

OLYMPUS[®]

Your Vision, Our Future

INDUSTRIAL INSPECTION MICROSCOPE

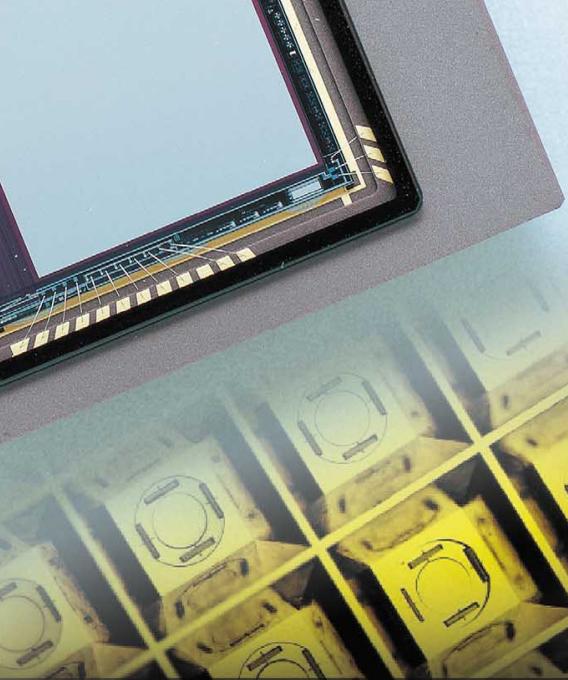
MX51

UIS
UNIVERSAL
INFINITY SYSTEM

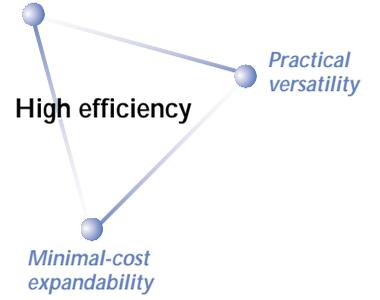


The best way to the best results



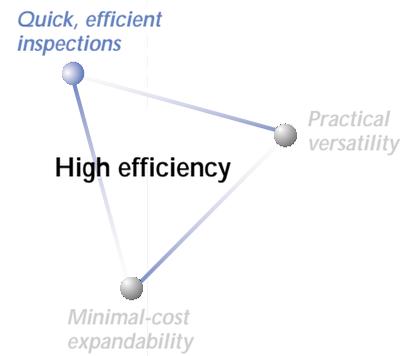


Quick, efficient inspections



The MX51 Effect: More Efficient Inspections Throughout Industry.





Streamlined operation for faster, more comprehensive results

Agile stage movement and coarse/fine movement interchange.

Two stage sizes are available, 150mm and 100mm. The 150mm stage has a built-in clutch lever, which enables quick location of specimens on the stage without diverting the operator's view, allowing quick, easy inspections.

Repositioned optical controls for smoother performance.

Controls for focusing and light intensity adjustment are placed closer together, so that both can be operated with one and the same hand.

Anti-static treatment prevents dust contaminating the sample.

The frame and 6-inch stage are coated to prevent static build-up.

* Use special metal plate.

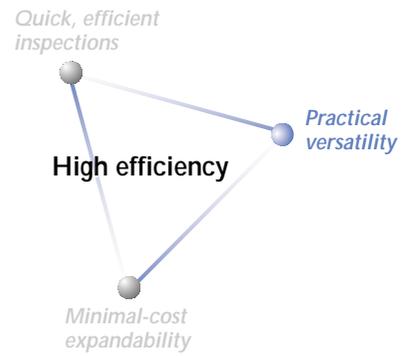
SEMI S2/S8 compliance enhances safety and ergonomics.

The convenience of front operation is one of the Olympus' key design concepts, complemented by compliance with international industry standards to guarantee superior reliability.

Motorized revolving nosepiece enables direct exchange of objectives for higher efficiency.

In addition to the standard nosepiece, the MX51 can be equipped with a range of motorized nosepieces. An external handset allows direct selection of the desired objective. The MX51 also offers a centerable, motorized nosepiece for accurate positioning for easy observation at high magnifications.



