



PA80MET / PA120MET

Upright Inspection Microscopes
for Industrial / Metallurgical Applications

8-inch and 12-inch German Designed Stage Industrial Inspection Microscopes

Motic Scientific's PA80MET and PA120MET series microscopes feature a flexible, modular design that can be suited to your specific industrial inspection application. Our Plan S-APO series objectives and professional optical system design ensure excellent optical performance, while our frame and base design creates a low gravity, high stability system which reduces vibration commonly experienced during higher magnification observation in industrial environments. Our PA80MET and PA120MET series microscopes are widely used for FPD, LCD, and silicon wafer inspection.

German Designed 8-inch and 12-inch Stages

Seamless Coarse/Fine movement on the stage handle is allowed even with larger and heavier samples. The mechanical stage maintains its reliability even after long-term use.

A maximum stage travel of 305x305 mm will allow a 12 inch wafer, LCD or FPD to be imaged and inspected. You can switch the clutch knob to achieve faster stage travel and inspect from one end of the sample to the other.



Illumination Methods

Various illuminations methods are available: 12V, 100W Halogen Lamp Brightfield Epi Illumination. 12V, 100W Halogen Lamp Darkfield Epi Illumination. Going from Brightfield to Darkfield has an easy switch that is built into the microscope frame.

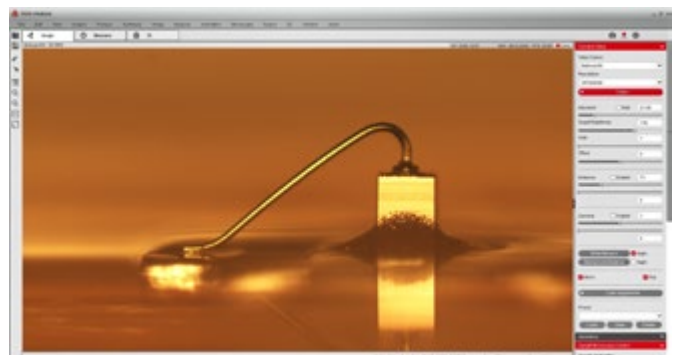
Motorized Revolving Nosepiece

The motorized nosepiece increases the speed of your workflow. You can select your magnification through either the Buttons on the microscope frame, Software or Controller.



Motic Analysis

Motic Analysis software is optimized to work intuitively and smoothly with the PA80MET/PA120MET. It is a professional software suite which can be used in both inspection and research environments



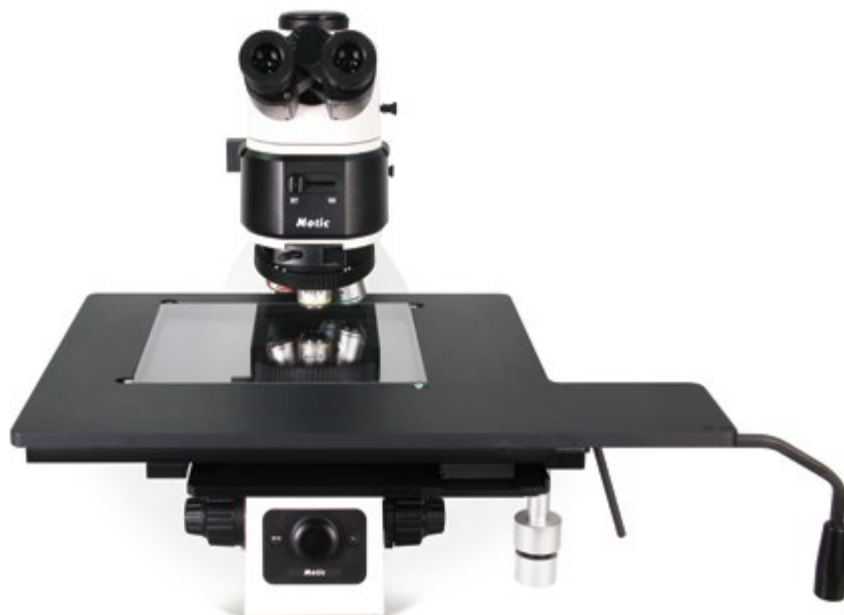


Professional Quality Moticam S Series Cameras

All of our high-quality Moticam S Series cameras are compatible with the PA80MET/PA120MET and are designed with faithful, high resolution image reproduction in mind.

