
BS-6000 Series Metallurgical Microscope

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1. BS-6000A Metallurgical Microscope



BS-6000A



BS-6000AT(Transmitted)

Introduction

BS-6000A series metallurgical microscopes are designed for metallography analysis. With excellent optical system, ingenious stand and convenient operation, they will be your best choice.

Feature

1. Excellent infinite optical system.
2. High magnification objective with long working distance.
3. Comfortable operation with low position focus knob.
4. Easy, safe and reliable lamp replacement device.

Application

BS-6000A series metallurgical microscopes are widely used in industrial areas for PCB board, LCD display, metal structure observation and inspection. It also can be used in colleagues for metallography education and research.

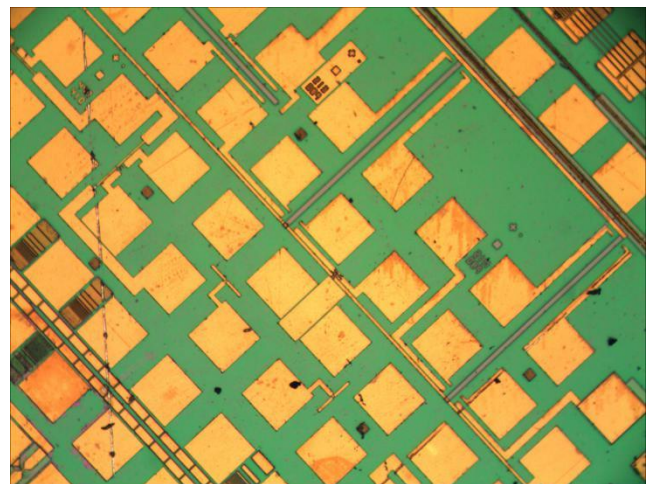
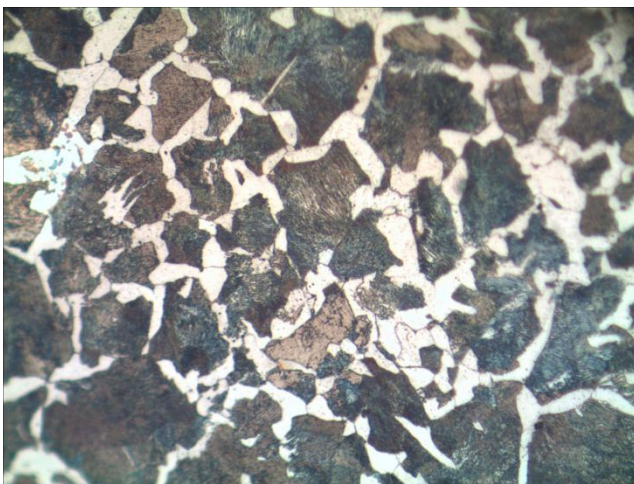
Specification

Item	Specification	BS-6000A	BS-6000AT
Viewing Head	Seidentopf type binocular head, inclined at 30°, 360° rotatable, interpupillary distance 48-75mm	●	
	Seidentopf type trinocular head, inclined at 30°, 360° rotatable, interpupillary distance 48-75mm, Light distribution: 20:80		●
Eyepiece	WF10×/18mm	●	●
	WF8×/18mm	○	○
	WF10×/18mm with 0.1mm Micrometer & cross hair	○	○
	WF12.5×/15mm	○	○
Infinite Plan	4×/0.1/∞/- WD 17.3mm	●	●
Achromatic	5×/0.12/∞/- WD 15.5mm	○	○
Objectives	10×/0.25/∞/- WD 10.0mm	●	●

	20×/0.40/∞/0 WD 5.8mm	○	○
	40×/0.60/∞/0 WD 2.9mm	●	●
	40×/0.65/∞/0 WD 0.52mm	○	○
	50×/0.75/∞/0 WD 0.32mm	○	○
	80×/0.90/∞/0 WD 0.2mm	○	○
	100×/0.80/∞/0 WD 2mm	○	○
Nosepiece	Quadruple Nosepiece	●	●
Stage	Double layer mechanical stage 150×140mm, moving range 75×50mm	●	●
Focusing	Coaxial Coarse & Fine Adjustment, Fine Division 0.002mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.2mm per Rotation, Range 20mm	●	●
Illumination	Kohler Illumination, Epi-illuminator with iris aperture diaphragm and iris field diaphragm, 6V/20W Halogen lamp, Brightness adjustable	●	●
	Kohler Illumination, Epi-illuminator with iris aperture diaphragm and iris field diaphragm, 3W LED illumination, Brightness adjustable	○	○
	Transmitted Illumination, 6V/20W Halogen Lamp, Brightness Adjustable	○	○
Filters	Blue, Green, Yellow & Ground filters	●	●
Polarizing Set	Polarizer and Analyzer	○	○
Specimen Presser	For metallurgical specimen preparation	○	○
Photo Adapter	Used to connect DSLR camera to the microscope	○	○
Video Adapter	1×, 0.5× C-mount adapter	○	○

Note: ●Standard parts, ○Optional parts

Sample Image



2. BS-6000B Inverted Metallurgical Microscope



BS-6000B



BS-6000B with double layer X-Y stage

Introduction

BS-6000B not only can identify and analyze a variety of metals, alloys, non-metallic material and the organizational structure and integrated circuits, but also micro-particles, wires, fibers, surface coating such as some of the surface conditions. Digital cameras can be added to the trinocular tube to take images and make image analysis.

Features

1. Infinite optical system provides excellent optical functions.
2. With the stable stand structure, advanced stage design and comfortable operation.

Application

BS-6000B is widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, it also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, other non-metallic materials and so on.

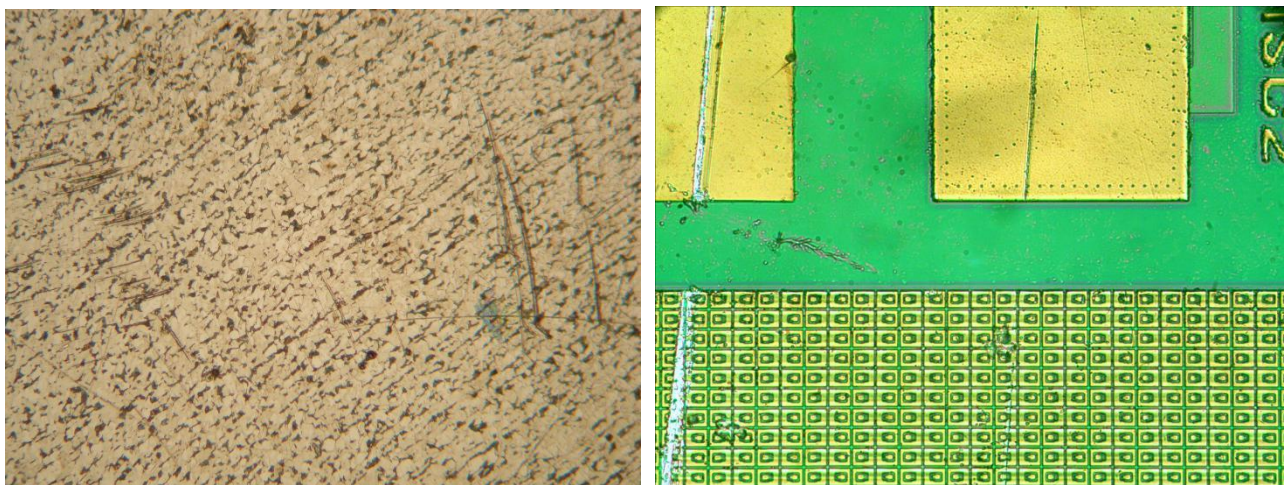
Specification

Item	Specification	BS-6000B
Optical System	Infinite Optical System	●
Viewing Head	Trinocular head inclined at 30°, interpupillary distance 48-75mm	●
Eyepiece	High-point, extra wide field eyepiece EW10×/ 20mm	●
Infinite Plan Achromatic Objective	4×/ 0.1/∞/- WD 17.3mm	●
	5×/0.12/∞/- WD 15.4mm	○
	10×/0.25/∞/- WD 10.0mm	●
	20×/0.40/∞/0 WD 5.8mm	●
	40×/0.65/∞/0 WD 0.52mm	●

	40×/0.60/∞/0 WD 2.9mm	○
	50×/0.75/∞/0 WD 0.32mm	○
	80×/0.90/∞/0 WD 0.2mm	○
	100×/0.80/∞/0 WD 2mm	○
Nosepiece	Quintuple nosepiece	●
Stage	Plain stage with slide clips 160×250mm	●
	Attachable mechanical stage, X-Y coaxial control, moving range 120×78mm	○
	Double layer mechanical stage 226×178mm, Moving range 50×50mm	○
	Auxiliary stage	○
Focusing	Coaxial coarse & fine adjustment, Vertical objective movement, Coarse stroke 37.7mm per rotation, Fine stroke 0.2mm per rotation, Fine Division 0.002mm. Moving range upto 8mm, down 3mm	●
Kohler Illumination	Halogen lamp 6V/ 30W, Kohler illumination	●
Filter	Blue, Yellow, Green and Frosted filters	●
Polarization Set	Polarizer and Analyzer	●
Specimen Presser	For metallurgical specimen preparation	○
Photo Adapter	Used to connect DSLR camera to the microscope	○
Video Adapter	1×, 0.5× C-mount adapter	○

Note: ●Standard parts, ○Optional parts

Sample Image



3. BS-6002R/TR Metallurgical Microscope



BS-6002TR



BS-6002TTR

Introduction

BS-6002R/TR Series metallurgical microscopes are high level professional microscopes which are specially designed for metallurgical analysis. With excellent optical system, ingenious stand and convenient operation, they will be your best choice.

Features

1. Infinite optical system provide excellent resolution and definition.
2. Infinite long working distance objective, provide wide space for specimens.
3. Powerful transmitted and reflected system with Kohler illumination.
4. Polarizing attachment and other accessories are available.