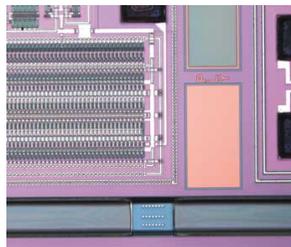


Practical versatility: the MX51 is ideal for many different kinds of inspections

Latest UIS optics maximize detection of even tiny defects.

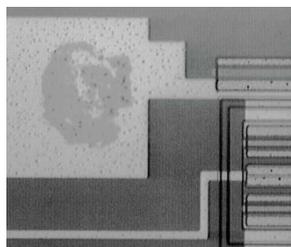
Fast, accurate detection of defects, and hence fewer check failures, are ensured by the MX51's enhanced brightfield/darkfield observation capabilities, which deliver approximately 4* times greater detection sensitivity than previous model. Outstanding accuracy in observation of small diameter wafers such as those used in today's smaller sensors and many other high-performance electronic devices.

*In the recommended set of objective lens.



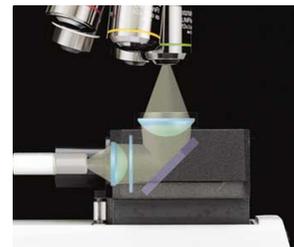
Offers multiple observation methods from visible to fluorescence and near-IR.

The standard illuminator (BX-RLA2) complies with near IR observation, as well as offering brightfield, darkfield, Nomarski DIC and simple polarizing observations. A universal illuminator (BX-URA2) is also available for fluorescence observation.



Transmitted light observation.

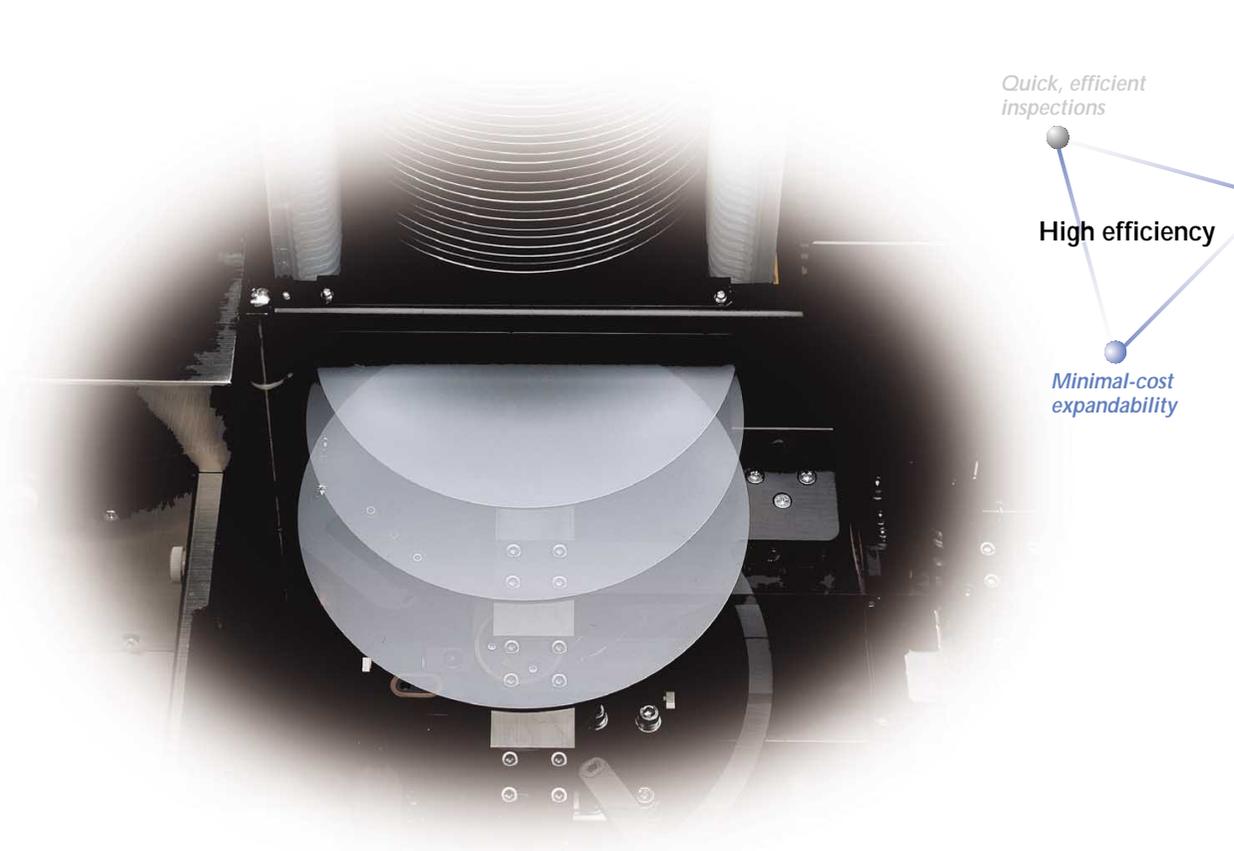
The combination of a transmitted illumination unit with the 150mm stage enables transmitted light brightfield observation of samples up to 2mm thick, with an illumination range of 100X100mm. The slim-profiled illumination unit is designed for minimal effect on the stage operation and is useful for observations of samples such as MEMS (Micro Electronics Mechanical Systems) sensors and other optical/optronic components.



