Image Measurement Software
MicroMeasure Version 1.07
Operating Manual

7th edition

Scalar Corporation

Index

1. Introduction

This application software developed by Scalar Corporation measures distances, areas and angles of the object(s) on a still image.

You can get the image of the object(s) by reading an image (bmp, jpg or tif) retained in your PC or from an image on the camera connected via USB. Besides, the version 1.06 has made wireless microscope, AirMicro, be possible to connect. Calibrations should be pre-set to insure accurate measurements (see "5-2. Calibration" .)

2. Contents of the Package

This package consists of the following items:

- USB-Key
- CD-ROM

* Please be careful not to lose the USB Key.

3. System Requirements

Monitor Resolution: 1024(dot) x 768(dot) or greater

OS: Windows XP/Vista/7

Application: Microsoft Office 2000/2003/2007/2010

* Without Microsoft Office, "Save Data & Img" does not work.

* Insert the USB-Key before starting this software and do not unplug it until the program terminates.

4. Setting Up

Insert the enclosed CD-ROM into the CD Drive on your PC. The installer program starts automatically. If not, please open CD-ROM folder and click "Setup.exe".

To uninstall this software, go to "Add or Remove Programs" in Control Panel and remove it.

5. Operations

Insert the USB-Key into a USB port and launch the software.
* Driver installation is not necessary.

Basic operations are as follows.
* Preparing a Still Image
* Calibration
* Measurement
* Exporting Data

5-1. Preparing a Still Image

This software starts with a window indicated by Fig. 1 or Fig. 2.

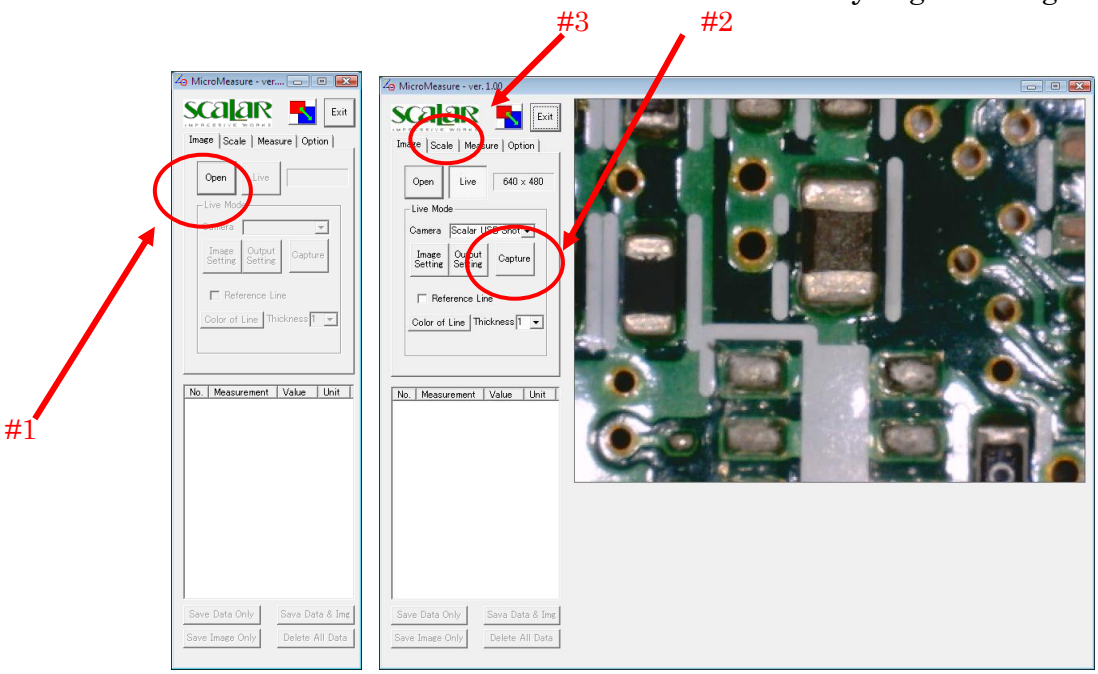


Fig. 1 **Fig. 2**

If a USB Camera is not connected, the program displays only the Fig. 1 window.

5-1-1. Opening a Still Image

To open a still image saved in your PC, click the "Open" button indicated by #1 in Fig. 1 and select an image file. The operation proceeds to Calibration.

5-1-2. Capturing a Still Image from the USB Camera

To capture a still image from the USB camera, click the "Capture" button indicated by #2 in Fig. 2. To begin measuring, click on the "Scale" tab, indicated by #3 in Fig. 2.

5-1-3. Recapturing a Still Image

To capture a still image again, click the "Live" button indicated by #1 in Fig. 3.

5-1-4. Selecting Camera

If two or more cameras are connected, please select the proper camera from the "Camera" pull-down menu indicated by #2 in Fig. 3

5-1-5. Camera Setting

To adjust the camera settings, click the "Image Setting" or "Output Setting" button indicated by #3 in Fig. 3. The size of the image is shown at #4 indicated in Fig. 3.

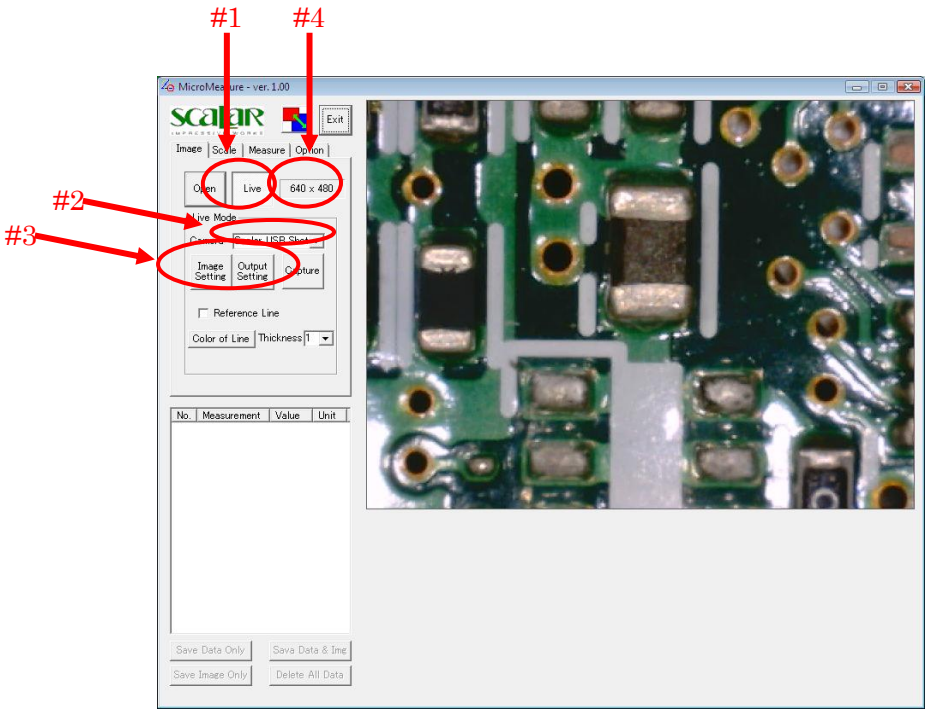


Fig. 3

5-1-6. Connection with the AirMicro

Please check and confirm the SSID of the AirMicro body to use and then make WiFi connection. SSID is mentioned on the label pasted on the bottom of the body. In addition, on the WiFi connection settings of Windows, please specify a fixed IP and not select a DHCP. Please use the value of the SSID of the AirMicro to specify the IP. If the SSID is AirMicro005, please specify 192.168.5. (2 to 254) for the IP address. The subnet address is always 255.255.255.0.

