



The Spinor Optics Biolux 400 XSP48 is the successor to our popular Spinor Optics Start 40-400x. It is recommended for young and elderly researchers of the micro-world optical microscope with a significantly redesigned construction. The optical system has been improved, which determines the quality of the microscopic image. In addition, the microscope has a socket in the base for battery installation, thanks to which observations can be carried out in the field or where we do not have access to the power grid. The shape of the body also makes it easier to move and carry the microscope. In this set together with a very good camera - Bresser 2 MPix Full HD The advantages of Biolux 400x XS48 to Spinor Optics Start 40-400x and outstanding features

- an improved optical system with optical glass of the highest quality allows you to get an even better picture - bright and without distortion
- Built-in battery operation without the need for a plug - it is possible to take the microscope in the field
- a holder integrated in a tripod that facilitates the safe transfer of the microscope
- solid metal body guarantees long-term reliability, made of light and durable alloys
- double adjustment of focus: coaxial macrometric and micrometer knob - it facilitates precise adjustment of the focus, which is especially important especially at high magnifications (in this price range it is worth paying attention to)
- dual lighting system with smooth brightness adjustment: passing (bottom - so-called DIA) for observing preparations on glass slides (transparent objects, transmitting light beam) and reflected (upper - so-called EPI); Reflected lighting allows you to observe non-transparent objects (eg insects, minerals, fabrics, coins)
- LED illumination prevents the preparation and microscope from heating up (no risk of scalding) and guarantees several tens of thousands of hours of work
- achromatic 4x, 10x and 40x lenses as well as WF10x wide field eyepiece
- real range of magnifications obtained thanks to lenses: from 40x to 400x (you can also buy an additional 16x eyepiece and gain 640x magnification)
- cross table with preparation handle and precise shift knobs in the horizontal plane in the X and Y axes - precise selection of the test area
- the movement mechanism of the preparation has a vernier - a special scale that increases the accuracy of the reading
- six-seater wheel with colorful filters that allow you to choose the optimal lighting conditions and get better image contrast during the observation
- a set of ready-made preparations included (you can start the observation immediately after unpacking), preparatory tools (for preparing your own preparations) and materials for maintaining the optics in cleanliness - a detailed list in the "equipment" section

Technical parameters

- Monocular head rotated by 360 °, inclined at 45 °
- lenses with glass optics: 4x, 10x, 40x
- wide field eyepiece with a glass optic: WF10x
- the possibility of mounting in the eyepiece tube of a digital microscope camera or glasses with a larger magnification (to be bought)
- range of magnifications in the standard 40x - 400x standard completion
- five different contrast color filters plus one free slot on the rotary dial
- three-socket objective revolver
- upper (reflected) and lower (passing) illumination LED with brightness adjustment - changing the operating mode by means of a switch at the back of the microscope
- Possibility of working on batteries, without the need of connecting to the electricity grid
- 90 x 90 mm functional table with cross mechanism with a specimen mounting holder, equipped with horizontal shift knobs (X / Y)
- the movement mechanism of the preparation has a vernier - a special scale that increases the accuracy of the reading
- coaxial double sided micro / macro knobs for focusing
- solid ergonomic metal stand with a modern design, has a special holder for safe carrying the microscope
- dimensions: 120 x 156 mm (base), height: 290 mm
- weight: about 1500 g

Equipment

- ready-made preparations (5 items)
- glass slides (5 items)
- coverslips (10 pcs)
- plastic box
- preparations
- a plastic round container with a lid
- tweezers
- pipette
- test tube
- preparative stick
- prep stick
- special paper for cleaning the optics
- adhesive labels for labeling preparations
- anti-dust cover for the microscope
- AC adapter

The Bresser 2 MPix Full HD camera is a modern device that allows you to take photos of microscopic objects and objects in the sky. All you need to do is place the camera in the microscope tube or telescope eyepiece and connect it via the USB port to the computer in order to enjoy colorful images of microscopic images or objects in the sky. Bresser camera is equipped with a high resolution 1920x1080 pixels (Full HD) sensor. It complies with the UVC standard for Microsoft operating systems, enabling data transfer to a computer via the interface in real time, without the need for drivers. Equipped with the camera there are adapters of various diameters allowing the camera to be placed in various types of microscopes and in the telescope. Equipped also with the CamLabLite program, which allows you to take photos and later their processing consisting of, among others, on zooming, framing, changing contrast and sharpness. Advanced program features allow you to stitch photos into panoramic layouts, sharpen details as a result of combining multiple images into one (EDF - Extended Depth of Focus) and mapping the darkest details and details in a single photo (HDR - High Dynamic Range). Thanks to these functions, the recorded images will be an excellent representation of the viewing objects. The CamLabLite program also gives you the possibility to perform geometric measurements of fragments of viewed objects. The 2.0 MPix Bresser camera together with the provided software can be used in schools at work and at home.

Basic features

- eyepiece camera with a metal body - 1920 x 1080 resolution Pixeli, Full HD (2 Mpix) - 23.2 mm cylinder with integrated UV / IR blocking filter
- adapters for various microscopes (30.0 and 30.5 mm) and a telescope with a diameter of 1.25 "(31.7 mm) - simple and quick installation
- simple installation of the eyepiece in the tube or eyepiece
- connect to the computer via the USB port
- program for service in Polish
- the ability to register images in the form of graphic and movie files
- measurement and counting functions
- light selection mode - automatic and manual
- white balance selection mode - automatic and manual
- advanced functions for stitching and folding photos

Technical parameters

- USB 2.0 camera - 1920 x 1080 resolution Pixeli, Full HD
- magnification - about 10x
- UVC standard
- image format: jpg, bmp, tif, png
- video format: wmv, H264, avi

System requirements

- operating system - Windows XP / Vista / Windows 7 / Windows 8 / Windows 10
- internal memory - at least 1GB RAM
- free disk space - at least 2GB
- USB 2.0 port

Equipment

- Full HD camera - 30 mm adapter - 30.5 mm adapter - 1.25 "adapter (31.7 mm) - software on the board - USB cable

Warranty 2 years (for the whole set) below - photos taken with the Spinor Optics 400 XSP48 microscope and a Bresser camera with 2 megapixels USB; preparations - selected Levenhuk biological preparations; click to view the full-resolution image