Application

BS-6002R/TR series metallurgical microscopes are widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, they also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

Specification

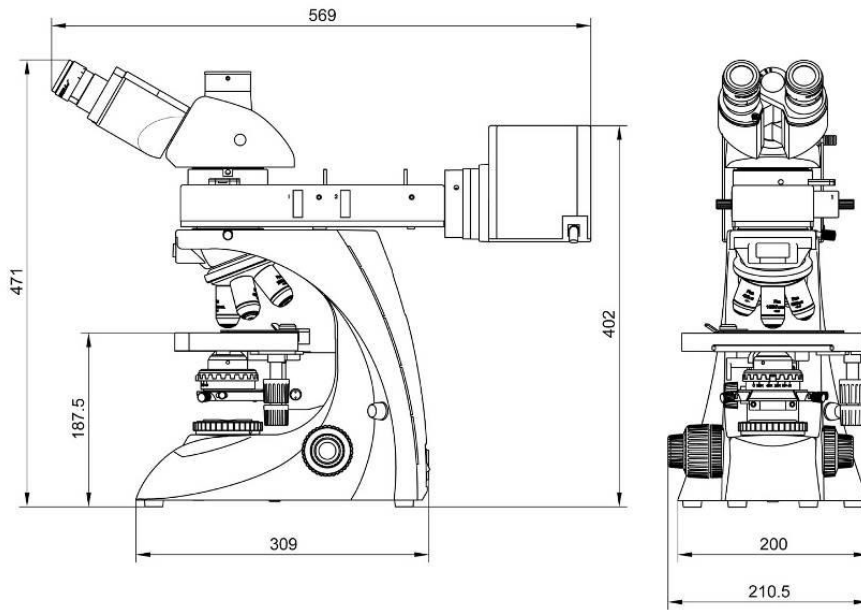
Item	Specification	BS-6002 BR	BS-6002 BTR
Optical System	Infinite Optical System	•	•
Viewing Head	Seidentopf Binocular Head, Inclined 30°, Rotatable 360°, Interpupillary Distance: 48-76mm, Tube diameter: 30mm	•	•

	Seidentopf Trinocular Head, Inclined 30°, Rotatable 360°, Interpupillary Distance: 48-76mm, Tube diameter: 30mm. Light distribution (both): 100: 0 (100% for eyepiece), 80:20 (80% for trinocular head and 20% for eyepiece)	○	○
Eyepieces	WF10× / 22mm (adjustable)	●	●
	WF10× / 22mm (adjustable , reticule 0.1mm)	●	●
Long Working Distance Infinite Plan Objective	5×/0.10 W.D=24.23mm	●	●
	10×/0.25 W.D=18.48mm	●	●
	20×/0.40 (S) W.D=8.35mm	●	●
	40×/0.65 (S) W.D=3.90mm	○	○
	50×/0.7 (S) W.D=1.95mm	●	●
	80×/0.80 (S) W.D=0.85mm	○	○
	100×/0.90 (S) W.D=1.00mm	○	○
Nosepiece	Backward Quintuple Nosepiece	●	●
Mechanical Stage	Stage size: 200mm × 150mm, Travel range: 77mm × 52mm. Stage fast lowering unit: Up-Down moving range can be increased to 50mm	●	
	Stage size: 182mm × 140mm, Travel range: 77mm × 52mm Two slid holder, Metal plate size: 200mm x 150mm		●
Focus	Coaxial Coarse and Fine Focusing, Fine Division 0.002mm, Fine Stroke 0.2mm per Rotation, Moving Range 25mm. Tightness adjustment, upper distance limiter	●	●
Micrometer	Stage Micrometer 0.01mm	○	○
Polarizing Unit	Polarizing and Analyzer attachment	●	●
Condenser	Abbe N.A. 1.25 with Iris Diaphragm		●
Illumination	Reflected Illumination, 12V/50W Halogen lamp (Input voltage: 100V~240V), Field diaphragm	●	●
	Transmitted Illumination, 6V/20W Halogen lamp (Input voltage: 100V~240V), Field diaphragm, Center adjustable.		●
Filter	Blue	●	●
	Green	○	○
	Amber	○	○
	Grey	○	○
C-mount Adapter	1× C-mount	○	○
	0.5× C-mount (Focus Adjustable)	○	○
Packing	Packing Size: 750×360×450mm, Gross Weight: 16 kgs, Net Weight: 12kgs	●	●

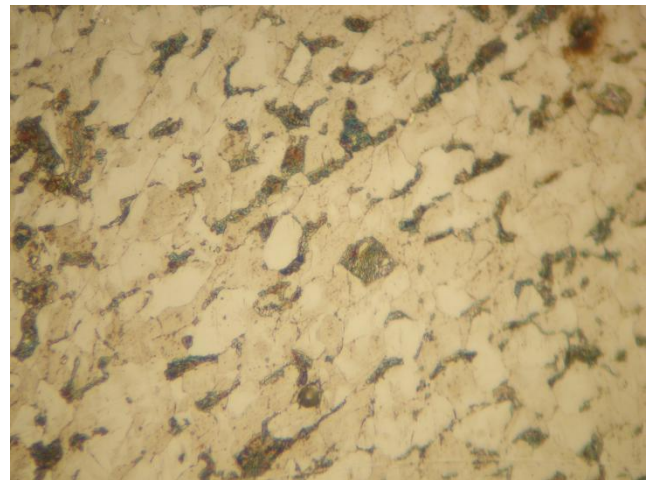
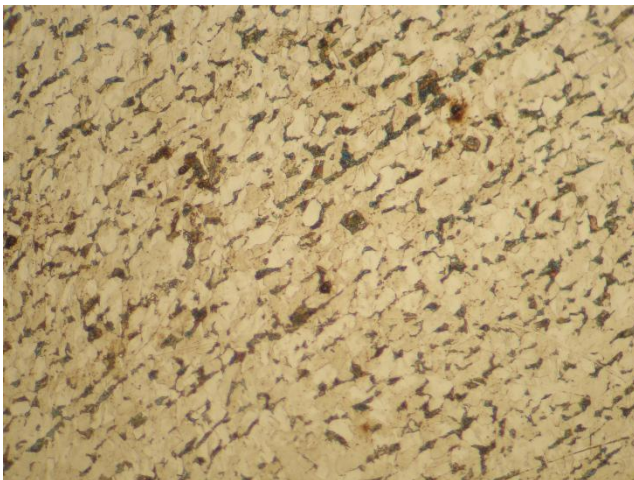
Note: ●Standard Outfit, ○Optional

Dimension

Unit: mm



Sample Image



4. BS-6003 Inverted Metallurgical Microscope



Introduction

BS-6003 inverted metallurgical microscope is widely used in schools and laboratory to identify and analyze structure of metals and alloys, as well as do researching on metallurgical material after heating.

Feature

1. Perfect for education, experiment and normal testing.
2. Easy operation, also supply high quality image.

Specification

Item	Specification	BS-6003M	BS-6003B	BS-6003T
Optical System	Finite optical system	●	●	●
Viewing Head	Monocular viewing head	●	○	○
	Sliding binocular viewing head	○	●	○
	Tinocular viewing head	○	○	●
	Integrated sliding binocular digital head(3.0MP)	○	○	○
Eyepiece	Wide field eyepiece WF10×/18mm	●	●	●
	Wide field eyepiece WF12.5×/14mm	●	●	●
	Wide field eyepiece WF16×/11mm	○	○	○
Objective	Achromatic objective 10×/0.25, WD=6.3mm	●	●	●
	Plan achromatic objective 40×/0.65, WD=0.7mm	●	●	●
	LWD Plan achromatic objective 50×/0.75, WD=2mm	○	○	○
	Achromatic objective 100×/1.25(oil), WD=0.1mm	●	●	●
Nosepiece	Triple nosepiece	●	●	●
Focusing	Coaxial coarse and fine adjustment, Fine division 0.002mm, Focusing range 30mm	●	●	●
Stage	Mechanical stage 180×155mm, Moving range 40×30mm, Stage Clips	●	●	●
Illumination	Kohler illumination, 12V/20W Halogen lamp, brightness adjustable	●	●	●
Filter	Blue, Green, Yellow and Ground filter	●	●	●

Note: ● Standard Outfit, ○ Optional

5. BS-6004 Inverted Metallurgical Microscope



Introduction

BS-6004 inverted metallurgical microscope adopts professional metallurgical objective and plan eyepiece to provide superior image, high resolution and comfortable observation. It is widely used in teaching and research of metallographic analysis, semiconductor silicon wafer inspection, geology mineral analysis, precision engineering and similar fields.

Feature

1. Low position high precision coaxial focusing system, left and right side can be adjusted. Easy to get a clear and comfortable image. Coarse stroke 38mm, fine focus accuracy 0.002mm.



2. Large size mechanical stage provides a more efficient working environment for the user, right hand operate. Size 180 × 155mm, moving range: 75 × 40mm.



3. Reflected Koehler illumination system with iris diaphragm and centerable field diaphragm, wide range voltage 90-240V, 6V/30W high brightness halogen bulb and long working life LED bulb(optional).



