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NINGBO SUNNY INSTRUMENTS CO.,LTD.

Add: 66-68 Shunyu Rd., Yuyao, Zhejiang

315400 China

Tel : 0086-574-62530024

Fax : 0086-574-62530066

E-mail : sales@sunnyoptical.com

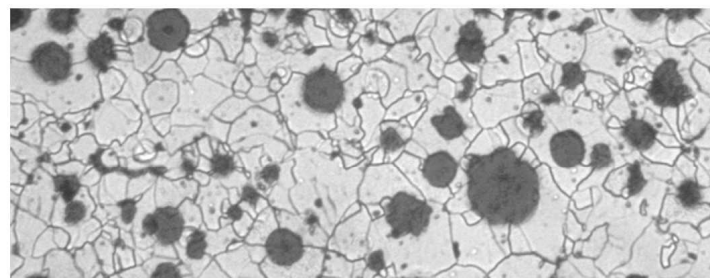
Metallurgical Microscopes

High resolution and excellent image and reliable mechanical structure;

Easy to operate and complete optional accessories, it is mainly applied in testing semi-conductor process, materials and mineral researching, precision engineering etc.



XY Series
BH Series
XD Series
IE Series



As technical improvement, manufacturer has right to make renovation in designing without notice

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XY-MR (Reflection)



XY-MRT (Transmission and reflection)

XY Series Metallurgical Microscope Technology Specification

Optical system	Color corrected infinity optical system (CSIS)
Viewing head	Infinity gemel binocular/trinocular head, 30°inclined, inter-pupillary range:54mm to 76mm, Light split rate: binocular 100%, binocular / trinocular 80%/20%
Eyeiece	Gemel digital head, 30°inclined, inter pupillary range:54mm to 75mm Optional: High eye point wide field eyepiece with adjustable diopter PL10X22T, plan eyepiece PL15X/16
Nosepiece	Reversed quintuple nosepiece
Objective	Long working distance infinity plan achromatic metallurgical objective 5X, 10X, 20X, 50X(Semi-apochromatic), 100X(Semi-apochromatic)
Condenser	N.A 0.7 swing achromatic condenser(transmission & reflection)
Focus	Low position coaxial focus system with tension adjustable,coarse:28mm per rotation, fine precision 0.002mm Specimen height can obtain 50mm(reflection). 30mm(Transmission and reflection)
Stage:	Double layer mechanical stage with low position coaxial controls. Size: 175mmX145mm, Moving range:76mmX42mm
Illuminator	Reflection: Reflection illumination with field diaphragm and aperture diaphragm, wide-range voltage 90-240V , single 3W LED bulb Transmission & reflection: Reflection illumination with field diaphragm and aperture diaphragm, wide-range voltage 90-240V , single 3W LED bulb, Transmission illumination: wide-range voltage 90-240V, 12V/50W halogen bulb
Polarizer device	Polarizer board(Reflection), Polarizer group (Transmission) , Fixed analyser board, 360° rotary analyser board
Accessories	Stage plate(Glass, Metal), Filters(yellow/blue/green/neutral), Micrometer slide 0.01mm, video & photo accessories

Characteristics

- Optical system: Color corrected infinity optical system (CSIS), High image quality, high resolution and comfortably viewing
- Eyeiece and Objective: High eye point wide field plan eyepiece PL10X/22mm, view field number 22mm, provide wide and flat viewing space, and can mount many kinds of micrometer; Long working distance infinity plan achromatic metallurgical objective, don't need coverslips
- Viewing head: Infinity gemel type binocular / trinocular / digital head, 30°inclined,
- Focus system: Low position coaxial focus system with tension adjustable,coarse:28mm per rotation, fine precision 0.002mm; Specimen height can obtain 50mm(reflection). 30mm(Transmission and reflection)
- Illuminator system: Reflection: Reflection illuminator with field diaphragm and aperture diaphragm, wide-range voltage 90-240V , single 3W LED bulb
Transmission & reflection: Reflection illumination with field diaphragm and aperture diaphragm, wide-range voltage 90-240V , single 3W LED bulb; Transmission illuminator: wide-range voltage 90-240V, 12V/50W halogen bulb

