



Model:

**B-290TB**

Typology:

**ROUTINE DIGITAL MICROSCOPE WITH TABLET**

Description:

*Educational and laboratory microscope for routine applications, with integrated camera and removable 10.1" full HD tablet.*

*Dye-cast frame, with high stability and ergonomics, for transmitted light observation.*

*Tablet PC with OPTIKA detachable system.*

### TABLET SPECIFICATION

|                        |   |
|------------------------|---|
| Model                  | Tablet 10.1"  |
| Operating System       | Windows 10 32-bit   |
| Language               | Multilanguages already installed                            |
| CPU                    | Intel® Atom™ Z3735F, Quad core                              |
| CPU speed              | 1.83 GHz  |
| Graphics Card          | Intel® HD Graphics 3D Accelerator                           |
| Memory                 | Ram 2,048 GB DDR3L  |
| LCD display            | LED 10.1" IPS Multi Touch Screen                            |
| LCD resolution         | 1280x800, 16/10 (WXGA)                                      |
| Storage                | Hdd 32 GB   |
| Network                | Wireless<br>Bluetooth 4.0                                   |
| Input/output ports     | USB - Microphone - Micro SD card reader - HDMI - Head-phone |
| Control Buttons        | Auto rotate off, volume control                             |
| Battery Technology     | Lithium-ion battery, 2x cell                                |
| Battery capacity       | 6000 mAh  |
| Max load               | 18 W  |
| Connection to the Load | Power supply 5 V 2 A  |
| Dimensions             | Thickness 10.5 mm, Height 17.4 cm, Width 25.7 cm            |
| Weight                 | 600 g   |
| Cables included        | OTG cable (Micro USB-B to USB-A)                            |
| Also included          | Instruction manual, Keyboard with touchpad, touch pen.      |

### MICROSCOPE SPECIFICATIONS

|                   |   |
|-------------------|---|
| Model             | Binocular with double layer stage, E-PLAN 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         | Wide Field, WF 10x/20.  |
| Nosepiece         | Quadruple revolving nosepiece, rotation on ball bearings.   |
| Objectives        | N-PLAN objectives with mechanical tube length 160 mm:<br>- N-PLAN objective 4x/0.10 W.D. 15.2<br>- N-PLAN objective 10x/0.25 W.D. 5.5<br>- N-PLAN objective 40x/0.65 W.D. 0.45<br>- N-PLAN objective 100x/1.25 W.D. 0.13<br>All objectives are treated with an anti-fungus treatment. |
| Stage             | Double layer with mechanical sliding stage, size 150x139 mm, X-Y movement range 75x33 mm, specimen holder for one slide. Belt drive in X direction. Vernier scale on X-Y 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 X-LED <sup>3</sup> type with white LED; light intensity control using a knob on left side of the frame.<br>LED power 3.6 W, comparable to a 50 W halogen bulb.<br>Color temperature: 6,300 K.<br>LED average lifetime approx.: 50.000 h.<br>Voltage: external power supply 100/240 Vac, 50/60 Hz, output: 6 Vdc 1 A.<br>Max. required power: 7 W. |  |
| <b>Condenser</b>       | NA1.25 Abbe condenser, sliding-in, centrable, up-down adjustment by rack&pinion  |  |
| <b>Dimensions</b>      | Microscope without tablet<br>HEIGHT: 430 mm<br>WIDHT: 235 mm<br>DEPTH: 290 mm<br>WEIGHT: 7.0 kg  | Microscope with tablet<br>HEIGHT: 525 mm<br>WIDHT: 260 mm<br>DEPTH: 290 mm<br>WEIGHT: 7.4 kg |

**CAMERA SPECIFICATIONS**

|                                     |                                    |
|-------------------------------------|------------------------------------|
| <b>Digital camera resolution</b>    | 3 MP                               |
| <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 µm                       |
| <b>Frame rate full resolution</b>   | 5 fps                              |
| <b>Frame rate other resolutions</b> | 8 fps (1280x1024), 30 fps(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 |
|--------------------------|-----|

**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%   |