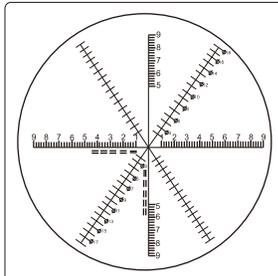
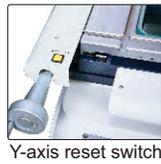




10X dividing eyepiece



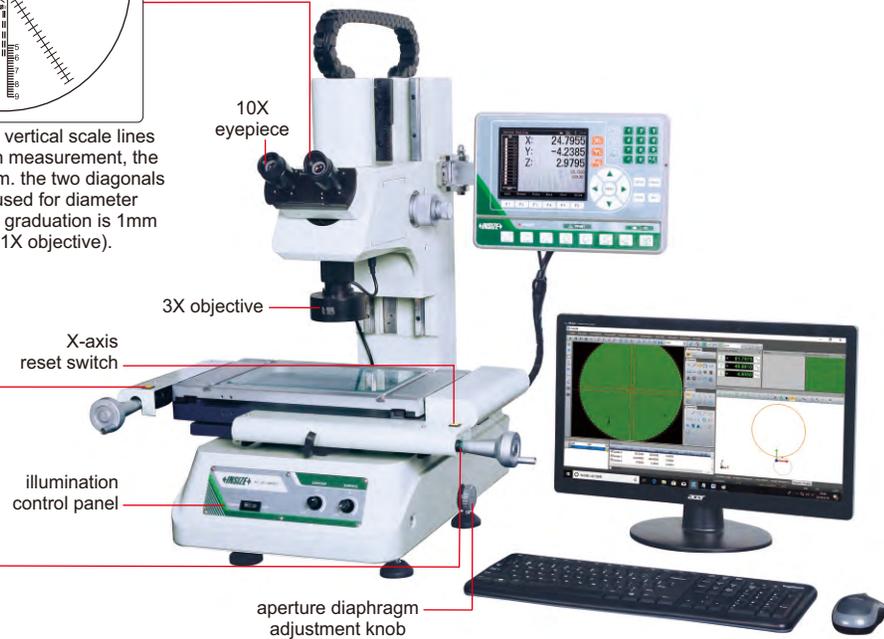
the horizontal and vertical scale lines are used for length measurement, the graduation is 0.2mm. the two diagonals scale lines are used for diameter measurement, the graduation is 1mm (when using 1X objective).



Y-axis reset switch



laser positioning switch



computer is optional

**ISD-VMM215**
**SPECIFICATION**

Code	binocular	ISD-VMM205	ISD-VMM215	ISD-VMM225	ISD-VMM235
	monocular	ISD-VMM205D	ISD-VMM215D	ISD-VMM225D	ISD-VMM235D
X/Y axis travel		150×100mm	200×100mm	250×150mm	300×200mm
Z axis travel		150mm	150mm	200mm	200mm
Metal stage size		354×228mm	404×228mm	450×280mm	500×330mm
Glass stage size		210×160mm	260×160mm	306×196mm	350×250mm
Resolution of X/Y/Z axis		0.5µm			
Accuracy of X/Y axis		≤(3.5+L/100)µm (L is the measuring length in mm)			
Repeatability		2µm			
Camera		1/3" color CCD, 0.3M pixel			
Optical magnification		30X (with 3X objective)			
Image magnification		114X (on 19" monitor)			
Illumination		surface and contour with adjustable LED			
Max. weight of workpiece		25kg			
Power supply		100V~240V, 50/60Hz			
Operation system		Windows 7/8/10			
Drive method		manual			
Dimension (L×W×H)		540×667×850mm	540×667×850mm	800×675×920mm	800×675×920mm
Weight		100kg	110kg	135kg	140kg

To be continued

Continued from previous page

**DATA PROCESSING UNIT**

<b>Output</b>	RS232
<b>Function</b>	simple measuring tools
	measure coordinate of points
	measure lines
	measure center coordinate, radius of circle with three points
	measure distances between two objects
	measure angles
	set origin of coordinate
	skew and calibrate the workpiece
	measure rectangle (including length, width, perimeter and center coordinate)
	measure thread (including thread diameter, screw pitch, screw angle)
measure slot (including center coordinate, length, width)	

**STANDARD DELIVERY**

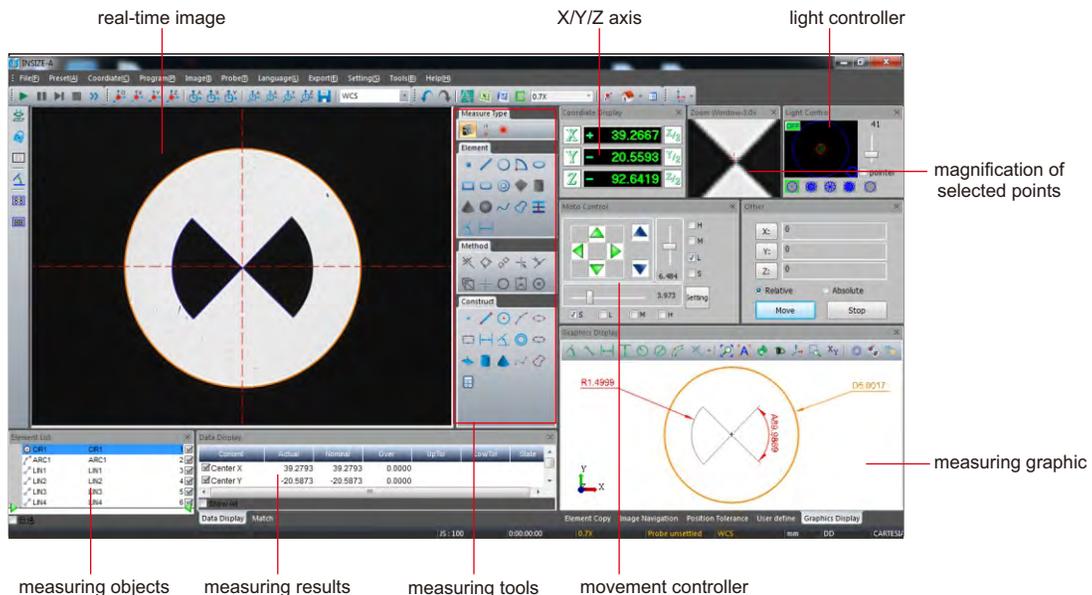
<b>Main unit</b>	1 pc
<b>Video card with dongle</b>	1 pc
<b>Software disc</b>	1 pc
<b>Calibration glass chart</b>	1 pc
<b>Demo sample</b>	1 pc
<b>Foot switch</b>	1 pc
<b>3X objective</b>	1 pc

**OPTIONAL ACCESSORY**

<b>1X objective</b>	<b>ISD-VMM-LENS1X</b>
<b>5X objective</b>	<b>ISD-VMM-LENS5X</b>
<b>10X objective</b>	<b>ISD-VMM-LENS10X</b>
<b>Toolmaker microscopes (with computer)</b>	Code: <b>ISD-VMM205A</b> (binocular) <b>ISD-VMM215A</b> (binocular) <b>ISD-VMM225A</b> (binocular) <b>ISD-VMM235A</b> (binocular)
	Code: <b>ISD-VMM205DA</b> (monocular) <b>ISD-VMM215DA</b> (monocular) <b>ISD-VMM225DA</b> (monocular) <b>ISD-VMM235DA</b> (monocular)

**SOFTWARE (INCLUDED)**

- Refer to page 409~410 for details



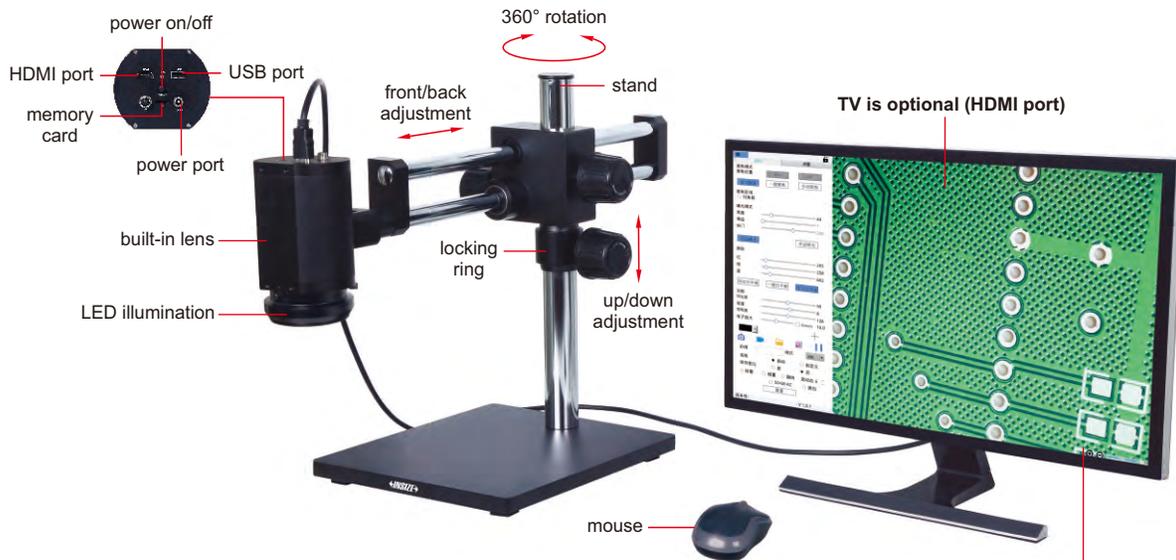
AUTO FOCUS

TAKE PICTURES AND VIDEOS



# AUTO FOCUS DIGITAL MICROSCOPE (LARGE VIEW FIELD) CODE 5302-AF105

MEASUREMENT



- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to memory card
- Connected to TV by HDMI port
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)
- Built-in software without computer, operation by mouse



1~14X optical zoom adjustment

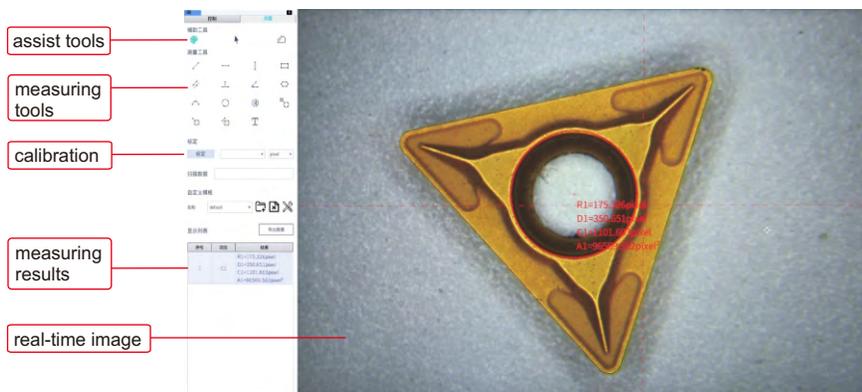
## SPECIFICATION

Magnification	1.8X~27.5X (on 28" TV)
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Auto focus distance	100mm~∞
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	500×280×410mm
Weight	17kg

Focus distance	Adjustable magnification (on 28" TV)	View field	Measuring accuracy
100mm	4.5~27.5X	24×14~161×90mm	0.02mm
150mm	3~21X	30×17~240×128mm	0.02mm
200mm	2.3~17.5X	38×20~305×176mm	0.02mm
250mm	2~15X	42×24~320×210mm	0.02mm
270mm	1.8~14.4X	43×25~378×240mm	0.02mm

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## MEASURING SOFTWARE (INCLUDED)



## STANDARD DELIVERY

Main unit (with stand)	1 pc
LED illumination	1 pc
16G memory card and holder	1 pc
Mouse	1 pc
HDMI cable (for TV)	1 pc
Power adapter	2 pcs

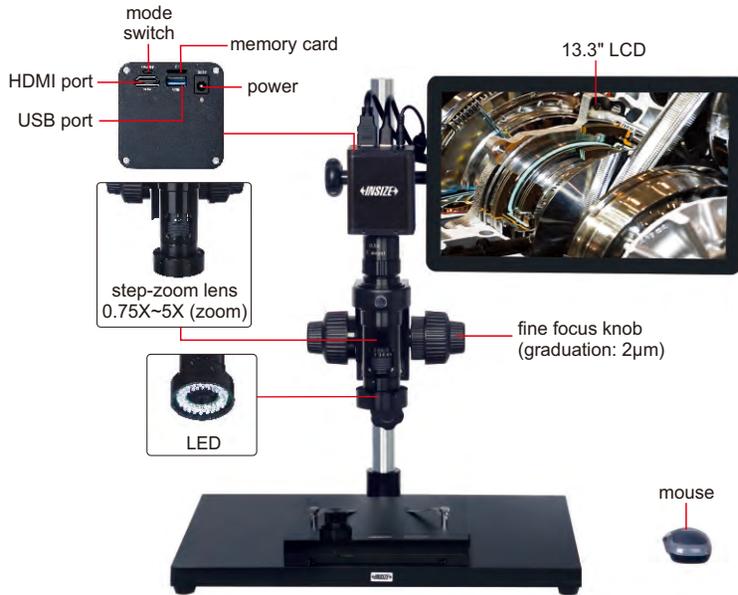
# HIGH-DEFINITION AUTO FOCUS MEASURING MICROSCOPE (WITH DISPLAY)

## CODE 5315-S710

IMAGE STITCHING

DUAL SCREEN OPERATION

FOCUS STACKING



focus stacking



focus on the top



focus on the bottom



clear image of both top and bottom

- 12M high-definition image
- Switchable LCD mode and computer mode
- Take pictures or videos, save to memory card
- Measurement results can be sent to Excel
- Auto focus
- Automatic white balance and exposure



calibration plate (included)

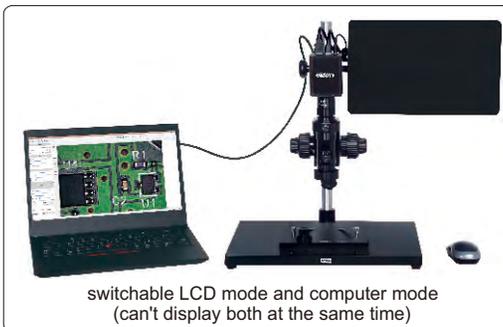


1X camera adapter (optional)



2X auxiliary objective (optional)

18

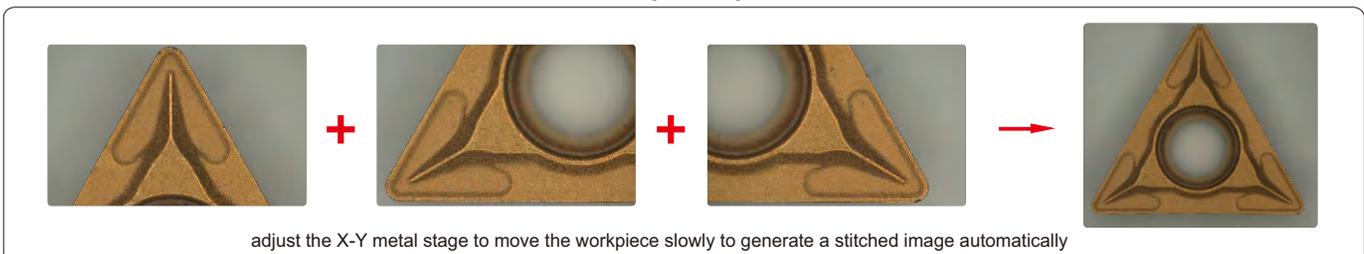


switchable LCD mode and computer mode (can't display both at the same time)



stage moving knob  
X-Y metal stage (included)  
(X-Y travel: 100×86mm)

image stitching



adjust the X-Y metal stage to move the workpiece slowly to generate a stitched image automatically

To be continued

Continued from previous page

**SPECIFICATION**

Magnification	15X~100X (on 13.3" LCD)
Sensor	1/1.7" CMOS
Pixel	12M
Resolution	4000×3000
Frame rate	60fps
Output	HDMI/USB
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm

**STANDARD DELIVERY**

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
32G memory card	1 pc
Mouse	1 pc
X-Y metal stage	1 pc

**MAGNIFICATION AND MEASURING ACCURACY (on 13.3" LCD)**

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±2mm
1X	20X	±2mm
1.5X	30X	±2mm
2X	40X	±2mm
2.5X	50X	±2mm
3X	60X	±2mm
3.5X	70X	±2mm
4X	80X	±1mm
4.5X	90X	±1mm
5X	100X	±1mm

**MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (on 13.3" LCD)**

Specification	Camera adapter	
	0.5X (included)	1X (optional)
Magnification	15~100X	30~200X
Focus distance	80±2mm	80±2mm
View field	20.0×11.2~5.5×3.1mm	10.0×5.6~2.7×1.5mm

**OPTIONAL ACCESSORY**

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
Computer	ISM-DL-COMPUTER
LED light	Page 431~432
Auxiliary objective	Page 433

**SOFTWARE FOR LCD (INCLUDED)**

focus

AF ROI

AE

AWB

assist tools

main tool

calibration

list show

**SOFTWARE FOR COMPUTER (INCLUDED)**

real-time image

calibration

measuring tools

focus mode

focus area

exposure

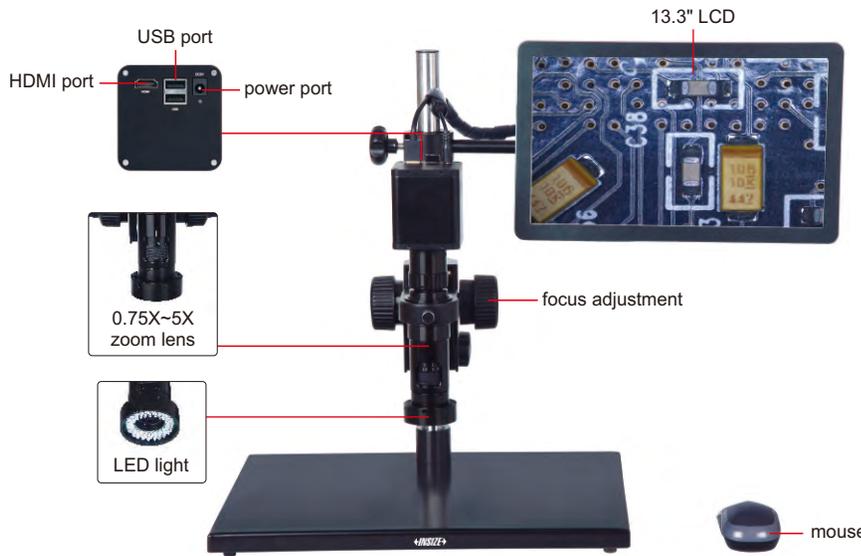
white balance

function

# AUTO FOCUS DIGITAL MICROSCOPE (WITH DISPLAY) CODE 5303-AF103

AUTO FOCUS

TAKE PICTURES  
AND VIDEOS



16G USB flash disk (included)



0.5X camera adapter (included)



1X auxiliary objective (included)



mouse

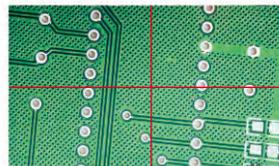


0.75X-5X zoom lens



LED light

- 1080P high-definition image
- Auto focus camera
- Take pictures and videos, saved to USB flash disk
- Picture review, picture compare
- Automatic exposure and white balance
- Brightness, contrast ratio, gain are adjustable
- Display cross hair (blue/green/red/yellow/black/brown colors)



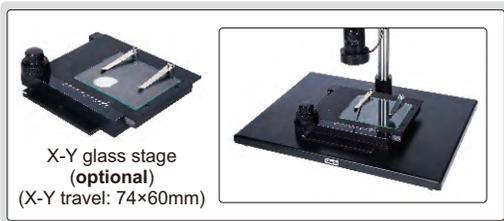
display cross hair (blue/green/red/yellow/black/brown colors)



1X camera adapter (optional)