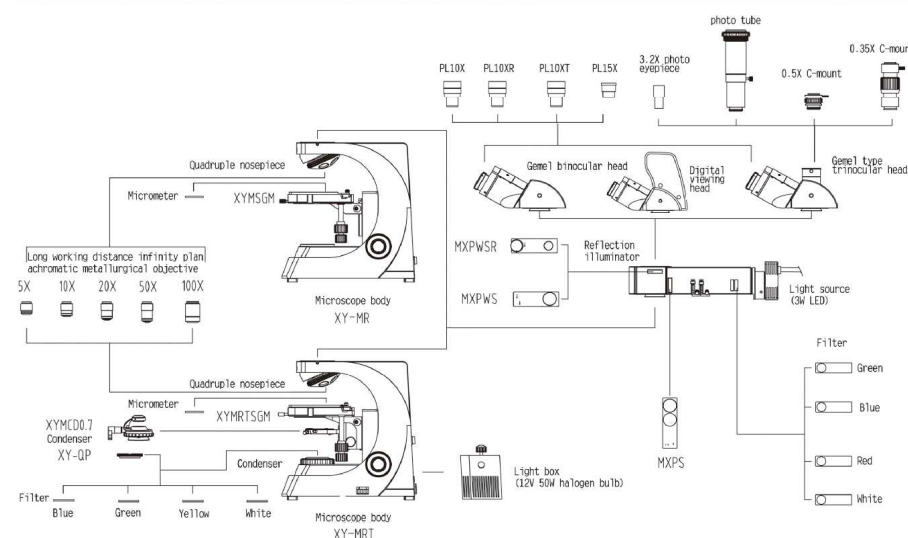
Objective parameter table

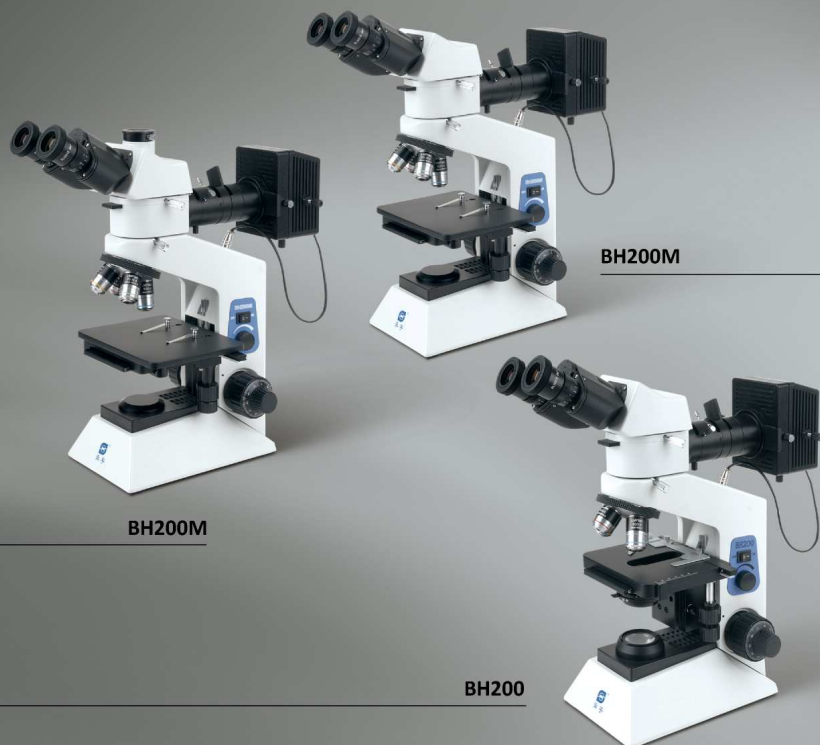
Magnification	N.A.	Working distance(mm)	Coverslip thickness	Conjugate distance(mm)
5X	0.14	20.5	0	∞
10X	0.25	16	0	∞
20X	0.40	7.8	0	∞
50XS	0.55	7.9	0	∞
100XS	0.80	2.1	0	∞

Eyepiece parameter table

Eyepiece	PL10X/22	PL10X/22R	PL10X/22T	PL15X/16
Field of view	22mm	22mm	22mm	16mm
Remarks	Standard	Optional	Optional	Optional

XY Series Metallurgical Microscopes Configuration Chart





BH200M Series Metallurgical Microscope Technology Specification

Optical system	Color corrected finity optical system
Objective	Long working distance plan achromatic metallurgical objective 5X, 10X, 20X, 50X, 100X
Eyepiece	High eye point plan eyepiece PL10X/18mm
Viewing head	Gemel binocular head. 30°inclined, 360 rotatable, with adjustmnet diopte Gemel trinocular head. 30°inclined, 360 rotatable, with adjustmnet diopte
Illuminator	Reflection Koehler illumination,wide range voltage 00 240V . 6V/30W halogen bulb, with continuous intensity
Focus	Coaxial focus system with tension adjustment and up-limited, coarse range:25mm, fine precision 0.002mm
Nosepiece	Quadruple nosepiece; Optional: Quintuple nosepiece
Stage:	Double layer mechanical stage, Size:140mmX132mm(attached 180mmX145mm plate stage)
Accessories	C-mount adapter, Polarizer accessories: polarizer and analyser board

