

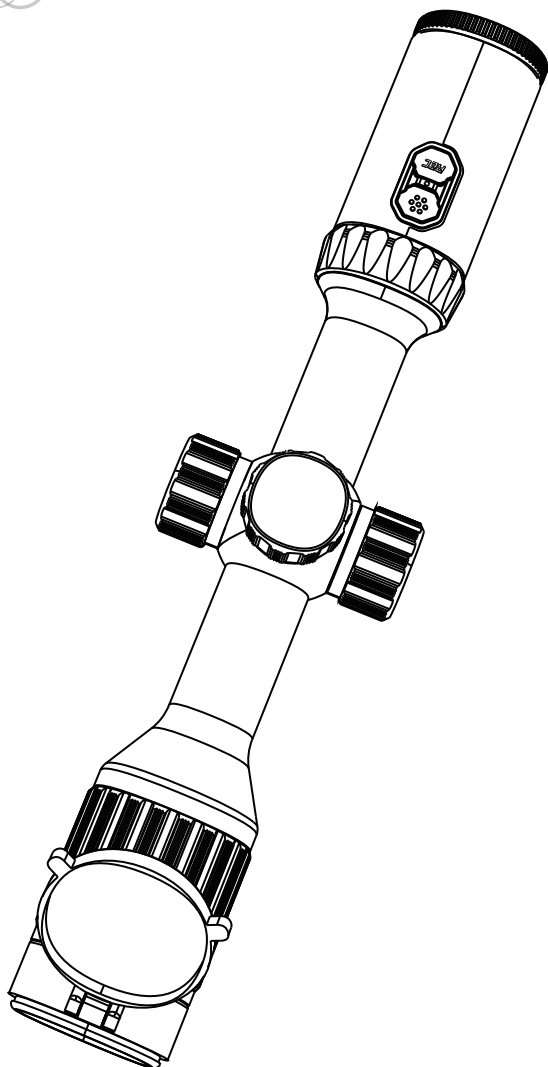
CONOTECH

Precision without compromise



NIGHT ARROW

Thermal Imaging Riflescope



Attention!

Export of **Night Arrow Series** models may have export restrictions depending on the laws in your region.

RoHS  

Attention!



Proper usage of this device is essential for safe operation. Please read this manual carefully before use.



If the device has been in storage for an extended period, check its functionality before use.



Do not disassemble the device. Only an authorized repair center is allowed to do this.



Ensure the external optical surfaces remain clean. Avoid touching them with bare hands.



Sand and sea water can damage the optical coatings.



Never point the device directly at the sun.



Image quality may vary depending on environmental and atmospheric conditions. For instance, at sunset, temperature differences between objects can enhance contrast.



Remove batteries and store them in polyethylene bags to avoid contact with metal if the device will be stored for an extended period.



Use the protective lens cap during transportation or storage.



Condensation may fog the optical surfaces. This occurs when the device transitions between environments with differing temperatures or humidity levels. Once the temperature stabilizes, condensation will dissipate. Wipe away moisture with the towel.

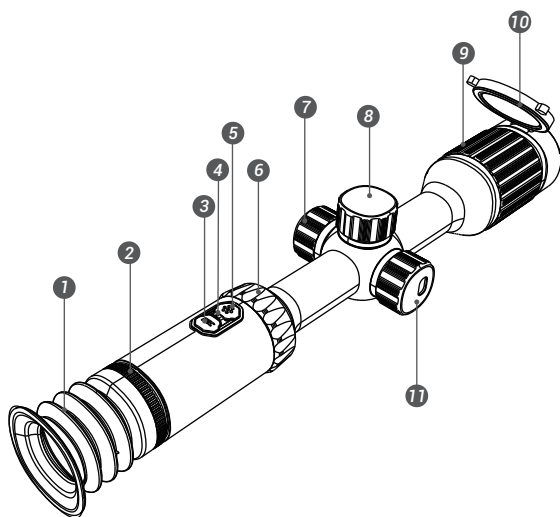


Clean lenses with the Lens Cloth or napkin.