5-1-7. Image of the AirMicro on display

Please click #1 on the screen and wait

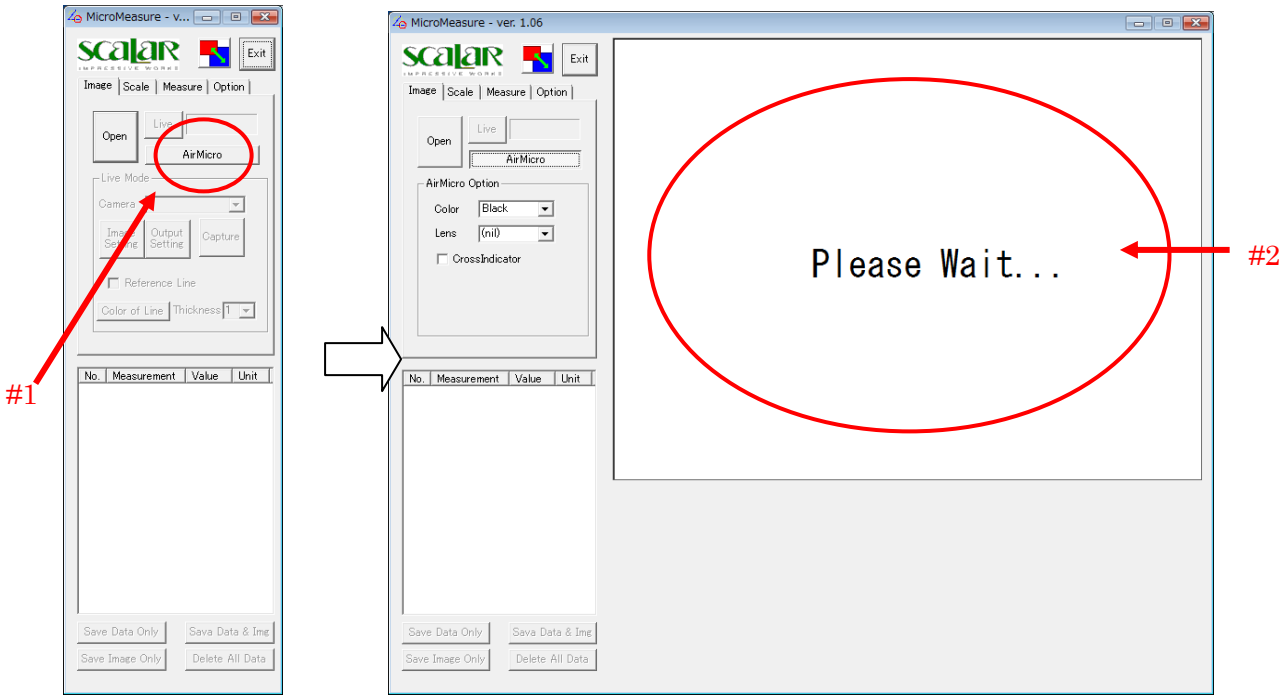


Image of the AirMicro will be displayed on the #2 if the AirMicro is connected properly..

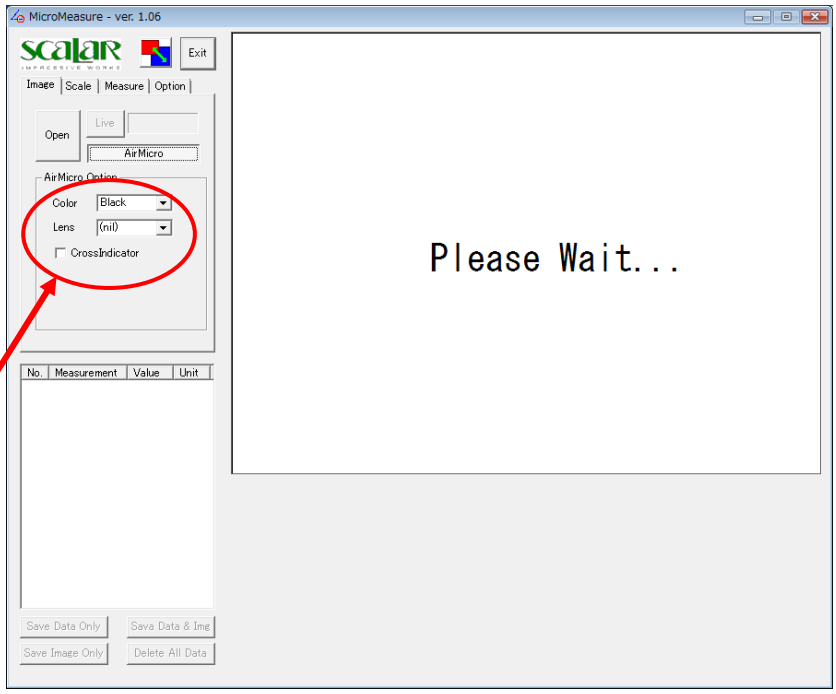
5-1-8. Capturing images of the AirMicro

Please press and hold the button until you have completed shooting of the body AirMicro.

Please press and hold the button of the AirMicro body until you have completed capturing images. When you cannot complete it for a long time , you may be able to resolve by making the location of the WiFi adapter that is connected to a Windows machine closer to the AirMicro.

5-1-9. Selection of the display of the AirMicro

You can display the scale or the indicator over the image to capture with the AirMicro. You may select or change the display to whatever you want with the #1 on the screen below.



#1

5-2. Calibration

In the "Scale Tab", you can calibrate horizontal/vertical scale and set a standard scale that can be shown in a still image for reference.

5-2-1. Loading a Preset Setting

To load a setting you have already made and saved, the click pull-down menu indicated by #1 in Fig. 4 and select one.

5-2-2. Calibrating a Scale

To calibrate a scale, adjust the values indicated by #2 in Fig. 4 and scales indicated by #3 in Fig. 4.

5-2-3. Saving a Setting as a Preset Setting

After the calibration data is edited, the "Save" button indicated by #4 in Fig 4. becomes active. Click this button and save as a preset setting.

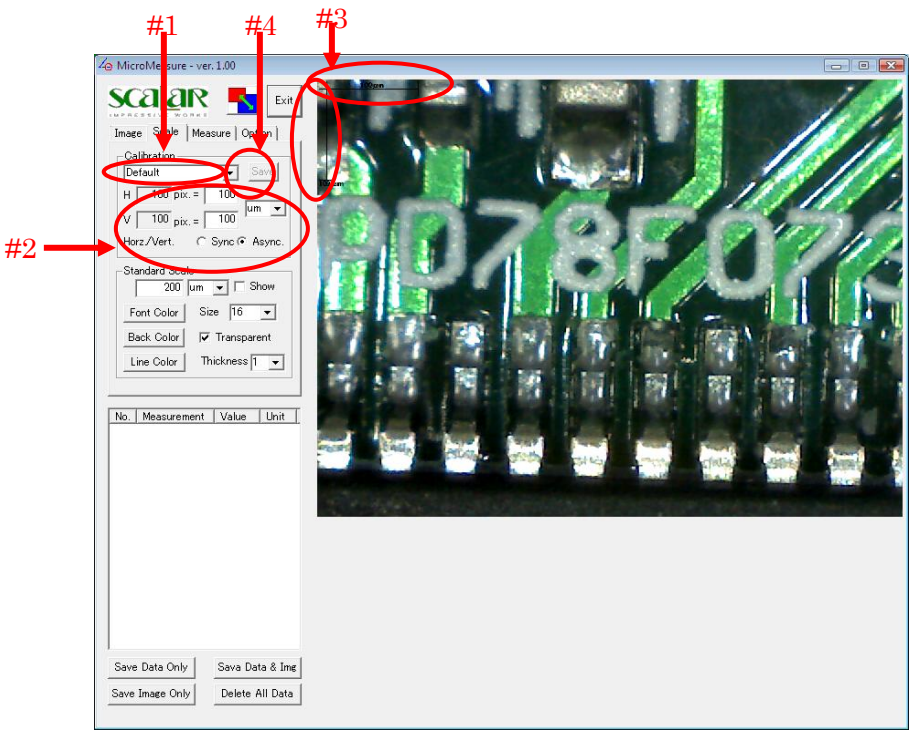


Fig. 4

5-2-4. Setting a Standard Scale

To set a standard scale, adjust with buttons indicated by #1 in Fig. 5 and actual scale indicated by #2 in Fig. 5.

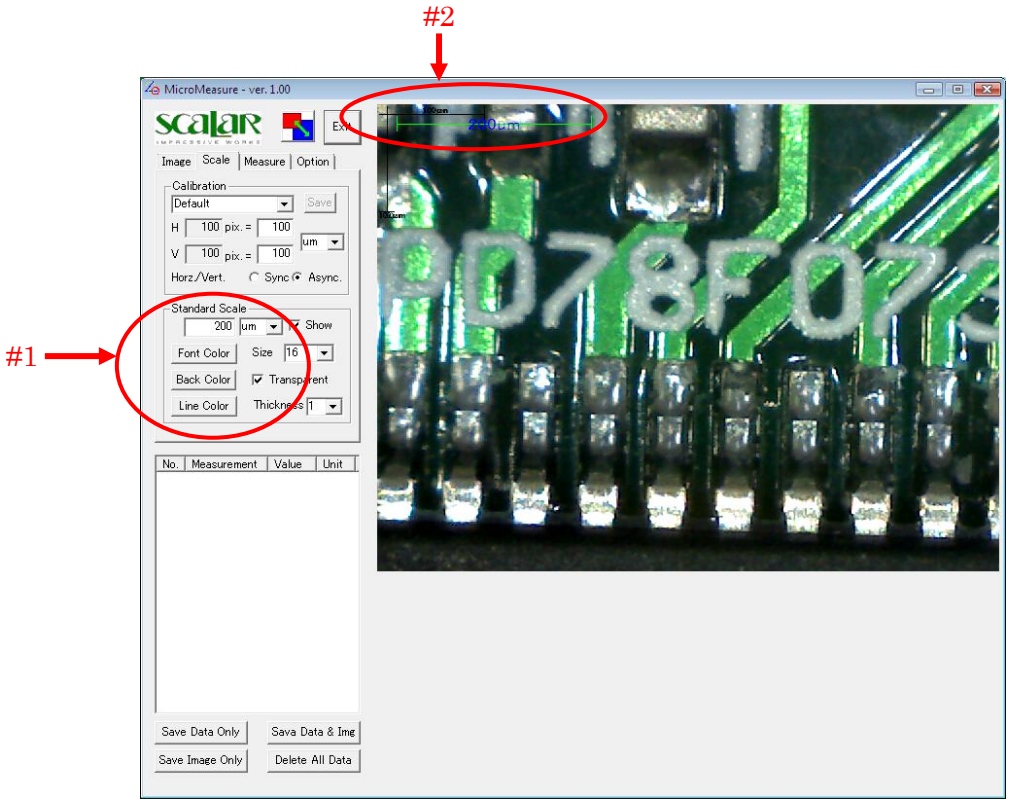


Fig. 5

5-3. Measurement

There are Measurement tools that measure distances, areas and angles. Other tools to input text and draw lines.

