LY SERIES

Thermal Imaging Sights

深圳市朗高特科技发展有限公司
SHENZHEN LONGOT TECHNOLOGY DEVELOPMENT CO., LTD

地址/Add：深圳市宝安区松岗街道松岗大道 7 号汉海达大厦 906
/906 Hanhaida Building, No.7 Songgang Avenue, Tantou
Community, Songgang Street, Baoan District, Shenzhen
电话/Tel：0755-29125651
邮箱/Email：longot@szlongot.com
官网/Web：www.szlongot.com

用户指南/User Guide   V1.0

LY 系列
LY Series Infrared | 热成像观察镜
Thermal Sights

Longot LY335 / LY350 / LY650
LY335LRF / LY350LRF / LY650LRF

DISCLAIMER

This product is prohibited for illegal use,including illegal hunting,military,chemical,biological or nuclear weapons,illegal privacy photographing,and other violations of laws and regulations.It is prohibited to transport goods prohibited by the United Nations,the European Union or the OSCE.The products are only sold in the place where the company is registered and cannot be exported.

Purchase of this machine is equivalent to accepting the constraints of this statement,equivalent to agreeing to sign the relevant liability statement.In case of any violation,the company shall not be held responsible.

LONGOTTECHNIC

Environmental influences

Note:Never point the lens of the device directly at intense heat sources such as the sun or laser equipment.The objective lens and eyepiece can function as a burning glass and damage the interior components.

Risk of swallowing

Caution:Do not place this device in the hands of small children.Incorrect handling can cause small parts to come loose which may be swallowed.

Safety instructions for use

-Do not expose the device to fire or high temperatures.
-The battery capacity decreases when operated in a cold ambient temperature.This is not a fault and occurs for technical reasons.
-Always store the device in its carrying bag in a dry,well-ventilate space.For prolonged storage,remove the batteries.
-Do not expose your device to extreme temperatures lower than20℃and higher than+50℃.
-The product shall only be connected to a USB Type C interface.
-If the device has been damaged or the battery is defective,send the Device to our after-sales service for repair.

Model	LY335	LY350	LY650	LY335LRF	LY350LRF	LY650LRF
Detector Specifications						
Detector Type	Uncooled vanadium oxide	Uncooled vanadium oxide	Uncooled vanadium oxide	Uncooled vanadium oxide	Uncooled vanadium oxide	Uncooled vanadium oxide
Resolution, Pixel	384×288	384×288	640×512	384×288	384×288	640×512
Pixel Size, μm	12μm	12μm	12μm	12μm	12μm	12μm
Optical Characteristics						
Objective lens	35 mm	50 mm	50 mm	35 mm	50 mm	50 mm
Magnification, x	3.0x	4.3x	2.6x	3.0x	4.3x	2.6x
Digital zoom, x	1x、2x、4x、8x	1x、2x、4x、8x	1x、2x、4x、8x、16x	1x、2x、4x、8x	1x、2x、4x、8x	1x、2x、4x、8x、16x
Min Focus Distance, M	5 m	5 m	5 m	5 m	5 m	5 m
Exit pupil distance, mm	45 mm	45 mm	45 mm	45 mm	45 mm	45 mm
Exit pupil Diameter, mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm
Field of View (H × V), degree	7.53°×5.65°	5.28°×3.96°	8.78°×7.03°	7.53°×5.65°	5.28°×3.96°	8.78°×7.03°
Diopter, D	-5D~+3D	-5D~+3D	-5D~+3D	-5D~+3D	-5D~+3D	-5D~+3D
Identify distancese, m (Target size: 1.7m×0.5m)	924 m	1319 m	1319 m	924 m	1319 m	1319 m
Rangefinder Characteristics						
Wavelength, nm	/	/	/	905 nm	905 nm	905 nm
Measuring Range, M/Y	/	/	/	1000 m	1000 m	1000 m
Measurement accuracy, M/Y	/	/	/	①5m~400m,±1m;②＞400m,±(d*0.3%)	①5m~400m,±1m;②＞400m,±(d*0.3%)	①5m~400m,±1m;②＞400m,±(d*0.3%)