Specification

Item	Specification	BS-6004
Optical System	Finite optical system	●
Viewing Head	Trinocular viewing head, 45° inclined, Diopter adjustment ±5 for each side, Interpupillary distance: 54-75mm, light distribution: binocular: trinocular =80%:20%	●
Eyepiece	High eyepoint wide field plan eyepiece PL10×/18mm	●
	High eyepoint wide field eyepiece WF15X/13mm	○
	High eyepoint wide field eyepiece WF20×/10mm	○
Metallurgical Objective	LWD plan achromatic metallurgical objective 5×/0.13, WD=15.5mm	●
	LWD plan achromatic metallurgical objective 10×/0.25, WD=8.7mm	●
	LWD plan achromatic metallurgical objective 20×/0.40, WD=8.8mm	●
	LWD plan achromatic metallurgical objective 50×/0.60, WD=5.1mm	●
	LWD plan achromatic metallurgical objective 100×/0.8, WD=2.0mm	○
Nosepiece	Backward quadruple nosepiece	●
	Backward quintuple nosepiece	○
Focusing	Low position coaxial coarse and fine adjustment. With tightness adjustment. Coarse stroke per rotation 38mm; fine focus accuracy: 2um.	●
Stage	Three-layers mechanical stage, size 180mm×155mm, right hand low position control, Moving range:75mm× 40mm; Metal stage plate, center hole dia.φ12mm	●
Illumination	Reflected Koehler illumination with iris diaphragm and centerable field diaphragm, wide-range voltage 90-240V, 5W LED bulb, with continuous intensity adjustment.	●
	Reflected Koehler illumination with iris diaphragm and centerable field diaphragm, wide-range voltage 90-240V, 6V/30W halogen bulb, with continuous intensity adjustment.	○
Polarizing kit	Polarizer and the analyzer can be removed from the optical path, the analyzer can be rotated 360°.	○
Video Adapter	1× C-mount adapter, focus adjustable	○
	0.5× C-mount adapter, focus adjustable	●
Filter	Blue filter (φ 32mm)	●

Note: ● Standard Outfit, ○ Optional

6. BS-6005 Inverted Metallurgical Microscope



Introduction

BS-6005 series inverted metallurgical microscopes adopt professional metallurgical objective and plan eyepiece to provide superior image, high resolution and comfortable observation. They combine bright field, dark field and polarizing observation. They are widely used in teaching and research of metallographic analysis, semiconductor silicon wafer inspection, geology mineral analysis, precision engineering and similar fields.

Feature

1. Dark field objectives are available, make observation in dark & bright field.
2. Wide view field eyepiece, view field up to 22mm for comfortable observation.



3. 12V/50W Halogen lamp provide high intensity illumination, can detect the details better.
4. High quality bright field, bright field&dark field metallurgical objective.



Metallurgical LWD Infinite Plan Objectives



Metallurgical LWD Infinite Plan Objectives for Bright & Dark Field

5. Large size (210 mm×180mm) three-layer working stage, more choice for samples.

6. Light distribution (both): 100 : 0 (100% for eyepiece); 80 : 20 (80% for trinocular head and 20% for eyepiece), easy to use camera and have high definition and high resolution images.



7. Polarizing set is standard.



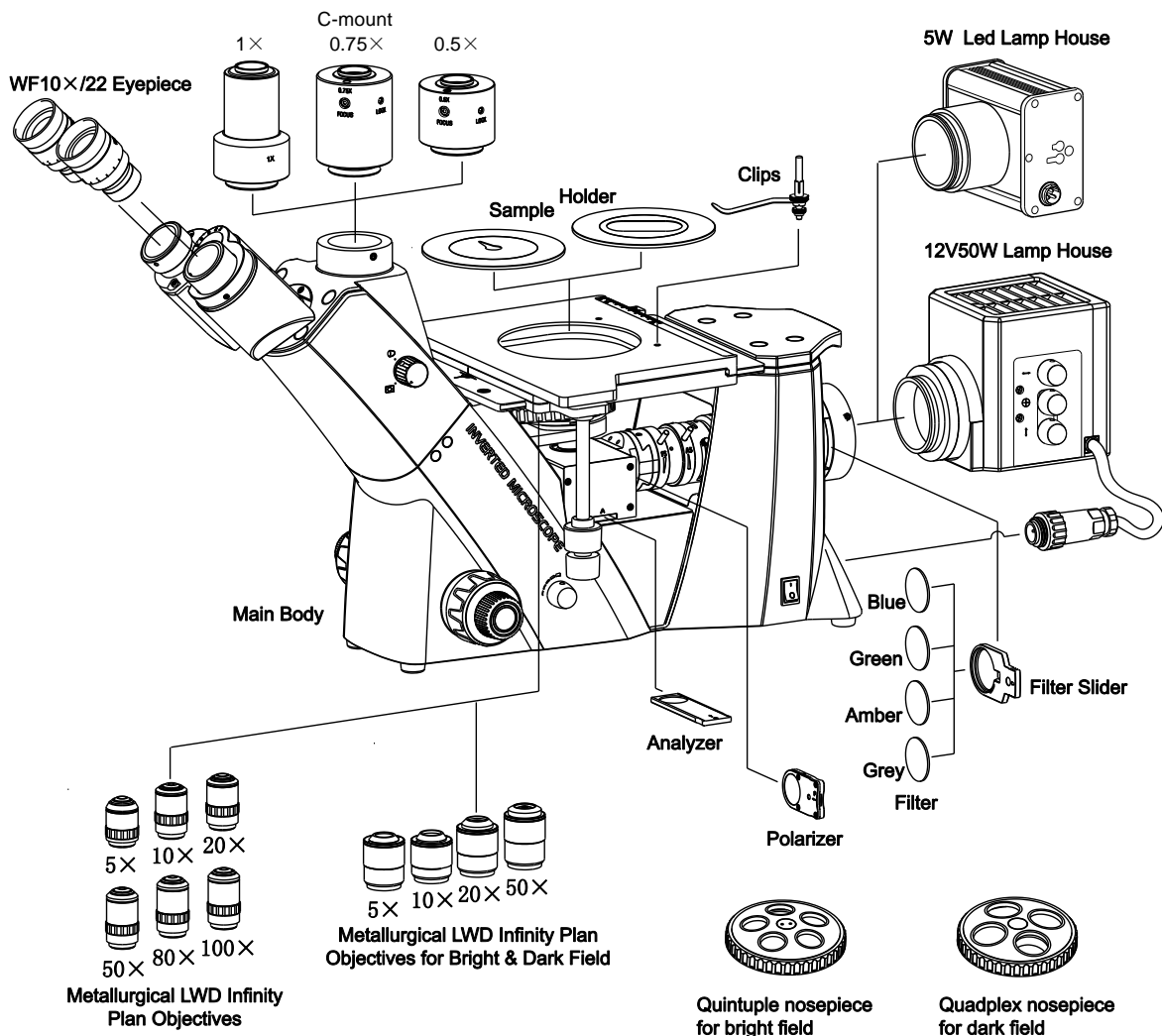
Specification

Item	Specification	BS-6005	BS-6005D
Optical System	Infinite optical system	●	●
Viewing Head	Seidentopf trinocular viewing head, 30° inclined, Interpupillary distance: 48-76mm, Light distribution (both): 100: 0 (100% for eyepiece), 80:20 (80% for trinocular head and 20% for eyepiece)	●	●
Eyepiece	WF10× / 22mm (adjustable)	●	●
	WF10× / 22mm (adjustable, reticule 0.1mm)	●	●
Metallurgical LWD Infinite Plan Objectives	LPL 5×/0.13, WD=16.04mm	●	○
	LPL 10×/0.25, WD=18.48mm	●	○
	LPL 20×/0.40, WD=8.35mm	●	○
	LPL 50×/0.70, WD=1.95mm	●	○
	LPL 80×/0.80, WD=0.85mm	○	○
Metallurgical LWD Infinite Plan Objectives for Bright & Dark Field	LPL 100×/0.9(Dry), WD=1.1mm	○	○
	M Plan 5×/0.13 BD, WD=16.04mm		●
	M Plan 10×/0.25 BD, WD=18.48mm		●
	M Plan 20×/0.40 BD, WD=8.35mm		●
Nosepiece	M Plan 50×/0.70 BD, WD=1.95mm		●
	Quintuple nosepiece	●	
Focusing	Quadruple nosepiece (specially for bright&dark field objectives)		●
	Low position coaxial coarse and fine adjustment. With tightness adjustment. Coarse stroke per rotation 10mm, fine stroke per rotation 0.2mm; fine division 2μm.	●	●

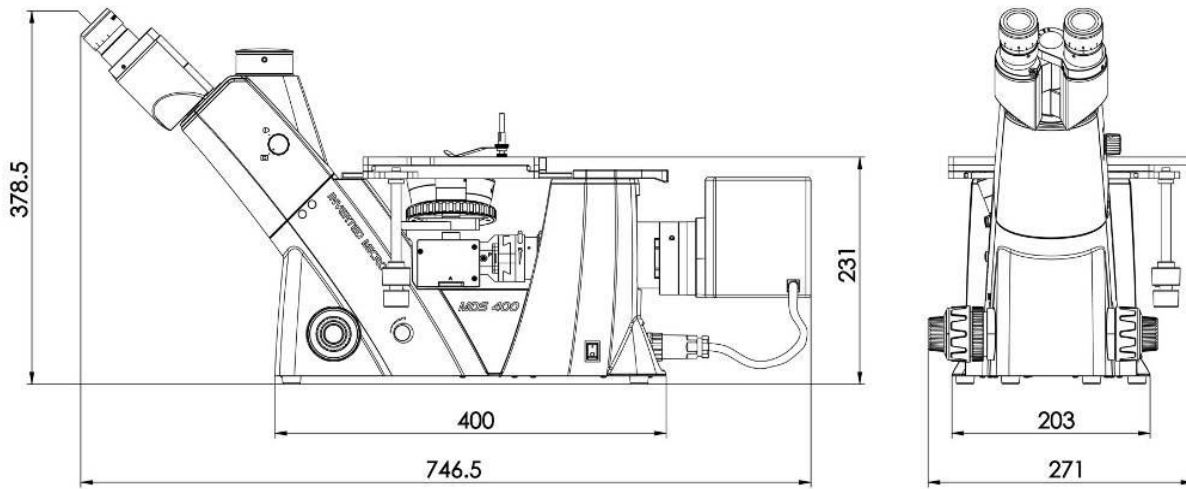
Stage	Three-layers mechanical stage, size 210mm×180mm, right hand low position control, Moving range 50mm× 50mm, scale 0.1mm	●	●
Illumination	Reflected Koehler illumination with iris diaphragm and centerable field diaphragm, 12V/50W Halogen (Input voltage: 100V-240V)	●	●
	Reflected Koehler illumination with iris diaphragm and centerable field diaphragm, 5W LED lamp (Input voltage: 100V-240V)	○	○
Auto power on-off system	Power off automatically upon user leaving 10 minutes, power on automatically upon user approaching	○	○
Polarizing kit	Polarizer and the analyzer	●	●
Filter	Blue filter	●	●
	Green/ Amber/ Grey	○	○
Video Adapter	1× C-mount adapter, focus adjustable	○	○
	0.75× C-mount adapter, focus adjustable	○	○
	0.5× C-mount adapter, focus adjustable	○	○
Packing	Packing Size: 660mm×590mm×325mm, Gross Weight: 17 kgs, Net Weight: 12.5 kgs	●	●

