

Entry-level biological microscopes for students ECOVISION B-20 / B-20C / B-20R / B-20 Solar / B-50 M-100FL / M-100FL-H / M-100FLed

ECOVISION Series

Entry-level biological microscopes for students



ECOVISION Series

Monocular biological microscopes designed especially for students attending primary and secondary schools. The metal structure combines sturdiness and ease of use.

The wide selection of available models allows you to choose the most suitable microscope according to the application required.

OPTIKA

OP

IKA

B-20	Monocular microscope 400x, LED.
B-20C	Monocular microscope 400x, with coaxial knobs, LED.
B-20R	Monocular microscope 400x, LED with rechargeable batteries.
B-20 Solar	Monocular microscope 400x, LED with solar panel.
B-50	Monocular microscope 400x, with coaxial knobs, LED.
M-100FL	Monocular microscope, 400x, tungsten lamp.
M-100FL-H	Monocular microscope 400x, halogen lamp.
M-100FLed	Monocular microscope 400x, LED.

ECOVISION Series - **B-50**

B-50

This microscope is the perfect choice for students who want an innovative and easy-to-use product.



Observation mode: Brightfield.

Focusing: Coaxial coarse and fine focusing mechanism.
Stage: Fixed stage, 120 mm x 110 mm, with sample clips.
Nosepiece: Triple revolving nosepiece, rotation on ball bearings.
Head: Monocular, 45° inclined and rotatable 360°.
Eyepiece: WF10x/18 widefield eyepiece with field number 18mm.
Objectives: Achromatic objectives with mechanical tube lenght 160 mm, 0,17mm cover glass:
Achrometic 4X/010

- Achromatic 4X/0,10
- Achromatic 10X/0,25
- Achromatic 40X/0,65

All objectives are treated with an anti-fungus treatment. **Condenser:** N.A. 0,65 pre-centered, **with built-in illuminator**. **Dimensions:** Height: 350 mm - Width: 132 mm - Depth: 220 mm. **Illumination:** Special condenser with built-in illuminator. Light source: high intensity cold white LED, with adjustment knob. Input voltage: 110/230Vac, 50/60Hz. Max required power: 1W



ECOVISION Series - **B-50**



Revolutionary illumination system built in the condenser: ultra-bright light and great contrast ensured. Ergonomic light control position: the knob is located under the condenser body.



ECOVISION Series - Models

B-20

Monocular biological microscope with **400x magnification**. 360° rotating head, with 45° inclined eyepiece tube. Wide Field 10x/16mm eyepiece. Triple nosepiece rotating in both directions with objective click locking system.

Achromatic objectives: 4x, 10x and telescopic 40x.

Separate coarse and fine focusing knobs on different axis, with focus tension adjustment. Movable round stage, 90 mm diameter, 5 mm moving range, slide clips. **White LED, with brightness control**.

B-20C

Monocular biological microscope, with 400x magnification. Achromatic objectives 4x, 10x and 40x, wide field 10x/18mm eyepiece. Coaxial coarse and fine focus knobs located on both sides of the stand. Double layer mechanical stage, size 105x95mm, with specimen holder. White LED, with brightness control. Fixed condenser.





B-20R

Monocular biological microscope with **400x magnification**. 360° rotating head, with 45° inclined eyepiece tube. Wide Field 10x/16mm eyepiece. Triple nosepiece rotating in both directions with objective click locking system. Achromatic objectives: 4x, 10x and telescopic 40x.

Separate coarse and fine focusing knobs on different axis, with focus tension adjustment. Movable round stage, 90 mm diameter, 5 mm moving range, slide clips. White LED, with brightness control and rechargeable battery.

B-20/B-20R





B-20Solar

Monocular biological microscope with **400x magnification**. 360° rotating head, with 45° inclined eyepiece tube. Wide Field 10x/16mm eyepiece.

Triple nosepiece rotating in both directions with objective click locking system. Achromatic objectives: 4x, 10x and telescopic 40x.

Separate coarse and fine focusing knobs on different axis, with focus tension adjustment. Movable round stage, 90 mm diameter, 5 mm moving range, slide clips. White LED, powered by a solar panel, for field use.

ECOVISION Series - Models

M-100FL

Monocular biological microscope with 400x magnification which can be increased to 1600x through an additional 16x eyepiece and 100x objective. 360° rotating head, with 45° inclined eyepiece tube. Wide Field 10x/18mm eyepiece.

Triple nosepiece rotating in both directions with objectives click locking system. DIN achromatic objectives: 4x, 10x and telescopic 40x. Coarse and fine focusing knobs located on both sides of the stand. The fine focusing knobs are graduated. Fixed stage with slide clips; 0.65 N.A. condenser, iris diaphragm and filter holder.

Built-in illuminator with 230V/20W tugsten bulb and condensing lens.



M-100FL-H

Monocular biological microscope with 400x magnification which can be increased to 1600x through an additional 16x eyepiece and 100x objective. 360° rotating head, with 45° inclined eyepiece tube. Wide Field 10x/18mm eyepiece.

Triple nosepiece revolver rotating in both directions with objectives click locking system. DIN achromatic objectives: 4x, 10x and telescopic 40x. Coarse and fine focusing knobs located on both sides of the stand. The fine focusing knobs are graduated. Fixed stage complete with slide clips; 0.65 N.A. condenser, iris diaphragm and filter holder. Built-in 12V/10W halogen illuminator with dichroic bulb. External transformer included.

M-100FLed

Monocular biological microscope with **400x magnification which can be increased to 1600x** through an additional 16x eyepiece and 100x objective. 360° rotating head, with 45° inclined eyepiece tube.

Wide Field 10x/18mm eyepiece.

