coolingtech

Digital Microscope
User Manual

English

Prepared by CoolingTech

Thank you for purchasing our Digital Microscope

It is a slim type tool and can be easily used in different fields.
Including:

1. Textile industrial for textile inspection
2. Printing inspection
3. Industrial inspection: PCB, Precision machinery...
4. Educational purpose
5. Hair examination
6. Skin examination
7. Microbiological observation
8. Jewelry & coin (Collections) inspection
9. Visual Assistance
10. Others

Currently we have two models of Digital Microscope: USB port and TV port formats.
The USB microscope must be connected to the computer or mobile phone,tablet PC. and TV microscope
be connected to visual device (N/P). User interface is very friendly and you can do the Measure work easily.

You can find more information of the product on this manual.

CONTENTS

New features of Coolingtech software version 4.5：

· All functions support win10 system
· Software supports 19 languages (Chinese, English, Korean, Japanese, Spanish, German, French, Russian, Thai, Italian, polish, Portuguese, Dutch, Turkish, Malay, Greek, Persian, Arabic)
· Screenshot interface sort by chronological order from the back to the front

Parts of Microscope

Focus roller

Magnification Ratio

LED Light

Snap

Lift adjusting roller

1.5m USB Line

Stand

Specification

Sensor: high performance chip
Main control chip: dedicated master 24Bit DSP
Photo / video: software control
Light source: 8 LED white lights
Static resolution: SD 640*480; HD 1200*1600; ultra clear 2592*1944
Digital zoom: 5X
Working distance: manual adjustment 0~40mm
Image resolution: SD 640*480P, HD 1280 x 720P; Full HD 1960*1080P
CD:driver software, measurement software, use manual
Support operating system: 32bit and 64bit Windows,, XP, VISTA, WIN7, WIN 8, WIN 10; MAC, Linux

Power supply: USB (5V DC), WIFI or mobile OTG cable
Interface: USB 3.0 &USB 2.0 & USB 1.1 compatible,OTG
Dynamic Frames: 30f/s Under 600 LUX Brightness
Illumination range: 0 ~ 30000LUX adjustable by USB cable Hardware requirements: Umlimited
Language support: Chinese (Simplified), Chinese (traditional), English, Korean, Japanese, Spanish, German, French, Russian, Thai, Italian, polish, Portuguese, Dutch, Turkish, Malay, Greek, Persian, Arabic (other languages need to customize)
Product color: matte black, other colors can be customized
Body size: 112 mm (length) 33 mm (outer diameter)
Single package weight: 265g

product support Windows 2000、XP、VISTA、WIN 7、WIN 8、WIN 10 Pentium 1G, Celeron, AMD 1G & above, 128MB Memory, 150MB Hard Disc memory space,16-bit & above VGA ,CD-ROM, USB2.0 or USB1.1

Product Outlook & Standard parts

1. Digital Microscope (1pcs)
2. USB 2.0 cable
3. Metal fixed Stand (1pcs)
4. CD (Driver software, Measurement software, User Manual)
5.Microscope Micrometer Calibration Rule

Notes before use

1. Don't dissemble the digital Microscope or change the interior parts, it can cause damage.
2. Don't clean the Microscope with alcohol organic solvents
3. Don't touch the lens with your fingers.
4. Avoid outdoor use if possible.
5. Storage temperature , 0°C ~ 40°C,Humidity:45%RH ~ 85RH%.
6. In case the product gets wet, leave PC connection immediately.And do not dissemble or dry by hair dryer. Send to repair center if the digit microscope was effected by liquid or other elements.
7. Measurement Data only for reference

Hardware and system requirements

Digital Microscope is a free Driver Product，it can be worked immediately after connected to the computer with operation system above Win2000 version.
1. Connect the Portable digital microscope by USB cable to your computer, double click 'my computer' icon on your computer desktop,below interface will be shown up.
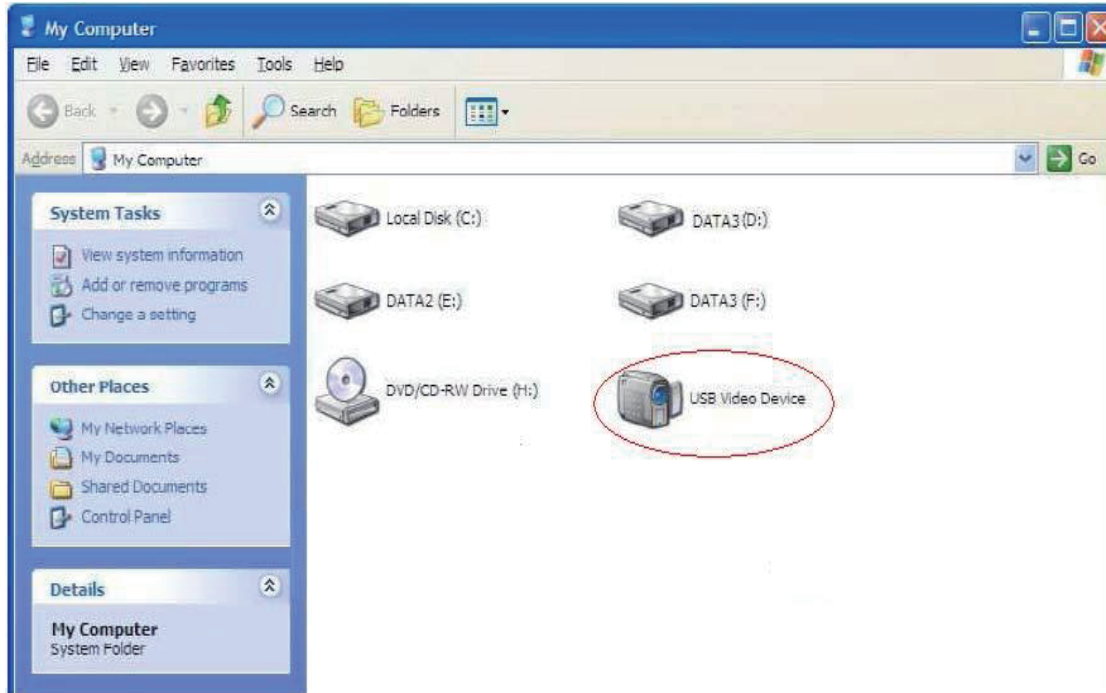
2. Double click the Video device icon as above red marked in your computer. Now it is ready to use.

If you can't find the Video device, or if your computer can't recognize it, please follow below steps to install the driver.

Insert the attached CD, system will auto run to the interface as below and follow the steps to complete the installation:
(NOTE：If the computer can't auto run the disc, you need to operate manually by click
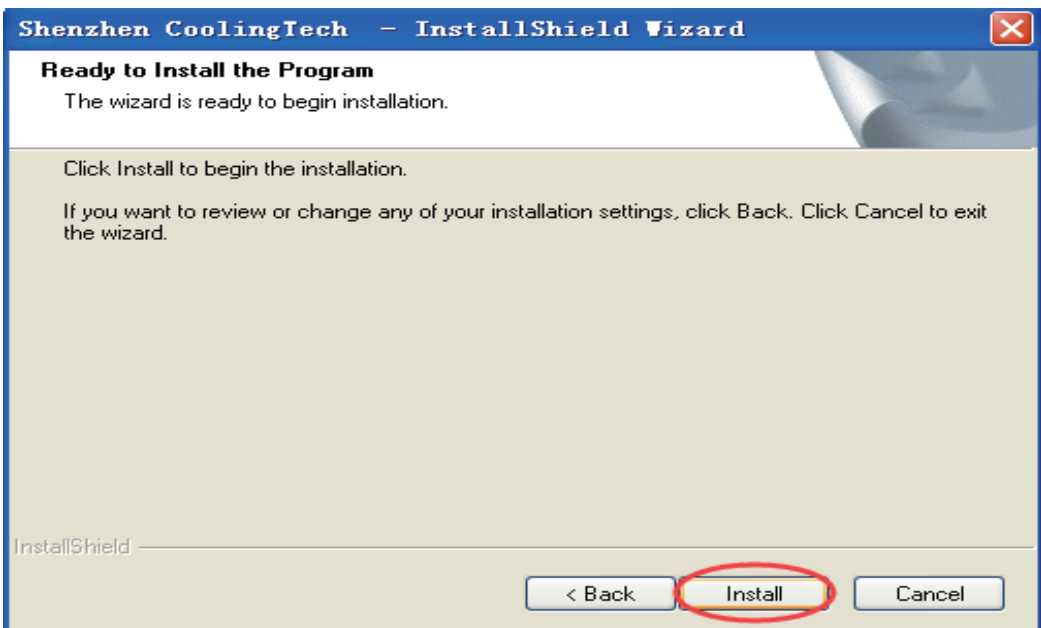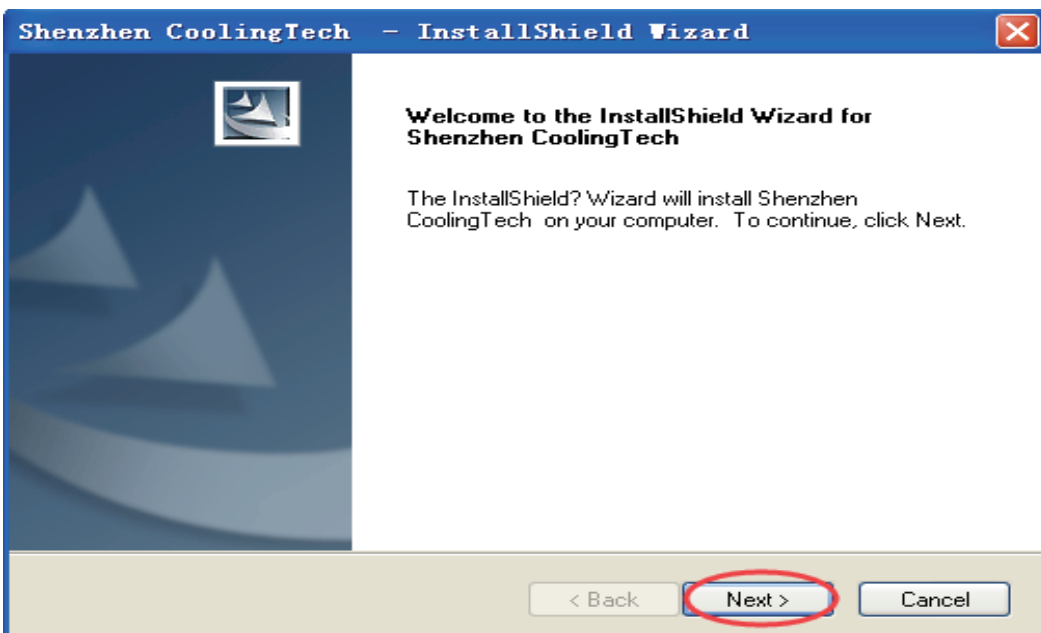"My Computer"→ "DVD/CD Driver"→run"AUTORUN.EXE")