Characteristics

- Optical system: Color corrected finity optical system, high image qualityand resolution
- Eyepiece and Objective: a) High eye point plan eyepiece PL10X. veiw field number 18mm. provide wide and flat viewing space, and can mount many kinds of micrometer;
b) Achromatic metallurgical objective, plan achromatic metallurgical objective and Long working distance professional achromatic metallurgical objective;
c) Don't need coverslips
- Illuminator system: a) Reflection Koehler illumination, anti-reflection structure, effectively prevent the interference of reflected light, making images clearer and better field of view contrast
- Adopt wide-range voltage 90-240V . 6V/30W halogen bulb, the center of filament can be adjusted and brightness can be continuously adjusted.
- Stage: Double layer mechanical stage, low position coaxial focus system, attached 180mmX145mm plate stage, easy to put a larger sample.
- Accessories: a) Can put the yellow, green, blue, white filter in optical, provide different color lighting to view kinds of samples
b) Polarizing viewing by taking polarizer and analyser into optical way
c) Polarizer $\pm 25^\circ$ adjustment, can adjust the orthogonal state and view contrast

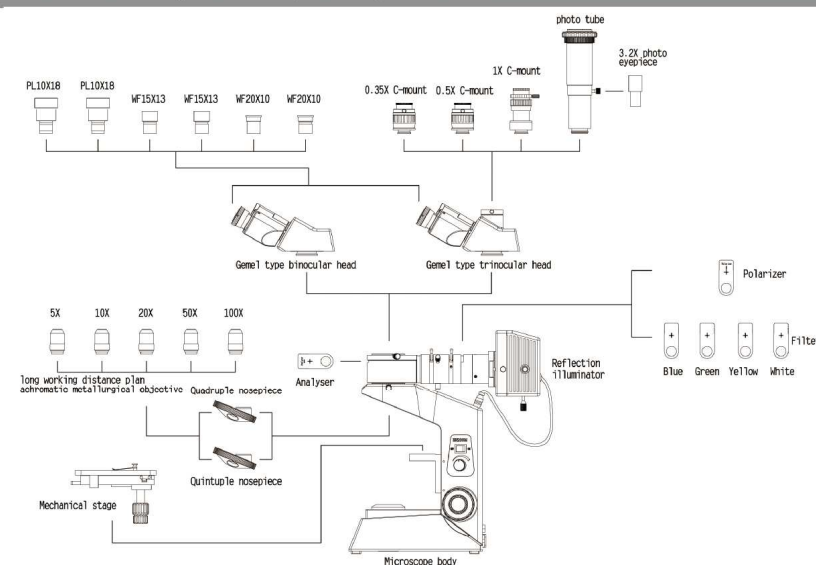
Objective parameter table

Item	Magnification	N.A.	Working distance (mm)	Coverslip thickness(mm)	Conjugate distance (mm)
Long working distance plan achromatic metallurgical objective	5X	0.13	15.5	0	195
	10X	0.25	8.7	0	195
	20X	0.40	8.8	0	195
	50XS	0.60	5.1	0	195
	100XS	0.80	2.0	0	195

Eyepiece parameter table

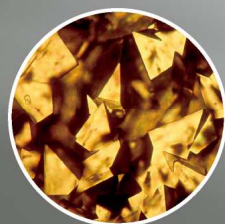
Eyepiece	PL10X/18	PL10X/18R	WF15X/13	WF15X/13R	WF20X/10	WF20X/10R
Field of view	18mm	18mm	13mm	13mm	10mm	10mm

BH200M Series Metallurgical Microscopes Configuration Chart





XD20M



XD30M

XD Series Inverted Metallurgical Microscope Technology Specification

Optical system	Color corrected infinity optical system (CSIS)
Viewing head	Infinity gemel binocular/ trinocular head. 45°inclined, inter-pupillary range:54mm to 75mm, Light split rate: binocular 100%, binocular / trinocular 80%/20%
Eyeiece	High eye point wide field plan eyepiece PL10X/22mm Optional: High eye point wide field eyepiece PL15X/16mm
Nosepiece	Quintuple nosepiece
Objective	Long working distance infinity plan achromatic metallurgical objective 5X, 10X, 20X, 50X(Semi-apochromatic), 100X(Semi-apochromatic)
Focus	Low position coaxial focus system with tension adjustable,coarse:38mm per rotation, fine precision 0.002mm(2μ)
Stage:	Fixed stage, Size:175mmX145mm, can mount specimen fixture, extension plate and the coaxial mechanical mobile ruler
Illuminator	Reflection Koehler illumination with alterable aperture diaphragm and centerable field diaphragm , wide-range voltage 90-240V . 12V/50W halogen bulb, with continuous intensity
Polarizer device	360° rotary analyser , the polarizer and polarizer both can shift out the optical way
Video & photo accessories	C-mount adapter (1/2, 1/3) and Relay mirror
Other	Metal stage plate, Slides holder (φ54 and 26.5X76.5), Terasaki holder (φ64mm and 56X81.5), Mechanical mobile ruler 120°78, Stage extension plate

