### **B-190TB**



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## **OPTIKA**

Rev. 04

Model: **B-190TB** 

Typology:

### ROUTINE DIGITAL MICROSCOPE WITH TABLET

Description:

Educational and laboratory microscope for routine applications, with integrated camera and removable 8" tablet. Dye-cast frame, with hight stability and ergonomy, for transmitted light observation.

Tablet PC with OPTIKA detachable system.

TABLET SPECIFICATION		
Model	Acer Iconia W4	
Operating System	Windows 8.1 32-bit, Microsoft Office Home & Student 2013	
Language	Multilanguages already installed	
CPU	Intel <sup>®</sup> Atom™ Z3740, Quad core (4 Core)	
CPU speed	1,33 GHz	
Graphics Card	Intel® HD Graphics, LPDDR3 controller	
Memory	Ram 2,048 GB, LPDDR3	
LCD display	LED 8" IPS Multi Touch Screen	
LCD resolution	1280 x 800, 16/10 (WXGA) , Active Matrix TFT Colour LCD	
Storage	Hdd 32GB	
Network	Wireless IEEE 802.11 a/g/n Bluetooth 4.0	
Input/output ports	Micro USB-B - Microphone Micro SD card reader - Micro HDMI Head-phone	
Control Buttons	Auto rotate off, volume control	
Battery Technology	Lithium-ion battery, 2x cell	
Battery capacity	4960 mAh	
Battery Life	Up to 8 hours, up to 4,5 hours in continuous Camera Live View mode.	
Max load	10 W	
Connection to the Load	Power supply 5,35 V 2A with, EuroPlug connection for 100-240 VAC, USB port with USB cable	
Dimensions	Thickness 11,5 mm Height 13,5 cm Width 21,9 cm	
Weight	415 g	
Cables included	OTG cable ( Micro-B to USB-A ) 10cm, 26 cm USB camera cable (Micro-B to USB-B )	
Also included	Instruction manual, Recovery CD, Touch Pen	
MICROSCORE SPECIFICATIONS		

#### MICROSCOPE SPECIFICATIONS

Model	Binocular with double layer stage, objectives 4x 10x 40x 100x	
Head	Binocular Digital observation head, inclined 30° and rotatable 360°. Diopter adjustment on left eyepieces. Interpupillary adjustment 48-75 mm.	
Observation Modes	Brightfield	
Eyepieces	Widefield eyepieces WF10X/18 with field number 18mm.	
Nosepiece	Quadruple revolving nosepiece, rotation on ball bearings.	
Objectives	Achromatic objectives with mechanical tube lenght 160 mm, made by following objectives: -) Achromatic DIN 4X, A.N. 0.10, W.D. 18 mm -) Achromatic DIN 10X, A.N. 0.25, W.D. 7 mm -) Achromatic DIN 40X, A.N. 0.65, W.D. 0,53 mm -) Achromatic DIN 100X, A.N. 1,25, W.D. 0,13 mm (oil immersion) All objectives are treated with an anti-fungus treatment.	
Stage	Double layer with mechanical sliding stage, size 125x115mm, X-Y movement range 70x30, specimen holder for one slide. Vernier scale on the two axes, accuracy 0,1 mm.	

В-190ТВ	
Focusing System	Coaxial coarse and fine focusing mechanism (graduated, 0.002mm) with upper stop, to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.
illumination	Light source type X-LED <sup>2</sup> with white LED; light intensity control using a knob on left side of the frame. LED power 3W, comparable to an halogen bulb 30-35W. Color temperature: 6300K LED average life time approx. 50.000h. Voltage: external power supply 100/240Vac, 50/60Hz, output: 6 V Max power required: 7W
Condenser	Abbe condenser, N.A. 1,25 precentered
Dimensions	HEIGHT:         400 mm           WIDHT:         235 mm           DEPTH:         290 mm           WEIGHT:         7,0 kg

#### CAMERA SPECIFICATIONS

Digital camera resolution	3.14 MegaPixels
Analog camera resolution	NO
Signal output	USB 2.0
Audio Signal	NO
Sensor Size	1/2.5"
Sensor technology	CMOS
Image format	4\3
Full Image size	2048 x 1536
Pixel size	2,2 x 2,2 micron
Frame rate full resolution	5 frames\sec
Frame rate other resolutions	8 FPS (1280x1024), 30FPS (640x480)
Sensitivity	0,53 V/Lux-second (550 nm)
Signal / noise ratio	40 dB
Dynamic range	66.5 dB
Max Exposure time	1,5 sec
ADC conversion	12 BIT
Color Depth	8 BIT
On camera IR Filter	680 nm
Automatic White Balance	Auto - Man
Automatic Gain Control	Auto - Man
Automatic Back light control	Auto - Man
Exposure control	Auto - Man

#### ACCESSORIES

Calil	bration	Slide
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YES

# SOFTWARE SPECIFICATIONS Supplied Software Optika Vision Lite (full view function is also included for a wider Live Camera view) Driver type No driver (microsoft driver) Capture features Continuous auto exposure, image size, image capture, compressed video capture Control parameters Brightness, gain, exposur time, colors, color enhancement.

GENERAL SPECIFICATIONS	
Working temperature	+0 up to +60°C
Storage temperature	-20 up to +70°C
Relative Humidity	45% up to 85%