Intermediate attachment raises objectives to accommodate thick samples.

The standard maximum sample thickness is 30mm. Insert the intermediate attachment to accommodate thicker samples.





Quick, efficient inspections

High efficiency

Minimal-cost expandability

Practical versatility

Expandability:

adding extra functions at minimal cost

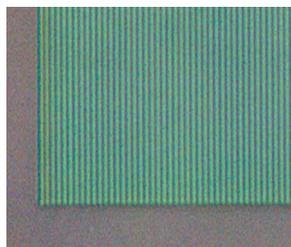
Combine with wafers loaders to increase work efficiency.

Use of the AL110-6 series wafer loaders, which accept wafers up to 150mm, offers front- and back-macro inspection and microscope inspection without the operator handling the wafers.



Confocal module for high-resolution, high-contrast observations.

The confocal module (U-CFU) employs an original disk scanning method to deliver high-contrast, high-resolution observation images. This allows inspection of multi-layered electronic devices.



Digital imaging with excellent cost performance.

A wide range of cost-effective Olympus digital cameras can be added to the MX51. Additionally, adapters allow the use of digital or video cameras currently in use.

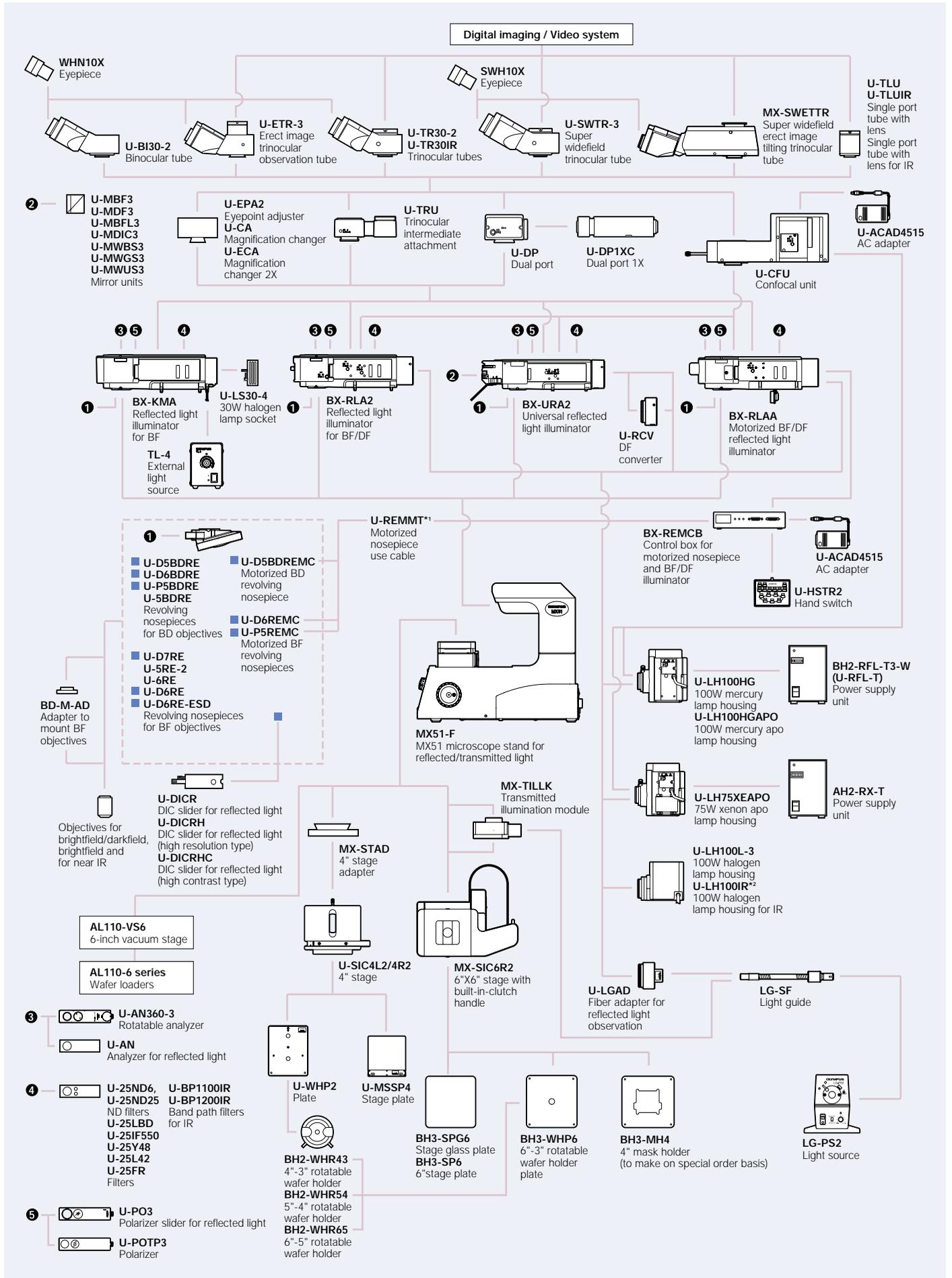


DP12 configuration

Accepts many high-quality BX2M accessories.

A wide range of the highly-regarded BX2M series accessories can be used, including a tilting observation tube, motorized illuminator, various lamp housings, motorized revolving nosepieces, mirror units, prisms, filters and intermediate attachments.

■ System Diagram



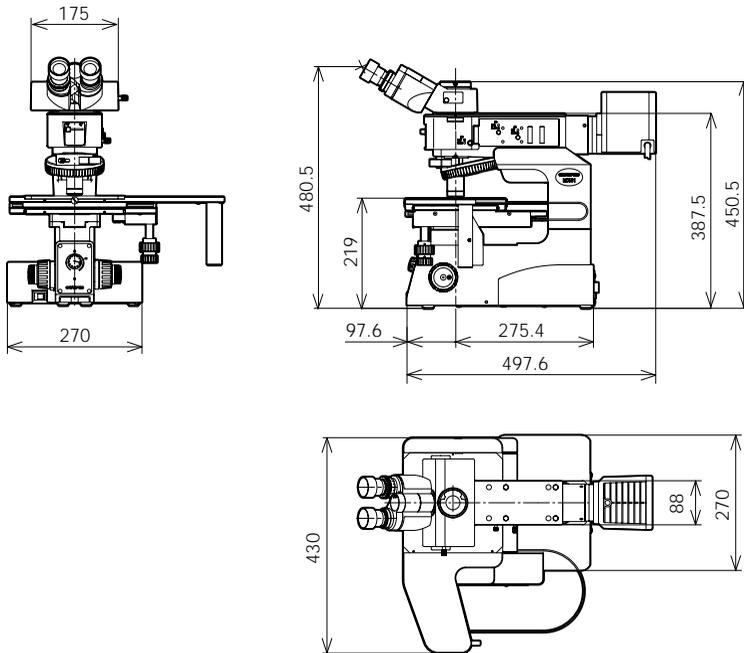
*1 For other illuminations than BX-RLAA *2 Extended cable U-RMT is needed

