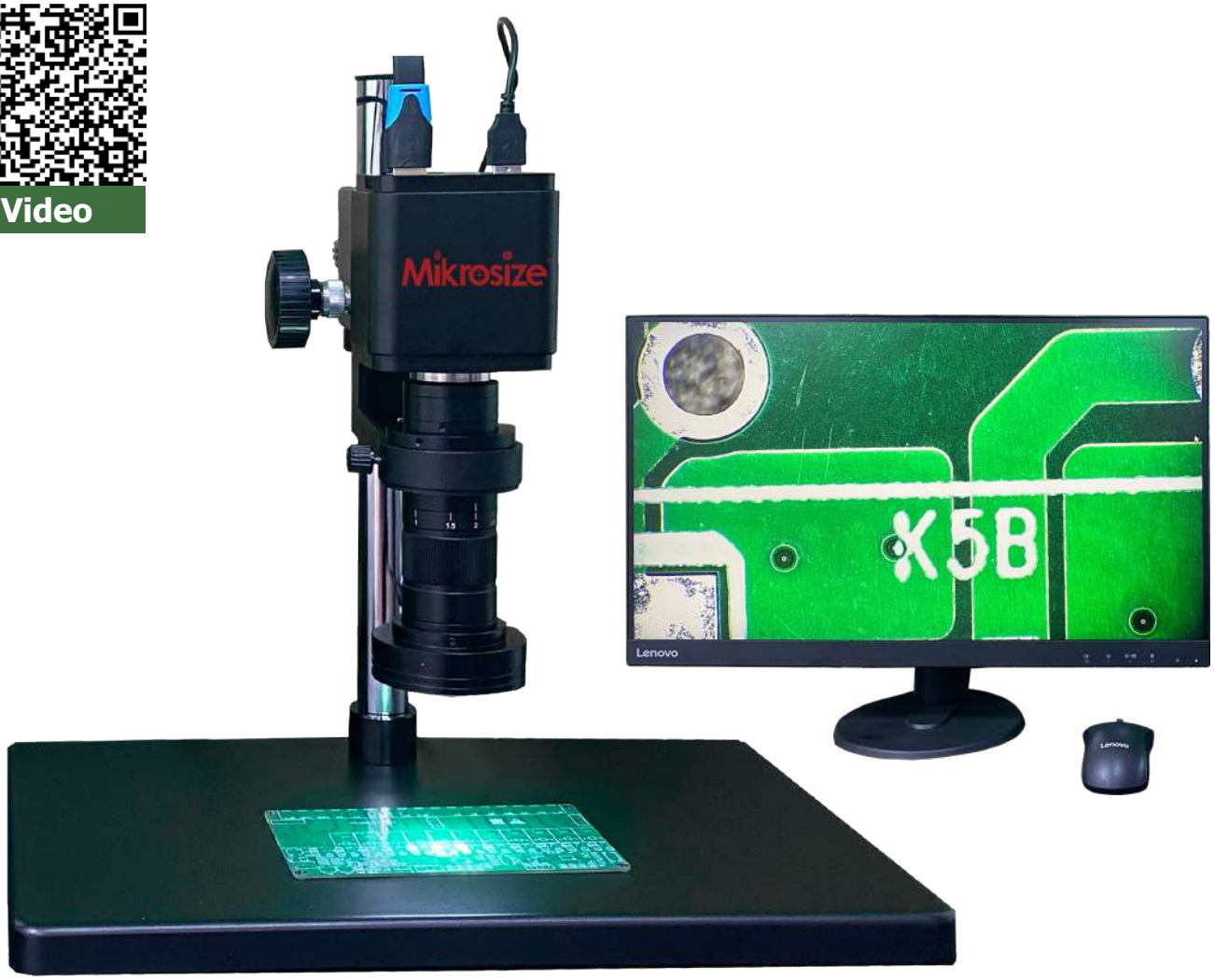
Mikrosize®

iVideo-80

Digital Video Microscope

Video



Contact us

Mikrosize Precision Instrument Co.,Ltd
A-4035 RuiFeng Business Expo, Wuhu City, China , 241000.
Web:www.mikrosize.com
Email: mikrosize@mikrosize.com

Product Features and Application

iVideo-80 video microscope has remarkable advantages. it uses the Sony Exmor back-illuminated CMOS sensor providing clear imaging. It can adaptively switch between 4K and 1080P, and has a powerful ISP function that can optimize the images. In terms of applications, its multiple interface outputs make it convenient to connect to a variety of devices. With rich software functions and support for multiple languages, it can be widely applied in fields such as machine vision inspection, industrial inspection, scientific research, and education.