Characteristics

- Optical system: Color corrected infinity optical system (CSIS). High image quality, high resolution and comfortably viewing
- Eyepiece and Objective: High eye point wide field plan eyepiece PL10X/22mm. view field number 22mm. provide wide and flat viewing space, and can mount many kinds of micrometer; Long working distance infinity plan achromatic metallurgical objective, don't need coverslips
- Viewing head: Infinity gemel type binocular / trinocular head. 45°inclined,
- Focus system: Low position coaxial focus system with tension adjustable,coarse:38mm per rotation, fine precision 0.002mm(2μ)
- Illuminator system: Reflection Koehler illuminator with alterable aperture diaphragm and centerable field diaphragm , wide-range voltage 90-240V . 12V/50W halogen bulb, with continuous intensity
- Stage: Can mount low position coaxial mechanical mobile ruler and stage extension plate, Expand the working space to meet the different requirement of customers

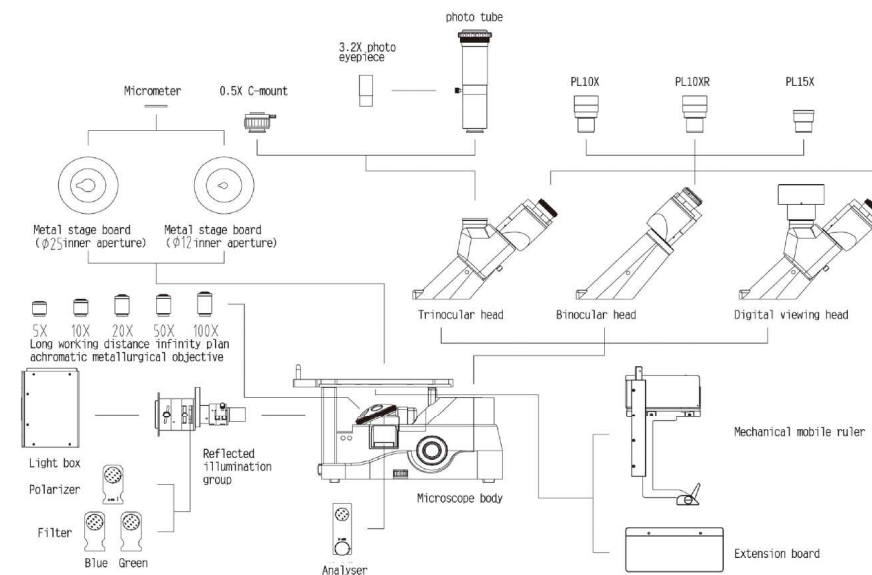
Objective parameter table

Magnification	N.A.	Working distance(mm)	Coverslip thickness(mm)	Conjugate distance(mm)
5X	0.14	20.5	0	∞
10X	0.25	16	0	∞
20X	0.40	7.8	0	∞
50X	0.55	7.9	0	∞
100X	0.80	2.1	0	∞

Eyepiece parameter table

EYEPIECE	PL10X/22	PL10X/22R	PL10X/22 I	PL15X/16
Field of view	22mm	22mm	22mm	16mm
Remarks	Standard	Optional	Optional	Optional

XD Series Inverted Metallurgical Microscopes Configuration Chart





IE200M

Characteristics

- Optical system: Adopt special metallurgical objective and PL10X plan eyepiece, High image quality, high resolution and comfortably viewing
- Focus system: Low position coaxial focus system, coarse: 38mm per rotation, fine precision 0.002mm, Mechanical stage, Size: 180mmX155mm, Moving range: 75mmX40mm
- Illuminator system: Transmission Koehler illuminator with alterable aperture diaphragm and centerable field diaphragm, wide-range voltage 90-240V, 6V/ 3W high brightness and long life LED bulb
- Video & photo accessories: Adopt the corresponding photographic accessories, to acquire and save the image, Analysis with computer and professional metallographic image analysis software

