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S04-600X Digital Microscope User Manual

*P*repared *by C*oolingtech   *Engineering Dept.*

2011.10.1

Thank you for Purchasing our S04-600X 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

Digital Microscope(S04-600X) must be connected to the computer ,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

① ② ③ ④ ⑤ ⑥ ⑦

① **LED Light** ② **Lens** ③**Magnification 25X~600X** ④ **Focus Roller**
⑤ **SNAP & Zoom Switch** ⑥ **Body** ⑦ **USB Line**

Specification

Image CMOS Sensor

Controller High Speed DSP (Driver Free available)

Focus Range 0mm ~ 40mm

Snap Shot Software and Hardware

Video Capture Resolution 1.3M.

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

Still Image Capture Resolution1280*960,1600*1200,800*600,640*480,
320*240

Frame Rate 30 f/s under 600 LUX Brightness

Digital Zoom 5X Sequence Mode

Brightness Control Manual adjustment

Magnification Range 25X ~ 600X (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: Iron gun 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. If 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

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3. Metal fixed Stand (1pcs)

4. CD ROM (Driver, Measurement software, User Manual)

5. 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

S04-600X Digital Microscope is a free Driver Product，it can works immediately after being connected to the computer with operation system above win2000 version. Connect the Digital Microscope by USB2.0 cable to your computer, Double-click 'my computer' icon on your computer desktop, below interface will shown up.
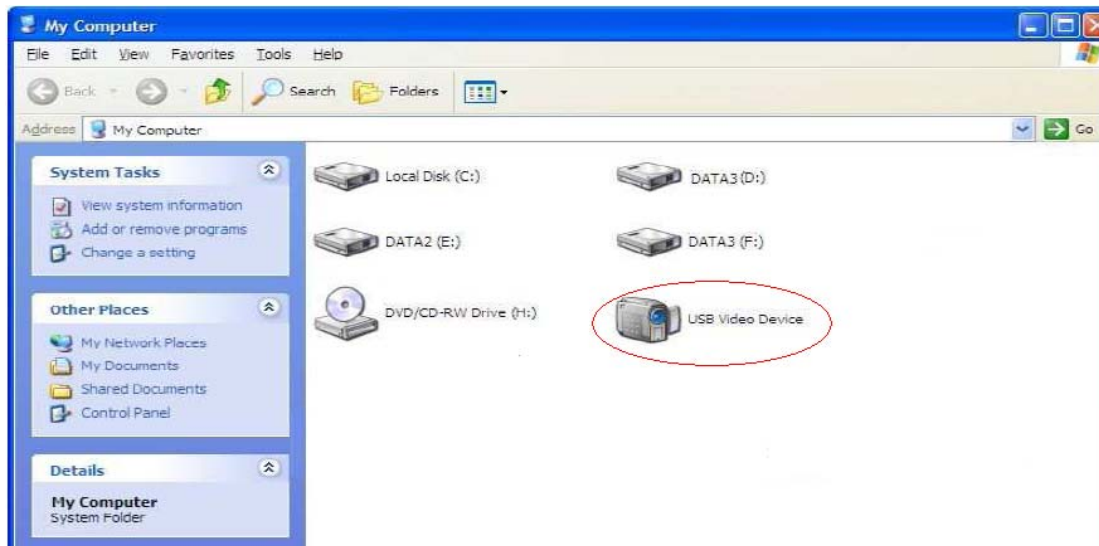
Double click the **Video device icon** as above red marked in your computer. Now it is ready to use.

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")

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1. Driver installation

1Click [**Driver**] to continue, the screen will show the installation progress.

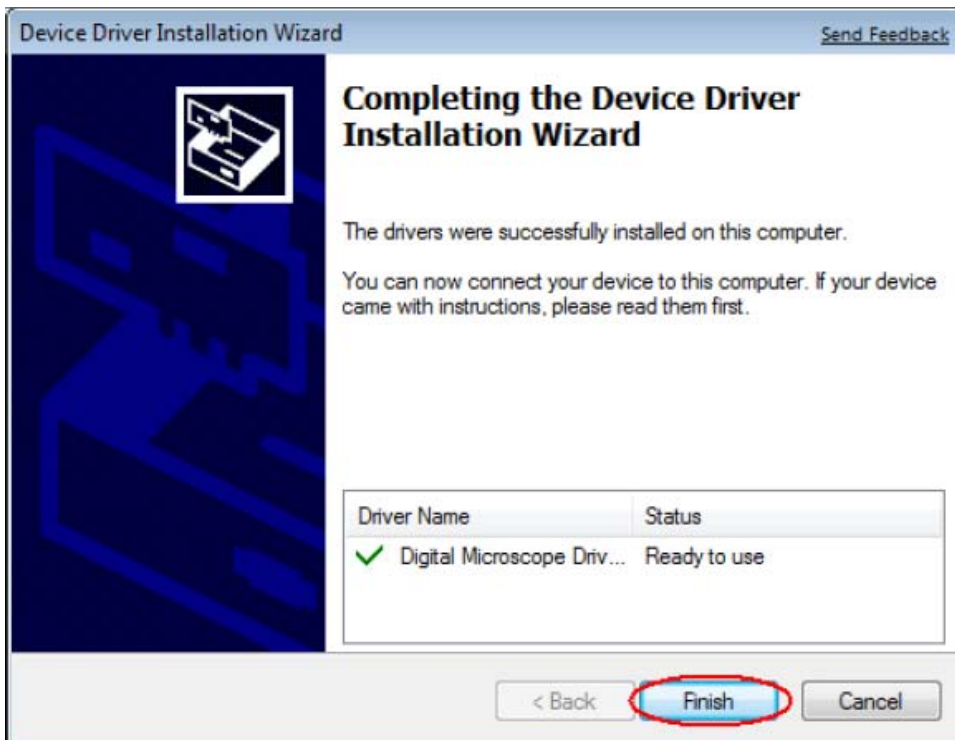# **C**ooling**T**ech
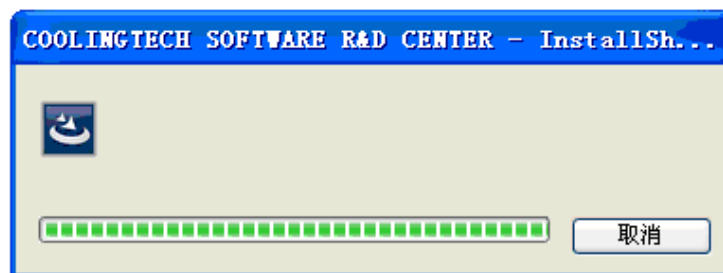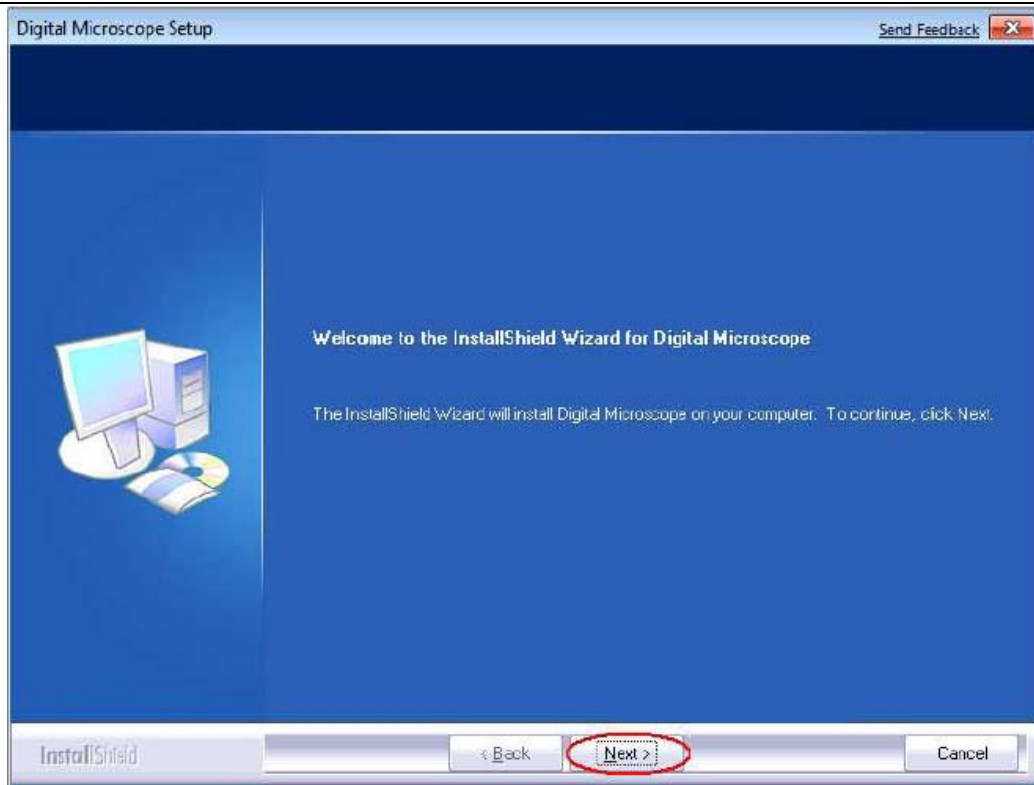
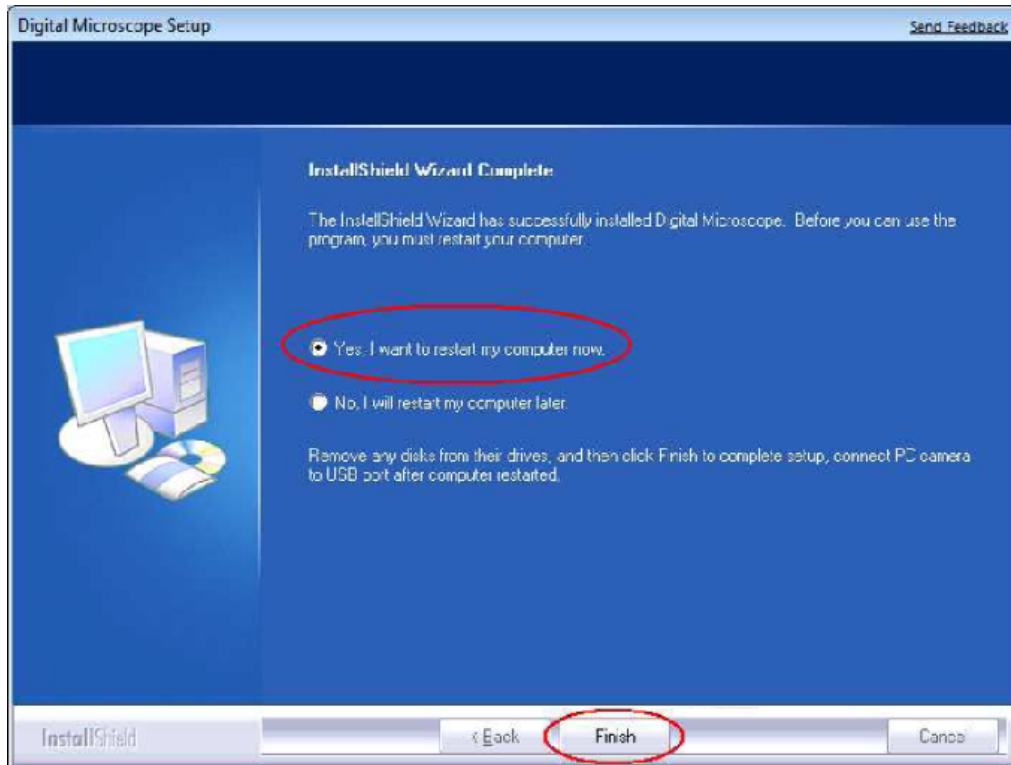Click "next" to continue，as followings:

Click "next" to continue，as followings:

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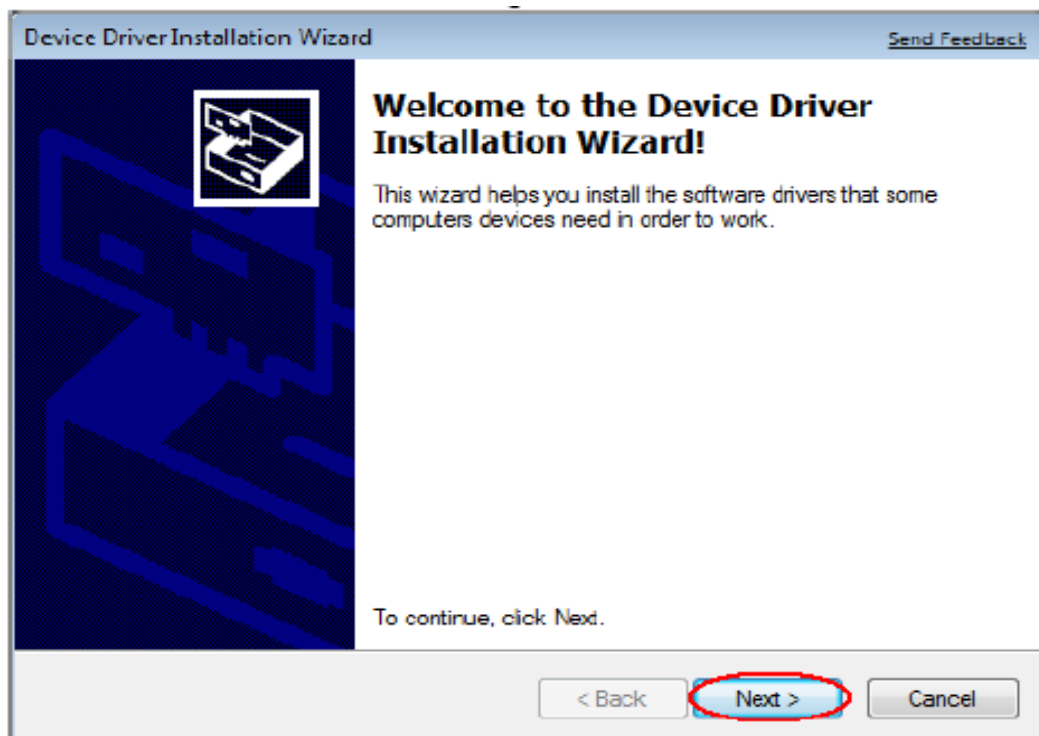
Click "continue Anyway" , as followings:
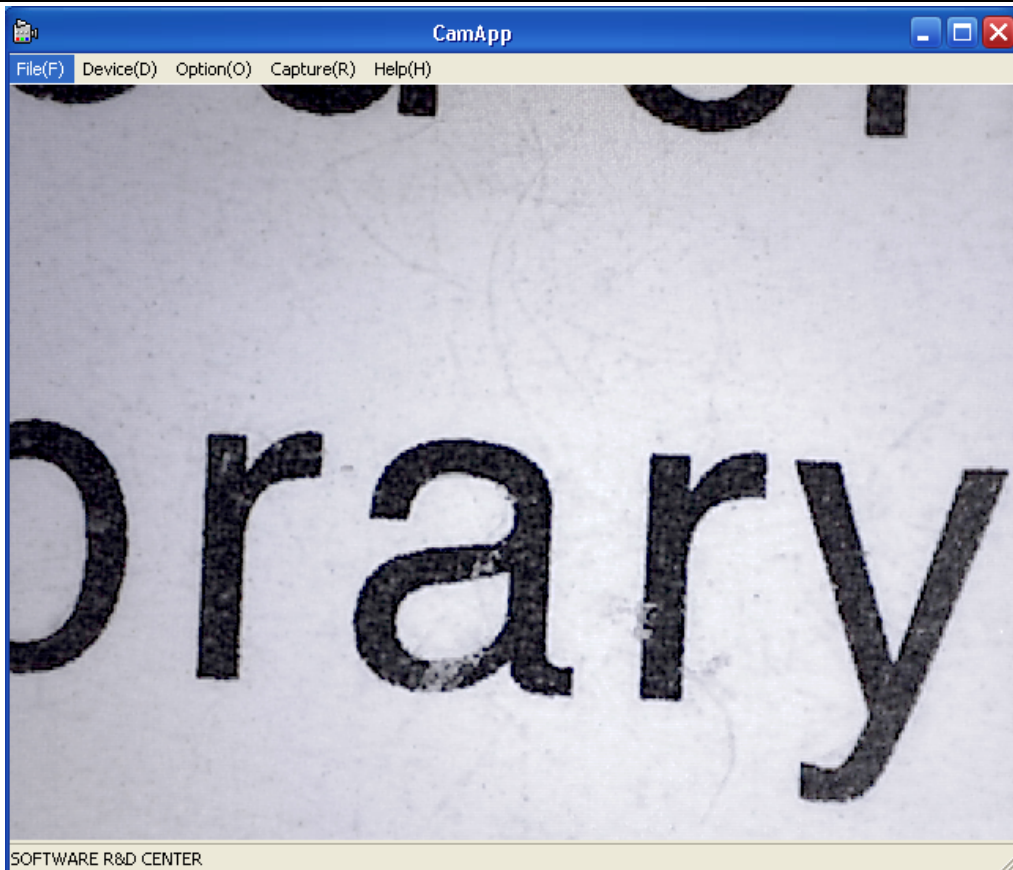

Click "Finish" to continue，as followings

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".

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Hardware Installation

⚠ The software you are installing for this hardware:

Digital Microscope

has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)

Continuing your installation of this software may impair or destabilize the correct operation of your system, either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.

[Continue Anyway]   [STOP Installation]

Found New Hardware Wizard

Completing the Found New Hardware Wizard

The wizard has finished installing the software for:

Digital Microscope

Click Finish to close the wizard.

[< Back]   [Finish]   [Cancel]

5, When Drive are installed, CamApp icon will appear on the desktop. Double-click it

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6 Interface

Toolbar

Preview Area
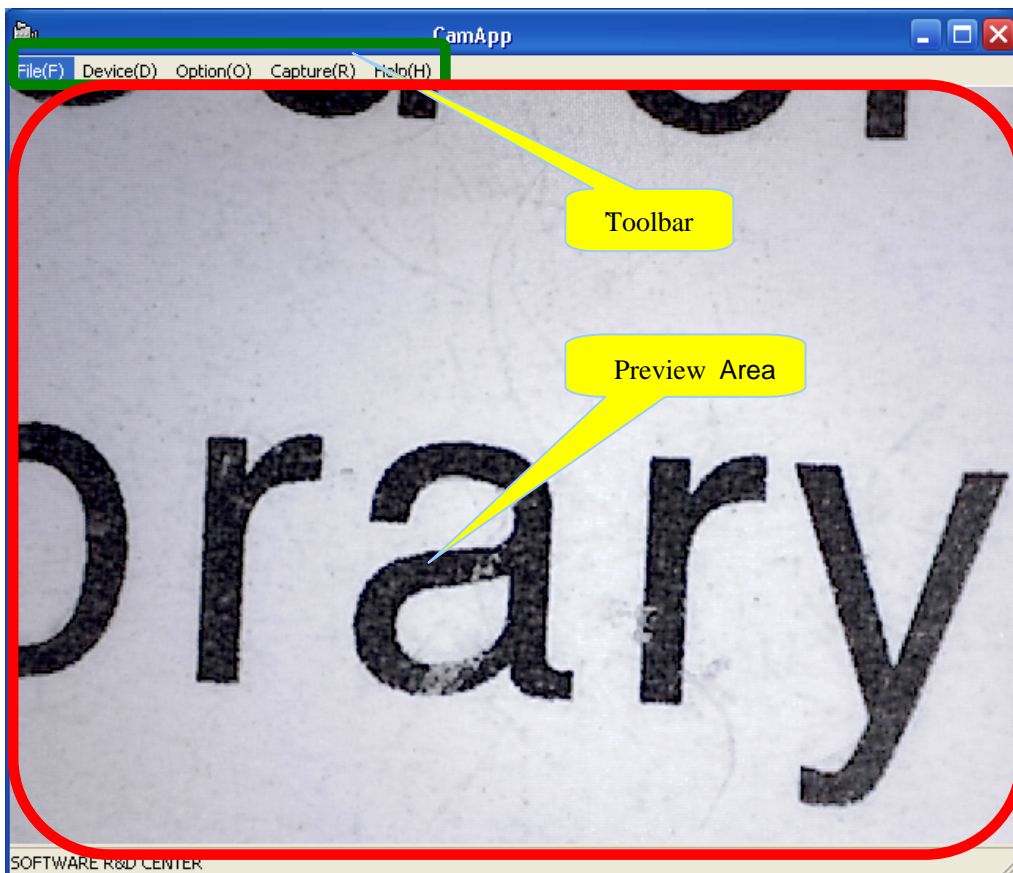
7 Tool bar instroduction

File(F) Device(D) Option(O) Capture(R) Help(H)

1 Click File(F)

File(F)

Set capture file Folder…(S)
Set snapshot file Folder…(N)
File index reset(R)

Exit(X)
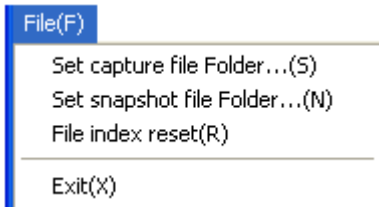
This equipment has video and photo function. Before video and photo Please click "Set capture file folder path" or "Set snapshot file path" to set the file storage area .

2 Click Device(D)

Device(D)

✔ USB2.0 PC Camera

✔ SigmaTel Audio
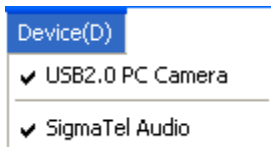
You can select the different equipment according to your request if your computer has two video equipment or more

3 Click Option(O)

Option(O)

✔ Preview(P)
Video Capture Filter…(C)
Video Capture Pin…(I)
Audio Capture Filter…(V)

1 Click "Video capture filter"

Properties

Video Proc Amp | Camera Control | General Setting

Brightness   30
Contrast   57
Hue
Saturation   2
Sharpness   10
Gamma   3
White Balance
Backlight Comp   0
ColorEnable   Default   Auto

OK   Cancel   Apply

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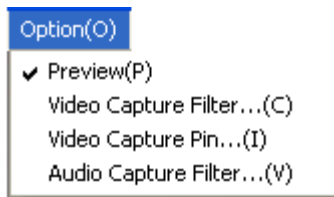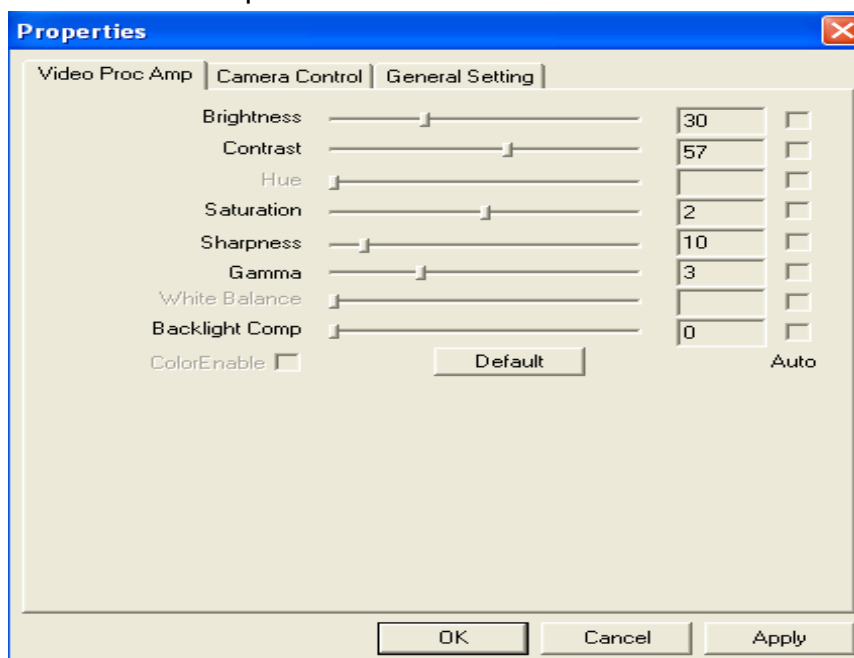
Video parameters setting，you can change some values according to your request， Do not recommend to make some changes because the parameters has been adjusted to best form before leaving factory If the values are changed negligently，and click "default" to recover the factory shipped state. Click "General Setting" and entering Special effective function
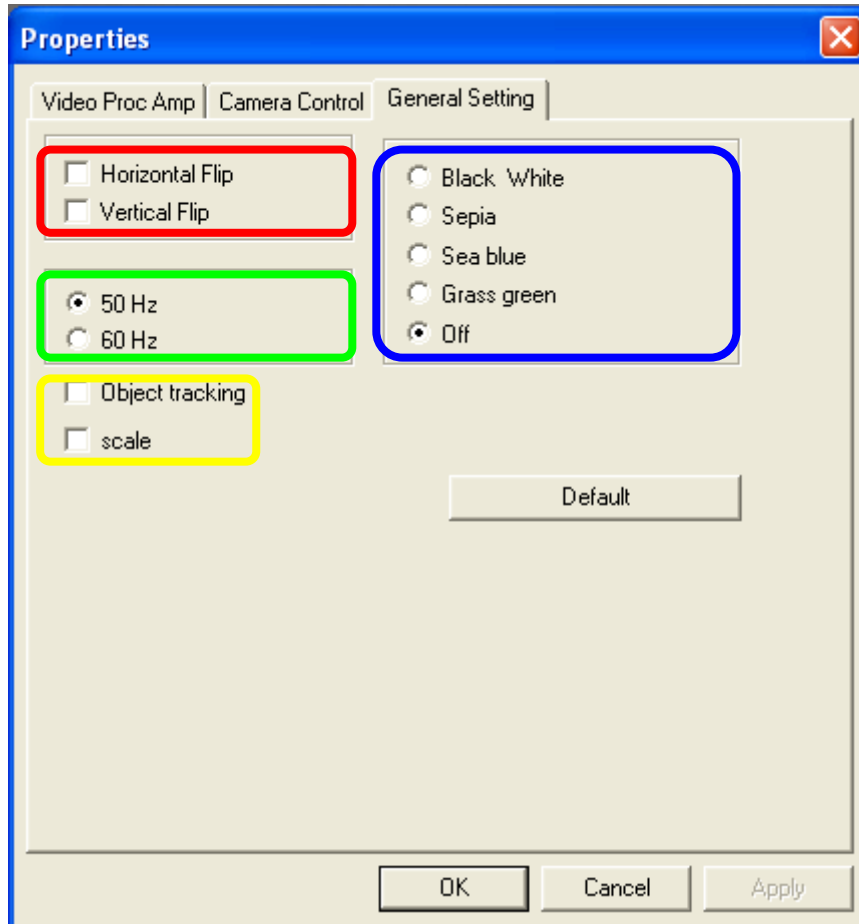
"Horizontal Flip" and **" Vertical Flip"** in the red form.