Model	LY335	LY350	LY650	LY335LRF	LY350LRF	LY650LRF
Electrical Characteristics						
Display Type	OLED	OLED	OLED	OLED	OLED	OLED
Resolution, pixels	1024×768	1024×768	1024×768	1024×768	1024×768	1024×768
WiFi Frequency,GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz	2.4GHz
Video/Photo	mp4/jpg	mp4/jpg	mp4/jpg	mp4/jpg	mp4/jpg	mp4/jpg
Built-in memory，GB	16G-64G	16G-64G	16G-64G	16G-64G	16G-64G	16G-64G
Power Supply，V	3~4.2V	3~4.2V	3~4.2V	3~4.2V	3~4.2V	3~4.2V
Battery type*QTY/Capacity	16340 Battery x 4/1300mAh	16340 Battery x 4/1300mAh	16340 Battery x 4/1300mAh	16340 Battery x 4/1300mAh	16340 Battery x 4/1300mAh	16340 Battery x 4/1300mAh
External power supply，V	5V 2A	5V 2A	5V 2A	5V 2A	5V 2A	5V 2A
Others Characteristics						
Operating time	6hrs（T=22℃)	6hrs（T=22℃)	4.5hrs（T=22℃)	6hrs（T=22℃)	6hrs（T=22℃)	4.5hrs（T=22℃)
Storage temperature, ℃	-30℃~+60℃	-30℃~+60℃	-30℃~+60℃	-30℃~+60℃	-30℃~+60℃	-30℃~+60℃
Body material	Aluminium alloy	Aluminium alloy	Aluminium alloy	Aluminium alloy	Aluminium alloy	Aluminium alloy
Degree of protection,IP code	IP67 (IEC60529)	IP67 (IEC60529)	IP67 (IEC60529)	IP67 (IEC60529)	IP67 (IEC60529)	IP67 (IEC60529)
Dimension（L*W*H)	231x61x59mm	238x74x62mm	241.1x75x64.6mm	231x90x67mm	238x90x67mm	238x90x67mm
Weight(without battery), g/oz	595g	645g	645g	680g	773g	773g

Packing instructions

1, portable bag 2, host 3, guide rail 4, wrench 5, screw 6, mirror cloth 7, charger 8, data cable

Intended use

The device is intended for displaying heat signatures during nature observation,remote hunting observations and for civil use.This device is not a toy for children.

Use the device only as described in this instruction manual.The manufacturer and the dealer accept no liability for damages which arise due to non-intended or incorrect use.

Note:Max.detection range of an object meaning:1.7x1.2 meter target in natural night conditions.

The distance is affected by temperature,humidity, weather ,and environment etc.

Operation time:The battery will have a margin of error according to. Different brands ,battery capacities,as well as environmental factors such as the influence of temperature,humidity,weather and soon. Please refer to reality as final.

Packing instruction

①bag ②device ③rail ④spanner ⑤screw ⑥lens cloth ⑦ charger ⑧data cable
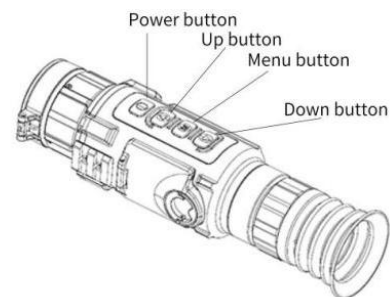
Button	Button explain
Power button	Long press to turn on/off,power-on status:short press to sleep/wake up.
Up button	Observation interface:short press to zoom in;Press and hold to refresh.
Menu button	Short Press:Enter shortcut menu Long press:Enter main menu
Down button	Observation interface:short press to take photos;Press and hold to start recording/stop recording.Video recording is not supported when the device is connected to the computer.
button+Menu button	Enable/disable reticent
Menu button+Down button	Press short to turn on/off laser ranging,and it will automatically turn off after 15times of continuous measurement.(default continuous ranging) When switching to single ranging,press short to open ranging,and it will automatically close after3 seconds.

