

U500X Digital Microscope User Manual

([English](#))

([中 文](#))

Prepared by Cooling Tech

2009.09.24

**Thank you for purchasing our U500X 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 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.

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Parts of Microscope



Specification

Image CMOS Sensor

Controller High Speed DSP (Driver Free available)

Focus Range 15mm ~ 40mm

Snap Shot Software and Hardware

Video Capture Resolution 0.3M.

Built-in 8 White-light LED and adjustable illumination ensure the magnified images are clear and bright

Still Image Capture Resolution 640*480

Frame Rate 30 f/s under 600 LUX Brightness

Digital Zoom 5X Sequence Mode

Brightness Control Manual adjustment

Magnification Range 25 X ~ 200X (Manually)

Power Supply USB Port (5V DC)

USB 2.0 & USB 1.1 Compatible

Operation System Windows XP, Vista, Win 7 32 bit and 64 bit.

Language: English, Chinese and other language by selection

System Requirement: Pentium Computer with 700M Hz & above,
20M HD Space CD ROM Driver, 64MB RAM, Direct X VGA Card

CD disk Driver and Micro-Measurement Tool

Product dimension 112 mm (L) X 33 mm (R)

Product net weight: 380g

Available color: Matting black, UV black; and other colors.

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.

Product Outlook & Standard parts

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

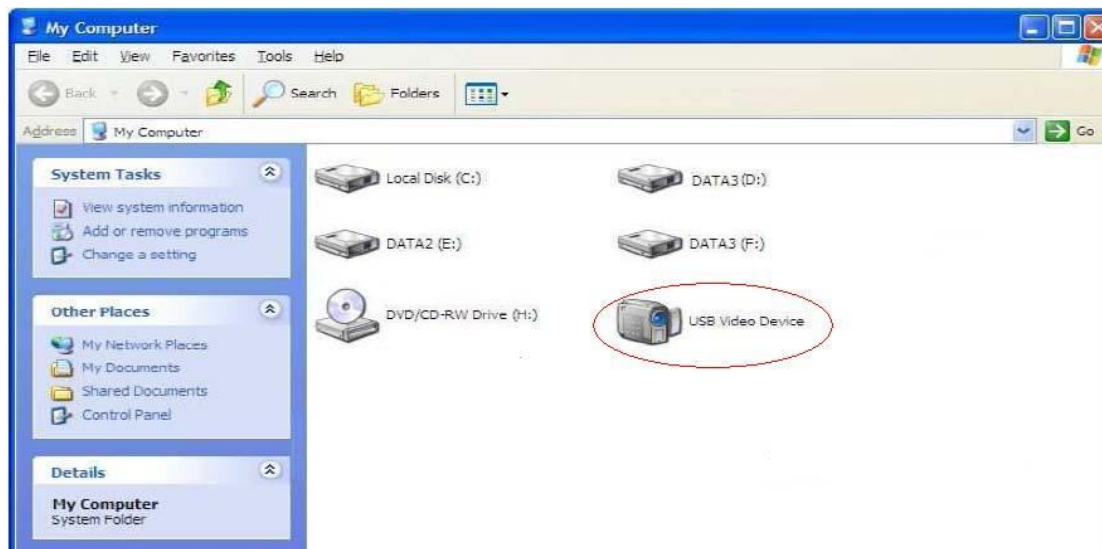
Hardware system requirements

Windows 2000、XP、VISTA、WIN7 Pentium 1G, Celeron, AMD 1G & above, 128MB Memory, 150MB Hard Disc memory space, 16-bit & above VGA, CD-ROM, USB2.0 or USB1.1.

How to install the Driver

U500X 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 USB2.0 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

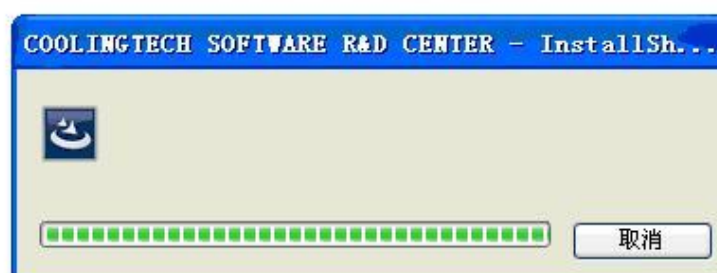
manually by click "My Computer" → "DVD/CD Driver" →
run"AUTORUN.EXE")