2X auxiliary objective (optional)



X-Y glass stage (optional)  
(X-Y travel: 74×60mm)

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## SPECIFICATION

Magnification	20X~123X
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

## STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adppter	2 pcs

## MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	20~123X	40~246X
	Focus distance	48~84mm	48~84mm
	View field	13×7~2.2×1mm	6.3×3.5~1.1×0.5mm
2X (optional)	Magnification	40~246X	80~492X
	Focus distance	24~42mm	24~42mm
	View field	6.5×3.5~1.1×0.5mm	3.3×1.8~0.6×0.3mm

## AUTO FOCUS DISTANCE

Zoom objective scale	0.75X	1X	1.5X	2X	2.5X
Auto focus distance	48~84mm	50~78mm	55~73mm	62~71mm	65~70mm

Zoom objective scale	3X	3.5X	4X	4.5X	5X
Auto focus distance	66~70mm	67~70mm	68~70mm	68~70mm	68~70mm

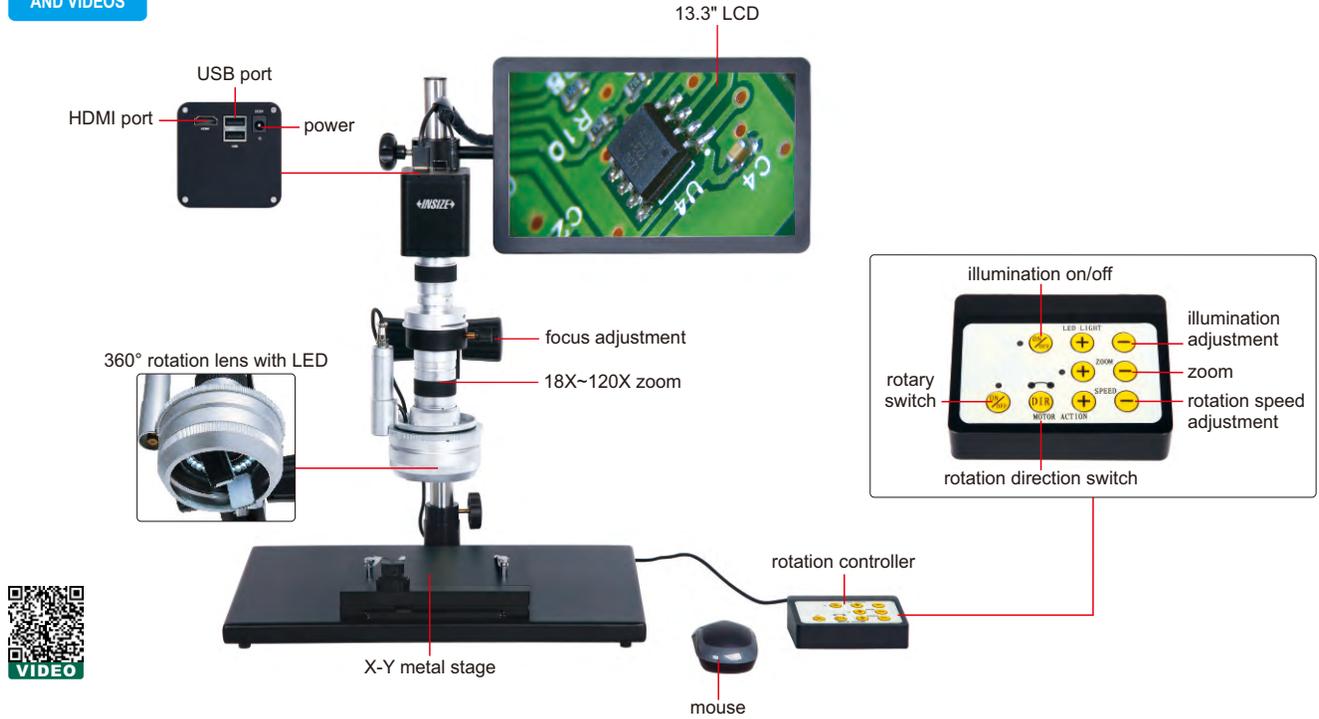
## OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 431~432
Auxiliary objective	page 433

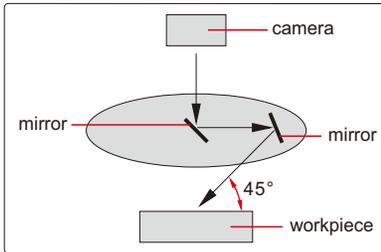
SUITABLE TO CHECK CONVEX OBJECTS AND WALL OF HOLE

## 3D MOTORIZED ROTATION MICROSCOPE (WITH DISPLAY) CODE 5301-D400

TAKE PICTURES AND VIDEOS



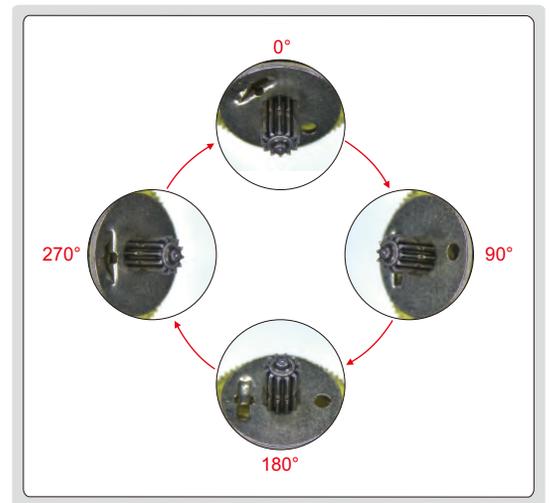
working principle



- 1080P high-definition 3D image
- Take pictures and videos, save to USB flash disk
- Automatic white balance and exposure
- Brightness, contrast ratio and gain are adjustable

### SPECIFICATION

Magnification	18X~120X
View field	2.4×1.5mm~16×9mm
Focus distance	20mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Rotation speed	2~5RPM
Power supply	110/220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg



360° rotation observation

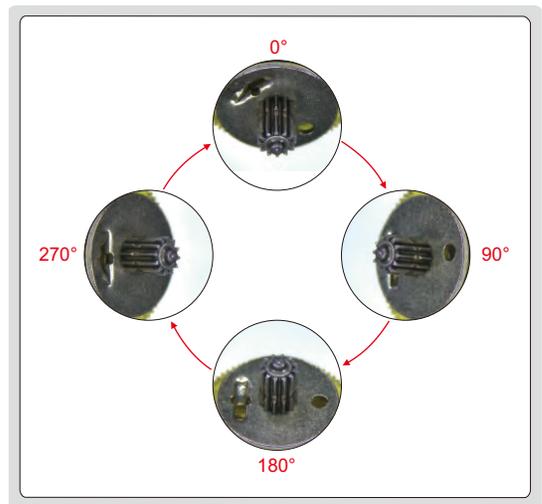
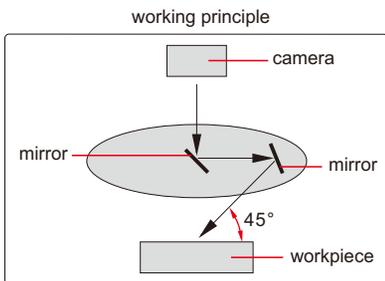
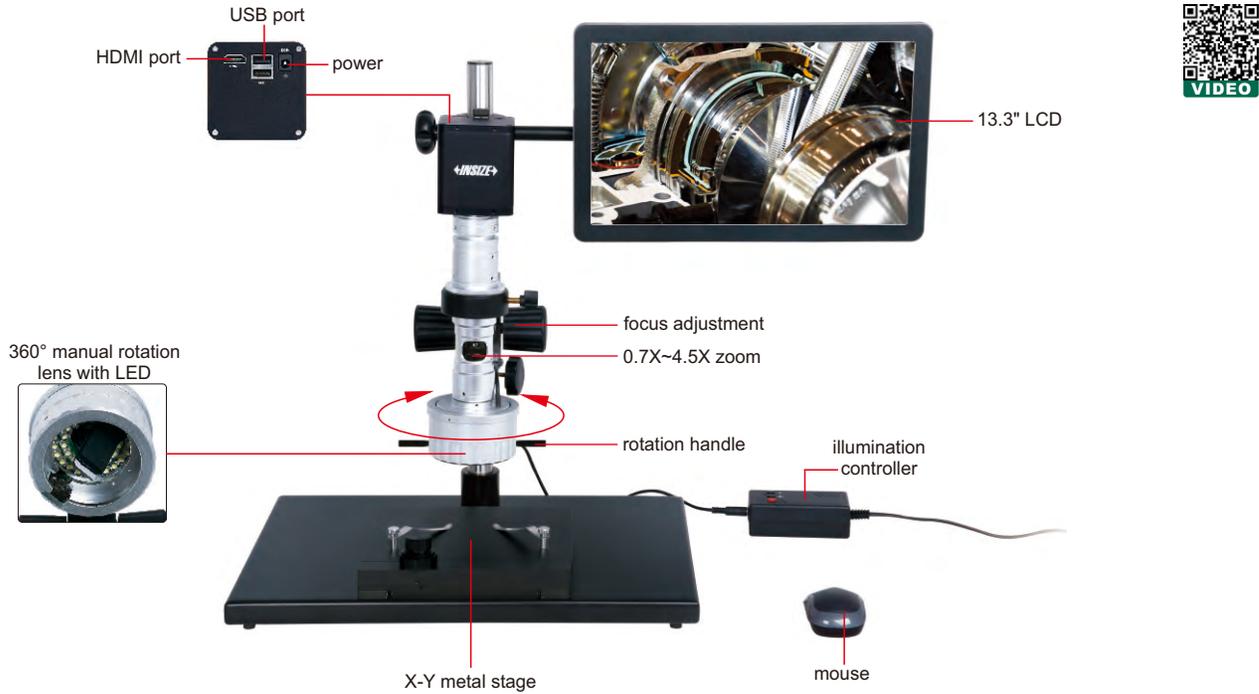
### STANDARD DELIVERY

Main unit	1 pc
Rotation controller	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

# 3D MANUAL ROTATION MICROSCOPE (WITH DISPLAY) CODE 5313-S407

SUITABLE TO CHECK CONVEX OBJECTS  
AND WALL OF HOLES

TAKE PICTURES AND VIDEOS



360° rotation observation

### SPECIFICATION

Magnification	18X~120X
View field	2.4×1.5mm~16×9mm
Focus distance	20mm
View angle	45°
Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	220V, 50/60Hz
Dimension (L×W×H)	570×300×430mm
Weight	10kg

### STANDARD DELIVERY

Main unit	1 pc
X-Y metal stage	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	2 pcs

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

MEASUREMENT

TAKE  
PICTURES

## DIGITAL MEASURING MICROSCOPES (WITH DISPLAY)



0.5X camera adapter  
(included)



1X auxiliary objective  
(included)



calibration plate  
(included)



16G USB flash disk  
(included)

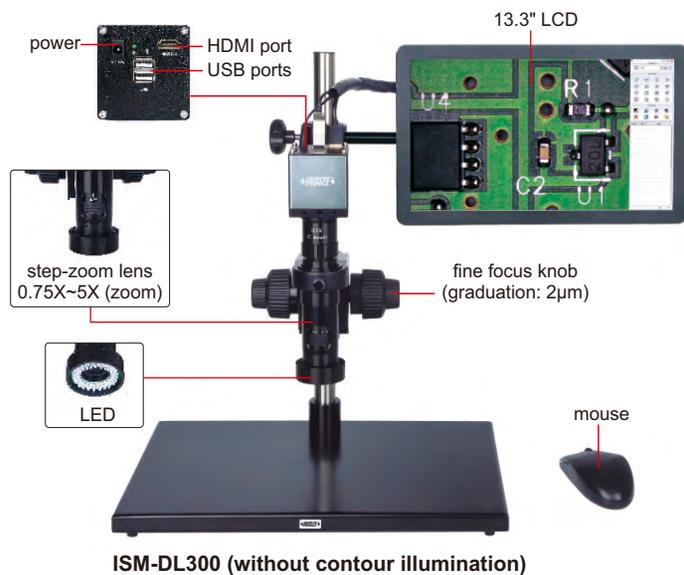


1X camera adapter  
(optional)

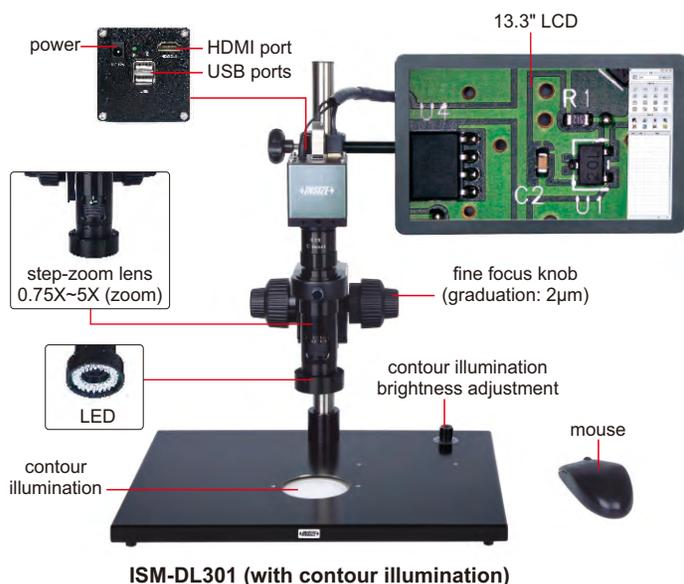


2X auxiliary objective  
(optional)

- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable



ISM-DL300 (without contour illumination)



ISM-DL301 (with contour illumination)

### SPECIFICATION

Code	ISM-DL300 (without contour illumination)	ISM-DL301 (with contour illumination)
Magnification	15X~100X	
Sensor	1/2" CMOS	
Pixel	2M	
Resolution	1920×1080	
Frame rate	60fps	
Output	HDMI	
Power supply	power adapter	
Dimension (L×W×H)	570×300×430mm	
Weight	6.5kg	

To be continued

Continued from previous page

**STANDARD DELIVERY**

Code	ISM-DL300	ISM-DL301
Main unit	1 pc	1 pc
0.5X camera adapter	1 pc	1 pc
1X auxiliary objective	1 pc	1 pc
Calibration plate	1 pc	1 pc
16G USB flash disk	1 pc	1 pc
White/black plate	1 pc	1 pc
Mouse	1 pc	1 pc
HDMI cable	1 pc	1 pc
Power adapter	2 pcs	3 pcs

**OPTIONAL ACCESSORY**

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage	ISM-DL-STAGE1
LED light	page 431~432
Auxiliary objective	page 433

**MAGNIFICATION AND MEASURING ACCURACY**

Objective magnification	Image magnification	Measuring accuracy*
0.75X	15X	±8μm
1X	20X	±7μm
1.5X	30X	±6μm
2X	40X	±6μm
2.5X	50X	±6μm
3X	60X	±5μm
3.5X	70X	±5μm
4X	80X	±4μm
4.5X	90X	±4μm
5X	100X	±4μm

\* When measuring the contour of workpieces, please use **ISM-DL301** to ensure accuracy.

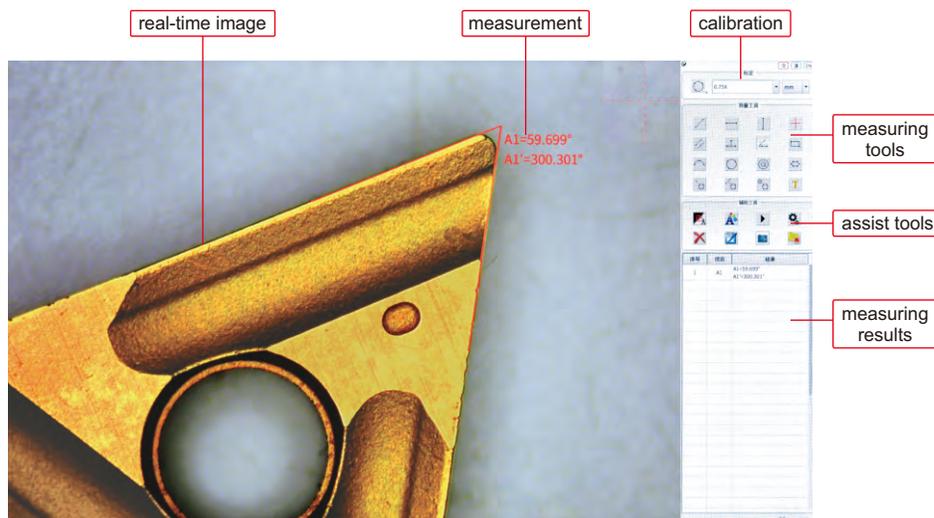


**MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD**

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

**SOFTWARE (INCLUDED)**

■ Refer to page 428 for details

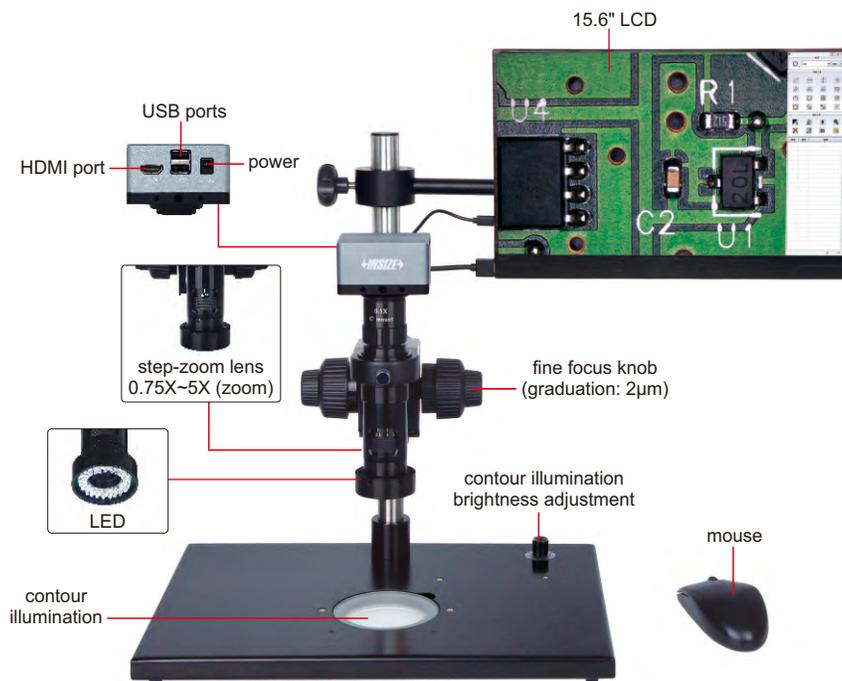


BUILT-IN SOFTWARE  
WITHOUT COMPUTER

TAKE  
PICTURES

MEASUREMENT

## 4K DIGITAL MEASURING MICROSCOPE (WITH DISPLAY) CODE 5310-DL401



- 4K high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Brightness, contrast ratio, gain are adjustable

### SPECIFICATION

Magnification	17.6X~120X
Sensor	1/2.3" CMOS
Pixel	8M
Resolution	3840×2160
Frame rate	4K: 30fps, 1080P: 60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg



To be continued

Continued from previous page

**MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY**

Objective magnification	Image magnification	View field	Measuring accuracy
0.75X	17.6X	19.5×11.5mm	±5µm
1X	23.7X	14.0×8.0mm	±5µm
1.5X	36.6X	9.0×5.0mm	±5µm
2X	49X	7.0×4.0mm	±5µm
2.5X	62X	5.5×3.0mm	±4µm
3X	73X	4.5×2.5mm	±4µm
3.5X	85X	4.0×2.2mm	±4µm
4X	97X	3.5×2.0mm	±3µm
4.5X	109X	3.0×1.8mm	±3µm
5X	120X	2.7×1.5mm	±3µm

