OPTIKA®
MICROSCOPES
ITALY

B-150 Series

Middle-Level Biological Microscopes For Students

The Most Comprehensive Series Dedicated To Students

A VARIETY OF CONFIGURATIONS TO MEET EVERY NEEDS

» Designed to fulfill primary/secondary schools and educational labs
» 18 mm field number for a wide observation area
» Cordless use, totally independent from mains/battery connection (R-PL Line)
» Sturdy and durable for extended lifetime; compact and intuitive
» External power supply for enhanced safety and convenient servicing

PROFESSIONAL FEATURES FOR... WELL, EVERYONE

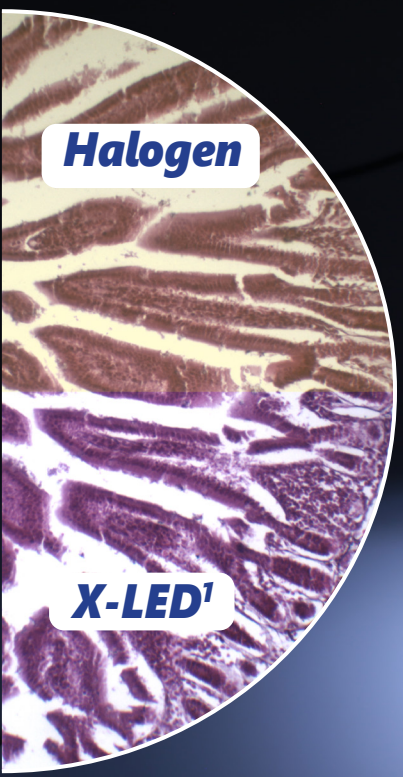
» High eyepoint eyepieces for glasses wearers
» N-PLAN objectives for a total field flatness on 18 mm (R-PL Line)
» Li-ion battery for unparalleled duration & fast recharge (R-PL Line)
» Automatic light control to forget manual adjustement (ALC Line)
» Simple polarization versions with polarizer and analyzer (P Line)

100X OIL/WATER OBJECTIVE - ONLY AVAILABLE AT OPTIKA

» Same objective for oil and water use
» Oil represents the best media for high numerical aperture
» Water combines results with convenience for educational purposes
» Save time - forget about tedious cleaning and maintenance
» Save money - no additional expenses due to inappropriate cleaning

100x Oil

100x Water



X-LED¹ FOR 65,000 HOURS OF OPERATION - ONLY AVAILABLE AT OPTIKA

» State-of-the-art illumination system for incomparable light intensity
» Exclusive lens & collector design, unmatched uniformity & brightness
» Excellent color fidelity, constant pure-white color temperature
» Money & energy saving, cutting electricity bills by 90%
» Simple polarization versions with polarizer and analyzer (P Line)

Multi-plug power supply

Plenty Of Smart & Innovative Light-Related Technologies

AUTOMATIC LIGHT CONTROL - ONLY AVAILABLE AT OPTIKA (ALC LINE)

» Choose the light intensity according to your preference
» Press the ALC button and the light will be automatically re-adjusted
» When another objective is used
» When the diphragm aperture changes
» When processing samples with different opacity

STEP 1

Set the brightness according to your prefences.

STEP 2

Press the ALC button to save the brightness level.

STEP 3

Forget about the illumination!

The microscope will automatically adjust the brightness for you, in case of:

- Another objective is used
- The diaphragm aperture is changed
- Another specimen with different opacity is processed

Regulation of diaphragm aperture

Plenty Of Smart & Innovative Light-Related Technologies

LI-ION BATTERIES PROS (on B-150R models):

» **Reliable:** Significantly lower self-discharge rate than NiMH
» **Faster recharge:** Li-Ions can be charged in about 6 hours
» **Number of charges:** approx. 2,000 times (+100% than NiMH batteries)
» **No "memory effect":** can be charged at any time, without effects
» Temperature tolerance to low temperature (more than NiMH batteries)

B-150 Series

A very comprehensive range of modern microscopes ideal for students and primary/secondary schools, available in brightfield or polarized light. Provided with achromatic or PLAN achromatic lenses, FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, fixed or mechanical stage and powerful, uniform, white color temperature 1 W X-LED1 illumination.
Slim and easy to carry, all the models are equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use

A variety of configurations to meet every needs
Configurations for every taste, including regular brightfield and the one ready for polarization analysis (P Line), automatic light control (ALC Line), with built-in cameras for image acquisition (D Line) and cordless versions with advanced features (R-PL Models)

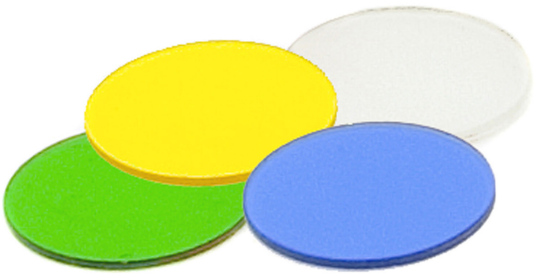
High eyepoint eyepieces for glasses wearers
These eyepieces are designed in such a way that the exit pupil is further away from the eye lens than standard eyepieces, being are well suited for eyeglasses wearers

X-LED[1] - State-of-the-art illumination system for incomparable light intensity
Provided with an exclusive lens & collector design, OPTIKA X-LED technology ensures unmatched uniformity & brightness (more than a 20 W halogen lamp) for excellent color fidelity with constant pure-white color temperature

100x oil/water objective: same objective for dual use
This new, revolutionary objective is something you've never seen before!
Oil ensures the best performance achievable; water represents the most convenient solution as eliminates tedious cleaning

Incomparable comfort with the exclusive Automatic Light Control (ALC Line)
Light intensity is automatically adjusted by the microscope: no matter if the aperture of the diaphragm changes, if another objective is used, and if the opacity of the sample is different...the microscope will set the light!

N-PLAN objectives combined with exclusive Li-ion battery (R-PL line)
Laboratory grade optics meets the latest technology in terms of battery, for unparalleled lifetime (2000 charges), extended autonomy (15 hours/charge) and incredibly fast recharging time (6 hours)



External power supply for enhanced safety and convenient servicing
OPTIKA's safety first approach drives to the use of a low voltage, multi-plug, external power supply in order to prevent any risk of electric shock and heatflow inside the unit

GET THE MOST OUT OF OUR ACCESSORIES

M-974 - Blue filter
Increase the colour temperature of light (toward the blue)
M-976 - Green filter
Optimize the resolution of phase contrast
M-978 - Yellow filter
Decrease the colour temperature of light (toward the red)
M-988 - Frosted glass filter
Increase the uniformity of illumination, even further

B-150 Series - Standard Models

B-151

Monocular microscope ideal for students and primary schools, with three achromatic lenses (400x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, fixed stage and powerful, uniform, white color temperature settable 1 W *X-LED¹* illumination.
Slim and easy to carry, the LED illumination will provide over 20 years of use.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
All with anti-fungus treatment.