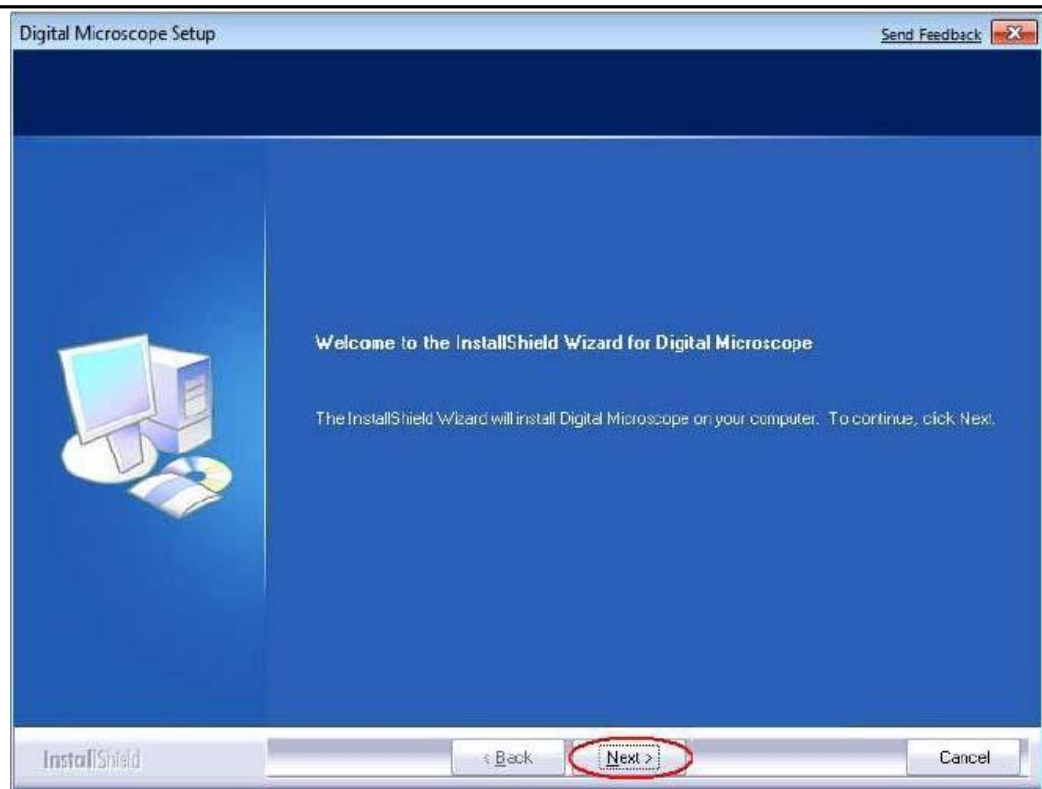


1. Driver installation

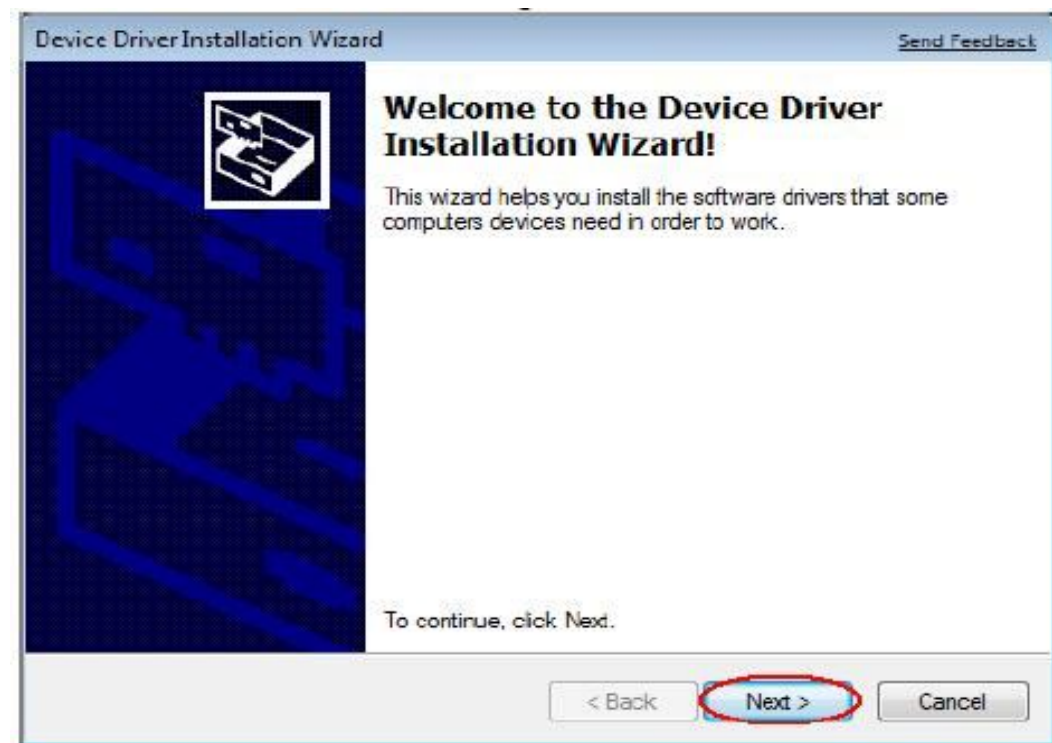
1 Click  to continue, the screen will show the installation progress.

COOLINGTECH SOFTWARE R&D CENTER





Click“next”to continue, as followings:



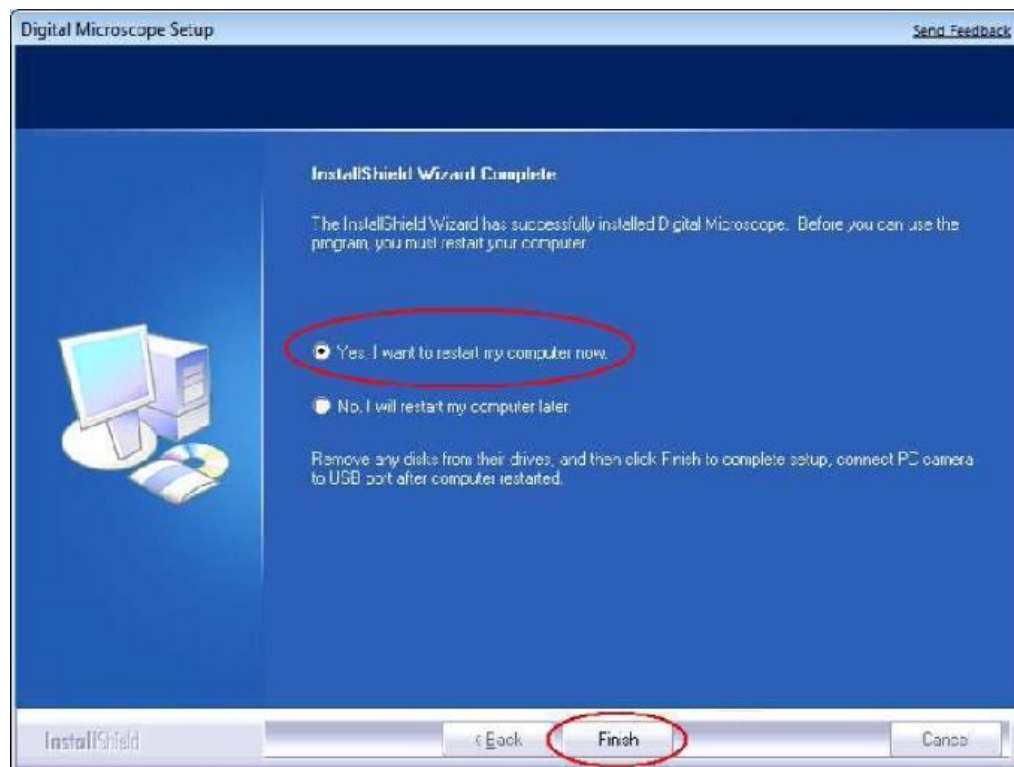
Click“next”to continue, as followings:



Click “continue Anyway”,as followings:



Click“Finish”to continue, as followings



Select 'Yes, I want to restart my computer now', and click "finish".

After restart your computer, Plug-in the USB port of Digital Microscope into Computer USB port. Following the user guide by steps and complete by click "Next" -> "Continue anyway" -> "Finish".