LEGAL NOTICE

Attaching this device to a weapon is the sole responsibility of the user. Check regional legal regulations before doing so.



NOTE

All images used in this instruction manual are for illustrative purpose only. Actual product may vary due to product enhancement.(v.5.0)

1 Rubber eyepiece

2 Diopter adjustment ring

3 REC button

4 LED indicator

🔴 Charging: Red light flashes

🟢 Full power: Green light is steady on

🔴 Low power: Red light is steady on

🟢 Wifi on: Green light flashes quickly

🟢 Wifi connects successful: Green light turns on for 3s and turns off

🟢 USB connects: Green light flashes

5 MENU button

6 Rotating wheel

7 Battery compartment cap

8 Controller

9 Focus ring

10 Lens cover

11 USB-C

1.Controller

O - OFF
I - ON
S - Standby

5.Rotating Wheel :

Real-time image status:

Rotate counterclockwise:
Zoom out
Rotate clockwise:
Zoom in

Menu activation status:

Rotate counterclockwise:
Left switch
Rotate clockwise:
Right switch

2.Menu Button:

Real-time image status:

Short press: Filter switch
Long press: Enter menu

Menu activation status:

Short press:
Switch menu options
Long press: Exit menu
/Enter or Exit submenu

4.REC + Menu Button :

Calibration

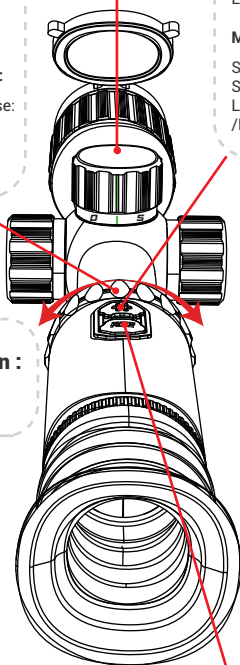
3.REC Button:

Real-time image status:

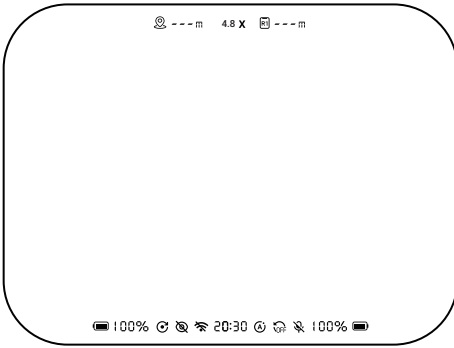
Short press: Take photo
Long press: Start/Stop video recording

Menu activation status:

Short press: Switch menu options



The status bar is on the top and bottom of the display and shows information on the actual operating status of the NIGHT ARROW.



The top of the display shows information including:

- Distance
- Magnification
- Rifle Profile
- Zeroing Distance

The bottom of the display shows information including:

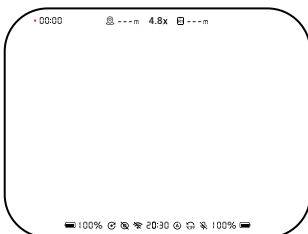
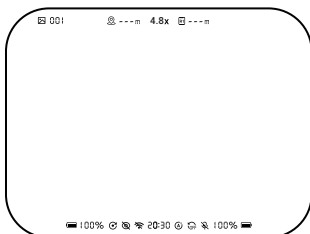
- External Battery Battery
- External Battery Capacity
- Recoil Video
- Display Mode
- WIFI Status
- Real Time
- Calibration Mode
- Standby Setting
- Audio
- Built-in Battery Capacity
- Built-in Battery Battery

Take photo/recording on-board

Short press **REC** to take photo.

Long press **REC** to start/stop video recording.