5-3-1. Distance - Between 2 Points

Click the button indicated by #1 in Fig.6. Click at a starting point and at an ending point on a still image.

The result is shown at #4 and #5 in Fig. 6.

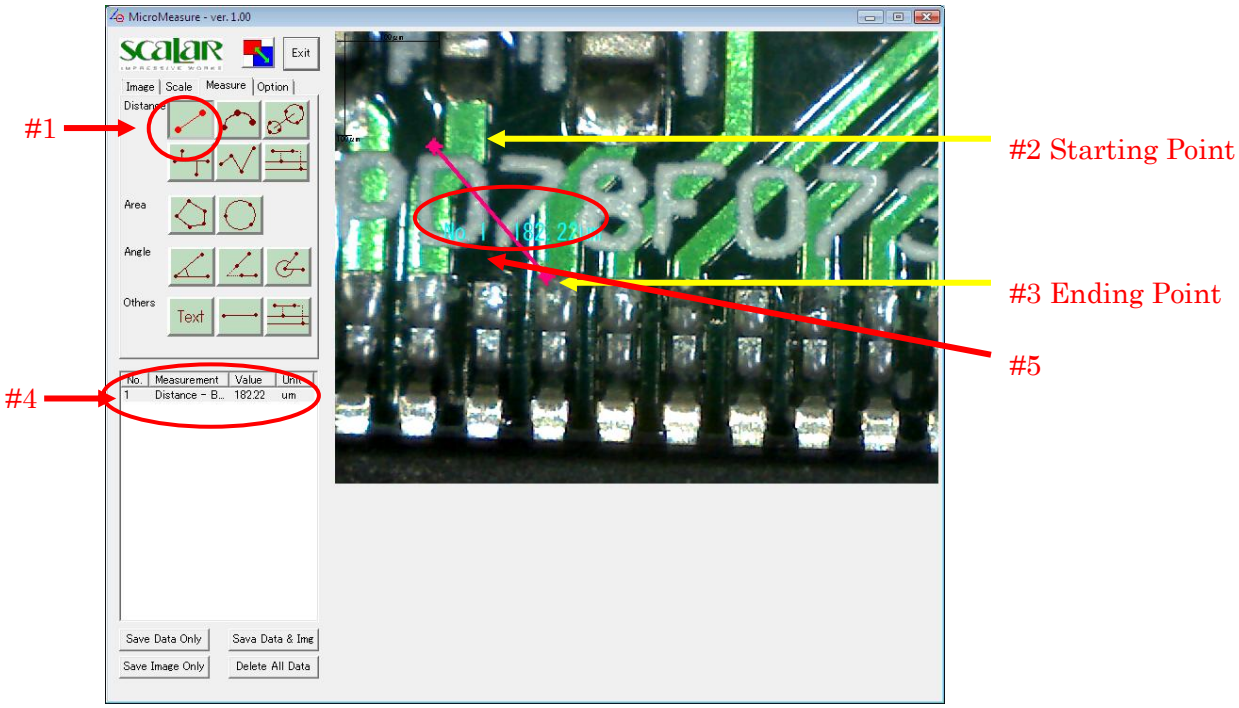


Fig. 6

5-3-2. Distance - Arc

Click the button indicated by #1 in Fig.7. Click at the starting point , the ending point and a middle point of an arc on a still image.

The result is shown at #5 and #6 in Fig. 7.

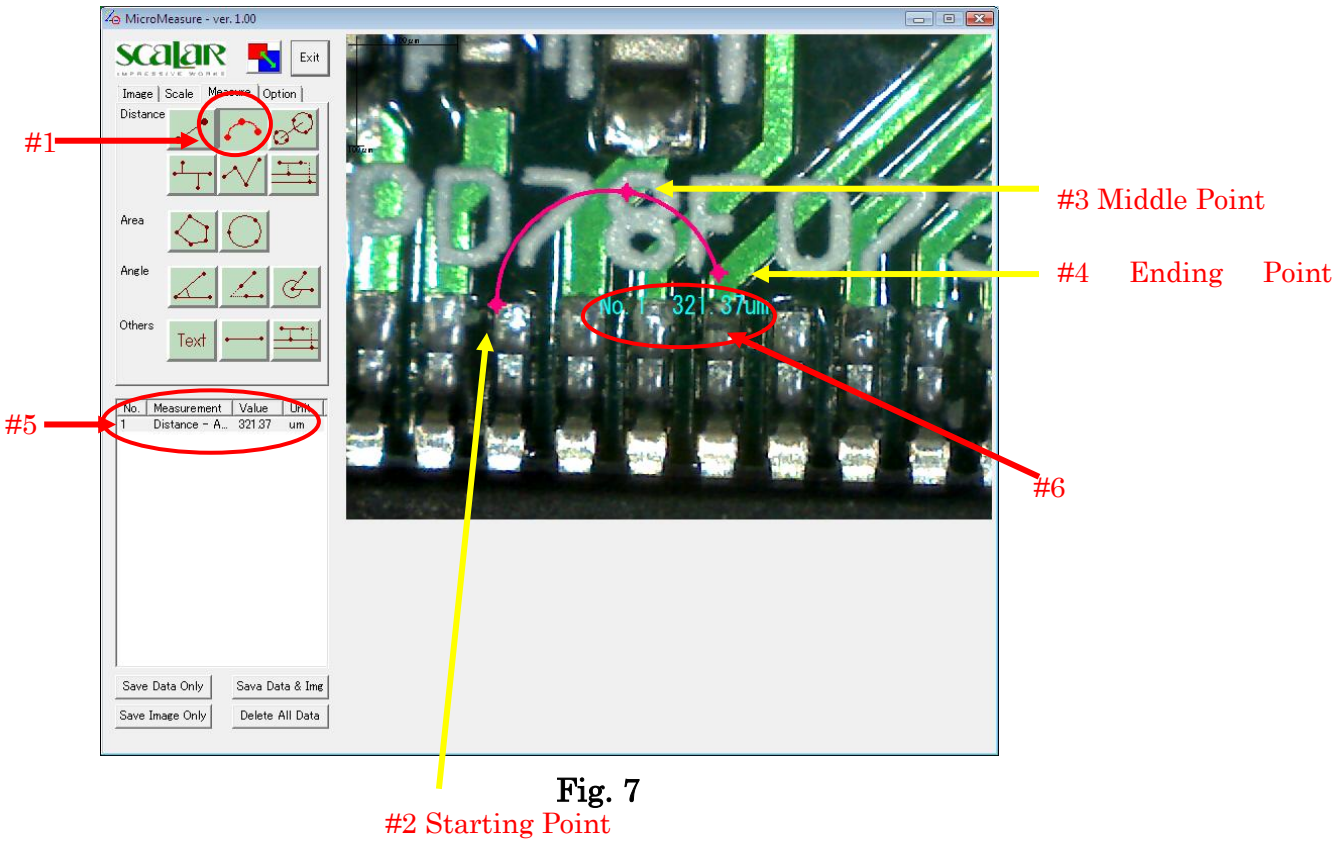


Fig. 7

5-3-3. Distance - Circle to Circle

Click the button indicated by #1 in Fig.8. Specify 2 circles by clicking 3 points per a circle on a still image.

The result is shown at #4 and #5 in Fig. 8.