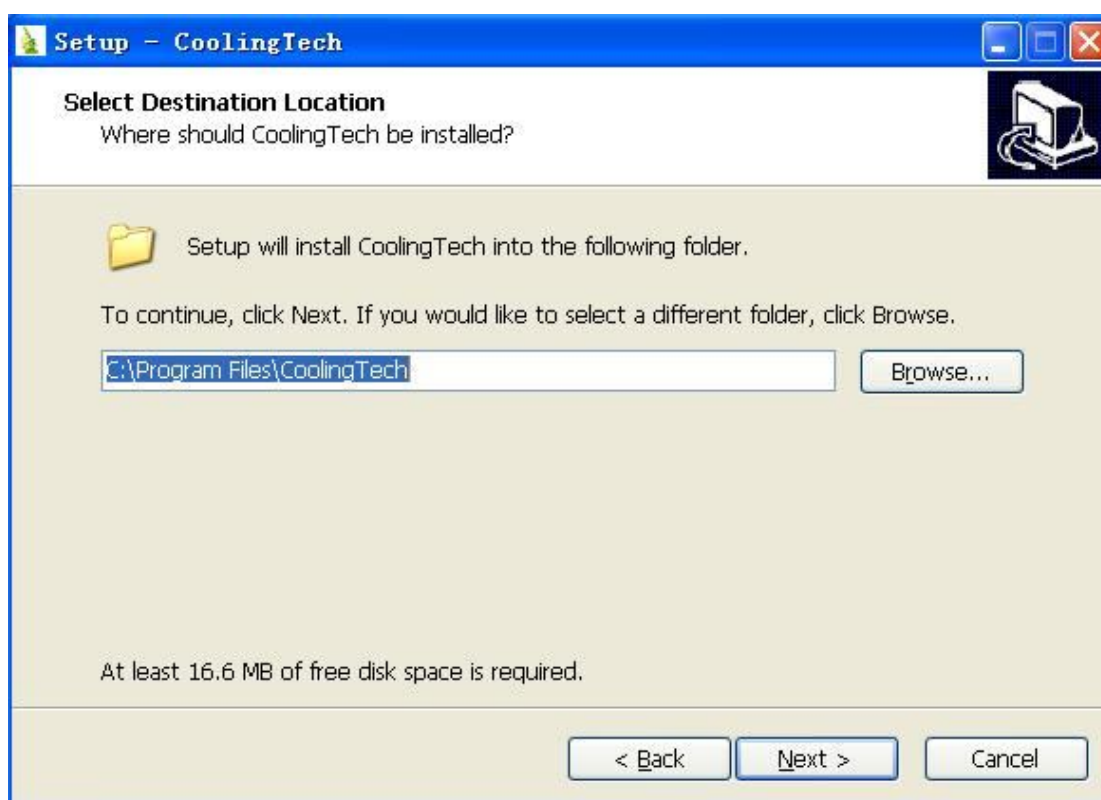


2 Measurement installations:

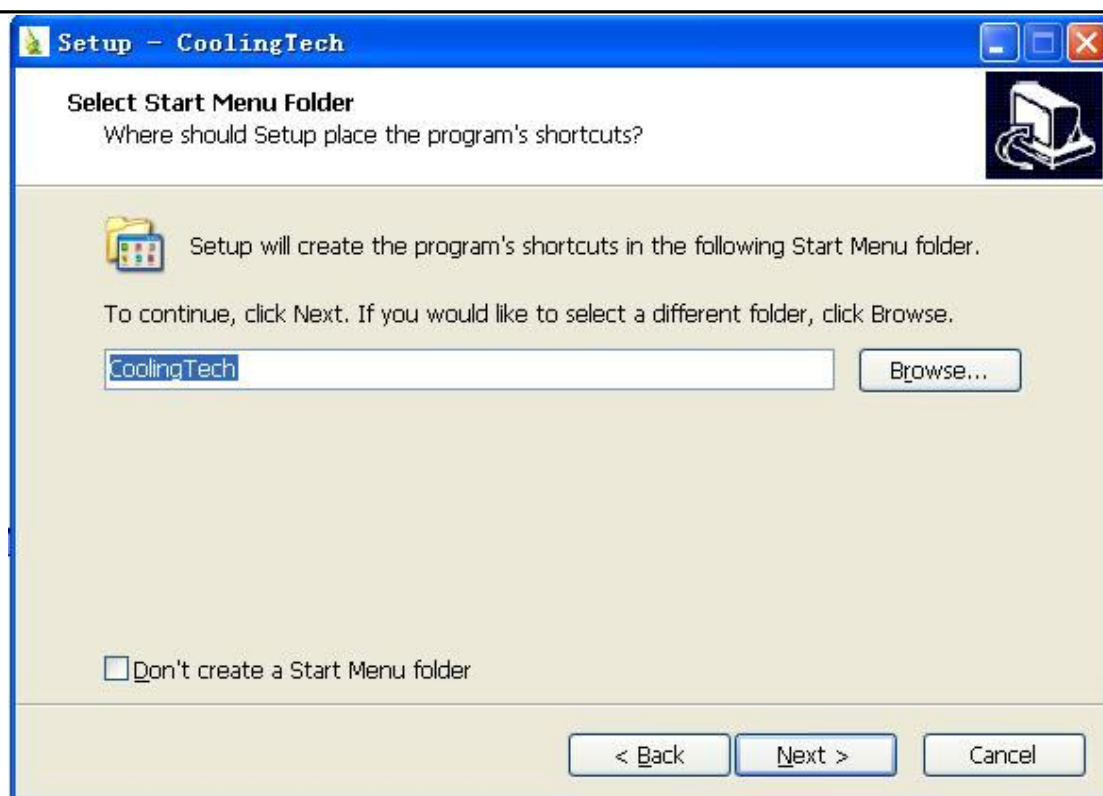
- 1 Click  to continue, as followings



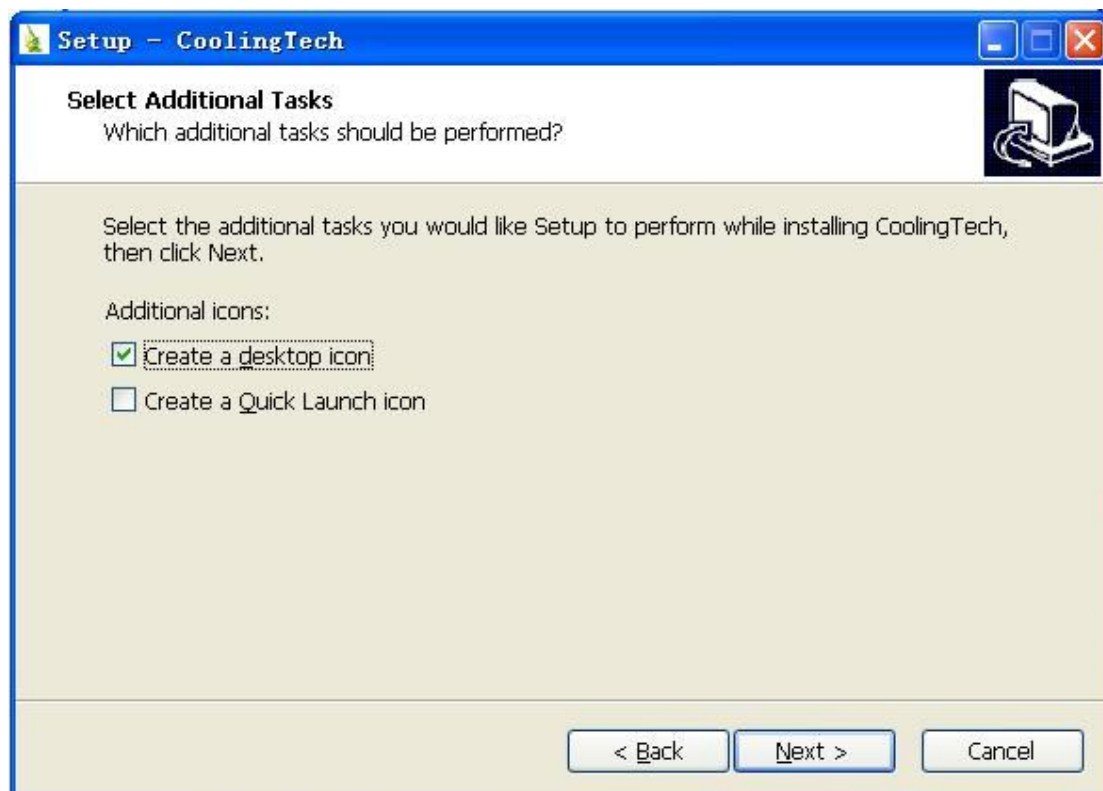
2 Click “next” to continue, as followings



3. Click “next” to continue, as followings



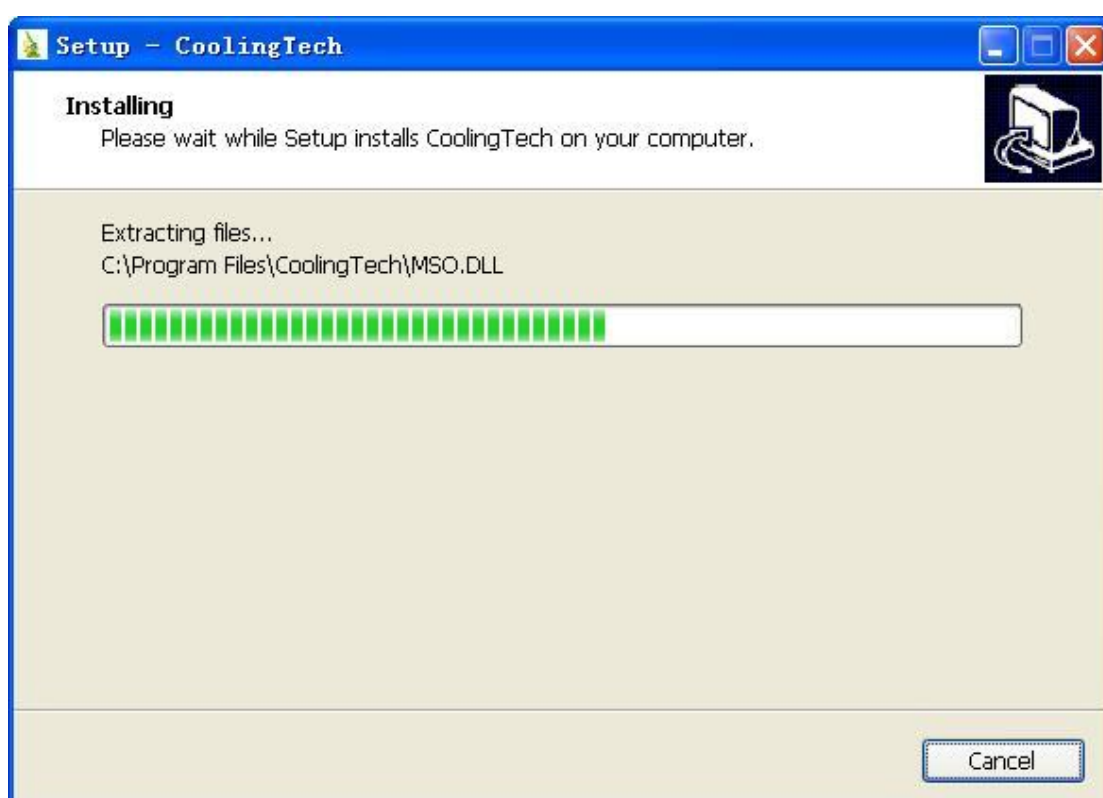
4. Click “next” to continue, as followings



5. Click “next” to continue, as followings




6 Click "Install" to continue, as followings



Wait a few seconds while the installation taking place.