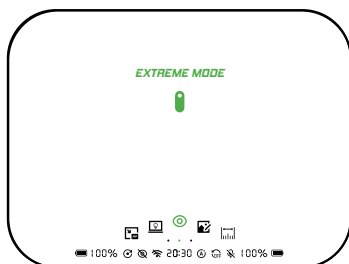
Number of photos or recording icon will be shown on the left top of the screen.



Firmware update via APP

Easily keep your device at the forefront of technology with firmware updates directly through our dedicated app.





Extreme mode

Short press **MENU/REC** to turn Extreme mode On/Off.

Image Equalizer

Short press **MENU/REC** to select:

-  **Brightness** Rotate the wheel to change the Brightness value from 1-5
-  **Contrast** Rotate the wheel to change the Contrast value from 1-5
-  **Sharpness** Rotate the wheel to change the Sharpness value from 1-5

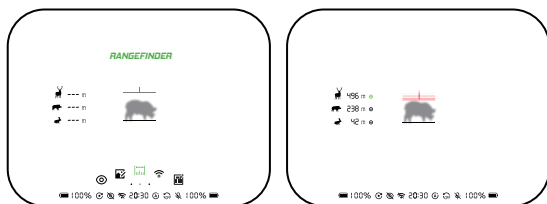
Rangefinder

Stadiametric rangefinder

(only in NAR 335PRO/NAR 350PRO/NAR 635PRO/NAR 650PRO)

NIGHT ARROW is equipped with a stadiametric rangefinder which allows the user to estimate approximate distance to an object of known size.

Short press **MENU/REC** to enter Rangefinder.



You will see on the display: measurement bars, icons of three reference objects and respective distances for the three objects.

There are three pre-set reference objects:

Rabbit – height 0.2m

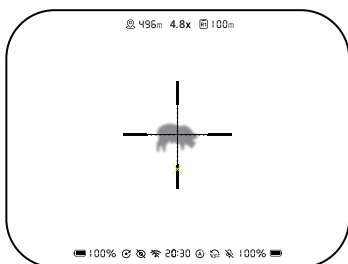
Wild boar – height 0.5m

Deer – height 1.7m

Please move the lower fixed bar to the bottom of the object, then rotate the wheel to move down/up the upper line to the top of the object. The distance of the object is automatically recalculated as you move the upper line.

Press **MENU/REC** to choose a reference object. Long press **MENU** to save & exit the rangefinder, the range information will not disappear from the display automatically.

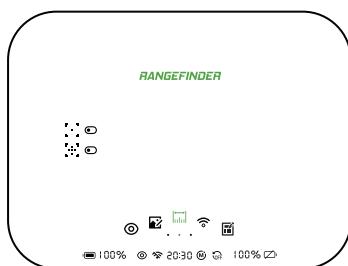
A "X" on reticle suggests the aiming point accordingly.



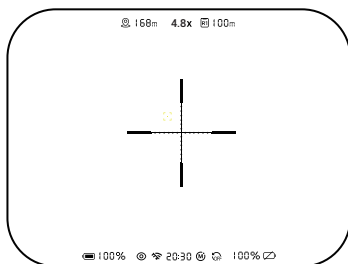
Laser rangefinder (only available in NAR LIIR series)

Short press **MENU/REC** to enter the laser rangefinder selection, and rotate the wheel to turn on single ranging or continuous ranging. But only one can be turned on at a time.

-  Single ranging
-  Continuous ranging

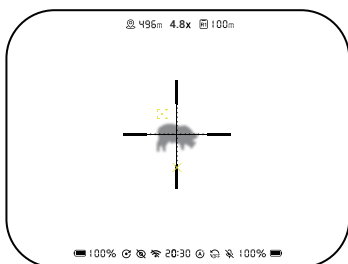


Short press **MENU** and the distance will be shown in the top left screen.



For an enhanced user experience, please first complete the zeroing process, followed by finalizing the Ballistic Calculate parameter settings.