**STANDARD DELIVERY**

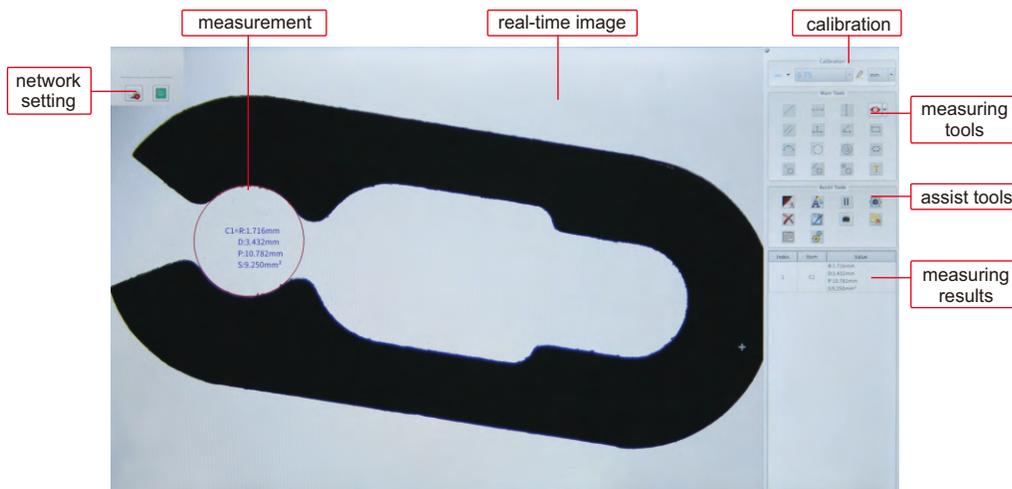
Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

**OPTIONAL ACCESSORY**

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
X-Y metal stage (travel: 100×86mm)	ISM-DL-STAGE1
LED light	page 431~432
Auxiliary objective	page 433

**SOFTWARE (INCLUDED)**

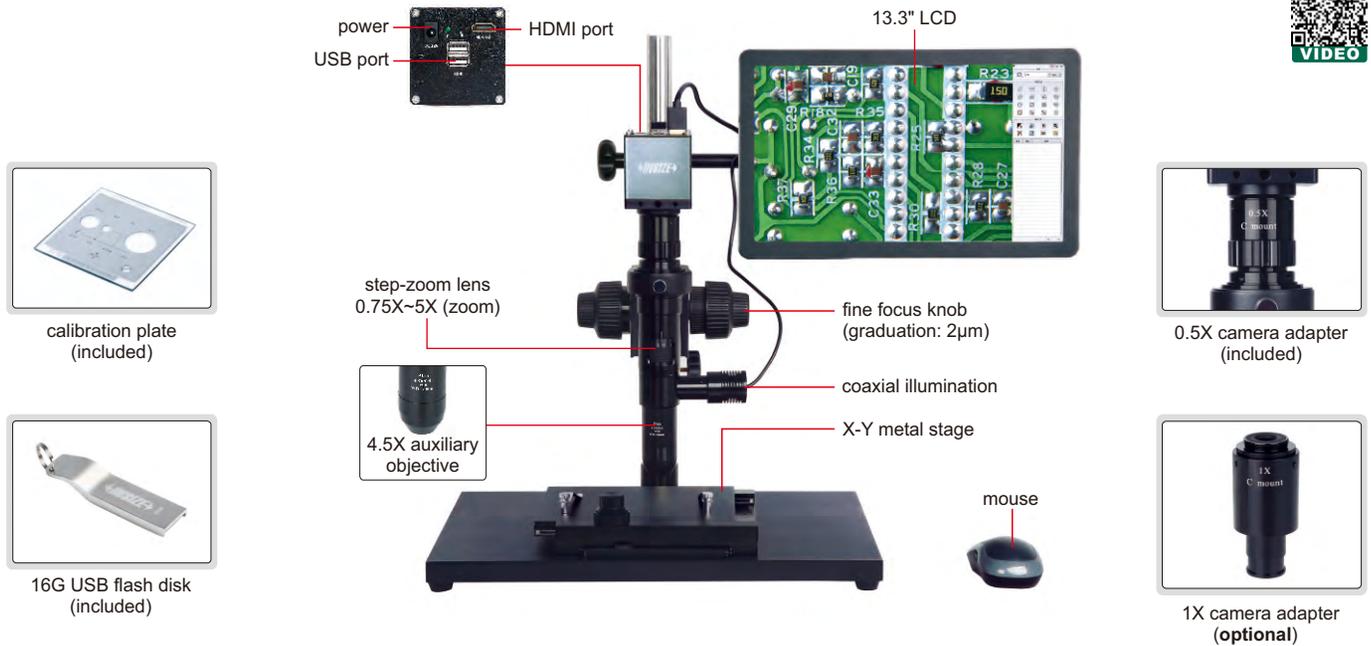
- Refer to page 428 for details



OBSERVATION AND MEASUREMENT  
AT HIGH MAGNIFICATION

SOFTWARE IS INCLUDED,  
REFER TO page 428 FOR DETAILS

## HIGH MAGNIFICATION MEASURING MICROSCOPE (WITH DISPLAY) CODE ISM-DL302



calibration plate  
(included)



16G USB flash disk  
(included)

- 1080P high-definition image
- Maximum 1000X optical magnification (using camera adapter 1X, optional)
- Built-in software without computer, operated by mouse
- Solid base and column to avoid lens shaking during focusing
- Software is included, refer to page 428 for details

### SPECIFICATION

Magnification	78X~504X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	15kg

### SATNDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
4.5X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
Mouse	1 pc
HDMI cable	1 pc
X-Y metal stage	1 pc

### OPTIONAL ACCESSORY

1X camera adapter	ISM-DL-CA1X
LED light	page 431~432

### MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Image magnification	Measuring accuracy
0.75X	78X	±5µm
1X	102X	±4µm
1.5X	153X	±4µm
2X	204X	±4µm
2.5X	255X	±4µm
3X	305X	±4µm
3.5X	356X	±4µm
4X	408X	±4µm
4.5X	458X	±4µm
5X	504X	±4µm

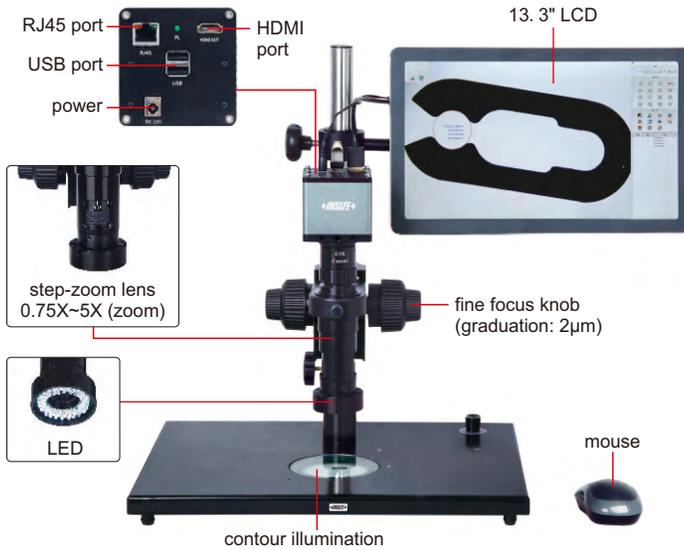
### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Camera adapter	0.5X (included)	1X (optional)
Magnification	78~504X	156~1008X
Focus distance	14±2mm	14±2mm
View field	2.8×1.7~0.5×0.3mm	1.4×0.9~0.3×0.2mm

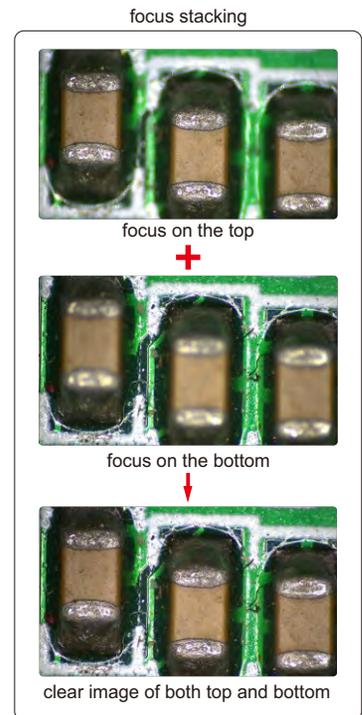
# FOCUS STACKING MEASURING MICROSCOPE (WITH DISPLAY) CODE ISM-DL510

BUILT-IN SOFTWARE  
WITHOUT COMPUTER

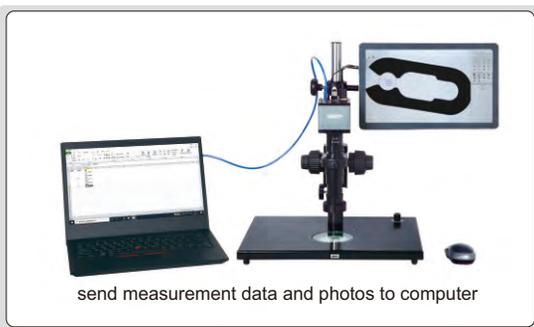
FOCUS  
STACKING



- 1080P high-definition image
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measurement results can be sent to Excel
- Automatic white balance and exposure
- Focus stacking
- Send photos and measurement data via ethernet (TCP/IP)
- Name photos and measurement data files with serial number of workpieces read by scanner



18



## SPECIFICATION

Magnification	15X~100X
Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	60fps
Output	HDMI
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm

To be continued

Continued from previous page

**STANDARD DELIVERY**

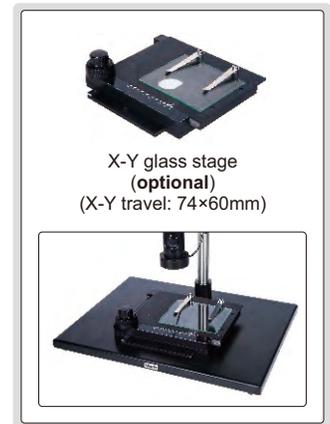
Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
Mouse	1 pc
Power adapter	3 pcs

**OPTIONAL ACCESSORY**

1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
X-Y glass stage (travel: 74×60mm)	ISM-DL-STAGE
Scanner and hub	7328-SCAN
LED light	page 431~432
Auxiliary objective	page 433

**MAGNIFICATION AND MEASURING ACCURACY**

Objective magnification	Image magnification	Measuring accuracy
0.75X	15X	±8µm
1X	20X	±7µm
1.5X	30X	±6µm
2X	40X	±6µm
2.5X	50X	±6µm
3X	60X	±5µm
3.5X	70X	±5µm
4X	80X	±4µm
4.5X	90X	±4µm
5X	100X	±4µm

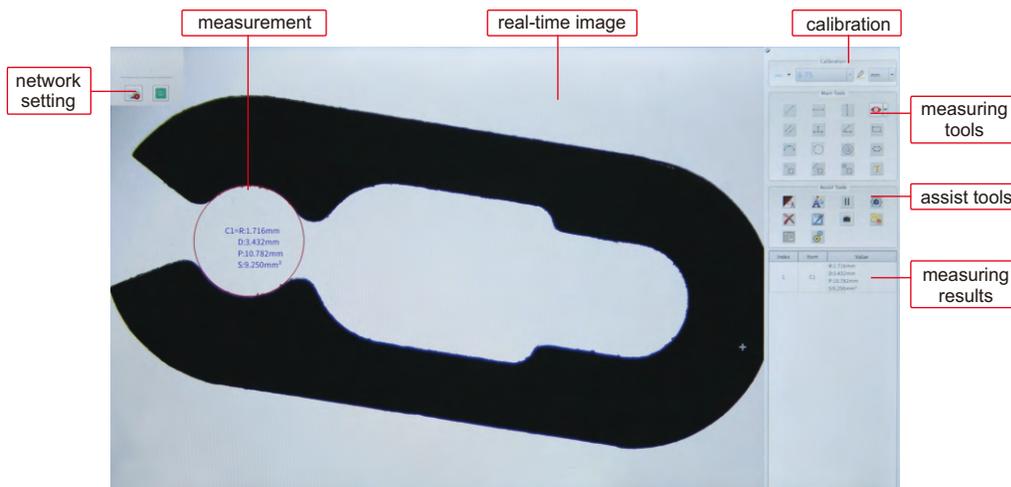


**MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD**

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

**SOFTWARE (INCLUDED)**

- Refer to page 428 for details



# DIGITAL MEASURING MICROSCOPE CODE 5307-ID100A

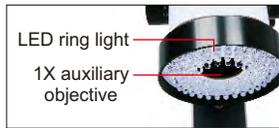
ELECTRONIC MAGNIFICATION  
FEEDBACK LENS

BUILT-IN SOFTWARE  
WITHOUT COMPUTER



- Electronic magnification feedback lens: when the objective lens magnification is changed manually, the software automatically selects the corresponding pre-calibration data and calibration is not needed
- Two methods of LED brightness adjustment, knob adjustment and software adjustment
- Built-in software without computer, operated by mouse
- Take pictures, save to USB flash disk
- Measuring results can be sent to Excel

adjustable display angle



## SPECIFICATION

Sensor	1/2" CMOS
Pixel	2M
Resolution	1920×1080
Magnification	12~77X
Focus distance	100mm
View field	2.7×1.9~17.5×11.9mm
Max workpiece height	60mm
Frame rate	60fps
Output	USB/HDMI
Power supply	power adapter
Dimension (L×W×H)	610×610×660mm
Weight	4.5kg

## STANDARD DELIVERY

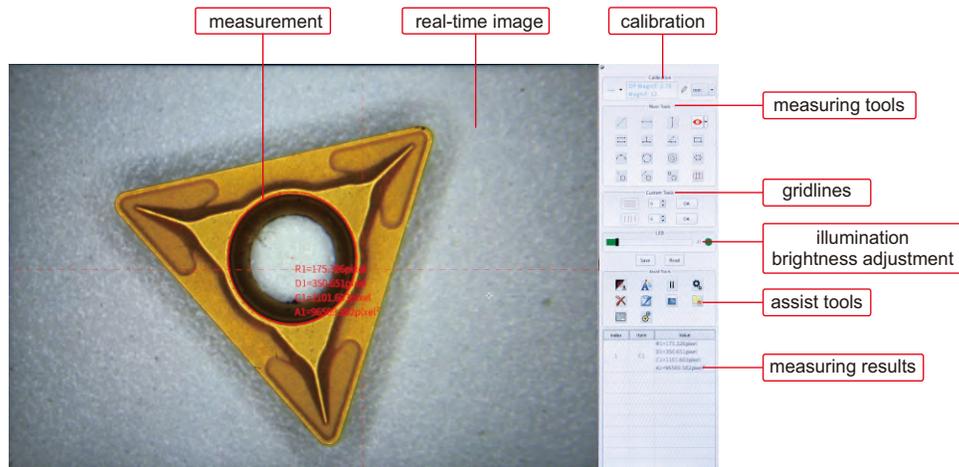
Main unit	1 pc
Calibration plate	1 pc
Power adapter	1 pc
Mouse	1 pc
16G USB flash disk	1 pc

## MAGNIFICATION AND MEASURING ACCURACY

Objective magnification	Magnification	Measuring accuracy
0.7X	12X	±9μm
1X	17X	±9μm
1.5X	26X	±8μm
2X	35X	±7μm
2.5X	43X	±7μm
3X	51X	±7μm
3.5X	60X	±6μm
4X	68X	±6μm
4.5X	77X	±5μm

## SOFTWARE (INCLUDED)

- Refer to page 428 for details

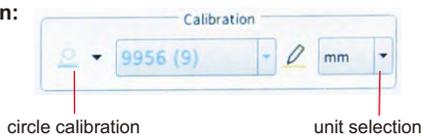


SOFTWARE CAN BE CUSTOMIZED

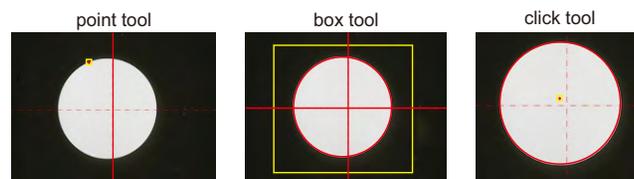
## MEASURING SOFTWARE OF DIGITAL MICROSCOPES



- **Included in digital microscopes (ISM-DL300, ISM-DL301, 5310-DL401, ISM-DL302, ISM-DL510, 5307-ID100A)**
- **Language:** Simplified Chinese, Traditional Chinese, English, Korean
- **Calibration:**



### ▪ Edge-detection:



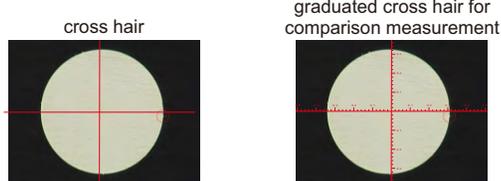
### ▪ Measurement tools:

- |  |   |   |
|--|---|---|
| measure length of line or distance between two points                | measure length of line or distance between two points in horizontal direction | measure length of line or distance between two points in vertical direction |
| measure angle from horizontal line                                   | measure angle from vertical line  | measure angle of two lines  |
| measure distance between two parallel lines                          | measure distance between two parallel lines                                   | measure distance between multiple parallel lines                            |
| measure distance between point and line                              | measure radius, length and angle of arc                                       | measure girth and area of polygon   |
| measure radius, diameter, girth and area of circle with three points | measure radius, diameter, girth and area concentric of circles                | measure length, width, girth and area of rectangle                          |
| measure minimum distance between point and circle                    | measure distance between point and center of circle                           | measure maximum distance between point and circle                           |
| measure minimum distance between line and circle                     | measure distance between line and center of circle                            | measure maximum distance between line and circle                            |
| measure minimum distance between two circles                         | measure center distance between two circles                                   | measure maximum distance between two circles                                |
| add text   | measure radius, diameter, girth and area of circle with two points            | cross hair and graduated cross hair   |

### ▪ Assist tools:

- |                                      |                                   |
|--------------------------------------|-----------------------------------|
| manual/automatic point selection     | delete images                     |
| line width and color settings        | export measurement data to U disk |
| freeze screen                        | take pictures and save            |
| camera parameter settings            | review pictures                   |
| layout settings of measurement items | system settings                   |

### ▪ Cross hair:



### ▪ Grid comparison measurement:



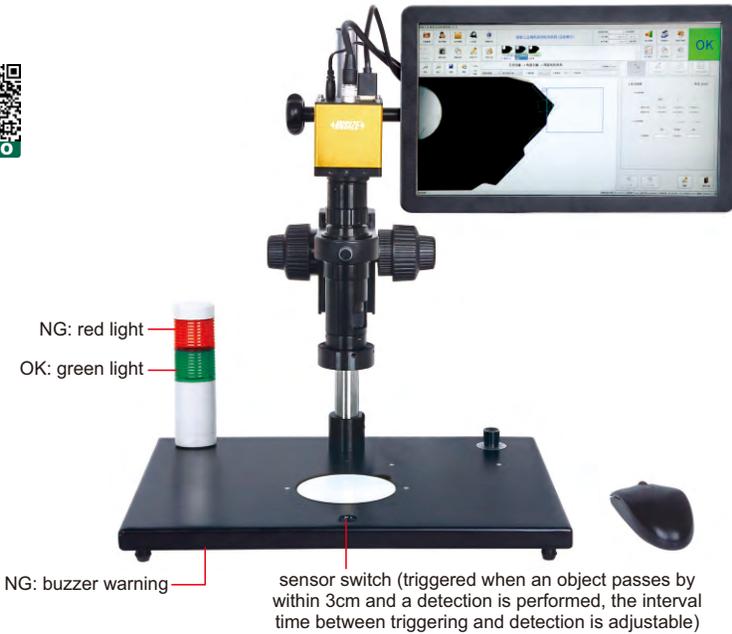
### ▪ Output to Excel:

1	A1	A1=59.699° A1=300.301°

## SMART MICROSCOPE CODE ISM-DL400

**AUTOMATICALLY LOCATE WORKPIECES  
REGARDLESS OF POSITION AND DIRECTION**

**BUILT-IN SOFTWARE  
WITHOUT COMPUTER**



### camera function

- surface defect detection
- dimension measurement
- read barcode
- burr detection
- contour matching
- character recognition
- color detection
- read QR code
- object counting
- thread measurement

### detect different workpieces at one time



- Automatically identify different workpieces
- Automatically locate workpieces regardless of position and direction
- Built-in software, PLC control input and output interface
- Including multiple detection tools
- Automatically calculate, store the test results and export to Excel

Tool	Tool Name	Detection Time	OK Count	NG Count	Yield Rate	Detection Rate
T101	Profile distance	400	200	200	50.00%	40.00%
T102	Chamber	300	75	225	25.00%	20.00%
Summary		400	200	200	50.00%	40.00%

report showing the perform times of each tool, quantity of OK and NG, the report can be saved

Tool	Tool	Tool			
T102 Cluster					
Detection Number	Detection time	Detection color	Number of lights	Maximum value	
1	T00101_00041_001	33ms	白色	0	0.0000mm
2	T00101_001151_001	31ms	白色	0	0.0000mm
3	T00101_001202_001	31ms	白色	0	0.0000mm

report of each detection is automatically created and saved

### SPECIFICATION

Magnification	15X~100X
Resolution	1920×1080
Pixel	2M
Single pixel size	3.75×3.75μm
Frame rate	60fps
Sensor	1/2" CMOS
Chip structure	FPGA+ARM
Operation system	Linux 3.10
Power supply	power adapter
Dimension (L×W×H)	570×300×430mm
Weight	6.5kg

### STANDARD DELIVERY

Main unit	1 pc
0.5X camera adapter	1 pc
1X auxiliary objective	1 pc
Calibration plate	1 pc
16G USB flash disk	1 pc
White/black plate	1 pc
HDMI cable	1 pc
Power adapter	3 pcs

### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View filed	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View filed	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

### OPTIONAL ACCESSORY

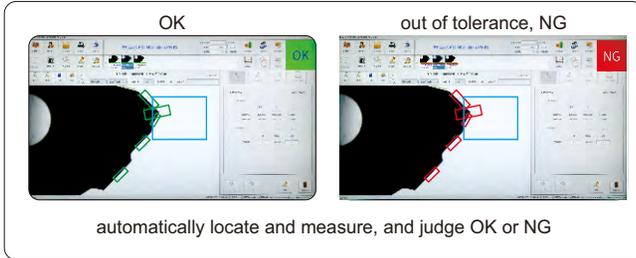
1X camera adapter	ISM-DL-CA1X
2X auxiliary objective	ISM-DL-OB2X
LED light	page 431~432
Auxiliary objective	page 433

To be continued

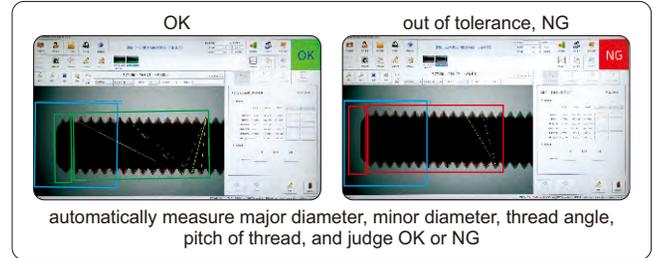
Continued from previous page

■ APPLICATION EXAMPLES:

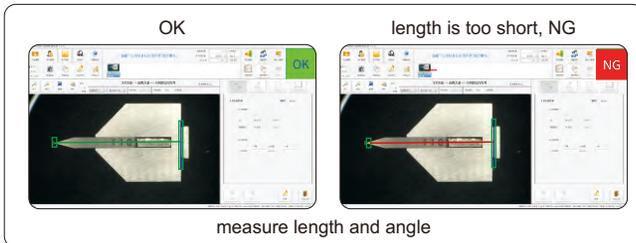
dimension measurement



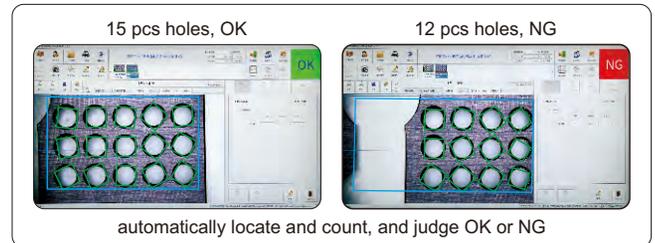
thread measurement



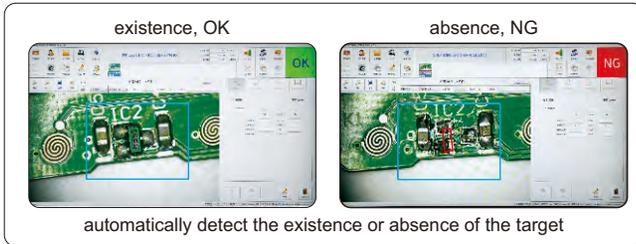
cutting tools measurement



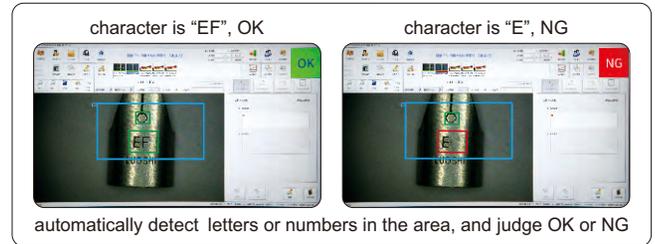
counting



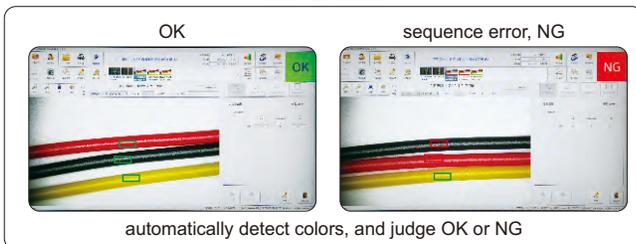
existence or absence



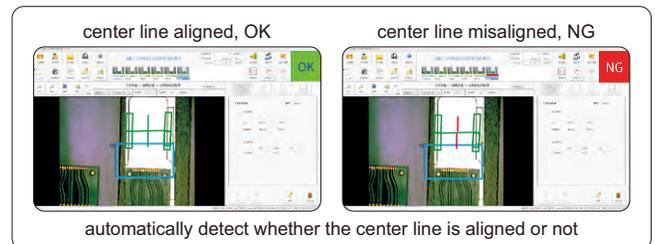
character recognition



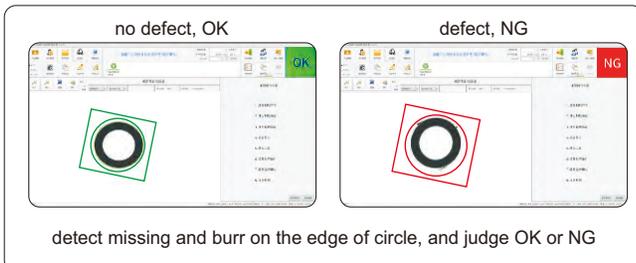
color detection



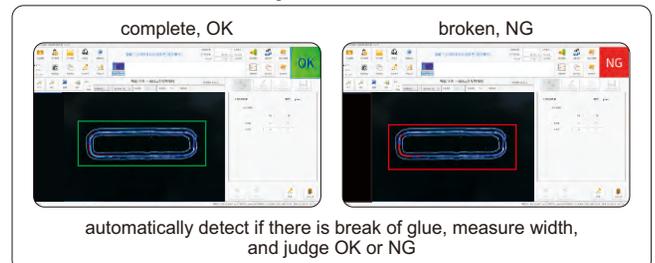
location detection



surface defect detection



glue detection

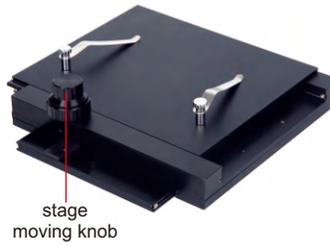


## X-Y METAL STAGE CODE ISM-DL-STAGE1

- Suitable for digital microscopes 5301-D400, 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, 5315-S710

### SPECIFICATION

X-Y travel range	100×86mm
Dimension (L×W×H)	180×180×50mm
Weight	2.3kg



## LED RING LIGHT CODE ISM-LED-9245R

RED, GREEN, BLUE, INFRARED AND  
UV LIGHT CAN BE CUSTOMIZED

ATTENTION: MUST BE USED WITH LIGHT  
BRACKET AND LIGHT CONTROLLER

- Diffuser plate is included to reduce the reflective effect on workpieces
- Suitable for digital microscopes 5301-D400, 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710

### SPECIFICATION

Light color	white
Power supply	24V
Power	5.5W
Angle	45°
Outside/inside diameter	92/52mm



## LED SQUARE LIGHT CODE ISM-LED-100L4

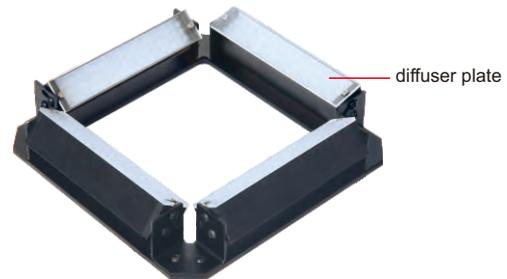
RED, GREEN, BLUE, INFRARED AND  
UV LIGHT CAN BE CUSTOMIZED

ATTENTION: MUST BE USED WITH LIGHT  
BRACKET AND LIGHT CONTROLLER

- Diffuser plate is included to reduce the reflective effect on workpieces
- Angle and brightness can be adjusted independently
- Suitable for digital microscopes 5301-D400, 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710

### SPECIFICATION

Light color	white
Power supply	24V
Power	10.36W
Angle	0~90°
Dimension (L×W×H)	154×154×30mm

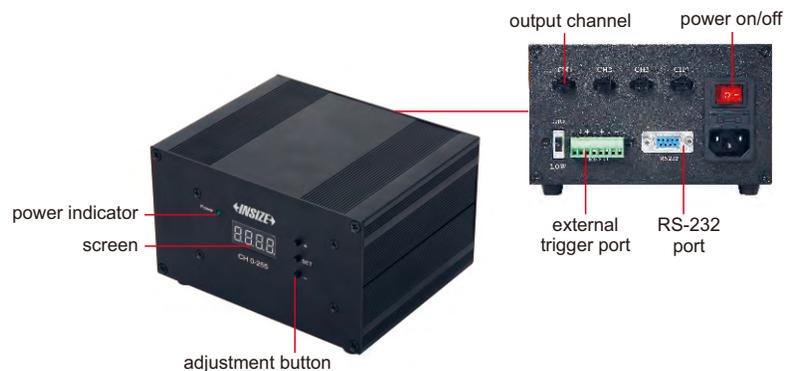


## DIGITAL LIGHT CONTROLLER CODE ISM-LED-CTRL

- 256 (0-255) steps of brightness adjustment
- With power off memory function and short circuit protection function
- Suitable for ISM-LED-100L4, ISM-LED-9245R

### SPECIFICATION

Power supply	100~240V, 50/60HZ
Output power (rated)	60W
Output voltage (rated)	24V
Dimension (L×W×H)	145×118×83mm



## BRACKET FOR LIGHTS CODE ISM-LED-BRACKET



L-shape metal

- 4 pcs L-shape bars are included, multiple combinations can be realized
- Suitable for ISM-LED-100L4, ISM-LED-9245R

application



### SPECIFICATION

Size (L×W×H)	260×300×20mm
Weight	0.7kg

## DUAL HEAD LED LIGHT CODE ISM-ZS-LED

- Adjustable illumination
- For digital and stereo microscopes

### SPECIFICATION

Power	3W
Power supply	100~240V
Working	10000h
Illumination	10000lux



application



## LED AUXILIARY LIGHT CODE ISM-DL-LED

- Suitable for digital microscopes  
5301-D400, 5303-AF103, 5310-DL401,  
ISM-DL300, ISM-DL301, ISM-DL302,  
ISM-DL400, ISM-DL510, 5315-S710

### SPECIFICATION

Power	8W
Diameter of mounting hole	Ø25mm
Power supply	10~12V, 0~300mA



brightness adjustment knob



illumination direction and brightness are adjustable

## COAXIAL LIGHT CODE ISM-DL-COAXIAL

- Suitable for digital microscopes  
5303-AF103, 5310-DL401,  
ISM-DL300, ISM-DL301,  
ISM-DL302, ISM-DL400,  
ISM-DL510, 5315-S710

### SPECIFICATION

Power	1W
Power supply	0~3.4V, 0~400mA



brightness adjustment knob



for smooth surfaces and small holes, brightness is adjustable

## AUXILIARY OBJECTIVES



**0.3X auxiliary objective**  
ISM-DL-OB03X



**0.5X auxiliary objective**  
ISM-DL-OB05X



**0.75X auxiliary objective**  
ISM-DL-OB075X



**1X auxiliary objective**  
ISM-DL-OB1X



**1.5X auxiliary objective**  
ISM-DL-OB1D5X



**2X auxiliary objective**  
ISM-DL-OB2X

- Suitable for digital microscopes 5303-AF103, 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510, 5315-S710

### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (5303-AF103, 5315-S710)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X (optional)	Magnification	6~37X	12~74X
	Focus distance	120~310mm	120~310mm
	View field	52×30~8×5mm	26×15~4×2.5mm
0.5X (optional)	Magnification	10~61X	20~123X
	Focus distance	78~230mm	78~230mm
	View field	37×20~5×3mm	18×10~2.5×1.5mm
0.75X (optional)	Magnification	15~92X	30~184X
	Focus distance	60~125mm	60~125mm
	View field	21×13~3.4×2mm	10×6.5~1.7×1mm
1X (included)	Magnification	20~123X	40~246X
	Focus distance	48~84mm	48~84mm
	View field	15×8~2.5×1.5mm	7.5×4~1.3×0.7mm
1.5X (optional)	Magnification	30~184X	60~368X
	Focus distance	36~63mm	36~63mm
	View field	10×6~1.7×1mm	5×3~0.9×0.5mm
2X (optional)	Magnification	40~246X	80~492X
	Focus distance	24~42mm	24~42mm
	View field	7.5×4~1.3×0.7mm	3.8×2~0.7×0.4mm

### MAGNIFICATION, FOCUS DISTANCE AND VIEW FIELD (5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510)

Auxiliary objective	Specification	Camera adapter	
		0.5X (included)	1X (optional)
0.3X* (optional)	Magnification	5~34X	10~68X
	Focus distance	287±2mm	287±2mm
	View field	42×26~6.5×4.5mm	21×13~3.3×2.3mm
0.5X* (optional)	Magnification	9~56X	18~112X
	Focus distance	166±2mm	166±2mm
	View field	25.6×16.8~5×3.5mm	12.8×8.4~2×1.3mm
0.75X* (optional)	Magnification	13~84X	26~168X
	Focus distance	105±2mm	105±2mm
	View field	17×10.5~2.6×1.7mm	8.5×5.3~1.3×0.9mm
1X (included)	Magnification	15~100X	30~200X
	Focus distance	70±2mm	70±2mm
	View field	16×11~2.5×1.6mm	7.8×5.3~1.2×0.8mm
1.5X (optional)	Magnification	26~168X	52~336X
	Focus distance	42±2mm	42±2mm
	View field	8.5×5.2~1.3×0.9mm	4.3×2.6~0.7×0.5mm
2X (optional)	Magnification	30~200X	60~400X
	Focus distance	29±2mm	29±2mm
	View field	7.8×5.3~1.2×0.8mm	3.8×2.7~0.6×0.4mm

\*For auxiliary objectives 0.3X, 0.5X, 0.75X, use contour illumination of 5310-DL401, ISM-DL300, ISM-DL301, ISM-DL302, ISM-DL400, ISM-DL510 or LED light

MEASUREMENT

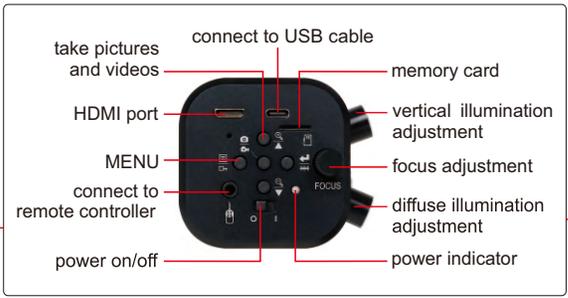
TAKE PICTURES AND VIDEOS



DIGITAL MICROSCOPES



5309-DM50

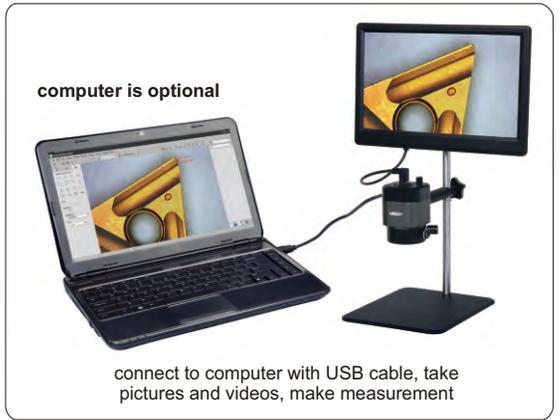


5309-DM51

- Independent control of vertical illumination and diffuse illumination
- Back focus adjustment extends working distance
- Take pictures and videos, save to memory card

SPECIFICATION

Code	5309-DM50	5309-DM51
Arm type	straight	universal
Sensor	1/2.8" CMOS	
Pixel	2M	
Resolution	1920×1080	
Exposure	real-time auto, single auto, manual adjustment	
White balance	real-time auto, single auto, manual RGB adjustment	
Record format	pictures: JPG videos: MOV	
Record media	memory card	
Working distance	45~169mm	42~195mm
Magnification	9~41X	7.6~49.4X
View field	7.6×4~38.5×21.7mm	7×4~45×25mm
Power supply	DC12V 3A	



MAGNIFICATION, VIEW FIELD AND MEASURING ACCURACY (use computers, optional)

Image magnification	View field	Measuring accuracy
9.0X	38.5×21.7mm	±0.02mm
13.0X	26.6×15.0mm	±0.02mm
17.0X	20.5×11.7mm	±0.02mm
22.0X	16.0×9.0mm	±0.02mm
28.5X	11.9×6.3mm	±0.02mm
34.0X	9.8×5.5mm	±0.01mm
41.0X	7.6×4.1mm	±0.01mm

STANDARD DELIVERY

Main unit	1 pc
Memory card and holder	1 pc
Plastic calibration rule (graduation 1mm)	1 pc
White/black plate	1 pc
Remote controller	1 pc
USB cable	1 pc
Measuring software	1 pc
Power adapter	1 pc

To be continued

Continued from previous page



remote controller  
(included)