Battery Installation
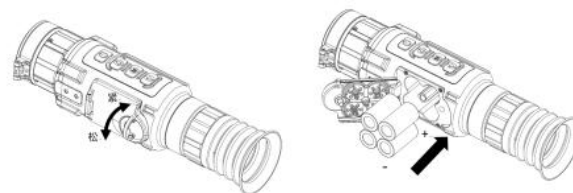
As is shown in the picture:Turn the battery cover anticlockwise to loosen it and insert batteries into the battery compartment with the positive mark inward.Finally,turn the battery cover clockwise to tighten it.

When the batteries are insufficient,please change the batteries in time or use the USB cable to supply the power by connecting the power.When the device connects to external power by USB,the device will prefer using USB to supply power.Must be pulled out the batteries to avoid the batteries and device loss if don't use the device in a longtime.

Rail Installation
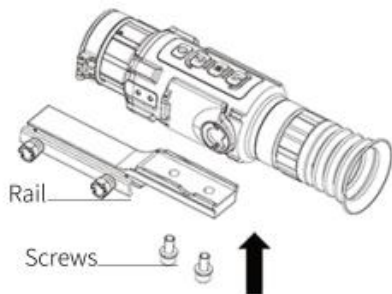
Rail

Screws

Install the device to the rail as the arrow shows.Make the rail hole align with the screws and use the Allen key to insert the screws,and tighten them.

Power On/Off

Please do not open the objective lens cover during power on until an image appears on the screen.

Power On:When the battery is sufficiently charged,long press power button to power on the device.

Power Off:When the device is turned on,long press power button to power off the device.

When the device is turned on,short press power button to enter stand by mode.Short press power button again to wake up the device.

Dioptre

Open the lens cover,hold the device or fix the device in the equipment.Make sure the eyepiece covers your eye and watch the image.Adjust the focus ring until the text or image is clear.
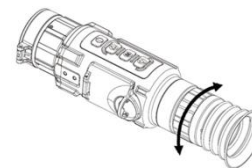
Shortcut Menu

In the observation interface,short press menu button to show the shortcut menu.

Short press up button or down button to adjust contrast.

Long press menu button to save settings and exit.

Short press menu button to configure the selected function

Long press menu button to save settings and exit.

Palettes

Switching the palettes can improve the definition of image details.Different palettes can highlight different color.In the same palettes,the color of target does change with temperature.

Proper palettes can accurately orient targets for getting information sufficiently.

Short press menu button to go to the shortcut menu.

Short press up button or down button to select 🎨 (Palettes)and short press menu button to enter the setting interface.

Short press up button or down button to switch palettes.

Long press menu button to save setting sand exit.

Contrast

The contrast level is higher,the chiaroscuro and colors contrast is more obvious.users can adjust the contrast to highlight different targets in complex environments.

Short press menu button to go to the shortcut menu.

Short press up button or down button to select 🌓 (Contrast)and press menu button to enter the setting interface.

Brightness

The higher the value of brightness is,the brighter the image is.When the main interface is too dark,users can adjust the brightness to adjust the clarity of image displayed.

Short press menu button to go to the shortcut menu.

Short press up button or down button to select (Brightness)and press menu button to enter the setting interface.

Short press up button or down button to adjust ☼ brightness.

Long press menu button to save settings and exit.

PIP

PIP is the image of zooming in the center of scene partially and overlapping in the preview interface,users can open the PIP to check the details of critical image.

Short press menu button to go to the shortcut menu.

Short press up button or down button to select (PIP)and press menu button to enter the setting interface.

Ranging settings

Press the"Menu Key"briefly in the preview interface to bring up the shortcut menu.

Press "Up"or"Down"briefly to move to the ranging setting,and"Menu"briefly to switch the menu.

Secondary/continuous.

Press and hold"Menu Key"to save and exit.

Reticent Memory

It is necessary to turn on the display setting behind the division.For details,please refer to the key operation.

When there are many people sharing the equipment or there are multiple requirements for split line configuration,you can choose different ones.

The dividing line group,each dividing line group can be configured with different types of dividing lines.