Note: ● Standard Outfit, ○ Optional

System Diagram



Dimension



Unit: mm

7. BS-6010R/TR Metallurgical Microscope



BS-6010BR



BS-6010BTR

Introduction

BS-6010R/TR Metallurgical Microscopes are high level metallurgical microscopes with Reflected / Transmitted & Reflected illumination system, they not only can be used to identify and analyze a variety of metals, alloys, non-metallic material and the organizational structure and integrated circuits, but also can be applied to micro-particles, wires, fibers, surface coating such as some of the surface conditions. Digital cameras can be added to the trinocular tube to take images and make image analysis.

Feature

1. Infinite optical system provides excellent optical functions.
2. Laboratory metallurgical microscope, including bright field, dark field, polarization and DIC observation system.
3. Powerful transmitted and reflected system with Kohler illumination.
4. Ideal instrument for industry inspection and science research.

Application

BS-6010R/TR is widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, it also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

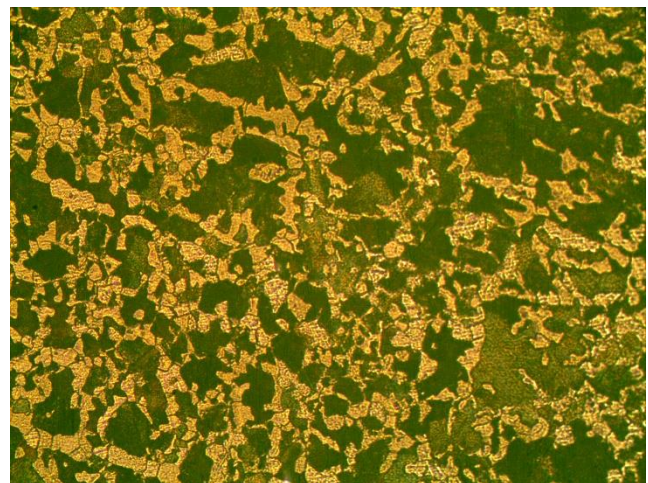
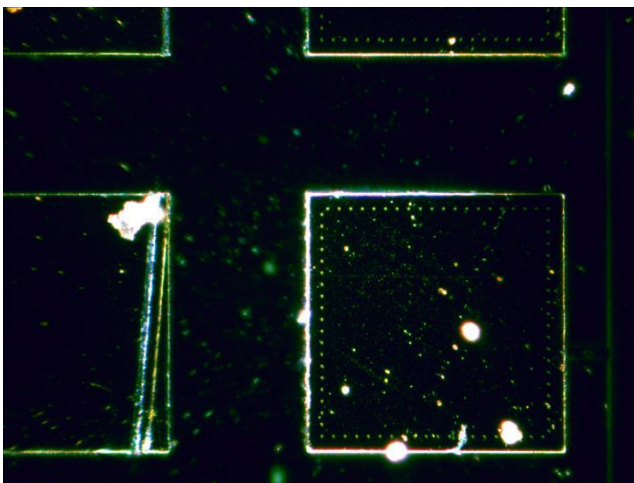
Specification

Item	Specification	BS-6010BR	BS-6010BTR
Optical System	Infinite Optical System	●	●
Viewing Head	Siedentopf binocular viewing head, inclined at 30°, interpupillary distance 48-75mm	●	●
	Siedentopf trinocular viewing head, inclined at 30°, interpupillary distance 48-75mm	○	○

Extra Wide Field Eyepiece	WF10×/22mm	●	●
	WF10×/22mm Eyepiece with scale of cross hair	●	●
	EW15×/16mm	○	○
	EW20×/12mm	○	○
Infinite Plan Achromatic Objective	5×/0.12/∞/- (BF&DF) LWD 10mm	●	●
	10×/0.25/∞/- (BF&DF) LWD 10mm	●	●
	20×/0.40/∞/0 (BF&DF) LWD 5.0mm	●	●
	50×/0.75/∞/0 (BF&DF) LWD 1.3mm	●	●
	100×/0.90(Dry)/∞/0 (BF&DF) LWD 0.7mm	●	●
	40×/0.65/∞/0.17 (BF) WD 0.6mm		●
	100×/1.25/∞/0.17 (BF) WD 0.16mm		●
Nosepiece	Backward quintuple nosepiece	●	●
Stage	Double layer mechanical stage 216×150mm, Moving range 78×54mm		●
	Double layer mechanical stage 188×148mm, Moving range 78×54mm	●	
Focusing	Coaxial coarse & fine adjustment, fine division 2μm, moving range 30mm	●	●
Kohler Illumination	Reflected 12V/50W Halogen light, Center and brightness adjustable	●	●
	Transmitted 12V/20W Halogen light, Center and brightness adjustable		●
	Polarizer and analyzer	●	●
	DIC attachment	○	○
	Green, Gray and ground glass filter	●	●
Accessories	Specimen Presser	○	○
	Photo Adapter(Used to connect DSLR camera to the microscope)	○	○
	0.5× Video adapter with C-mount	●	●
	Stage Micrometer 0.01mm	●	●

Note: ●Standard parts, ○Optional parts

Sample Images



8. BS-6012RF/TRF Laboratory Metallurgical Microscope



BS-6012RF/TRF

Introduction

BS-6012RF/TRF metallurgical microscopes are high level professional microscopes which are specially designed for metallurgical analysis and industrial inspections. With excellent optical system, ingenious stand and convenient operation, they will be your best choice.

Feature



1. With the most suitable viewing degree, 30 °inclined head holds everyone in the best working state, less tension and fatigue. You can adjust the interpupillary distance to optimum according to the scale on viewing head.
2. Reflected illuminator with field/aperture diaphragm and oblique light device, as well as slots for polarizing kit and filters, adopts Koehler illumination system.
 - 2.1 Comparing with other LED, single 5W LED with warm white light(3000-3300K) greatly reduces the fatigue on observer's vision.
 - 2.2 With pull-rod devices for adjusting the centers of field and aperture diaphragm, stray light can be eliminated by expanding or shrinking the illumination zone.
 - 2.3 Simple polarizing observation is available with insert polarizer kit. More ideal images are here with different filters.
3. The highest sample can be tested is 28mm with transmitted & reflected frame while 78mm high sample is available with reflected frame, as the stage can be dropped 50mm by loosening the screw in the stage holder.
4. M4 wrench for socket head screws places in the frame, making the best of the available space and improving your working efficiency.
5. Up-limit device is helpful to avoid the damage caused by impact between sample and objective lens.
6. Using the outstanding swing-out condenser system, much more transmitted light can be through with bigger numerical.

Application

BS-6012RF/TRF are widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, they also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings and other non-metallic materials and so on.

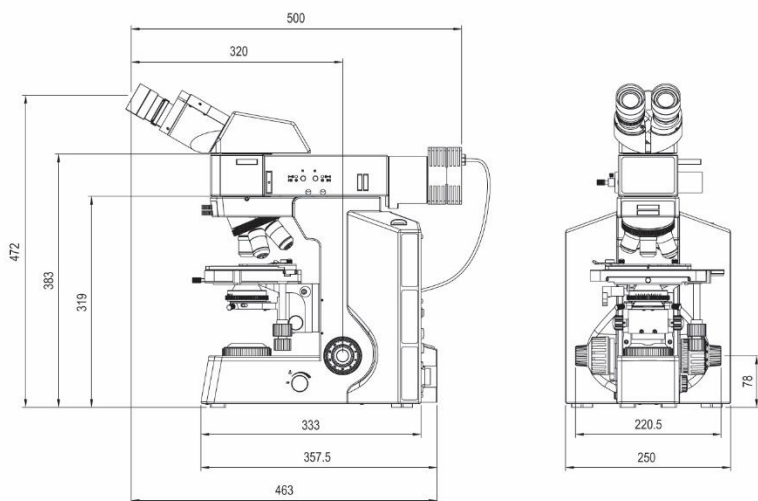
Specification

Item	Specification	BS-6012RF	BS-6012TRF
Optical System	Infinite optical system, Tube length 180mm, parfocal distance 45mm	●	●
Viewing Head	Siedentopf trinocular viewing head, inclined at 30°, interpupillary distance 54mm-75mm, left diopter ±5 adjustable, splitting ratio R:T=100:0 or 50:50, eyepiece tube Φ30mm	●	●
	Siedentopf binocular viewing head, inclined at 30°, interpupillary distance 54mm-75mm, left diopter ±5 adjustable, eyepiece tube Φ30mm	○	○
Eyepiece	High eye-point wide field plan eyepiece PL10×/22mm	●	●
	High eye-point wide field plan eyepiece PL10×/22mm, with reticle		
	High eye-point wide field plan focusing eyepiece PL10×/22mm		
	High eye-point wide field plan eyepiece PL15×/16mm		
Infinite LWD Plan	5×/ 0.15/∞/ 0 (BF) WD 10.80mm	●	●