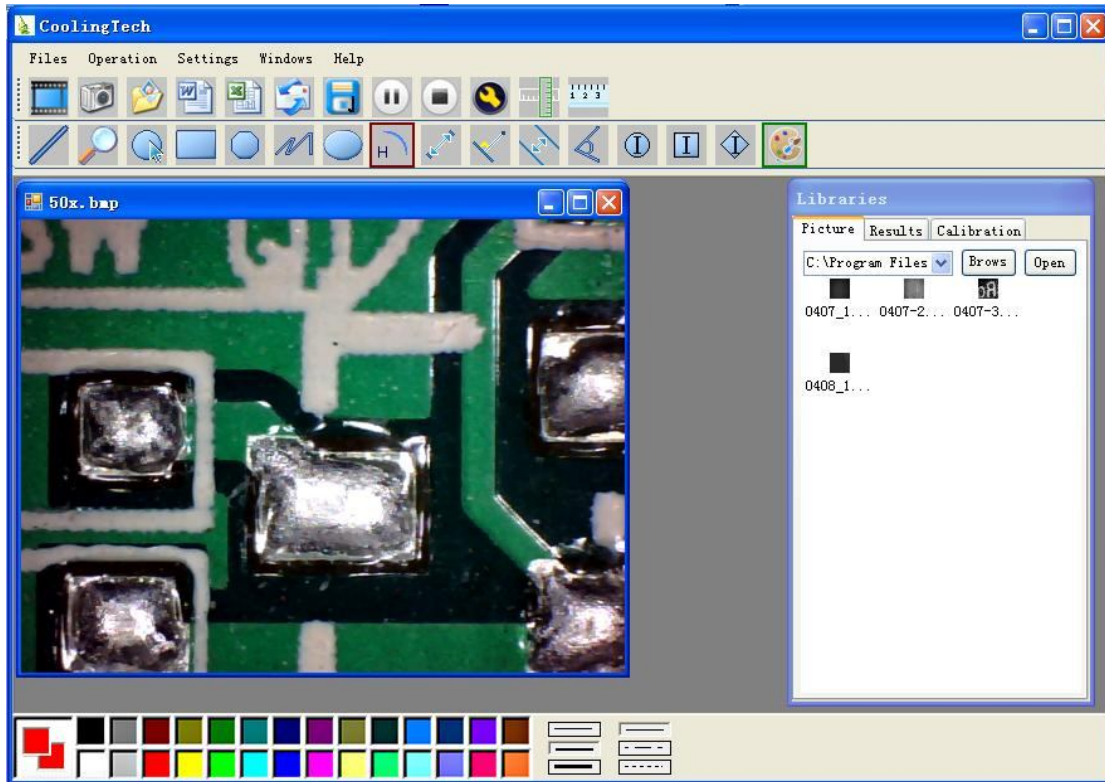



7. Click “Finish” and the installation completes.

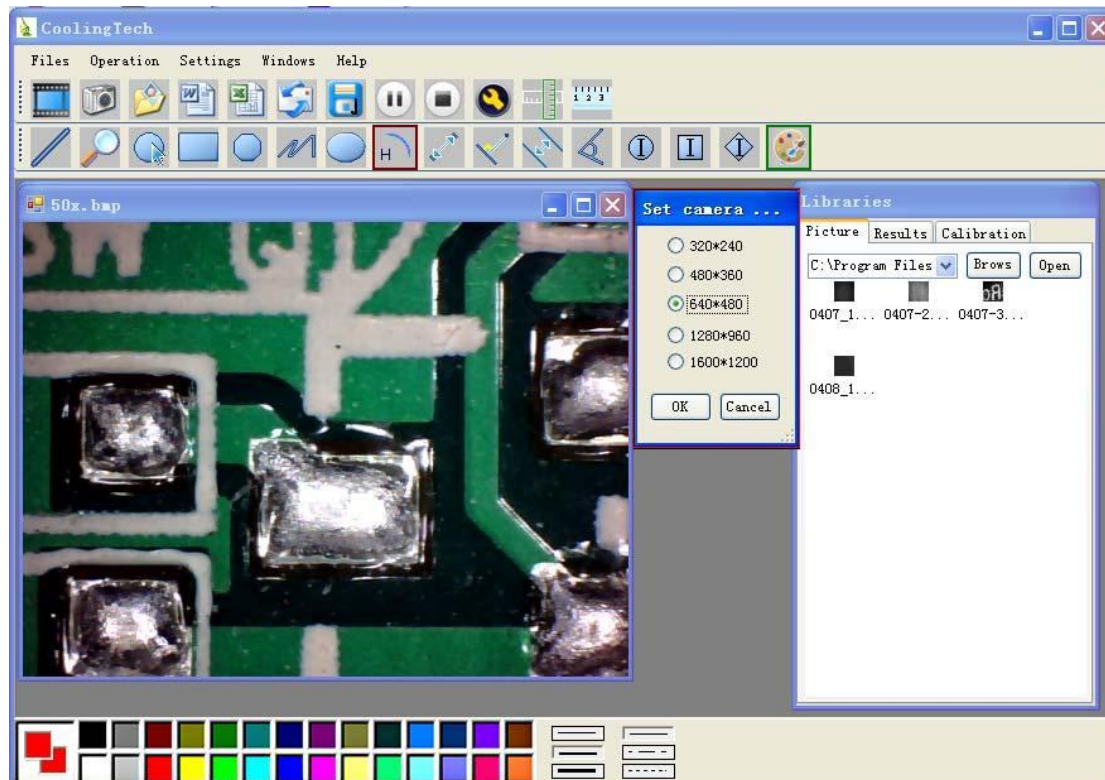
8. After the installation completes, double click  at computer desktop to start using the software.