Press the "Menu Key"briefly in the preview interface to bring up the shortcut menu.

Press "Up"or"Down"briefly to move to partitioned storage,and press"Menu"briefly to switch.

A~E cycle.

Press and hold "Menu Key"to save and exit.Press and hold "Menu Key"to save and exit.

Reticule setting

Press the"Menu Key"briefly in the preview interface to bring up the shortcut menu.

Press "Up"or "Down"to move to the division setting,and "Menu"to enter the division setting.

1.Zoning type

Press"Up"or"Down"briefly to move to the division type,and"Menu"briefly to switch between 1-7 types.

2.Reticent colors

Press "Up"or"Down"briefly to move to the Reticent color,and"Menu"briefly to switch

3.Reticent calibration

Press"Up"or"Down"briefly to move to graduation calibration,and press "Menu"briefly to enter graduation calibration.

Fix the equipment firmly,press the"menu key" shortly after firing,and turn on the screen to freeze. Turn on and observe the impact point on the frozen screen (if you can't see the impact point,it is

recommended to insert a fragrant heat source at the impact point),select the calibration X 〔X=0〕 axis by pressing the Up key or the Down key,press the Up key or the Down key to translate the dividing line left or right to the impact point,and click the Menu key to pass the Up key or the Down key.(You can also directly move the reticent to the impact point through the X and Y axes to complete the calibration)

4.Reticent zeroing

Press the "Up"or "Down"key briefly to move to the Reticent and return,and press the "Menu Key"pop-up window briefly to confirm whether it returns to the center point.

Press and hold "Menu Key"to save and exit.

Main Menu

The status bar is the auxiliary information superimposed and displayed at the bottom of the preview screen of the equipment.After it is turned on,you can know the information of the memory,power,function activation and so on of the device at any time.

Press and hold "Menu Key"under the observation interface to bring up the main menu.

Press"Up"or"Down"to move to(🌀 "Status Bar")and "Menu"to turn it on/off.

Press and hold "Menu Key"to save and exit.

Flat Field Correction

Flat Field Correction can correct non-uniformity of display.Users need to refresh the image in time to keep the preview interface clean.And the display image is refreshed or repaired to optimize the quality of preview interface and image details.

Long press menu button to go to the main menu.

Short press up button or down button to select 🌀(FFC),and press menu button to confirm.

-Manual FFC:In the live view interface,long press up button to correct the non-uniformity of display.

-Auto FFC:The device performs FFC automatically according to the set schedule when the device is turned on.

-External FFC:Cover the lens cover,long press up button to correct the non-uniformity of display.

Video Output

The device is connected to the display screen by cables,which can output video images,and it is convenient to expand the display and zoom in to view the details of the images.

The cable has been connected before the equipment is started,and he interface of the equipment is forbidden to be hot-swapped.

Press and hold "Menu Key"under the observation interface to bring up the main menu.

Press "Up"or"Down"to move to ▶ ("Video Output")and "Menu"to turn it on/off.

Press and hold "Menu Key"to save and exit.

Defective Pixel Correction

It can correct the defective pixels(bright spots or dark spot on the screen)on the screen.It makes sure the image Integrity and clarity.DPC is only supported in the white hot mode.

Long press menu button to go to the main menu.

Short press up button or down button to select ⊡ (DPC),and short press menu button to enter DPC setting interface.

Press the short menu key to switch the moving direction of the cursor's X/Y axis;press the up key or the short menu key to switch the moving direction of the cursor's X/Y axis;press the up key or the down key to move the cursor,move the center point of the correction cursor to the position of the blind pixel,and click the power key to add the blind pixel.

long press "Menu Key"to save and exit.

Repair one blind pixel at a time,and batch repair is not supported.

Note:Zoom in on the selected position of the correction cursor at the bottom right of the screen,and you can see the blind pixel more clearly.Long press menu button to exit.

Format

Please format the photos and videos in the memory when the memory is cleaned

Before cleaning the memory,please make sure that important media files have been backed up.Please refer to photo and video export for related operations".

Press and hold the"Menu Key"in the preview interface to bring up the main menu.

