B-510BF4K

OPTIKA

Rev.2026002



B-510 4K ULTRA HD DIGITAL BF MICROSCOPE, 1000x, IOS PLAN

Main Body	Type	Upright
	Construction material	Aluminum die-cast
	with trasportation handle	Yes
	Internal prism	Glass prism
	Optical system	Infinity
	Optics with anti-fungus treatment	Yes
Nosepiece	Positions	Quintuple
	Reversed	Yes
	Bi-directional	Yes
	Rotation on ball bearings	Yes
	Objective thread	RMS
Objectives	Type	IOS W-PLAN
	Correction	Plan Achromatic
	Parfocal distance (mm)	DIN 45
	Optical system	Infinity
	Standard magnifications	4x-10x-40x-100x
Stage	Dimensions (mm)	233x147
	Mechanical stage	Rackless
	Material	Anti-scratch painting
	Specimen holder	Yes
	Slide number	2
	Moving range (mm)	78x54
	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	Swing-out
	Numerical aperture (N.A.)	0.2 / 0.9
	Numerical aperture scale	Yes
	Aperture diaphragm	Iris
	Removable	Yes
	Centerable	Yes
	Focusable	By rack and pinion

Focusing System	Type	Coaxial coarse & fine
	Focus modes	Coarse & fine
	Coarse total travel (mm)	25
	Fine graduations	100
	Fine total travel (per single rotation) (mm)	0,2
	Fine resolution (µm)	2
	Upper stop to prevent contact	Yes
	Adjustable tension	Yes
	Flat knob for ergonomy	Yes
Observation Method -	Brightfield	Yes
Transmitted Illumination	Type	X-LED
	X-LED type	X-LED3
	Light source power (W)	3.6
	Brightness control	Manual
	Kohler illumination	Full
	Color Temperature (K)	5,500-5,700
	Lifetime (hours)	> 65,000
	Max. required power (W)	6
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	5 Vdc 2.5 A
Accessories Included	Dust cover	Yes
	Immersion oil (10ml)	Yes
	Tension adjustment tool	Yes
	Allen wrench	Yes
	User Manual	Digital version (downloadable)
	Calibration slide	Yes
Product Dimensions (footprint)	Width (mm)	250
	Depth (mm)	260
Product Dimensions (overall footprint)	Height (mm)	610
	Width (mm)	355
	Depth (mm)	285
Product Weight	(kg)	10.5
Camera General specifications	SD Card Still image capture	Yes
	SD Card Video recording	Yes
	USB output	Yes
	HDMI output	Yes
	C-Mount	Yes

Sensor	Camera resolution (n° of pixels: W x H)	3840 x 2160
	Color / Monochrome	Color
	Sensor Size	1/1.8"
	Sensor Technology	CMOS
	Sensor Type	SONY
	Image Format	16:9
	Pixel Size (mm)	2.0x2.0
	Acquisition technology	Rolling shutter
	Dynamic range (DB)	66
	G sensitivity	505mV at 1/30s
	Dark Signal	0.13mV at 1/30s
	ADC conversion	8 Bit - 12Bit
	Color Depth	1, 4, 8, 24 Bit
	Exposure time	0.04 msec- 2 sec
	Binning	1x1
	IR filter	Yes
	IR filter range (nm)	380-650 (IR CUT)
USB	Camera resolution (MP)	8
	USB standard	USB2.0
	Frame rate full resolution (fps)	20@3840x2160
HDMI	HDMI resolution (MP)	8
	Frame rate full resolution (fps)	30@3840x2160
	Live HDMI measurement	Yes
	Exposure	Auto / Manual
	White Balance	Auto / Manual / ROI
Camera Power Supply	Type	External
	Connector	Jack, 2.1 mm
	Power plug type	Multiplug (EU, UK, US)
	Input voltage	100/240 Vac, 50/60Hz
	Output voltage	12 Vdc, 1500 mA
	LED indicator	Yes
Camera accessories	Calibration slide	Yes
	USB cable (1.8m)	Yes
	HDMI cable (1.5m)	Yes
	Wireless Mouse	Yes
	SD card	16GB
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%
Available Software	Built-in Camera SW	HDMIPRO
HDMI Monitor	Display size	15.6"
	Display resolution	3840x2160
	Contrast ratio	1000:1
	Luminous flux (lumen)	350
	Power plug type	European
	Input voltage	110/240 Vac, 50/60 Hz
	Output voltage	5 Vdc 4 A

SW Specifications		
General	Archiving	Yes
	Multi-language menu	Yes
	Chinese (Simplified)	Yes
	Chinese (Traditional)	Yes
	English	Yes
	French	Yes
	German	Yes
	Italian	Yes
	Japanese	Yes
	Korean	Yes
	Russian	Yes
	Thai	Yes
Image Acquisition	Still image multiple format saving	Yes
	Video recordiing multiple format saving	Yes
	Continuous automatic exposure	Yes
	Manual exposure	Yes
	Color acquisition	Yes
	Gray-scale acquisition	Yes
	White Balance Auto	Yes
	White Balance Manual	Yes
	White Balance ROI	Yes
	Image enhancement	Yes
	Zoom in	Yes
	Zoom out	Yes
	Image Comparison	Yes
	Browse of Images and Video	Yes
	Freeze image	Yes
	Horizontal Flip	Yes
	Verical Flip	Yes
Image Processing	HDR (High Dynamic Range)	Yes
	Layer management	Yes
	Text Overlay	Yes
	Ruler Overlay	Yes
	Arrow Overlay	Yes
	Measurement Overlay	Yes
	Grids	Yes
	Live measurement	Yes
	Still image measurement	Yes
	Select measurement unit	Yes
	Export to Excel	Yes
	Available Measurements	
	Point	Yes
	Line	
	Arbitrary	Yes
	Horizontal	Yes
	Vertical	Yes
	Line (3 points)	
	Vertical	Yes
	Arbitrary	Yes
	Angle	
	Angle (3 points)	Yes
	Angle (4 Points)	Yes
	Parallel lines	

Measurements	Arbitrary	Yes
	Parallel lines (3 Points)	Yes
	Rectangle	
	Rectangle (2 Points)	Yes
	Rectangle (3 Points)	Yes
	Ellipse	
	Ellipse (2 Points)	Yes
	Ellipse (5 Points)	Yes
	Circle	
	Circle (Center + Radius)	Yes
	Circle (3 Points)	Yes
	2 Circles	
	2 Circle (Center + Radius)	Yes
	2 Circle (3 Points)	Yes
	Annulus	
	Annulus (Center + Radius)	Yes
	Annulus (3 Points)	Yes
	Curve	
	Multipoint	Yes
	Arc	Yes
	Polygon	
	Multipoint	Yes