Specimen stage: Fixed stage, 130x120 mm. With sample clips.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Adjustable tension of coarse focusing knob.

Condenser: N.A. 0.65, pre-centered, fixed with iris diaphragm.

Illumination: X-LED1 with white 1 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/5Vdc external power supply.

B-151ALC

Monocular microscope ideal for students and primary schools, with three achromatic lenses (400x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, fixed stage and powerful, uniform, white color temperature settable 1 W *X-LED¹* illumination. Slim and easy to carry, the LED illumination will provide over 20 years of use of use. The exclusive ALC will automatically adjust the brightness according to your preferences

Head: Monocular, 30° inclined; 360° rotating (when ALC cable is unplugged).

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
All with anti-fungus treatment.

Specimen stage: Fixed stage, 130x120 mm. With sample clips.

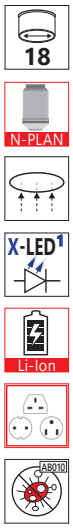
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: N.A. 0.65, pre-centered, fixed with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. With ***ALC*** for automatic light control. Multi-plug 100-240Vac/5Vdc external power supply.

B-150 Series - Standard Models

B-151R-PL



Cordless monocular microscope ideal for students and primary schools, with three PLAN achromatic lenses (400x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, fixed stage and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, the LED illumination will provide over 20 years of use of use.
The Li-Ion battery (not provided) ensures unparalleled duration and fast recharge.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN 4x/0.10, W.D. 15.2 mm.
- N-PLAN 10x/0.25, W.D. 5.5 mm.
- N-PLAN 40x/0.65, W.D. 0.45 mm.

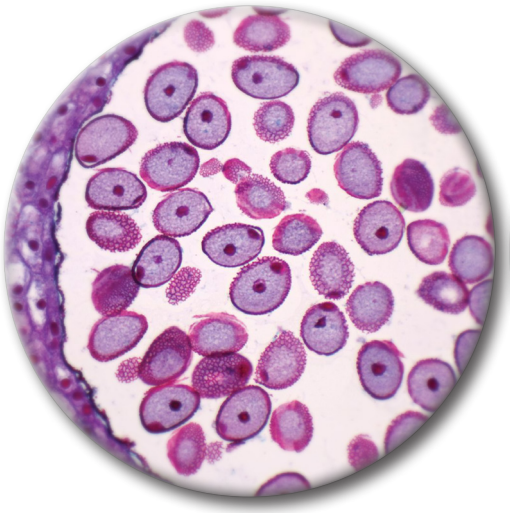
All with anti-fungus treatment.

Specimen stage: Fixed stage, 130x120 mm. With sample clips.

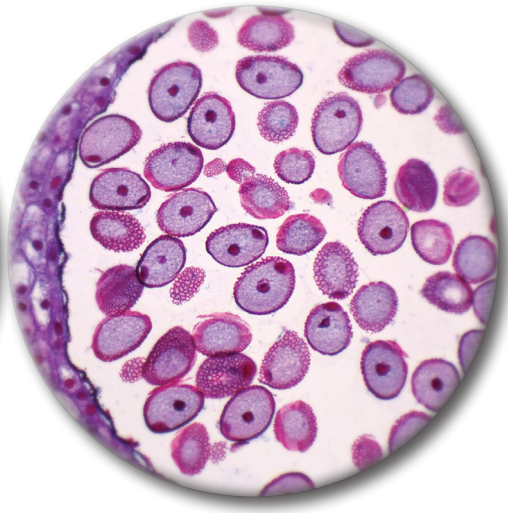
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: N.A. 0.65, pre-centered, fixed with iris diaphragm.

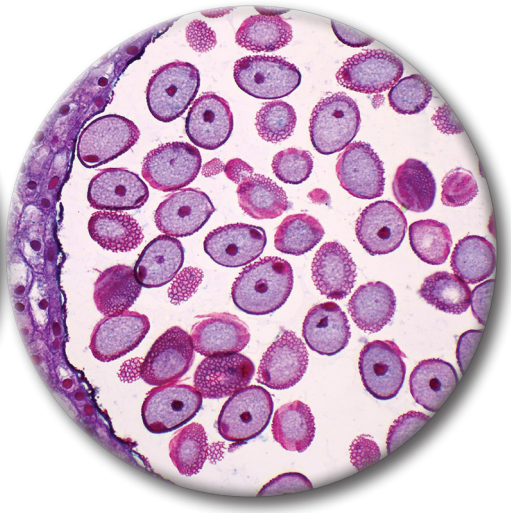
Illumination: X-LED¹ with white 1 W LED and light intensity control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.



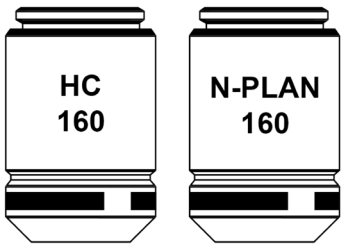
Lily Anther, Mature Pollen Grains, c.s
Conventional Achromatic Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA HC Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA N-PLAN Objective



HC

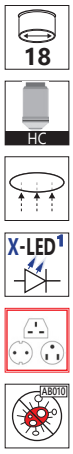
N-PLAN

OPTIKA HC: This series of objectives ensures a versatile and reasonably priced entry-level solution for brightfield and simple polarization applications.
They are specifically designed to achieve optimal contrast and thus maximize yield on an instrument intended for education on F.N. 18.

OPTIKA N-PLAN: In addition to the advantages of the HC objectives, the total flatness of the field and an even greater contrast are achieved with the N-PLAN series.

B-150 Series - Standard Models

B-152 / B-153



Monocular microscope ideal for students and primary schools, with four achromatic lenses (600x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
- **Achromatic HC type 60x/0.85, W.D. 0.45 mm (only in B-153 model).**

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/5Vdc external power supply.

B-152ALC / B-153ALC

Monocular microscope ideal for students and primary schools, with four achromatic lenses (600x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color 1 W *X-LED¹*. Slim and easy to carry, equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED. The exclusive ALC will automatically adjust the brightness according to your preferences.