<div align="center">
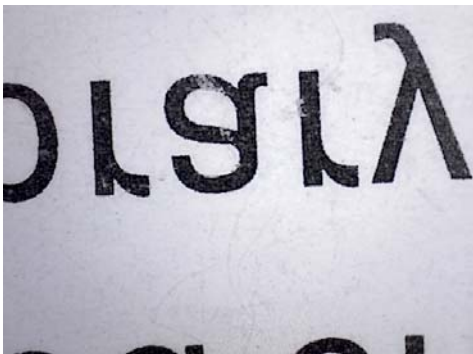
Horizontal Flip   **Vertical Flip**

</div>
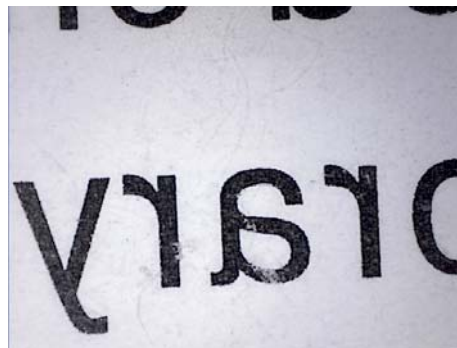
"frequency" in the green form

Special background in the blue form, the back ground will be changed by your different selection

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For example:
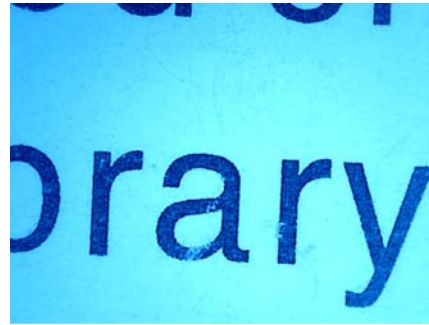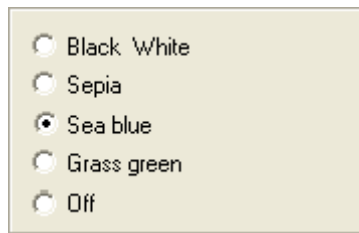
"**Object tracking**" and "Scale" in the yellow form
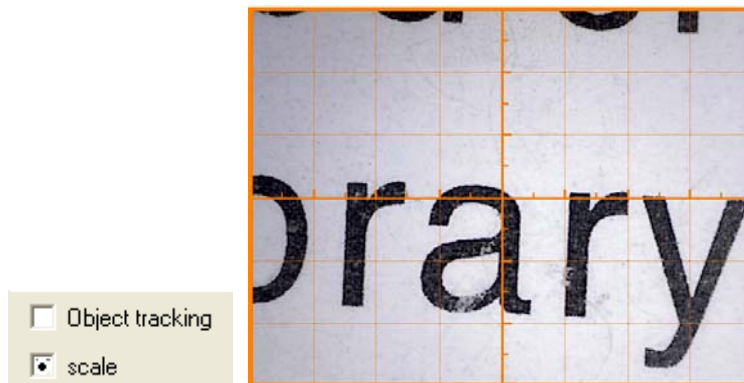
2 Click "video capture pin.."
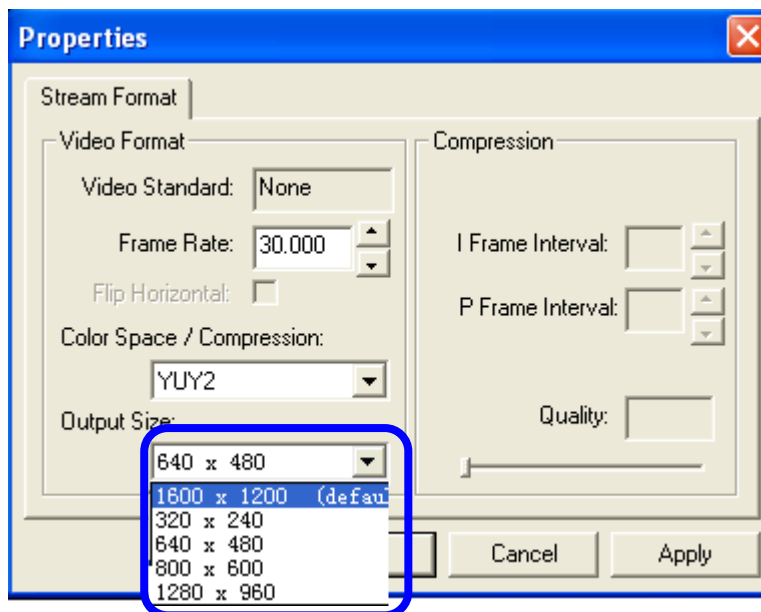
You can set the different output size according to your request

4 Click Capture(R)   Photo and Video setting

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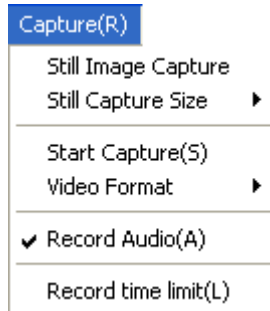
Select "Still Image capture" and "still capture Size"

Video Format AVI。

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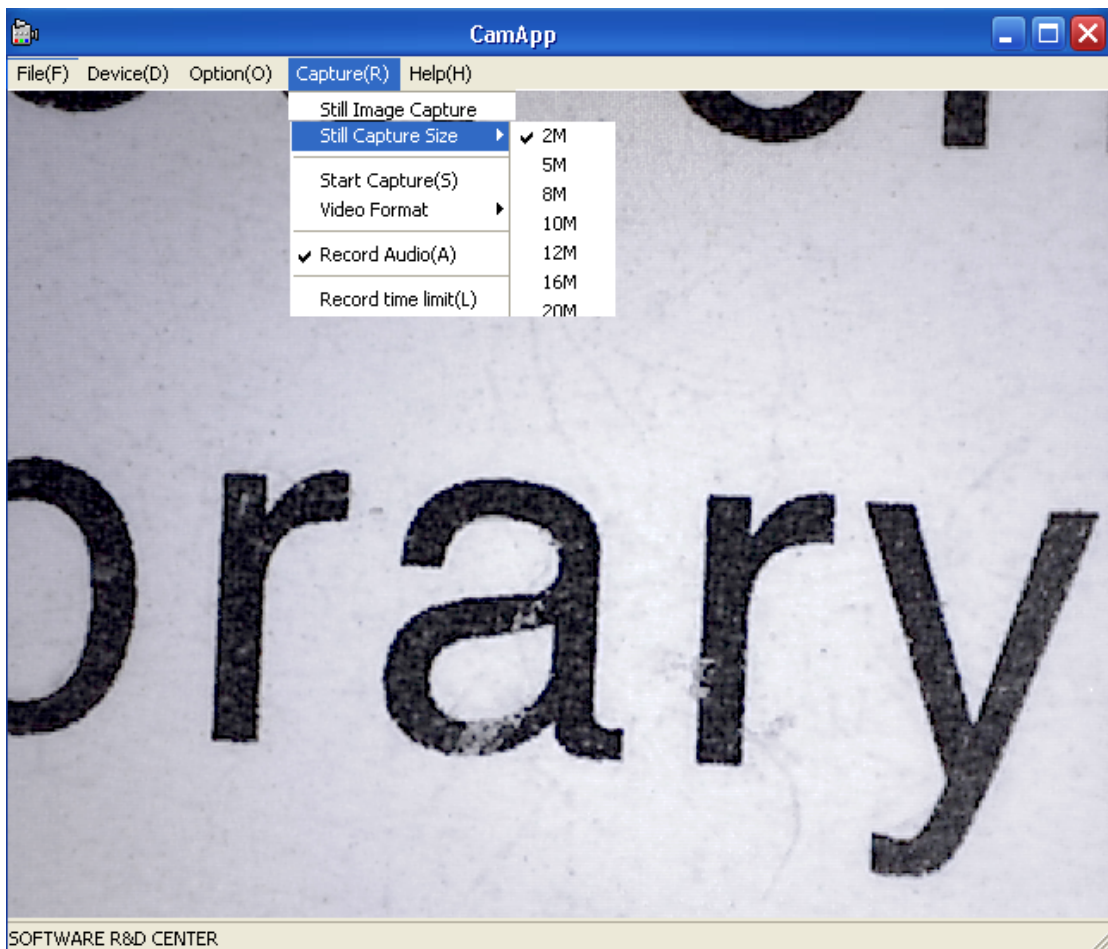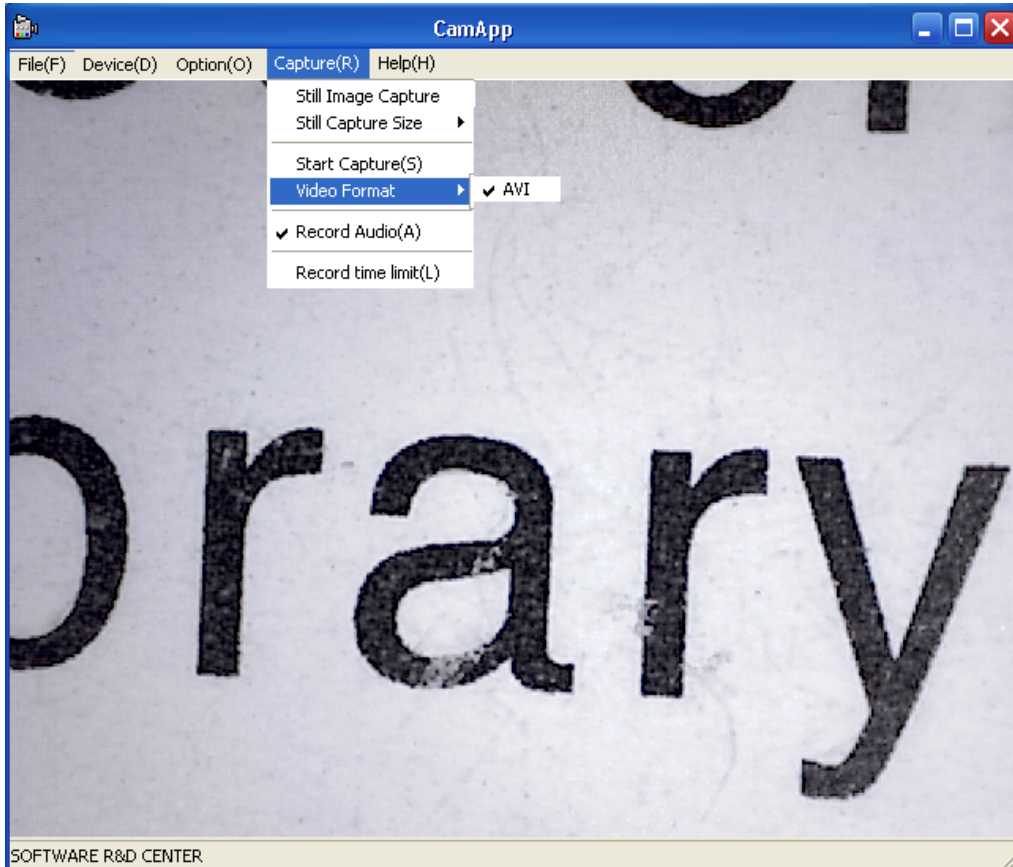
2 Measurement installations:

1 Click **Measurement** to continue, as followings

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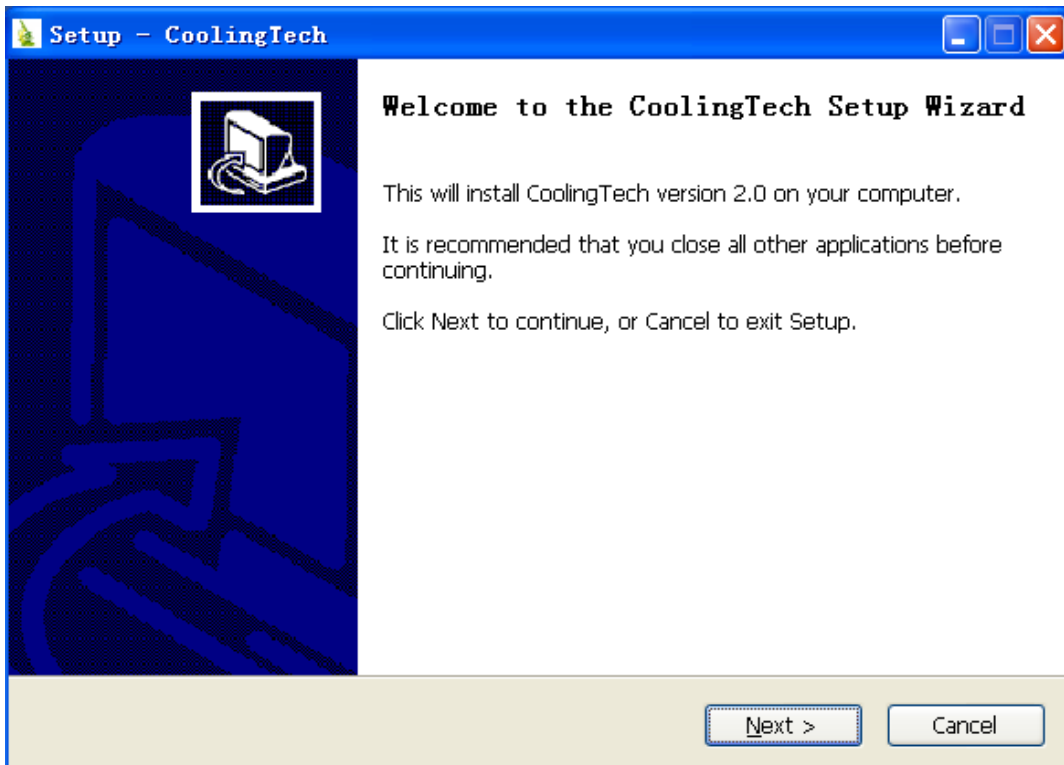
2 Click "next" to continue, as followings
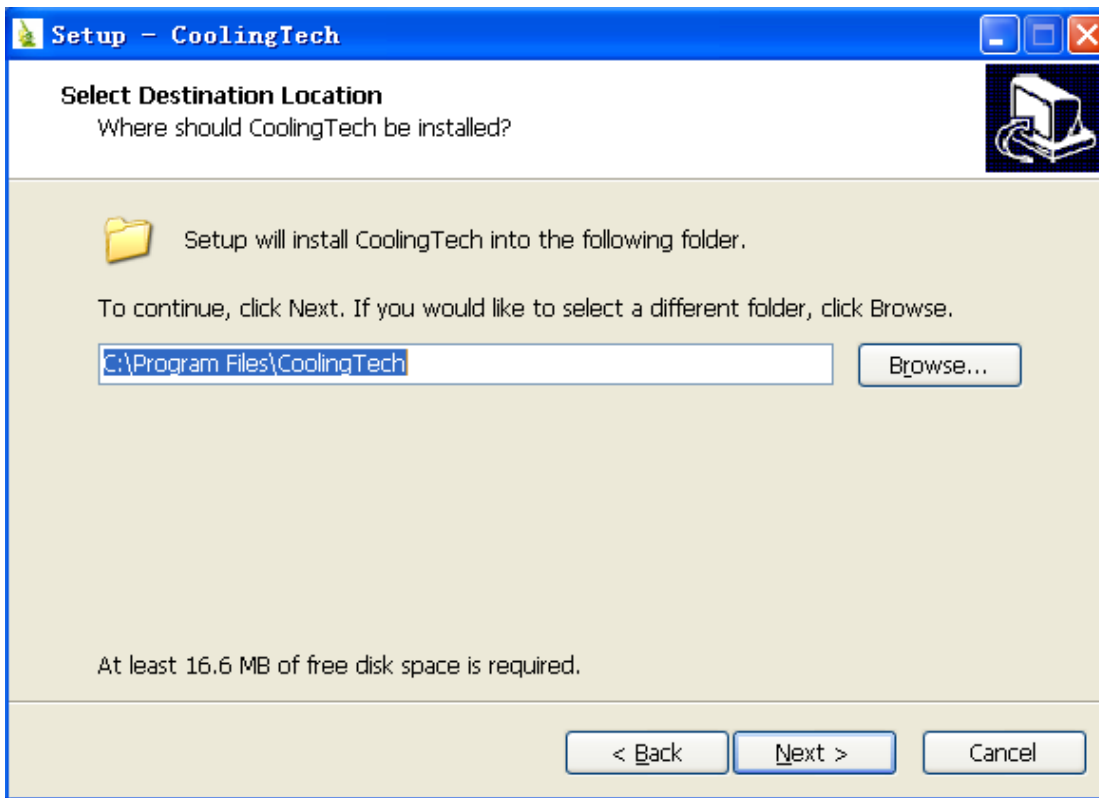
3. Click "next" to continue, as followings

Cooling**Tech**
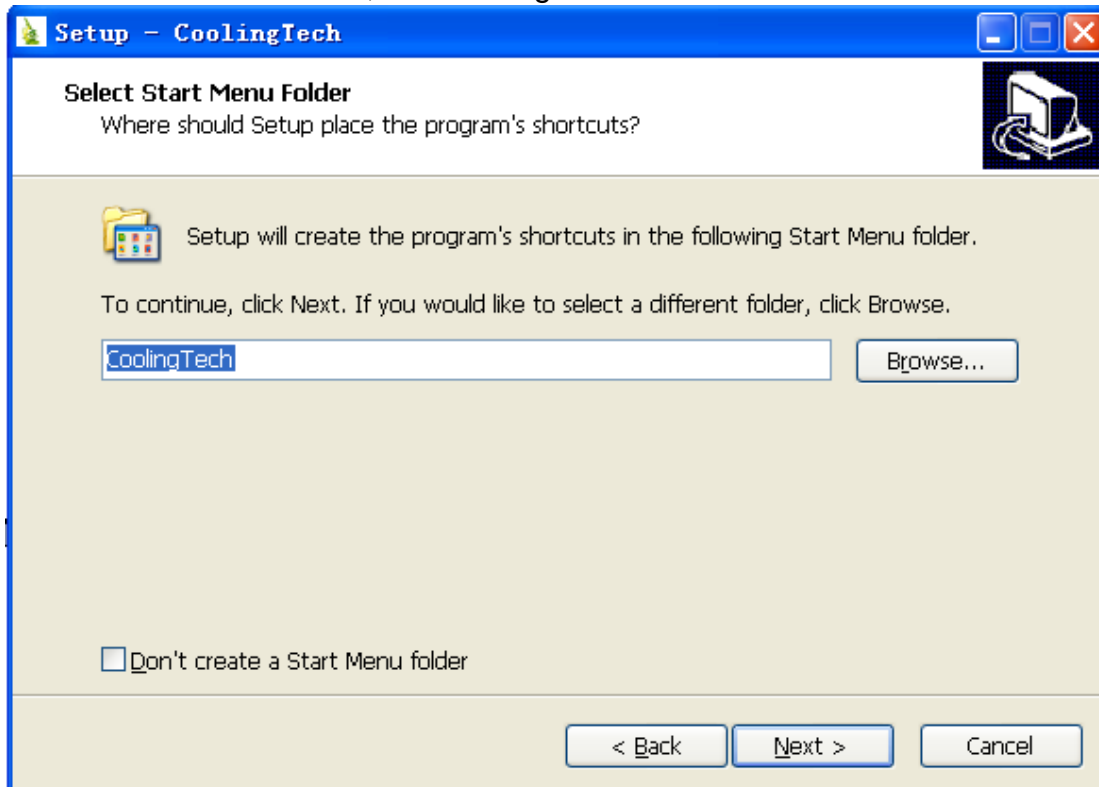
4. Click "next" to continue, as followings
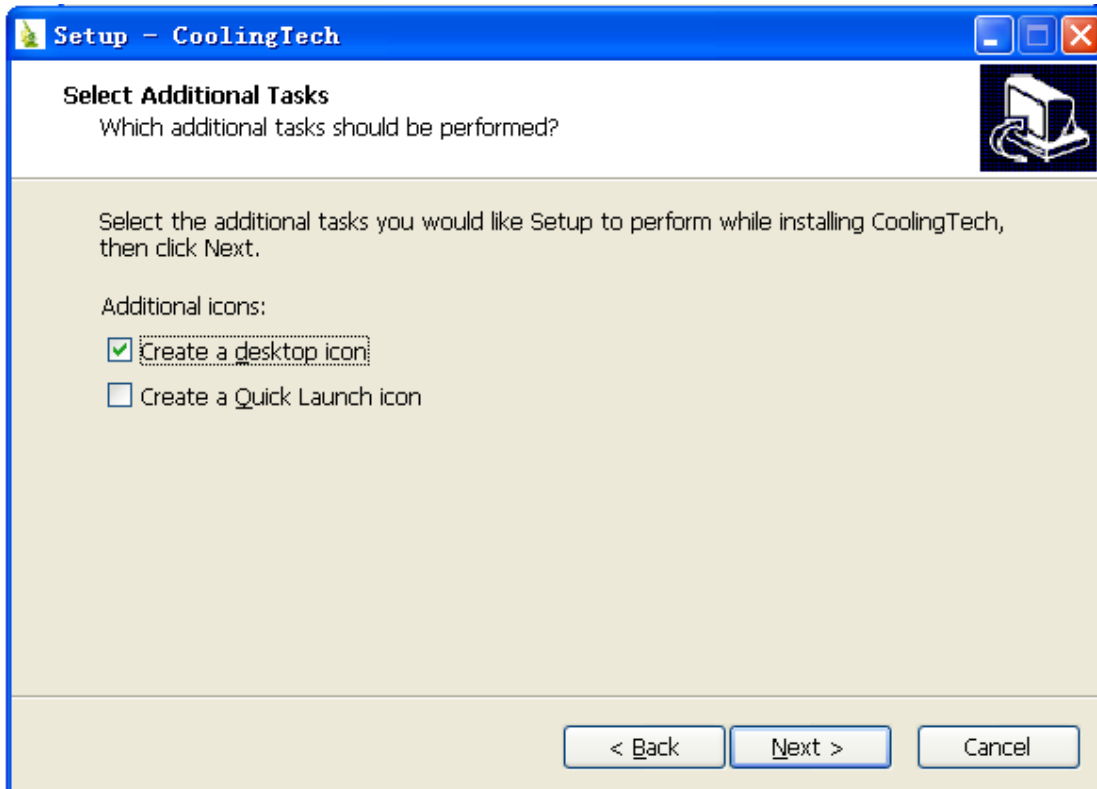
5. Click "next" to continue, as followings
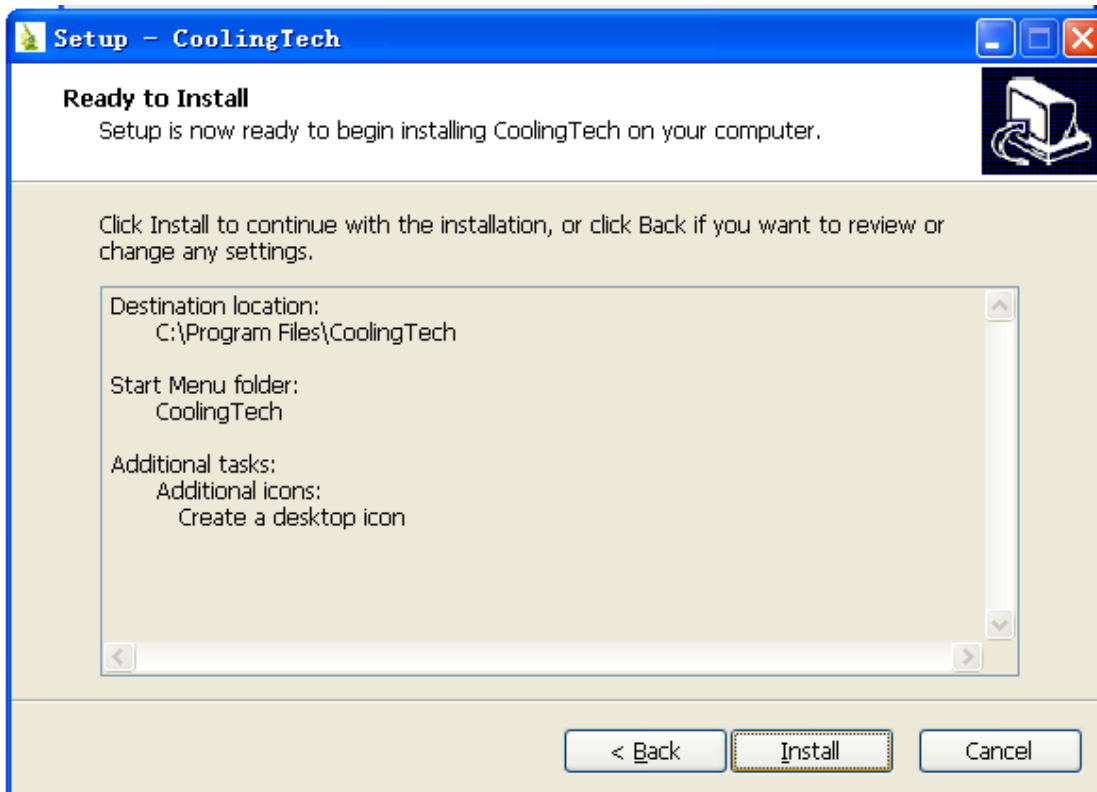
6 Click "Install" to continue, as followings