Triple nosepiece rotating in both directions with objectives click locking system. DIN achromatic objectives: 4x, 10x and telescopic 40x. Coarse and fine focusing knobs located on both sides of the stand. The fine focusing knobs are graduated. Fixed stage with slide clips; 0.65 N.A. condenser, iris diaphragm and filter holder.

Built-in LED illuminator with 3 rechargeable batteries.

The illuminator can be used for 24 hours continously without any recharge. External recharger included. Battery pack: 3 x AA, 1.2V NiMh, 1000 mAh, replaceable by the user. Time required for a full recharge: 10 hours.

Battery runtime with LED at maximum power: 12 hours. Battery charging enabled while using the microscope. (Performances estimated with batteries at their maximum efficiency).

M-100FL





OPTIKA





ECOVISION Series - **Technical specifications**

Model	Head	Eyepiece	Objectives	Stage	Focusing	Illuminator
B-20	Monocular 360° rotating, 45° inclined.	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rotating, 90mm diameter, with sample clips	Separate coarse and fine control knobs	LED
B-20C	Monocular 360° rotating, 45° inclined.	WF10X/18mm	Achromatic 4x, 10x, 40x	Mechanical stage, 105x95mm with specimen holder	Coaxial coarse and fine control knobs	LED
B-20R	Monocular 360° rotating, 45° inclined.	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rotating, 90mm diameter, with sample clips	Separate coarse and fine control knobs	LED with rechargeable battery
B-20 SOLAR	Monocular 360° rotating, 30° inclined.	WF10x/16mm	Achromatic 4x, 10x, 40x	Movable, 360° rota- ting, 90mm diameter, with sample clips	Separate coarse and fine control knobs	LED powered by solar panel
B-50	Monocular 360° rotating, 30° inclined.	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	Fixed stage, 120x110 mm with sample clips	Coaxial coarse and fine control knobs	Special condenser with built-in 1W LED
M-100FL	Monocular 360° rotating, 30° inclined.	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	Fixed stage, 120x110 mm with sample clips	Separate coarse and fine control knobs	20W tungsten
M-100FL-H	Monocular 360° rotating, 30° inclined.	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	Fixed stage, 120x110 mm with sample clips	Separate coarse and fine control knobs	10W halogen
M-100FLed	Monocular 360° rotating, 30° inclined.	WF10x/18mm	Achromatic DIN 4x, 10x, 40x	Fixed stage, 120x110 mm with sample clips	Separate coarse and fine control knobs	LED with rechargeable battery

ECOVISION Series - Accessories

B-20 - B-20R - B-20 Solar

M-044	Eyepiece WF10x/16mm.
M-727	Achromatic objective 4x/0.10.
M-728	Achromatic objective 10x/0.25.
M-729	Achromatic objective 40x/0.65.
M-030	Dust cover type 1.
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.

M-100FL - M-100FL-H - M-100FLed

M-001	Eyepiece H5x.
M-002	Eyepiece WF10x/18mm.
M-003	Eyepiece WF16x/12mm.
M-004	Eyepiece with micrometer WF10x/18mm.
M-008	Evepiece with pointer WF10x/18mm.
M-131	Achromatic objective 4x/0,10.
M-132	Achromatic objective 10x/0,25.
M-133	Achromatic objective 20x/0,40.
M-134	Achromatic objective 40x/0,65.
M-135	Achromatic objective 60x/0,80.
M-136	Achromatic objective 100x/1,25 (Oil).
M-040	Attachable mechanical stage.
M-099	Polarising set (filters and rotating table).
M-012	Tungsten bulb 20W/230V.
M-013	Halogen bulb 12V/10W, with dichroic mirror.
M-971	Plane-concave mirror, with base, type 4.
M-015	Dust cover type 2.
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
15008	OPTIKA immersion oil 10ml.
M-069	Solar battery pack. *

* Only for M-100FLed

15104 - Lens cleaner, 50ml



B-50

M-001 M-002.1 M-003 M-004 M-008 M-131 M-132 M-134 M-040 M-099 M-015 M-069 M-114	Eyepiece H5x. Eyepiece WF10x/18mm. Eyepiece WF16x/12mm. Eyepiece with micrometer WF10x/18mm. Eyepiece with pointer WF10x/18mm. Achromatic objective 4x/0,10. Achromatic objective 40x/0,25. Achromatic objective 40x/0,65. Attachable mechanical stage. Polarising set (filters and rotating table). Dust cover type 2. Solar battery pack. C-Mount adapter for 1/2" sensor.
M-114	
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.

B-20C

M-002 M-008	Eyepiece WF10x/18mm. Eyepiece with pointer WF10x/18mm.
M-727	Achromatic objective 4x/0.10.
M-728	Achromatic objective 10x/0.25.
M-729	Achromatic objective 40x/0.65.
M-030	Dust cover type 1.
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.



How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.

M-069 - Solar battery pack

Included battery: rechargeable - Lithium-Poly. Capacity: 2600 mAh. Output voltage: 5,5Vdc. - Dimensions: 120x73x10 mm. Autonomy: over 6 hours at medium intensity (X-LED³). Charging modes: with solar panel (12h), with external USB power supply (not included) or from PC USB port (5h).

Headquarters and Manufacturing Facilities

OPTIKA[®] S.r.I. Via Rigla, 30 - 24010 Ponteranica (BG) - ITALIA - Tel.: +39 035.571.392 - Fax: +39 035.571.435 - info@optikamicroscopes.com

Optika Sales branches

OPTIKA[®] Spain **OPTIKA**[®] China

spain@optikamicroscopes.com china@optikamicroscopes.com

OPTIKA[®] USA

usa@optikamicroscopes.com **OPTIKA**[®] Hungary hungary@optikamicroscopes.com