When the continuous ranging is turned on, the relevant distance will show up. A "X" on reticle suggests the aiming point accordingly.



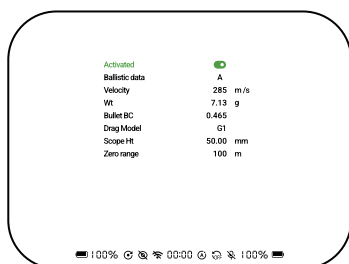
WIFI

Short press **MENU/REC** to turn WIFI On/Off.



Ballistic Calculator

Short press **MENU** to enter Ballistic calculator. Then rotate the wheel to turn on/off the function. Short press **MENU/REC** to select Ballistic data, Velocity, Wt, Bullet BC, Drag Model, Scope Ht, and Zero range, then rotate the wheel and adjust the value matching your rifle. Long press **MENU** to save and exit.



Ballistic data - Maximum storage capacity for 5 types of bullets.

Velocity, Wt, Bullet BC - On the bullet package or ask the bullet supplier.

Drag Model - G1 for short, flat-based bullets, G7 for long bullet with a boat-tail and pointy nose.

Scope Ht - The distance from the center of the weapon barrel to the center of the lens.

After entering the ballistic calculation parameters, please ensure to perform zeroing to enable precise usage.

For NAR LIIR series

Step 1: Short press on **MENU** - Distance is measured and displayed, the ranging cursor appears.

Step 2: Short press on **MENU** - Distance is measured and displayed, the aiming point appears, and the ranging cursor appears.

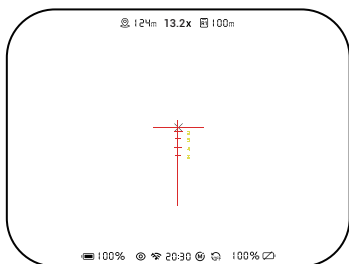
Step 3: Short press on **MENU** - Distance is measured and displayed, the aiming point disappears, and the ranging cursor appears.

If the interval between button presses does not exceed 30 seconds, steps 2 and 3 will repeat. If the interval between button presses exceeds 30 seconds, the laser rangefinder will stop operating, the ranging cursor will disappear, and the device will remain in its last state. Pressing the **MENU** for a single measurement will restart the process from step 1.

Please note: When turn on Ballistic Calculator, continuous ranging is disabled, only single ranging is available.

For NAR Pro series

After entering the ballistic calculation parameters, please long press **MENU** to return to the home page. Suggested aiming points for different distances will appear on the screen.



Profile

NIGHT ARROW can save up to 3 profiles of rifles.

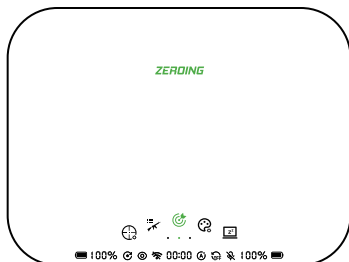
Short press **MENU/REC** to select R1, R2 or R3.

Long press **MENU/REC** to save and exit.



Zeroing

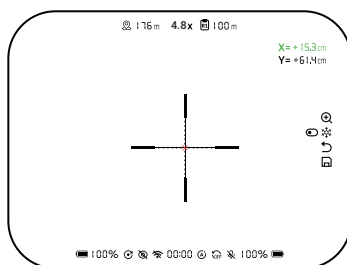
Select the zeroing profile, R1 is set as default. The zeroing distance is set in Ballistic calculator.



Take a shot, make the cross center of the reticle at point of impact. Short press **MENU/REC** to switch zeroing options.

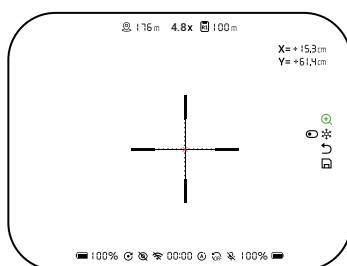
Windage/Elevation

Then rotate the wheel to adjust the X,Y value.



