Rev. 04



# Model: **B-290TB**

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**

TABLET SPECIFICATION	
Model	Acer Iconia W4
Operating System	Windows 8.1 32-bit
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
Max load	10 W
Battery Life	Up to 8 hours, up to 4,5 hours in continuous Camera Live View mode.
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

#### MICROSCOPE SPECIFICATIONS

Binocular with double layer stage, E-PLAN objectives 4x 10x 40x 100x
Binocular Digital observation head, inclined 30° and rotatable 360°.  Diopter adjustment on left eyepieces. Interpupillary adjustment 48-75 mm.
Brightfield
Widefield eyepieces WF10X/20 with field number 20.
Quadruple revolving nosepiece, rotation on ball bearings.
E-Plan objectives with mechanical tube lenght 160mm:  -) E-Plan 4X, N.A. 0.10, W.D. 15.2 mm  -) E-Plan 10X, N.A. 0.25, W.D. 5.5 mm  -) E-Plan 40X, N.A. 0.65, W.D. 0.45 mm  -) E-Plan 100X, N.A. 1.25, W.D. 0.13 mm (oil immersion)  All objectives are treated with an anti-fungus treatment.
Double layer with mechanical sliding stage, size 150x133mm, X-Y movement range 75x50mm, specimen holder for one slide. Belt drive in X direction.  Vernier scale on X-Y axes, accuracy 0,1mm.

B-290TB	EN OPTIKA
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 X-LED³ type with white LED; light intensity control using a knob on left side of the frame.  LED power 3.6W, comparable to a 50W halogen bulb.  Color temperature: 6300K.  LED average lifetime approx.: 50.000h.  Voltage: external power supply 100/240Vac, 50/60Hz, output: 6Vdc 1A.  Max. required power: 7W.
Condenser	NA1.25 Abbe condenser, sliding-in, centrable, up-down adjustment by rack&pinion
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**

Calibration Slide 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%