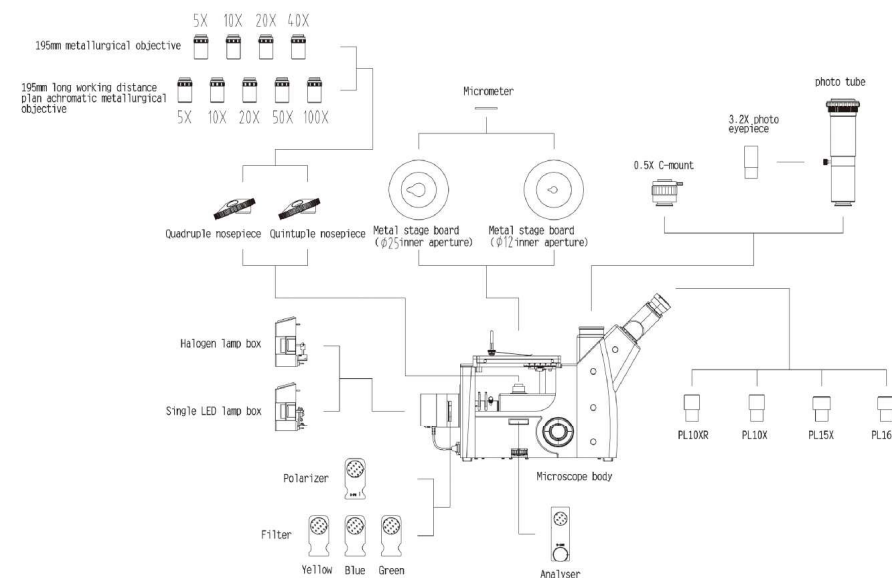
Objective parameter table

Item	Magnification	N.A.	Working distance (mm)	Coverslip thickness(mm)	Conjugate distance (mm)
Long working distance plan achromatic metallurgical objective	5X	0.13	15.5	0	195
	10X	0.25	8.7	0	195
	20X	0.40	8.8	0	195
	50X	0.60	5.1	0	195
	100X	0.80	2.0	0	195

Eyepiece parameter table

EYEPIECE	PL10X/18	PL10X/18R	WF15X/13	WF15X/13R	WF20X/10	WF20X/10R
Field of view	18mm	18mm	13mm	13mm	10mm	10mm

IE Series Inverted Metallurgical Microscopes Configuration Chart



IE Series Inverted Metallurgical Microscope Technology Specification

Optical system	Color corrected finity optical system
Viewing head	Gemel trinocular head, 45° inclined, with adjustmnet diopter, inter-pupillary range: 54mm to 75mm, Light split rate: 80%/20%
Eyepiece	High eye point plan eyepiece PL10X/18mm
Nosepiece	Quadruple nosepiece; Optional: quintuple nosepiece
Objective	Long working distance plan achromatic metallurgical objective 5X, 10X, 20X, 50X, 100X
Stage:	Mechanical stage, Size: 180mmX155mm, Low position control by right hand, moving range: 75mmX40mm, precision: 0.1mm
Focus	Low position coaxial focus system, coarse: 38mm per rotation, fine precision 0.002mm
Illuminator	Transmission Koehler illumination with alterable aperture diaphragm and centerable field diaphragm, wide-range voltage 90-240V, 6V/30W halogen bulb, with continuous intensity
Polarizer device	360° rotary analyser, the polarizer and analyser both can shift out the optical way
Video & photo accessories	C-mount adapter (1/2, 1/3) and Relay mirror

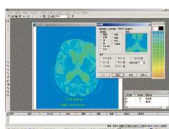
Video & Photo Accessories



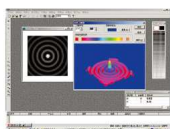
- Connect CCD and Trinocular tube with special C-mount to acquire the image
- Through professional image analysis software, you can do image processing, measurement, and analysis, input to the projector for teaching
- Through special C-mount, mount the digital camera on the microscope to get many image record and analysis

Software—Sunny Photolib

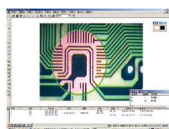
Function	<ol style="list-style-type: none"> 1.Support TWAIN standard scanners and digital cameras and a variety of image acquisition card 2.The up to date programming tools, Chinese or English menu 3.Including: color adjustment, image deformation, digital form processing, image enhancement texture analysis, identification, such as more than hundred kinds of professional image processing and analysis function 4.Support 24 bit true color image acquisition, processing and analysis for RGB, CMYK, HSV, YUV color model. 5.Advanced particle automatic identification system, particles' automatic segmentation function 6.Geometric measurement, automatic quantitative analysis, with a variety of parameters
Operation systems	Support WIN95,Win98,WIN2000 and WINXP



