modes (Strobe/Location Beacon/SOS)

With the light switched on, press and hold the switch all the way down for more than one second to enter strobe mode. When in strobe mode, press the switch halfway repeatedly to cycle through SOS, Location Beacon and Strobe modes. To exit, simply press the switch all the way down to turn the light off. The MH20 does not have memory effect in any of these special modes.
NOTE: When in location beacon or SOS modes, press and hold the switch halfway for over one second will access strobe mode directly.

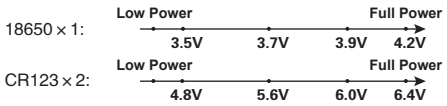
Charging Function

The MH20 is capable of charging a 18650 Li–ion battery with the included USB charging cable. Connect the USB cable to the MH20's charging port and a power source (USB chargers, PC or other power terminals) as shown in the adjacent image. Fully charging one depleted 18650 battery takes approximately 6 hours.
Under normal charging conditions, the blue power indicator light will blink twice every three seconds to notify users. When charging is complete, the blue power indicator will illuminate steadily.
If a problem is detected during the charging process, the MH20 will stop charging and the blue power indicator will blink rapidly. This is usually caused by faulty or incorrectly inserted batteries.



Power Tips

After battery installation, the blue power indicator will blink to indicate battery voltage (accurate to 0.1V). For example, when battery voltage is at 4.2V, the blue power indicator will blink 4 times, followed by a one second pause and another 2 blinks. Different voltages represent the corresponding remaining battery power levels:



ATR Technology

Advanced temperature regulation (ATR) technology allows the MH20 to dynamically adjust output performance according to its body temperature. This prevents damage from overheating and prolongs its working life.

Changing / Charging Battery

Batteries should be replaced or recharged when output appears to be dim or the flashlight becomes unresponsive.

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. Any DOA / defective product can be exchanged for a replacement through a local distributor/dealer within the 15 days of purchase. After 15 days, all defective / malfunctioning NITECORE® products can be repaired free of charge for a period of 60 months (5 years) from the date of purchase. Beyond 60 months (5 years), 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:
1. The product(s) is/are broken down, reconstructed and/or modified by unauthorized parties.
2. The product(s) is/are damaged through improper use.
3. The product(s) is/are damaged by leakage of batteries.
For the latest information on NITECORE® products and services, please contact a local NITECORE® distributor or send an email to service@nitecore.com.
The Nitecore official website shall prevail in case of any product data changes.

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Thanks for purchasing NITECORE!