B-1000

Upright Research Microscope
OPTIKA Microscopes, thanks to the long experience achieved in microscopy development, has conceived the new B-1000: a major leap in our technological offer. As a flagship instrument, B-1000 originates from customer most demanding feedbacks and needs. Its modularity and versatility will allow to find the perfect place in any clinical or basic research laboratory. All controls are easily accessible and comfortable also for extended periods of observation.

Highest category of optical equipment among our product range guarantees a sharp and clear view in any situation, while top level mechanical design offers sturdiness and long lifetime.
**B-1000** is built on IOS Infinity Corrected optical system, which gives both top-notch optical performances, and the possibility to extend your instrument with the broad range of accessories and modules. X-LED illumination is the best solution to have pure white light, very intense even at higher magnification, and optimum power efficiency given by solid state source.

If you search for our best solution to your present and future professional needs, B-1000 is the answer.
B-1000 Research Microscope
Solid Stand – Extra Stability

Completely new design and a die-cast aluminium stand offer solidity and durability, even for the most demanding laboratory use.

This new microscope can seamlessly be upgraded with many attachments that extend its field of use.

X-LED White Illumination

X-LED illumination system is based on a pure white high-efficiency LED and a special optics. It guarantees constant color temperature, no heat, and an extreme electrical consumption efficiency. The whole system is pre-aligned and boasts a lifetime of 50.000 hours.

Light under control

Intelligent control of the microscope illumination: the “AUTO-OFF” function automatically switches the light off after a user-selectable time period. “BOOST” gives an extra high level of illumination for light-demanding applications. “AUTO” allows to store an illumination level, and to maintain it throughout the inspection.

Ergonomy

Low position focus and stage controls allow a fast and comfortable operation. Frequently used controls as light intensity adjustment and diaphragm are also placed in the lower part of the stand and enable operation without having to take the eyes off the specimen. All optical heads are equipped with high-point eyepieces and dioptic adjustment, for the best viewing experience.
Modularity – Build your own solution

Many worlds in one instrument. Modularity allows to build the desired solution (brightfield, darkfield, phase contrast, material science, fluorescence, motorized automation and so on).

B-1000 has the flexibility to help your work the best way.

Comfortable Stage

Refined ceramic stage, with a wide working surface and a highly precise XY movement.

High Quality IOS Optical System

Infinity corrected optical system, based on planachromatic, fluorite, and semi-apochromatic objectives, designed to give sharp and clear images, both for the user and the digital camera. Quintuple and sextuple nosepieces give the flexibility to build the optics set that best suits your needs. The system is complete with wide field, high-point eyepieces, with a field number of 24mm.

Ready for Digital Imaging

Range of adapters can accommodate for C-mount digital cameras, as well as reflex cameras. Focus adjustment gives perfectly clear digital images.

Our cameras include specific software for capturing, measuring, marking and storing your pictures. Optika Vision Pro software allows to perform image acquisition, post-processing, measurements and storage of your images. User can save a preset for later work, or even create a multi-focus composition.
Remote Stage Control

The stage can be remote-controlled through a dedicated software: X, Y and Z axes can be moved with a single click. Communication protocol is available for interfacing with custom software, such as automated analysis or autofocus.

X-Y MOTORIZED STAGE
Z-AXIS WITH AUTOFOCUS SYSTEM

X-LED benefits

Powerful pure white LED illumination, ideal for brightfield, darkfield and phase contrast applications.
Color temperature constant through all the intensity levels. No heat generation, that could damage the specimen.
Factory pre-centering assures uniform illumination over the field of view, yet providing perfect Koehler alignment.
Very long lifetime and high power efficiency.
Pathology / Cytology
Since B-800 / B-1000 use white LED illumination, they can maintain the same color temperature even if the brightness is changed. “AUTO” function automatically adjusts the light intensity when the objective is changed or the aperture diaphragm is set to a different value.
These features, along with motorized stage and ergonomic controls, make your workflow easier.

Phase Contrast Microscopy
The bright LED illuminator brings a comfortable view in phase contrast with all magnifications. Universal wheel condenser allows to quickly switch between brightfield, darkfield and phase contrast.

Material Science
A new attachment designed specifically for metallographic inspection, with dedicated objectives set, for the most complete epi-illumination analysis: brightfield, darkfield and polarizing view.