Plug-in the devices, Display in operation window

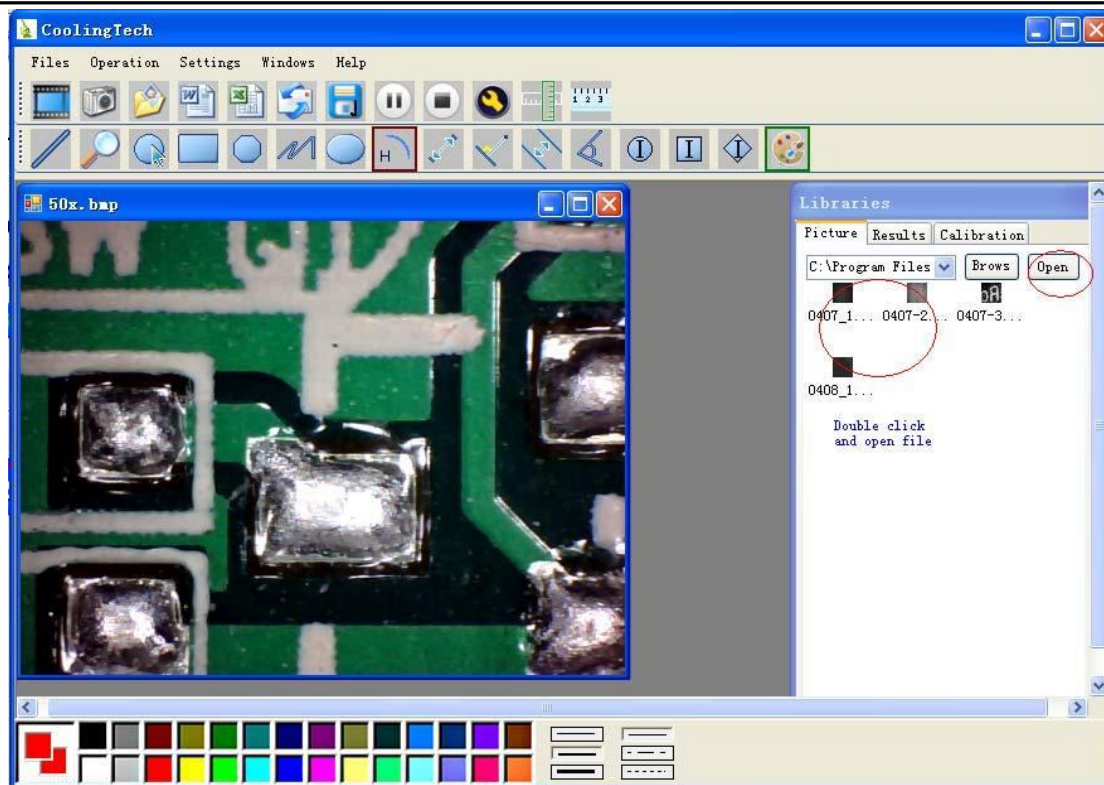




9 Click  ,open the operation system

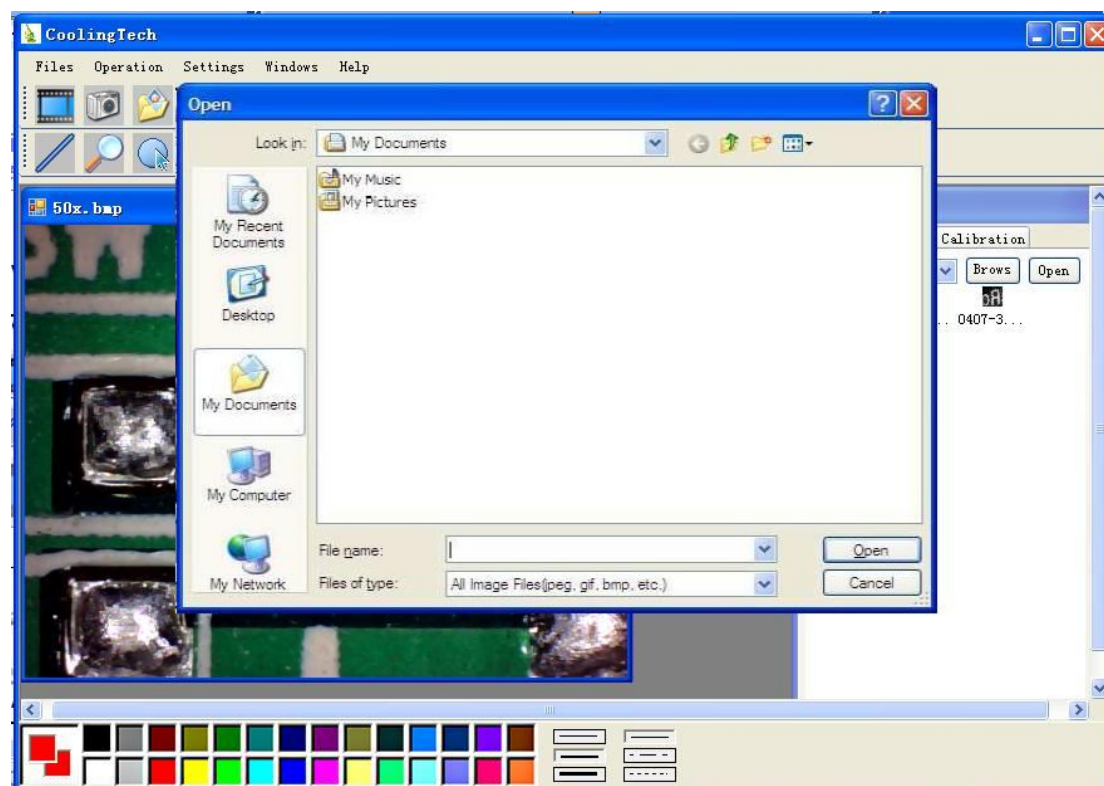



Choose the Image resolution from 320*240 to 1600*1200, default at VGA Mode 640*480