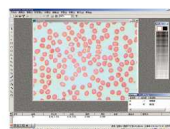
● Image Processing



● 3D Simulation



● Geometric Measurement



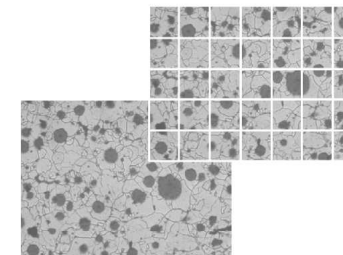
● Quantitative Analysis

SUNNY

Professional automatically puzzle software - Micropec

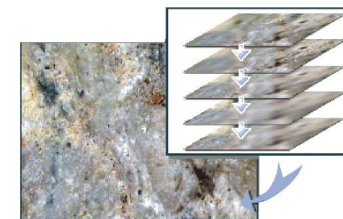
When using high magnification objective lens to observe the slices, only can acquire the local images, at this time you can use this software to splice various parts of sections to get the complete image

- Splicing fast and accurately
- Support manual and automatic splicing function

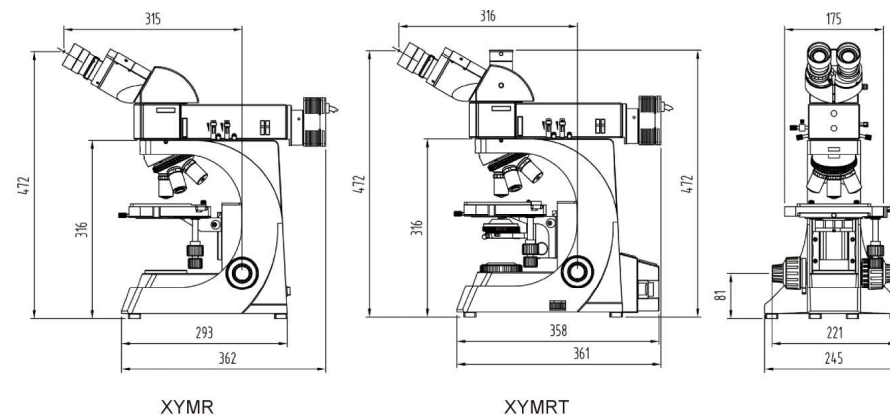


Synthesis of multiple focal plane image software modules- Microspec

When use high magnification objective to observe uneven slice, due to the restrictions of high magnification objective lens' depth of field, only can observe the part of image clear, using the software can automatic synthesize the images which record on different focal plane, to get a clear image and increase high magnification objective lens' depth of field.



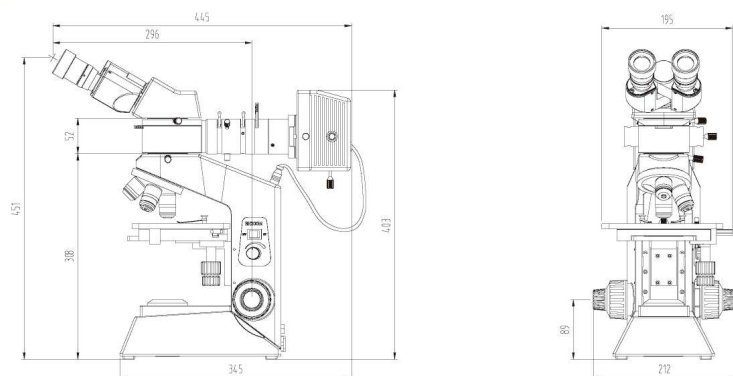
XY Series Metallurgical Microscopes Dimension Chart