Fluorescence Microscopy
A new attachment for epi-fluorescence provides the ultimate solution in the field of fluorescence diagnostic. Vibration-free six positions filter wheel with shutter, field and aperture diaphragms, it offers all you need for a complete analysis. Custom filtersets are available and mounted on request. For application where efficiency, rapidity and ease of use are crucial, this model offers also a LED epi-fluorescence attachment, with very high power standard illuminators.

Darkfield Microscopy
Ideal for observing blood cells, diatoms, small insects, bone, fibers, unstained bacteria, yeast, protozoa, mineral and chemical crystals, colloidal particles, dust-count specimens, and thin sections of polymers and ceramics.

Polarizing Microscopy
Polarized light microscopy is used in geological applications or also for both natural and industrial minerals, composites such as concretes, ceramics, mineral fibers and polymers, and crystalline or biological molecules such as DNA, starch, wood and urea.
Attachments for a full polarization analysis are available (both for transmitted and incident light), so it’s possible to look at color fringes right away.
B-1000 Series - Discussion microscope

Share your view with up to 10 persons. With built-in movable pointer, it helps any teaching or discussion experience.

B-1000Ti-2 (with 1 discussion head)
B-1000Ti-3 (with 2 discussion heads)
B-1000Ti-5 (with 4 discussion heads)
B-1000Ti-10 (with 9 discussion heads)
**EYEPieces**

- WF10x/22mm Eyepieces, high-point type
- WF10x/24mm Eyepieces, high-point type

**Heads**

- Trinocular Head 100/0 - 50/50 type
- Trinocular Head 100/0 - 50/50 - 0/100 type
- Binocular Ergonomic Head

**Nosepieces**

- Sextuple revolving Nosepiece, for RMS objectives
- Sextuple motorized revolving Nosepiece, for RMS objectives; with DIC slot
- Quintuple revolving Nosepiece, for darkfield metallurgical objectives; with 3 ring adapters for brightfield objectives
- Quintuple motorized revolving Nosepiece for darkfield metallurgical objectives; with 3 ring adapters for brightfield objectives motorized
- Metallographic stage for B-1000 MET
OBJECTIVES

IOS (infinity corrected) Plan Objectives

IOS (infinity corrected) Semi-APO FLUO E-Plan objectives

IOS (infinity corrected) Semi-APO FLUO High-Grade Plan objectives

IOS (infinity corrected) POL Plan objectives, for transmitted polarized light

IOS (infinity corrected) LWD POL Plan objectives, for transmitted and incident polarized light

IOS (infinity corrected) MET Plan objectives, for brightfield

IOS (infinity corrected) MET Plan objectives, for transmitted polarized light

IOS (infinity corrected) Phase Contrast Plan Objectives

STAGES

Standard Mechanical Stage

Belt drive Mechanical Stage; movement knobs with friction adjustment control

Ceramic coated Mechanical Stage; movement knobs with friction adjustment control

MPC (mineral solid surface) Belt drive Mechanical Stage; movement knobs with friction adjustment control

Heating Stage

Rotating Stage + attachable XY stage
CONDESERS

M-1150
0.90 N.A. swing-out Condenser

M-1151
1.20 N.A. swing-out Condenser

M-1152
Phase contrast Condenser with darkfield stop (dry)

M-1153
0.90 N.A. swing-out Polarizing Condenser

M-1154
0.70 N.A. swing-out Condenser

M-1155
Phase contrast Condenser with darkfield stop (dry)

Darkfield Condenser (dry)

M-1031
4-position LED Fluorescence Attachment

M-1032
6-position HBO Fluorescence attachment

M-1033
Bertrand Lens with analyzer and Lambda slides slot

M-1034
Incident Polarizing Light attachment, with field and aperture diaphragms

M-1035
Metallurgical Brightfield/Darkfield attachment, with field and aperture diaphragms, neutral density filter, and polarizer/analyzer filters.
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**B-800 BF Model - Brightfield version**

