



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 high stability and ergonomy, for transmitted light observation.*

**TABLET SPECIFICATION**

Model	Acer Iconia W4
Operating System	Windows 8.1 32-bit, Microsoft Office Home & Student 2013
Language	Multilanguages already installed
CPU	Intel® 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

**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 length 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.

<b>Focusing System</b>	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.
<b>illumination</b>	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
<b>Condenser</b>	Abbe condenser, N.A. 1,25 precentered
<b>Dimensions</b>	HEIGHT: 400 mm WIDHT: 235 mm DEPTH: 290 mm WEIGHT: 7,0 kg

### CAMERA SPECIFICATIONS

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

### ACCESSORIES

<b>Calibration Slide</b>	YES
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### SOFTWARE SPECIFICATIONS

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

### GENERAL SPECIFICATIONS

<b>Working temperature</b>	+0 up to +60°C
<b>Storage temperature</b>	-20 up to +70°C
<b>Relative Humidity</b>	45% up to 85%