Achromatic	10×/ 0.30/∞/ 0 (BF) WD 10.0mm	●	●
Metallurgical	20×/ 0.45/∞/ 0 (BF) WD 4.00mm	●	●
Objective	50×/ 0.55/∞/ 0 (BF) WD 7.90mm	●	●
	100×/ 0.80/∞/ 0 (BF) WD 2.10mm	●	●
Nosepiece	Backward quintuple nosepiece	●	●
Maximum	28mm		●
Sample Height	78mm	●	
Focusing	Transmitted & Reflected frame, coaxial focus system with tension adjustment and up-limited device, moving range: 28mm, fine precision: 0.002mm. Stage can be adjusted up and down, 28mm high sample is available.		●
	Reflected frame, coaxial focus system with tension adjustment and up-limited device, moving range: 28mm, fine precision: 0.002mm. Stage can be adjusted up and down, 78mm high sample is available.	●	
Stage	Double layer mechanical stage with X-Y coaxial adjustment, size: 175mm×145mm, moving range: 76mm×42mm.	●	
	Metal plate for transmitted frame; glass plate for transmitted & reflected frame.		●
Reflected Illumination	Wide-range voltage 100V-240V, AC50/60Hz, reflected lamp-house with single 5W LED, warm color. Koehler illuminator with oblique light device, center adjustable field and aperture diaphragm	●	●
Transmitted Illumination	Wide-range voltage 100V-240V, AC50/60Hz, transmitted lamp-house with single 5W LED, warm color.		●
Condenser	N.A.0.9 swing-out achromatic condenser for transmitted frame, with center adjustable aperture iris diaphragm.		●
Other Accessories	Yellow/neutral/IF550/LBD filter for transmitted light		○
	Digital camera adapter: 1X, 0.67X, 0.5X focusing C-mount adapter	○	○
	3.2X photo eyepiece	○	○
	Photo tube with PK or MD mount for DSLR camera	○	○
	Relay lens	○	○
	Interference filter for reflected light: Blue filter ≤ 480nm; Green filter 520nm~570nm; Red filter 630~750nm; White balance filter	○	○
	High precision micrometer, scale value 0.01mm	○	○

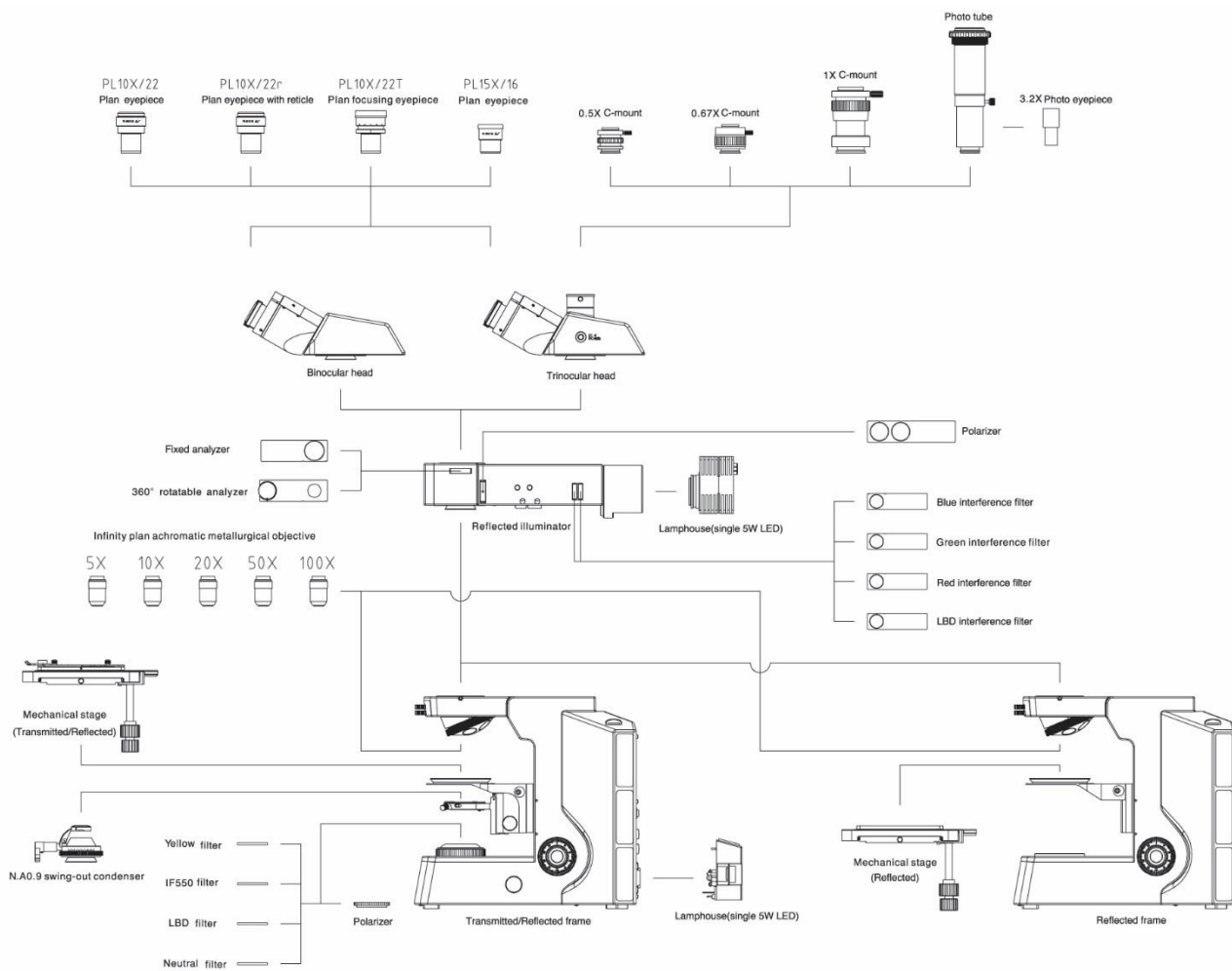
Note: ●Standard Outfit, ○Optional

Dimension

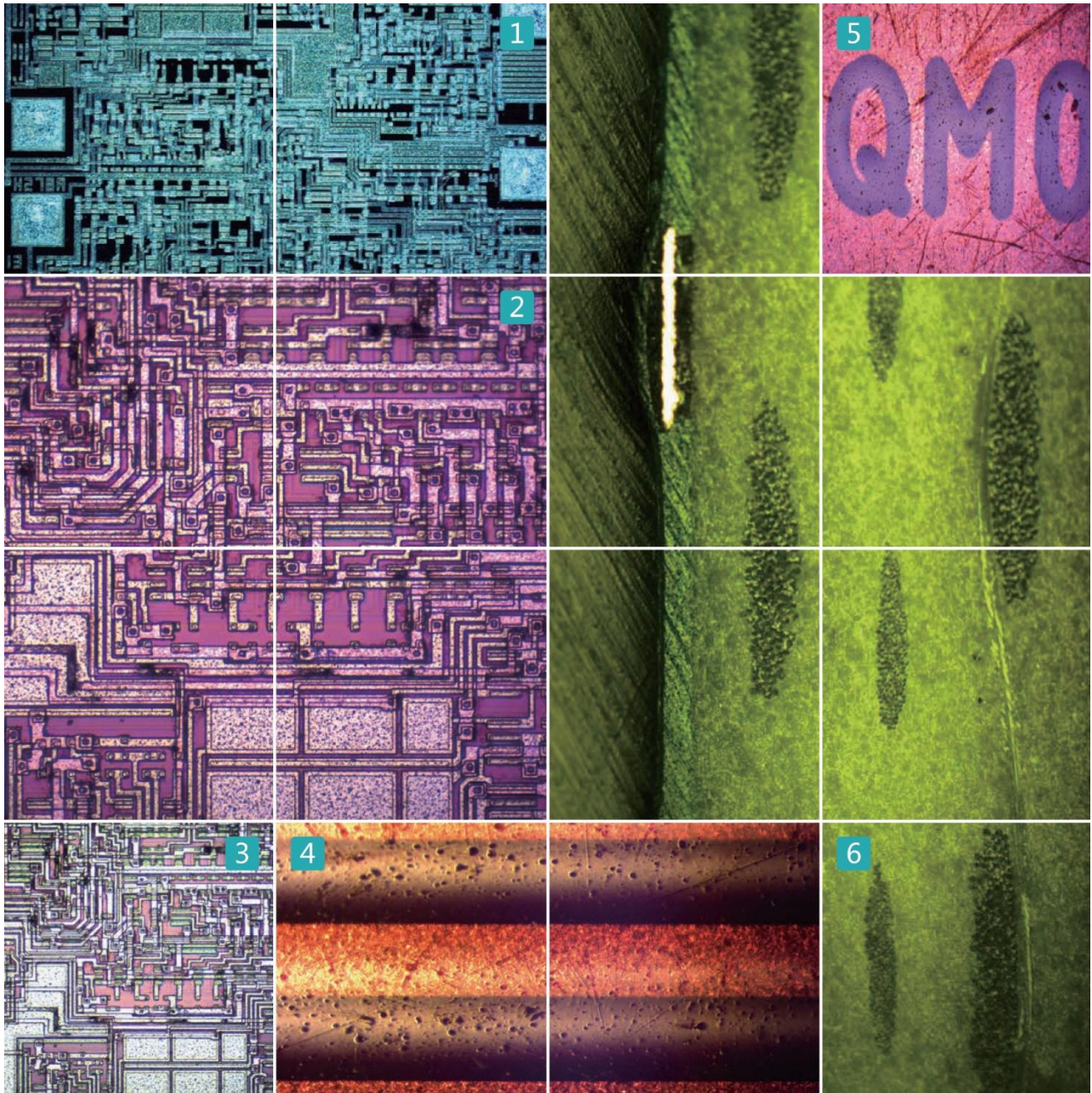


Unit: mm

System Diagram



Sample Image



1,2,3 are Bright field image
4,5 are Oblique light image
6 is Simple polarizing image

9. BS-6020RF/TRF Laboratory Metallurgical Microscope



BS-6020TRF

Introduction

BS-6020RF/TRF metallurgical microscopes are high level professional microscopes which are specially designed for metallurgical analysis. With excellent optical system, ingenious stand and convenient operation, they will be your best choice.