■ Specifications

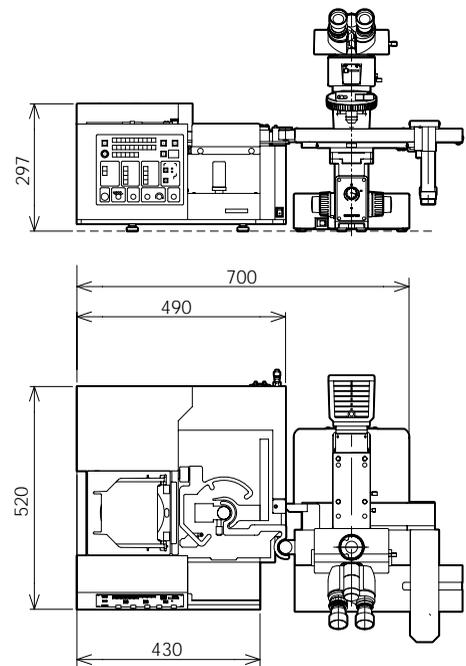
Optics	UIS Optics (infinity-corrected system)		
Microscope stand	2-guide rack and pinion method Coarse and fine co-axial Z-axis control stroke 32mm (2mm upper and 30mm below from the focal plane) The same stroke 15mm (combination with transmitted illumination) Stroke per rotation of fine Z-axis control 0.1 mm (1 unit 1 μ m) Coarse handle torque adjustment Coarse handle upper limit lever		
Illumination	BX-KMA Brightfield illuminator	BX-RLA2 Brightfield/Darkfield illuminator	BX-URA2 Universal Fluorescence illuminator
	Contrast changeover method Applicable observation mode	— ① Brightfield ② Normaski DIC ③ Polarized light	BF-DF slide method ① Brightfield ② Darkfield ③ Normaski DIC ④ Polarized light ⑤ IR
			Mirror (Max. up to 6) turret method ① Brightfield ② Darkfield ③ Normaski DIC ④ Polarized light ⑤ Fluorescence
Lamphousing	6V30W Halogen Lamp socket: U-LS30-4 Transformer: TL-4	12V100W Halogen Lamphouse: U-LH100L-3 Power supply is integrated in MX51	Mercury lamp house: U-LH100HGAPO External power supply BH2-RFL-T3 needed
Transmitted illumination	Brightfield MX-TILLK combined with fiber light guide illumination (configured with MX-SIC6R2)		
Power supply unit	—	Rated voltage: 100-120/220-240V ~ 1.8A/0.8A 50/60Hz Continuous light intensity dial	
Observation tube	U-BI30-2 Widefield binocular, U-TR30-2 Widefield trinocular, U-ETR3 Widefield erect image trinocular (F.N. 22) U-SWTR Superwidefield trinocular, MX-SWETTR Superwidefield erect image tilting trinocular (F.N. 26.5)		
Revolving nosepiece	U-5RE-2, U-6RE U-D5BDRE, U-D6BDRE, U-P5BDRE (with slider slot for DIC Prism)		
Stage	U-SIC4R2/SIC4L2 Coaxial right/left-hand control 4"X4" stage		MX-SIC6R2 Coaxial right/left-hand control 6"X6" stage
	Drive method: rack and pinion method Y axis stopper: lever method		Drive method: Belt method Stroke: 158(X) X158 (Y) mm Clutch method: 2 clutch plates (Built-in-clutch ON/OFF handle) Holder dimensions: 200 X 200mm Transmitted light area: 100 X 100mm
Dimensions & Weight	Dimensions: Approx. 430(W) X 591(D) X 495(H)mm Weight: Approx. 26kg (Stand Approx. 11kg)		