Press "Up"or"Down"to move to(⌷ "Format",and "Menu"to popup two.

Confirm the second window,select Yes/No first.

Operation result:Operation result:The device clears the built-in memory of e MMC,and the pop-up window prompts "Format succeeded"Press and hold "Menu Key"to save and exit.

Wi-Fi

The device support WiFi connection.It can build the wireless connection with cellphone and mobile equipment by WiFi.

Long press menu button to go to the main menu.

Short press up button or down button to select 📶 (Wi-Fi),and short press menu button to enter the Wi-Fi setting interface.

Turn on the WiFi function of the mobile phone and select the device network to connect.

Wi-Fi name:Wlan+device serial number

Wi-Fi password:12345678

Language

Long press menu button to go to the main menu.

Short press up button or down button to ⚙ select (Setting),and press menu button to enter the setting interface.

Short press up button or down button to 🌐 select (Language)to enter the configuration interface.

Long press menu button to save settings and exit.

Time

Long press menu button to go to the main menu.

Short press up button or down button to select ⚙ (Setting)and short press menu button to enter the setting interface.

Short press up button or down button to select 🕐 (Time Settings)and short press menu button to enter the setting interface.

Time Setting Description

Setting type	Setting description
Time Display Setting	Short press menu button to enable/disable time display on the top right of the interface.
Time and date Setting	Press the short menu key to switch "hour/minute/second"and"year/month/day",Press "Up"or"Down"to adjust the value.

Long press menu button to save settings and exit.

Voltage

Long press menu button to go to the menu.

Short press up button or down button to select ⚙ (Setting),and short press menu button to enter the setting interface.

Short press up button or down button to select Voltage,and short press menu button to confirm.

Short press up button or down button to select 🔋 "3.0V" or "3.7V" Long press menu button to save settings and exit.

Restore Device

Users can one-click restore the device's parameter to ex-factory status,please cautiously use.

Long press menu button to go to the menu.

Short press up button or down button to select ⚙ (Setting),and short press menu button to enter the setting interface.

Short press up button or down button to select 🔧 (Restore),and short press menu button to confirm.

Short press up button or down button to select Yes

Long press menu button to save settings and exit.The device will restore to defaults according to the prompt.

The result of operation:the interface will display a pop-up to remind initialization successfully completed after the parameter of device restores factory settings successfully.The device reboots.

Device Information

Users can check the model number,version and SN number and so on.
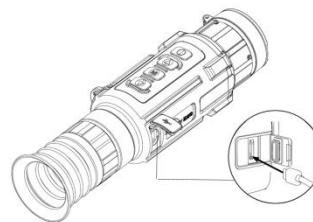
Long press menu button to go to the main menu.

Short press up button or down button to select ⚙ (Setting),and short press menu button to enter the setting interface.

Short press up button or down button to select ⓘ (Version),and short press menu button to enter the setting interface.

Long press menu button to save settings and exit.

Cable Connection and Files Exporting

Please do not connect with PC if the device is with batteries.

1.open the gland of the Type-C interface,and align the Type-C interface to access the USB data cable.pass

The Type-C interface is connected to the USB data cable,connecting the device with the computer,and can view or export the videos and photos in the device.It can also directly supply power to the device by connecting the external power supply.When using the cable to connect the equipment,do not directly pull the cable,or it may damage the cable or cause the line failure,which may affect the normal use.

2.Export of photos and videos

You can export and view the videos and photos saved in the device only after you turn on the WIFI.

Use USB data cable to connect the device to the computer.

Open the "DCIM"folder of the disk corresponding to the device,and enter the folder with photos or videos.

Select the video files or photos that need to be exported and copy them to the computer.

The folder name is in the form of year+month.Example:The photo or video recording time is June 2022,and the folder name is in the form of year+month.For example,if the photo or video recording time is June,2022,the corresponding folder name is"202206",which is subject to the system time of the equipment.

After service

Thank you for choosing this product.In order to fully enjoy the perfect after-sales service support,please carefully read the instructions of this product warranty card after purchase and keep it properly.