Product Features

- back-illuminated CMOS sensor, adaptively switch between 4K and 1080P, providing clear imaging and high resolution
- It has multiple interface outputs such as HDMI and USB, offering various connection methods and being adaptable to a variety of devices for flexible use.
- Powerful ISP function, supporting multiple adjustments such as automatic/manual exposure and white balance to optimize the image
- Powerful software functions and convenient operation, it supports multiple languages for different users.
- It supports storage via SD card and USB flash drive, with the SD card priority.Convenient storage and ensures data security.
- Camera has strong adaptability to working environment, working temperature ranging from -10℃ to 50℃ and a humidity of 30% to 80% RH.

Product Application

- high-definition imaging and measurement functions, it can accurately detect product defects.
- Industrial inspection field. Various image adjustment functions, assisting in the inspection of industrial parts.
- Scientific research. High resolution and powerful functions provide clear images for scientific research observations
- Education field. It is convenient for teachers to display microscopic structures and assist in the implementation of teaching activities
- Video collection of stereo microscopes, recording the experimental process ,facilitating analysis and research.
- Image collection of biological microscopes, meeting image acquisition in biological research and teaching.

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Product Structure

1.Camera **2.Adapter Lens**
3.Continuous Zoom Monocular Objective Lens
4.Continuous Zoom Ring Light Source
5.Special Bracket for Continuous Zoom Monocular Objective Lens
6.Column **7.Base**

