EUROStar II Plus – the standardised fluorescence microscope with a 50,000 hour life span at 100% luminous power!

Technical data

Dimensions
W x D x H ..... approx. 200 × 350 × 450 mm
Weight ..... approx. 7.2 kg

Power supply
Output voltage ..... 12 V (Battery use possible)
Supply voltage ..... 100 to 240 V
Power supply range ..... autom. voltage conversion

LED-Light source EUROStar-Bluelight
LED type ..... Azul EU2
Excitation light source wave length ..... 460-490 nm
LED voltage ..... 3.75-3.99 V
Power ..... 5 W
Constant light flux at 460-490 nm ..... 30 lm
Product life ..... approx. 50,000 h
Laser classification 2
Deterioration indicator ..... acoustic alarm

Filter set for FITC
Excitation filter ..... 450-490 nm
Beam splitter ..... 510 nm
Emission filter ..... 515 nm

Opto-mechanical components
Objective change revolver ..... manual, 5-fold
Objective 1 and 2 ..... A-Plan 20x/0.45; A-Plan 40x/0.65
Eyepiece ..... PL 10×/20 Br. and PL 10×/20 Br. foc.
Binocular phototube ..... 30°/20
Sliding prism ..... 100% vis / 100% doc
Max. number of viewing fields 20
Interpupillary distance ..... 55 to 75 mm
Viewing angle/height ..... 30 °/430 mm
Visual port ..... Tube factor 1×
Photo/Video port ..... Tube factor 1×

Stand
Stage focusing coarse drive ..... 4 mm/U
Stage focusing fine drive ..... 0.4 mm/U
Overall lift ..... 15 mm
Specimen stage ..... 75 × 30 mm R/L, ceramic surface

Addtional equipment (optional)
Objectives ..... Carl Zeiss
Digital camera (USB port) ..... Lumenera 175c
Large bi-axial ceramic surface ..... 102 x 105 mm R/L
EUROStar Photometer ..... EUROIMMUN

EUROIMMUN, a specialist in the field of immunodiagnostics, now offers you the **EUROStar II fluorescence microscope**, developed in cooperation with a well-known manufacturer of optical equipment. This microscope is specifically tailored to the requirements of indirect immunofluorescence. Non-essential components have been removed and the labourious conventional mercury vapour lamp has been replaced by the stunningly simple EUROStar-Bluelight system.

EUROIMMUN has successfully overcome a serious weakness of the indirect immunofluorescence: Depending on the design and age of the light source installed in the microscope which was used for evaluation, some antibodies had been evaluated as positive and, at other times, as negative or widely differing titers were determined for one and the same sample. The EUROStar II provides a defined light flux which is maintained at a constant level through the entire life span of the light source. Annual recalibration of the EUROStar II, a service also offered by EUROIMMUN, can be carried out using the **EUROStar photometer**. The certificate issued after recalibration confirms correct functioning of your microscope. The EUROStar II will help you to make an excellent impression during your next accreditation procedure.

Only a fraction of the light from a mercury lamp (HBO) can be used for fluorescence excitation – the majority of the energy is transformed into heat and dangerous ultraviolet radiation. With the EUROStar-Bluelight, engineers at EUROIMMUN AG have brought blue light-emitting diodes to fluorescence microscopy. Almost all the emitted light is suitable for the excitation of fluorescein.

Requiring only a tenth of the electrical power (low heat formation) the EUROStar-Bluelight provides the same amount of usable excitation light as a 50-watt HBO mercury vapour lamp.

The EUROStar-Bluelight does not emit any ultraviolet radiation and is explosion proof. We were therefore able to integrate this light source into the microscope housing, so there is no further need for the large switching transformer. Also, there is no longer any need to keep records of lamp operation times – and these were in any case superfluous owing to the different operational life span of each individual HBO lamp.

With a frequently used fluorescence microscope, the mercury vapour lamp is often left switched on all day as, once switched off, it must be left to cool for 20 minutes before being switched on again, and several minutes are then needed after switching on until the full light output is achieved. Keeping a fluorescence microscope in constant operation in this way is costly in terms of energy use and seriously reduces the effective operating life of the lamp.

In constrast, the EUROStar-Bluelight provides instant full light output after being switched on, and can be switched off and on again in quick succession with no harmful effects. The LED has a life expectancy of at least 50,000 hours – in which time 500 mercury vapour lamps would have burned out, at great expense and requiring 500 beam adjustments to be made! When, at some point, the life of the LED ends, the operator is prompted in time by an acoustic alarm to arrange for an exchange of the light source. However, this event does not occur until after approx. 25 years during which the microscope was used continuously for 8 hours per working day. Power for the EUROStar II microscope is supplied from a normal mains outlet (via the supplied adaptor, where applicable). Should a power loss occur, the microscope can even be powered for a short time from a medium-sized 12-volt battery!

Customers who require white transmitted light for conventional microscopy in addition to epifluorescence microscopy, can purchase the **EUROStar II Plus**, which has an additional halogen light source integrated into the microscope stand which allows bright field, dark field, phase contrast and polarisation microscopy. Furthermore, the EUROStar II microscope has been designed in its standard to accept a digital camera.

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YG_0301_I_UK_A08, 01/2009