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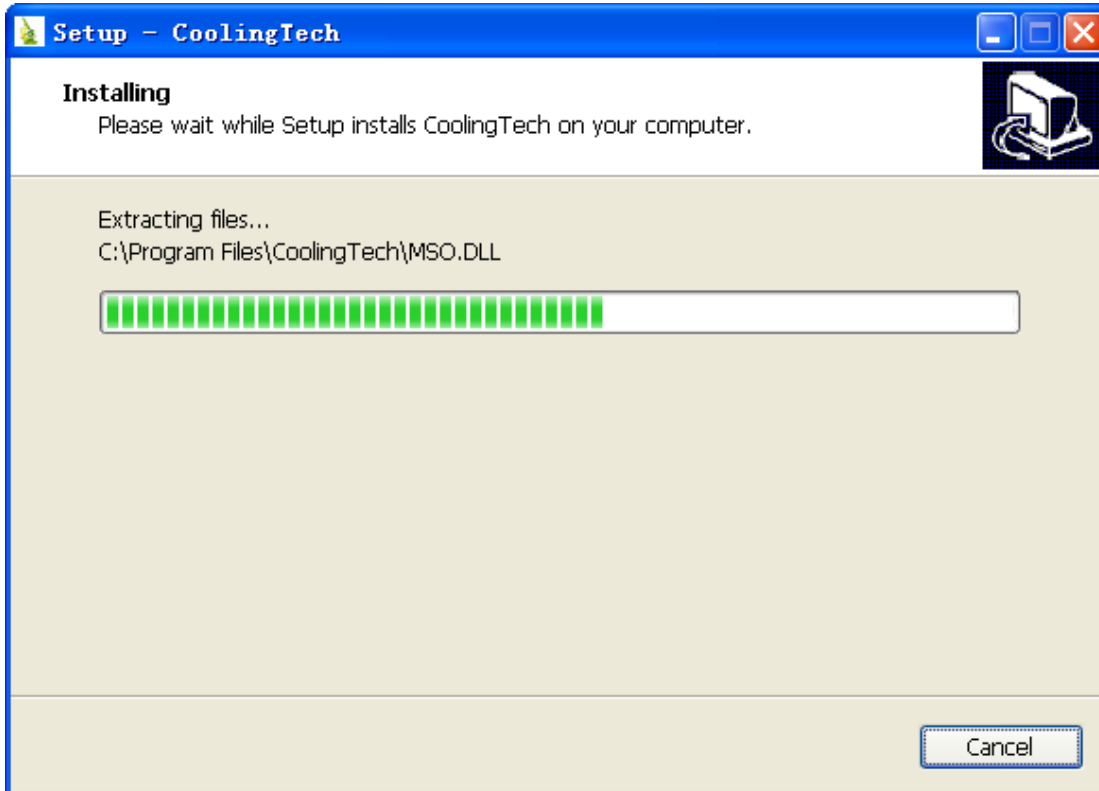
Wait a few seconds while the installation taking place.
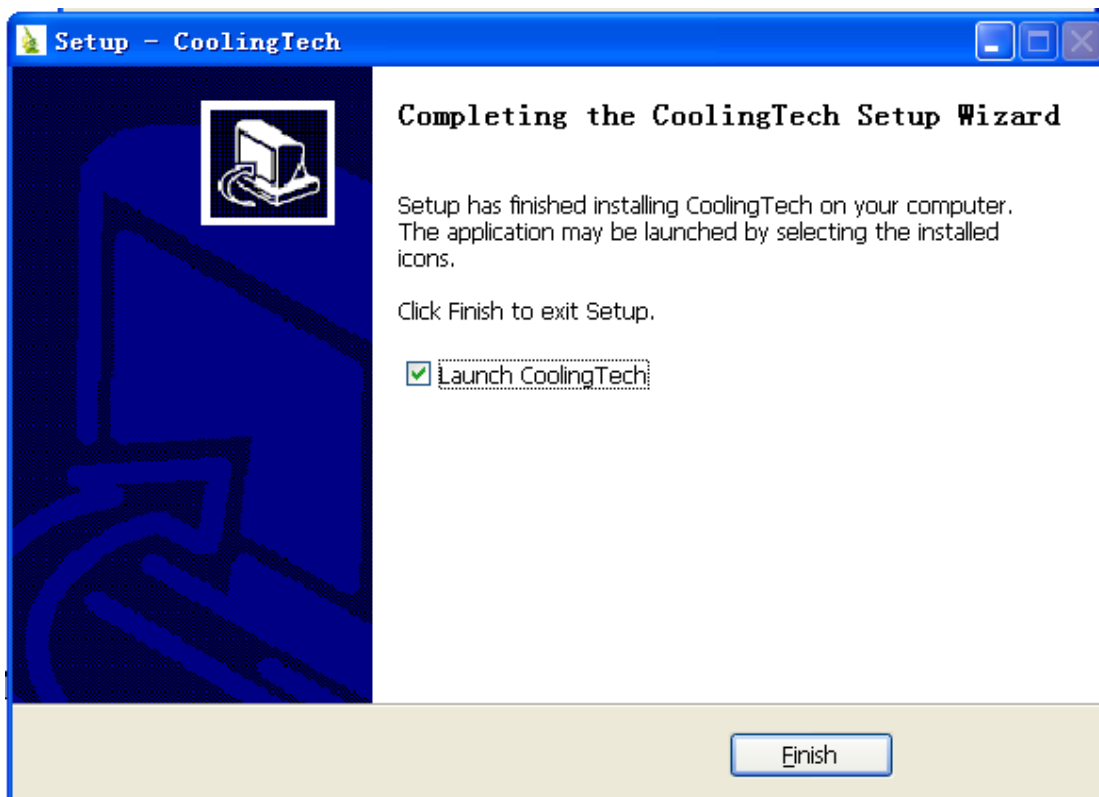
7.Click "Finish" and the installation completes.

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8.After the installation completes, double click ![icon] at computer desktop to start using the software.
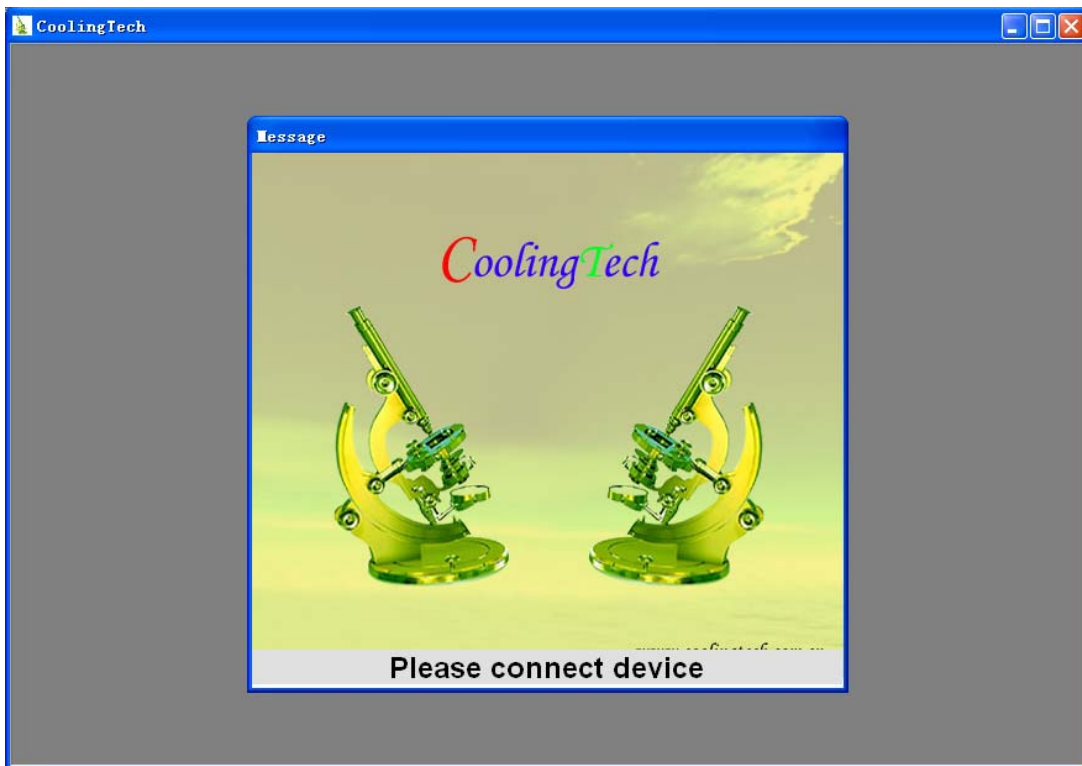
Plug-in the devices, Display in operation window

