PORTABLE LCD+USB MICROSCOPE
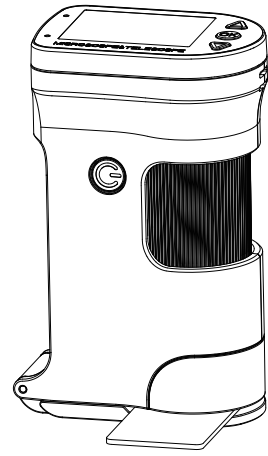
User's Guide

Welcome To Use

Thanks for using our portable digital microscope.
Please read the manual carefully and it will be helpful for you to use this digital microscope better.

Product Features

This product is our brand new portable digital microscope with high performance and cost effective.

● Adopt color LCD screen, observe directly, easy to use;
● 1080P30 design, no lag, no smear, fluent HD;
● Professional image processing DSP, 3D de-noise, restore colors and details really;
● Built-in HD lens, have microscope and telescope function（1mm-10m);
● Rotating lens barrel design, precise focusing and smooth feeling;
● Built-in white LED design, simple operation and intuitive viewing;
● Built-in purple light design, can observe special objects such as banknote, watermarks;
● Support object stage for easy observation of coverslips, slides and other specimens;
● Support picture, video record and playback function;
● Support LCD+USB(UVC) output display;
● Support 4X~60X infinite magnification, clear and smooth;
● Support functions such as exposure compensation, sharpness、color、image adjustment etc;
● Support 4GB ~64GB TF card;
● Powered by 18650 lithium battery, easy for outdoor use;
● Adopt TYPE-C 5V power supply, both positive and negative inserts are available;

With brand new algorithm, new design and new configuration, it will bring you new smooth and high-definition experience!

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Packaging & Accessories

●Digital microscope 1pcs   ●USB Cable   1pcs (optional)
●Slide   2pcs   ●Sling   1pcs
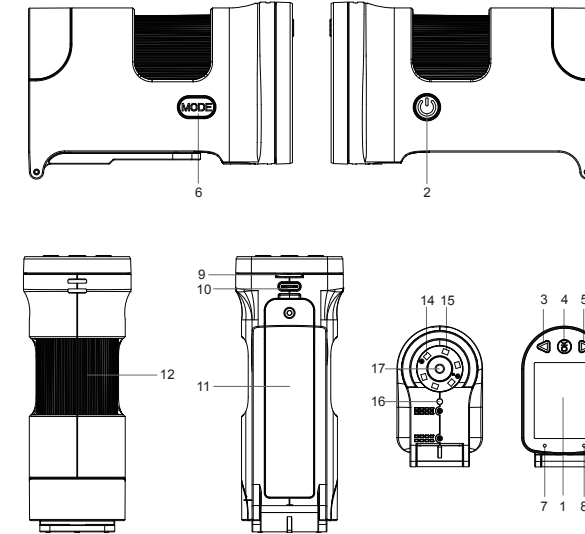●User Manual   1pcs   ●LithiumBattery(18650) 1pcs (optional)

Technical Specifications

● Screen size: 2.0 Inch;
● Screen resolution: 960x240;
● Image sensor: 1/4 inch (BSI);
● Pixel size: 3um x 3um;
● Image resolution: 2592x1944(5M)、3264x2448(8M)、4032x3024 (12M) etc;
● Video resolution: 1080P、720P、VGA;
● USB resolution: 720P30、VGAP30;
● Zoom rate: 4X~60X（Optical 4X-15X, Digital 1X~4X）;
● Language: English, Simplified Chinese, Traditional Chinese;
● White LED: Built-in 3pcs bright white LED, 3pcs bright purple light;
● USB interface: TYPE-C USB2.0;
● TF card slot: Max support 64 G TF card;
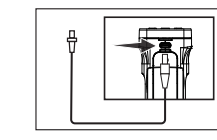● Working distance: 1mm-10m;