10 Click  to use measurement function.

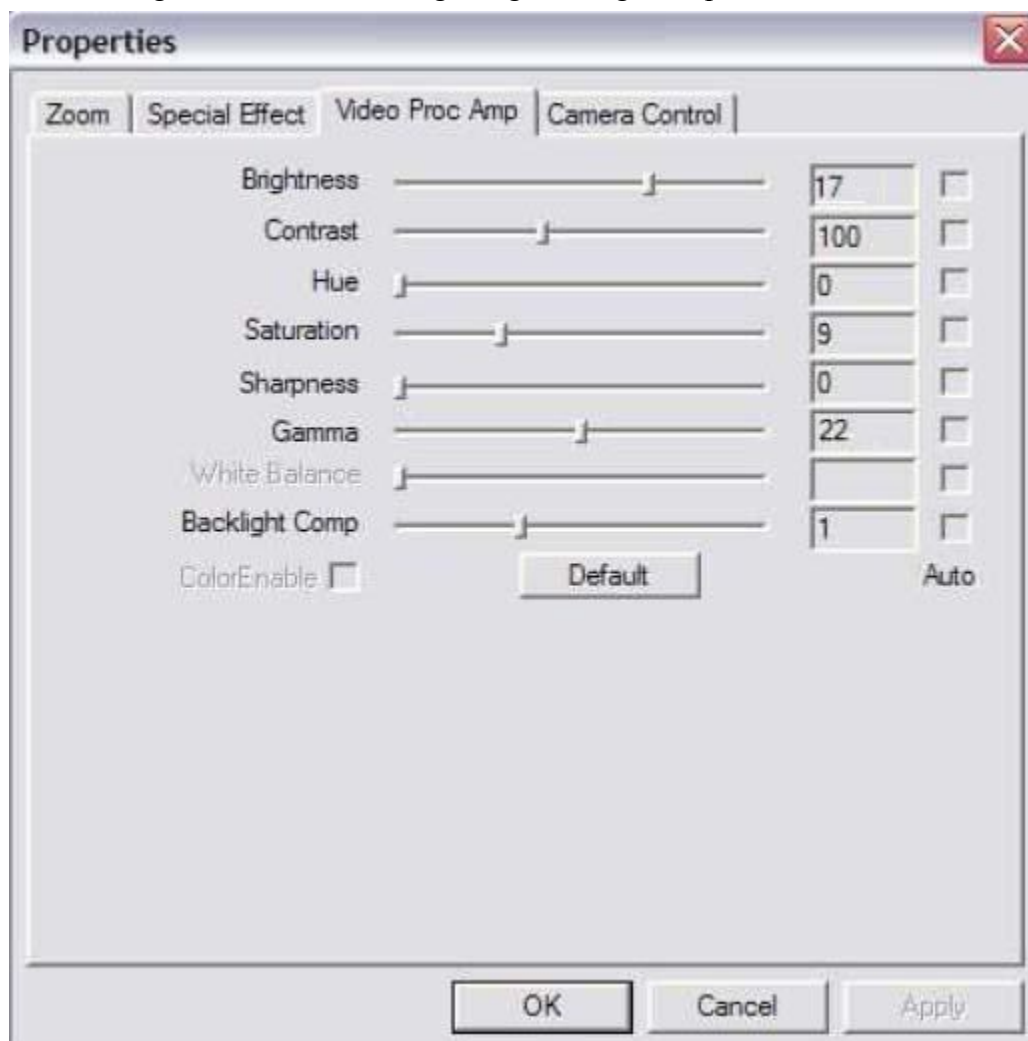


11 Click  to open pictures, and click  to save pictures



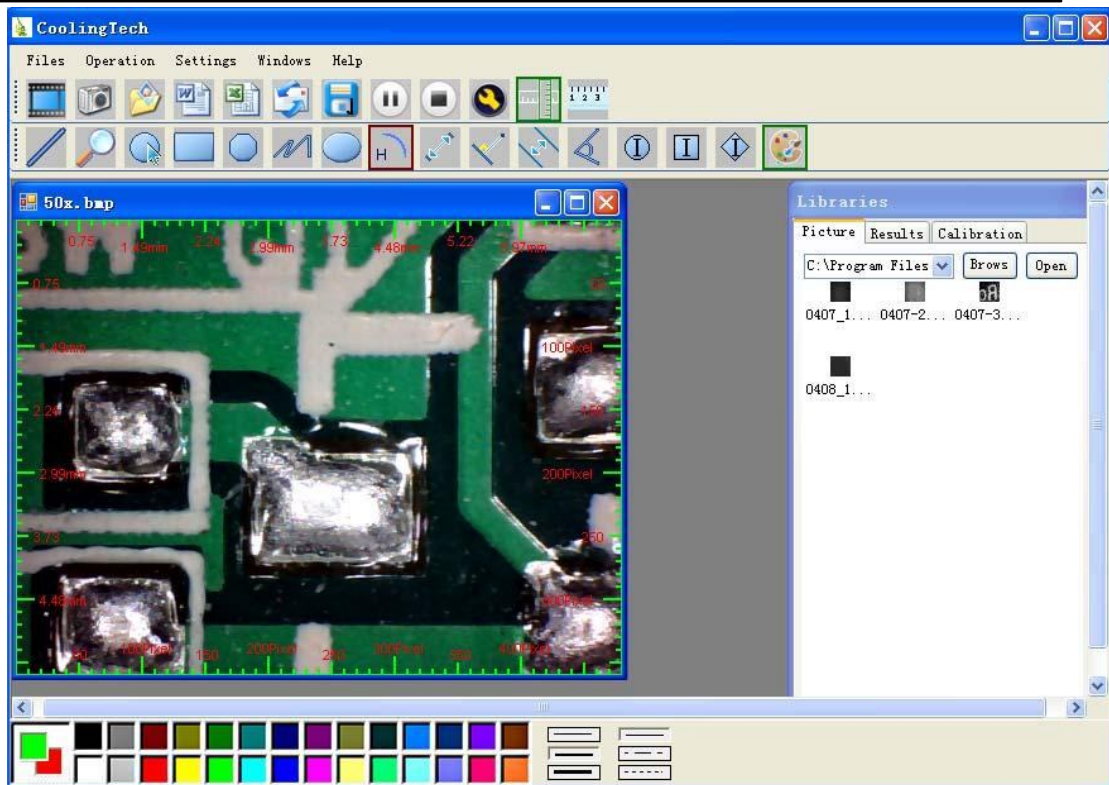
12  
Video PLAY(Pause) ,STOP


- 13  Image Parameter including Image setting and special effects



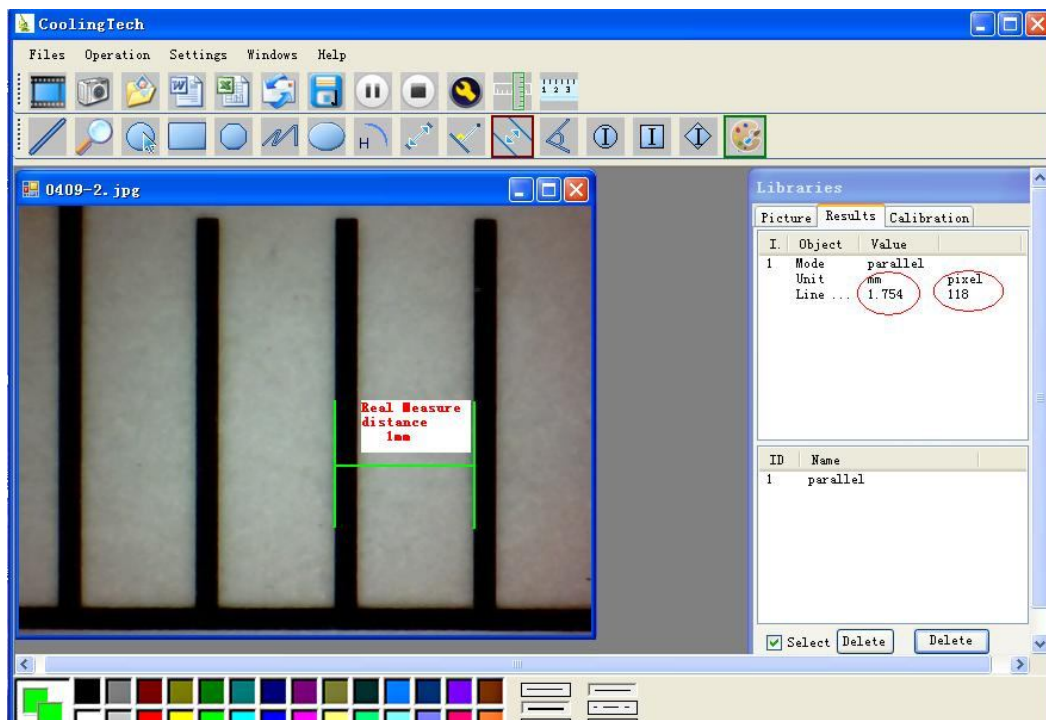
- 15  Magnifier

- 16 Click  Ruller, as followings

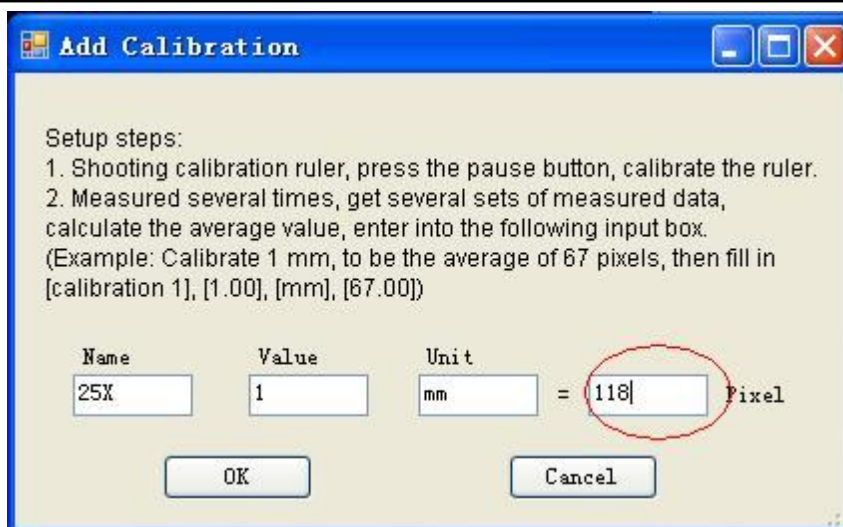


17 Click  , start calibration make sure certain accuracy.

Our experience told us that measurement could be controlled at 99% high precision. Measure tolerance could be caused from human eye distortion and defocus. More practice is helpful to measurements.



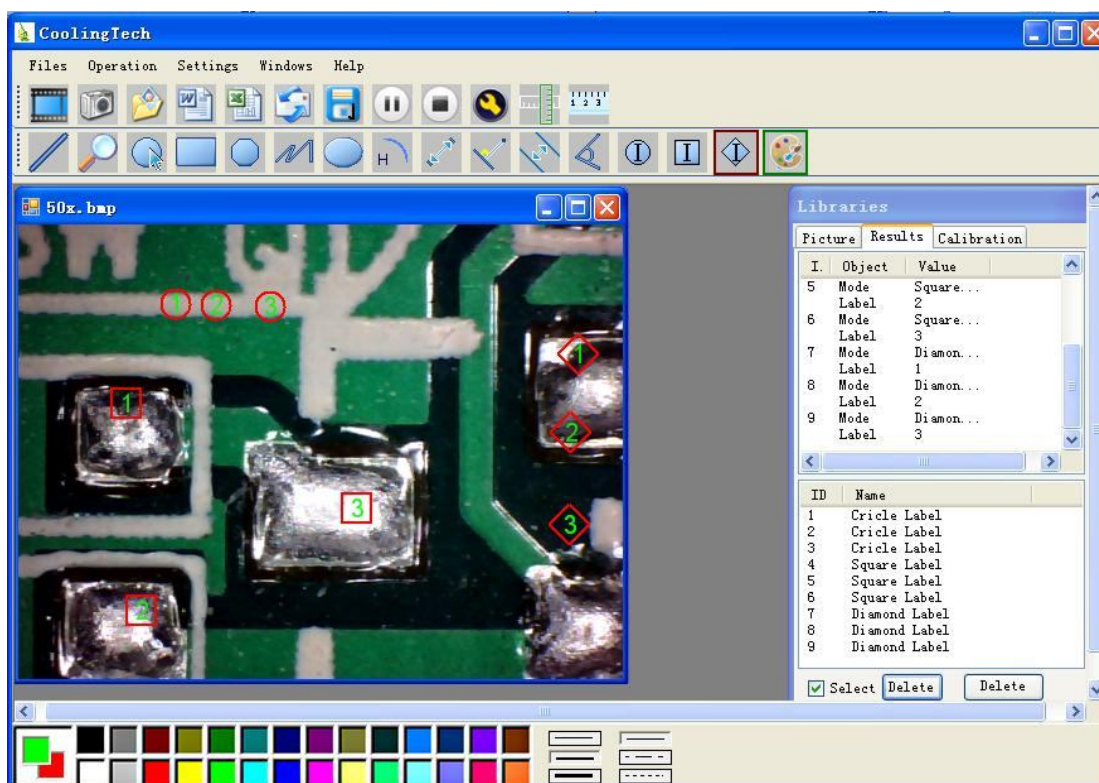
18 Key in the Measure data(Pixel),Unit, and Click' OK'



Warning:

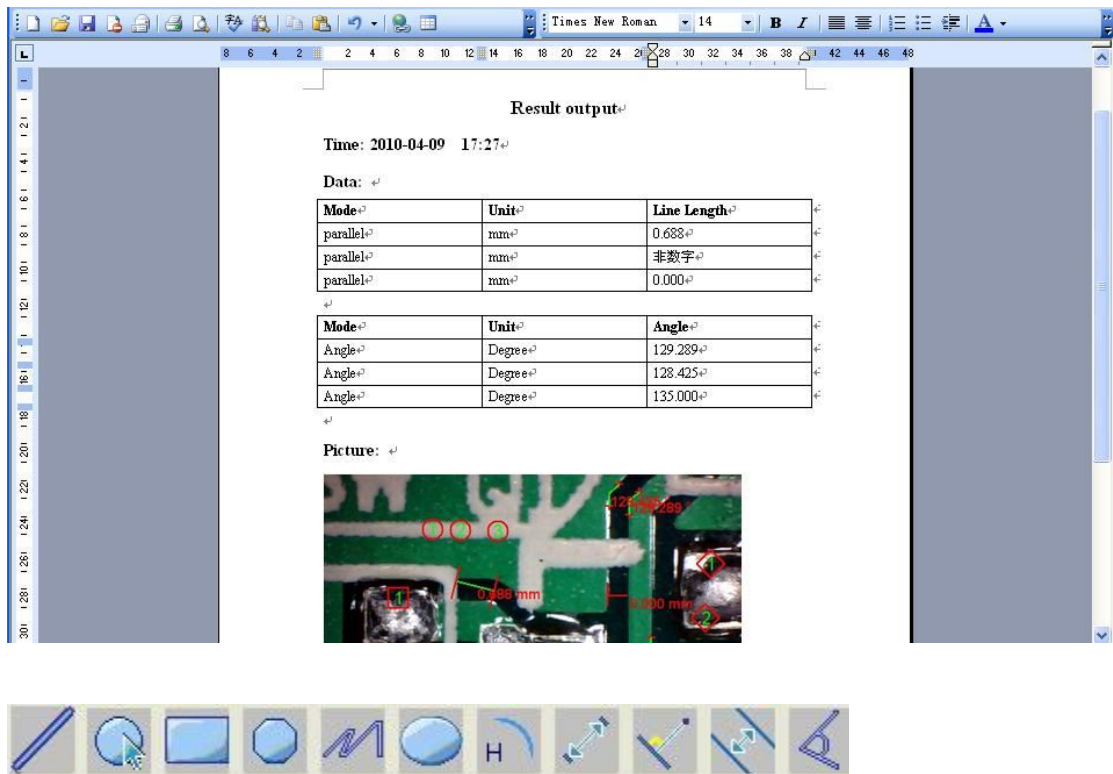
Please do calibration again once Magnification Ratio changed.

- 19  Color setting of display character



- 20 Click  to export word or excel format.

Example: Measure data under word file



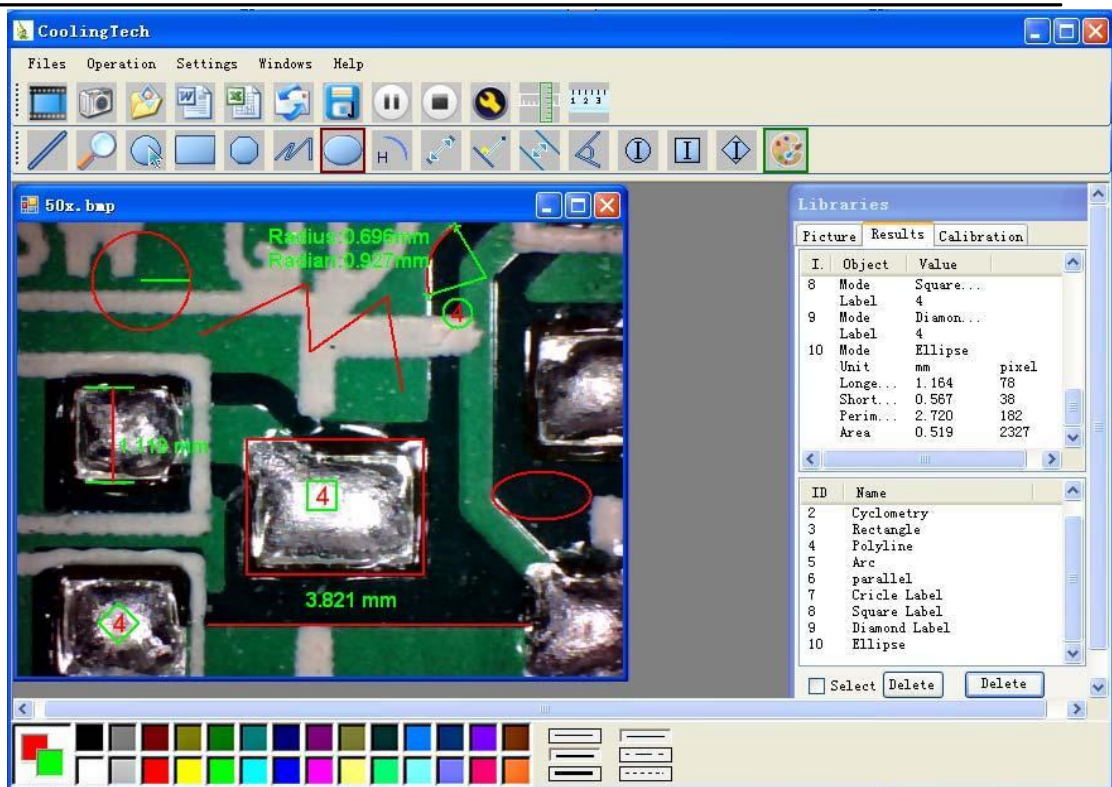
From Left to right:

Line ring Square Polygon Set-line Length

Oval Arc Point to Point distance Point to Line distance

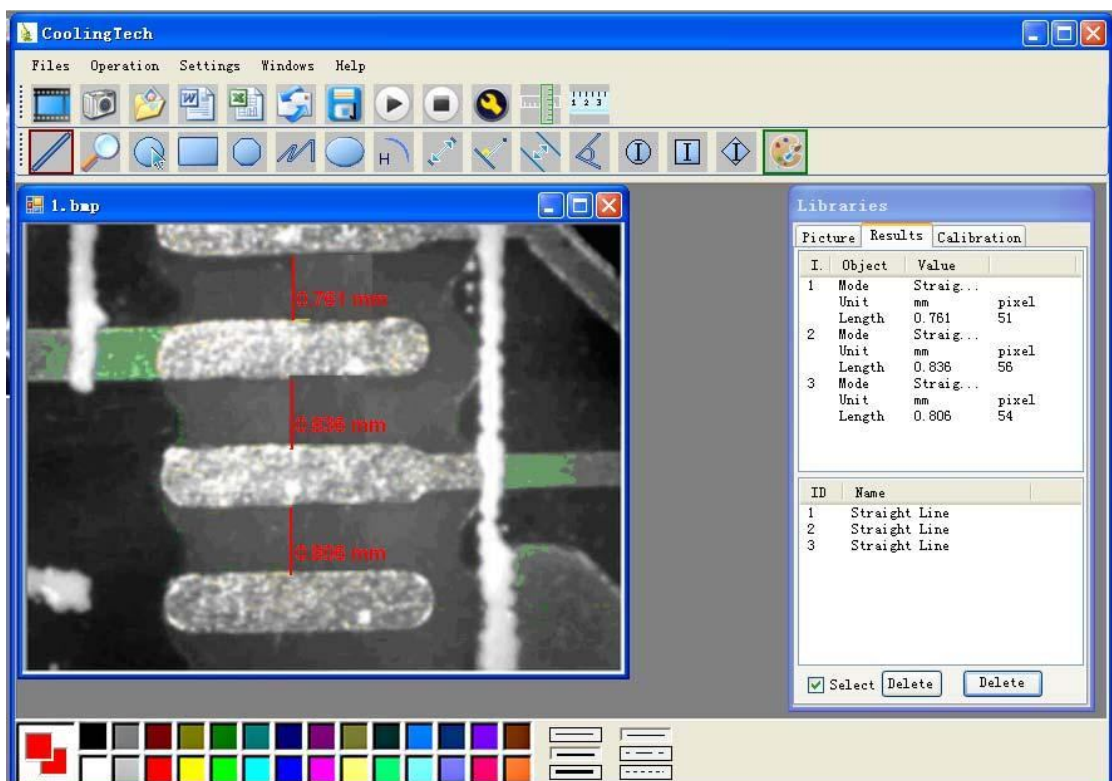
Parallel line Angle

(as below show)