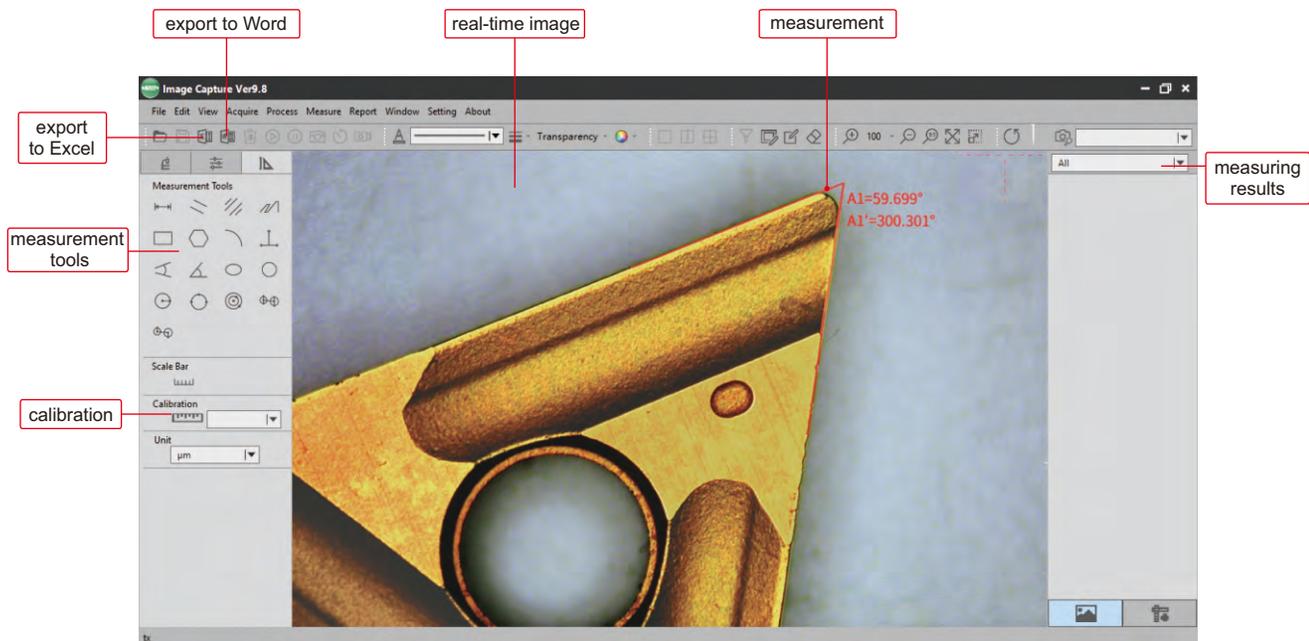
white/black plate  
(included)



plastic calibration rule  
(graduation 1mm, included)

## SOFTWARE FOR COMPUTER

- **Language:** Chinese (Simplified), English, French, Chinese (Traditional), Portuguese, Korean, Japanese
- **Operation system:** Windows 7/8/8.1/10 (64bit)



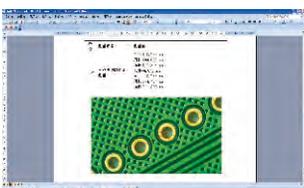
18

### Measurement tools:

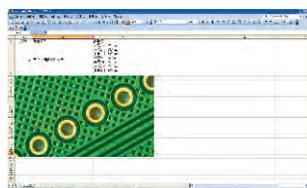
- |  |                                     |  |                                       |
|--|-------------------------------------|--|---------------------------------------|
| straight line distance measurement     | parallel lines distance measurement | centre distance between parallel lines measurement | polyline line measurement             |
| rectangular measurement                | polygon measurement                 | arc measurement                                    | three-vertical-line measurement       |
| four-point perspective measurement     | angle measurement                   | ellipse measurement                                | round measurement                     |
| circle measurement by radius           | circle measurement by 3-point       | torus measurement                                  | center distance measurement by radius |
| center distance measurement by 3-point |                                     |  |                                       |

### Data export to Word or Excel:

export to word



export to excel

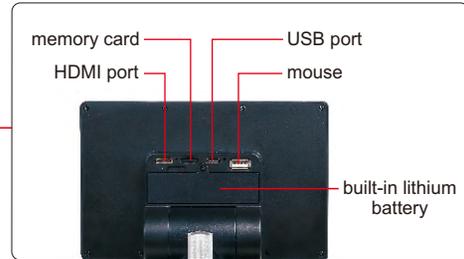
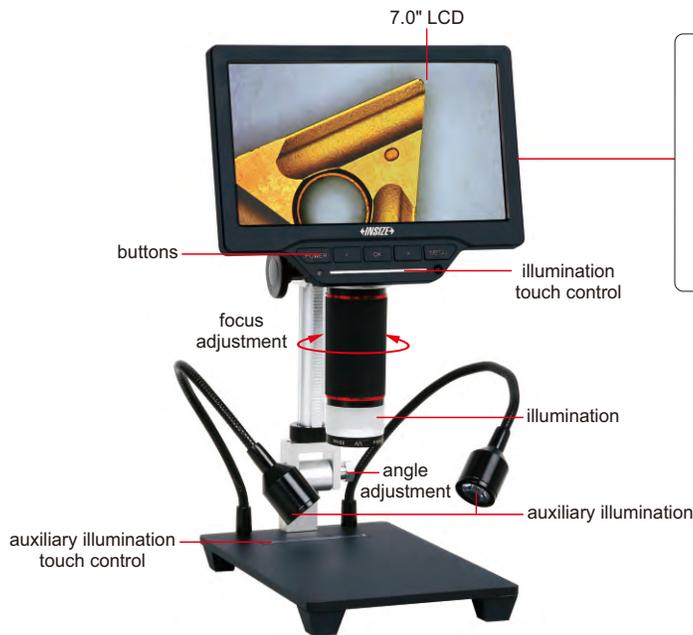


TAKE PICTURES AND VIDEOS

BUILT-IN LITHIUM BATTERY



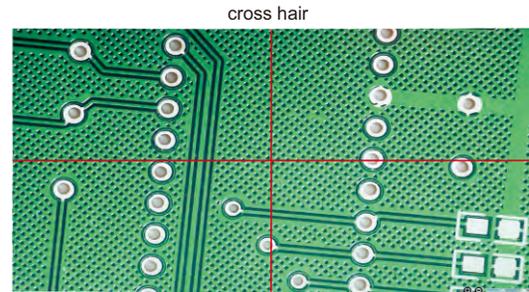
## MINI DIGITAL MICROSCOPE (ECONOMIC TYPE) CODE 5311-M710



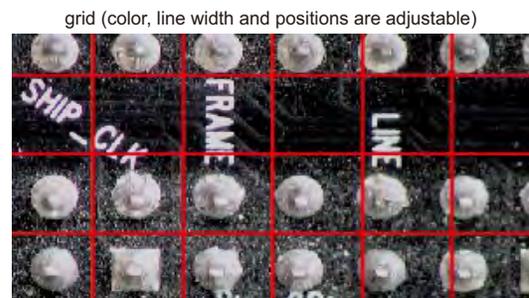
8G memory card and holder (included)



infrared ray remote controller (included)



cross hair



grid (color, line width and positions are adjustable)

### SPECIFICATION

Display resolution	1024×600
Sensor	1/3" CMOS
Sensor resolution	1280×960
Single pixel size	2µm×2µm
Frame rate	60fps/30fps
Magnification	1X~16X
White balance	auto/manual (10 levels RGB)/calibration
Exposure control	AE lock/exposure compensation (10 levels)
Image control	contrast/saturation/sharpness
Record media	memory card
Output	HDMI
Power supply	built-in lithium battery/power adapter
Dimension (L×W×H)	174×200×350mm
Weight	1.5kg

### STANDARD DELIVERY

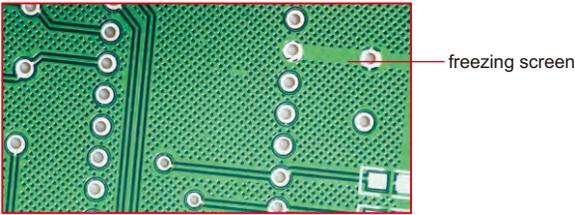
Main unit	1 pc
USB cable	1 pc
HDMI cable	1 pc
IR remote controller	1 pc
8G memory card and holder	1 pc
Plastic calibration rule	1 pc
Power adapter	1 pc

To be continued

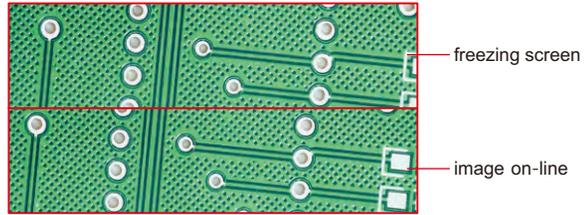
Continued from previous page

▪ **Screen freezing:**

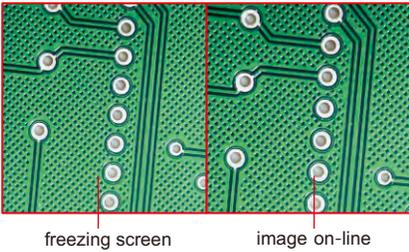
full screen



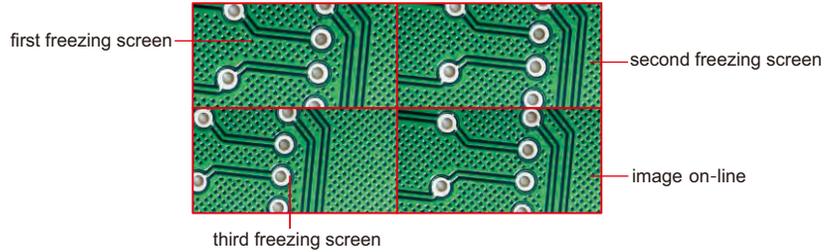
up-down split screen



left-right split screen



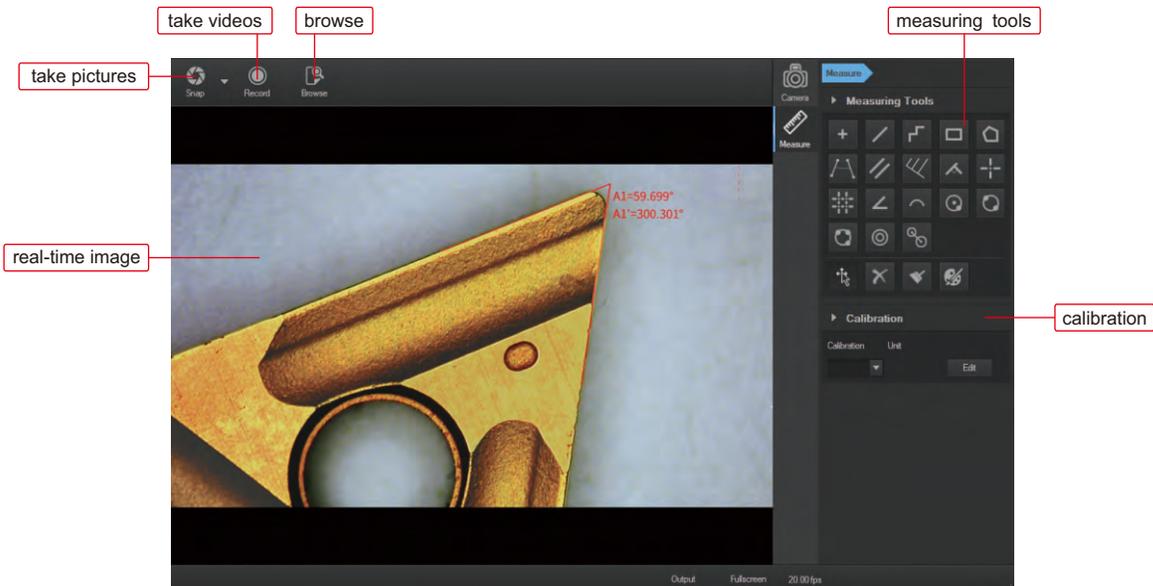
1/4 split screen



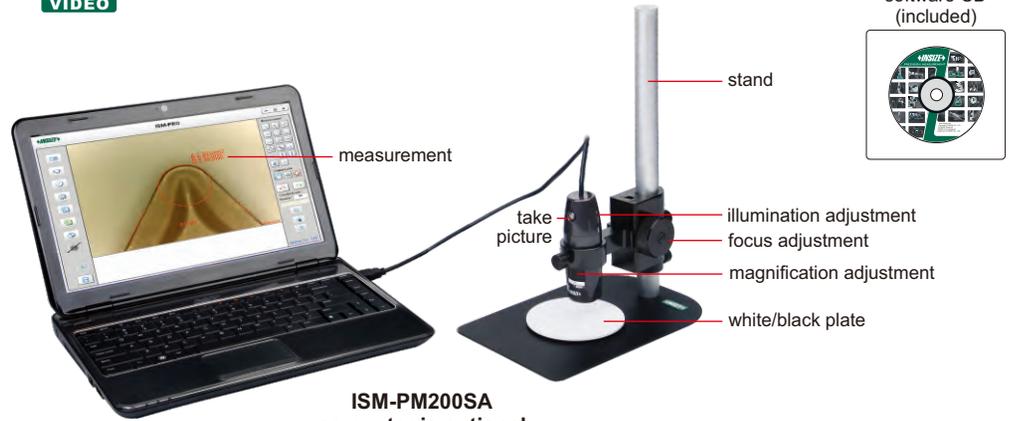
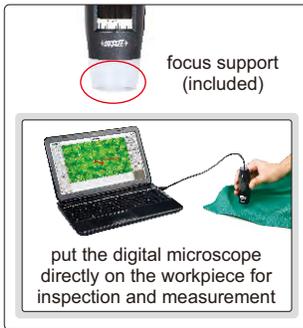
**SOFTWARE FOR COMPUTER (included)**

- **Language:** Chinese (Simplified), English
- **Operation system:** Windows 7/8/8.1/10 (64bit)
- **Port:** USB2.0 or above
- **Measuring accuracy:** 0.02mm

- |                              |                                      |                                 |   |
|------------------------------|--------------------------------------|---------------------------------|---|
| point counting               | straight line length                 | continuous line length          | area of a rectangle                           |
| area of a polygon            | distance between 2 lines             | distance between parallel lines | distance between line and first parallel line |
| point-line distance          | cross line                           | double cross line               | angle   |
| arc                          | radius of a circle                   | radius of a 2-point circle      | radius of a 3-point circle                    |
| center distance of 2 circles | center distance of concentric circle |                                 |   |



## DIGITAL MEASURING MICROSCOPES



- Can take pictures and videos
- Supplied with software
- Calibration rules (graduation 0.1 and 1mm) are included
- With focus support

### SPECIFICATION

Code	ISM-PM200SA	ISM-PM200SB
Magnification	10X~200X	10X~200X
Stand	standard	universal
Pixel	2M (resolution: 1600×1200)	
Illumination	built-in adjustable LED	
Power supply	USB 2.0 cable (voltage required: 5±0.1V)	

### OPTIONAL ACCESSORY

Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

### SOFTWARE

- Language:** English, Japanese, Korean, German, Turkey, Portuguese, Chinese
- Operation system:** Windows 7/8/XP/Vista
- Measuring tools:**

- |   |  |
|---|--|
| measure length of line or distance between two points | measure radius, length and angle of arc  |
| measure area of rectangle                             | add number with circle                   |
| measure distance between two circles                  | measure length of continuous line        |
| measure distance between two parallel lines           | measure angle with three points          |
| measure angle with two lines                          | measure radius, girth and area of circle |
| measure distance between point and line               | add text                                 |

#### Edge detection measurement tools:

- detect two parallel lines automatically and calculate distance
- detect circle automatically, and calculate radius, girth and area
- detect arc automatically, and calculate radius, angle and arc length
- detect two lines automatically, and calculate angle
- detect line automatically, and calculate length

universal stand (included in ISM-PM200SB)

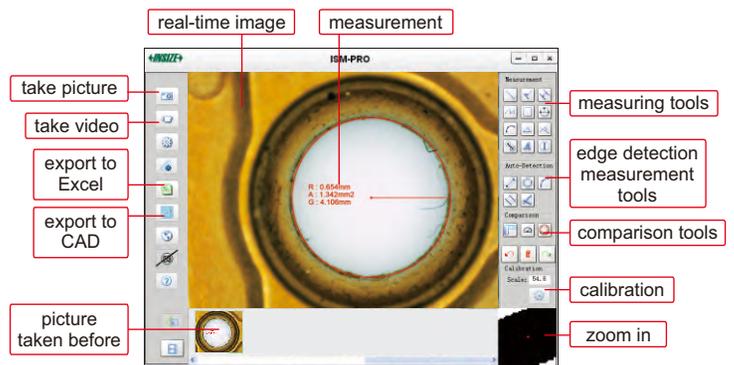


filter (optional)



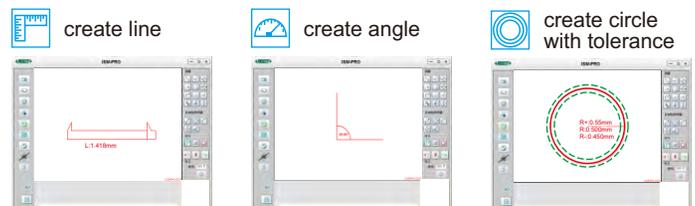
### MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	21mm	8.1×6.4mm	30µm
100X	13mm	3.9×3.1mm	15µm
150X	16mm	2.6×2.1mm	10µm
200X	19mm	1.8×1.5mm	8µm



#### Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces



#### Data export to CAD or Excel:



# WiFi DIGITAL MEASURING MICROSCOPE CODE ISM-WF200



- Maximum working distance is 5m under WiFi mode
- Can be connected to multiple iPads, Android devices or computers together under WiFi mode
- Take pictures and videos
- Supplied with software



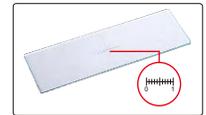
stand (code ISM-PM-STAND, optional)



software CD (included)



plastic calibration rule (graduation 1mm, included)



glass calibration rule (graduation 0.1mm, included)

## SPECIFICATION

Magnification	10X~200X
Pixel	1.3M (resolution: 1280×1024)
Illumination	built-in adjustable LED
Power supply	built-in rechargeable battery



## STANDARD DELIVERY

Microscope	1 pc
Focus support ring for 80X/150X	1 pc
Focus support ring for 60X/200X	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
Plastic calibration rule (graduation 1mm)	1 pc
Software and USB cable	1 pc
AC/DC adapter	1 pc



## OPTIONAL ACCESSORY

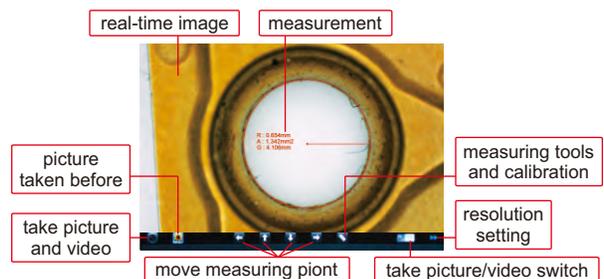
Stand	ISM-PM-STAND
Green filter	ISM-PM-GREEN
Yellow filter	ISM-PM-YELLOW
Blue filter	ISM-PM-BLUE

## MAGNIFICATION, FOCUS DISTANCE, VIEW FIELD AND ACCURACY

Magnification	Focus distance	View field	Accuracy
50X	21mm	8.1×6.4mm	30µm
100X	13mm	3.9×3.1mm	15µm
150X	16mm	2.6×2.1mm	10µm
200X	19mm	1.8×1.5mm	8µm

### 1 Software ISM-PAD (for iPad by WiFi)

- measure length of line or distance between two points
- measure radius, girth and area of circle with three points
- measure angle

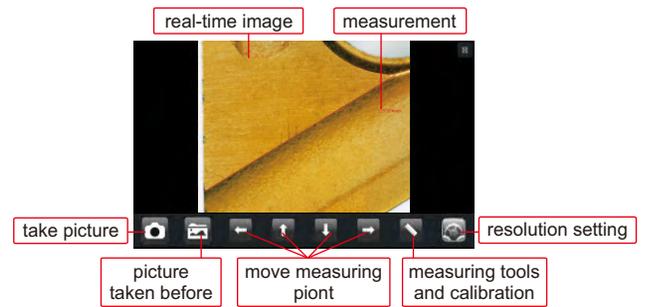


To be continued

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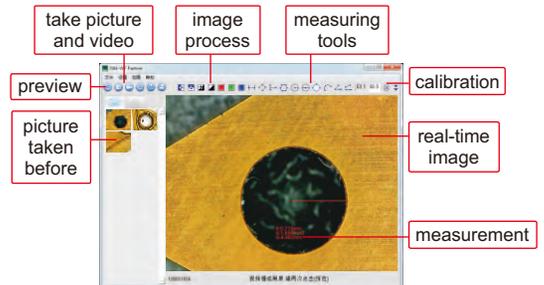
## 2 Software ISM-APK (for Android devices by WiFi)