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Product Structure

1、Display	7、Power light	13、Object stage
2、Power button	8、Charge light	14、White LED
3、Up button	9、TF card slot	15、Purple LED
4、Confirm button	10、USB（TYPE-C）	16、Projector LED
5、Down button	11、Battery cover	17、Lens
6、Mode/Menu button	12、Lens barrel shaft	

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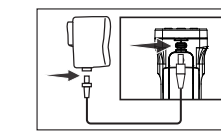## How To Use

1、Battery charging

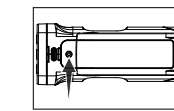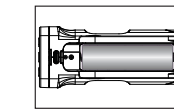Connect USB cable   USB cable connect with 5V adapter(not included)

1、Insert USB cable into the USB port of the digital microscope;
2、Put another side into the USB port of the power adapter;
3、Connecting adapter to AC power;
4、The red indicator will be on when charging;
The red indicator will be off when complete charge.

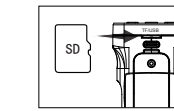Attention: Adapter output voltage is 5V, output current is 1A or above;

2、Install digital microscope

Use a Phillips screwdriver to take off the battery cover;   Install the battery and re-tighten the battery cover;   Insert TF card;

1、Use a Phillips screwdriver to take off the battery cover;
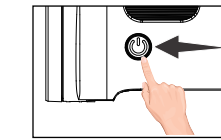2、Install the battery according to battery compartment indication and re-tighten the battery cover;
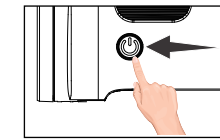
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3、TF card gold finger pointing down, insert TF card slot;

Attention: Use a Phillips screwdriver to remove and assemble the battery cover;

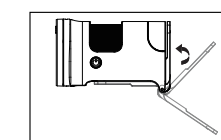### 3、Power on/off

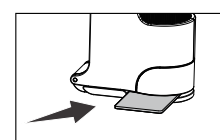Long press power button to power on   Long press power button again to power off

1、Long press power button, digital microscope will turn on, power light will be on to enter preview mode;
2、Use center point of monitor to aim the object, adjust lens focal length to make image clear;
3、Long press power button again to power off digital microscope;

Attention: In order to reach the best effect, please clean display screen before using.

4、Use the object stage

Turn the object stage to the bottom of the lens;   Place the slide on the object stage;

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1、Turn the object stage to the bottom of the lens, and the projector LED will turn on automatically;
2、Place the slide on the object stage, so that the observation object is aligned with the center of the object stage;
3、Adjust lens focal length to make image clear;

5、Use digital microscope

Zoom in / out function:
Press Down button to zoom out, press Up button to zoom in;

Photo/Video:
Press Confirm button can take photo/video;

Mode switch:
Long press Menu button, can switch photo、video、playback mode;

Menu function:
Long press Menu button, get into menu for setting of photo、video、playback、system etc parameters setting;

White LED brightness:
Short press Power button will circulate between white LED、purple LED、projector LED and power off;

USB connection:
Insert USB cable, can choose U disk model、camera mode、working mode.

For more details, please check Function and Menu Introduction section.

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Introduction of Functions

1、Zoom rate adjustment

Press UP or Down button to adjust the zoom rate and then reach the best display effect;
This device can be zoomed in and out infinitely between 1X~4X;

2、White LED switch

Short press Power button will circulate between white LED、purple LED、projector LED and power off;
The object stage will automatically switch to white Led or projector LED according to the position;

3、Photo and video recording function

Short press Menu button to switch photo mode, press Confirm button to execute the photo function;
Short press Menu button to switch video mode, press Confirm button to execute the video recording function;

Attention: Photo or video recording function need to insert TF card.

4、Playback function

Short press Mode button to switch to playback mode, can playback photos and videos;
Press Up button to get into previous file;
Press Down button to get into next file;
Press Confirm button to get into play or pause;
Press Menu button to enter playback menu;

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5、Image adjustment

This device provides rich image adjustment function to meet different application occasions;

Exposure compensation:
Adjust value of lightness to control the display brightness;

Attention:
When the White LED is insufficient or the environment is dark, the brightness may not be adjusted up.