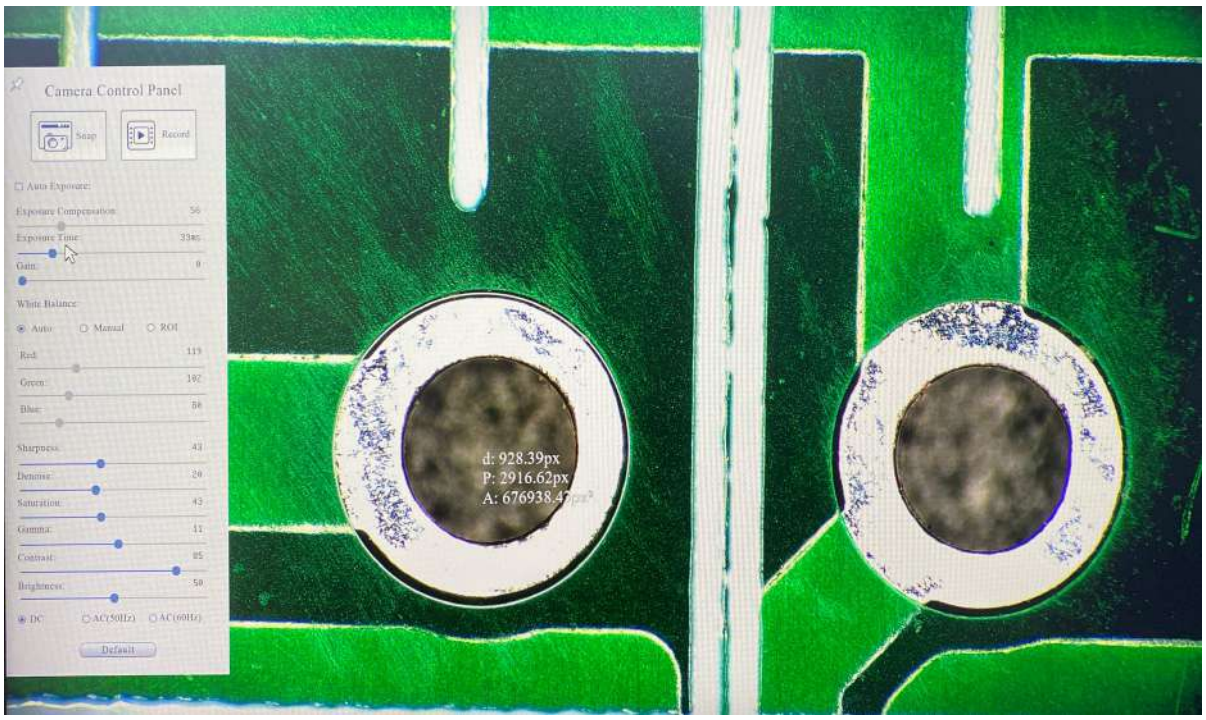
Camera

Continuous Zoom Monocular Objective Lens

Continuous Zoom Ring Light Source

Special Bracket for Continuous Zoom Monocular Objective Lens

Software Function



Camera Control Area

●The capture function can grab images and save them to SD card, which is used to record key scenes such as experimental moments and product details.

●The video recording function can record the content of video window and store it in SD card, which is suitable for recording dynamic processes such as technological processes and operation demonstrations etc.

●The automatic exposure function can automatically adjust the exposure time according to working environment, and it performs excellently in industrial inspections under complex lighting conditions and outdoor field shootings.

●The white balance function has both automatic and manual modes, which can correct color deviations and make the imaging colors of biological specimens and artworks more accurate.

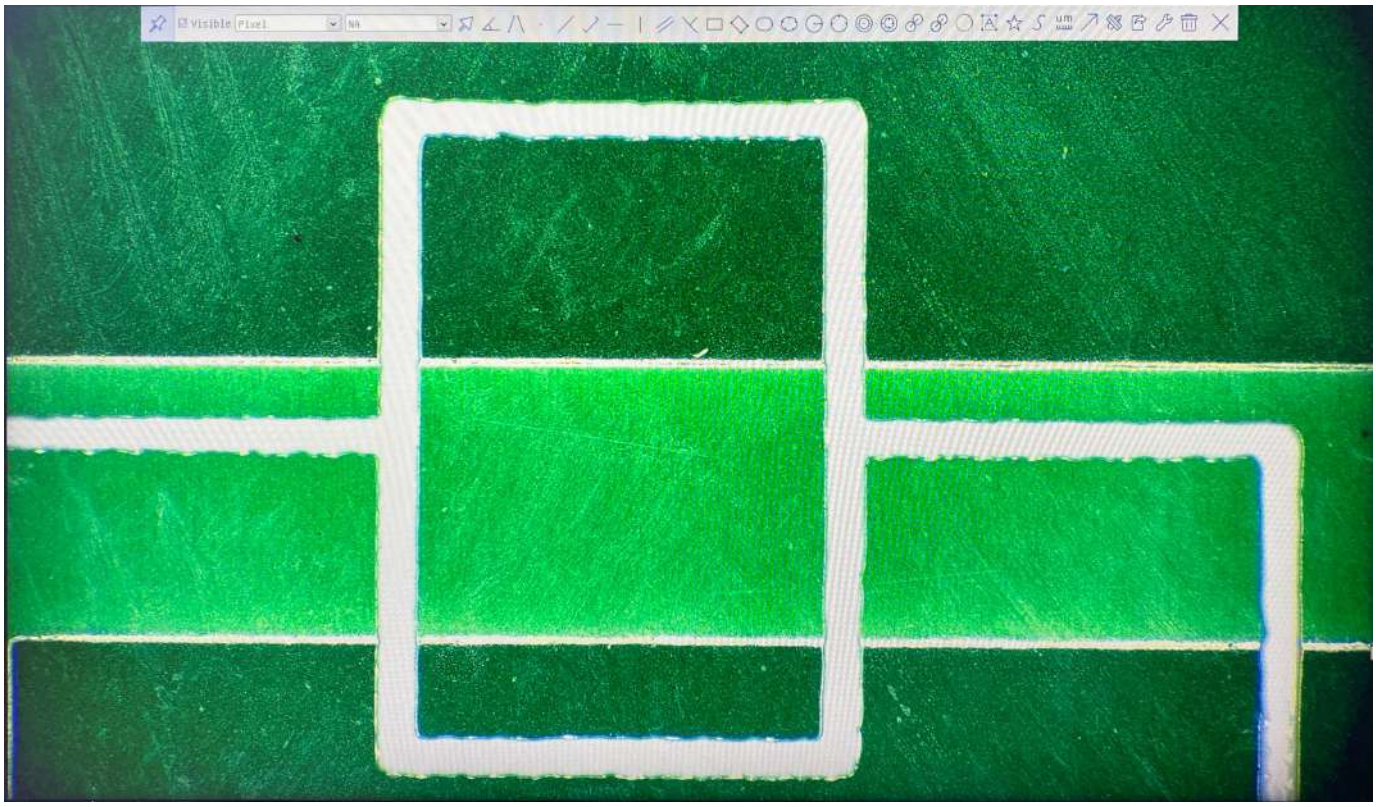
●The gain function can adjust the analog gain of the sensor. In low-light monitoring and night shooting scenarios, the video brightness can be adjusted as needed.