MOTICAM S TECHNICAL SPECIFICATIONS

Moticam	S1	S3	S6	S12	MoticamProS5 Lite	MoticamProS5 Plus
Sensor Type	CMOS					
Sensor Size	1/3"	1/2.8"	1/1.8"	1/1.7"	2/3"	2/3"
Resolution	1.2M	3M	6M	12M	5M	5M
Imaging Area (Diagonal)	6.09mm	6.44mm	8.92mm	9.33mm	11.1mm	11.1mm
Pixel Size	3.75µm x 3.75µm	2.5µm x 2.5µm	2.4µm x 2.4µm	1.85µm x 1.85µm	3.45µm x 3.45µm	3.45µm x 3.45µm
Max. Frame Rate:	1280x960@120fps	2048x1536@60fps	3072x2048@30fps	4000x3000@25fps	2448x2048@35.7fps	2448x2048@68.3fps
	640x480@240fps	1920x1080@60fps	1536x1024@50fps	2048x1080@50fps	1224x1024@88.4fps	1224x1024@175.8fps
Scan Mode	Progressive					
Shutter Mode	Rolling Shutter	Rolling Shutter	Rolling Shutter	Rolling Shutter	Global Shutter	Global Shutter
Data Transfer	USB3.1					
Exposure Time	15us~2sec	21us~2sec	16us~2sec	22us~2sec	14us~2sec	7us~2sec
Sensitivity (G)	2350 mV @ 1/30 sec	600 mV @ 1/30 sec	425 mV @ 1/30 sec	280 mV @ 1/30 sec	1146 mV @ 1/30 sec	1146 mV @ 1/30 sec
Focusable Lens	12mm	12mm	16mm	16mm	16mm	16mm
Power consumption	less1.0W@ 5V(USB-supply)				less1.5W@ 5V(USB-supply)	
Lens Mount	CS-Mount					
Support Device	TWAIN, SDK and DirectShow Driver					
Supported OS (Recommended)	Higher than Microsoft Windows7/8/10, MAC OSX10.9 and Linux					
Minimum Computer Requirements (Recommended)	2GHz Dualcore, RAM memory 2GB and Video Memory Min 512MB					
Operating Temperature	From -10 to + 60 degree celsius non condensing					
Package Includes	CS Ring Adaptor, Calibration Slide, USB3.1 cable, Image Plus 3.0 for PC / OSX / Linux(Accessories Package) Focusable Lens, 30mm and 38mm Eyepiece Adapter, Macro Tube and Macro Tube Calibration dot					



PA80MET SPECIFICATIONS

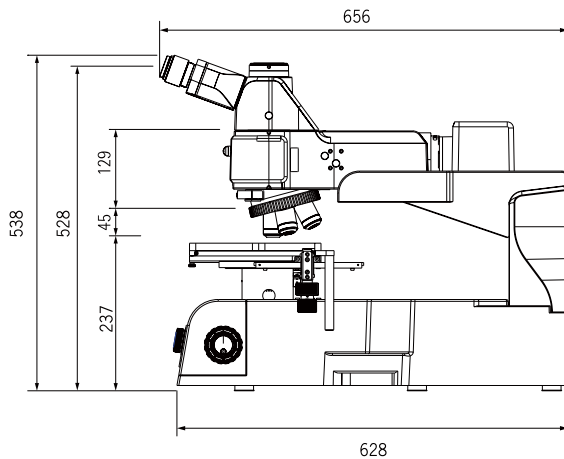
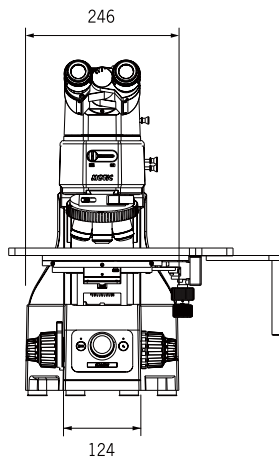
	Brightfield		Brightfield / Darkfield	
Model	PA80MET	PA80MET-T	PA80MET-BD	PA80MET-BD-T
Optical System	Colour Corrected Infinity Optical System (CCIS®)			
Illumination	Reflected	Reflected / Transmitted	Reflected	Reflected / Transmitted
Observation Tube				
Trinocular	Erect type (F.N 25), 20° inclined, Trino Light path selection: 2-step (100:0 / 0:100)			
Binocular (Optional)	Erect type (F.N 25), 20° inclined			
Eyepieces	10X (F.N 25), Diopter adjustable, Reticle optional			
Revolving Nosepiece				
Brightfield	5-position Nosepiece for Brightfield objective lens with DIC slot		/	
Brightfield/ Darkfield	/		5-position Nosepiece for Brightfield, Darkfield objective lens with DIC slot	
Plan S-APO	Plan S-APO 5X/0.15 Plan S-APO 10X/0.3 Plan S-APO 20X/0.45 Plan S-APO 50X/0.8 Plan S-APO 100X/0.9 (Optional)		Plan S-APO BD 5X/0.15 Plan S-APO BD 10X/0.3 Plan S-APO BD 20X/0.45 Plan S-APO BD 50X/0.8 Plan S-APO BD 100X/0.9 (Optional)	
LPlan S-APO	LPlan S-APO 20X/0.4 LPlan S-APO 50X/0.55 LPlan S-APO 100X/0.8		LPlan S-APO BD 20X/0.4 LPlan S-APO BD 50X/0.55 LPlan S-APO BD 100X/0.8	
Base unit - Focus	Stroke range: 29.5 mm / Coarse and Fine focusing knob. Coarse: 17.7 mm/revolution / Fine: 0.1 mm/revolution (1 µm scale) Upper limit stopper, Torque adjustment ring			
Base unit - Electronics	Integrated power supply for light adjustment / LED voltage indicator / IL switch and ECO switch			
3D Profile Module	No	No	No	No
Reflected Illumination	Kohler illumination system / Brightfield, Reflected DIC, simple Polarization		Kohler illumination system / Brightfield, Darkfield, Reflected DIC, simple Polarization	
Light source	12V/100W halogen			
Transmitted Illumination	/	Yes	/	Yes
Light source	/	10W LED	/	10W LED
Condenser	/	LWCD, N.A 0.55	/	LWCD, N.A 0.55
Stage	Dimensions : 325mm (Max width 415mm) X 325mm Moving stroke: 200mm X 200mm Optional: wafer stage			