We will provide after-sales service according to the manufacturer's after-sales service policy,including:

1. The warranty period starts from the first purchase date of the product,and the purchase date is subject to the invoice date of the purchased product.If there is no valid invoice,the warranty period will be calculated from the product delivery date.If the invoice date of the product is later than the actual delivery date of the product,the warranty period starts from the actual delivery date of the product.The warranty period shall be implemented according to the after-sales service policy of the manufacturer.

2.No warranty coverage:

a.Exceeding the specified warranty period;

b.Failure or damage caused by misuse,accident,modification,improper physical or operating environment,natural disasters,power surges and improper maintenance or storage;

c.Failure or damage caused by third-party products,software,services or behaviors;

d.Normal decolonization,wear and consumption during product use;

e.The product can run normally without interruption or error;

f.Data loss or damage;

g.Consumable parts,such as batteries or protective films,which are consumed with time,unless it is a failure due to material or process defects;

h.The valid warranty certificate and valid original purchase invoice or receipt of the product cannot be produced,the original serial number label of the product is altered,replaced or torn,the product has no serial number,or the product model or number on the warranty certificate is inconsistent with the actual product;

i.If the product is not used according to the attached instructions and operation manual,or the product is not used in the intended function or environment,the manufacturer determines that you violate the operation manual after confirmation;

j.The completeness and appearance of the products are not guaranteed,so you should inspect the products on the spot when accepting them and raise objections to any discrepancies.

3.The manufacturer is not responsible for the extra promises made to you by the seller or any other third party,and you should ask these third parties to honor them.

1.With this card,you can enjoy the free warranty with in the warranty period and the preferential services outside the warranty period.

2.This warranty card is only applicable to the products in this warranty card,and it is valid after being stamped by the sales unit

3.Product warranty terms of special projects shall be subject to the specific purchase and sale contract.

Safety precautions

1.Use of the product must be in strict compliance with the local electrical safety regulations.

2.Use the power adapter provided by qualified manufacturer.Refer to the product specification for detailed power requirements.It is recommended that equip with independent power adapter for each device.(DO NOT connect multiple devices to one power adapter,to avoid over-heating or fire hazards caused by overload.)

3.If smoke,odor,or noise arises from the device,immediately turnoff the power,unplug the power cable,and contact the service center.

4.DO NOT place the battery near heating or fire source.Avoid direct sunlight.

5.If the device equips with build-in removable battery,please use proper battery.Improper use or replacement of the battery may result in explosion hazard.The battery compartment requires to be closed after installation or taken away.

6.DO NOT place the battery in the reach of children.

7.It is recommended to reboot the device every 2 hours when using it to ensure the device performance.

8.DO NOT drop the things on the device or vibrate device.DO NOT expose the device to high electromagnetic radiation.

9.DO NOT install the device in a place where surface vibrates or is vulnerable to shock(ignore it may cause the device damage)

10.DO NOT use the device in extremely hot,cold,dusty,corrosive,saline-alkali or humid.Refer to the product specification for detailed requirements.

11.Please close the lens cover to protect the image sensor when the device is not in use.

12.The device should place in an airy and no erosive gas environment.DO NOT place it in direct sunlight,insufficient ventilation or near heat source environment(e.g.:heater,radiator).ignore this item may cause a fire risk.

13.If the device should be stored for a longtime,it should be checked by connecting to power supplies every 6 months.And the electric time can not be less than3h.

14.Please clean the lens with a dry soft cotton cloth or lens wiping paper to avoid scratching the lens.

15.Users acknowledge that the nature of internet provides for inherent security risks,and our company shall not take any responsibilities for abnormal operation,privacy leakage or other damages resulting from cybersex-attack,hacker attack,virus inspection,or other internet security risks;however,our company will provide timely technical support if required.

16.Users may face network security problems when the device connects to the Internet,please strengthen the protection of personal information and data safety.When you find your device has network security problems,please contact us in time.

17.Keep all wrappers after unpacking them for future use.In case of any failure occurred,you need to return the device to the factory with the original wrapper.Transportation without the original wrapper may result in damage on the device and the company shall not take any responsibilities.