How to install the Driver software

Click **Driver** to continue, the screen will show the installation progress.
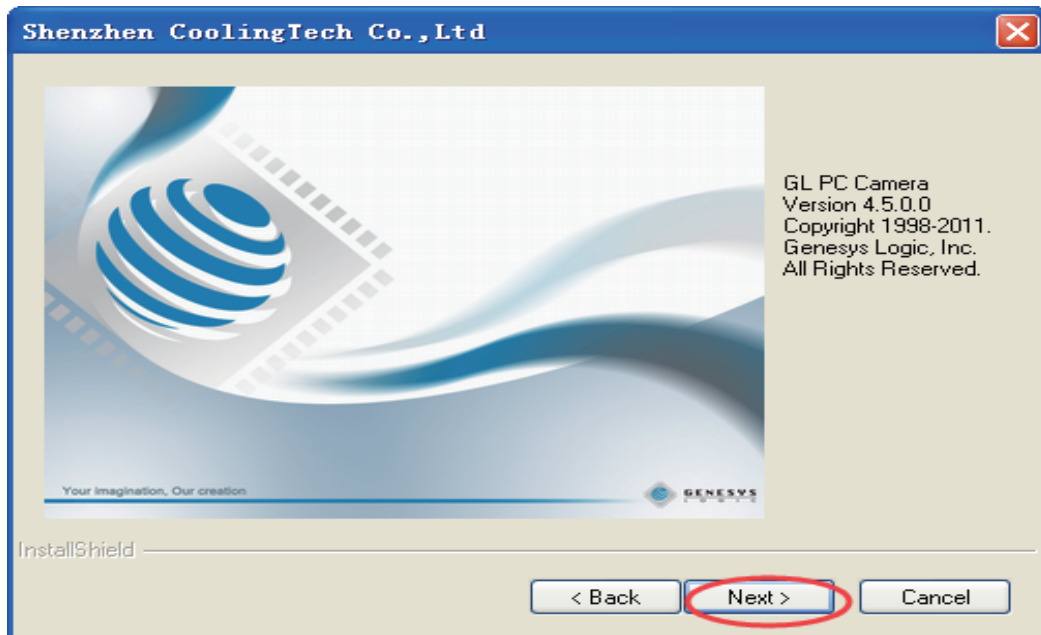
Click"Next"——Click"Next"——Click"Install"——Click"是(Y)"——Click"Finish"
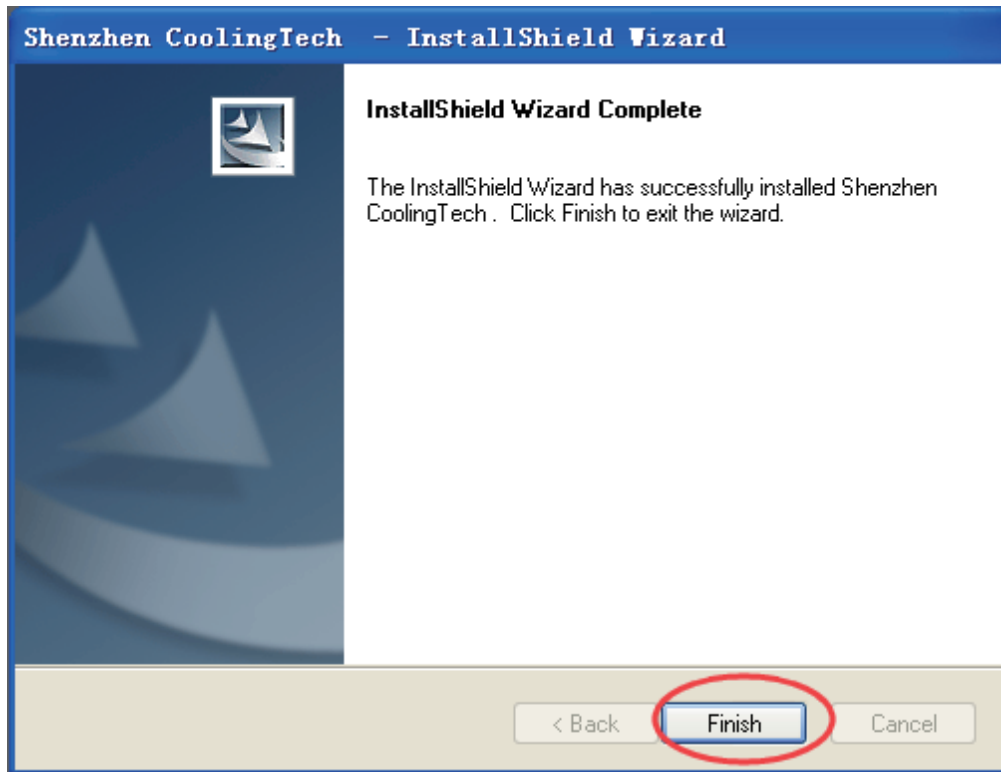
Select 'Finish' at last.Driver installation completed, if it is the first installation, it is recommended to restart your computer. If warning information appear, please click "continue".
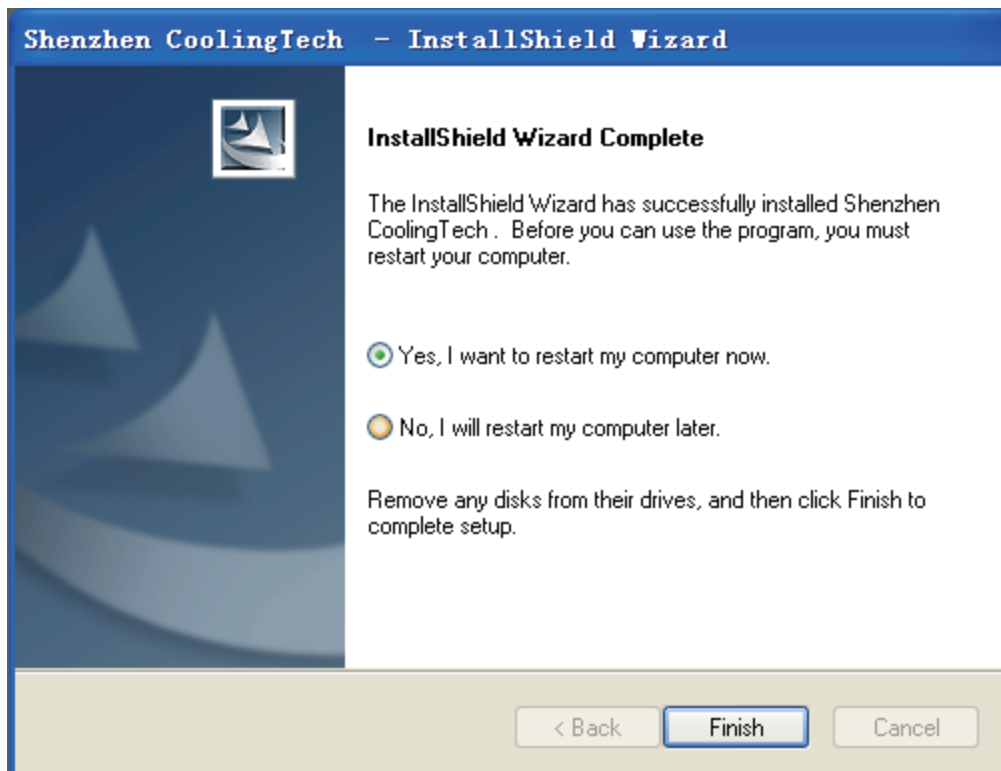
After the installation is complete, the following icon appears on the desktop, double-click the icon, click on the "device" option, select "USB 2 PC camera", will see the picture of the microscope capture
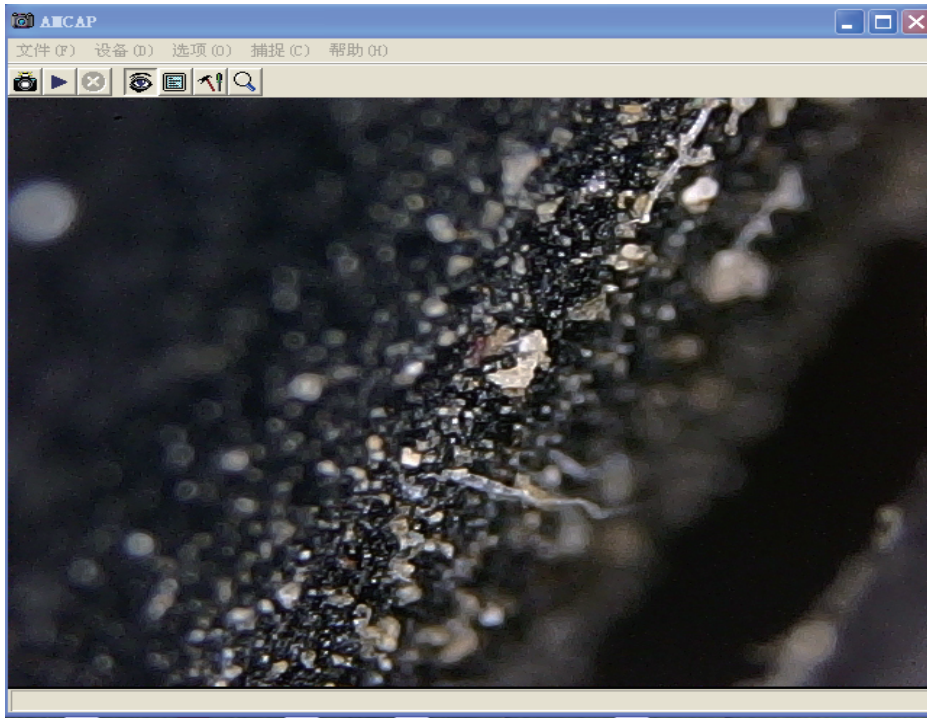
options in Menu bar can be set according to needs, for example, click the "options" - "set the video effect", in dialog box, you can adjust the picture effect. If you need to restore default settings, click "default"".
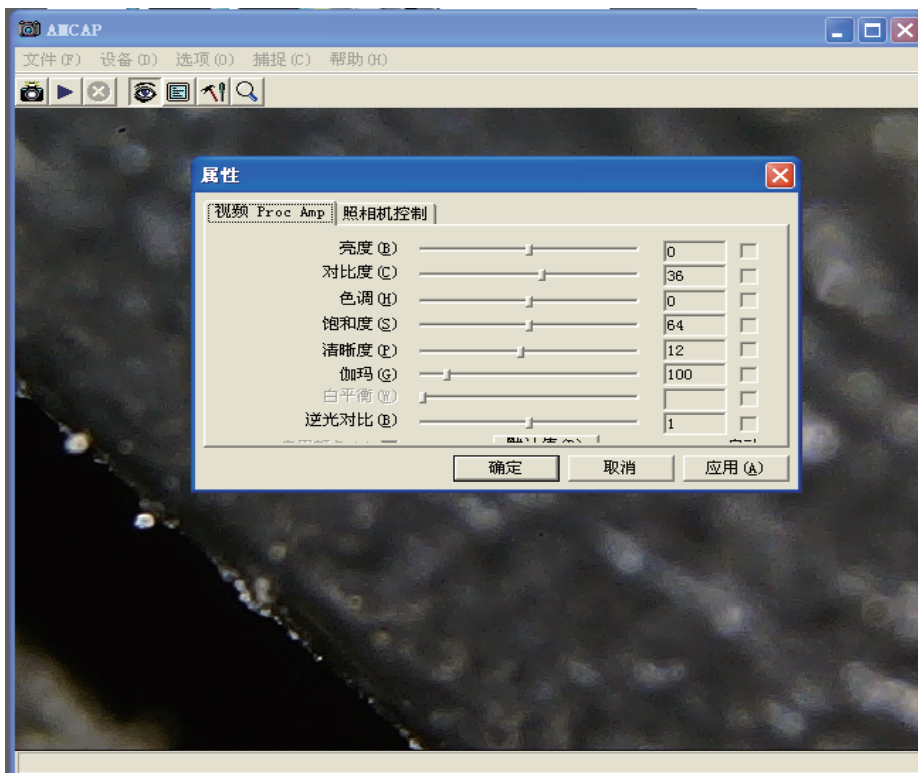
note：in the amcap software, the 'ZOOM' button can increase the magnification 5 times;and double click or long press 'SNAP' button can take photo.Set photo save path:seclet 'capture' ,'set image path'.
The amcap software can do general observation, if you need to measure objects,please install "Coolingtech" software in CD. installation steps as follows:

Please connect the product to your computer before installation.click measurement **Measurement** , or open CD,double click Measurement.exe,select 'next' →setting setup path,select 'next'→select 'close'.In the installation process,if system prompt need to install 'Net framework V2.0',then open the 'dotnetfx.exe' in CD, to install Net framework V2.0, then you can successfully install measurement software.
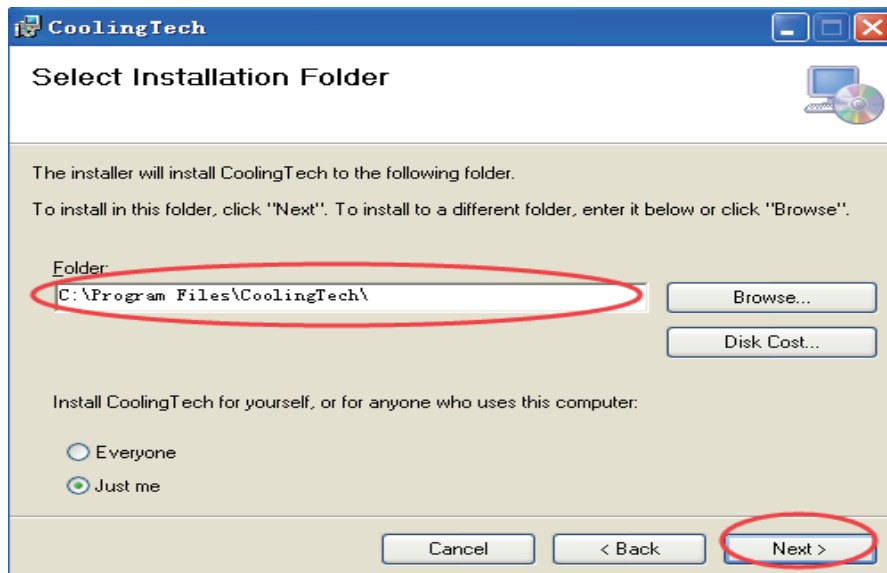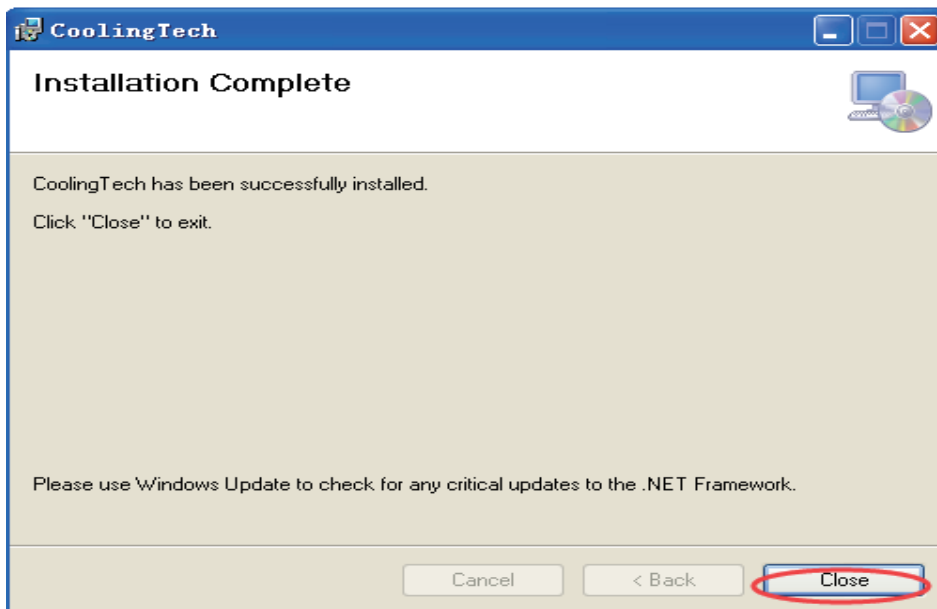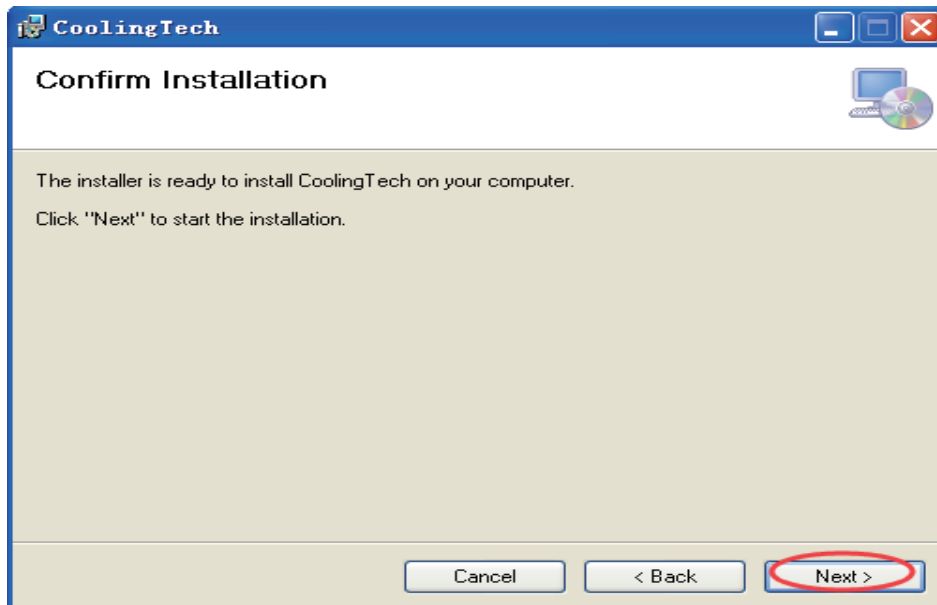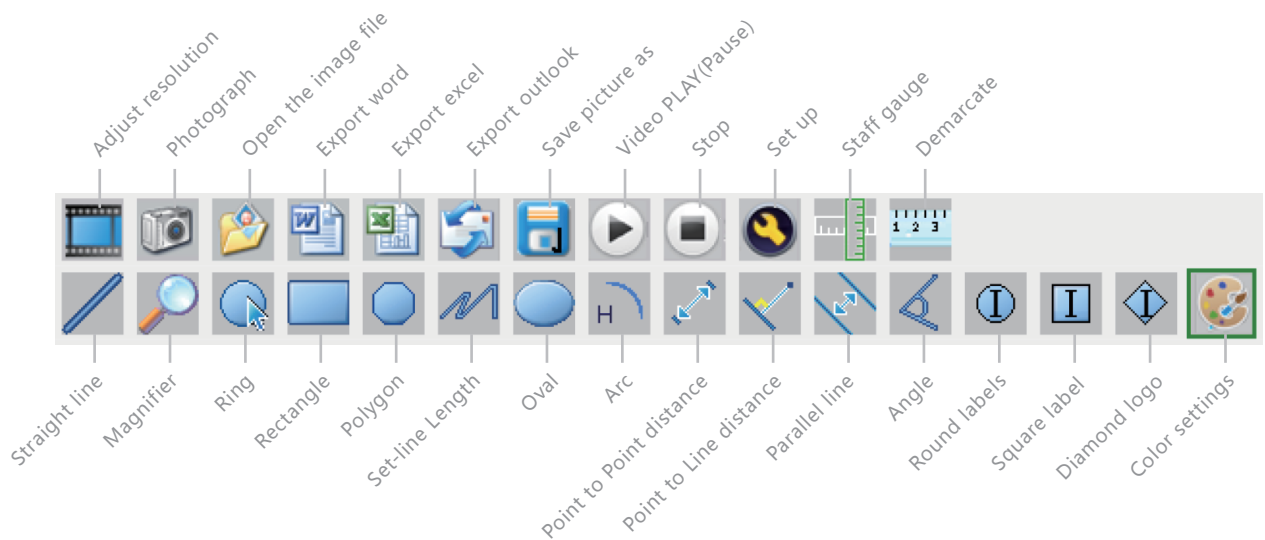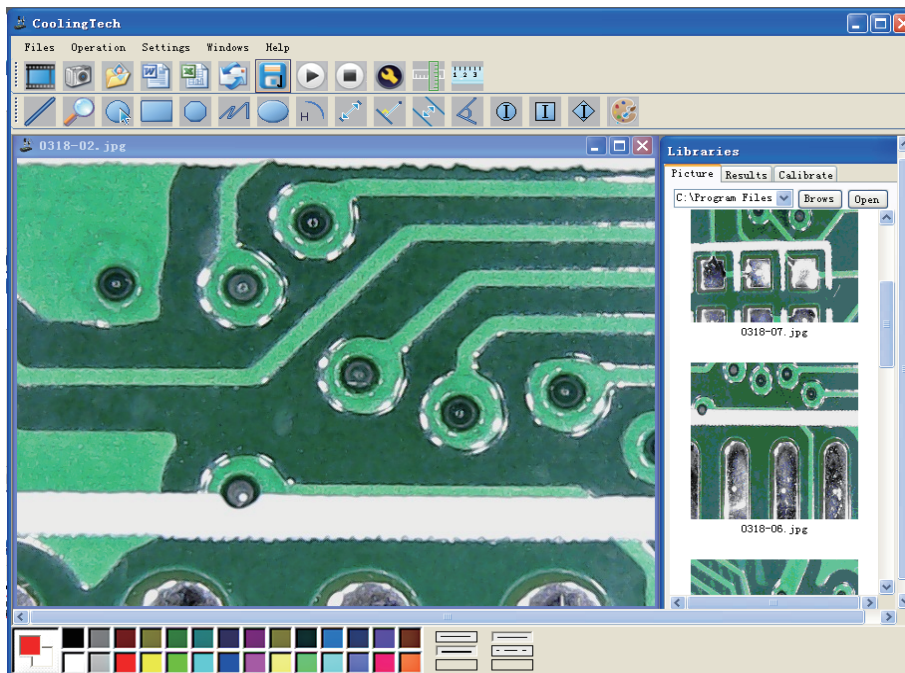
After the successful installation of the program, click on the desktop called "CoolingTech MicroScope" folder, enter the following interface. Double click the 'CoolingTech MicroScope' Icon.
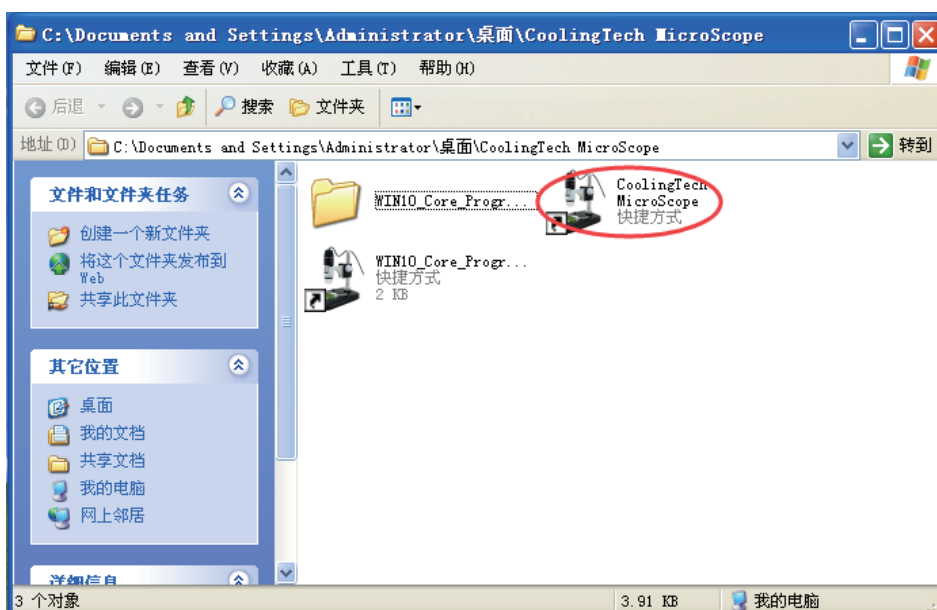
Follow the prompts to connect the device, the program automatically runs to the main interface.