Head: Monocular, 30° inclined; 360° rotating (when ALC cable is unplugged).

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
- **Achromatic HC type 60x/0.85 (only in B-153ALC model)**

All with anti-fungus treatment.

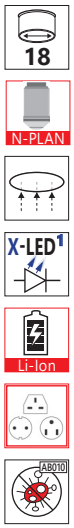
Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. With ***ALC*** for automatic light control. Multi-plug 100-240Vac/5Vdc external power supply.

B-152R-PL / B-153R-PL



Cordless monocular microscope ideal for students and primary schools, with three or four PLAN achromatic lenses (400x on B-152R-PL or 600x on B-153R-PL), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color 1 W *X-LED¹*. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination. The Li-Ion battery (not provided) ensures unparalleled duration and fast recharge.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10, W.D. 15.2 mm.
- N-PLAN plan achromatic 10x/0.25, W.D. 5.5 mm.
- N-PLAN plan achromatic 40x/0.65, W.D. 0.45 mm.
- N-PLAN plan achromatic 60x/0.85, W.D. 0.45 mm. (only for B-153R-PL).

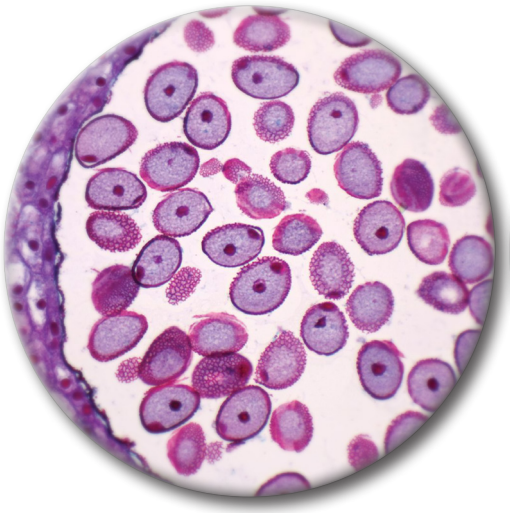
All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

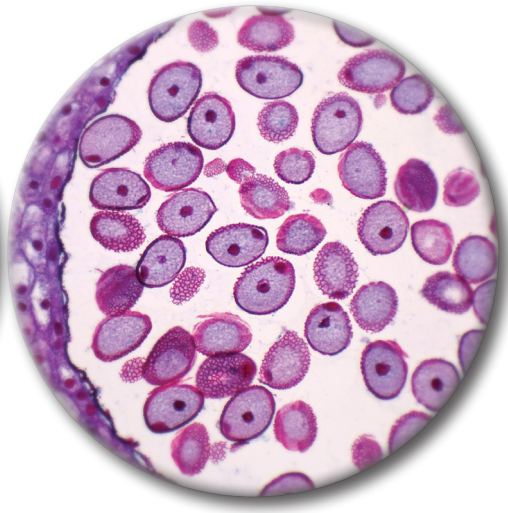
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

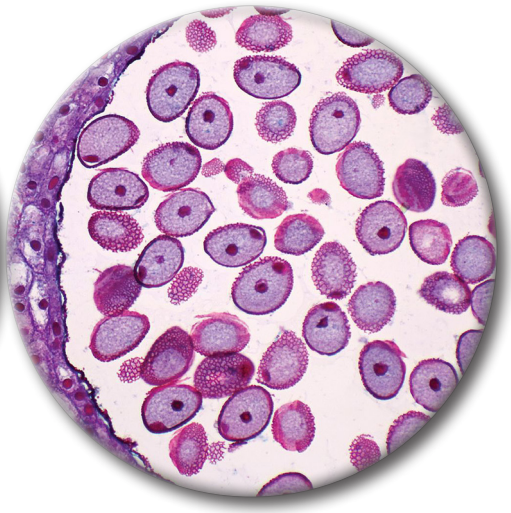
Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.



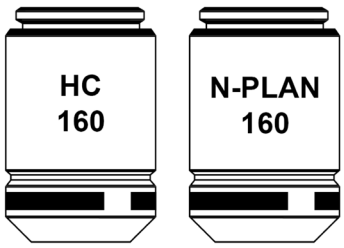
Lily Anther, Mature Pollen Grains, c.s
Conventional Achromatic Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA HC Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA N-PLAN Objective



HC

N-PLAN

OPTIKA HC: This series of objectives ensures a versatile and reasonably priced entry-level solution for brightfield and simple polarization applications. They are specifically designed to achieve optimal contrast and thus maximize yield on an instrument intended for education on F.N. 18.

OPTIKA N-PLAN: In addition to the advantages of the HC objectives, the total flatness of the field and an even greater contrast are achieved with the N-PLAN series.

B-150 Series - Standard Models

B-155

Monocular microscope ideal for students and primary schools, with four achromatic lenses (1000x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10
- Achromatic HC type 10x/0.25
- Achromatic HC type 40x/0.65
- Achromatic HC type 100x/1.25 (oil/water).

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/5Vdc external power supply.

B-155ALC

Monocular microscope ideal for students and primary schools, with four achromatic lenses (1000x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹*. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope with long lasting LED illumination. The ALC will automatically adjust the brightness according to your preferences.

Head: Monocular, 30° inclined; 360° rotating (when ALC cable is unplugged).

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10
- Achromatic HC type 10x/0.25
- Achromatic HC type 40x/0.65
- Achromatic HC type 100x/1.25 (oil/water).

All with anti-fungus treatment.

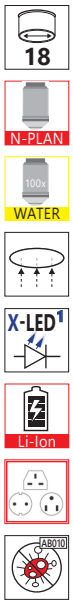
Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. With ***ALC*** for automatic light control. Multi-plug 100-240Vac/5Vdc external power supply.

B-155R-PL



Cordless monocular microscope ideal for students and primary schools, with four PLAN achromatic lenses (1000x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color 1 W *X-LED*[1]. Slim and easy to carry, equipped with all the main controls to start learning how to use an advanced microscope with long lasting LED illumination. The Li-Ion battery (not supplied) ensures unparalleled duration and fast recharge.

Head: Monocular, 30° inclined; 360° rotating.

Eyepiece: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10, W.D. 18 mm.
- N-PLAN plan achromatic 10x/0.25, W.D. 7 mm.
- N-PLAN plan achromatic 40x/0.65, W.D. 0.53 mm.
- N-PLAN plan achromatic 100x/1.25, W.D. 0.13 mm (oil/water).