-  measure length of line or distance between two points
-  measure radius, girth and area of circle with three points
-  measure angle



## 3 Software ISM-WF Partner (for computer by WiFi)

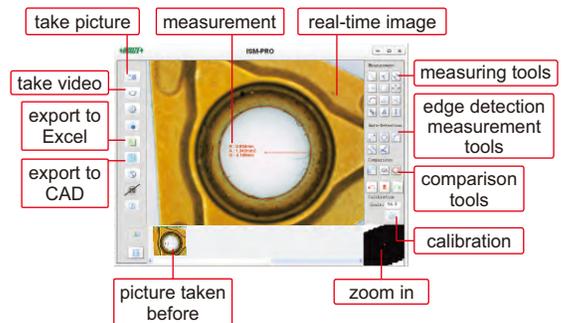
- |   |  |
|---|--|
|  measure length of line or distance between two points       |  measure angle with two lines                             |
|  measure area of polygon                                     |  measure radius, girth and area of circle with two points |
|  measure angle with three points                             |  measure distance between point and line                  |
|  measure radius, girth and area of circle with center point  |  measure radius, length and angle of arc                  |
|  measure length of continuous line                           |  measure area of rectangle                                |
|  measure radius, girth and area of circle with three points |  |



## 4 Software ISM-PRO (for computer by USB cable)

### Measuring tools:

- |   |   |
|---|---|
|  measure length of line or distance between two points |  measure distance between point and line |
|  measure length of continuous line                     |  measure area of rectangle               |
|  measure radius, length and angle of arc               |  measure angle with two lines            |
|  measure distance between two circles                  |  add number with circle                  |
|  measure distance between two parallel lines           |  measure angle with three points         |
|  measure radius, girth and area of circle              |  add text                                |

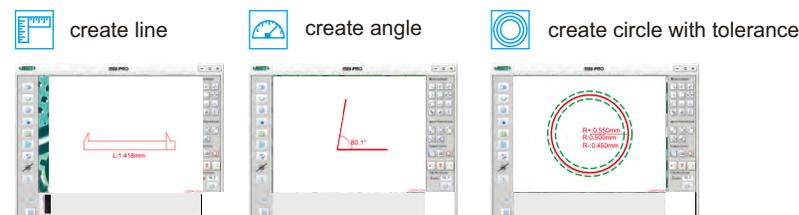


### Edge detection measurement tools:

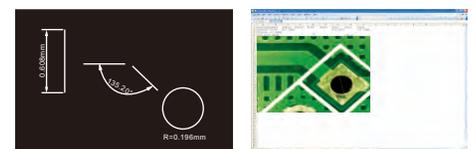
- |  |  |
|--|--|
|  detect line automatically, and calculate length                      |  detect two lines automatically, and calculate angle            |
|  detect arc automatically, and calculate radius, angle and arc length |  detect two parallel lines automatically and calculate distance |
|  detect circle automatically, and calculate radius, girth and area    |  |

### Comparison tools:

Create line, angle or circle with desired size, to compare with workpieces



### Data export to CAD or Excel:



## INDUSTRIAL MICROSCOPES



5101-M500

- Infinite optical system, polarization observation, dark field observation
- Kohler illumination system provides uniform illumination field
- Objective 50X is spring type

### SPECIFICATION

Code	5101-M500 (bright field objectives)				5101-M500BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	20X	50X	5X	10X	20X	50X
Working distance	26.1mm	20.2mm	8.80mm	3.68mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.12	0.25	0.40	0.70	0.12	0.25	0.40	0.70
Magnification	50X~500X							
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 160×140mm							
	travel: 35x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	415×345×380mm							
Weight	14kg							

### STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Bright & dark field objective (for 5101-M500BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5101-M500)	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

\* Digital camera must be used with camera adapter

## INDUSTRIAL INSPECTION MICROSCOPE (LARGE STAGE) CODE 5104-M700



- For observation and inspection of large IC and chip in IT industry

### SPECIFICATION

<b>Magnification</b>	40X~400X			
<b>Eyepiece (wide field)</b>	10X (view field: Ø22mm)			
<b>Objective (plan achromatic)</b>	4X	10X	20X	40X
<b>Numerical aperture</b>	0.10	0.25	0.40	0.60
<b>Working distance</b>	17.8mm	10mm	5.8mm	2.9mm
<b>Stage</b>	double layer, size: 300×268mm, travel: 250×200mm			
<b>Kohler illumination</b>	6V/20W halogen lamp, brightness is adjustable built-in green, blue, yellow and frosted glasses			
<b>Pupil distance</b>	48~75mm			
<b>Diopter adjustment</b>	±5 diopter (two eyepieces)			
<b>Power supply</b>	220V, 50/60Hz			
<b>Dimension (L×W×H)</b>	647×268×376mm			
<b>Weight</b>	12kg			

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Camera connector</b>	1 pc
<b>Anti-dust cover</b>	1 pc

### OPTIONAL ACCESSORY

<b>Bright field objective</b>	<b>2.5X plan achromatic objective (focus distance: 11.7mm)</b>	<b>5104-M700-OB2.5X</b>
	<b>5X plan achromatic objective (focus distance: 15.5mm)</b>	<b>5104-M700-OB5X</b>
	<b>50X plan achromatic objective (focus distance: 0.32mm)</b>	<b>5104-M700-OB50X</b>
	<b>100X plan achromatic objective (focus distance: 2mm)</b>	<b>5104-M700-OB100X</b>
<b>Polarizer and analyzer</b>		<b>5104-M700-AP</b>
<b>Digital camera</b>		<b>ISM-CM20, ISM-CM63, ISM-ZS70-S</b>
<b>Camera adapter 0.5X *</b>		<b>ISM-MAS-ADAPTER</b>

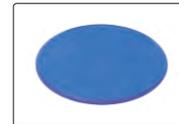
\*Digital camera must be used with camera adapter

## METALLURGICAL MICROSCOPES



5102-M600

- Infinite optical system, observation in reflected or transmitted illumination, polarizing observation
- Kohler illumination system provides uniform illumination field
- Objectives 40X, 60X are spring type



blue filter (included)



frosted glass filter (included)

### SPECIFICATION

Code	5102-M600 (bright field objectives)				5102-M600BD (bright & dark field objectives)			
Illumination	6V/30W (transmitted)		6V/30W (reflected)		12V/30W (transmitted)		12V/50W (reflected)	
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	5X	10X	40X	60X	5X	10X	20X	40X
Working distance	26.1mm	20.2mm	3.98mm	3.18mm	9.70mm	9.30mm	7.20mm	3.00mm
Numerical aperture	0.12	0.25	0.60	0.70	0.12	0.25	0.40	0.70
Magnification	50X~600X				50X~400X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 210×140mm							
	travel: 75×50mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	456×260×498mm							
Weight	11kg							

### STANDARD DELIVERY

Main unit	1 pc
Anti-dust cover	1 pc
Filter (blue/frosted glass)	1 pc of each

### OPTIONAL ACCESSORY

Bright & dark field objective (for 5102-M600BD)	PL50X	5101-M-BD50X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5101-M-EPD10X
Bright field objective (for 5102-M600)	PL20X	5101-M-OB20X
	PL50X	5101-M-OB50X
	PL80X	5101-M-OB80X
	PL100X	5101-M-OB100X
Digital camera		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter *		5101-M-ADAPTER

\* Digital camera must be used with camera adapter

## METALLURGICAL MICROSCOPES



5103-M1000

- Infinite optical system, polarization observation
- Kohler illumination system provides uniform illumination field
- Objectives 50X, 100X are spring type

### SPECIFICATION

Code	5103-M1000 (bright field objectives)				5103-M1000BD (bright & dark field objectives)			
Illumination	6V/30W halogen lamp, brightness is adjustable				12V/50W halogen lamp, brightness is adjustable			
Objective (infinite plan achromatic)	bright field objectives				bright & dark field objectives			
	10X	20X	50X	100X	5X	10X	20X	50X
Working distance	20.2mm	8.80mm	3.68mm	0.40mm	9.70mm	9.30mm	7.23mm	2.50mm
Numerical aperture	0.25	0.40	0.70	0.85	0.12	0.25	0.40	0.70
Magnification	100X~1000X				50X~500X			
Eyepiece (wide field)	10X (view field: Ø22mm)							
Stage	double layer							
	size: 242×200mm							
	travel: 30x30mm							
Pupil distance	53~75mm							
Diopter adjustment	±5 diopter (one eyepiece)							
Power supply	220V, 50/60Hz							
Dimension (L×W×H)	614×250×394mm							
Weight	13kg							

### STANDARD DELIVERY

Main unit	1 pc
Polarizer and analyzer	1 pc of each
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Bright & dark field objective (for 5103-M1000BD)	PL40X	5101-M-BD40X
	PL60X	5101-M-BD60X
	PL80X	5101-M-BD80X
	PL100X	5101-M-BD100X
10X dividing eyepiece (0.1mm/div.)		5103-M-EPD10X
Bright field objective (for 5103-M1000)	PL5X	5101-M-OB5X
	PL40X	5101-M-OB40X
	PL60X	5101-M-OB60X
	PL80X	5101-M-OB80X
Digital camera		ISM-CM63
Camera adapter *		5101-M-ADAPTER

\* Digital camera must be used with camera adapter

## ZOOM STEREO MICROSCOPE (PROFESSIONAL TYPE) CODE 5107-S70T



LED ring light (optional)



- Greenough optical system, clear observation, real color
- High working distance is convenient for operation
- Excellent flat image and large depth of field, make observation comfortable
- 6.7:1 large zoom ratio, allow quick observation adjustment

### SPECIFICATION

<b>Optical tube</b>	trinocular
<b>Eyepiece (wide field)</b>	10X (view field: Ø22mm)
<b>Objective</b>	0.67X~4.5X (zoom)
<b>Observation tube</b>	45° trinocular tube inclination angle, built-in 0.5X adapter
<b>Zoom ratio</b>	6.7:1
<b>Pupil distance</b>	50~75mm
<b>Diopter adjustment</b>	-8~+5 diopter (both eyepieces)
<b>Working distance of objective</b>	110mm
<b>Max. workpiece height</b>	106mm
<b>Illumination</b>	adjustable LED light
<b>Power supply</b>	110/220V
<b>Dimension (L×W×H)</b>	330×300×368mm
<b>Weight</b>	3.5kg



frosted glass filter (included)



white/black plate (included)

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>10X eyepiece</b>	2 pcs
<b>Ø100mm glass plate</b>	1 pc
<b>Ø100mm white/black plate</b>	1 pc
<b>Anti-dust cover</b>	1 pc

### OPTIONAL ACCESSORY

<b>Auxiliary objective</b>	<b>0.5X</b>	<b>5107-S70T-OB05X</b>
	<b>1.5X</b>	<b>5107-S70T-OB15X</b>
	<b>2X</b>	<b>5107-S70T-OB20X</b>
<b>Eyepiece</b>	<b>15X (view field: Ø16mm)</b>	<b>5107-S70T-EP15X</b>
	<b>20X (view field: Ø12.5mm)</b>	<b>5107-S70T-EP20X</b>
<b>LED ring light</b>		<b>ISM-ZS-RL</b>
<b>Digital camera</b>		<b>ISM-CM20, ISM-CM63, ISM-ZS70-S</b>

PARALLEL LIGHT PATH: REDUCE FATIGUE,  
ACCESSORIES CAN BE ADDED INTO LIGHT PATH

## PARALLEL LIGHT STEREO MICROSCOPE CODE ISM-ZS200



coaxial illumination (optional)



- Infinity parallel optical system and 20° inclined optical tube reduce fatigue
- Coaxial illumination is optional for deep holes which cannot be observed by ring light
- Aperture diaphragm is optional for large depth of field and high quality image

optical path splitter (optional)



iris diaphragm (optional)



### SPECIFICATION

Optical tube	binocular (20° inclined)
Eyepiece (wide field)	10X (view field: Ø22mm)
Objective	0.8X~8X (zoom)
Zoom ratio	1:10
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (both eyepieces)
Working distance of objective	78mm
Max. workpiece height	72mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	240×280×440mm
Weight	4.3kg

### STANDARD DELIVERY

Main unit	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Objective	0.5X achromatic objective (focus distance: 186mm)	ISM-ZS200-OB05X *
	2X plan achromatic objective (focus distance: 32.5mm)	ISM-ZS200-OB2X
	0.5X plan apochromatic objective (focus distance: 126mm)	ISM-ZS200-APO05X *
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS200-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS200-EP20X
	WF30X (view field: Ø20mm)	ISM-ZS200-EP30X
Sleeve for objective		ISM-ZS30-ADAPTER
Iris diaphragm		ISM-ZS200-IRD
Optical path splitter		ISM-ZS200-OBS
Coaxial illumination		ISM-ZS200-COAXIAL
Digital camera **		ISM-CM20, ISM-CM63

\* 0.5X achromatic objective must be used with sleeve ISM-ZS30-ADAPTER

\*\* Digital camera must be used with optical path splitter

## ZOOM STEREO MICROSCOPES (ADVANCED TYPE)

LARGE ZOOM RATIO



ISM-ZS100T

application  
(code: **ISM-ZS100T**)

connect to  
digital camera



LED ring light (optional)

### SPECIFICATION

Code	ISM-ZS100	ISM-ZS100T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø23mm)	
Objective	0.6X~5X (zoom)	
Zoom ratio	1: 8.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60HZ	
Dimension (L×W×H)	260×310×490mm	
Weight	4.9kg	

### STANDARD DELIVERY

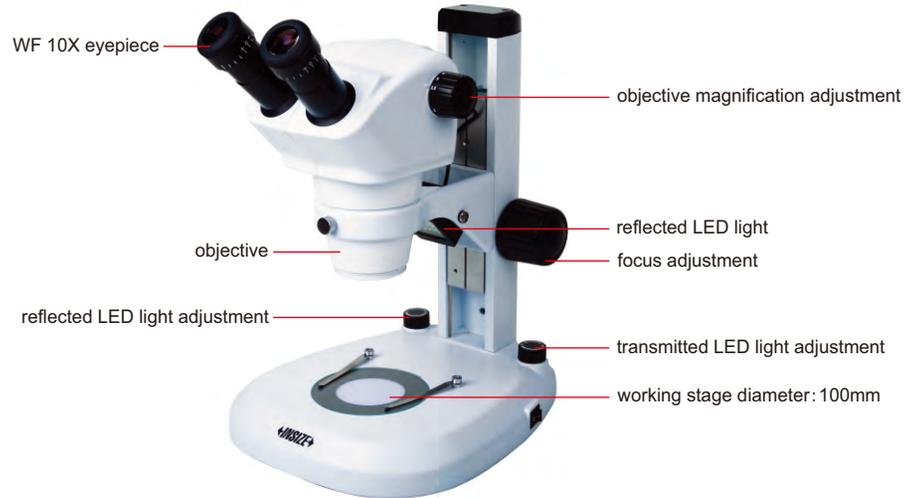
Main unit	1 pc
Digital camera adapter 0.55X for ISM-ZS100T	1 pc
WF10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Auxiliary objective	0.5X (focus distance: 220mm)	ISM-ZS100-OB05X *
	0.7X (focus distance: 125mm)	ISM-ZS100-OB07X
	2X (focus distance: 45mm)	ISM-ZS100-OB2X
Eyepiece	WF15X (view field: Ø16mm)	ISM-ZS100-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS100-EP20X
	WF30X (view field: Ø8mm)	ISM-ZS100-EP30X
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
LED ring light		ISM-ZS-RL
Digital camera adapter 1X for ISM-ZS100T		ISM-ZS100-DA
Digital camera for ISM-ZS100T		ISM-CM20, ISM-CM63, ISM-ZS70-S

\*0.5X auxiliary objective must be used with sleeve ISM-ZS30-ADAPTER

## ZOOM STEREO MICROSCOPES (STANDARD TYPE)



LED ring light (optional)

ISM-ZS50

### SPECIFICATION

Code	ISM-ZS50	ISM-ZS50T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)	
Objective	0.8X~5X (zoom)	
Zoom ratio	1: 6.3	
Pupil distance	55~75mm (adjustable)	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	75mm	
Illumination	adjustable reflected and transmitted LED light	
Power supply	110/220V, 50/60HZ	
Dimension (L×W×H)	290×260×480mm	
Weight	4.9kg	

### STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø100mm glass plate	1 pc
Ø100mm white/black plate	1 pc
Anti-dust cover	1 pc

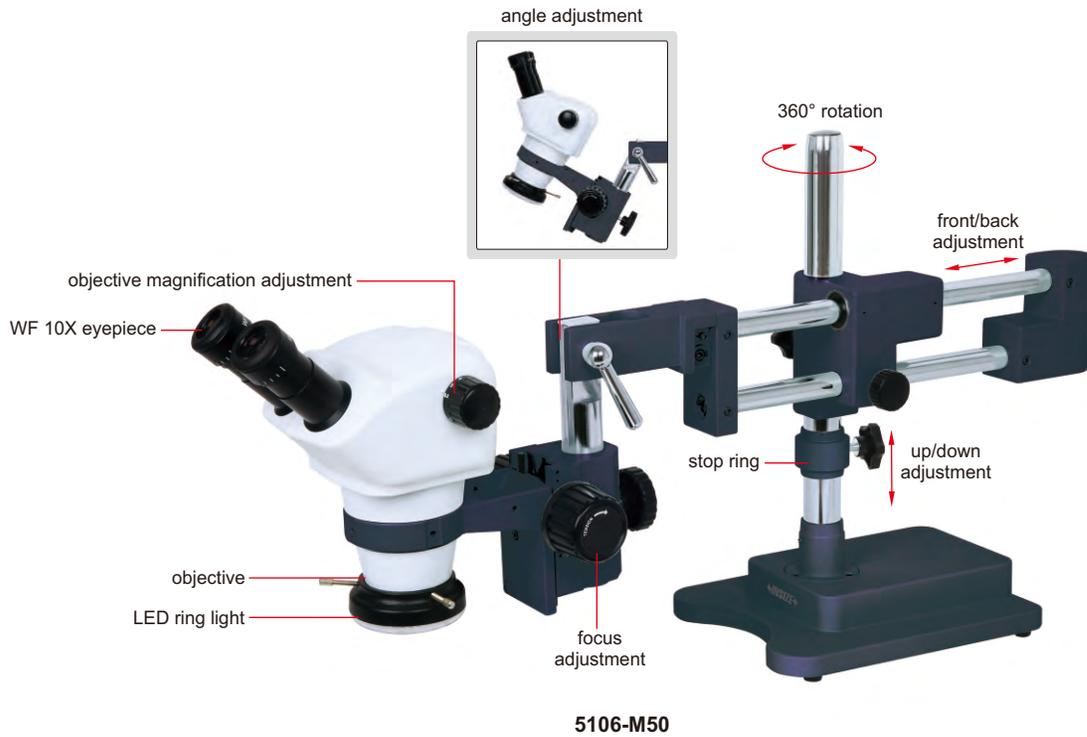
### OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X*
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera for ISM-ZS50T		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter 0.5X for ISM-ZS50T**		ISM-MAS-ADAPTER

\* 0.5X auxiliary objective must be used with ISM-ZS30-ADAPTER

\*\* Digital camera must be used with camera adapter 0.5X

## ZOOM STEREO MICROSCOPES (WITH UNIVERSAL STAND)



### SPECIFICATION

Code	5106-M50	5106-M50T
Optical tube	binocular	trinocular
Eyepiece (wide field)	10X (view field: Ø22mm)	
Objective	0.8X~5X (zoom)	
Zoom ratio	1:6.3	
Pupil distance	55~75mm	
Diopter adjustment	±5 diopter (two eyepieces)	
Working distance of objective	115mm	
Max. workpiece height	300mm	
Illumination	adjustable reflected LED ring light	
Power supply	power adapter	
Dimension (L×W×H)	790×230×430mm	
Weight	20kg	