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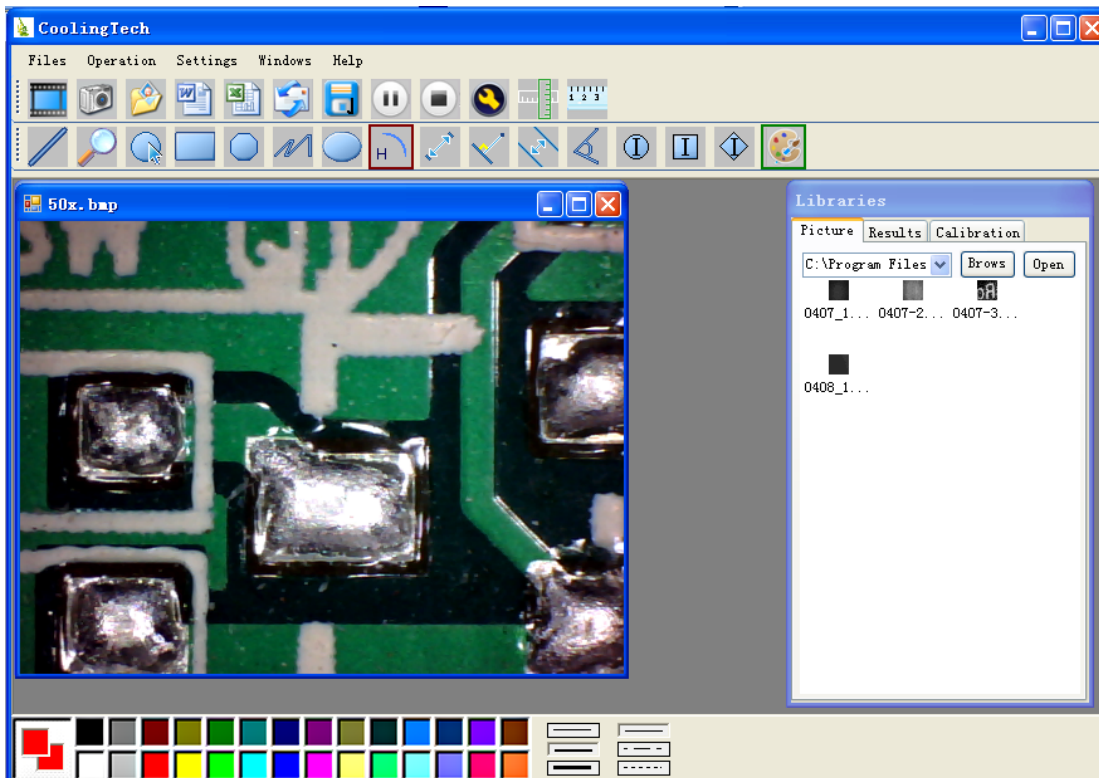
9 Click ,open the operation system
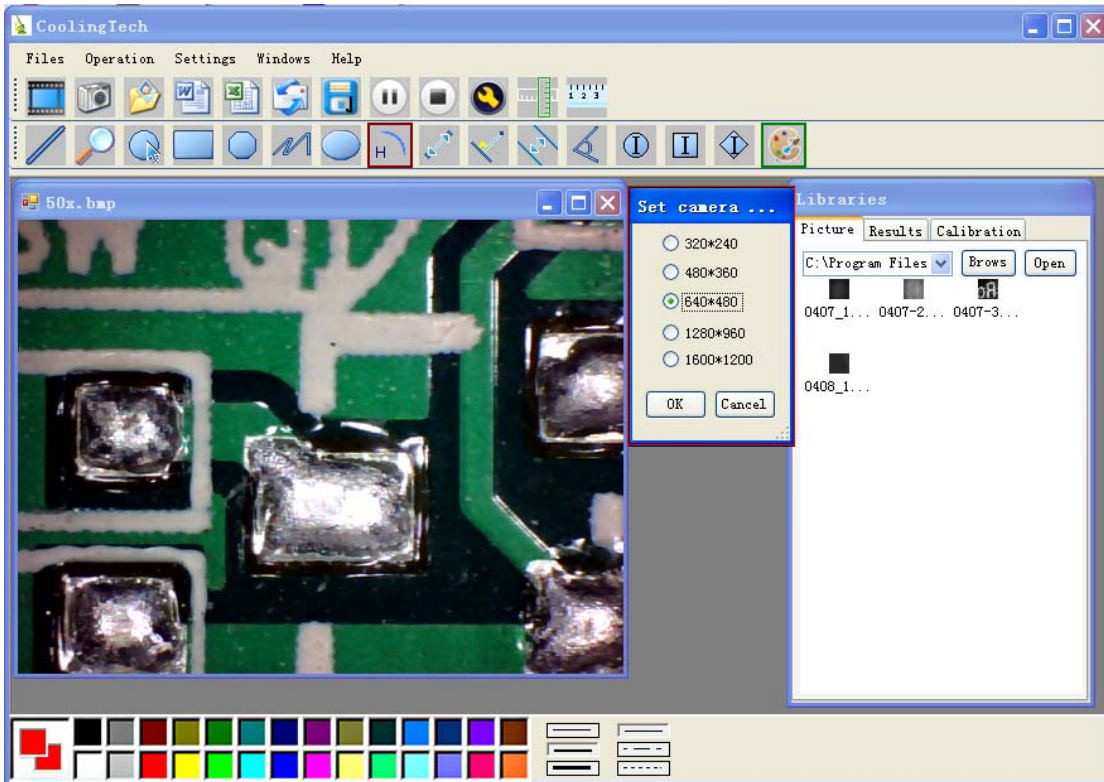
Choose the Image resolution from 320*240 to 1600*1200, default at VGA Mode640*480
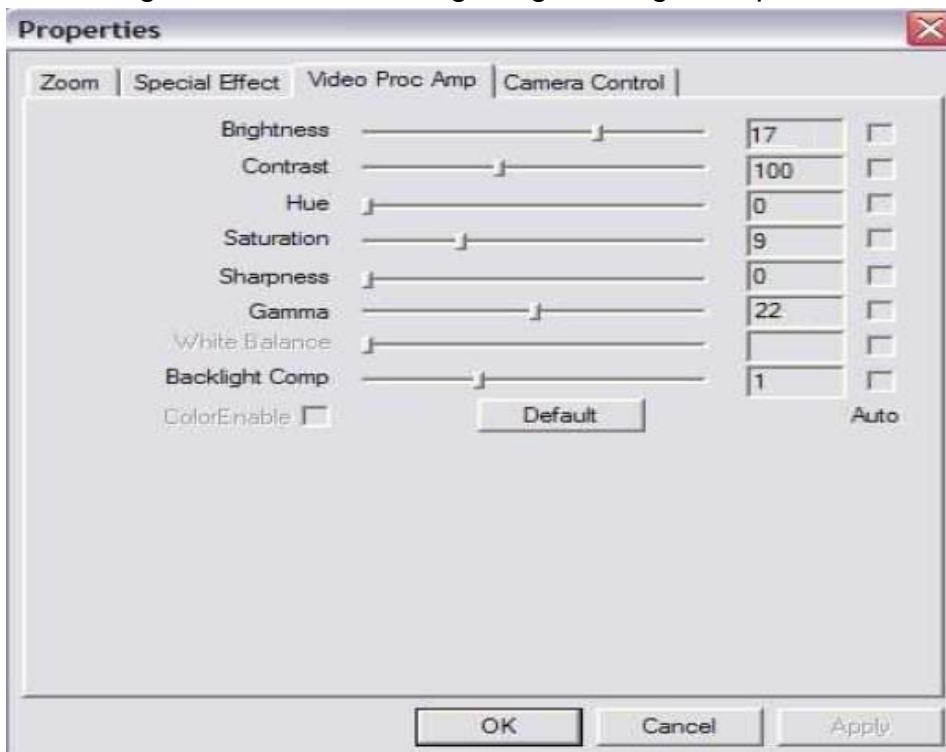
10 Click to use measurement function.

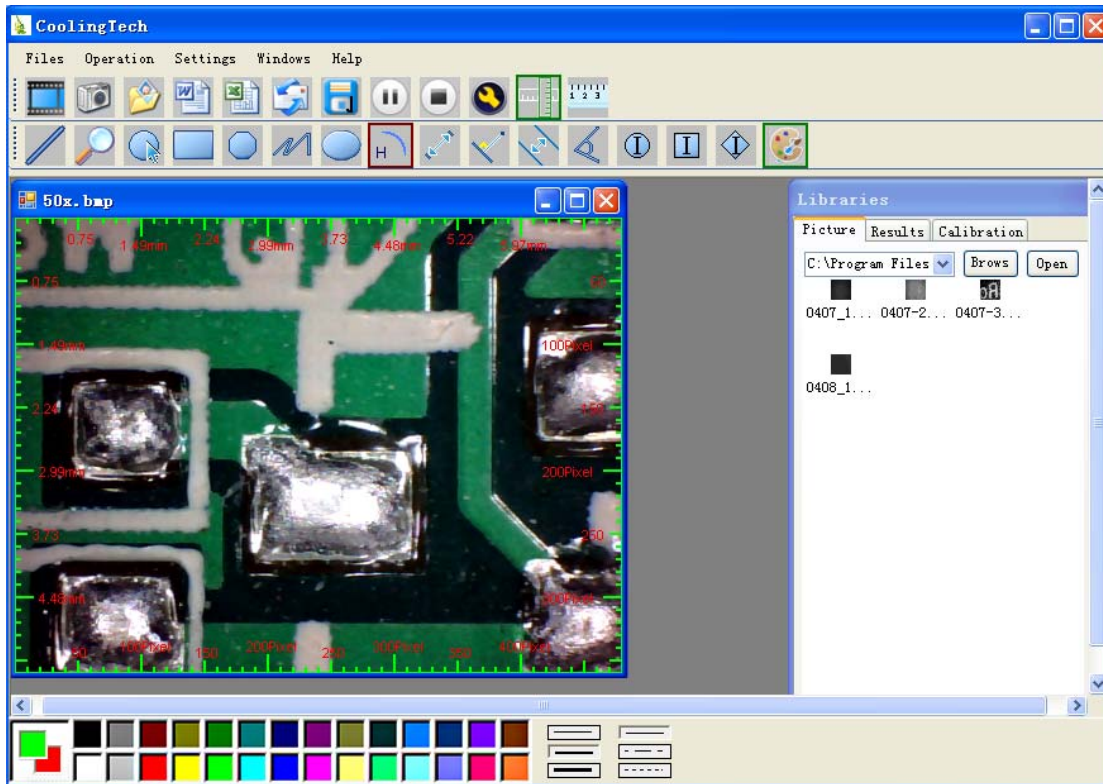# CoolingTech
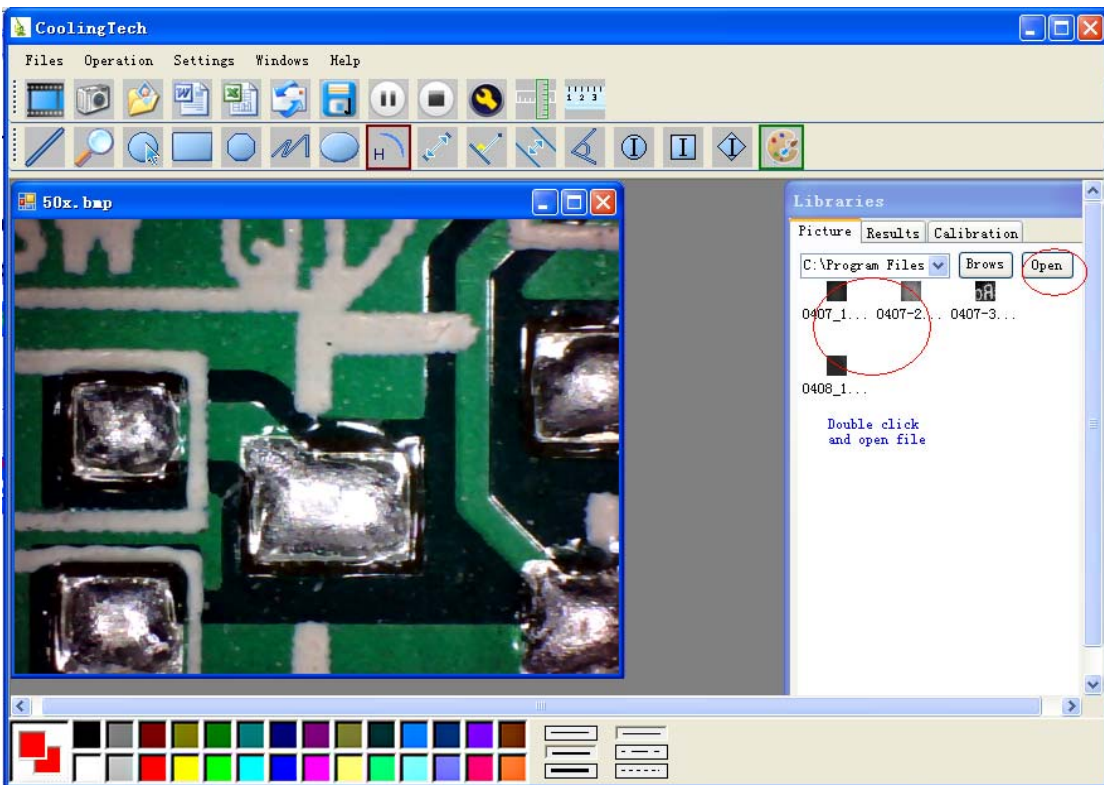
11 Click to open pictures, and click to save pictures
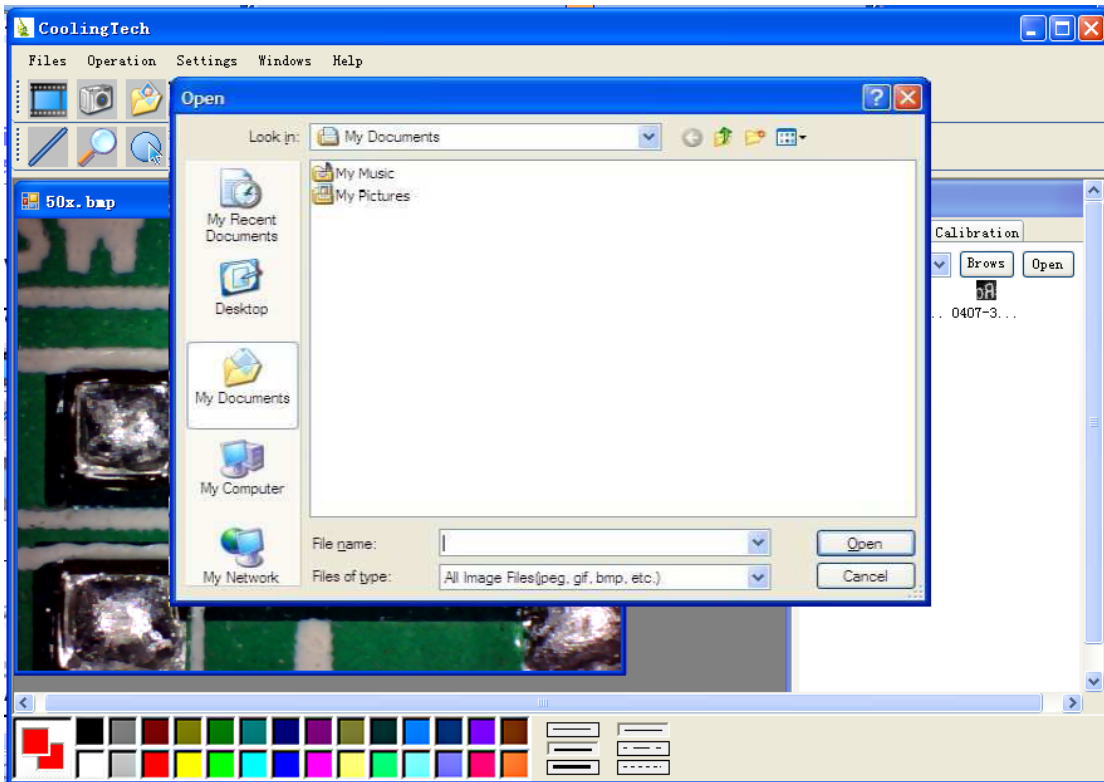
12