Feature

1. Laboratory metallurgical microscope, including bright field, dark field and polarization observation system.
2. Powerful transmitted and reflected system with Kohler illumination.
3. Ideal instrument for metallurgical analysis, industry inspection and science research.

Application

BS-6020RF/TRF are widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, they also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

Specification

Item	Specification	BS-6020RF	BS-6020TRF
Optical System	Infinite optical system	●	●
Viewing Head	Siedentopf trinocular viewing head, inclined at 30°, interpupillary distance 48mm-75mm	●	●
Eyepiece	Extral wide field eyepiece EW10×/22mm, eyepiece tube Φ30mm	●	●
Infinite Plan Achromatic Objective	5×/ 0.12/∞/ - (BF) WD 15.5mm	●	●
	10×/ 0.25/∞/ - (BF&DF) WD 10.0mm	●	●
	20×/ 0.4/∞/ 0 (BF&DF) WD 4.3mm	●	●
	50×/ 0.75/∞/ 0 (BF) WD 0.32mm	●	●
	100×/ 0.8/∞/ 0 (BF) WD 2mm	●	●
	40×/ 0.65/∞/ 0.17 WD 0.54mm		●
	100×/ 1.25/∞/ 0.17 WD 0.13mm		●
	5×/ 0.12/∞/ - (BF&DF) WD 12mm	○	○
	40×/ 0.6/∞/ 0 (BF&DF) WD 2.9mm	○	○
	50×/ 0.75/∞/ 0 (BF&DF) WD 0.32mm	○	○
100×/ 0.8/∞/ 0 (BF&DF) WD 2mm	○	○	
Maximum Sample Height	30mm		●
	50mm	●	
Reflected Light	24V/100W Halogen light, Brightness adjustable	●	●
	Kohler illumination and aspherical condenser	●	●
	Polarizer and analyzer	○	○
	An integrate device for polarizer and analyzer	○	○
	Blue, Green, Yellow and Ground glass filter	●	●
Transmitted Light	Swing-out condenser NA0.9/ 0.25		●
	24V/100W Halogen light and aspherical condenser		●
	Blue filter		●
Filter	ND25, ND6	○	○
Focusing	Coaxial Coarse and Fine Adjustment, Fine Division 0.001mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.1mm per Rotation, Moving Range 30mm	●	●
Nosepiece	Backward quintuple nosepiece	●	●
Stage	Double layer mechanical stage(without hole) 186×138mm/ 74mm×50mm	●	
	Double layer mechanical stage 186×138mm/ 74mm×50mm		●
	Glass specimen preparation plate	○	○
	Specimen preparation plate		●
	Slide glass		●
Accessories	Specimen Presser	○	○
	Photo Attachment	○	○
	Video Attachment, C-mount 1×, 0.5×	○	○

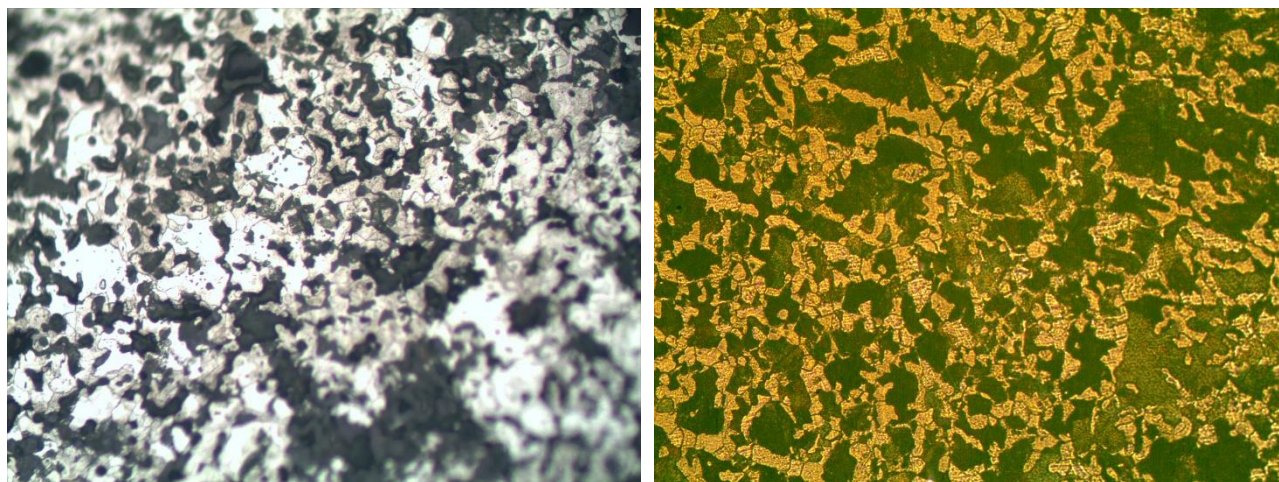
Note: ●Standard Outfit, ○Optional

Accessory



Specimen Presser

Sample Image



10. BS-6022RF/TRF Laboratory Metallurgical Microscope



BS-6022TRF

Introduction

BS-6022RF/TRF metallurgical microscopes are high level professional microscopes which are specially designed for metallurgical analysis. With excellent optical system, ingenious stand and convenient operation, they will be your best choice. DIC observation attachment is optional for these microscopes to meet some special requirements.

Features

1. Laboratory metallurgical microscope, including bright field, dark field and polarization observation system, DIC attachment is also optional.
2. Powerful transmitted and reflected system with Kohler illumination.
3. Ideal instrument for metallurgical analysis, industry inspection and science research.

Application

BS-6022RF/TRF are widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, they also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

Specification

Item	Specification	BS-6022RF	BS-6022TRF
Optical System	Infinite optical system	●	●
Viewing Head	Siedentopf trinocular viewing head, inclined at 30°, interpupillary distance 48mm-75mm	●	●
Eyepiece	Extral wide field eyepiece EW10×/22mm, eyepiece tube Φ30mm	●	●
Infinite Plan Achromatic Objective	5×/ 0.12/∞/ - (BF&DF) WD 12mm	●	●
	10×/ 0.25/∞/ - (BF&DF) WD 10.0mm	●	●
	20×/ 0.4/∞/ 0 (BF&DF) WD 4.3mm	●	●
	40×/ 0.65/∞/ 0.17 WD 0.54mm		●
	100×/ 1.25/∞/ 0.17 WD 0.13mm		●
	40×/ 0.6/∞/ 0 (BF&DF) WD 2.9mm	○	○
	50×/ 0.75/∞/ 0 (BF&DF) WD 0.32mm	●	●
	100×/ 0.8/∞/ 0 (BF&DF) WD 2mm	●	●
DIC Attachment	20×, 100×	○	○
Maximum Sample Height	30mm		●
	50mm	●	
Reflected Light	24V/100W Halogen light, Brightness adjustable	●	●
	Kohler illumination and aspherical condenser	●	●
	Polarizer and analyzer	○	○
	An integrate device for polarizer and analyzer	○	○
	Blue, Green, Yellow and Ground glass filter	●	●
Transmitted Light	Swing-out condenser NA0.9/ 0.25		●
	24V/100W Halogen light and aspherical condenser		●
	Blue filter		●
Filter	ND25, ND6	○	○
Focusing	Coaxial Coarse and Fine Adjustment, Fine Division 0.001mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.1mm per Rotation, Moving Range 30mm	●	●
Nosepiece	Backward quintuple nosepiece	●	●
Stage	Double layer mechanical stage(without hole) 186×138mm/ 74mm×50mm	●	
	Double layer mechanical stage 186×138mm/ 74mm×50mm		●
	Glass specimen preparation plate	○	○
	Specimen preparation plate		●
	Slide glass		●
Accessories	Specimen Presser	○	○
	Photo Attachment	○	○
	Video Attachment, C-Mount 1×, 0.5×	○	○
	0.01mm stage micrometer	○	○

Note: ●Standard Outfit, ○Optional

Accessory

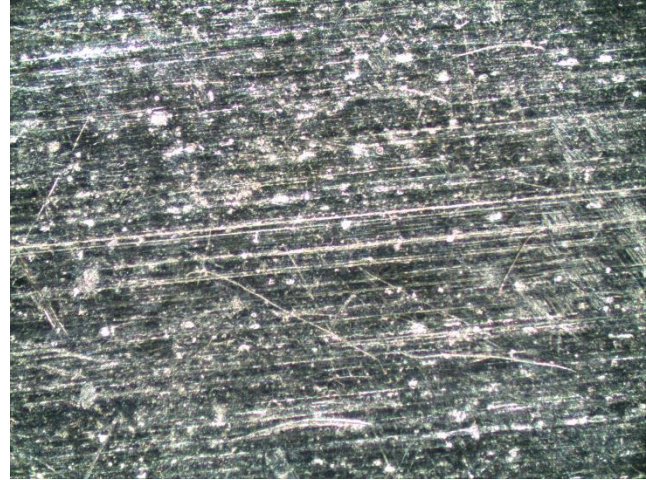
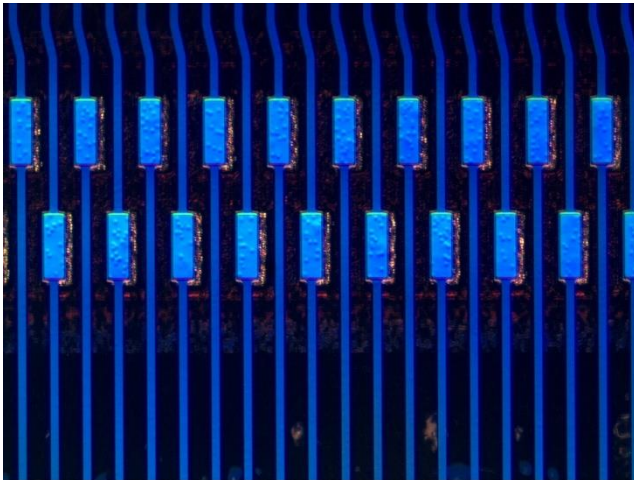


Specimen Presser



DIC Attachment

Sample Image



11. BS-6023B/BD Metallurgical Microscope



BS-6023BD

Introduction

BS-6023B/BD metallurgical microscopes are high level professional microscopes which are specially designed for metallurgical analysis. These microscopes can be used for bright field, dark field, polarizing and DIC observation. With compact structure, excellent optical system and abundant outfit, they can be your best support in research and daily work. The structure is convenient for large-size and thick specimens.