■ Dimensions (unit: mm)

MX51



MX51+AL110-6



Objectives

Lens Optical character	Magnification	N.A.	W.D. (mm)	Cover glass thickness (mm)	Resolution*2 (µm)
UMPLFL	5X	0.15	20.0	—	2.24
	10X	0.30	10.1	—	1.12
	20X	0.46	3.1	0	0.73
	40X	0.75	0.63	0	0.45
	50X	0.80	0.66	0	0.42
	100X	0.95	0.31	0	0.35
UMPLFL-BD	5X	0.15	12.0	—	2.24
	10X	0.30	6.5	—	1.12
	20X	0.46	3.0	0	0.73
	50X	0.80	0.66	0	0.42
	100X	0.90	0.31	0	0.37
	UMPLFL-BDP	5X	0.15	12.0	—
10X		0.25	6.5	—	1.34
20X		0.40	3.0	0	0.84
50X		0.75	0.66	0	0.45
100X		0.90	0.31	0	0.37
LMPLAPO		150X	0.9	1.0	0
	250X	0.9	0.80	0	0.37
LMPLAPO-BD	150X	0.9	1.0	0	0.37
	250X	0.9	0.80	0	0.37
LMPLFL	5X	0.13	22.5	—	2.58
	10X	0.25	21.0	—	1.34
	20X	0.40	12.0	0	0.84
	50X	0.50	10.6	0	0.67
	100X	0.80	3.4	0	0.42
	LMPLFL-BD	5X	0.13	15.0	—
10X		0.25	10.0	—	1.34
20X		0.40	12.0	0	0.84
50X		0.50	10.6	0	0.67
100X		0.80	3.3	0	0.42
MPLAPO		20X	0.60	0.90	0
	50X	0.95	0.30	0	0.35
	100X	0.95	0.35	0	0.35
	100XOil	1.40	0.1	0	0.24
MPLAPO-BD	100X	0.9	0.31	0	0.37
MPLFL-BD	50X	0.8	1.0	—	0.42
	100X	0.9	1.0	—	0.37
MPL*3	5X	0.10	19.6	—	3.36
	10X	0.25	10.6	—	1.34
	20X	0.40	1.3	0	0.84
	50X	0.75	0.38	0	0.45
	100X	0.90	0.21	0	0.37
	MPL-BD*1*3	5X	0.10	12.0	—
10X		0.25	7.0	—	1.34
20X		0.40	1.3	0	0.84
50X		0.75	0.38	0	0.45
100X		0.90	0.21	0	0.37
SLMPL		20X	0.35	21.0	0
	50X	0.45	15.0	0	0.75
LCPLAPO	20X	0.40	8.8	0/0.7/1.1	0.84
	50X	0.60	3.1	0/0.7/1.1	0.56
LCPLFL-LCD	100X	0.80	0.95/ 1.1/ 1.143	0.6-1.2	0.42
LMPL-IR	5XIR	0.10	20.0	—	—
	10XIR	0.25	18.5	—	—
	20XIR	0.40	8.1	—	—
	50XIR	0.55	6.0	—	—
	100XIR	0.80	3.4	—	—
	MPL-IR	100XIR	0.95	0.3	—

*1 When MPL-BD objectives are used in combination with the U-LH100HGAP0/ULH75XEAP0 lamp housing (mercury/xenon socket) for darkfield observation, illumination near the perimeter of the field of view may be slightly insufficient depending on the specimen.

*2 Resolving power calculated with the aperture diaphragm fully opened.

*3 Up to F.N. 22.

●OLYMPUS CORPORATION obtains ISO9001/ISO14001.

Specifications are subject to change without any obligation on the part of the manufacturer.

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