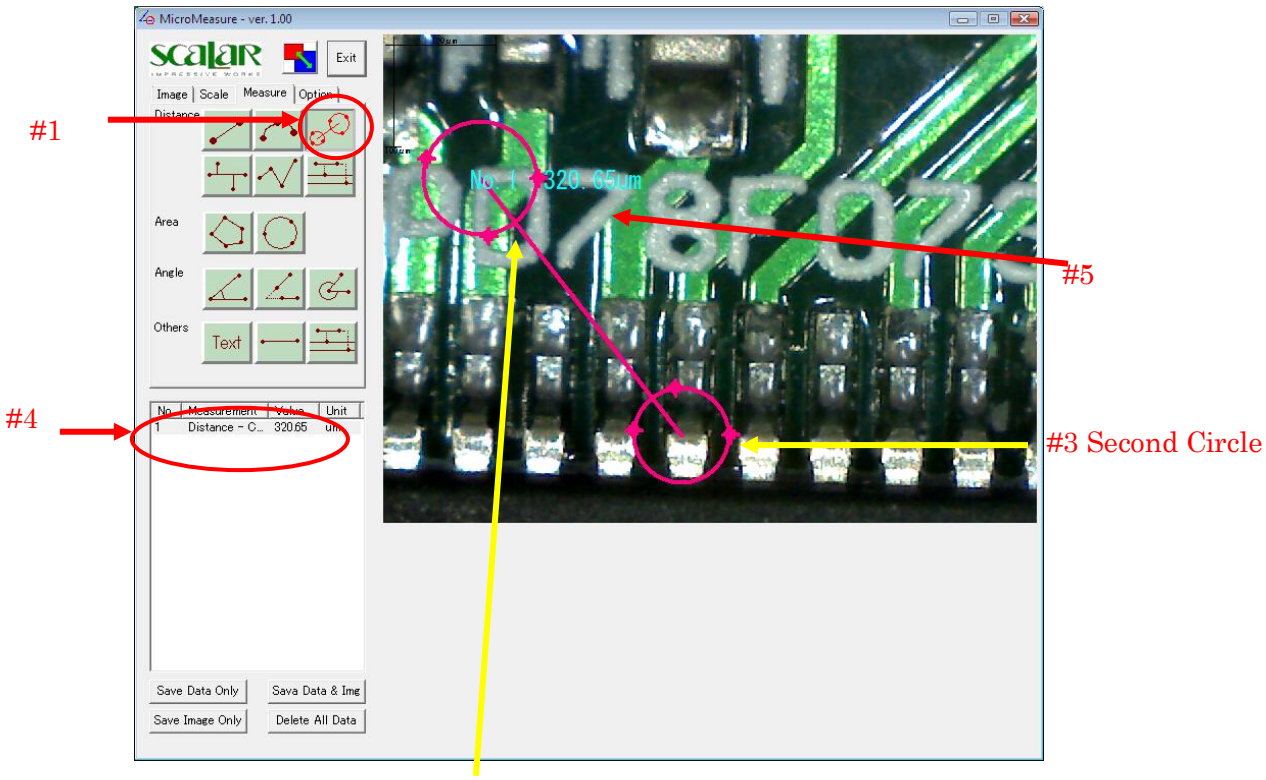


Fig. 8

5-3-4. Distance - Perpendicular Line

Click the button indicated by #1 in Fig.8. Specify 2 points to draw a standard line. And then, specify points you want to measure distances from a standard line.

The result is shown at #2 and #3 in Fig. 9.

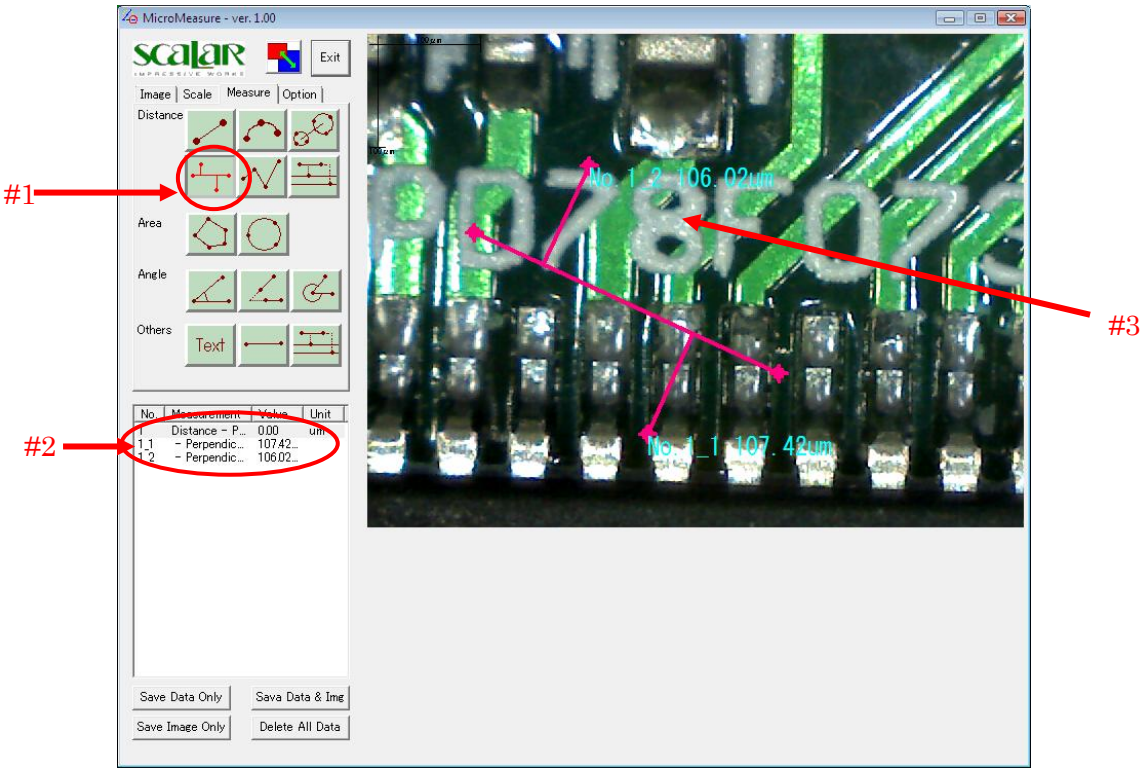


Fig. 9

5-3-5. Distance - Broken Line

Click the button indicated by #1 in Fig.11. Specify points of broken line. Double click at the final point.

The result is shown at #2 and #3 in Fig. 10.

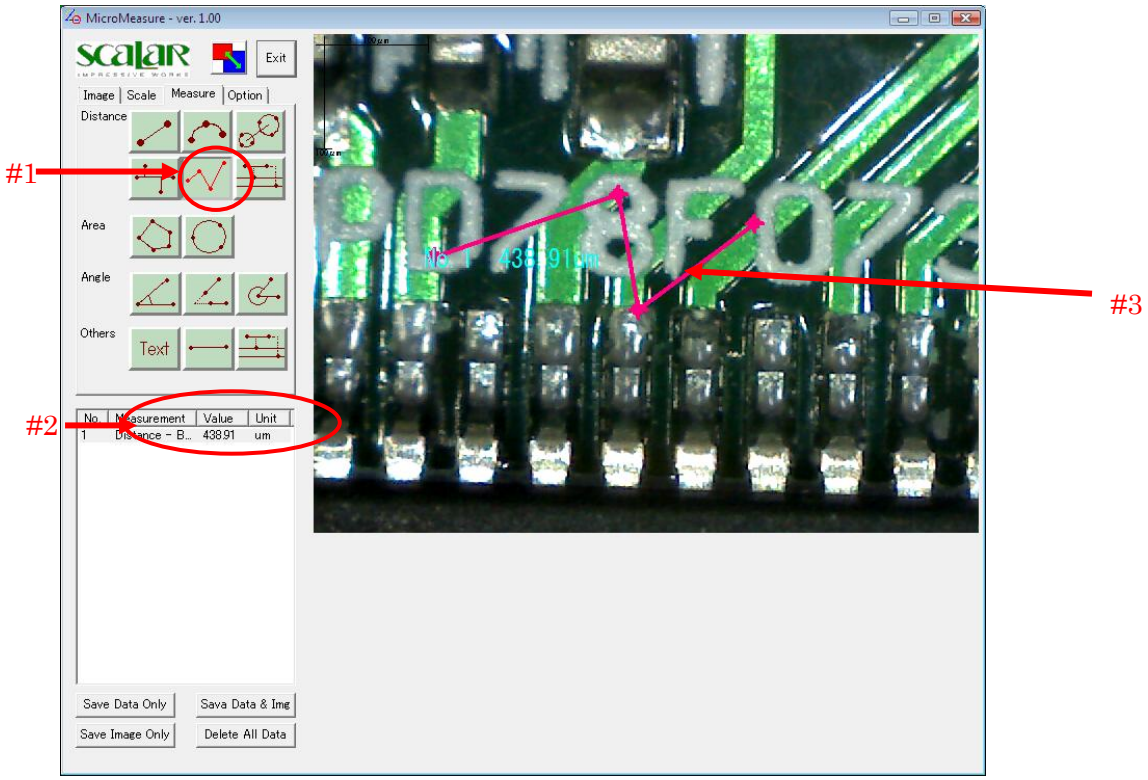


Fig. 10

5-3-6. Distance - Parallel Line

Click the button indicated by #1 in Fig.11. Specify 2 points to draw a standard line. And then, specify points you want to draw parallel lines. Double click at the final line.