### STANDARD DELIVERY

Main unit (with stand)	1 pc
WF10X eyepiece	2 pcs
LED ring light	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS50-OB05X *
	2X	ISM-ZS50-OB2X
Eyepiece	10X dividing eyepiece (0.1mm/div.)	ISM-ZS50-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera for 5106-M50T		ISM-CM20, ISM-CM63, ISM-ZS70-S
Camera adapter 0.5X for 5106-M50T **		ISM-MAS-ADAPTER

\* 0.5X auxiliary objective must be used with **ISM-ZS30-ADAPTER**

\*\* Digital camera must be used with camera adapter 0.5X

## ZOOM STEREO MICROSCOPE (BASIC TYPE) CODE ISM-ZS30



### SPECIFICATION

Optical tube	binocular
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	1X~4.5X (zoom)
Zoom ratio	1:4.5
Pupil distance	55~75mm (adjustable)
Diopter adjustment	±5 diopter (two eyepieces)
Working distance of objective	97mm
Max. workpiece height	60mm
Illumination	adjustable reflected and transmitted LED light
Power supply	110/220V, 50/60HZ
Dimension (L×W×H)	260×190×400mm
Weight	4.3kg



LED ring light (optional)

### STANDARD DELIVERY

Main unit	1 pc
WF 10X eyepiece	2 pcs
Ø95mm glass plate	1 pc
Ø95mm white/black plate	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Auxiliary objective	0.5X	ISM-ZS30-OB05X *
	0.63X	ISM-ZS30-OB06X *
	0.75X	ISM-ZS30-OB07X *
	2X	ISM-ZS30-OB2X
Eyepiece	10X dividing eyepiece (graduation 0.1mm/div.)	ISM-ZS30-EPD10X
	WF15X (view field: Ø16mm)	ISM-ZS50-EP15X
	WF20X (view field: Ø12mm)	ISM-ZS50-EP20X
LED ring light		ISM-ZS-RL
Sleeve for auxiliary objective		ISM-ZS30-ADAPTER
Digital camera		ISM-CM63
Camera adapter 0.75X **		ISM-AD-0D75

\*0.5X, 0.63X and 0.75X auxiliary objectives must be used with ISM-ZS30-ADAPTER

\*\*Digital camera must be used with camera adapter 0.75X

## LONG WORKING DISTANCE STEREO MICROSCOPE (LOW MAGNIFICATION) CODE 5305-ZS80

### SPECIFICATION

Magnification	8X
Eyepiece (wide field)	10X (view field: Ø20mm)
Objective	0.8X
Pupil distance	55~75mm
Diopter adjustment	±5 diopter (one eyepiece)
Working distance of objective	115mm
Max. workpiece height	100mm
Dimension (L×W×H)	280x160x370mm
Weight	3.7kg

### STANDARD DELIVERY

Main unit	1 pc
10X eyepieces	1 pair
0.8X objective	1 pc
Anti-dust cover	1 pc

### OPTIONAL ACCESSORY

Eyepiece	WF5X (view field: Ø20mm)	5305-ZS80-EP5X
	WF15X (view field: Ø15mm)	5305-ZS80-EP15X
	WF20X (view field: Ø10mm)	5305-ZS80-EP20X
LED ring light		ISM-ZS-RL



LED ring light (optional)

## POLARIZING MICROSCOPE CODE ISM-POL1000



- Widely used in geology, mineralogy, fossil fuel exploration
- Single polarization, orthogonal polarization or conoscopic observation are available



### SPECIFICATION

<b>Magnification</b>	40X~600X				
<b>Eyepiece</b>	10X (view field: Ø20mm)				
<b>Infinite strain free plan achromatic objective</b>	4X (transmitted/reflected)	10X (transmitted/reflected)	20X (transmitted)	40X (transmitted)	60X (transmitted)
<b>Working distance</b>	22.2mm	6.1mm	6.4mm	0.6mm	0.3mm
<b>Numerical aperture</b>	0.1	0.25	0.4	0.65	0.8
<b>Stage</b>	revolving round stage diameter: Ø160mm graduation: 1°, resolution: 6'				
<b>Pupil distance</b>	53~75mm				
<b>Diopter adjustment</b>	±5 diopter (one eyepiece)				
<b>Illumination</b>	12V/50W halogen lamp, brightness is adjustable (reflected illumination) 12V/20W halogen lamp, brightness is adjustable (transmitted illumination)				
<b>Power supply</b>	110/220V, 50/60HZ				
<b>Dimension (L×W×H)</b>	614×250×394mm				
<b>Weight</b>	13kg				

### STANDARD DELIVERY

<b>Main unit</b>	1 pc
<b>Micrometer</b>	1 pc
<b>Grid plate</b>	1 pc
<b>10X crossing eyepiece (view field: Ø20mm)</b>	1 pc
<b>10X dividing eyepiece (view field: Ø20mm, graduation 0.1mm)</b>	1 pc
<b>λ slip (first class red) and 1/4λ slip</b>	1 pc
<b>Quartz wedge</b>	1 pc

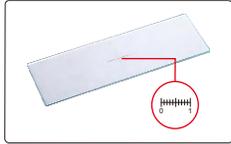
### OPTIONAL ACCESSORY

<b>Objective for reflected system</b>	PL20X	ISM-POL1000-OBR20X
	PL40X	ISM-POL1000-OBR40X
	PL60X	ISM-POL1000-OBR60X
	PL100X	ISM-POL1000-OBR100X
<b>Objective for transmitted system</b>	PL100X	ISM-POL1000-OBT100X
<b>Specimen presser</b>		ISM-POL1000-SP

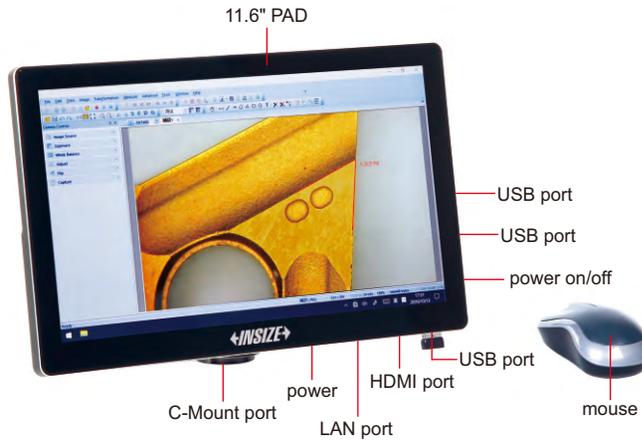
**ATTENTION: CAMERA CONNECTOR AND ADAPTER ARE NEEDED ACCORDING TO MICROSCOPES**

## DIGITAL CAMERA FOR MICROSCOPES (WITH PAD) CODE ISM-ZS70-S

**MEASUREMENT, TAKE PICTURES AND VIDEOS**



glass calibration rule (included, graduation 0.1mm)



- Windows 10 operation system
- Built-in software, can take pictures and videos, can measure
- Language: Chinese, English, French, Japanese, German, Polish, Arabic
- Automatic exposure, white balance, brightness, contrast ratio, saturation are adjustable
- Image process feature: zoom in/out, flip, mirror, stitching and so on
- Output to Excel or CSV file



software (included)



### Measuring tools

- measure line
- measure meander line
- arrow mark
- measure polygon
- calibration
- measure angle
- measure rectangle
- measure circle
- text mark
- show/hide scale

### SPECIFICATION

Sensor	1/2.3" CMOS
Pixel	16M
Resolution	800×600, 1600×1200, 1920×1080, 2048×1536, 2304×1728, 2592×1944, 4608×3456
Frame rate	30fps (1920×1080)
Output	HDMI, USB 3.0
Power supply	power adapter
Dimension (L×W×H)	280.3×177.4×12.5mm
Weight	0.9kg

### STANDARD DELIVERY

Main unit	1 pc
Mouse	1 pc
Glass calibration rule (graduation 0.1mm)	1 pc
AC/DC adapter	1 pc

## DIGITAL CAMERA FOR MICROSCOPES CODE ISM-CM63

ATTENTION: ADAPTERS ARE NEEDED  
ACCORDING TO MICROSCOPES



- To be used with computers
- Sony Exmor back-illuminated CMOS sensor
- USB3.0 transmission
- Automatic exposure, gain adjustment, white balance, chrominance adjustment, saturation adjustment, gamma correction, luminance adjustment, contrast adjustment



C-mount port

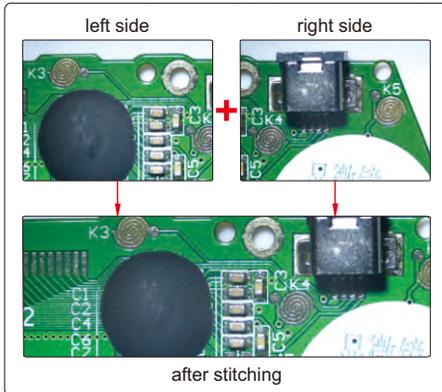
adapter 0.75X  
(optional)



application



automatic image stitching (expand field of view)



software (included)

**selectable resolution**

**histogram (quantify the distribution of color and brightness)**

**measurement items**

**real time gray calibration**

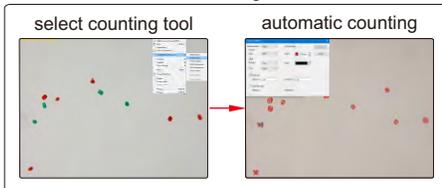
**black balance (reduce color difference)**

**flat field correction (reduce brightness difference)**

**dark field correction (reduce thermal noise)**

The software can control image completely, including measurement, image stitching, extend focus depth, image gray processing, RGB histogram observation, image color sampling, 3D plot (3D representation of image intensity), image exposure, white balance, black balance, image bit depth, flat field correction and dark field correction, etc.

counting



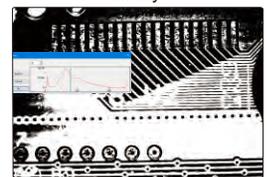
focus stacking



### Measuring tools:

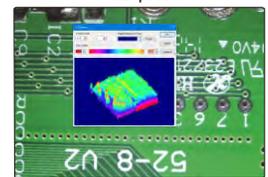
- |  |   |  |  |
|--|---|--|--|
|  | measure length of line or distance between two points |  | measure rectangle                                |
|  | measure distance between two parallel lines           |  | measure width and diameter of ring               |
|  | measure angle   |  | measure diameter, length, perimeter angle of arc |
|  | measure radius, girth and area of circle              |  | measure area of polygon                          |
|  | measure axis lengths, girth and area of ellipse       |  | measure center distance between two circles      |
|  | calibration   |  | measure length of open curve                     |

binary



separate target and background

3D plot



visualize the distribution of image brightness and color

To be continued

Continued from previous page

### SPECIFICATION

Sensor (back-up)	1/1.8" CMOS
Resolution	3072×2048
Pixel	6.3M
Single pixel size	2.4×2.4μm
Spectral range	380-650nm (with infrared cut filter)
Frame rate	30fps
Sampling average	1×1
Exposure time	0.1ms~15s
Power supply	USB port
Weight	400g

### STANDAER DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc

### COMPUTER REQUIREMENT

Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz or above
Memery	2GB or above
USB port	USB3.0 (recommand) or USB2.0
Display	17" or above

### OPTIONAL ACCESSORY

Adapter 0.75X	ISM-AD-0D75
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## SMART CAMERA CODE ISM-MV10



- Built-in software, operated by mouse.
- Automatically calculate, store the test results and export to Excel.
- Camera with PLC control input and output interface, can be integrated with automation equipment.
- Functions: presence or absence of objects, position tilt correction, object counting, color detection, stain detection, dimension measurement, position guide, etc.

### SPECIFICATION

Chip structure	FPGA+ARM
Opreation system	Linux 3.10
Kernel structure	dual-core Cortex-A9
Frequency	1GHZ
I/O port	3 sets of input and output (can be connected to photoelectric switch, wire switch, PLC, etc.)
Working temperature	-10~70°C
Sensor	1/2" CMOS
Single pixel size	3.75×3.75μm
Resolution	1920×1080
Frame rate	60fps
Video output	HDMI port
Lens connection	standard C port

### SOFTWARE

presence or absence of objects



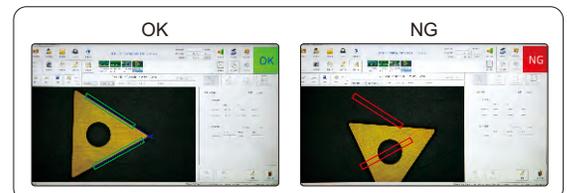
select the area and specify the target, the camera will automatically detect the presence or absence of the target.

automatic counting



select the area and specify the target, the camera will automatically calculate the number of targets.

dimension measurement



measuring angle, distance, radius, center distance, etc.

### STANDAER DELIVERY

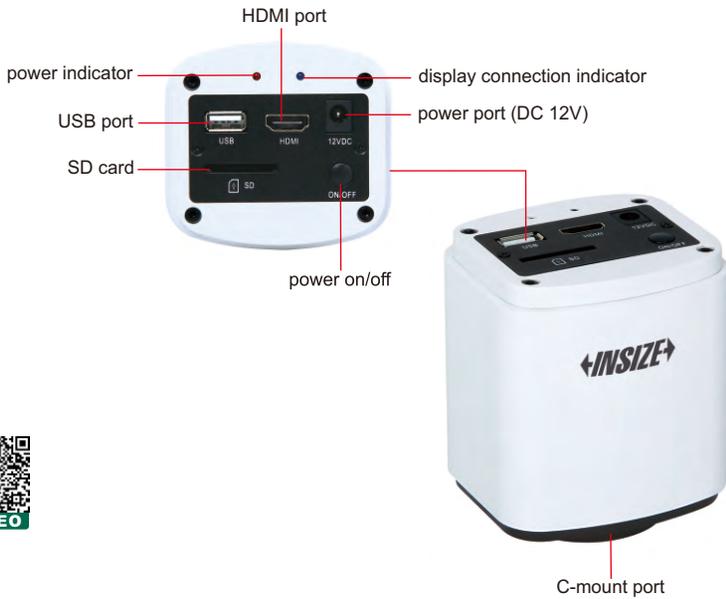
Camera (with HDMI cable)	1 pc
Software	1 pc

# DIGITAL CAMERA FOR MICROSCOPES CODE ISM-CM20

ATTENTION: ADAPTERS ARE NEEDED  
ACCORDING TO MICROSCOPES

FOCUS  
STACKING

AUTOMATIC IMAGE  
STITCHING



adapter 0.5X (optional)



application



- 1080P high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for displays, without computer
- Professional measuring software for computers is included
- For bright field, dark field or fluorescent field
- Automatic exposure, white balance, gain adjustment, gamma correction, brightness contrast adjustment, saturation adjustment, chroma sharpness adjustment
- Focus stacking, automatic image stitching

## SIMPLE MEASURING SOFTWARE (BUILT-IN, FOR DISPLAYS)

### Measuring tools:

- measure length of line or distance between two points
- measure distance between point and line
- measure rectangle
- measure concentric circles
- measure circle
- measure curve
- measure polygon
- measure center distance of two circles
- measure angle of two lines



auto exposure, white balance, gain adjustment, gamma, chroma contrast adjustment, brightness sharpness adjustment, size measurement

To be continued

Continued from previous page

**PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)**

**selectable resolution**



**white balance**  
(balance color based on actual light source)



**histogram**  
(quantify the distribution of color and brightness)



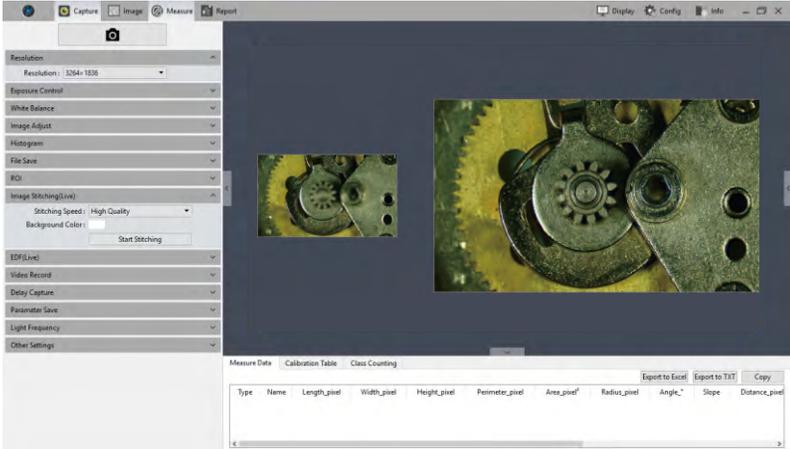


image coloring, fluorescence synthesis, binary, image smoothing, color filter/color extraction/color inversion, delay capture, focus stacking, automatic image stitching, metrics flow, manual counting, dynamic and static measurement, layered measurement, report generation and printing, delay record, flat field correction, image adjustment, histogram.