ISO adjustment:
Can choose Auto、ISO100、ISO200、ISO400 to adopt to different brightness;

HDR range:
Start the HDR function , have better effect on dark detailed area;
Tips: Lower the lightness first, open the HDR, can avoid the high light reflector;

Image quality:
Can choose from Fine, Normal and Economy three kinds of image quality;

Sharpness adjustment:
Can choose image clarity from Strong、Normal、Soft to meet different application occasions;

Color effect adjustment:
Colorful→Display picture with multi color;
Black and white→Display the picture with white and black only to meet special application;
Retro→Display image in a retro way to meet some special applications;

Light source frequency:
Choose 50HZ or 60HZ according to the light source frequency of the current environment, which can effectively prevent image water ripples.

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6、Marking function

This device provides rich marking function for reference in the processing period.
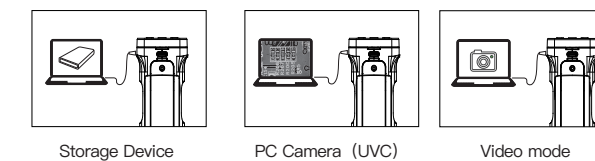Cross cursor: Off, Center and Cross 3 different shape optional.

7、Lower power detection

This device provides power indicator and low battery tips function.

1、When use battery, the bottom right corner will show the current battery level;
2、When use power adaptor, the external power supply will be displayed in the bottom right corner;
3、When in low battery, it will prompt that the battery is low and power indicator light will flash, then the device will be power off automatically.

8、Connect to computer

After connecting USB cable with computer, can choose storage device、PC camera、video recording mode.

Storage Device   PC Camera (UVC)   Video mode

Storage Device: Can show the picture and video playback or download and save in computer.
PC Camera（UVC）：Can deliver video to computer to display in real time for analysis、measurement etc;
Video mode: USB is only used as DCIN to power the microscope, and the microscope performs normal operation;

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Computer configuration requirements

This digital microscope requires computer reach below requirements:
●Windows® Win7/Vista/XP SP3 or above OS;
●Intel® Pentium 4, 2.8 GHz CPU or above;
●At least 2GB RAM or above;
●Standard USB 2.0 or above;
●512 MB or above video card;

Precautions

In order to keep your digital microscope working in the best condition, please read below notes carefully:

●Do not expose digital microscope under high temperature or sun light;
●Please make sure digital microscope display clean enough to have the best imaging effect;
●Please make sure digital microscope far away from humidity, rain, liquid and chemicals;
●Please do not direct white LED or purple LED to your eyes to avoid damage eyesight;
●Please do not use digital microscope near inadequately shielded electronic devices or medical equipment;
●Please make sure to use digital microscope between 10℃ and 40℃;
●Please make sure to store digital microscope between −20℃ and 65℃;
●Please do not try to repair or open digital microscope to avoid damage out of warranty;
●Please use original adapter and accessories to avoid possible damage and danger;

Warning:
Please use original adapter and accessories to avoid possible damage of the device;
This product is forbidden to be used by children 3 years and younger;
If used by children, they must be accompanied by an adult;

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Problem Solutions

Questions	Solutions
Digital microscope cannot be switched on	Make sure if power connect correctly; Make sure if battery install correctly;
White LED causes the screen to reflect the light	Please try to turn off the white LED, use ambient light; Please try to switch white LED, choose white LED、purple LED or projector LED;
Digital microscope image is too dark or too bright	Make sure if lens focus on the observation object; Make sure if white LED is on;
Digital microscope blur or dirty	Please wipe the digital microscope display goggles; Make sure if focal length is placed at the best position;
Digital microscope cannot be stored or showed card error	Format TF card or change a new one;
Poor observation effect of slides	Turn the object stage to the bottom, then use projector LED; Please align the observation object with the center of the stage;

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