**B-800 BF**
Type: **BRIGHTFIELD RESEARCH MICROSCOPE**

Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted light observation.
BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001**: WF10x/22mm Eyepieces
- **M-1010**: Trinocular head (2 position)
- **M-1012**: Binocular ERGO head
- **M-1013**: Trinocular ERGO head
- **M-1020**: Body with manual focus
- **M-1040**: Quintuple nosepiece
- **M-1041**: Sextuple nosepiece
- **M-1049** 2x, **M-1050** 4x, **M-1051** 10x, **M-1052** 20x, **M-1053** 40x, **M-1054** 60x, **M-1055** 100x
- **M-1140**: IOS Plan Objectives
- **M-1110**: IOS (infinity corrected)
- **M-1112**: Semi-APO FLUO E-Plan objective
- **M-1140**: Standard stage
- **M-1150**: 0.90 N.A. swing-out condenser
- **M-1151**: 1.20 N.A. swing-out condenser
- **M-1060** 4x, **M-1061** 10x, **M-1062** 20x, **M-1063** 40x, **M-1064** 100x
B-800 PH Model - Phase contrast version

B-800 PH
Type: PHASE CONTRAST RESEARCH MICROSCOPE
Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted light observation.
BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

M-1001
WF10x/22mm Eyepieces

M-1010
Trinocular head (2 position)

M-1012
Binocular ERGO head

M-1013
Trinocular ERGO head

M-1020
Body with manual focus

M-1040
Quintuple nosepiece

M-1041
Sextuple nosepiece

M-1120 10x
M-1121 20x
M-1122 40x
M-1123 100x

M-1140
Standard stage

M-1152
Phase contrast condenser with darkfield spot (dry)

M-977
Green filter, 45mm

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:
**B-1000 BF Model - Bright field version**

Version for standard brightfield view.
Illumination: X-LED8 (8W power)
B-1000 BF Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1002** WF10x/24mm Eyepieces
- **M-1011** Trinocular head
- **M-1012** Binocular ERGO head
- **M-1013** Trinocular ERGO head
- **M-1030** Automatic brightness control system
- **M-1021** Body with manual focus
- **M-1022** Body with motorized focus
- **M-1042** Sextuple nosepiece with DIC slot
- **M-1043** Motorized Sextuple nosepiece with DIC slot
- **M-1049** 2x
- **M-1050** 4x
- **M-1051** 10x
- **M-1052** 20x
- **M-1053** 40x
- **M-1054** 60x
- **M-1055** 100x
- **M-1140** Standard stage
- **M-1141** Belt drive stage
- **M-1142** Ceramic stage
- **M-1147** Motorized stage
- **M-1150** 0.90 N.A. swing-out condenser
- **M-1151** 1.20 N.A. swing-out condenser
B-1000 PH Model - Phase contrast version

B-1000 PH
Type:
PHASE CONTRAST RESEARCH MICROSCOPE
Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted light observation.

Version for phase contrast analysis. Illumination: X-LED® (8W power).
B-1000 PH Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1002** WF10x/24mm Eyepieces
- **M-1004** Centering telescope for phase contrast

- **M-1011** Trinocular head
- **M-1012** Binocular ERGO head
- **M-1013** Trinocular ERGO head

- **M-1030** Automatic brightness control system

- **M-1021** Body with manual focus
- **M-1022** Body with motorized focus

- **M-1042** Sextuple nosepiece with DIC slot
- **M-1043** Motorized Sextuple nosepiece with DIC slot

- **M-1100** IOS Phase Contrast Plan Objectives

- **M-1120** 10x
- **M-1121** 20x
- **M-1122** 40x
- **M-1123** 100x

- **M-1140** Standard stage
- **M-1141** Belt drive stage
- **M-1142** Ceramic stage
- **M-1147** Motorized stage

- **M-1152** Phase contrast condenser with darkfield spot (dry)
- **M-977** Green filter, 45mm
B-1000 FL LED Model

B-1000 FL LED
Type: RESEARCH MICROSCOPE
Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.

Version for LED epifluorescence analysis.
Transmitted illumination: X-LED® (8W power).
Epi-illumination: special attachment with built-in high-power colored LEDs.
B-1000 FL LED Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1011** Trinocular head
- **M-1012** Binocular ERGO head
- **M-1031** LED Fluorescence attachment
- **M-1021** Body with manual focus
- **M-1022** Body with motorized focus
- **M-1042** Sextuple nosepiece with DIC slot
- **M-1043** Motorized Sextuple nosepiece with DIC slot
- **M-1042** Sextuple nosepiece
- **M-1043** Motorized Sextuple nosepiece

- **Objetivos Plan IOS**
- **Objetivos semi-APO E-plan IOS**
- **Objetivos semi-APO FLUO Plan de alta gama IOS**

- **M-1140** Standard stage
- **M-1141** Belt drive stage
- **M-1142** Ceramic stage
- **M-1147** Motorized stage

- **M-1150** 0.90 N.A. swing-out condenser
- **M-1151** 1.20 N.A. swing-out condenser
**B-1000 FL HBO Model**

**B-1000 FL HBO**

*Type:* RESEARCH MICROSCOPE

*Description:* Laboratory microscope for routine and research applications. Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.