Feature

1. Can be used for bright field, dark field, simple polarization and DIC observation, compact and flexible.
2. Halogen light, 150W cold light source, 40W LED cold light source are available, the brightness is sufficient to meet a variety of observation requirements.
3. Large base, high column. Convenient for large-size LCD panel, PCB board and thicker or larger sample observation.
4. Ideal instrument for metallurgical analysis, industry inspection and science research.

Application

BS-6023B/BD are widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, they also can be used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, other non-metallic materials and so on.

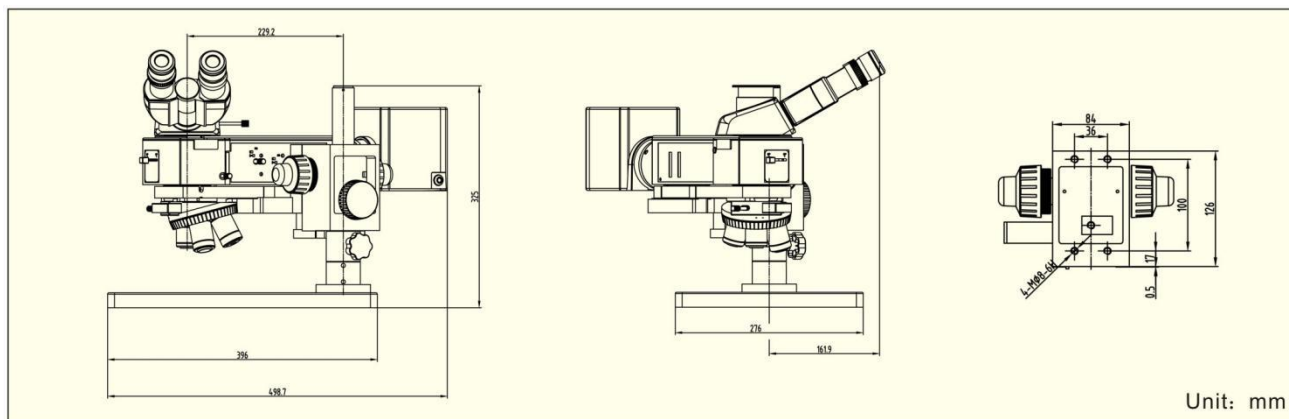
Specification

Item	Specification	BS-6023B	BS-6023BD
Optical System	Infinite optical system	•	•
Viewing Head	Siedentopf trinocular viewing head, inclined at 30°, rotate 360°, interpupillary	•	•

	distance 48mm-75mm, light distribution: 80:20		
Eyepiece	Extra wide field eyepiece EW10×/22mm, eyepiece tube Φ30mm	●	
Infinite Plan Achromatic Objective	5×/ 0.12/∞/ - (BF) WD 15.5mm	●	
	10×/ 0.25/∞/ - (BF) WD 10.0mm	●	
	20×/ 0.4/∞/ 0 (BF) WD 5.8mm	●	
	50×/ 0.75/∞/ 0 (BF) WD 0.32mm	●	
	100×/ 0.8/∞/ 0 (BF) WD 2.0mm	●	
	5×/ 0.12/∞/ - (BF&DF) WD 12.0mm		●
	10×/ 0.25/∞/ - (BF&DF) WD 10.0mm		●
	20×/ 0.4/∞/ 0 (BF&DF) WD 4.3mm		●
	50×/ 0.75/∞/ 0 (BF&DF) WD 0.32mm		●
	100×/ 0.8/∞/ 0 (BF&DF) WD 2.0mm		●
DIC	DIC Attachment 20×, 100×	○	○
Reflected Light	24V/100W Halogen light, Brightness adjustable	●	●
	150W Cold Light, Brightness adjustable	○	○
	40W LED illumination, Brightness adjustable	○	○
	Polarizer and analyzer	○	○
	Blue, Green, Yellow and Frosted filter	●	●
Focusing	Coaxial coarse and fine adjustment, Fine Division 0.001mm, Moving Range 32mm	●	●
Nosepiece	Backward quintuple nosepiece	●	●
Stand	Size of the base: 396×276mm×22mm, the height of the column 300mm, diameter 30mm	●	●
Accessories	Specimen Presser	○	○
	Photo Attachment for Nikon or Canon DSLR camera	○	○
	Video Attachment, C-Mount 1×, 0.5×	○	○

Note: ●Standard Outfit, ○Optional

Dimension



Accessory

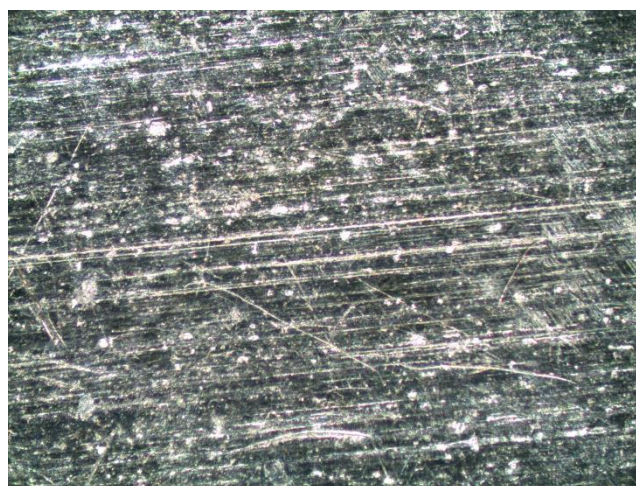
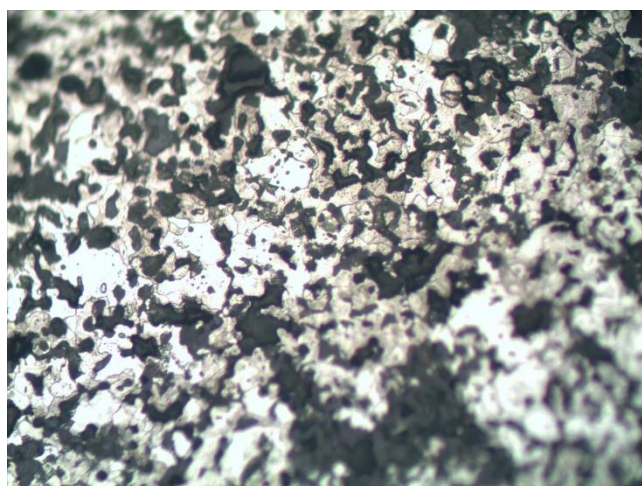


Specimen Presser



DIC Attachment

Sample Image



12. BS-6030 Inverted Metallurgical Microscope



Introduction

BS-6030 Inverted Metallurgical Microscope is a research level metallurgical microscope, it can identify and analyze not only a variety of metals, alloys, non-metallic material and the organizational structure and integrated circuits, but also micro-particles, wires, fibers, surface coating and so on. Digital cameras can be added to the trinocular tube to take images and make image analysis. DIC observation is optional.

Feature

1. Infinite optical system provides excellent optical functions.
2. DIC observation is optional.
3. Meet most of your requirements by high performance optical system, technological innovation and high stability.

Application

BS-6030 can be used in institutes and laboratories to observe and identify the structure of various metal and alloy, it also can be widely used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

Specification

Item	Specification	BS-6030
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Optical System	Infinite optical system	●
Viewing Head	Siedentopf trinocular head, inclined at 30°, interpupillary distance 48-75mm	●
Extra Wide Field Eyepiece	WF10×/ 22mm	●
	WF10×/ 20mm Eyepiece with scale of cross hair	●
	WF15×/ 16mm	○
	WF20×/ 12mm	○
Infinite LWD Plan Achromatic Objective	5×/0.12/∞/0 (BF/DF) LWD 10.0mm	●
	10×/0.25/∞/0 (BF/DF) LWD 10.0mm	●
	20×/0.40/∞/0 (BF/DF) LWD 5.0mm	●
	50×/0.75/∞/0 (BF/DF) LWD 1.3mm	●
	100×/0.90/∞/0 (BF/DF) LWD 0.7mm	●
Nosepiece	Backward quintuple nosepiece	●
Stage	Double layer mechanical stage 226×178mm, Moving range 40mm×40mm	●
	Small stage plate, Φ20mm, Φ30mm, water drop type	●
Focusing	Coaxial coarse & fine adjustment, fine division 2μm, move up 1mm, down 7mm	●
Kohler Reflected Illumination	12V/50W Halogen light, center and brightness adjustable	●
	Polarizer and analyzer	●
	DIC attachment	○
	Built-in Green, Blue, Yellow, Gray and Ground glass filters	●
Optional Accessories	Photo Adapter(Used to connect Nikon/Canon DSLR camera to the microscope)	○
	0.5× C-mount Video Adapter	●
	Micrometer scale 0.01mm	●

Note: ●Standard parts ○Optional parts

13. BS-6060 Metallurgical Microscope



Introduction

BS-6060 series metallurgical microscopes are developed for research with a number of pioneering design in appearance and functions, with wide field of view, high definition and bright & dark field semi-apochromatic metallurgical objectives, they are born to provide a perfect detection solution and develop a new pattern of industrial field.