PA120MET SPECIFICATIONS

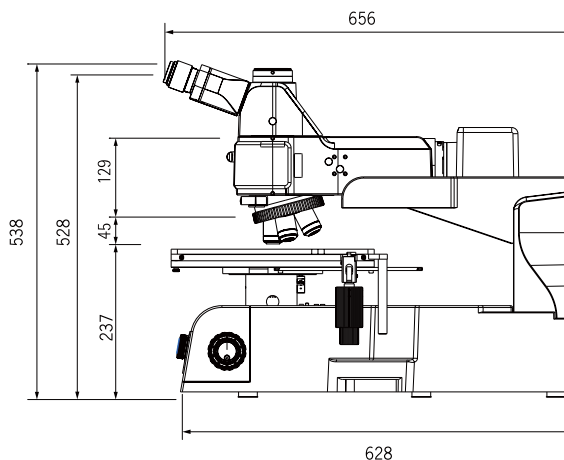
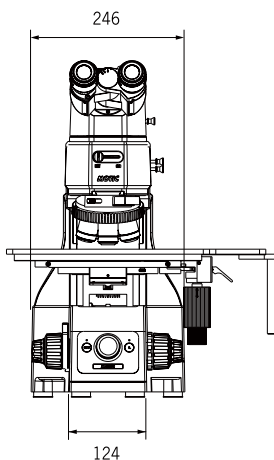
	Brightfield		Brightfield / Darkfield	
Model	PA120MET	PA120MET-T	PA120MET-BD	PA120MET-BD-T
Optical System	Colour Corrected Infinity Optical System (CCIS®)			
Illumination	Reflected	Reflected / Transmitted	Reflected	Reflected / Transmitted
Observation Tube				
Trinocular	Erect type (F.N 25), 20° inclined, Trino Light path selection: 2-step (100:0 / 0:100)			
Binocular (Optional)	Erect type (F.N 25), 20° inclined			
Eyepieces	10X (F.N 25), Diopter adjustable, Reticle optional			
Revolving Nosepiece				
Brightfield	5-position Nosepiece for Brightfield objective lens with DIC slot		/	
Brightfield/ Darkfield	/		5-position Nosepiece for Brightfield, Darkfield objective lens with DIC slot	
Plan S-APO	Plan S-APO 5X/0.15 Plan S-APO 10X/0.3 Plan S-APO 20X/0.45 Plan S-APO 50X/0.8 Plan S-APO 100X/0.9 (Optional)		Plan S-APO BD 5X/0.15 Plan S-APO BD 10X/0.3 Plan S-APO BD 20X/0.45 Plan S-APO BD 50X/0.8 Plan S-APO BD 100X/0.9 (Optional)	
LPlan S-APO	LPlan S-APO 20X/0.4 LPlan S-APO 50X/0.55 LPlan S-APO 100X/0.8		LPlan S-APO BD 20X/0.4 LPlan S-APO BD 50X/0.55 LPlan S-APO BD 100X/0.8	
Base unit - Focus	Stroke range: 29.5 mm / Coarse and Fine focusing knob. Coarse: 17.7 mm/revolution / Fine: 0.1 mm/revolution (1 µm scale) Upper limit stopper, Torque adjustment ring			
Base unit - Electronics	Integrated power supply for light adjustment / LED voltage indicator / IL switch and ECO switch			
3D Profile Module	No	No	No	No
Reflected Illumination	Kohler illumination system / Brightfield, Reflected DIC, simple Polarization		Kohler illumination system / Brightfield, Darkfield, Reflected DIC, simple Polarization	
Light source	12V/100W halogen			
Transmitted Illumination	/	Yes	/	Yes
Light source	/	10W LED	/	10W LED
Condenser	/	LWCD, N.A 0.55	/	LWCD, N.A 0.55
Stage	Dimensions : 520mm X 400mm Moving stroke: 300mm X 300mm Optional: wafer stage			

DIMENSIONS

PA80MET (units:mm)



PA120MET (units:mm)



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Design Change: The manufacturer reserves the right to make changes in instrument design in accordance with scientific and mechanical progress, without notice and without obligation.

Designed at Motic Scientific in Xiamen

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