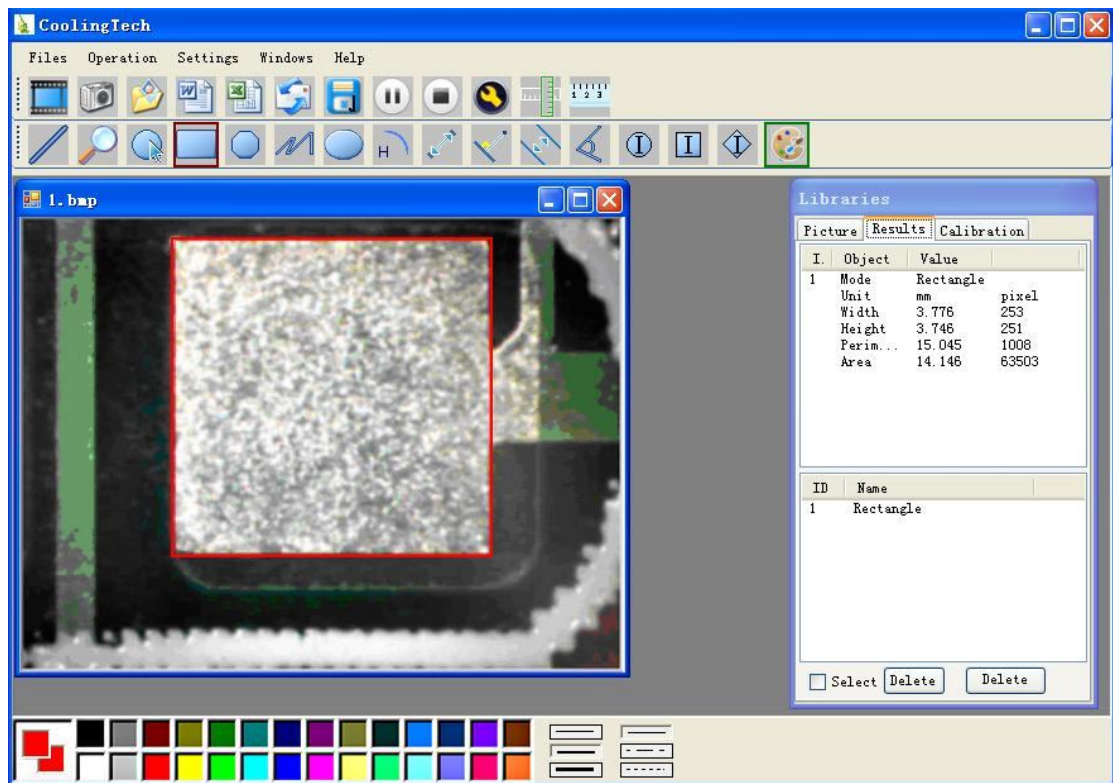
For example 1

Line measurement:



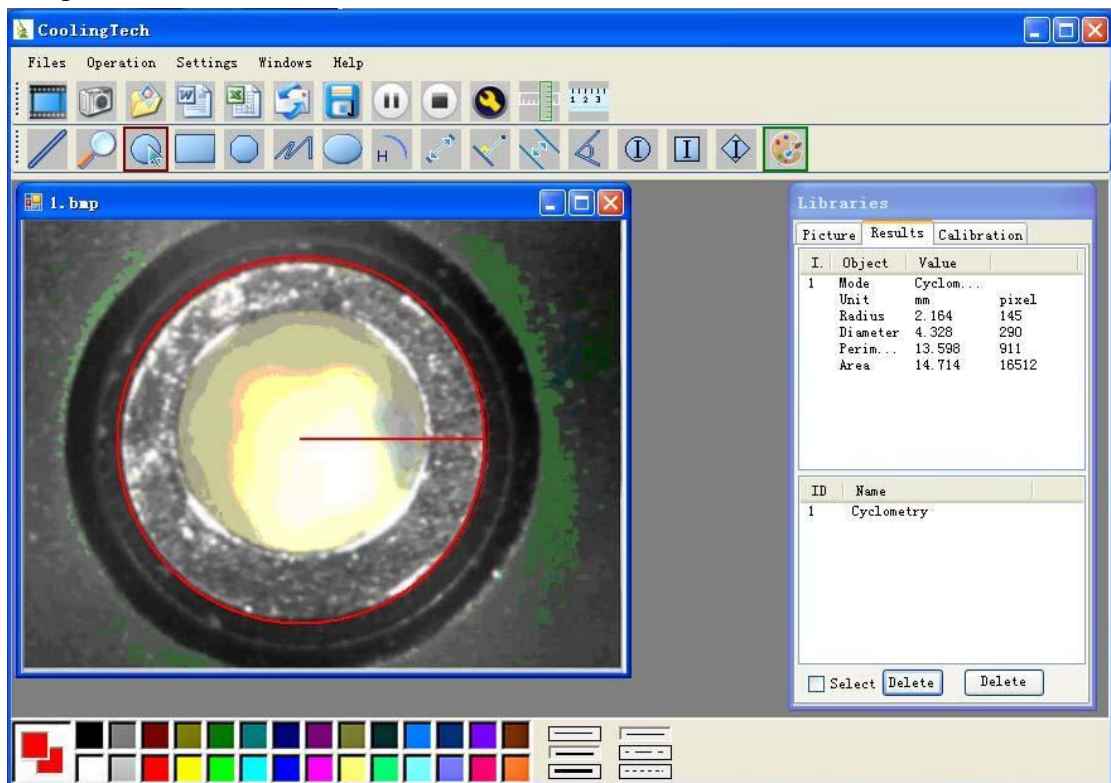
For example 2

Rectangular measurements:



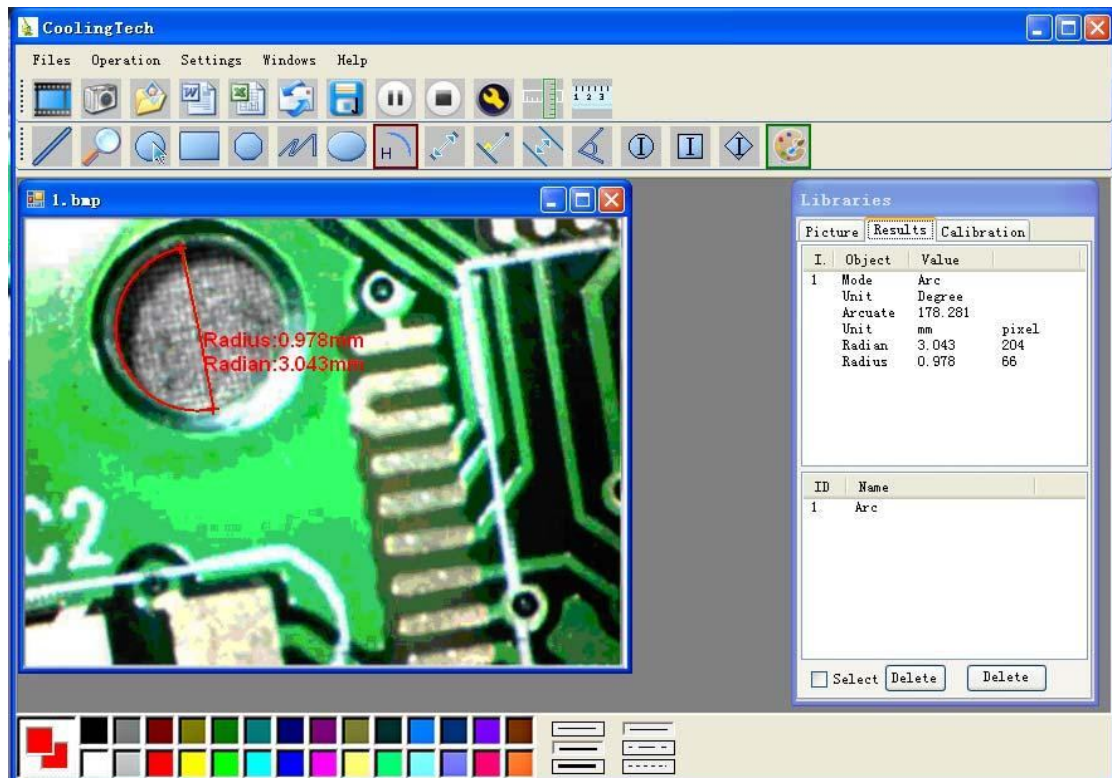
For example3

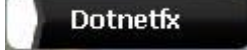
Ring measurements:



For example 4

Arc measurements:



3Please click  to Continue when the NET Framework2.0 is necessary