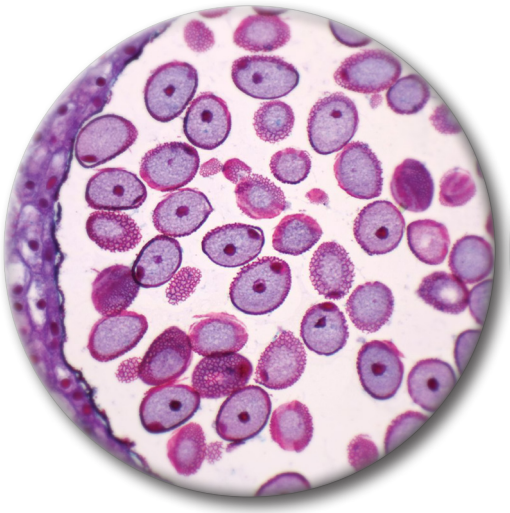
All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

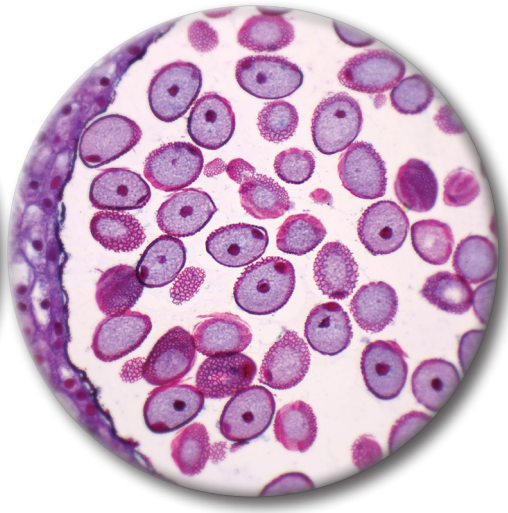
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

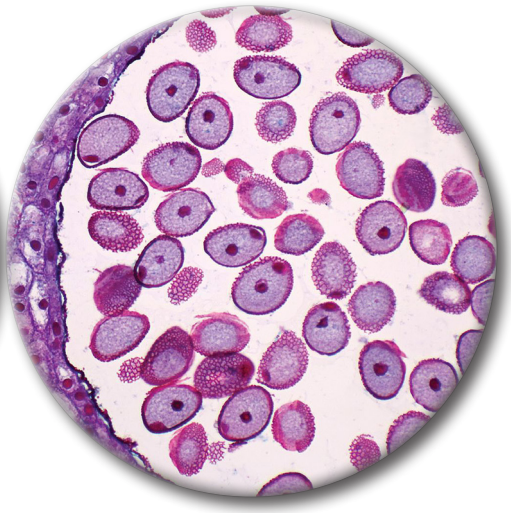
Illumination: X-LED[1] with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.



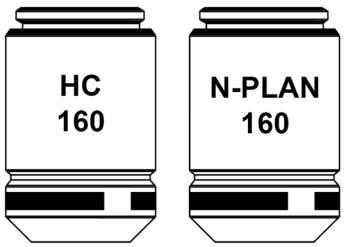
Lily Anther, Mature Pollen Grains, c.s
Conventional Achromatic Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA HC Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA N-PLAN Objective



HC

N-PLAN

OPTIKA HC: This series of objectives ensures a versatile and reasonably priced entry-level solution for brightfield and simple polarization applications. They are specifically designed to achieve optimal contrast and thus maximize yield on an instrument intended for education on F.N. 18.

OPTIKA N-PLAN: In addition to the advantages of the HC objectives, the total flatness of the field and an even greater contrast are achieved with the N-PLAN series.

B-150 Series - Standard Models

B-156 / B-157

Binocular microscope ideal for students and primary schools, with four achromatic lenses (600x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use.

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
- **Achromatic HC type 60x/0.85, W.D. 0.45 mm (only in B-157 model).**

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/5Vdc external power supply.

B-156ALC / B-157ALC

Binocular microscope ideal for students and primary schools, with four achromatic lenses (600x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W X-LED¹ illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The exclusive *ALC* will automatically adjust the brightness according to your preferences.

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm
- **Achromatic HC type 60x/0.85, W.D. 0.45 mm (only in B-157ALC model).**

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. With *ALC* for automatic light control. Multi-plug 100-240Vac/5Vdc external power supply.

B-150 Series - Standard Models

B-156R-PL / B-157R-PL

Cordless binocular microscope ideal for students and primary schools, with four PLAN achromatic lenses (600x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The Li-Ion battery ensures unparalleled duration and fast recharge.

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10, W.D. 15.2 mm.
- N-PLAN plan achromatic 10x/0.25, W.D. 5.5 mm.
- N-PLAN plan achromatic 40x/0.65, W.D. 0.45 mm.
- **N-PLAN plan achromatic 60x/0.85, W.D. 0.45 mm (only in B-157R-PL model).**

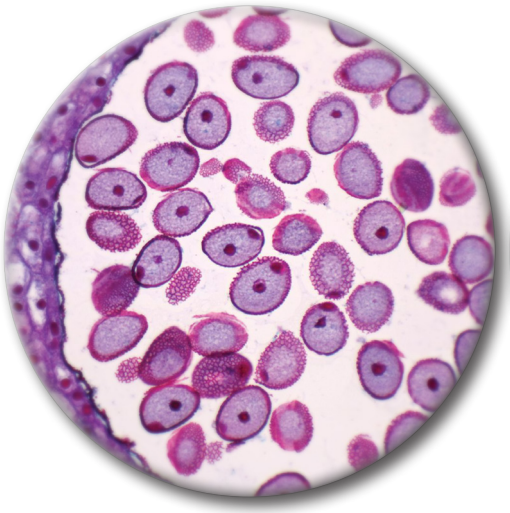
All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

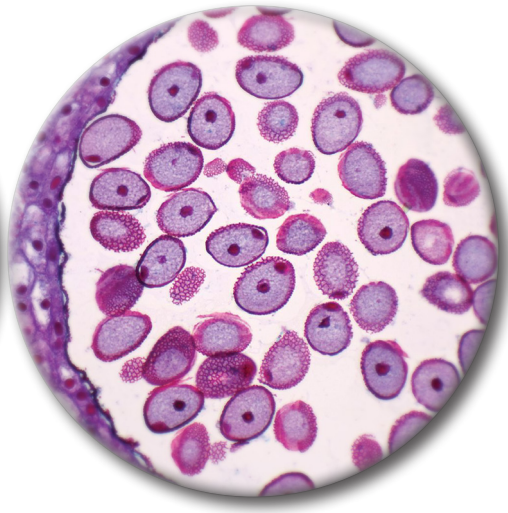
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

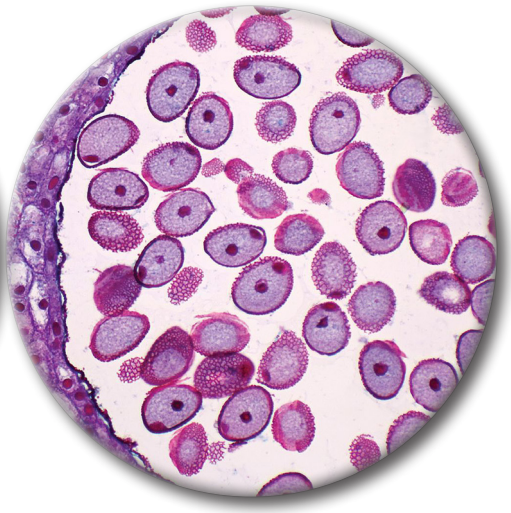
Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.