●The sharpening function can enhance the clarity of the video, and it is used in scenarios where details need to be highlighted, such as observing precision parts and tiny text symbols etc.

●The noise reduction function can adjust the hardware noise reduction level, and it is suitable for improving the quality of the video image in noisy environments or under high ISO settings.

The contrast adjustment is achieved by dragging the slider, which can make the light and dark contrast of the image more appropriate and optimize the visual presentation effect.

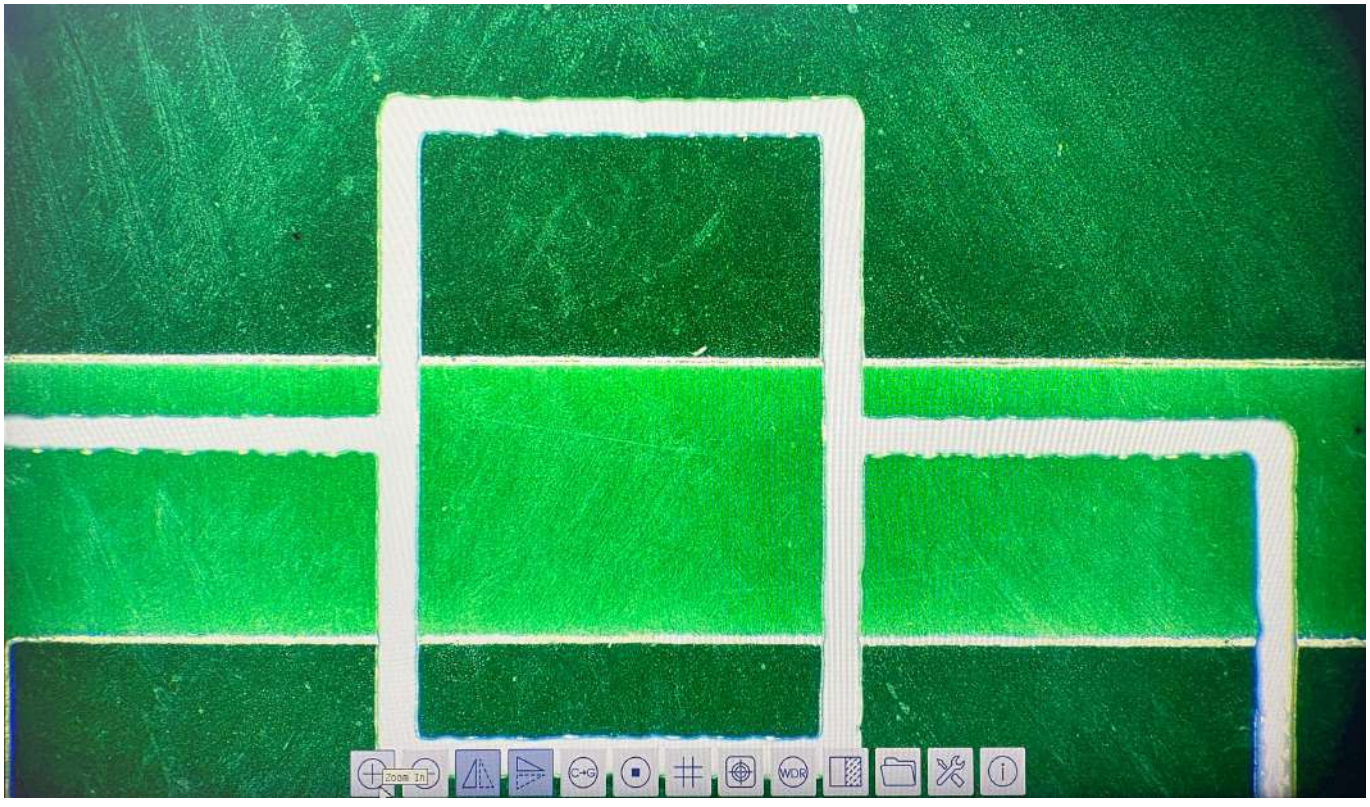
Software Function



Measuring Function

- Measurement/Fixed Mode Switch: Allows users to switch between measurement states, facilitating flexible transitions between measurement operations and fixing the screen.
- Unit Selection: Enables users to choose measurement unit. By coordinating with actual magnification ratio, it ensures the measurement accuracy in non - pixel units, suitable for various scenarios.
- Angle Measurement: Supports angle measurement using four - point and arbitrary line methods, which is of great significance in the angle detection of mechanical parts and building structures.
- Line Drawing: Users can draw points, three - point line segments, horizontal lines and various lines , which are used for dimension marking, contour description, and auxiliary measurement analysis.
- Graphic Drawing: Capable of drawing rectangles, ellipses, circles and other graphics, it can accurately depict and measure target shapes, with a wide range of applications.
