Mikrosize®

iVision-MM
Toolmakers Microscope

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Product Advantages and Applications

●The tool microscope has remarkable advantages. It is equipped with a trinocular tube and a variety of observation methods, allowing for flexible adaptation. With 10X/23 eyepieces and multiple high-performance objective lenses, it can produce clear images. The manual focusing is precise, and it has a green semi-circle auxiliary focusing function. The 6-megapixel CCD camera and LED cold light source enable excellent image acquisition and illumination, resulting in high measurement accuracy and meeting diverse industrial inspection requirements.

Product Advantages

●The trinocular tube has a beam splitting ratio of 100:0. When paired with a variety of observation methods, it can be flexibly switched to meet different observation requirements.

●It is equipped with a variety of high-performance objective lenses, such as the TU plan Fluor series, which can provide high-quality imaging and accurately restore details.

●It supports manual coarse and fine focusing. The fine adjustment grid value is 2μm. There is a built-in black rectangular auxiliary focusing function, which makes the operation convenient, enabling fast and accurate focusing.

●The 6-megapixel CCD camera is equipped with a USB3.0 interface, enabling efficient image acquisition and fast data transmission, which is convenient for data processing.

●Illuminated by an LED cold light source, it features stable brightness, reduced heat generation, providing a clear and bright observation field of view, and extending the service life of the equipment.

●It has the function of switching between bright field and dark field. The bright field can clearly present the surface morphology of the sample, and the dark field can highlight the subtle structures.

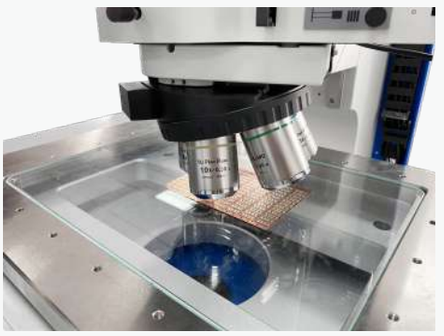
Product Applications

●With high-precision objective lenses and manual focusing, it is able to accurately examine the fine structures of parts, providing assistance for high-precision assembly work.

●A variety of observation methods and high-quality light sources are conducive to the analysis of the metallographic structure of metal materials and the evaluation of material properties.

●The workbench has a large travel range and high measurement accuracy, which makes it convenient to observe the microscopic damage and material details of the workpiece.

It can observe and analyze the microscopic structure of the chip, the flatness of the chip surface, the circuit wiring, as well as the interface conditions of materials at various layers.