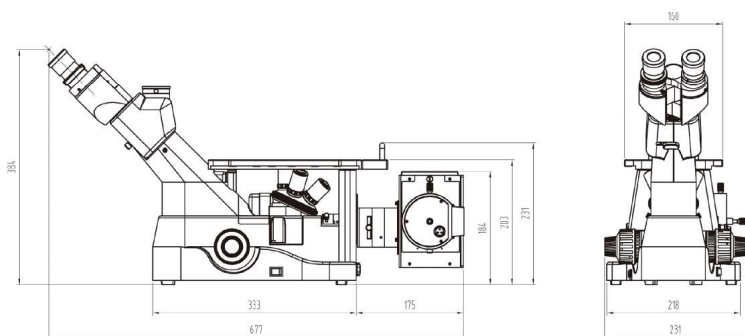
XYMR

XYMRT

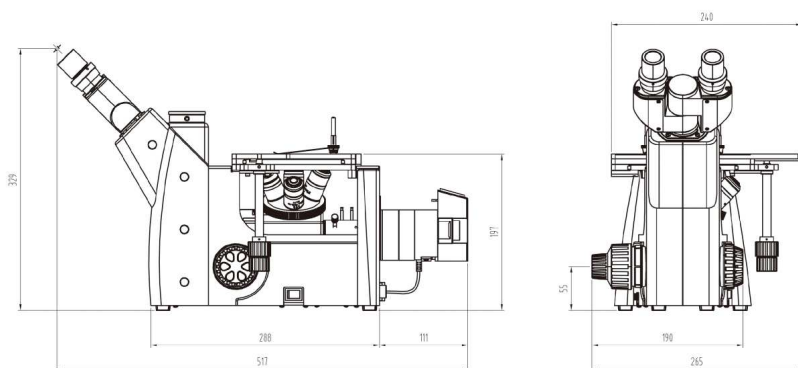
BH200M Series Metallurgical Microscopes Dimension Chart



XD Inverted Series Metallurgical Microscopes Dimension Chart



IE Inverted Series Metallurgical Microscopes Dimension Chart



XY Series Metallurgical Microscopes Specification

Specification		Model	
Part	Description	XY-MR	XY-MRT
Eyepiece	PL10X/22	●●	●●
	PL10X/22R with reticle	○	○
	PL10X/22T with diopter adjustment	○○	○○
	PL15X/16	○○	○○
Head	Infinity gemel binocular head. 30°inclined	●	●
	Infinity gemel trinocular head. 30°inclined adjustmnet diopte	○	○
	Infinity gemel digital head. 30°inclined	○	○
Objectives	Long working distance infinity plan achromatic metallurgical objective 5X	●	●
	Long working distance infinity plan achromatic metallurgical objective 10X	●	●
	Long working distance infinity plan achromatic metallurgical objective 20X	●	●
	Long working distance infinity plan Semi-achromatic metallurgical objective 50X	●	●
	Long working distance infinity plan Semi-achromatic metallurgical objective 100X	○	○
Nosepiece	Reversed quintuple nosepiece	●	●
Body	Reflection:Low position coaxial focus system with tension adjustable, coarse:28mm per rotation, fine precision 0.002mm; Specimen height can obtain 50mm	●	/
	Transmission & Reflection: Low position coaxial focus system with tension adjustable, coarse:28mm per rotation, fine precision 0.002mm; Specimen height can obtain 30mm	/	●
Illuminator	Reflection illuminator with field diaphragm and aperture	●	●
Condenser	N.A.0.7 swing achromatic condenser	●	●
Stage	Double layer mechanical stage with low position coaxial controls. Size:175mmX145mm, Moving range:76mmX42mm	●	●
	Metal Satge plate	●	/
	Glass stage plate	/	●
light sources	Wide-range voltage 90-240V , single 3W LED bulb	●	●
	Wide-range voltage 90-240V, 12V/50W halogen bulb	/	●
Filter	Interference filter (Blue≤480nm)	○	○
	Interference filter (Green 520nm-570nm)	○	○
	Interference filter (Red 630nm-750nm)	○	○
	Interference filter (White balance filter)	○	○
Photo device	Photo tube(with PK mount) 3.2× photo eyepiece	○	○
Digital camera device	C-mount and relay mirror	○	○
C-mount adapter	1/3X 、 1/2X C-mount adapter	○	○
Polarizer accessories	Polarizer board (Reflection)	○	○
	Polarizer board (Transmission)	○	○
	Fixed analyser board	○	○
	360° rotary analyser board	○	○
Pressing Machine	Pressing Machine	○	○
Other	Hexagon wrench (M3,M4)	●	●