19 languages are optional: "set" - "language" - (select the language you want)
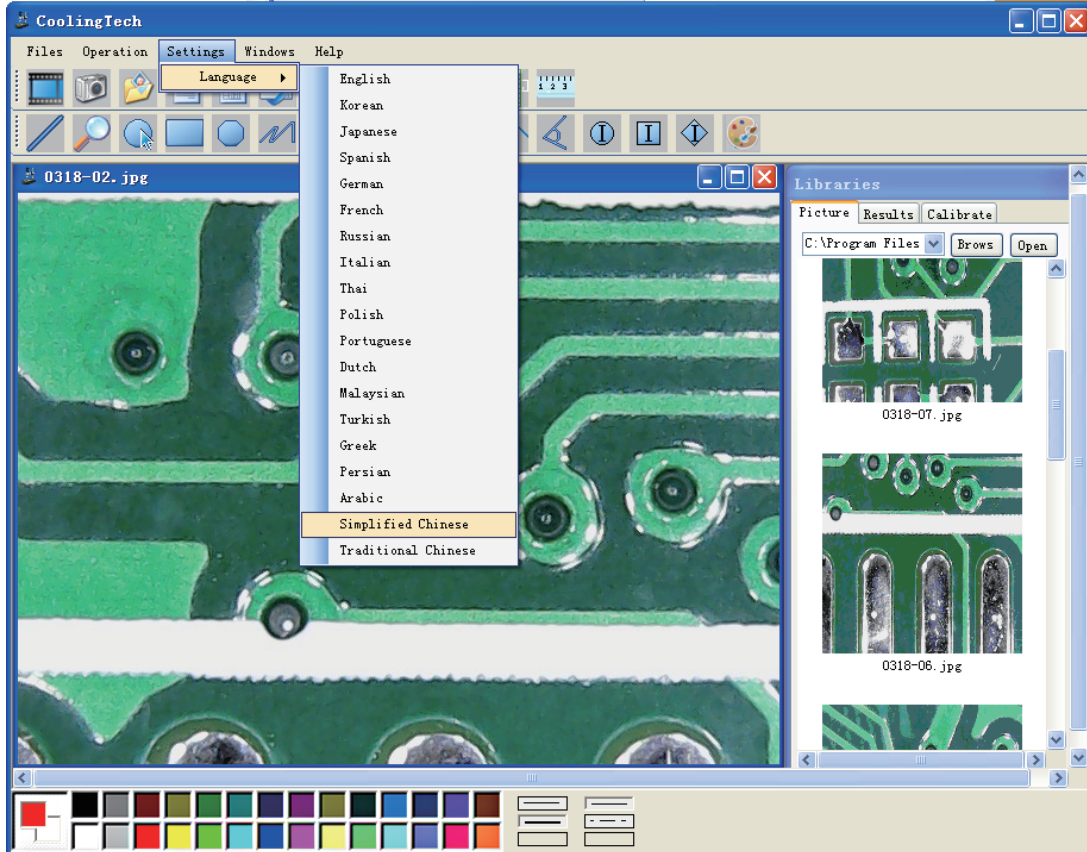