Version for epifluorescence analysis. Transmitted illumination: X-LED⁸ (8W power). Epi-illumination: special attachment with 100W mercury lamp and 6-position filter wheel.
BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1011** Trinocular head
- **M-1012** Binocular ERGO head
- **M-1032** HBO Fluorescence attachment
- **M-1021** Body with manual focus
- **M-1022** Body with motorized focus
- **M-1042** Sextuple nosepiece with DIC slot
- **M-1043** Motorized Sextuple nosepiece with DIC slot
- **M-1060** 4x
  - M-1061 10x
  - M-1062 20x
  - M-1063 40x
  - M-1064 100x
- **M-1070** 4x
  - M-1071 10x
  - M-1072 20x
  - M-1073 40x
  - M-1074 100x
- **M-1069** IOS Semi APO FLUO E-Plan objectives
- **M-1070** IOS Semi APO FLUO high-Grade Plan objectives
- **M-1140** Standard stage
- **M-1141** Belt drive stage
- **M-1142** Ceramic stage
- **M-1147** Motorized stage
- **M-1150** 0.90 N.A. swing-out condenser
- **M-1151** 1.20 N.A. swing-out condenser

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:
B-1000 POL Model - Transmitted polarization

B-1000 POL
Typology:
TRANSMITTED POLARIZING RESEARCH MICROSCOPE
Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted light observation.

Version for transmitted polarization analysis.
Illumination: X-LED® (8W power).
BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1002** WF10x/24mm Eyepieces
- **M-1004** Centering telescope for phase contrast
- **M-781** Eyepiece micrometer high-point
- **M-1145 + M-1146** Rotating stage + attachable XY stage
- **M-1153** 0.90 N.A. swing-out polarized condenser
B-1000 POL-I Model - Transmitted and incident polarizing

Typology: TRANSMITTED AND INCIDENT POLARIZING RESEARCH MICROSCOPE

Description:
Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.

Version for transmitted and incident polarization analysis.
Transmitted illumination: X-LED® (8W power).
Epi-illumination: special attachment with built-in high-power white LED.
BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

- **M-1001** WF10x/22mm Eyepieces
- **M-1011** Trinocular head
- **M-1033** Bertrand lens with rotating analyzer, with lambda filters
- **M-1034** Polarizing attachment for incident illumination
- **M-1044** Quintuple centrable nosepiece
- **M-1145** + **M-1146** Rotating stage + attachable XY stage
- **M-1153** 0.90 N.A. swing-out polarized condenser

**Model Configuration Chart**

- **B-1000 POL-I**
  - **M-1012** Binocular ERGO head
  - **M-1021** Body with manual focus
  - **M-1022** Body with motorized focus
  - **M-781** Eyepiece micrometer high-point

**Options**

- **M-1090 5x**
- **M-1091 10x**
- **M-1092 20x**
- **M-1094 50x**
B-1000 MET Model

Typology: RESEARCH MICROSCOPE
Description: Laboratory microscope for routine and research applications.
Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.

Version for material analysis (transmitted and incident light).
Transmitted illumination X-LED® (8W power).
Special attachment with built-in 100W halogen lamp.
B-1000 MET Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:

M-1001
WF10x/22mm Eyepieces

M-1011 Trinocular head

M-1012 Binocular ERGO head

M-1035 Metallurgical attachment for brightfield and darkfield

M-1021 Body with manual focus

M-1022 Body with motorized focus

M-1045 Quintuple revolving Nosepiece for darkfield metallurgical objectives

M-1046 Quintuple motorized revolving Nosepiece for darkfield metallurgical objective

M-1099 2.5x
M-1100 5x
M-1101 10x
M-1102 20x
M-1103 50x
M-1104 100x

IOS MET Plan Objectives for brightfield

IOS MET Plan objectives for darkfield

M-1140 Standard stage

M-1141 Belt drive stage

M-1142 Ceramic stage

M-1147 Motorized stage

M-1148 Metallographic stage

M-1154 0.7 N.A. swing-out condenser