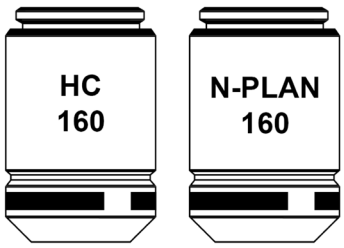
Lily Anther, Mature Pollen Grains, c.s
Conventional Achromatic Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA HC Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA N-PLAN Objective



HC

N-PLAN

OPTIKA HC: This series of objectives ensures a versatile and reasonably priced entry-level solution for brightfield and simple polarization applications. They are specifically designed to achieve optimal contrast and thus maximize yield on an instrument intended for education on F.N. 18.

OPTIKA N-PLAN: In addition to the advantages of the HC objectives, the total flatness of the field and an even greater contrast are achieved with the N-PLAN series.

B-150 Series - Standard Models

B-159

Binocular microscope ideal for students and primary schools, with four achromatic lenses (1000x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use.

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
- Achromatic HC type 100x/1.25, W.D. 0.13 mm (oil/water).

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/5Vdc external power supply.

B-159ALC

Binocular microscope ideal for students and primary schools, with four achromatic lenses (1000x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W X-LED¹ illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The exclusive *ALC* will automatically adjust the brightness according to your preferences.

Head: Binocular, 30° inclined; 360° rotating (when ALC cable is unplugged).

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- Achromatic HC type 4x/0.10, W.D. 18 mm.
- Achromatic HC type 10x/0.25, W.D. 7 mm.
- Achromatic HC type 40x/0.65, W.D. 0.53 mm.
- Achromatic HC type 100x/1.25, W.D. 0.13 mm (oil/water).

All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

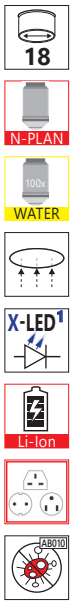
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. With *ALC* for automatic light control. Multi-plug 100-240Vac/5Vdc external power supply.

B-150 Series - Standard Models

B-159R-PL



Cordless binocular microscope ideal for students and primary schools, with four PLAN achromatic lenses (1000x), FN 18 high eyepointeyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The Li-Ion battery (not provided) ensures unparalleled duration and fast recharge.

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10, W.D. 15.2 mm.
- N-PLAN plan achromatic 10x/0.25, W.D. 5.5 mm.
- N-PLAN plan achromatic 40x/0.65, W.D. 0.45 mm.
- N-PLAN plan achromatic 100x/1.25, W.D. 0.13 mm (oil/water).

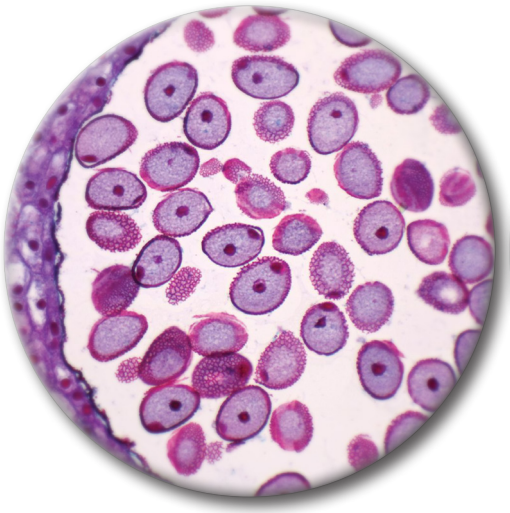
All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

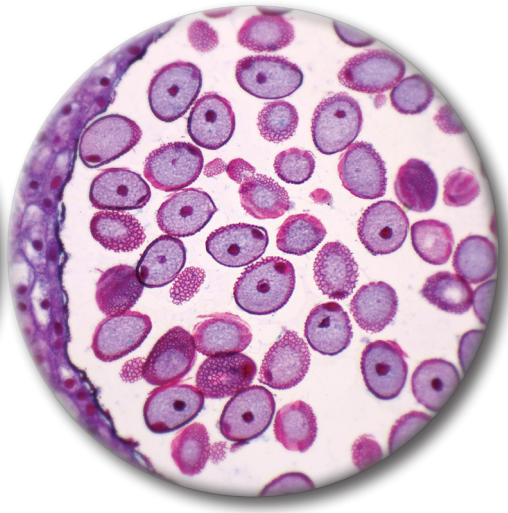
Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

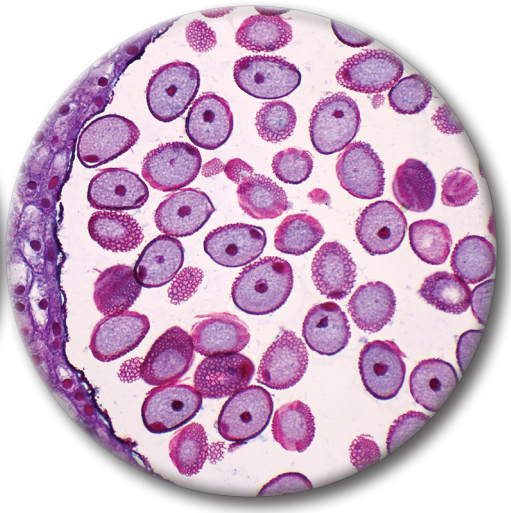
Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.