- Annotation Tools: Include text annotation, arrow marking, etc., which are used to add explanatory notes to measurement results, facilitating record ,communication, and analysis.
- Calibration Function: Establishes the corresponding relationship between measurement units and pixel sizes, ensuring measurement accuracy and serving as the basis for precise measurement.
- Data Export: Allows users to export measurement data in CSV format, facilitating data storage ,further analysis and processing, improving work efficiency.

Software Function



Camera Comprehensive Control Area

- Window Zoom: The video window can be zoomed in or out, which is convenient for viewing details or the overall picture, meeting different observation needs.
- Image Flip: It supports horizontal and vertical flips, making it convenient to correct the image during shooting from a special perspective or image adjustment.
- Image Operations: These include color-to-gray conversion, video freezing etc., which are beneficial for highlighting features or freezing the frame, assisting in analysis and recording.
- Data Management: It enables browsing of images and videos in SD card, and also allows viewing of version information, facilitating data management and device maintenance.

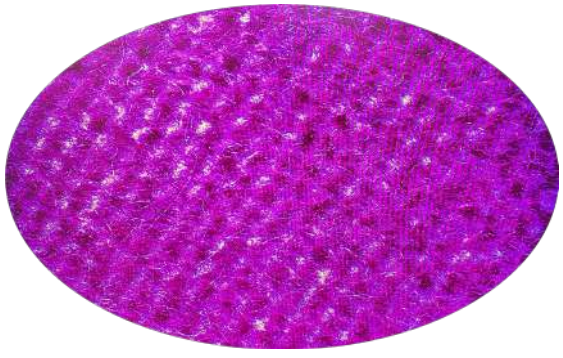
Camera

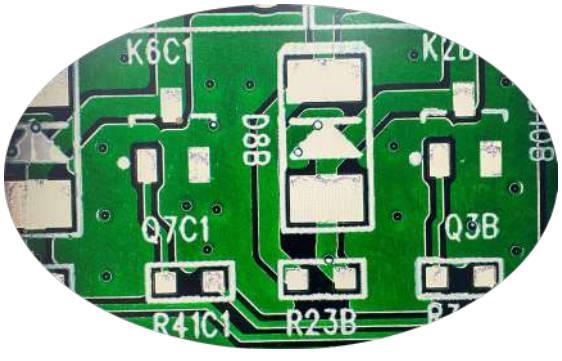
Camera Parameters	Sensor Size(mm)	Sony IMX334(C)1/1.8"(7.68x4.32)
	Pixel(μm)	2.0x2.0
	G - light sensitivity	505mv with 1/30s 0.1mv with 1/30s
	FPS Resolution	30@3840*2160(HDMI) 20@3840*2160(USB)
	Sampling Average	1x1
	Exposure Time (ms)	0.04-1000