Click , select the video resolution, video resolution range is 320*240 to 1960*1080,the default resolution is 640*480. click to take pictures.The latest pictures at the top.
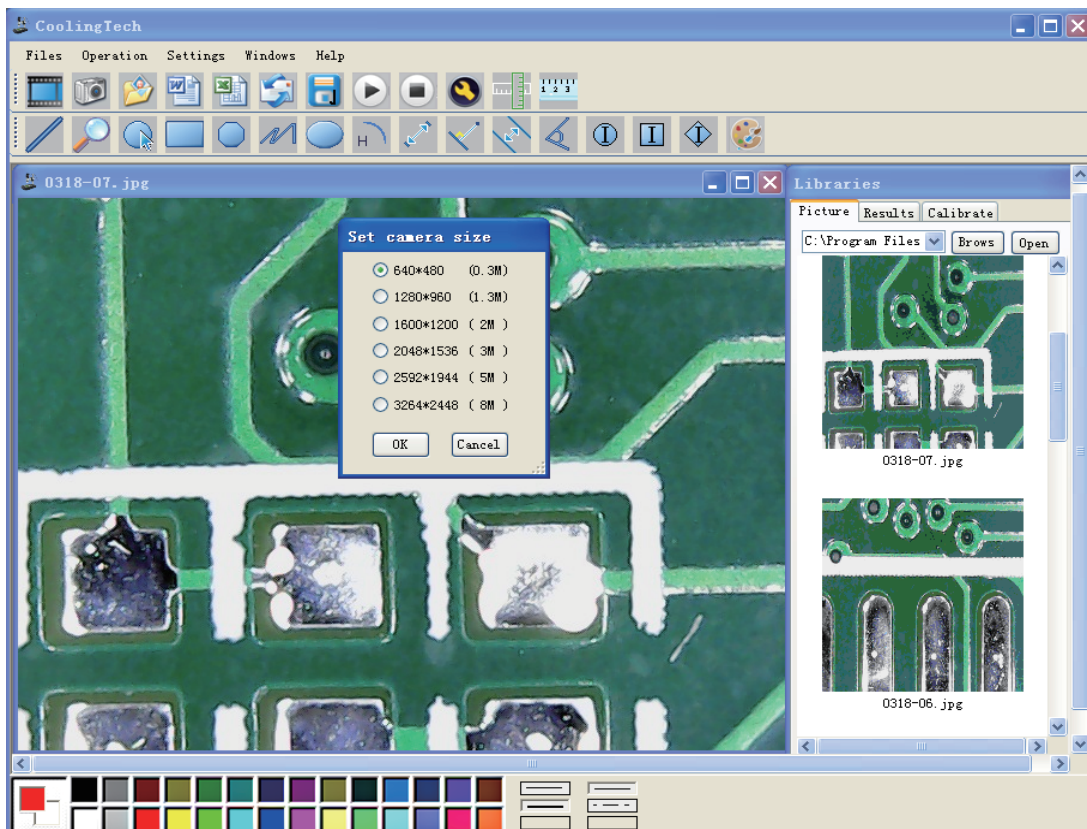
How to do the calibration

Put the microscope on the calibration ruler（gift with product）, adjust the roller to get a clear picture, press pause, click the icon 🔳 to do calibration。In order to improve the measurement accuracy, you must do calibration before using the microscope to measure. the magnification change each time, the calibration should be changed.It is recommended to measure the same actual value several times, and then take the average value.
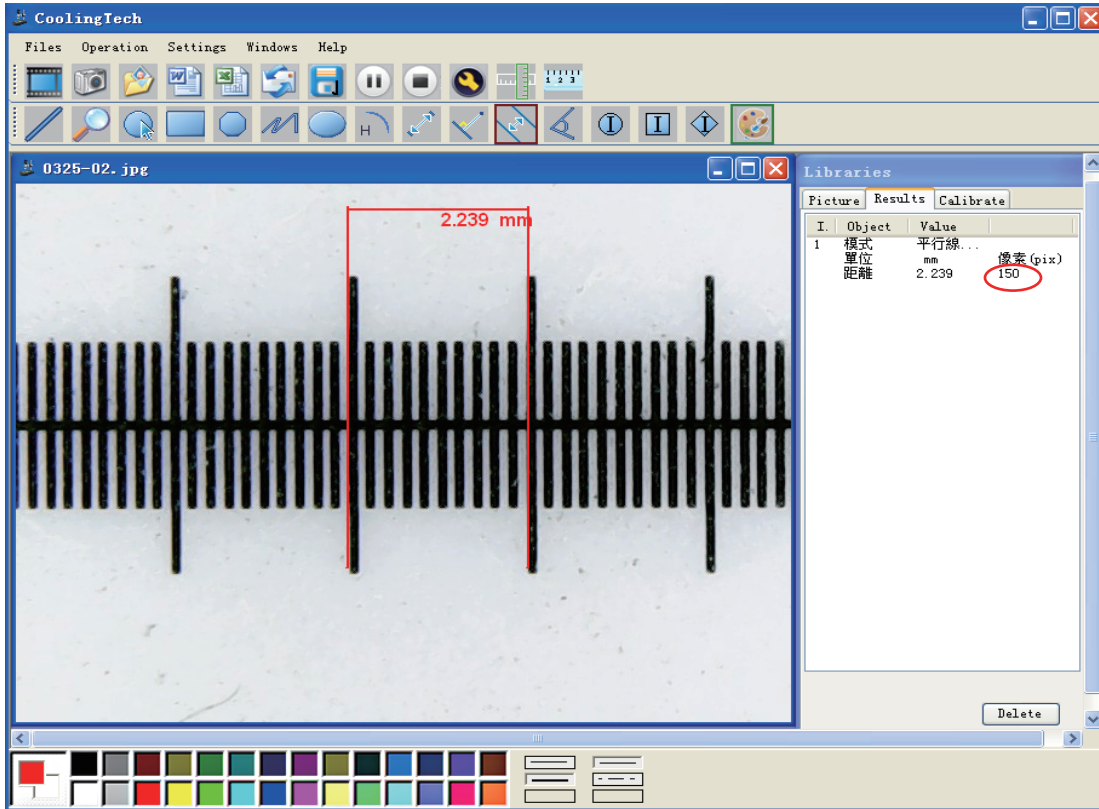

Enter the actual distance value, and the corresponding unit. The calibration is done. This calibration can be used to measur at this magnification.