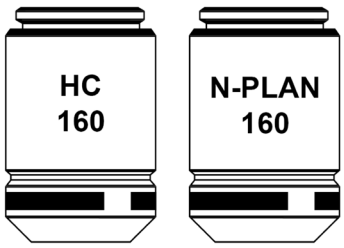
Lily Anther, Mature Pollen Grains, c.s
Conventional Achromatic Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA HC Objective



Lily Anther, Mature Pollen Grains, c.s
OPTIKA N-PLAN Objective



HC

N-PLAN

OPTIKA HC: This series of objectives ensures a versatile and reasonably priced entry-level solution for brightfield and simple polarization applications. They are specifically designed to achieve optimal contrast and thus maximize yield on an instrument intended for education on F.N. 18.

OPTIKA N-PLAN: In addition to the advantages of the HC objectives, the total flatness of the field and an even greater contrast are achieved with the N-PLAN series.

B-150 Series - Polarizing Models

B-150P-MRPL

Cordless monocular polarized light microscope ideal for students and primary schools, with three PLAN achromatic lenses (400x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, rotating stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination. Rotating swing-out polarizer and sliding-out fixed analyzer included. The Li-Ion battery (not provided) ensures unparalleled duration and fast recharge.

Head: Monocular, 30° inclined; 360° rotating.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10
- N-PLAN plan achromatic 10x/0.25
- N-PLAN plan achromatic 40x/0.65.

All with anti-fungus treatment.

Specimen stage: Rotatable round stage, 120 mm diameter, with sample clips.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: N.A. 1.25, pre-centered, fixed, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.

Polarizing filters: Rotating polarizer (swing-out) and fixed analyzer (sliding-out).

B-150P-BRPL

Cordless binocular polarized light microscope ideal for students and primary schools, with three PLAN achromatic lenses (400x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, rotating stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED¹* illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. Rotating swing-out polarizer and sliding-out fixed analyzer included. The exclusive Li-Ion battery ensures unparalleled duration and fast recharge

Head: Binocular, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10
- N-PLAN plan achromatic 10x/0.25
- N-PLAN plan achromatic 40x/0.65. All with anti-fungus treatment.

Specimen stage: Rotatable round stage, 120 mm diameter, with sample clips.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

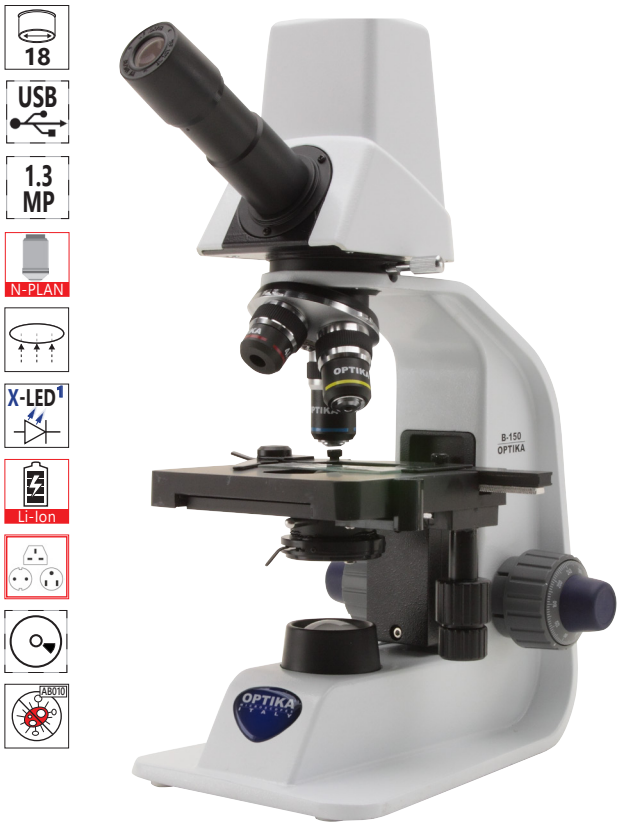
Condenser: N.A. 1.25, pre-centered, fixed, with iris diaphragm.

Illumination: X-LED¹ with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.

Polarizing filters: Rotating polarizer (swing-out) and fixed analyzer (sliding-out).

B-150 Series - Digital Models

B-150D-MRPL



Cordless digital monocular microscope ideal for students and primary schools, with three PLAN achromatic lenses (400x), FN 18 high eyepoint eyepiece, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED*[1] illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The exclusive Li-Ion battery ensures unparalleled duration and fast recharge

Head: Monocular with integrated 1.3 MP camera, 30° inclined; 360° rotating.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10
- N-PLAN plan achromatic 10x/0.25
- N-PLAN plan achromatic 40x/0.65

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED[1] with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.

B-150D-BRPL

Cordless digital binocular microscope ideal for students and primary schools, with four PLAN achromatic lenses (1000x), FN 18 high eyepoint eyepieces, finite optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 1 W *X-LED*[1] illumination. Slim and easy to carry, it is equipped with all the main controls to start learning how to use an advanced microscope and with long lasting LED illumination to provide over 20 years of use. The exclusive Li-Ion battery ensures unparalleled duration and fast recharge

Head: Binocular with integrated 3.2 MP camera, 30° inclined; 360° rotating.

Dioptric adjustment: Left eyepiece.

Eyepieces: WF10x/18 mm, high eyepoint, secured by screw.

Nosepiece: Quadruple ball bearings revolving nosepiece.

Objectives:
- N-PLAN plan achromatic 4x/0.10
- N-PLAN plan achromatic 10x/0.25
- N-PLAN plan achromatic 40x/0.65
- N-PLAN plan achromatic 100x/1.25 (oil/water). All with anti-fungus treatment.

Specimen stage: Mechanical stage, 125x116 mm, 70x30 mm X-Y movement range. Vernier scale on the two axes, accuracy: 0.1 mm.

Focusing: Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob.

Condenser: Abbe N.A. 1.25, pre-centered, focusable, with iris diaphragm.

Illumination: X-LED[1] with white 1 W LED and brightness control. Color temperature: 6,300 K. Li-Ion battery for long lasting operation. Multi-plug 100-240Vac/5Vdc external power supply.