● Standard specification *○* Optional parts

BH200M Series Metallurgical Microscopes Specification

Specification		Model
Part	Description	BH200M
Eyepiece	PL10X/18	●●
	PL10x/18R with reticle	○
	WF15X/13	○○
	WF15X/13R with reticle	○
	WF20X/10	○○
	WF20X/10R with reticle	○
Objective	Long working distance plan achromatic metallurgical objective 5X	●
	Long working distance plan achromatic metallurgical objective 10X	●
	Long working distance plan achromatic metallurgical objective 20X	○
	Long working distance plan achromatic metallurgical objective 50X	●
	Long working distance plan achromatic metallurgical objective 100X	○
Head	Gemel binocular head. 30°inclined, 360 rotatable, with adjustmnet diopter	●
	Gemel trinocular head. 30°inclined, 360 rotatable, with adjustmnet diopter	○
Focus	Coaxial focus system with tension adjustment and up-limited, coarse range:25mm, fine precision 0.002mm	●
Nosepiece	Quintuple nosepiece	○
	Quadruple nosepiece	●
Stage	Double layer mechanical stage, Size:140mmX132mm,	●
	attached 180mmX145mm plate stage to put bigger size sample.	
Illuminator	Reflection illumination,wide-range voltage 90-240V, with continuous intensity,	●
	with alterable aperture diaphragm and field diaphragm,	
Filter	6V/30W halogen bulb (philips 5761)	●
	Yellow Filter	○
	Green Filter	○
	Blue Filter	●
	Neutral Filter	○
C-mount adapter	1XCTV C-mount, with adjustable focusing	○
	1/2CTV (0.5X) C-mount, with adjustable focusing	○
	1/3CTV (0.35X) C-mount, with adjustable focusing	○
Photo device	3.2× photo eyepiece , Photo tube(with PK mount or MD mount)	○
Digital camera device	Relay mirror (C-mount)	○
Polarizer accessories	Polarizer board	○
	Analysar board	○

● Standard specification *○* Optional parts

XD Series Inverted Metallurgical Microscopes Specification

Specification		Model	
Part	Description	XD20M	XD30M
Eyepiece	PL10X/22	●●	●●
	PL10X/22R with reticle	○	○
	PL15X/16	○○	○○
Objectives	Long working distance infinity plan achromatic metallurgical objective 5X	●	●
	Long working distance infinity plan achromatic metallurgical objective 10X	●	●
	Long working distance infinity plan achromatic metallurgical objective 20X	●	●
	Long working distance infinity plan Semi-achromatic metallurgical objective 50X	●	●
	Long working distance infinity plan Semi-achromatic metallurgical objective 100X	○	○
Head	Infinity gemel binocular head. 45°inclined	●	/
	Infinity gemel trinocular head. 45°inclined	/	●
Nosepiece	Reversed quintuple nosepiece	●	●
Body	Low position coaxial focus system with tension adjustable,coarse:38mm per rotation, fine precision 0.002mm; Fixed stage:160mmX250mm	●	●
Accessories	Metal stage plate	●	●
	Mechanical mobile ruler	○	○
	Stage extension plate	○	○
Illuminator	Reflection Koehler illumination with alterable aperture diaphragm and centerable field diaphragm , wide-range voltage 90-240V , 12V/50W halogen bulb, with continuous intensity	●	●
Filter	Blue、 Green filter	●	●
Photo device	Photo tube(with PK mount) 3.2× photo eyepiece	○	○
Digital camera device	C-mount and relay mirror	○	○
C-mount adapter	0.5X 、 1X C-mount adapter	○	○
Polarizer accessories	360° rotary analyser , the polarizer and polarizer both can shift out the optical way	●	●

IE Series Inverted Metallurgical Microscopes Specification

Specification		Mode
Part	Description	IE200M
Eyepiece	PL10X/18	●●
	PL10X/18R with reticle	○
	WF15X/13	○○
	WF15X/13R with reticle	○
	WF20X/10	○○
	WF20X/10R with reticle	○
Head	Gemel trinocular head. 45°inclined, with adjustmnet diopter, inter pupillary range:64mm to 76mm, Light split ratio: 80%/20%	●
Objectives	Long working distance plan achromatic metallurgical objective 5X	●
	Long working distance plan achromatic metallurgical objective 10X	●
	Long working distance plan achromatic metallurgical objective 20X	●
	Long working distance plan achromatic metallurgical objective 50X	●
	Long working distance plan achromatic metallurgical objective 100X	●
Nosepiece	Quadruple nosepiece	●
Nosepiece	Quintuple nosepiece	○
Body	Low position coaxial focus system,coarse:38mm per rotation, fine precision 0.002mm	●
Stage	Mechanical stage, Size:180mmX155mm, Low position control by right hand, moving range: 75mmX40mm, precision:0.1mm	●
	Metal Stage Plate (Dia.12)	●
	Metal Stage Plate (Dia.25)	○
Illuminator	Reflected Koehler illumination with alterable aperture diaphragm and centerable field diaphragm , wide-range voltage 90-240V . Single 3W LED bulb, with continuous intensity	○
	Reflected Koehler illumination with alterable aperture diaphragm and centerable field diaphragm , wide-range voltage 90-240V . 6V30W halogen bulb, with continuous intensity	●
Filter	Blue filter	●
	Green Filter	●
	Yellow Filter	○
Polarizer accessories	360° rotary analyser , the polarizer and polarizer both can shift out the optical way	●
Vedio & Photo Device	Photo tube(with PK mount), 0.5XC-mount adapter, C-mount and relay mirror	○