OPTIKA

Rev. 2026002



B-190 Digital binocular microscope with digital imaging unit, X-OEF, 1000x, PLAN, EU

Main Body	Type	Upright
	Construction material	Aluminum die-cast
	with trasportation handle	Yes
	Internal prism	Glass prism
	Optical system	Finite 160 mm
	Optics with anti-fungus treatment	Yes

Head	Type	Binocular Digital
	Construction	Siedentopf
	Built-in camera	Yes
	Inclination	30°
	Rotation	360°
	Fixing screw for eyepieces	Yes
	Diopter adjustment	On left tube
	Diopter compensation	±5
	Interpupillary distance (mm)	48-75
	Split ratio	No
	Tube inner diameter (mm)	23

Eyepieces	Magnification	10x
	Field number (mm)	18
	High eyepoint (for glass wearers)	Yes
	Micrometric scale	Optional
	Diameter of micrometer glass (mm)	20

Nosepiece	Positions	Quadruple
	Reversed	Yes
	Bi-directional	Yes
	Rotation on ball bearings	Yes
	Objective thread	RMS

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Objectives	Type	N-PLAN
	Correction	Plan Achromatic
	Parfocal distance (mm)	DIN 45
	Optical system	Finite 160 mm
	Standard magnifications	4x-10x-40x-100x
		M-164
		M-165
		M-167
		M-169

Stage	Dimensions (mm)	125x115
	Mechanical stage	Rack and pinion
	Material	Anti-scratch painting
	Specimen holder	Yes
	Slide number	1
	Moving range (mm)	70x30
	X-Y movement	Yes
	X-Y Vernier scale	Yes
	Vernier scale accuracy (mm)	0.1
	Type	Double layer
	Right / Left hand	Right

Condenser - Single Position	Type	Abbe
	Numerical aperture (N.A.)	0.9 / 1.25
	Aperture diaphragm	Iris
	Holder for color filters	Yes
	Centerable	Pre-centered
	Focusable	By rotation

Focusing System	Type	3 step motorized
	Focus modes	Coarse, semi-fine and fine
	Coarse total travel (mm)	18
	Coarse total travel (per single rotation) (mm)	7,5
	Coarse resolution (µm)	250
	Semi-fine total travel (per single rotation) (mm)	0,24
	Semi-fine resolution (µm)	8
	Fine graduations	100
	Fine total travel (per single rotation) (mm)	0,03
	Fine resolution (µm)	1
	Upper stop to prevent contact	Yes
	Focus mode LED indicator	Yes
	Motorized	Yes

Observation Method - Transmitted Light	Brightfield	Yes
	Simple polarized light	Optional

Transmitted Illumination	Type	X-LED
	X-LED type	X-LED2
	Light source power (W)	3
	Brightness control	Manual
	Kohler illumination	No
	Color Temperature (K)	6,300
	Lifetime (hours)	> 65,000
	Max. required power (W)	6

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Power Supply for Transmitted Illumination	Type	External
	Microscope connector	Jack, 2.1 mm
	Power plug type	Multi-plug (EU, UK, US)
	Input voltage	100/240 Vac, 50/60 Hz
	Output voltage	6 Vdc 2.5 A
Accessories Included	Dust cover	Yes
	Immersion oil (10ml)	Yes
	Green filter	Yes
	User Manual	Digital version (downloadable)
	Calibration slide	Yes
	USB cable (m)	0,5
Product Dimensions (footprint)	Width (mm)	140
	Depth (mm)	215
Product Dimensions (overall footprint)	Height (mm)	500
	Width (mm)	250
	Depth (mm)	290
Product Weight	(kg)	7.4
Camera General specifications	USB output	Yes
	Height (mm)	Included in the microscope head
	Weight (kg)	Included in the microscope head
Sensor	Camera resolution (n° of pixels: W x H)	2592x1944
	Color / Monochrome	Color
	Sensor Size	1/2.5"
	Sensor Technology	CMOS
	Sensor Type	APTINA CMOS
	Image Format	4:3
	Pixel Size (mm)	2.2x2.2
	Acquisition technology	Rolling shutter
	Sensitivity	18.8ke/lus
	Signal/Noise Ratio (DB)	40
	Dynamic range (DB)	73
	ADC conversion	12 Bit
	Color Depth	8 Bit
	Exposure time	0.1 msec - 1 sec
	Binning	1x1
	IR filter	Yes
	IR filter range (nm)	380-650 (IR CUT)
USB	Camera resolution (MP)	5.1
	USB standard	USB2.0
	Frame rate full resolution (fps)	30@2592x1944
	Frame rate other resolution (fps)	30@1280x960 30@640x480

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Camera Power Supply	Connector	USB
	Output voltage	PC USB
	LED indicator	Yes
Environment	Working Temperature	-10°C up to +50°C
	Storage Temperature	-20°C up to +60°C
	Relative Humidity	30% to 80%
	Storage Humidity	10% to 60%
Operating System	OS	Windows 11
Available Software	PC SW	PROVIEW
Digital Imaging Unit	Operating system	Windows 11
	CPU	Intel® Core M3-8100Y
	CPU speed	3.4GHz
	Graphic card	Intel® UHD Graphics 615
	RAM	DDR3 12GB
	Display size	10.1" Incell 16:10
	Display resolution	1280x800
	Storage	Hdd 128 GB (SATA)
	Network	2.4G/5G 802.11a/b/g/n/ac + BT5.0 (6221C)
	Input ports	USB-A 3.0 (1x), Type C (2x)
	Output ports	Headphone - Micro HDMI
	Battery Type	Pure Cobalt
	Battery capacity	3400 mAh
	Power consumption	25,84W
	Power supply	12V2A Type-C
	Plug	European
	Dimensions (mm)	245.5*164.2*10
	Weight (Kg)	0.57
	Language	English

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