Note: magnification change, must be corrected, calibration result will be different at the same time.
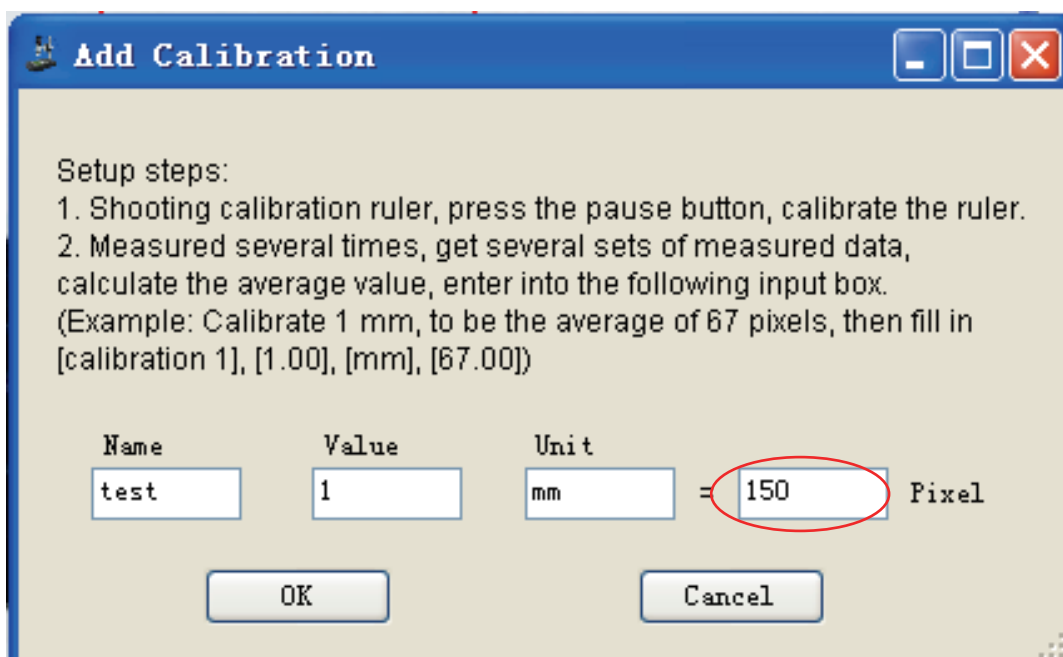
Calibration done, do not make any changes to the microscope, replace object with the calibration ruler and put it in the right position before the microscope. Click to take pictures. Double click on the image, then you can measure it. The software can measure various points, lines, shapes, length, angle, radian and other parameters. Measurement results can be exported by Word or Excel, mail.