The result is shown at #2 and #3 in Fig. 11

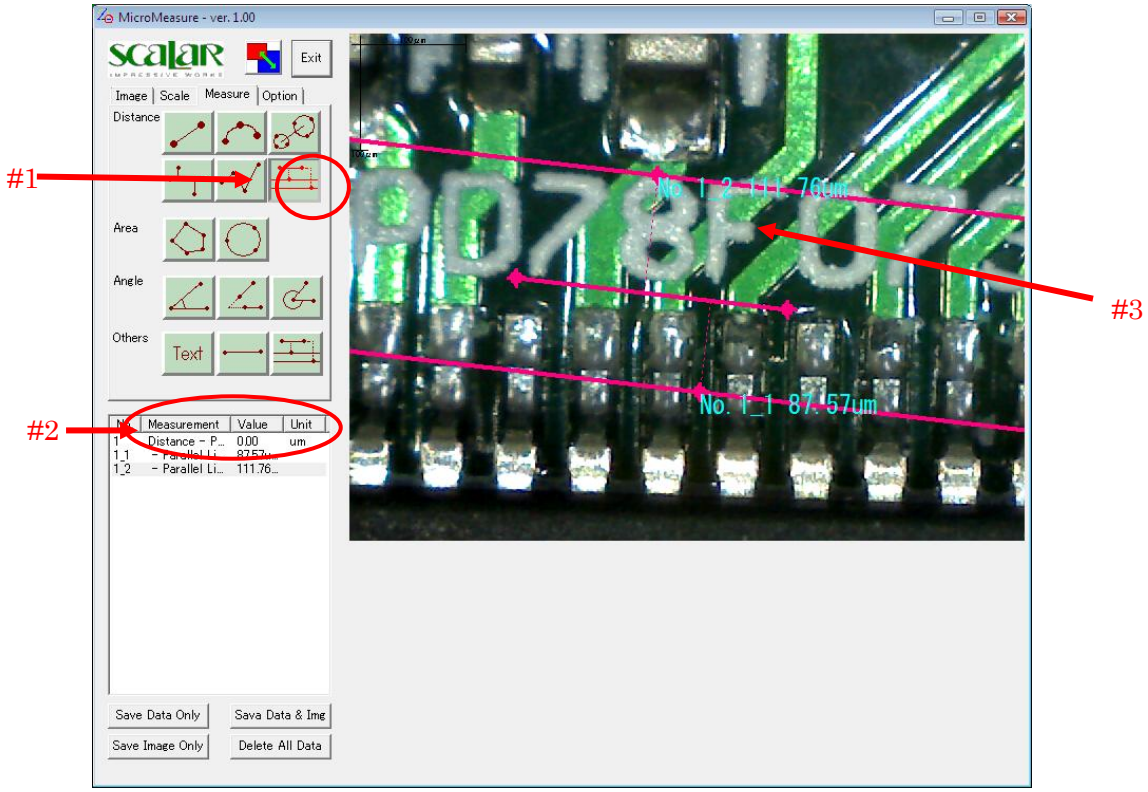


Fig. 11

5-3-7. Area - Polygon

Click the button indicated by #1 in Fig.12. Specify the points of a polygon by clicking on an image. And double click at the final point.

The result is shown at #2 and #3 in Fig. 12

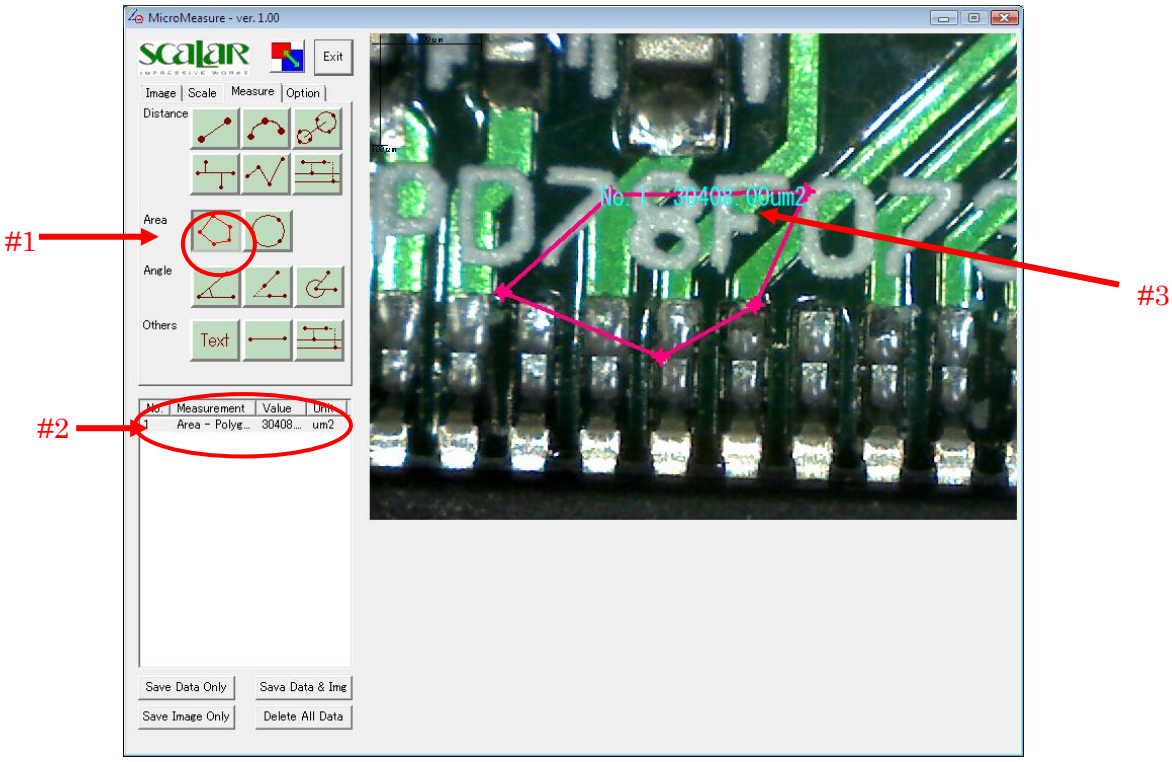


Fig. 12

5-3-8. Area - Circle

Click the button indicated by #1 in Fig.13. Specify a circle on an image.

The result is shown at #2 and #3 in Fig. 13, which consists of area, radius and circumference.

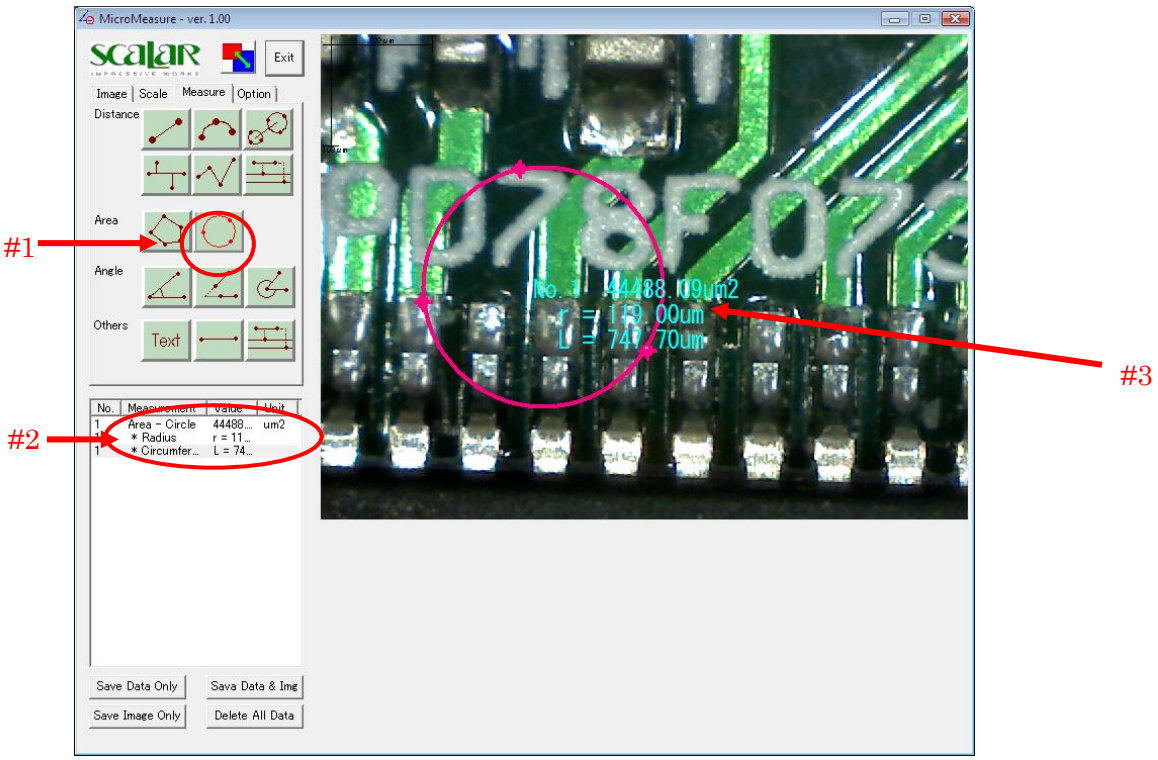


Fig. 13

5-3-9. Angle - Included Angle Between 3 Points

Click the button indicated by #1 in Fig.14. Specify an angle by clicking 3 points on an image.

