



Model:  
**B-150DB**

Typology:  
**EDUCATIONAL DIGITAL MICROSCOPE**

**Description:**

*Educational digital microscope for routine applications.*

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

|                            |                                                                                                                                                                                                                                                                                                                                                                         |
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| <b>Model</b>               | <b>B-150DB:</b> binocular with double layer stage; objectives 4x, 10x, 40x, 100x                                                                                                                                                                                                                                                                                        |
| <b>Illumination</b>        | Light source type: white LED; light intensity control using a knob on left side of the frame.<br>LED power: 1W.<br>Color temperature: 6300K<br>LED average lifetime approx.: 50.000h<br>External power supply 100/240Vac, 50/60Hz, output: 5Vdc 500mA.                                                                                                                  |
| <b>Observation Modes</b>   | Brightfield                                                                                                                                                                                                                                                                                                                                                             |
| <b>Focusing</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>Stage</b>               | Double layer with mechanical sliding stage, size 125x116mm, X-Y movement range 76x30.<br>Specimen holder for one slide.<br>Vernier scale on the two axes, accuracy 0,1 mm.                                                                                                                                                                                              |
| <b>Nosepiece</b>           | Quadruple revolving nosepiece, rotation on ball bearings.                                                                                                                                                                                                                                                                                                               |
| <b>Head</b>                | Binocular digital observation head, inclined 30° and rotatable 360°.<br>Diopter adjustment on left eyepiece.<br>Interpupillary adjustment 48-75 mm.                                                                                                                                                                                                                     |
| <b>Eyepieces</b>           | Widfield eyepieces WF10X/18 with field number 18mm.                                                                                                                                                                                                                                                                                                                     |
| <b>Objectives</b>          | Achromatic objectives with mechanical tube lenght 160 mm, made by following objectives:<br>-) Achromatic DIN 4X, A.N. 0.10, W.D. 18 mm<br>-) Achromatic DIN 10X, A.N. 0.25, W.D. 7 mm<br>-) Achromatic DIN 40X, A.N. 0.65, W.D. 0,53 mm<br>-) Achromatic DIN 100X, A.N. 1,25, W.D. 0,13 mm (oil immersion)<br>All objectives are treated with an anti-fungus treatment. |
| <b>Condenser</b>           | Abbe condenser, N.A. 1.2 precentered.                                                                                                                                                                                                                                                                                                                                   |
| <b>Image format</b>        | 2048x1536 pixel.                                                                                                                                                                                                                                                                                                                                                        |
| <b>Pixel size</b>          | 2.2x2.2um                                                                                                                                                                                                                                                                                                                                                               |
| <b>Sensor</b>              | 1/2.5"CMOS                                                                                                                                                                                                                                                                                                                                                              |
| <b>Image format</b>        | 4/3                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Output</b>              | USB port                                                                                                                                                                                                                                                                                                                                                                |
| <b>Frame Rate</b>          | 4 FPS (2048x1536), 8 FPS (1280x1024), 30FPS (640x480)                                                                                                                                                                                                                                                                                                                   |
| <b>S/N RATIO</b>           | 40dB                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Dynamic Range</b>       | 66.5dB                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Exposure Time</b>       | 15s - 1/1500s                                                                                                                                                                                                                                                                                                                                                           |
| <b>Effective digits</b>    | 12bit - on chips                                                                                                                                                                                                                                                                                                                                                        |
| <b>Sensitivity</b>         | 0.53 V/lux-sec (550nm)                                                                                                                                                                                                                                                                                                                                                  |
| <b>Calibration Slide</b>   | No                                                                                                                                                                                                                                                                                                                                                                      |
| <b>System requirements</b> | Windows XP, Vista, Win7, Win8, 32/64bit., USB 2.0                                                                                                                                                                                                                                                                                                                       |
| <b>Software</b>            | OPTIKA Vision Lite                                                                                                                                                                                                                                                                                                                                                      |
| <b>Driver</b>              | Camera-X3: microsoft driver, Twain                                                                                                                                                                                                                                                                                                                                      |
| <b>Control parameters</b>  | Brightness, tonality, contrast, saturation, gamma, EV exposure                                                                                                                                                                                                                                                                                                          |
| <b>Dimensions</b>          | HEIGHT: 350 mm<br>WIDTH: 170 mm<br>DEPTH: 210 mm<br>WEIGHT: 4 kg                                                                                                                                                                                                                                                                                                        |
| <b>Accessories</b>         | User manual, dust cover, 1,8m USB cable, CD-ROM.                                                                                                                                                                                                                                                                                                                        |