Zoom

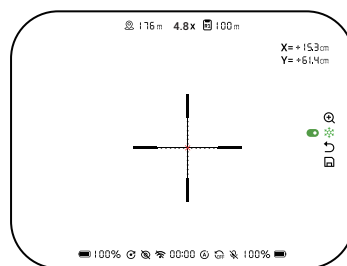
Short press **MENU/REC** to select zoom function, then rotate the wheel to zoom in/out the reticle.



Freeze

The feature of the freeze function is that there is no need to constantly keep the riflescope at the point of aiming.

After shooting, the user needs to align the dividing center point with the center of the cross target, and then rotate the wheel to freeze the infrared image of the current frame, as shown in the following figure.

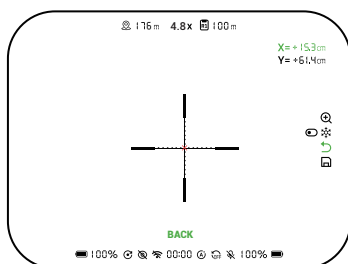


When freezing the image, you can short press **MENU/REC** to adjust the X and Y value.

Then you can rotate the wheel to unfreeze the image. Long press **MENU/REC** to save.

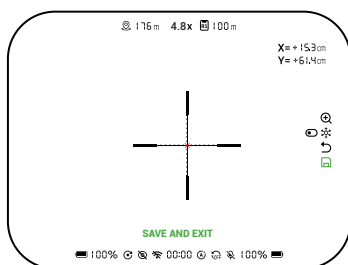
Back

Long press **MENU** to return to the previous menu, the current settings will not be saved.



Save and exit

Long press **MENU** to save and exit.



Reticle



Brightness

Short press **MENU/REC** to enter the brightness selection, and rotate the wheel to select the value from 1-5. Long press **MENU** to save and exit.



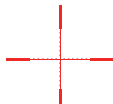
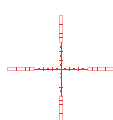
Color

Short press **MENU/REC** to enter the color selection, and rotate the wheel to select the desired reticle color, including Green, Red, White, and Black. Long press **MENU** to save and exit.



Type

Short press **MENU/REC** to enter the reticle type selection and rotate the wheel to select one from 4 reticle types. Long press **MENU** to save and exit.





Recoil video

Short press **MENU/REC** to turn on/off the function. The pre-recording function activates upon detecting recoil, capturing a 10-second span before and after your shot.



Microphone

Short press **MENU/REC** to turn on/off the microphone.



Calibration Mode

Short press **MENU/REC** to choose the calibration mode and long press **MENU** to save and exit.



Automatic



Manual



Silent (Please close lens cap when calibrating)



Defective Pixel Repair

Cover objective lens then short press **MENU** to perform defective pixel repair. A three-second countdown will appear on the screen, and the calibration will be started.



Pure Mode

Short press **MENU/REC** to turn Pure Mode On/Off.
The icons of submenu will be hidden automatically.



Color Mode

Short press **MENU/REC** to switch through the color modes.

Rotate the wheel to select activated or deactivated current color modes.

Color Modes can be selectively deactivated. Deactivated color modes will not show up so you only cycle through modes that you find useful.

The available Color Modes are:

WH - White Hot	BH - Black Hot	WW - Warm White
CG - Cold Green	CB - Cold Blue	RB - Rainbow

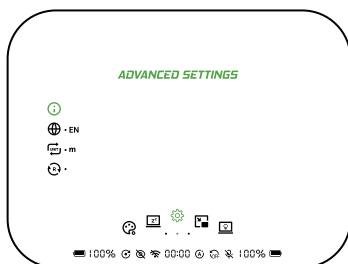


Standby Setting

Short press **MENU/REC** to switch the option
from    



Advanced Settings



Device Info Contain Model, S/N, software version and hardware version.