The result is shown at #2 and #3 in Fig. 14

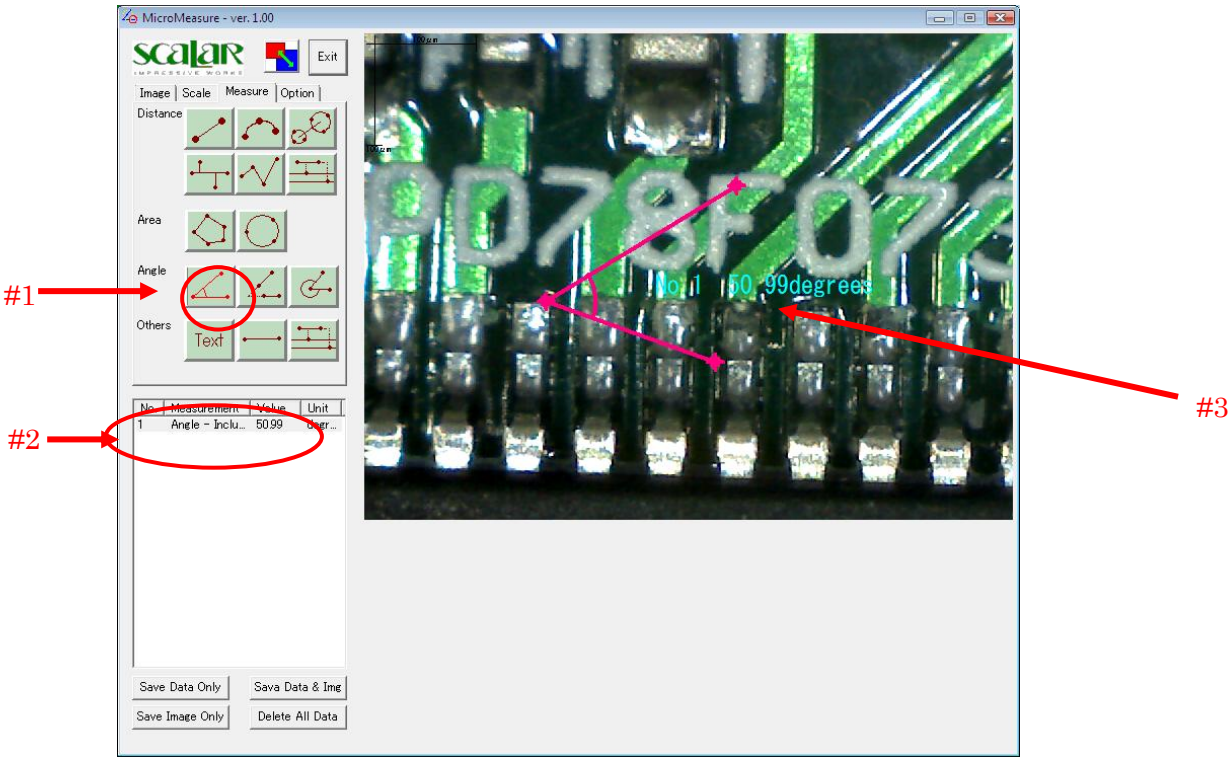


Fig. 14

5-3-10. Angle - Included Angle Between 2 Lines

Click ~~a~~ thebutton indicated by #1 in Fig.15. Specify an angle by drawing 2 lines.

The result is shown at #2 and #3 in Fig. 15

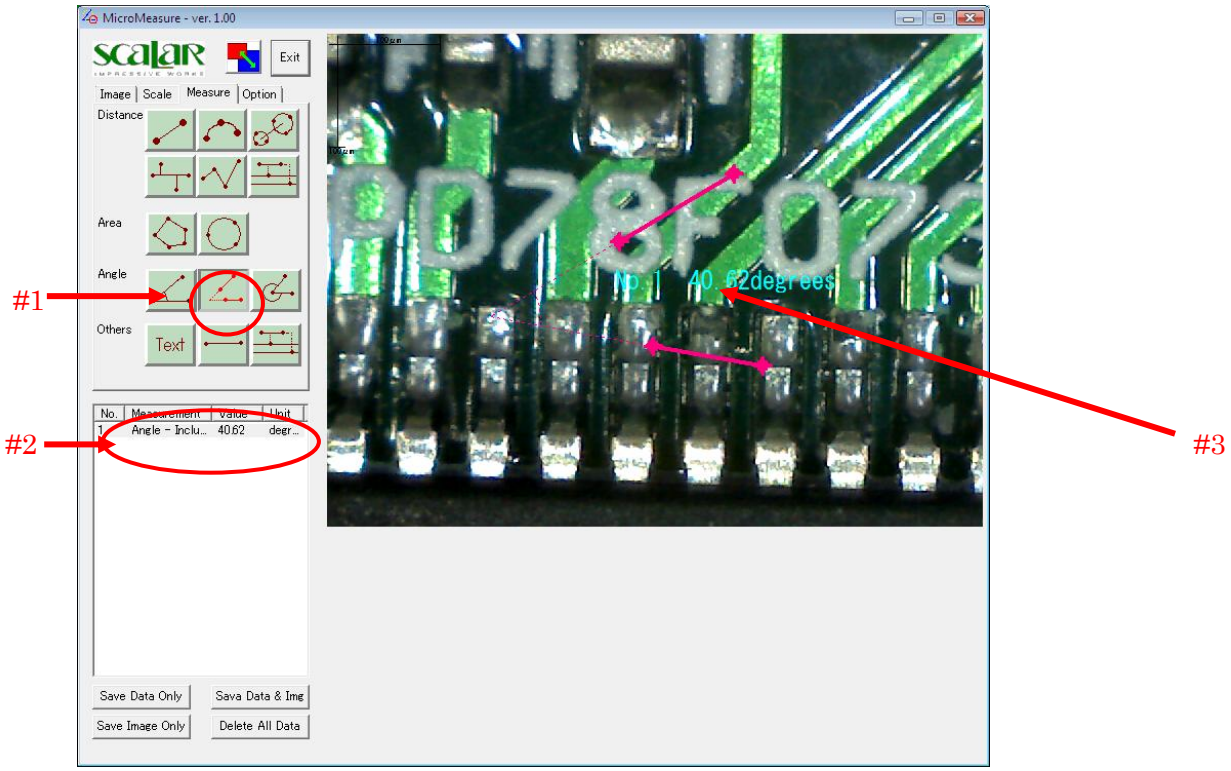


Fig. 15

5-3-11. Angle - Included Angle Between 3 Points (Type 2)

Click the button indicated by #1 in Fig.16. Specify an angle by clicking 3 points on an image.

The result (external angle) is shown at #2 and #3 in Fig. 16

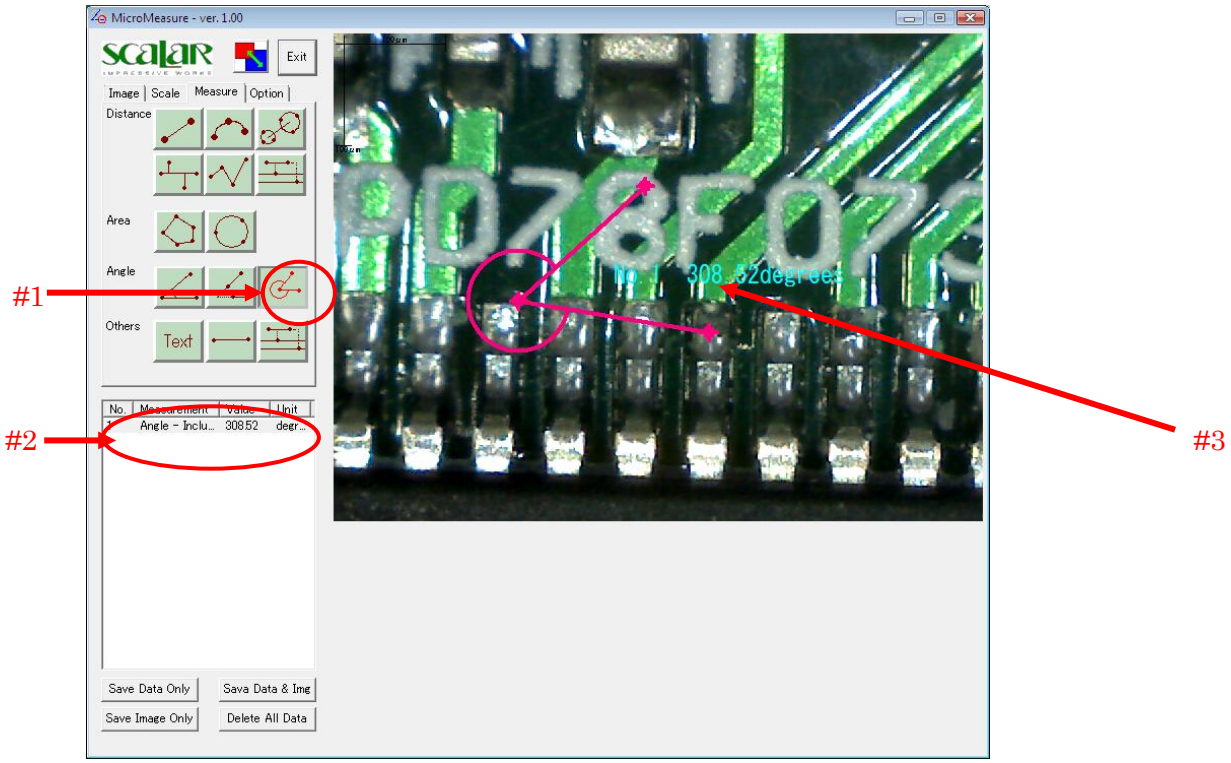


Fig. 16

5-3-12. Other Tools <Text, Standard Line, Standard Parallel Line>

To input text on an image, click the button indicated by #1 in Fig.17. Then click where you want to input the text.