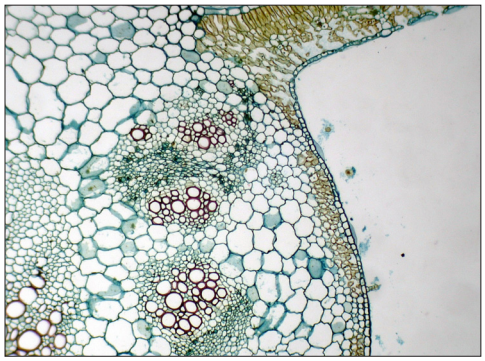
B-150 Series - B-150D Camera specifications

	B-150D-MRPL	B-150D-BRPL
Resolution	1280x1024 pixels (1.3 MP)	2048x1536 pixels (3.14 MP)
Sensor	1/3.2"CMOS	1/2.5"CMOS
Pixel size	2.8x2.8 µm	2.2x2.2 µm
Resolution & Frame Rate	1280x1024 - 15 fps	2048x1536 - 4 fps
	640x480 - 30 fps	1280x1024 - 8 fps
		640x480 - 30 fps
Sensitivity	1.0 V/Lux-sec	0.53 V/Lux-sec
White Balance	Auto / Manual	Auto / Manual
S/N Ratio	≥ 40 dB	≥ 40 dB
Dynamic Range	≥ 66.5 dB	≥ 66.5 dB
Digital Port	USB 2.0	USB 2.0
Imaging Software	OPTIKA Vision Lite	OPTIKA Vision Lite
System Requirements	Operating system: Windows XP, Vista, Win7, Win8, Win10, 32-64 bit	

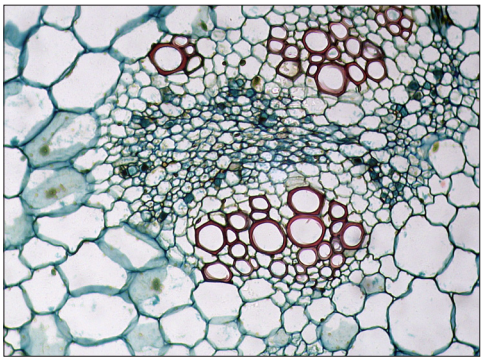
B-150 Series - Optical performance

Eyepiece			10x (M-002.1)		16x (M-003)	
Field number (mm)			18		12	
Objective	N.A.	W.D. (mm)	Total magnification	Field of View (mm)	Total magnification	Field of View (mm)
4x	0.1	18	40x	4.5	64x	3
10x	0.25	7	100x	1.8	160x	1.2
20x	0.4	2	200x	0.9	320x	0.6
40x	0.65	0.53	400x	0.45	640x	0.3
60x	0.8	0.45	600x	0.3	960x	0.2
100x	1.25 (oil/water)	0.13	1000x	0.18	1600x	0.12

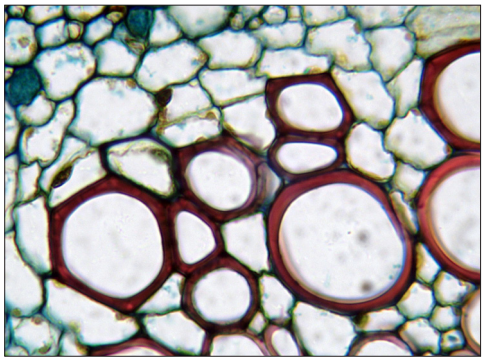
B-150 Series - Zoom comparison



Monocot and dicot - B-157 - 4x objective



Monocot and dicot - B-157 - 10x objective



Monocot and dicot - B-157 - 40x objective

B-150 Series - Digital Video Bundles

Five models of the B-150 series can be equipped with a camera and a 7" LCD screen, both in high definition. In these bundles, the normal head (supplied with the instrument) can be replaced with the digital system in a few minutes. This solution provides a system suitable for viewing specimens by several students at the same time, without removing the possibility of using the microscope in the classical way through the eyepiece.

LCD screen: High definition 7" LCD.

Camera: 1920x1080 pixels, 30fps (video). Up to 1844x1080 pixels (photo).

Storing capacity: On Micro Sd card

Video recording: Yes

Measuring funcion: Yes, simple line measurement

Models available:

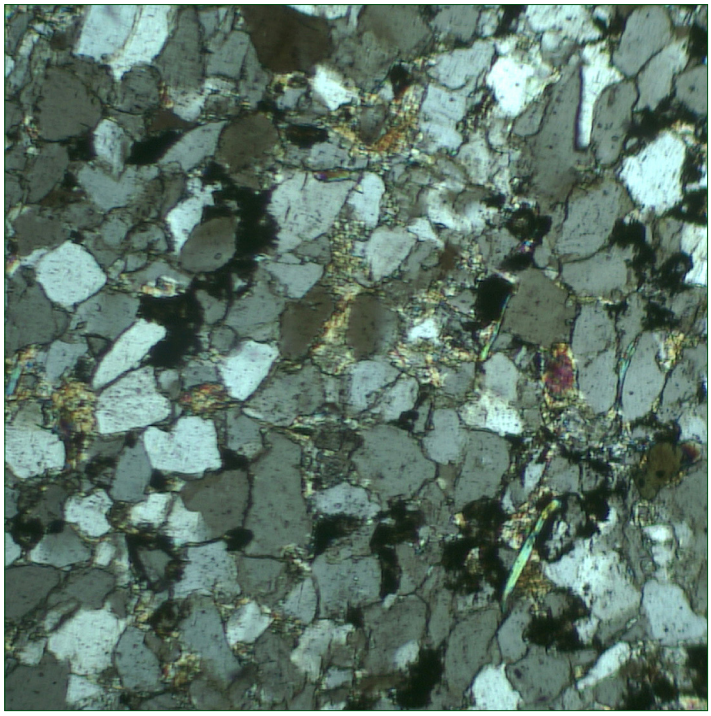
-B-151V: Same fatures than standard B-151, but delivered as bundle together with the 7" screen with built in camera. **Optical head with eyepiece included.**

-B-153V: Same fatures than standard B-153, but delivered as bundle together with the 7" screen with built in camera. **Optical head with eyepiece included.**

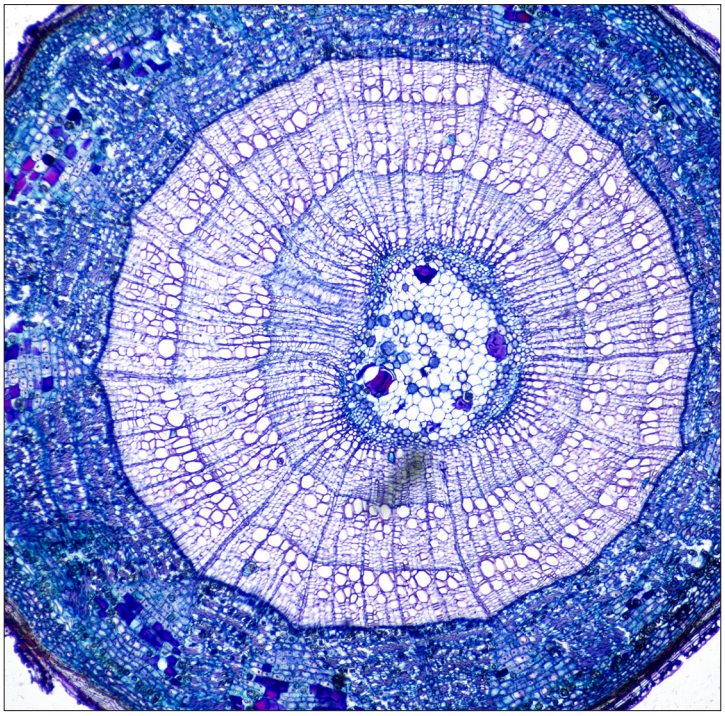
-B-151R-PLV: Same fatures than standard B-151R-PL, but delivered as bundle together with the 7" screen with built in camera. **Optical head with eyepiece included.**