Language Rotate the wheel to select from EN/DE/RU/CZ/ES/SE/PL, long press **MENU/REC** to save and exit



Unit Rotate the wheel to select from Meter and Yard, long press **MENU/REC** to save and exit.



Restore Rotate the wheel to select YES/NO, long press **MENU** to save and exit.



PIP

Short press **MENU/REC** to turn PIP On/Off.



Screen Brightness

Press **MENU/REC** to enter and rotate the wheel to change the value from 1-5, long press **MENU** to save and exit.

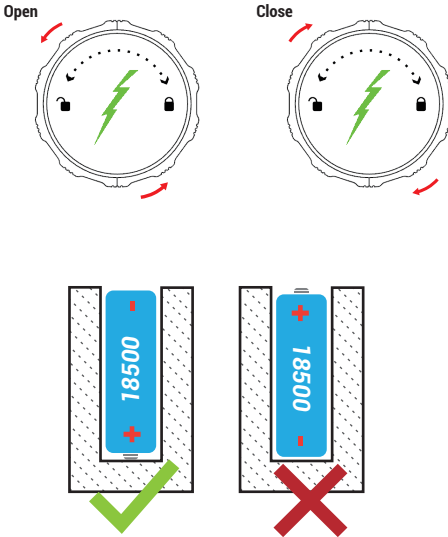
Removable battery

The batteries should be charged before first use.

Turn the battery compartment knob counterclockwise until stop.

Please install the battery based on the positive and negative signs. Otherwise, NIGHT ARROW will not start.

Replace the battery and close the compartment knob.



Built-in battery

NIGHT ARROW is powered by built-in rechargeable battery of total 6400 mAh and 1 removable 18500 battery.

1.If there are built-in battery and removable battery in the device, two battery icons are displayed in the status bar. The removable battery capacity shows on the left bottom of the status bar, and the built-in battery capacity shows on the right bottom.

2.When both types of batteries are fully charged, the device is powered by the removable battery. If there is a low removable battery level, the device will switch to the built-in battery.

3.Battery charge status is displayed on the status bar.

	100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	No battery	Charging
Removable Battery Capacity												
Built-in Battery Capacity												

4.It is possible to replace removable battery while NIGHT ARROW is on when it is powered by built-in battery (the device will continue to work properly).

External power supply

External power can be supplied from an external source, such as a power bank.

- 1.Connect the external power supply to the USB-C cable.
- 2.NIGHT ARROW takes to external power source while the built-in battery will gradually be recharged.
- 3.A rechargeable battery icon indicating a percentage of the battery life will appear in the status bar .
- 4.NIGHT ARROW supports quick fully charge in only 3 hours.
- 5.When you turn off external power source, NIGHT ARROW takes power from removable battery without turning off. When there is no removable battery or low power level the device takes power from the built-in battery.

NOTE

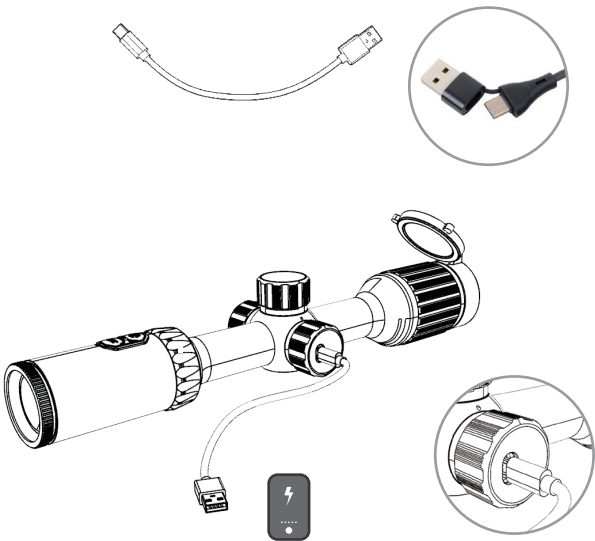
The batteries should be charged before first use.