Camera Panel Interface

1.USB Mouse: The USB mouse interface is used for controlling the built-in software.
2.USB Video: Connect to the computer terminal via a USB cable to achieve video image transmission; connect to the terminal via a USB cable to transmit MJPEG real-time images.
3.HDMI: Complies with the HDMI1.4 specification, and is used for 4K/1080P video image output. It supports the automatic resolution switching of the monitor (switching between 4K and 1080P); supports the HDMI1.4 protocol: 30fps@4K or 30fps@1080P.
4.DC12V: A 12V/1A Power Jack.
5.SD: Complies with the SDIO3.0 specification and is used for storing captured videos and images. When both SD card and USB flash drive are present, the SD card is preferentially used.
6.USB: Connect a USB flash drive, used for storing captured videos and images.
7.LED: The LED status indicator light.
8.ON/OFF: The power switch.

Items Inspection

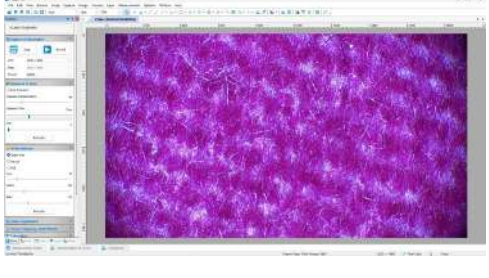


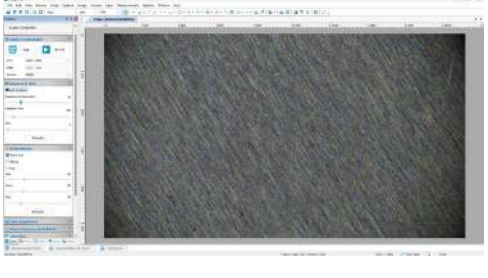


- Observing fabrics: High-resolution imaging, it can clearly display the interwoven state of fabric fibers and texture details. The color mode is adjustable, accurately restoring the true colors of fabrics.
- Observing wood grains: Rich images in details, and clearly present the direction of wood grains. It supports zooming in and out of the picture, making it convenient to observe the wood grains from overall view to local details.
- Observing metal surface: Powerful ISP function optimizes the images, clearly showing microscopic defects such as scratches, cracks, and particles on the metal surface. With multiple types of line drawing and measurement tools, which can accurately measure defects size on the metal surface.
- Observing circuit board: It can clearly present the component markings and circuit details on the circuit board, which is convenient for detecting potential problems such as soldering points quality and circuits connectivity

Software Connecting

Users can connect to computer via USB and use the software on the computer. With this software, users can perform functions such as shooting, recording, measuring, and generating reports.





The main functions of the software include basic functions such as image acquisition and display, measurement and annotation, image processing, 3D reconstruction and analysis, data statistics and analysis, as well as specific functions like multi-channel analysis for color or fluorescent images. The software also has the functions of generating Word reports and printing.

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Technical Specification

Magnification Ratio (27-inch Monitor)		54.3X-349.4X
Objective Lens		0.7X~4.5X The back focal length is adjustable, and the magnification ratio can be fixed.
LED ring light source		Maximum Diameter is 65mm. Central Diameter is 40mm.
bracket	**Column Aperture**	25mm
	Lens Aperture	50mm
	Apertures Central Distance	140mm
	Lifting Range	62mm
Support	**Base Size**	380*248*23 mm
	Column Height	340mm
	Column Diameter	25mm

Standard Delivery

Name	Qty	Photo
Camera	1 pc	
Power Adapter	1 pc	
Power Adapter for LED Light Source	1 pc	
LED Light Source	1 pc	
USB Mouse	1 pc	
HDMI Cable	1 pc	
2M USB 2.0 Cable	1 pc	
CD (Drivers and Application Programs)	1 pc	

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Optional Delivery

Optional Delivery	SD card (With a Capacity of More Than 16GB)
	Focus - adjustable Eyepiece Tube Adapter
	Fixed Eyepiece Tube Adapter
	Micrometer
	Adapter Ring for Eyepiece Tube With a Diameter of 30mm
	Adapter Ring for Eyepiece Tube With a Diameter of 30.5mm