-B-152R-PLV: Same fatures than standard B-152R-PL, but delivered as bundle together with the 7" screen with built in camera. **Optical head with eyepiece included.**

-B-159R-PLV: Same fatures than standard B-159R-PL, but delivered as bundle together with the 7" screen with built in camera. **Optical head with eyepiece included.**



Polarized light observation of quartzite with B-150P-MRPL and 10x objective.



Brightfield observation of tilia three-year stem with B-159 and 20x objective.

B-150 Series - Comparison charts

B-150 - Standard Models, with HC Objectives

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
B-151	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x	Fixed, 130x120 mm, with sample clips	Coaxial coarse and fine, limit stop	N.A. 0.65, iris diaphragm, fixed	1 W X-LED[1], manual brightness control
B-152 **B-153***	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 60x*	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control
B-155	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control
B-156 **B-157***	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 60x*	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control
B-159	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control

B-150 - ALC Models, with Automatic Light Control and HC Objectives

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
B-151ALC	Monocular, 30° inclined	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x	Fixed, 130x120 mm, with sample clips	Coaxial coarse and fine, limit stop	N.A. 0.65 fixed, with diaphragm	1 W X-LED[1], manual and automatic brightness control
B-152ALC **B-153ALC***	Monocular, 30° inclined	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 60x*	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual and automatic brightness control
B-155ALC	Monocular, 30° inclined	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual and automatic brightness control
B-156ALC **B-157ALC***	Binocular, 30° inclined	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 60x*	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual and automatic brightness control
B-159ALC	Binocular, 30° inclined	WF 10x/18	Quadruple	HC (high contrast) 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual and automatic brightness control

B-150 - Cordless Models, with N-PLAN Objectives and Li-Ion Rechargeable Batteries

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
B-151R-PL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x	Fixed, 130x120 mm, with sample clips	Coaxial coarse and fine, limit stop	N.A. 0.65 fixed, with diaphragm	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-152R-PL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-153R-PL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x, 60x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-155R-PL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-156R-PL **B-157R-PL***	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x, 60x*	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-159R-PL	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery

B-150 - Polarized Light Cordless Models, with N-PLAN Objectives and Li-Ion Rechargeable Batteries

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
B-150P-MRPL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x	Round, 360° rotating, 120 mm diameter, with sample clips	Coaxial coarse and fine, limit stop	N.A. 1.25, iris diaphragm, fixed	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-150P-BRPL	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x	Round, 360° rotating, 120 mm diameter, with sample clips	Coaxial coarse and fine, limit stop	N.A. 1.25, iris diaphragm, fixed	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery

B-150 - Digital Cordless Models, with N-PLAN Objectives and Li-Ion Rechargeable Batteries

Model	Head	Eyepiece(s)	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
B-150D-MRPL	Monocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery
B-150D-BRPL	Binocular, 30° inclined, 360° rotating	WF 10x/18	Quadruple	N-PLAN 4x, 10x, 40x, 100x	Double layer, 125x116 mm, moving range 70x30 mm	Coaxial coarse and fine, limit stop	Abbe N.A. 1.25, iris diaphragm, focusable	1 W X-LED[1], manual brightness control, Li-Ion rechargeable battery

B-150 Series - Accessories

Eyecups & Eyepieces
M-001 Huygens 5x eyepiece
M-002.1 WF10x/18 eyepiece, high eyepoint
M-004 WF10x/18 micrometric eyepiece, high eyepoint
M-008 WF10x/18 eyepiece, high eyepoint, with pointer
M-003 WF16x/12 eyepiece
M-162 WF20x/10 eyepiece

Objectives
HC
M-137 HC (high contrast) objective 4x/0.10
M-138 HC (high contrast) objective 10x/0.25
M-139 HC (high contrast) objective 20x/0.40
M-141 HC (high contrast) objective 40x/0.65
M-142 HC (high contrast) objective 60x/0.85
M-143 HC (high contrast) objective 100x/1.25 (oil)

N-PLAN
M-164 N-PLAN objective 4x/0.10
M-165 N-PLAN objective 10x/0.25
M-166 N-PLAN objective 20x/0.40
M-167 N-PLAN objective 40x/0.65
M-168 N-PLAN objective 60x/0.85
M-169 N-PLAN objective 100x/1.25 (oil)

Stages
M-040 Attachable mechanical stage (only for B-151, B-151ALC and B-151R-PL)

Condensers & Filters
M-974 Blue filter, 32mm diameter
M-976 Green filter, 32mm diameter
M-978 Yellow filter, 32mm diameter
M-988 Frosted glass filter, 32mm diameter
M-155 Polarising set (filters only)

Camera Adapters
M-115 0.35x C-Mount projection lens
M-114 0.5x C-Mount projection lens
M-118 0.75x C-Mount projection lens

Miscellaneous
15104 Cleaning kit
15008 Immersion oil, 10ml
15009 Immersion oil, 100ml
DC-002 Plastic dust cover, medium, 490(l)x490(h) mm
M-005 Micrometric slide, 26x76mm, with 2 scales (1mm/100 & 10mm/100)
M-069 Solar charger
M-972 Plane-concave mirror, with base
AB-010 Antibacterial surface treatment, only for newly purchased microscope

M-069 - Solar charger
Included battery: rechargeable – Lithium-Poly. Capacity: 2500 mAh.
Output voltage: 5 Vdc. -
Autonomy: over 6 hours at medium intensity (X-LED^3).
Charging models: with solar panel (12h),
with external USB power supply (2.5h)
Not compatible with R models.

15104 - Cleaning kit
It cleans glass quickly and effectively,
without leaving residue or odor.
Ideal for precision lens or prism cleaning.

How to connect the cameras to our microscopes.
Please refer to the Adapter reference list on Digital section.

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