Video PLAY(Pause) ,STOP

13 Image Parameter including Image setting and special effects
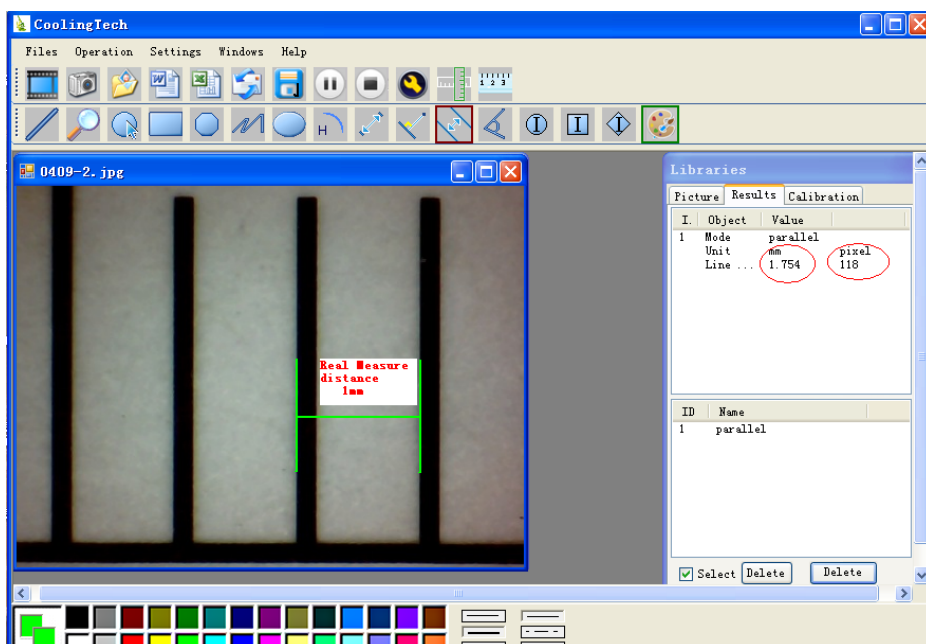
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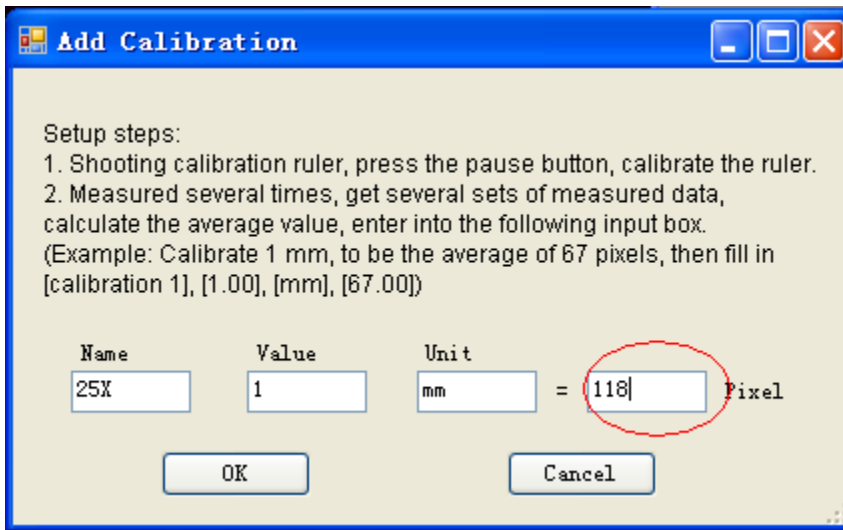15 Magnifier

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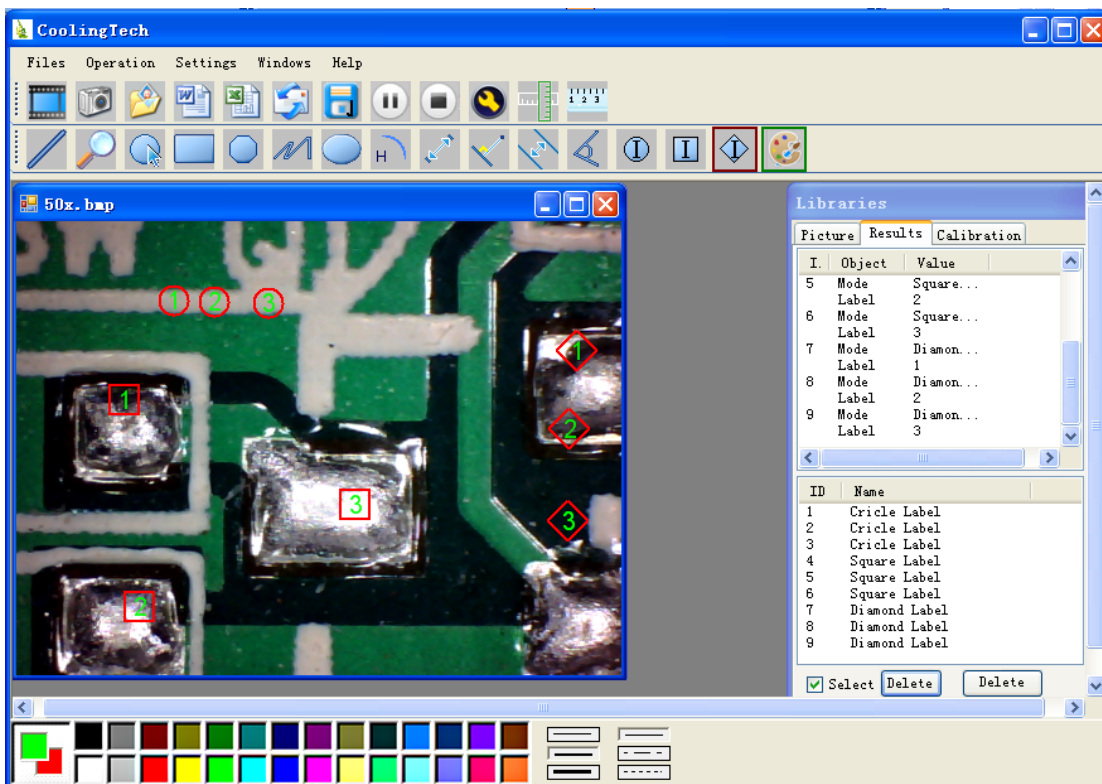
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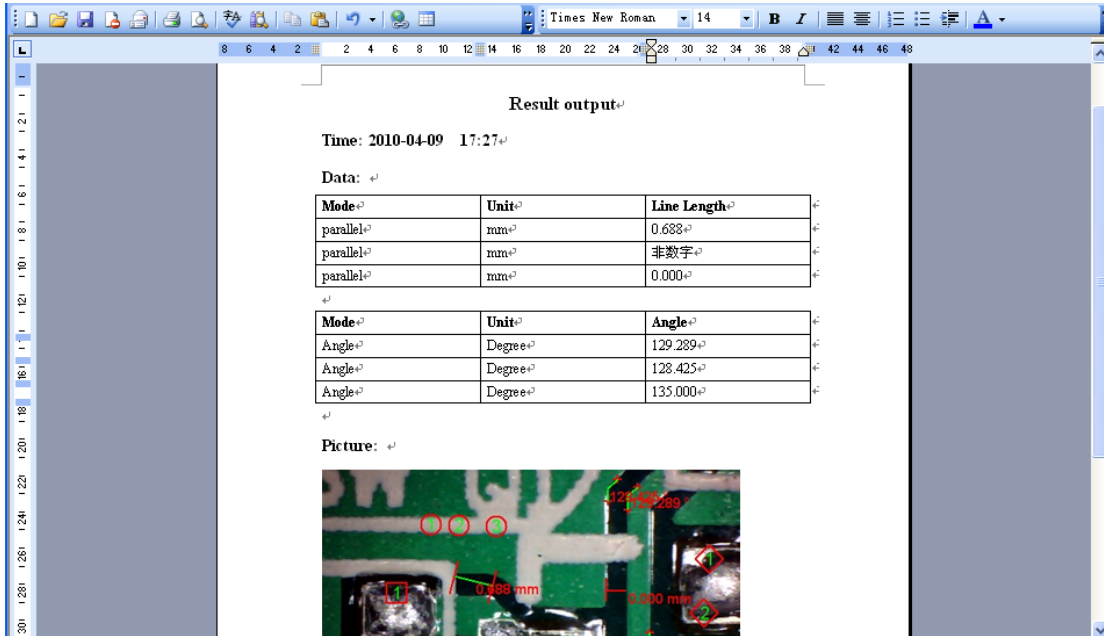18 Key in the Measure data(Pixel),Unit, and Click' OK'

Warning:

      Please do calibration again once Magnification Ratio changed.

19   Color setting of display character

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20 Click to export word or excel format.