When installing a removable battery with a sufficient charge level, NIGHT ARROW will automatically switch to it.

Zeroing information will be saved when NIGHT ARROW is shut down because of empty battery.

If NIGHT ARROW is shut down by opening battery cover without proper power off, zeroing information will not be saved.

1. Power supply/Firmware update/Charge built-in battery

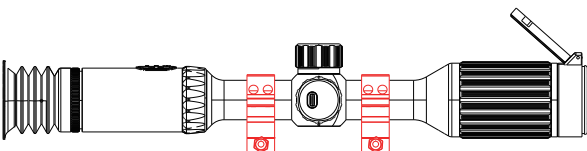


Attach to rifle

To ensure accurate shooting NIGHT ARROW should be properly mounted on the rifle.

Mount NIGHT ARROW with 30mm scope rings. Use only high-quality mounts and rings compatible with your rifle. Follow the mount manufacturer's installation instructions and use the proper tools.

When mounting NIGHT ARROW, adjust the position of the scope on the rifle to achieve optimal, comfortable eye relief. Failure to comply with this recommendation may result in injury to the shooter.



Storage and Transportation

- Clean the device thoroughly before storage, ensuring it is free of moisture and dust.
- Make sure that the batteries are removed and that the battery compartment is empty.
- It is possible for the device to be stored for short periods in a suitable soft pack, bag, or cartridge box.
- Store the device in a dry, enclosed, unheated, and ventilated space for long-term storage.
- Avoid exposing the product to aggressive environments, temperatures below -50°C or above $+60^{\circ}\text{C}$, relative humidity over 80%, or prolonged periods of direct sunlight.
- Before transportation, neatly pack the product in its original packaging (transport bag), ensuring all items and accessories are carefully placed in the bag. Then, securely place the bag in the transport suitcase.
- The device can be shipped via various transport methods, up to an altitude of 12.000 m.

Night Arrow Specification						
Model	NAR 335PRO	NAR 350PRO	NAR 350LIIR	NAR 635PRO	NAR 650PRO	NAR 650LIIR
Main Characteristics						
Detector	Uncooled Vox					
Resolution	384×288			640×512		
Frame rate	50Hz					
Pixel	12μm					
Spectral range	8-14μm					
NETD	<15mk					
Optical Characteristics						
Objective lens	35mm	50mm	50mm	35mm	50mm	50mm
Magnification	3.3×	4.8×	4.8×	1.9×	2.7×	2.7×
FOV(H×V), m@100m	13.2 × 10	9.2 × 7	9.2 × 7	22 × 18	15.4 × 12.3	15.4 × 12.3
Functions						
Zoom	1×/2×/4×			1×/2×/4×/8×		
Palettes	6					
Firmware update via APP	Yes					
Display						
Type	OLED					
Resolution	1024×768					
External video	WIFI					
Built-in memory	64GB					
Power Supply						
Battery	2×18650 (Built-in battery) + 1×18500 (External battery)					
External power supply	5V-2A, 9V-2A (USB-C)					
Operating time (at t=22°C)	12h					
Physical Characteristics						
Weight	900g	950g	990g	900g	950g	990g
Dimension, mm	72×89×375	72×89×390	72×89×380	72×89×375	72×89×390	72×89×380
Environmental Compatibility						
Ingress protection rating	IP67					
Operating temperature	-20°C-+50°C					
Storage temperature	-40°C-+70°C					
Shock resistance	7000J					
Laser Rangefinder						
Safety class for laser equipment according to IEC 60825-1:2014	/		1	/		1
Measuring range	/		5-1200m	/		5-1200m
Measurement accuracy	/		± 1m	/		± 1m



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