Input text in the dialog window shown by Fig. 18.

The result is shown at #2 and #3 in Fig. 17

For Standard Lines and Standard Parallel Lines, refer to 5-3-1., and 5-3-6 for basic operation.

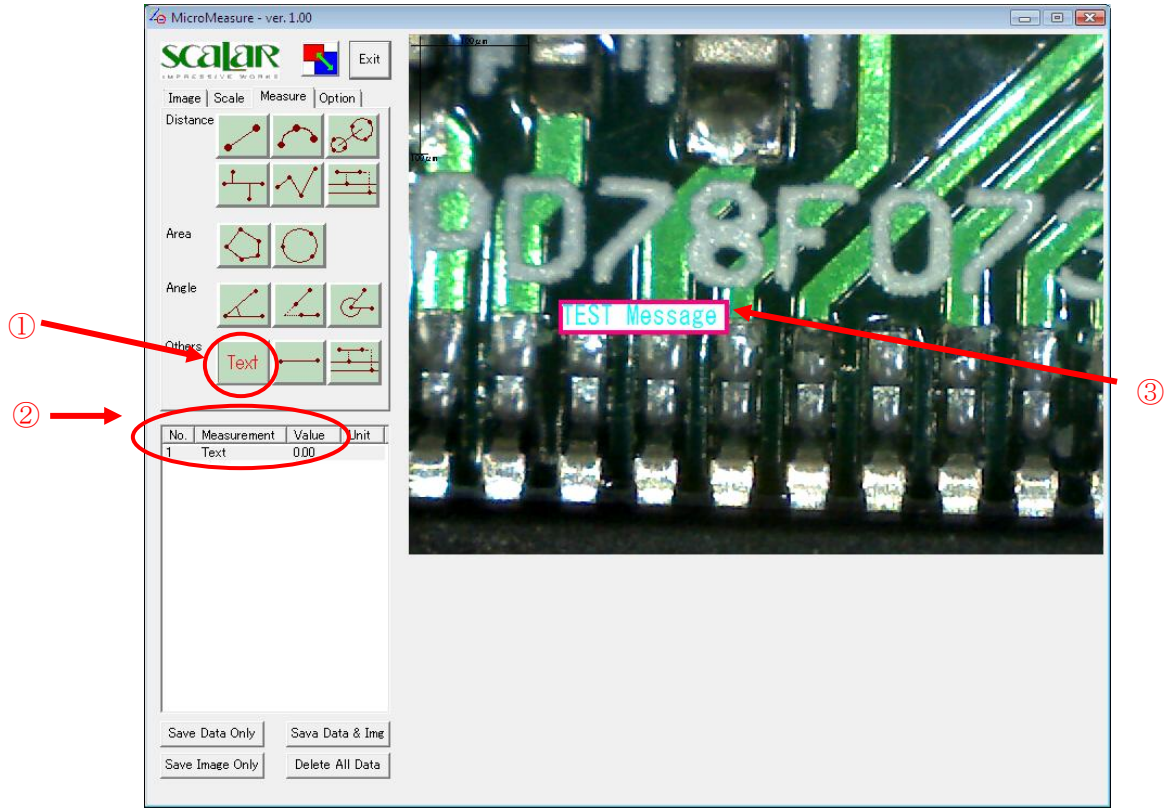


Fig. 17

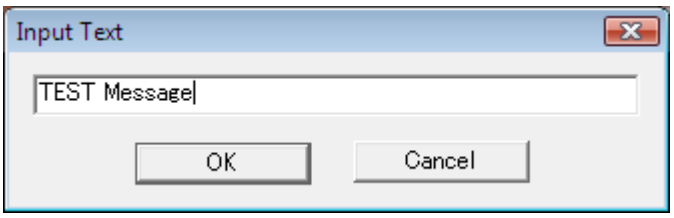


Fig. 18

5-3-13. Modifying a Previously Measured Item

To modify a measured item, click the item from the lower-left list and move the cursor onto the point you want to modify. The cursor then takes the shape shown by Fig. 19. Drag to the desired location to remeasure the item.

Fig. 19

5-3-14. Moving a Measured Item

To move a measured item without changing its shape, click the item from the lower-left list and move your mouse cursor onto the measured item. The cursor takes the shape shown in Fig. 20. Drag the measured item to move it.

Fig. 20

5-3-15. Deleting a Measured Item

To delete a measured item, either right click an item from the lower-left list or right click an item on an image which has the active image symbols.

Click "Yes" in the dialog window indicated by Fig. 21.

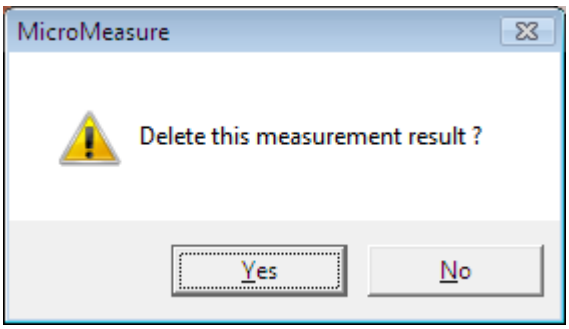


Fig. 21

5-3-16. Deleting a Sub-Measurement Result

If you want to delete only a sub-measurement result such as "Raidus" or "Circumference" of <5-3-8 Area - Circle> or each line of <5-3-4. Distance - Perpendicular Line> or <5-3-6. Distance - Parallel Line>, right click each sub-measurement result in a lower-left list. Actually, each sub-measurement result is not deleted, but only hidden. So if you copy this item, all sub-measurement results are also copied.

5-3-17. Copying a Measured Item

To copy a measured item, double click an item from lower-left list. The copied item is placed at the same position of an original item. You may then click and drag it to another location on the image.

5-3-18. Deleting All Measured Items

To delete all measured items, click the button indicated by #1 in Fig.

22 and click YES in the confirmation dialog window.

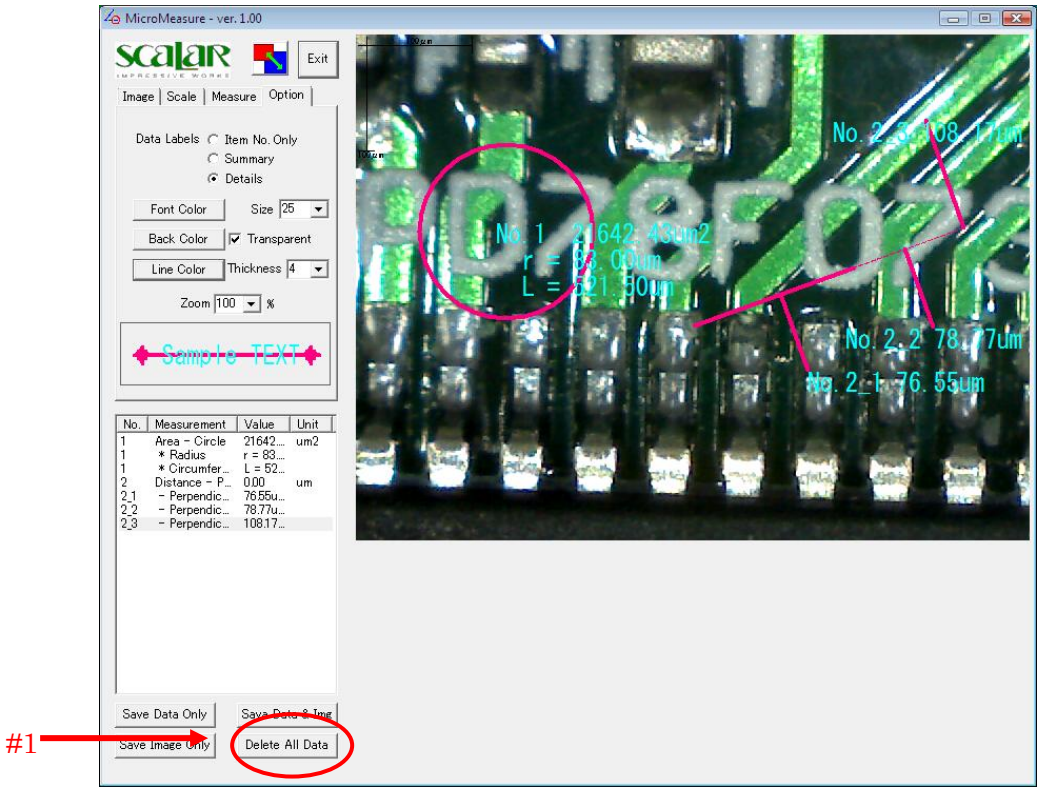


Fig. 22

5-3-19. Options Tab

At the Options Tab, you can change how to display both currently measured data and also set parameters for measurements yet to be made.

To change the labels settings of the items to be measured without changing already measured items, right click somewhere in the display area to remove the active image symbols.