Feature

1. High eye point wide field plan eyepiece.

The eyepiece field of view has been upgraded from traditional 22mm to 25mm and 26.5mm, provide more flat field of view and improve working efficiency. With wider diopter adjustment range and foldable rubber eye guard.



2. Viewing head with multi-splitting ratio.

The viewing head is designed of multiple options for splitting ratio.

(1) Trinocular head with erected image is standard, splitting ratio Binocular: Trinocular=100:0 or 0:100. The moving direction of samples is the same as observed.

(2) Trinocular head with inverted image is optional, splitting ratio Binocular: Trinocular=100:0 or 20:80 or 0:100. Except for concentrating 100% light to eyepiece tube or camera tube, there is another option with 20% light to eyepiece tube and 80% to camera tube, so that eyepiece observation and image output can be available at the same time.



3. Polarization system.

The polarizer and analyzer in polarization system contribute to eliminate the stray light in semiconductor and PCB detection, image with clear detail is achievable. There are fixed analyzer and rotatable analyzer for option. The sample can be observed at different polarizing angles with 360° rotatable analyzer. Besides, this polarization system can be upgraded to Nomarski differential interference contrast system after installing a new developed DIC attachment.



4. Nomarski differential interference contrast system(DIC).

The weeny asperities on the surface which can not be found in bright field, is able to be detected by using U-DICR attachment to create high contrast stereo relievo effect. It is widely used for testing the electric-conductive particles of LCD, surface scratches of precision disk.



5. Linkage between the neutral density filter and the switch for BF & DF.

The lever in front of illuminator is used to switch between bright field and dark field, and it is in tandem with a neutral density filter (ND50). When you switch from DF to BF, the built-in ND50 filter takes the role to reduce the light intensity. More scientific and more comfortable.

6. Multiple choice for Nosepiece.

The new nosepiece reduces the angle between the optical axis and the rotating axis to 15°, improving the accuracy of the centering and parfocality, and the appearance is more compact.



Application

BS-6060 is widely used in institutes and laboratories to observe and identify the structure of various metal and alloy, it also can be used in electronics, chemical and instrumentation industry, observe the opaque material and transparent material, such as metal, ceramics, integrated circuits, electronic chips, printed circuit boards, LCD panels, film, powder, toner, wire, fibers, plated coatings, and other non-metallic materials and so on.

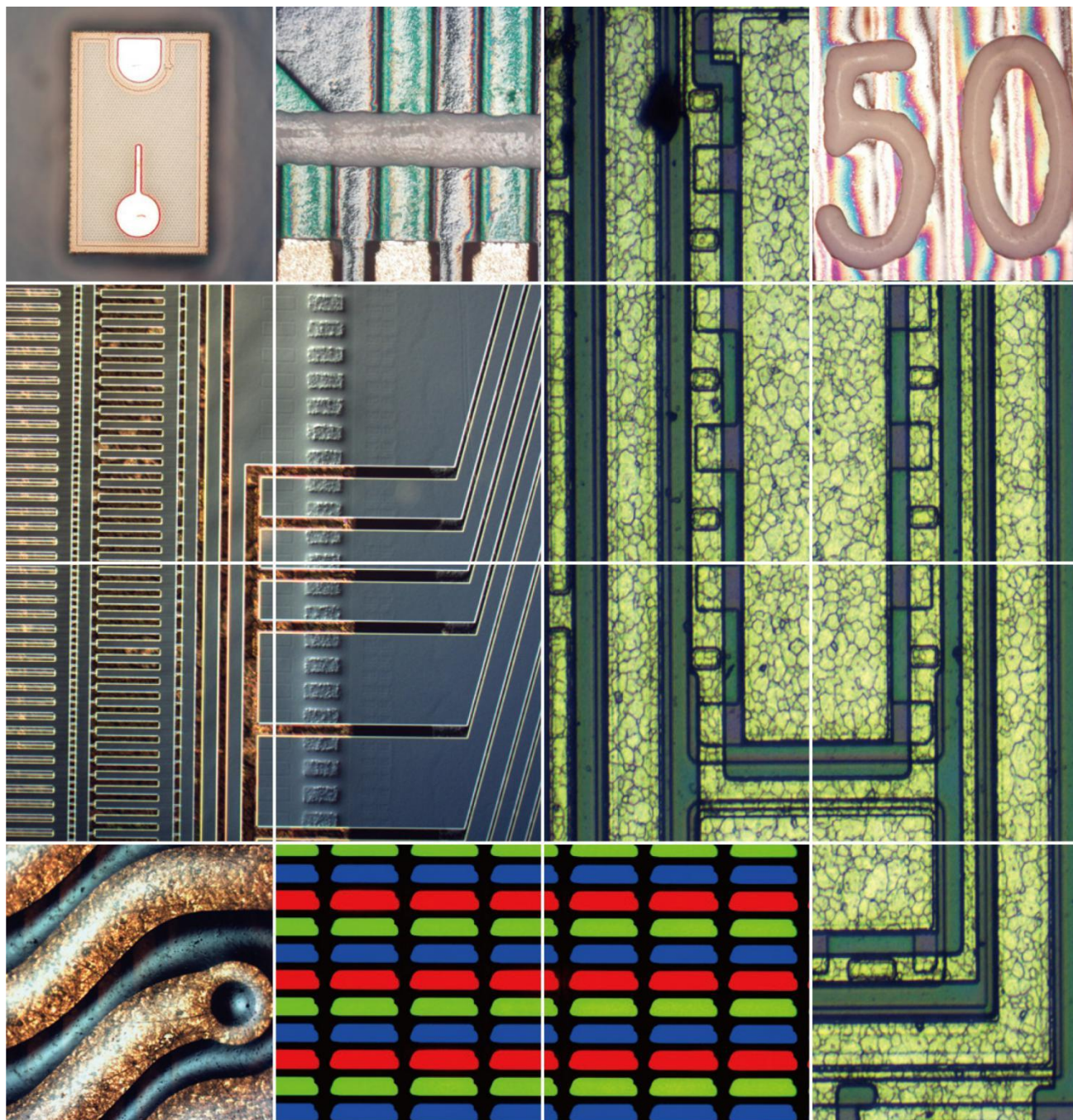
Specification

Item	Specification	BS-6060
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Optical System	Infinite Color Corrected Optical System	●
Viewing Head	Siedentopf trinocular head, Erect image, 30° inclined, interpupillary distance: 50mm~76mm; splitting ratio Eyepiece:Trinocular=100:0 or 0:100	●
	Siedentopf trinocular head, Inverted image, inclined at 30°, interpupillary distance: 50mm~76mm; splitting ratio Eyepiece:Trinocular=100:0 or 20:80 or 0:100	○
Eyepiece	High eyepoint wide field plan eyepiece PL10X/25mm, diopter adjustable	●
	High eyepoint wide field plan eyepiece PL10X/25mm, with reticle, diopter adjustable	○
	High eyepoint wide field plan eyepiece PL10X/26.5mm, diopter adjustable	○
	High eyepoint wide field plan eyepiece PL10X/26.5mm, with reticle, diopter	○
Objective	Bright & Dark Field Semi-Apochromatic Metallurgical Objective 5X, NA=0.15, WD=13.5mm	●
	Bright & Dark Field Semi-Apochromatic Metallurgical Objectives 10X, NA=0.30, WD=9mm	●
	Bright & Dark Field Semi-Apochromatic Metallurgical Objectives 20X, NA=0.50, WD=2.5mm	●
	Bright & Dark Field Semi-Apochromatic Metallurgical Objectives 50X, NA=0.80, WD=1.0mm	●
	Bright & Dark Field Semi-Apochromatic Metallurgical Objectives 100X, NA=0.90, WD=1.0mm	●
	Bright Field Semi-Apochromatic Metallurgical Objective 5X, NA=0.15, WD=19.5mm	○
	Bright Field Semi-Apochromatic Metallurgical Objectives 10X, NA=0.30, WD=10.9mm	○
	Bright Field Semi-Apochromatic Metallurgical Objectives 20X, NA=0.50, WD=3.2mm	○
	Bright Field Semi-Apochromatic Metallurgical Objectives 50X, NA=0.80, WD=1.2mm	○
	Bright Field Semi-Apochromatic Metallurgical Objectives 100X, NA=0.90, WD=1.0mm	○
Nosepiece (with DIC slot)	Bright & Dark Quintuple Nosepiece	●
	Bright & Dark Sextuple Nosepiece	○
	Bright Field Sextuple Nosepiece	○
	Bright Field Septuple Nosepiece	○
Frame	Reflected & Transmitted body, low-position coaxial coarse and fine adjustment, coarse adjustment distance: 25mm; fine precision: 0.001mm. With coarse adjustment stop and tightness adjustment. Built-in 100-240V wide voltage transformer, double way power output; intensity adjustable by digital set and reset; switch for reflection and transmission; built-in transmitted filters LBD/ND6/ND25).	●
	Reflected body, coaxial coarse and fine adjustment, coarse adjustment distance: 25mm; fine precision: 0.001mm. With coarse adjustment stop and tightness adjustment.	○
Stage	4 inch three layers mechanical stage with glass plate, moving range: 102mm(Y) *105mm(X)	●
Condenser	Swing-out type achromatic condenser (N.A.0.9)	●
Reflected Illuminator	BD reflected illuminator with iris field diaphragm and aperture diaphragm, central adjustable. With filter slot and polarizing slot. With switch for bright and dark field.	●
Lamp House	12V/100W halogen lamp house, center pre-set	●
Other Accessories	Camera adapter: 0.5X focusing C-mount	●
	Fixed polarizer, fixed analyzer, 360° rotatable analyzer	○
	DIC attachment	○
	Interference filters for reflected light	○
	High precision micrometer, scale value 0.01mm	○

Note: ●Standard parts ○Optional parts

Sample Image



Dimension