**flat field correction**



**metrics flow**  
(create templates, set tolerances and build metrics flow)



**manual counting**  
(class counting)



**focus stacking**


+

→


focus on the top

focus on the bottom

clear image of both top and bottom

**automatic image stitching**


+

→


slowly move the workpiece to generate a stitched image automatically (this image can not be used for size measurement)

**SPECIFICATION**

Sensor	1/2.8" CMOS
Pixel	2M
Resolution	1920×1080
Frame rate	30fps
Power supply	power adapter
Output	HDMI/USB
Lens connection	C-mount

**COMPUTER (optional) REQUIREMENT**

Operation system	Windows 7/8/10 (64 bit)
CPU	Intel Core i5 or above
Memory	8GB or above
USB port	USB 3.0

**DISPLAY (optional) REQUIREMENT**

Size	13" or above
Resolution	1080P or above
HDMI port	TYPE A

**STANDARD DELIVERY**

Main unit	1 pc
16G memory card and holder	1 pc
Mouse	1 pc
HDMI cable	1 pc
USB cable	1 pc
Power supply	1 pc

**OPTIONAL ACCESSORY**

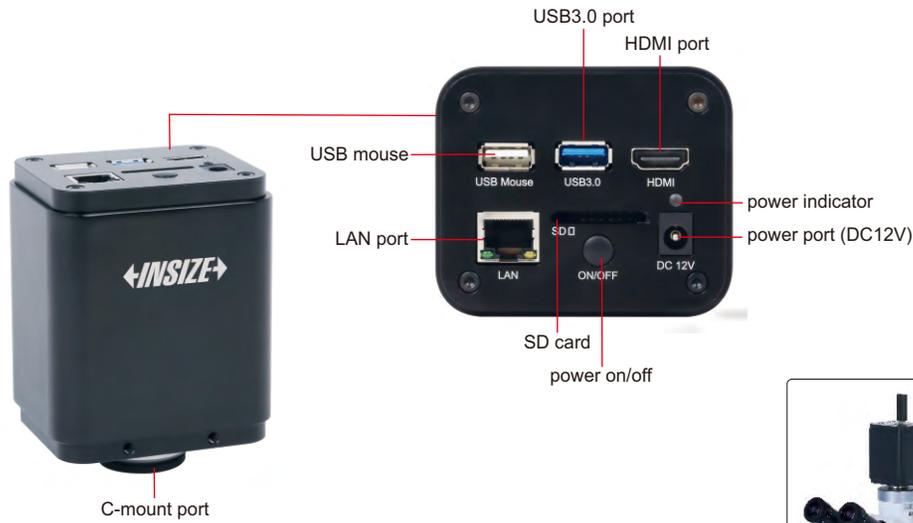
Adapter 0.5X	ISM-MAS-ADAPTER
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# WIFI 4K CAMERA FOR MICROSCOPES CODE ISM-MP8B

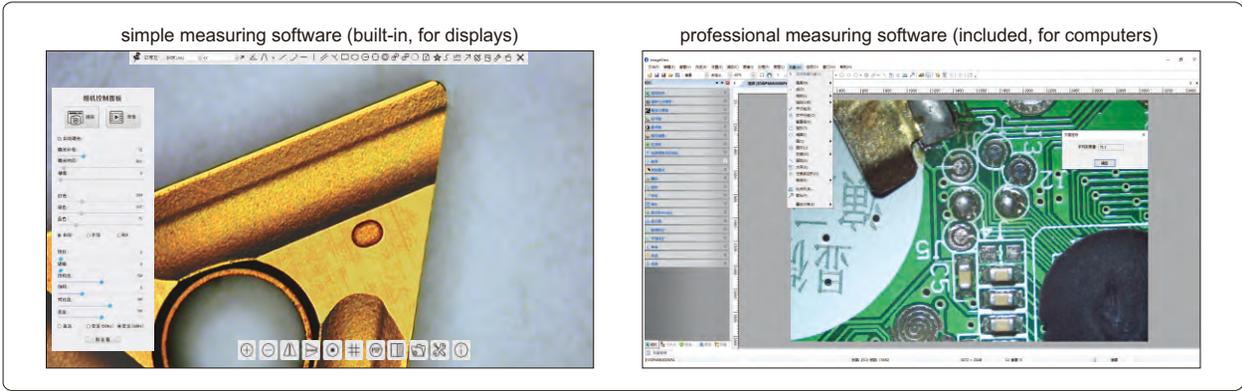
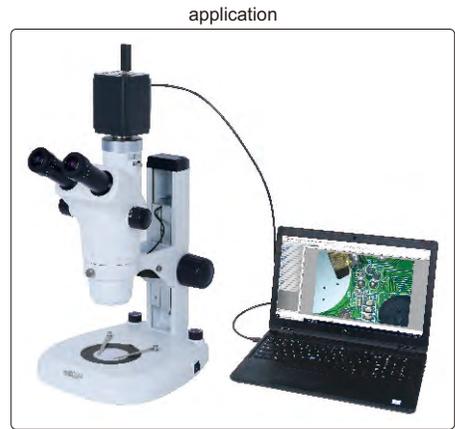
WIRELESS AD-HOC NETWORK

AUTOMATIC IMAGE STITCHING

FOCUS STACKING



- 4K high-definition image
- Can be connected with displays or computers
- Built-in simple measuring software for display, without computer
- Professional measuring software for computers is included
- 4K HDMI/LAN/USB multiple video outputs
- 4K/1080P automatically switched by display resolution
- Focus stacking, automatic image stitching
- Wireless network or wired network



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### SPECIFICATION

<b>Sensor</b>	1/1.2" CMOS
<b>Pixel</b>	8M
<b>Resolution</b>	3840×2160, 1920×1080
<b>Single pixel</b>	2.9×2.9µm
<b>Frame rate</b>	60fps@3840×2160 (HDMI) 30fps@3840×2160 (LAN) 30fps@3840×2160 (USB)
<b>Binning</b>	1×1
<b>Exposure</b>	0.04~2000ms
<b>Output</b>	HDMI/USB/LAN
<b>Lens connection</b>	C-mount
<b>Power supply</b>	DC 12V 1A
<b>Dimension (L×W×H)</b>	255×170×90mm
<b>Weight</b>	2kg

### CONNECTION

<b>HDMI</b>	comply with HDMI2.0 standard 4K/1080P automatically switched by display resolution
<b>LAN</b>	H264 encoded video bandwidth adjustment in real time DHCP configuration or manual configuration unicast/multicast configuration
<b>WLAN</b>	connecting 5G WLAN adapter (USB3.0 interface) in AP/STA mode
<b>USB3.0</b>	connecting USB3.0 port of PC for video transfer MJPEG format video

To be continued

Continued from previous page

**STANDARD DELIVERY**

Main unit	1 pc
16G SD card	1 pc
USB mouse	1 pc
HDMI2.0 cable	1 pc
USB3.0 cable	1 pc
USB wlan adapter	1 pc
Wlan cable	1 pc
Glass calibration ruler	1 pc
Calibration plate	1 pc
Software	1 pc
Power adapter	1 pc

**OPTIONAL ACCESSORY**

16G USB flash disk	IS-USBDISK-16G	
Adjustable lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2A075
	Ø31.75mm eyepiece tube	ISM-MP-3A075
Fixed lens adapter	Ø23.2mm eyepiece tube	ISM-MP-2F075
	Ø31.75mm eyepiece tube	ISM-MP-3F075
Adapter ring for Ø30.0mm eyepiece tube	ISM-MP-300R	
Adapter ring for Ø30.5mm eyepiece tube	ISM-MP-305R	

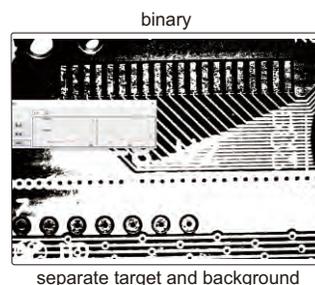
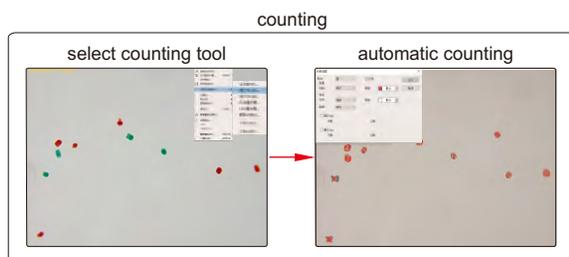
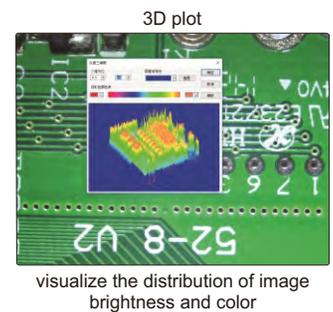
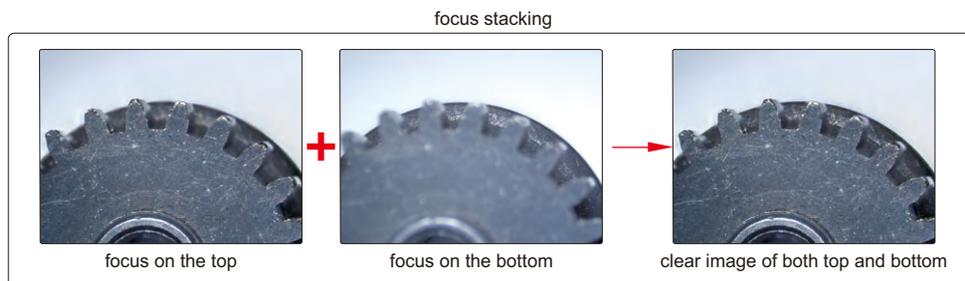
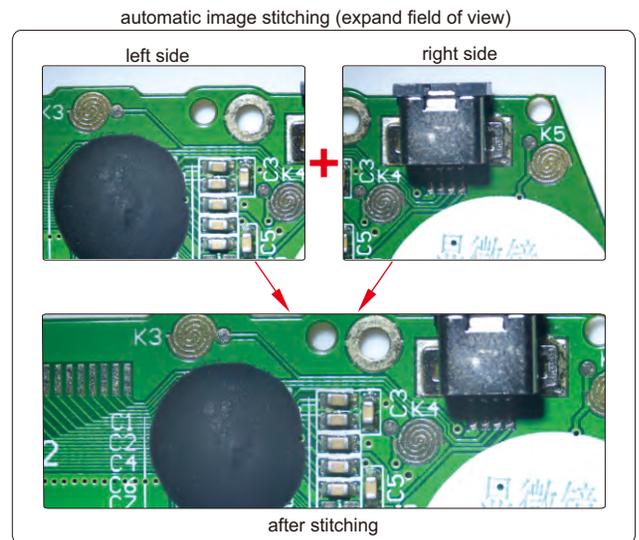
**COMPUTER**

Operation system	Windows/7/8/10
CPU	Intel Core 2 2.8Hz
Memory	2GB
USB port	USB3.0 or USB2.0 port
Display	17"

**PROFESSIONAL MEASURING SOFTWARE (INCLUDED, FOR COMPUTERS)**

**Measuring tools:**

- measure length of line or distance between two points
- measure rectangle
- measure distance between two parallel lines
- measure width and diameter of ring
- measure diameter, length, perimeter angle of arc
- measure angle
- measure radius, girth and area of circle
- measure area of polygon
- measure axis lengths, girth and area of ellipse
- measure center distance between two circles
- calibration
- measure length of open curve



# METALLURGICAL ANALYSIS SOFTWARE AND CAMERA CODE ISM-MAS100

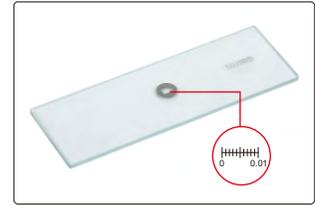
- More than 100 standards (ISO, ASTM, JIS, etc.)
- For metallurgical microscopes
- The camera can be inserted into the eyepiece tube or camera connector of microscopes
- Metallurgical analysis software is included, which can make comparative analysis, measurement and evaluation of various materials



application



software CD (included)



glass calibration rule (included, graduation 0.01mm)

metallurgical analysis software (included)

tool bar

gallery

this software can be used with variety of metallographic microscopes for acquisition, processing, analysis, report generation of metallurgical images

metallurgical module list

Select autoAnalysis Item

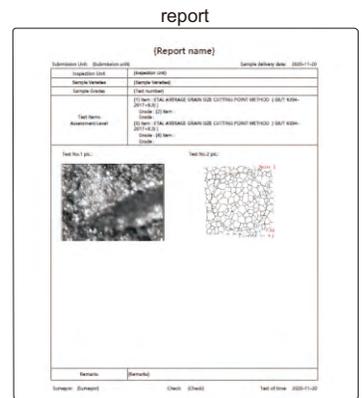
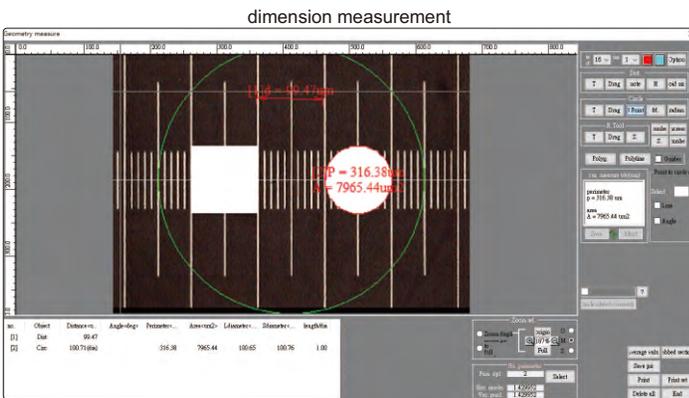
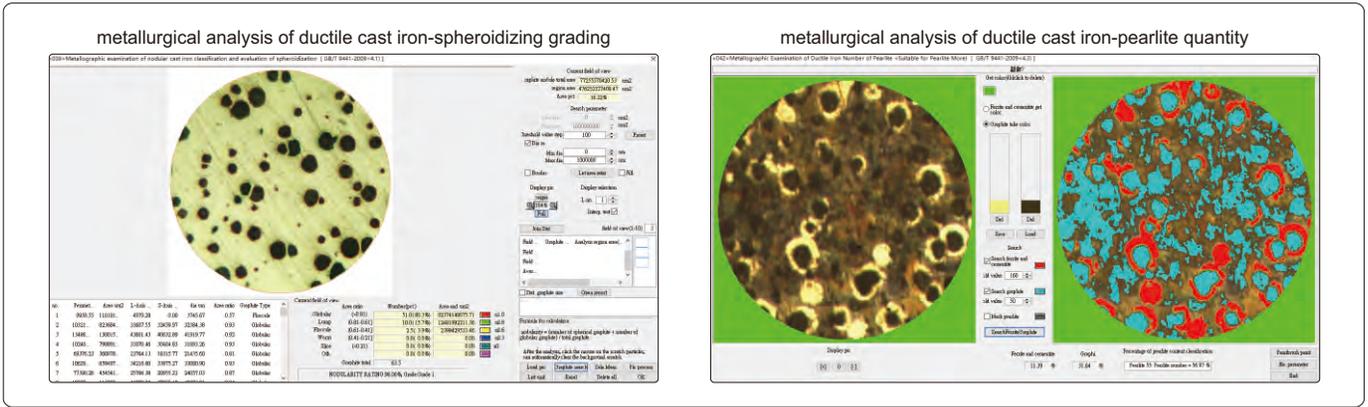
- [001] METHOD OF AVERAGE GRAIN SIZE, AREA OF METAL
- [002] METAL AVERAGE GRAIN SIZE CUTTING POINT METHOD
- [003] METAL AVERAGE GRAIN SIZE COMPARISON METHOD
- [004] Details of Average Grain Size Testing for Other Metals and Alloys
- [005] Standard for Dual Grain Size Characterization Test Method Area Fraction Evaluation Comparison Chart
- [006] Standard for Dual Grain Size Characterization Test Method #1. Micrographs of Dual Grain Size Types
- [007] Standard for Dual Grain Size Characterization Test Method #1. Micrographs of Dual Grain Size Types
- [008] Standard for Dual Grain Size Characterization Test Method #2. Application of Statistical Program for Determining Grain Size Distribution
- [009] steel apparent grain size of micrographic estimating(autometry) EN
- [010] steel apparent grain size of micrographic estimating(transversal method) EN
- [011] Determination of nonmetallic inclusion content in steel by standard grading diagram
- [012] Evaluation Method of Inclusion Content in Steel, method ( Worst field of view method )
- [013] Evaluation Method of Inclusion Content in Steel, method ( Low Inclusion Content Method )
- [014] Evaluation Method of Inclusion Content in Steel, method
- [015] Metallographic examination method. Microscopic examination of non-metallic impurities in high quality steel by metallographic diagram
- [016] Metallographic examination of precious metal cuprous oxide
- [017] Determination of decarburization depth of steel
- [018] DETERMINATION OF FERRITIC GRAIN SIZE OF LOW CARBON STEEL COIL ROLLED SHEET GRAIN ELONGATION
- [019] Determination of Phase Area Content of Stainless Steel
- [020] Metallographic Examination of Gray Cast Iron Graphite Distribution Shape
- [021] Metallographic Examination of Gray Cast Iron Graphite Length (Manual Analysis)
- [022] Metallographic Examination of Gray Cast Iron Graphite Length (Automatic Analysis)
- [023] Metallographic Examination of Gray Cast Iron Number of Pearlite
- [024] Metallographic Examination of Gray Cast Iron Number of Carbides
- [025] Metallographic Examination of Gray Cast Iron Number of Phosphorus Eutectic
- [026] Metallographic Examination of Gray Cast Iron Determination of the Number of Eutectic Groups of Cast Iron
- [027] Metallographic examination of gray cast iron Phosphorus eutectic type etc
- [028] Quantitative metallographic determination
- [029] Free cementite
- [030] Pearlite in Low Carbon Deformed Steel
- [031] Dual tissue
- [032] Microstructure Assessment of Steel Calculation of Trausite Content
- [033] Microstructure Assessment of Steel Calculation of Trausite Content
- [034] Metallographic Martensite Needle Length Rating of Carburized Gear For Automobile
- [035] Metallographic Carburate Rating of Carburized Gears For Automobile
- [036] Metallographic Retained Austenite Rating of Carburized Gears For Automobile

Multi-module grad [F10] [F11] OK Cancel

To be continued

Continued from previous page

examples of metallurgical analysis



focus stacking

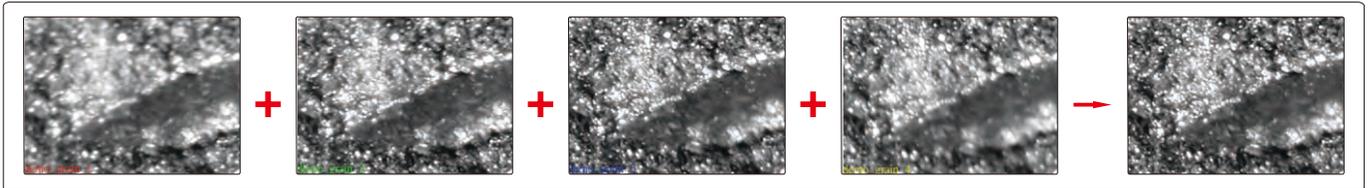
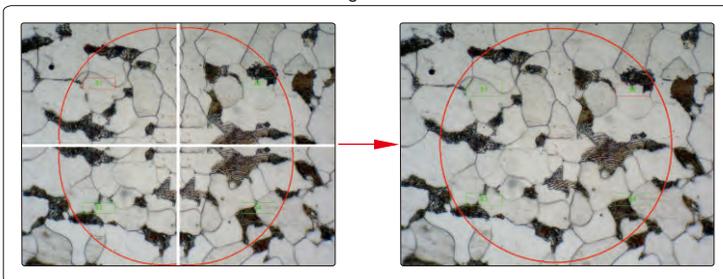
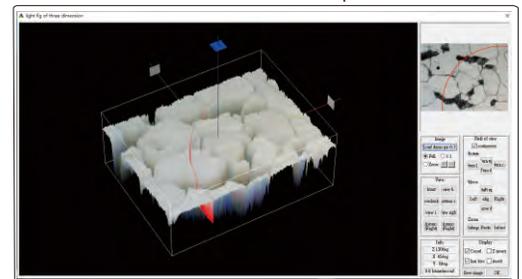


image stitch



three dimension map



SPECIFICATION

Sensor	1/2.8" CMOS
Pixel	3.1M
Resolution	2048x1536
Frame rate	10fps
Exposure	manual or automatic, adjustable exposure time
Power supply	USB port
Weight	400g

STANDARD DELIVERY

Camera (USB cable included)	1 pc
Software	1 pc
Glass calibration rule (graduation 0.01mm)	1 pc

## CAMERA ADAPTERS

- Ø23.2/30mm eyepiece adapter is included
- Suitable for digital cameras ISM-CM20, ISM-CM63, ISM-ZS70-S



Ø23.2/30mm eyepiece adapter (included)



**0.5X camera adapter (fixed focus distance)**  
ISM-AD-0D5



**0.75X camera adapter (fixed focus distance)**  
ISM-AD-0D75



**0.5X camera adapter (adjustable focus distance)**  
ISM-AD-A0D5



**0.75X camera adapter (adjustable focus distance)**  
ISM-AD-A0D75

focus distance adjustment ring

focus distance adjustment ring

application

inserted into eyepiece tube



inserted into camera connector



### SPECIFICATION

Code	ISM-AD-0D5	ISM-AD-A0D5 *	ISM-AD-0D75	ISM-AD-A0D75
Type	fixed focus distance	adjustable focus distance	fixed focus distance	adjustable focus distance
Magnification	0.5X	0.41X~0.58X	0.75X	0.64X~0.86X

\* There may be shadows on the edge of image when ISM-AD-A0D5 is used

## PORTABLE MEASURING MICROSCOPES

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ISM-PM100

### SPECIFICATION

Code	ISM-PM20	ISM-PM40	ISM-PM50	ISM-PM100
Total magnification	20X	40X	50X	100X
Eyepiece	10X with graduation	10X with graduation	10X with graduation	10X with graduation
Objective (achromatic)	2X (numerical aperture: 0.05)	4X (numerical aperture: 0.1)	5X (numerical aperture: 0.12)	10X (numerical aperture: 0.25)
Working distance	17.2mm	18mm	17.6mm	7mm
Graduation	0.05mm	0.025mm	0.02mm	0.01mm
Viewing field	Ø9mm	Ø4.5mm	Ø3.6mm	Ø1.8mm
Focus range	30mm			
Illumination	LED light			
Diameter of base	Ø63mm			
Height	210mm			
Weight	650g			

### STANDARD DELIVERY

Main unit	1 pc
Pen light	1 pc
Battery (AAA)	2 pcs