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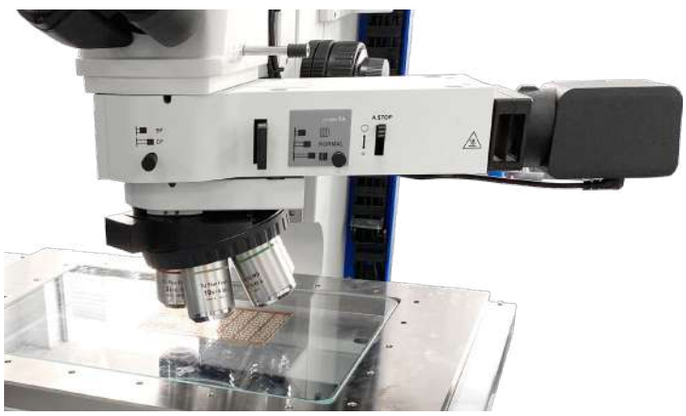
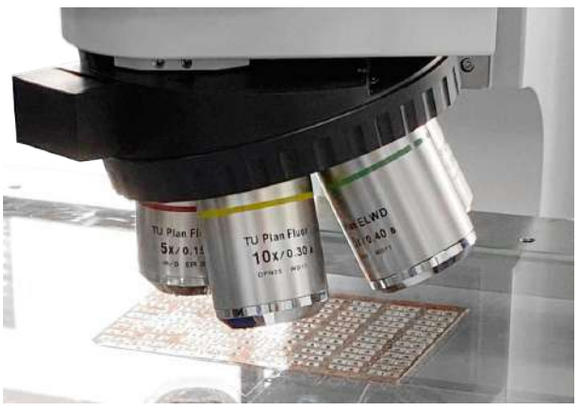
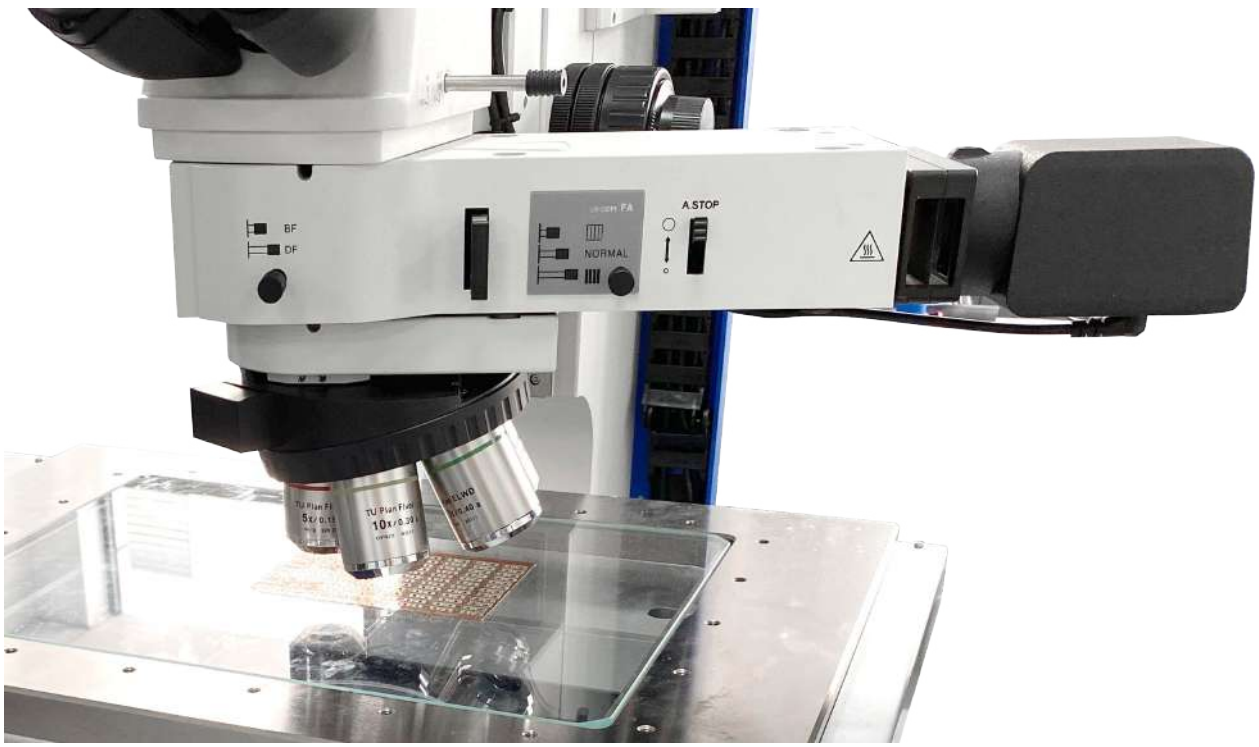
Product Detail

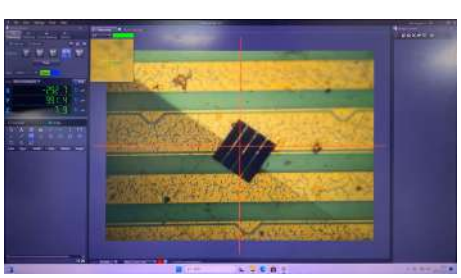
1.Function Control Area
2.X-axis Handle
3.Stage
4.Objective lens
5.Nosepiece
6.Illuminator
7.Eyepiece tube
8.Eyepiece
9.Coaxial coarse and fine focusing knob
10.Camera
11.Y-axis handle
12.Digital display counter





Structural Details Of The Illuminator





●Bright and Dark Field Switching Drawbar: The bright field clearly presents the morphology of the sample, while the dark field enhances the contrast, capable of highlighting the fine structures and impurities.