Example: Measure data under word file
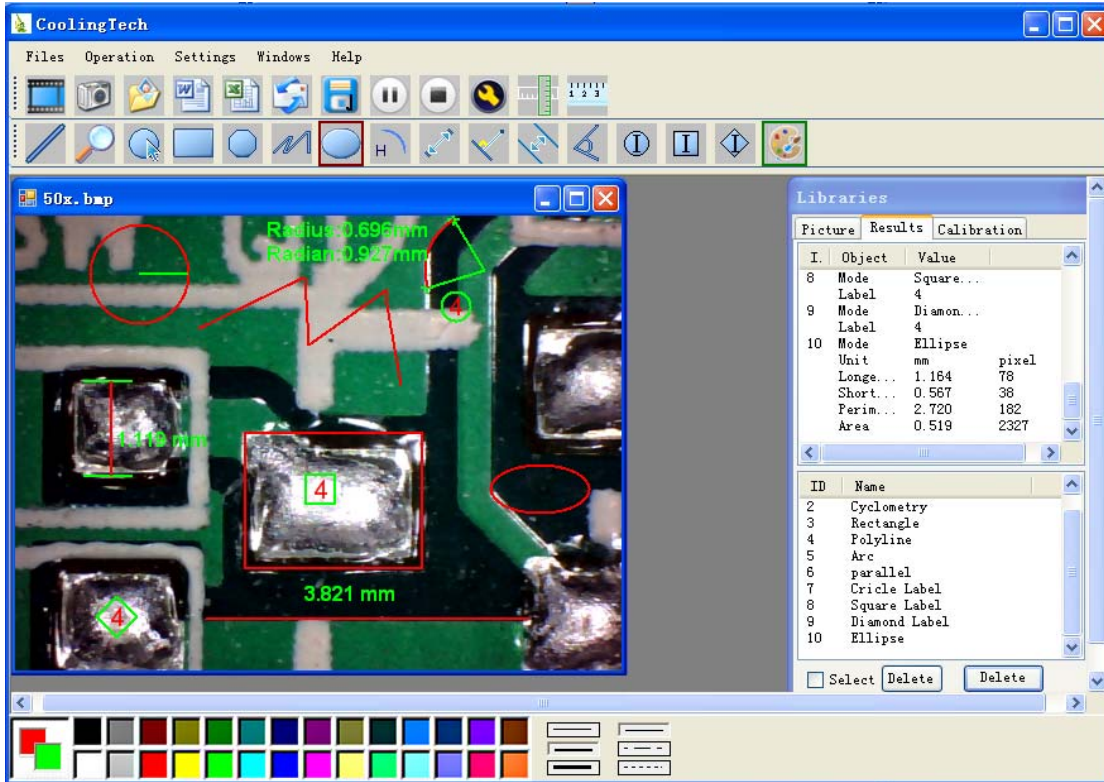

From Left to right:
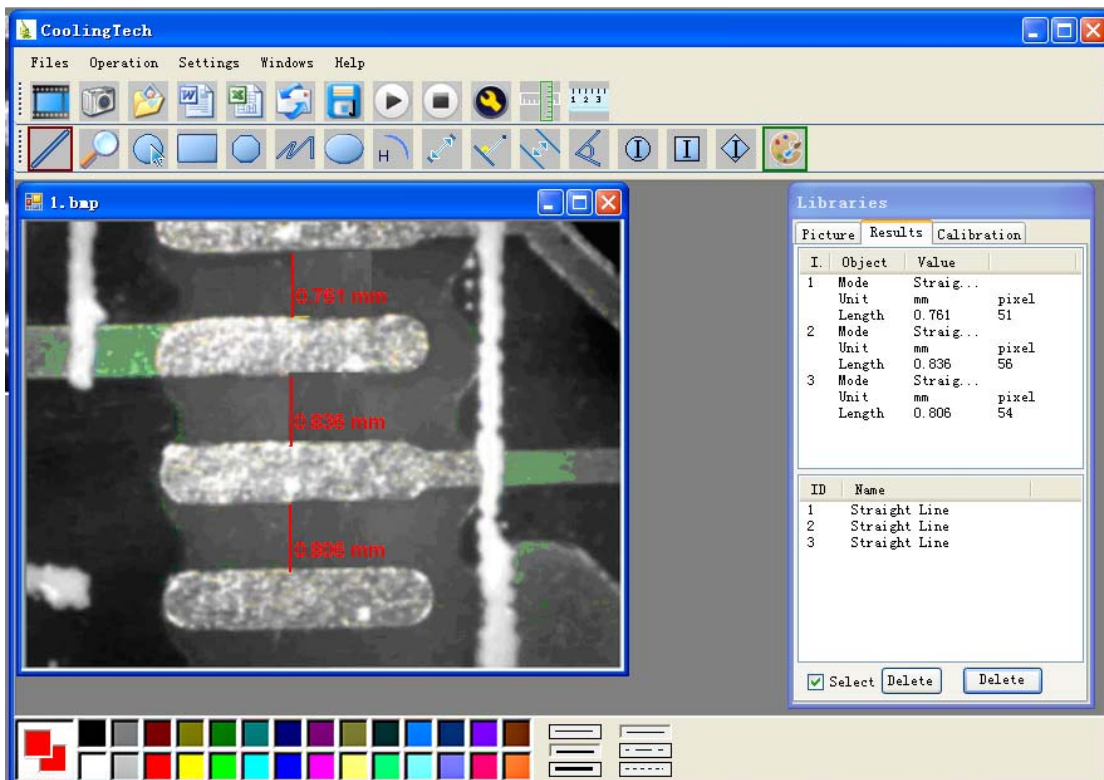
Line   ring   Square   Polygon   Set-line Length

Oval   Arc   Point to Point distance   Point to Line distance

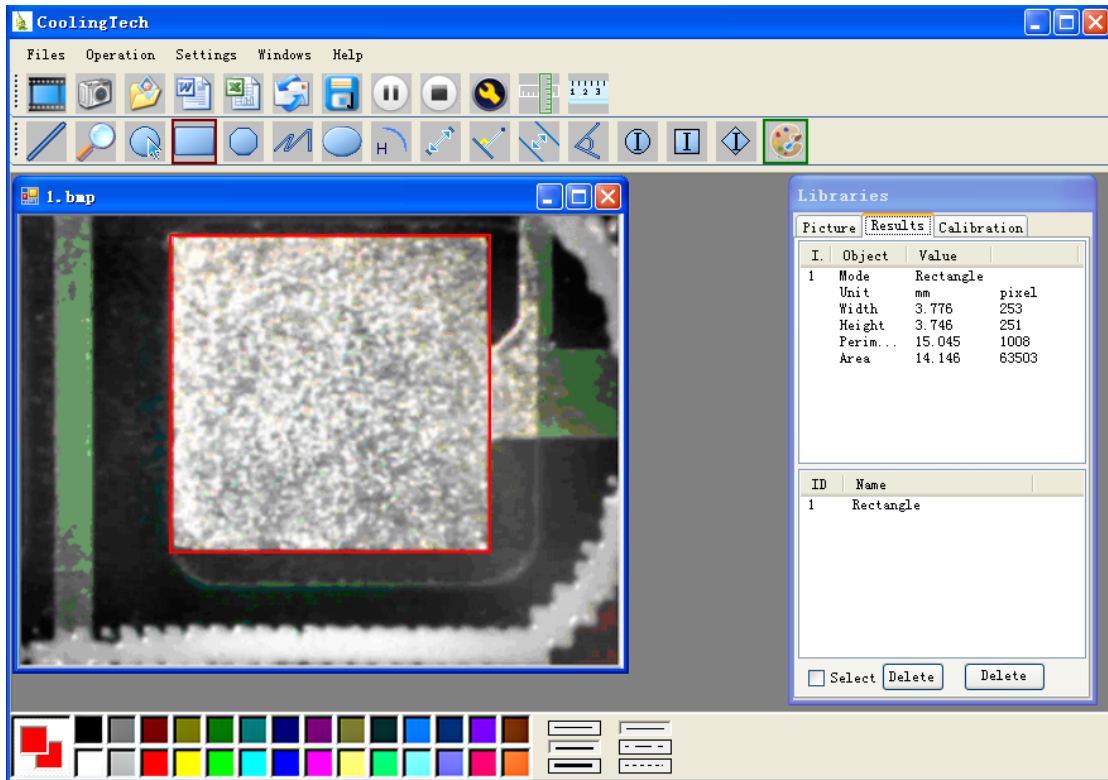Parallel line   Angle

(as below show)

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For example 1
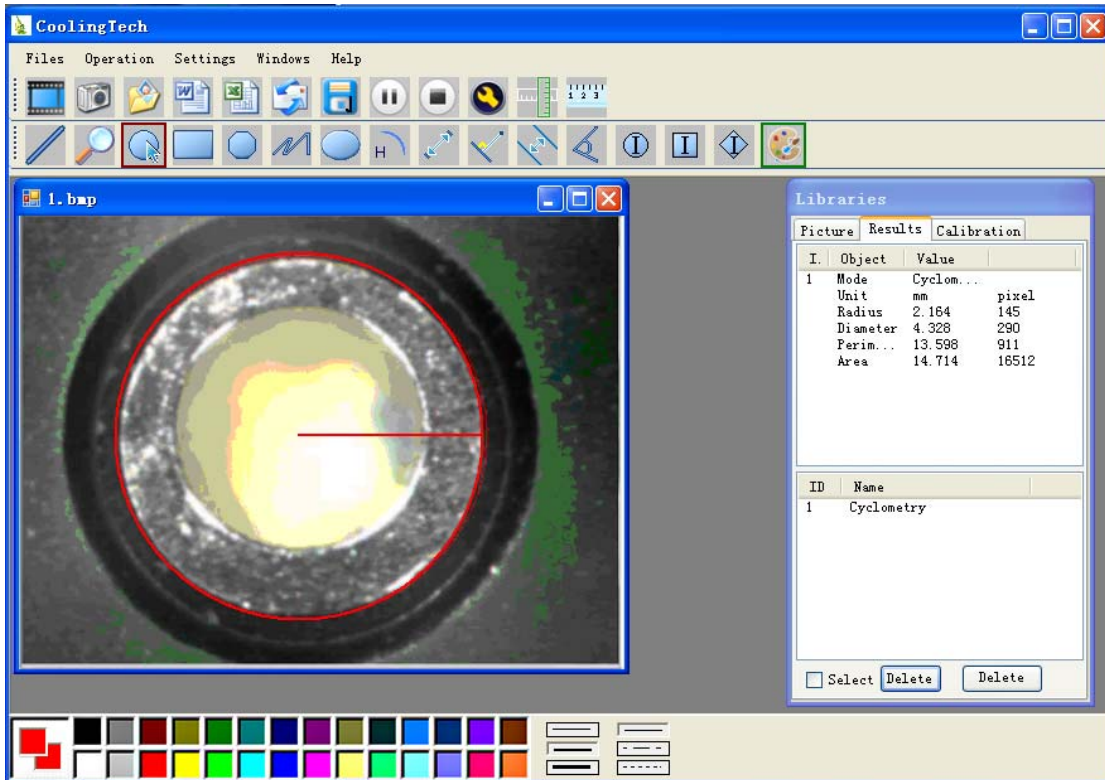 Line measurement:

For example 2

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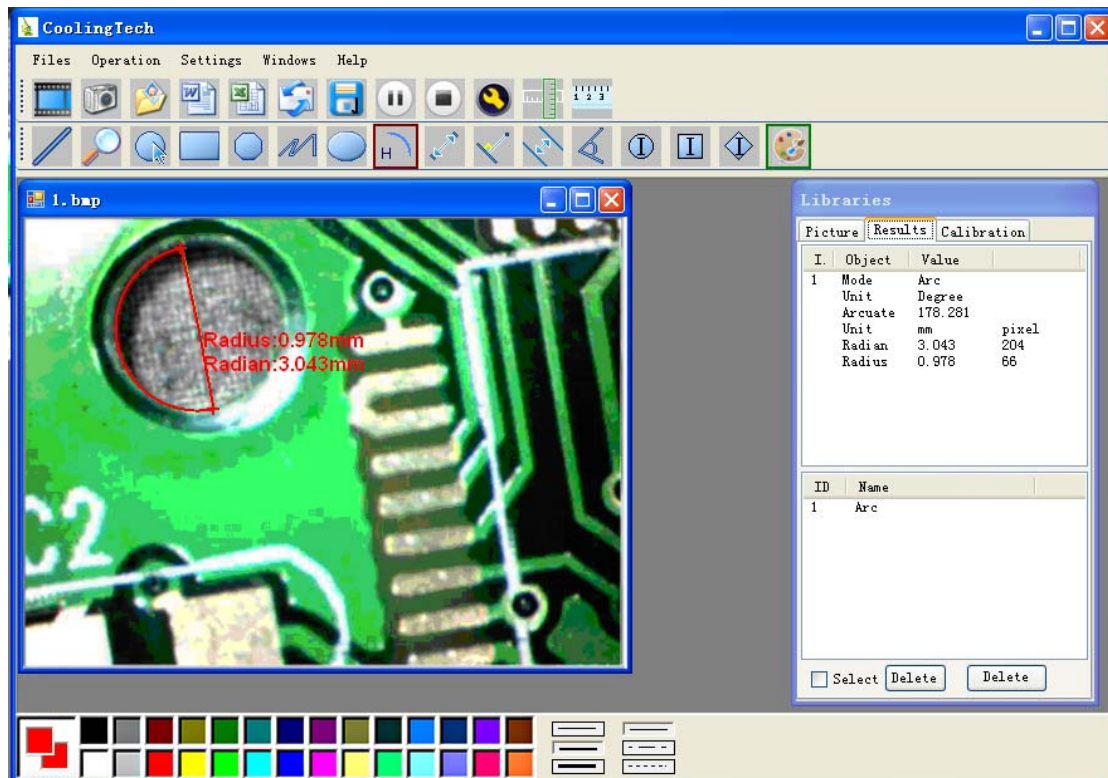
Rectangular measurements:

For example3

Ring measurements:

For example 4

Arc measurements:

3Please click [Dotnetfx] to Continue when the NET

Framework 2.0 is necessary, and you must install the

application "Instmsia.exe" of disk if your computer

operation system is MAC OS.