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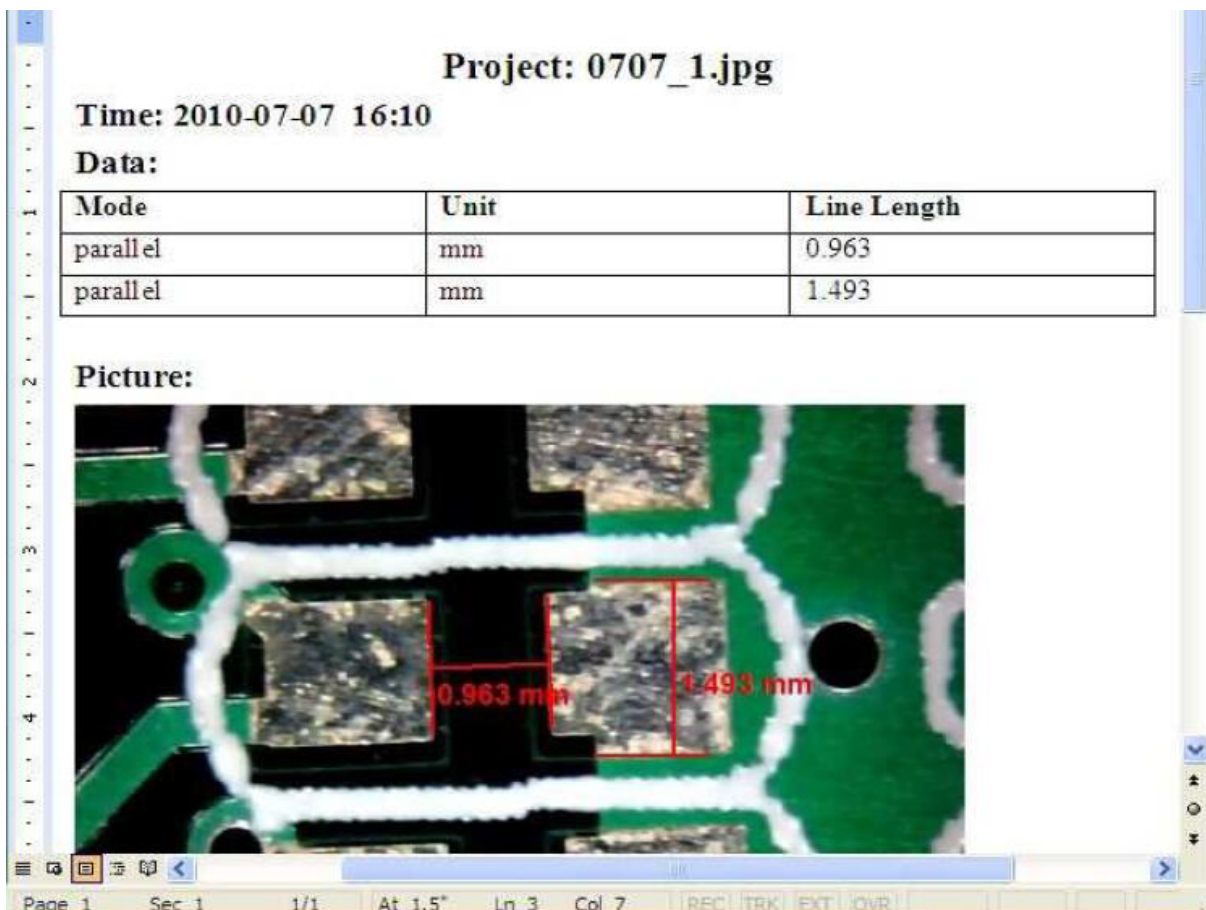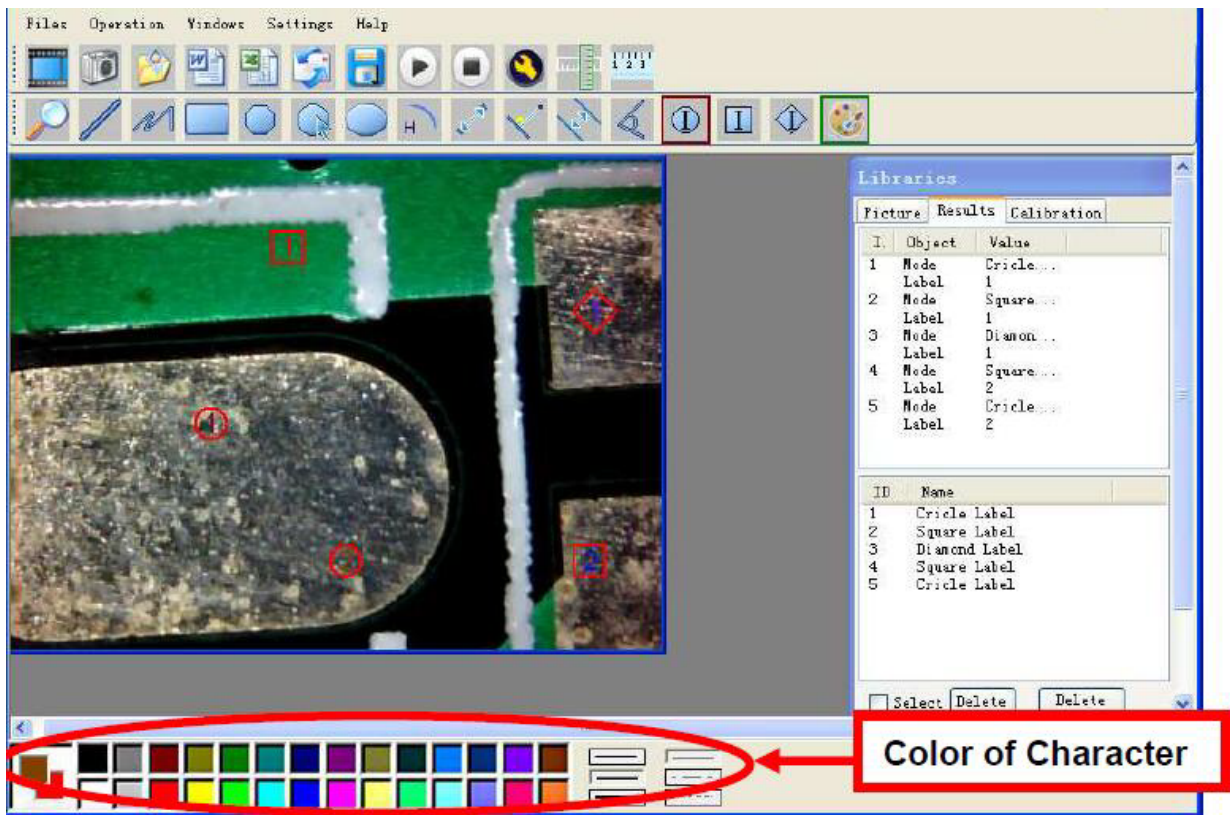
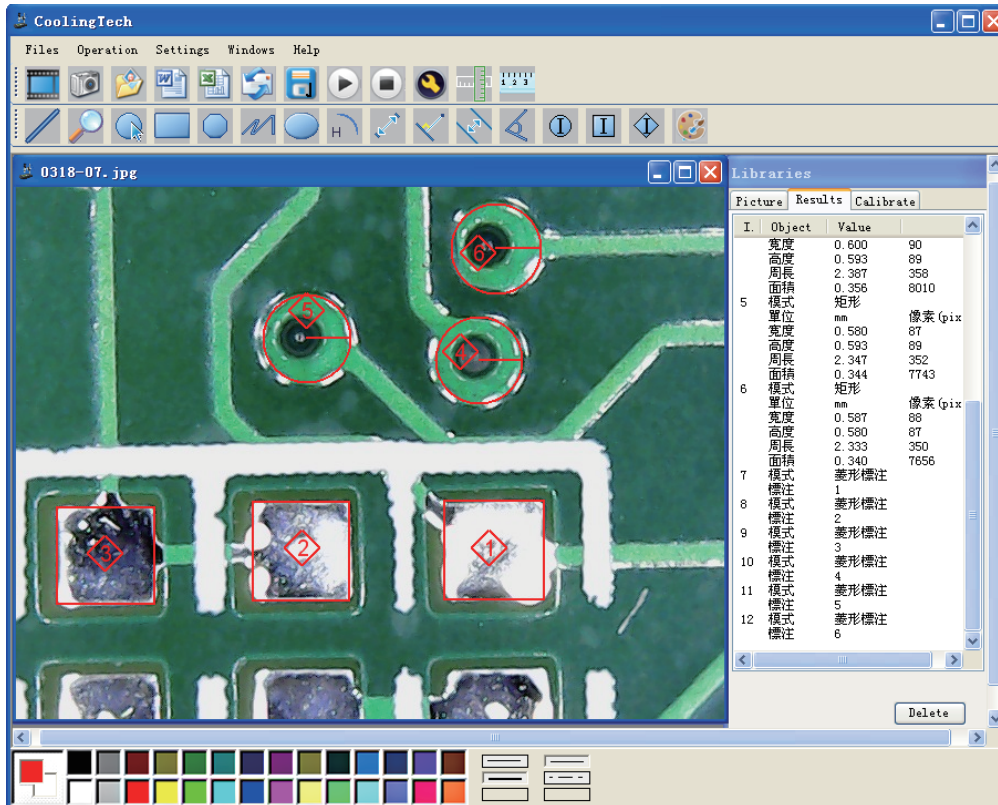Click , set screen brightness, contrast and other parameters.
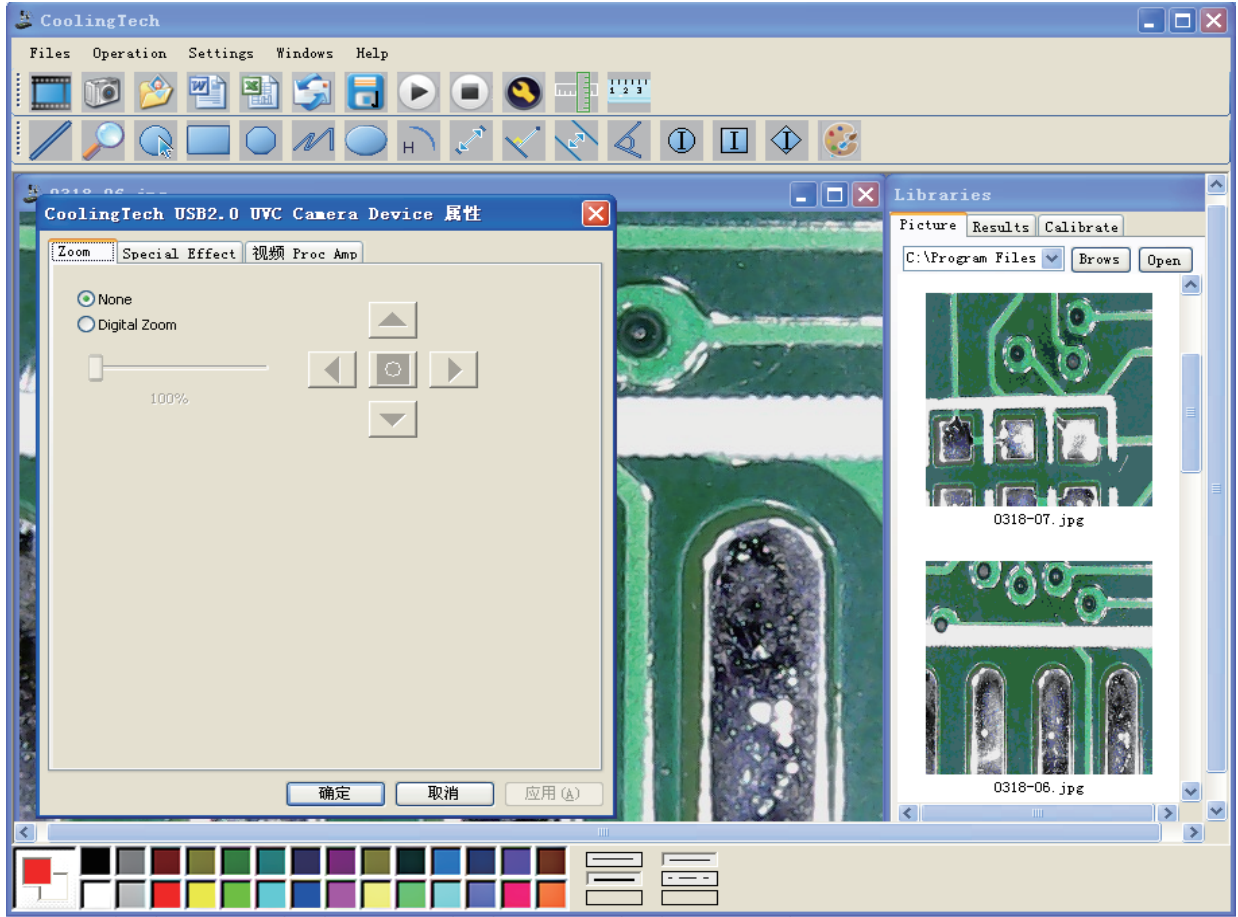
Click Ruller, as followings
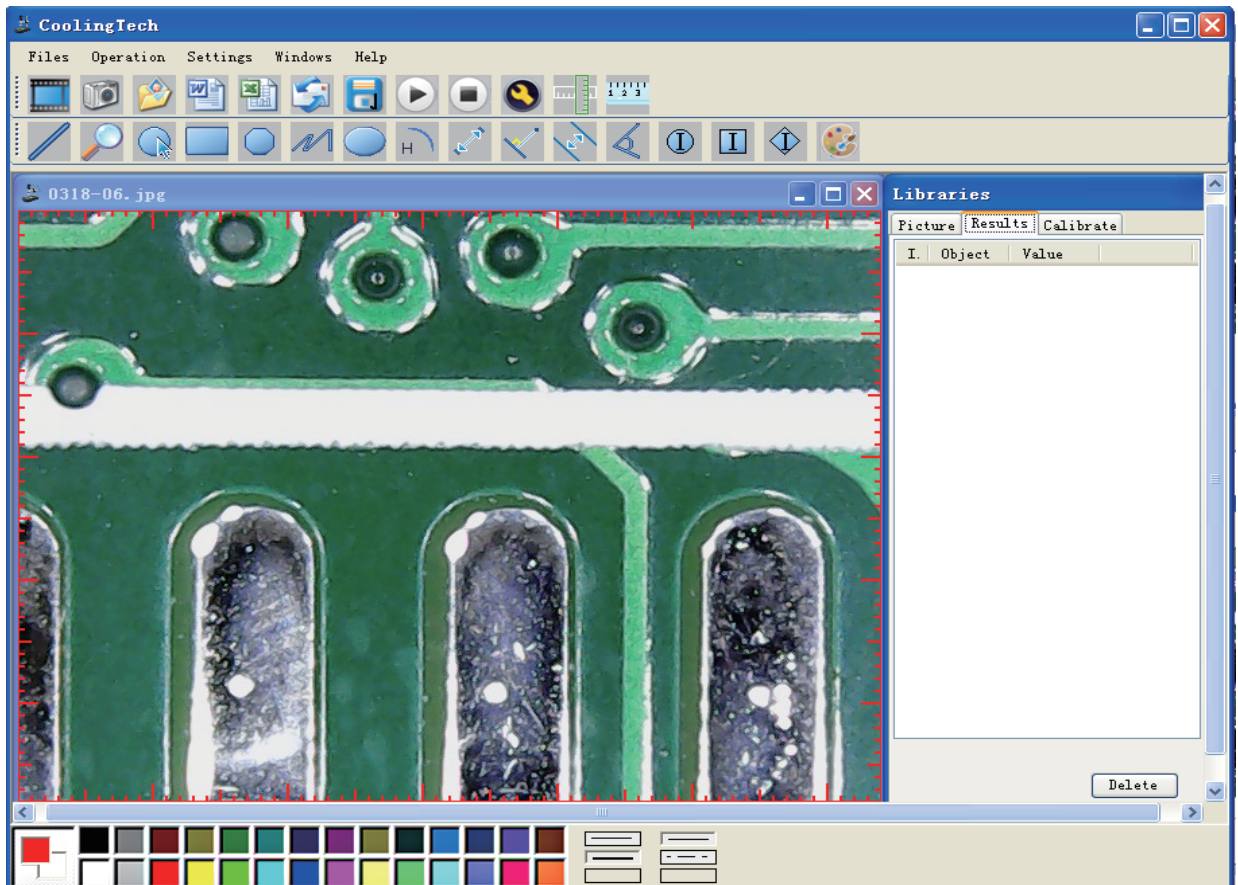
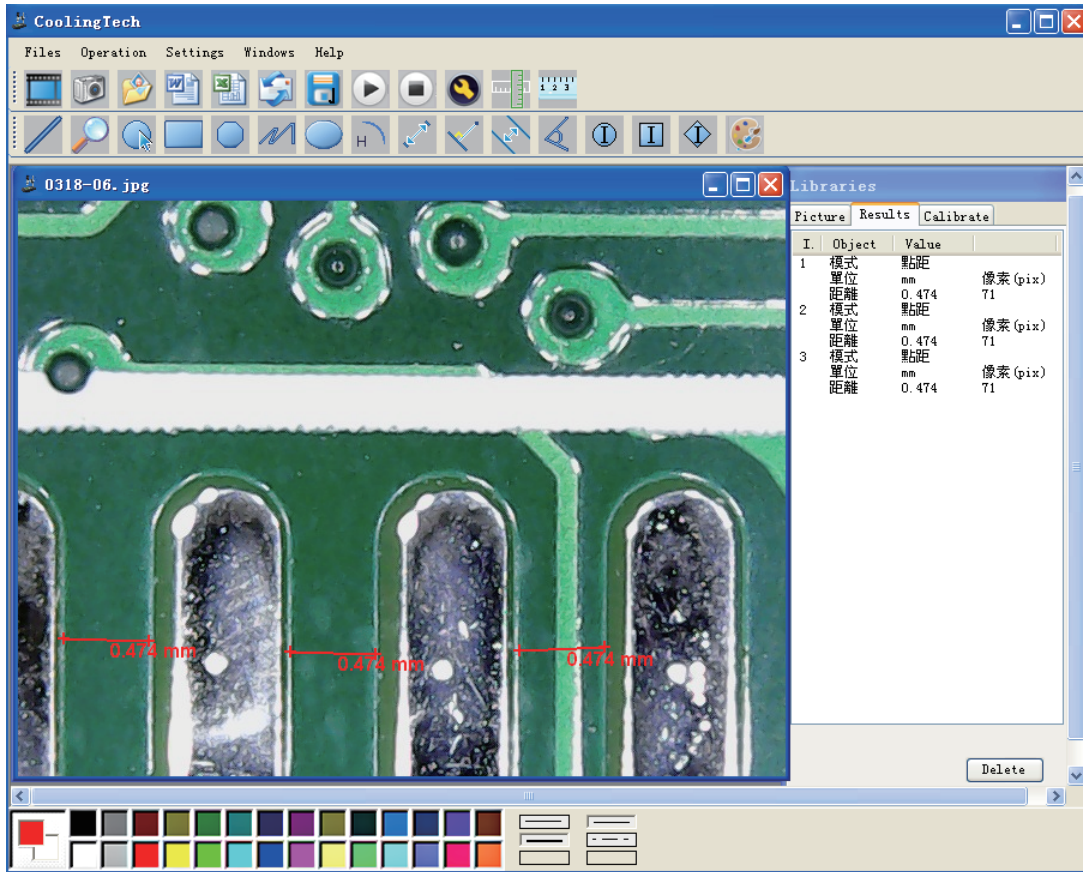Annotation and color selection