●Polarized light observation: It is capable of identifying anisotropic materials and vividly presenting the crystal structure and stress distribution.

●DIC (Differential Interference Contrast): It generates three-dimensional images and highlights the height differences of the details in the sample.

Built-in auxiliary focusing optical path: There are two shapes available for the built-in auxiliary focusing function, which allows users to select different auxiliary focusing shapes according to the samples they are observing.

Structural Details Of The Z-axis Mechanical Structure

● The maximum travel of the Z-axis can reach 180mm, meeting the measurement height requirements of most workpieces on the market.

● The coarse and fine coaxial focusing knob has a fine adjustment value of 2 micrometers. It is equipped with an upper limit stop, which can prevent users from accidentally damaging the objective lens due to incorrect operation.

● High-precision racks are adopted and matched with gears, featuring high precision and good stability.

Software Interface

● Measuring functions include distance, angle, circle, the distance from a point to a line, parallel lines, and polygon.

● Functions such as taking photos, recording videos, adjusting white balance, and enabling automatic exposure.

● Users can set their own measurement standards, including standards for straight lines and circles, and there are multiple units available for selection.

● It is possible to set the color of the scale lines and the diameter of the scale lines.

● It includes the functions of depth of field fusion and image stitching.

It includes an auxiliary focusing function, enabling users to focus more quickly.

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Technical Specification

Eyepiece tube	Triple eyepiece tube with a beam splitting ratio of 100:0. The inter-pupillary distance is adjustable from 50mm to 75mm.	
Observation method	BF/DF/PO/DIC(Optional)	
Eyepiece	10X/23(One of them has a cross hair)	
Objective lens	Flat-field semi-apo-chromatic bright and dark field	TU plan Fluor 5X/0.15 WD23.0
		TU plan Fluor 10X/0.3 WD13.0
		TU plan Fluor 20X/0.40 WD11.0
		TU plan Fluor 50X/0.55 WD8.5
		TU plan Fluor 100X/0.8 WD4.0
Focusing system	Manual coarse/fine focusing (electric focusing is optional), with a fine adjustment value of 2μm per division.	
Auxiliary focusing	Built-in auxiliary focusing - black rectangle	
Nosepiece	Manual Nosepiece; Bright and dark field 5-hole converter with DIC slot (optional coded Nosepiece) (optional electric Nosepiece)	
Resolution	X,Y,Z:0.1um	
CCD Camera	6-megapixel camera with CCD chip and USB 3.0 interface (12 - megapixel camera is optional)	
Camera interface	0.65X C-mount interface	
Software	Take photos, save them, and conduct measurements; achieve depth of field fusion and image stitching.	
Illuminant	Transmitted Illumination: Illuminated by LED parallel light cold light source.	
	Epi-illumination: Illuminated by LED coaxial light cold light source.	
Working platform(mm)	Size of the metal platform:500*350	
	Glass size:350*250	
	Load-bearing capacity:25KG	
Travel(mm)	X:300,Y:200,Z:200(Customized Travel)	
Measurement accuracy	2.8+L/100um	
Height measurement	180mm	
Counter	RS232	

Packing List

Name	QTY	Remarks
Main unit	1set	
Eyepiece tube	1pc	
5-hole Nosepiece	1pc	
CCD Camera	1pc	600W
10X/23 Eyepiece	2pcs	One of them is equipped with a crosshair)
TU plan Fluor 5X/0.15 WD23.0	1pc	
TU plan Fluor 10X/0.3 WD13.0	1pc	
TU plan Fluor 20X/0.40 WD11.0	1pc	
TU plan Fluor 50X/0.55 WD8.5	1pc	
TU plan Fluor 100X/0.8 WD4.0	1pc	Optional
Digital readout	1pc	
Polarizer	1pc	
Analyzer	1pc	
Power cord	1pc	
Digital readout	1pc	
Polarizer	1pc	
Analyzer	1pc	