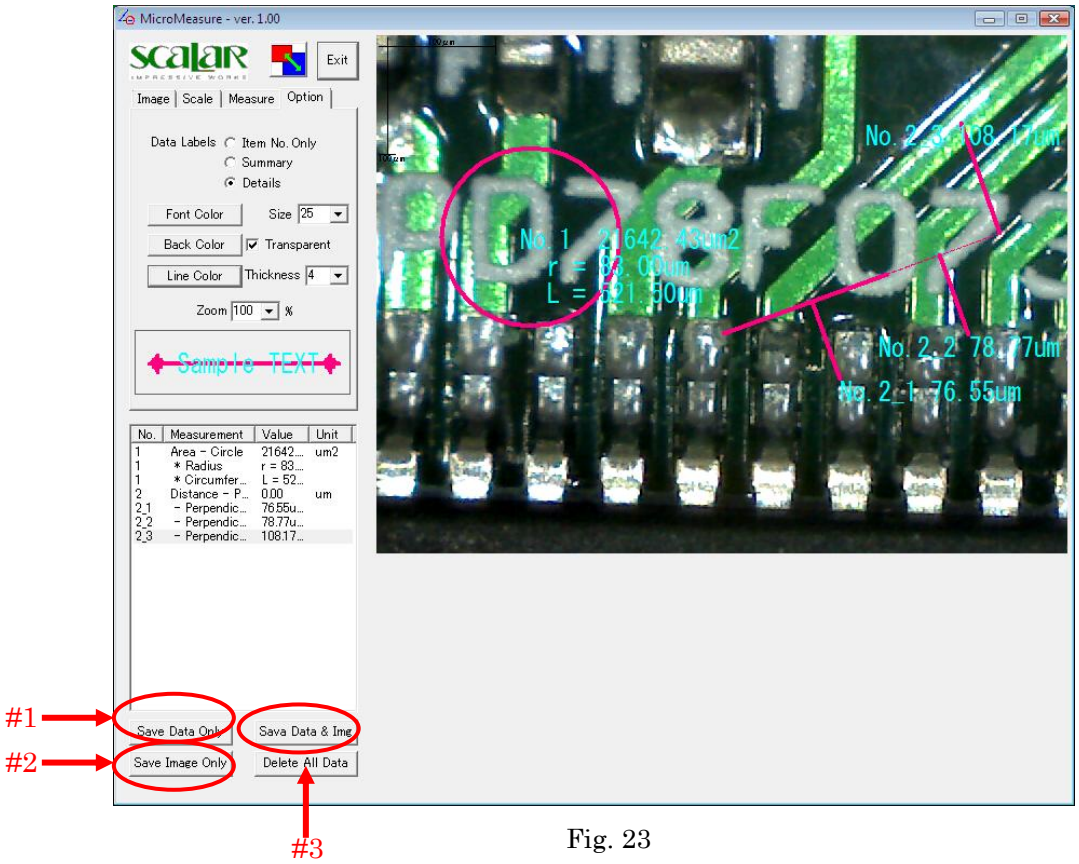


Fig. 23

5-3-20. Options Save and Load

The display method of a measurement result can be saved and called. Save by #2 and call by #1.

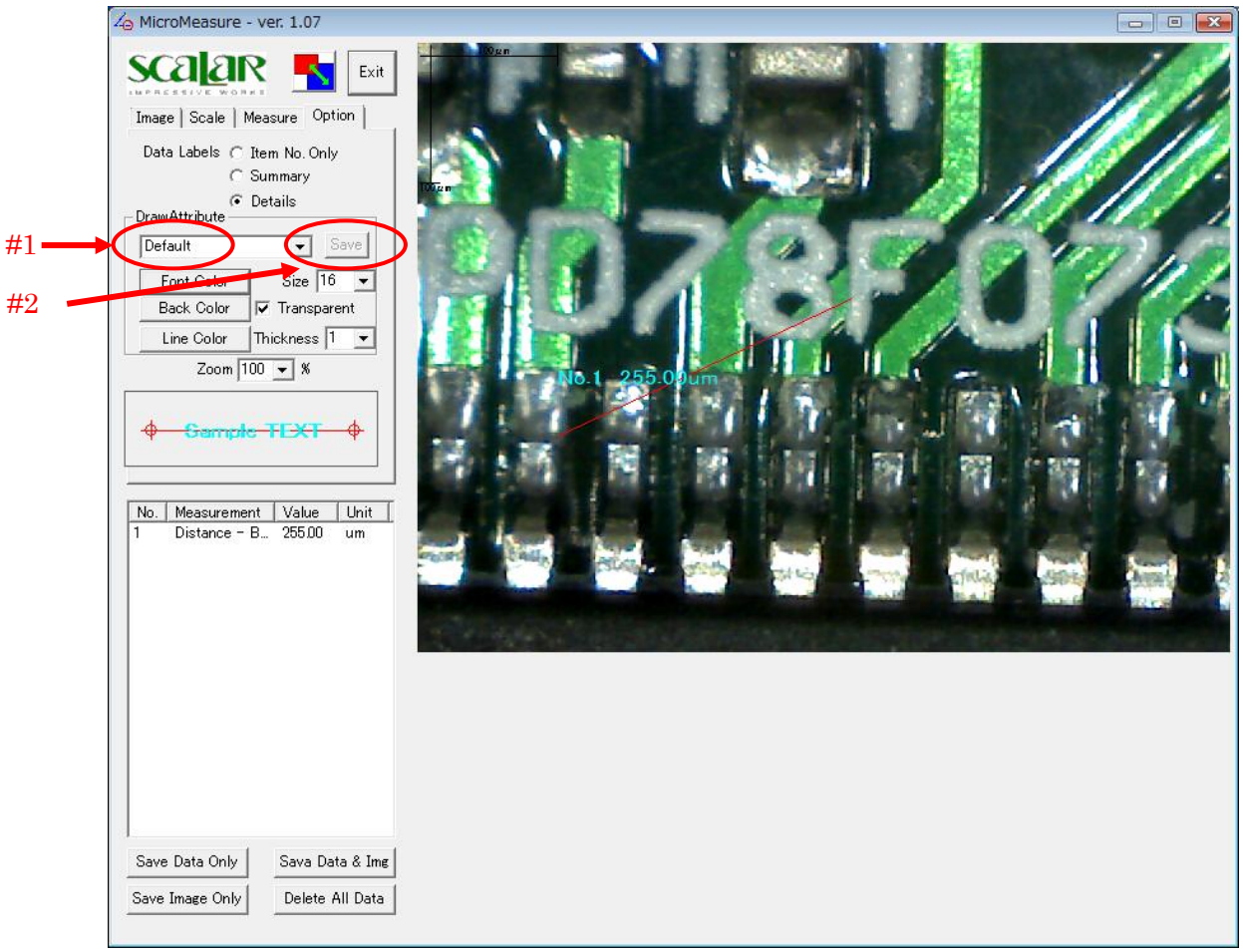


Fig. 24

5-4. Exporting Data

There are 3 ways to save measurement results.

5-4-1. Save Data Only

Click the button indicated by #1 in Fig. 23. Data is saved as a CSV file.

5-4-2. Save Image Only

Click the button indicated by #2 in Fig. 23. You can select the file format, BMP or JPG.

5-4-3. Save Data and Img.

Click the button indicated by #3 in Fig. 23. Edited image and measurement results are saved in a Microsoft Excel sheet (assuming that Microsoft Excel is one of your programs).

6. Evaluation Mode

Without a USB-Key, this program will start in the Evaluation Mode.

If you mistakenly unplug a USB-Key, a window indicated by Fig. 25 or Fig. 26 will appear. Plug in the USB-Key again and Click NO.

If you do not plug in the USB-Key again, any measured data will be lost.

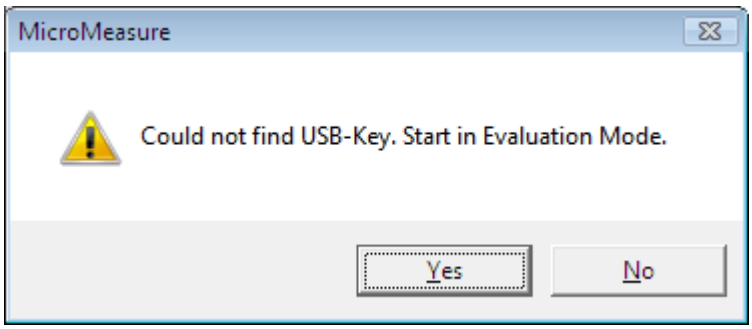


Fig. 25

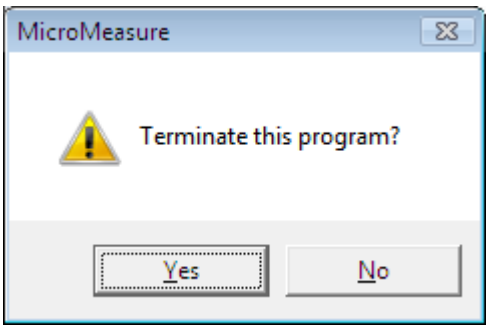


Fig. 26

7. Upgrading

You may check for the latest version of this program at the Scalar Corporation website. www.scalar.co.jp