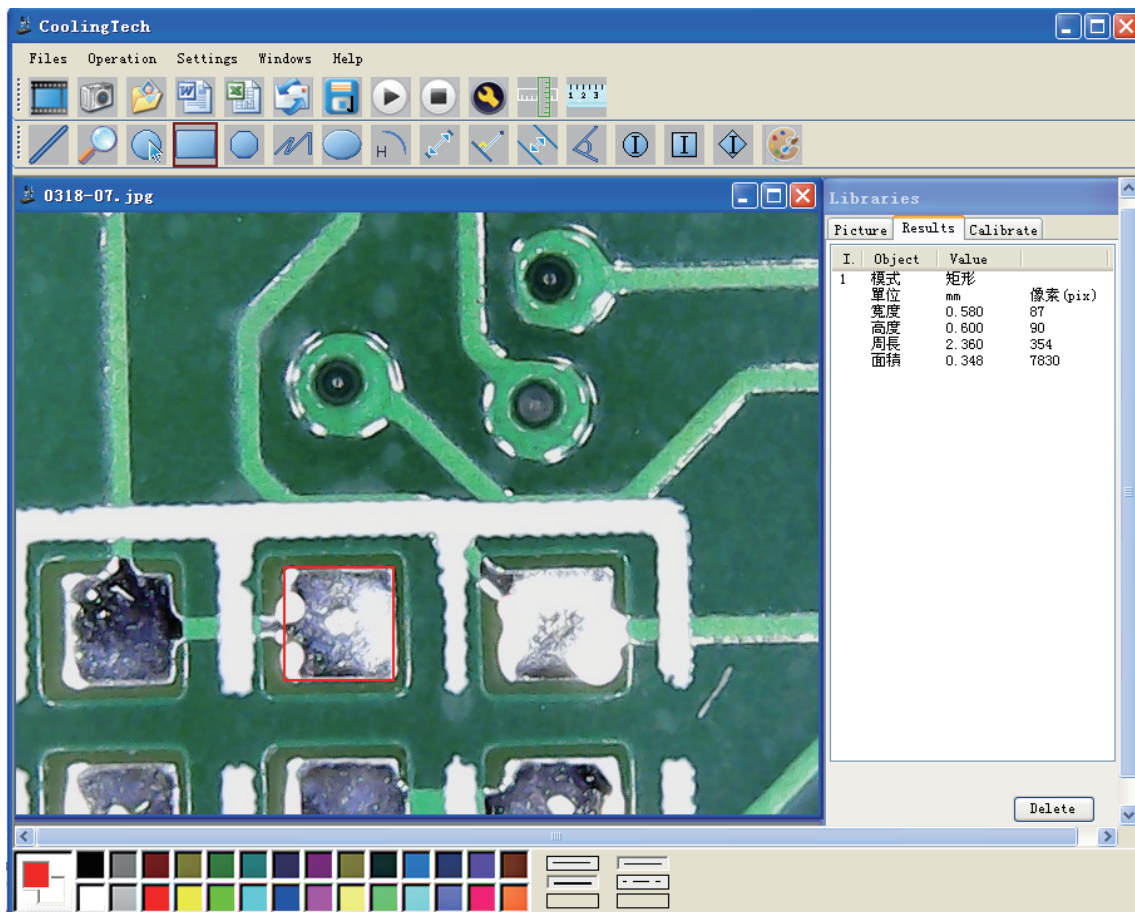

Icon description(left to right):

Linear measurement, circular measurement, rectangular measurement, polygon measurement, curve measurement, ellipse measurement, arc measurement, point to point measurement, point to line measurement, parallel line measurement, angle measurement.
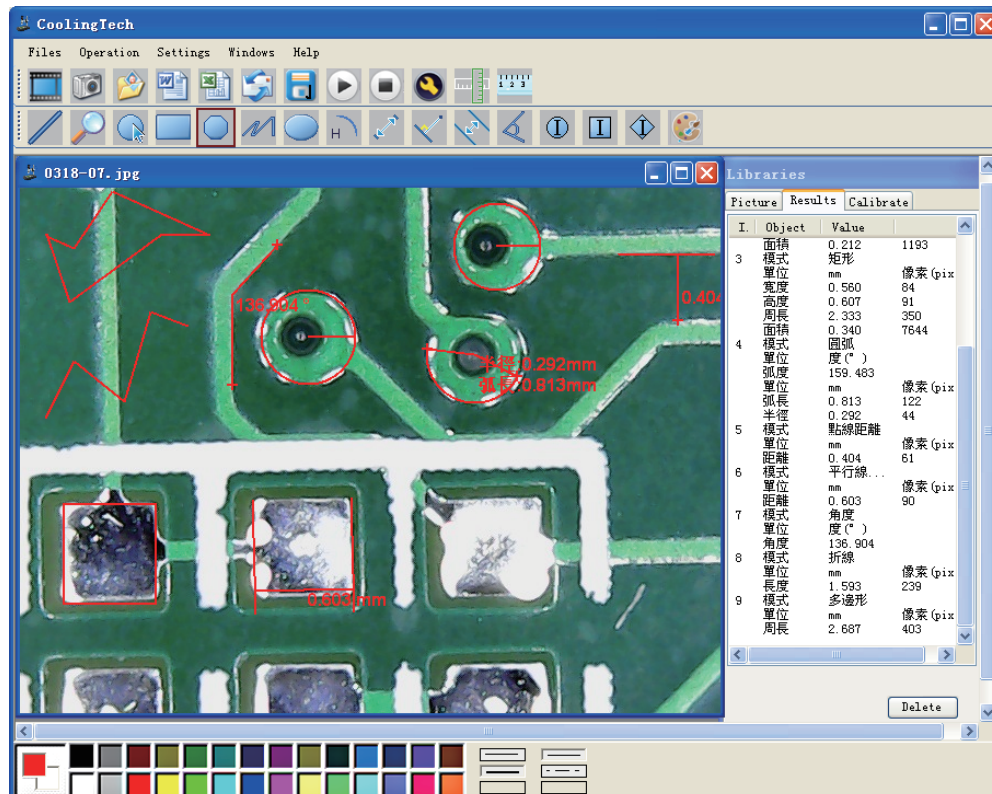
For example 1
Line measurement:

For example 2
Rectangular measurements:

For example3

Ring measurements: