

OPTIKA

M I C R O S C O P E S

I T A L Y



B-180 SERIES

Medium-level Biological Microscopes for Teachers

OPTIKA

Italian headquarters



OPTIKA Microscopes belongs to the group “M.A.D. Apparecchiature Scientifiche” and, with its almost 40 years experience in the field of scientific instrumentation, is worldwide known as a leading Company for optical microscopes’ production and distribution.

The Company, a team of 70 people in 3 different European locations, is engaged in the development of new models, production, quality control, sales and after-sales service.

OPTIKA microscopes excellence, concerning quality, innovation, competitive prices and customer assistance, reaches the end users through a wide network of national and international distributors.

B-180 SERIES**The series**

The B-180 series microscopes are optimally targeted at universities, as effective tools both for students and for educators. In their compact size, the B-180 microscopes show features that are normally to be found in much higher price ranges only. The intrinsic toughness and the overall high performance qualify these microscopes also for routine use in small professional environments. The extensive range of optional accessories extends the instrument potential.

Optical system

Designed for demanding users, the optical system is composed of first-class components. Optical coatings ensure superior image contrast. All optics are treated against mould, as required for humidity resistance.

Stand

The modern design offers excellent ergonomics, maintaining a high portability. A wide opening behind the turret allows a clear visual access to the objectives and to the specimen area, as required in a discussion group.

Mechanics

The moving parts are made by means of machine tools with computerized numerical control reducing manufacturing tolerance and increasing the reliability of the instrument. The strict control on materials and production process is optimized through the procedures established by ISO 9001:2008 quality system.

Illuminators

White LED, non-rechargeable, with brightness control. The high illumination efficiency permits a wider adjustment range of the aperture iris, thus allowing a higher image contrast.

**B-181**

Monocular
Achromatic
objectives
(4x, 10x, 40x, 100x)

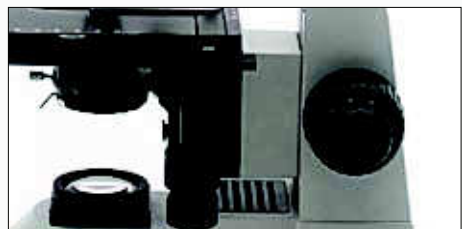
B-180 SERIES - Technical specifications



B-182

Binocular
Achromatic objectives
(4x, 10x, 40x, 100x)

Model	Head	Eyeiece	Nosepiece	Objectives	Stage	Focusing	Illuminator	Condenser
B-181	Monocular 360° rotating, 45° inclined	Wide Field 10X / 18 mm	Quadruple, reversed	Achromatic (4x, 10x, 40x, 100x)	Double layer with mechanical sliding stage, 125x115 mm, moving range 50x30 mm	Coaxial coarse and fine focusing system.	White LED, non-rechargeable, with brightness control	1.25 N.A. Abbe type, with centring system
B-182	Binocular 360° rotating, 30° inclined	Wide Field 10X / 18 mm	Quadruple, reversed	Achromatic (4x, 10x, 40x, 100x)	Double layer with mechanical sliding stage, 125x115 mm, moving range 50x30 mm	Coaxial coarse and fine focusing system.	White LED, non-rechargeable, with brightness control	1.25 N.A. Abbe type, with centring system
B-183	Trinocular 360° rotating, 30° inclined	Wide Field 10X / 18 mm	Quadruple, reversed	Achromatic (4x, 10x, 40x, 100x)	Double layer with mechanical sliding stage, 125x115 mm, moving range 50x30 mm	Coaxial coarse and fine focusing system.	White LED, non-rechargeable, with brightness control	1.25 N.A. Abbe type, with centring system

B-180 SERIES - Accessories

- M-001 H5x eyepiece
- M-002 WF10x/18mm eyepiece
- M-003 WF16x/12mm eyepiece
- M-004 Micrometer eyepiece WF10x/18mm
- M-310 4x/0.10 achromatic objective
- M-311 10x/0.25 achromatic objective
- M-312 20x/0.40 achromatic objective
- M-313 40x/0.65 achromatic objective
- M-314 60x/0.80 achromatic objective
- M-315 100x/1.25 (oil immersion) achromatic objective
- M-180 Polarising set (filters only)
- M-031 Dust cover type 3
- M-365 Photo tube adapter for SRL cameras
- M-366 CCD camera adapter

OPTIKA

M I C R O S C O P E S
I T A L Y



B-350 SERIES

Advanced Biological Microscopes for Teachers



OPTIKA Microscopes belongs to the group "M.A.D. Apparecchiature Scientifiche" and, with its almost 40 years experience in the field of scientific instrumentation, is worldwide known as a leading Company for optical microscopes' production and distribution.

The Company, a team of 70 people in 3 different European locations, is engaged in the development of new models, production, quality control, sales and after-sales service.

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B-350 SERIES

THE SERIES

The brand new series B-350 strikes the right balance between price and quality.

Thanks to the variety of its microscopes, it can be successfully used both in advanced teaching situations and in laboratories.

Professional users will certainly value the technical characteristics of the B-350 series that make its high quality microscopes resistant and reliable.

The series B-350 includes 8 models featuring achromatic, planachromatic and infinity corrected plan objectives.

Let's now take a closer look to each model:

X-LED™ - The future of illumination

OPTIKA is proud to introduce its own revolutionary LED powered illumination system. Developed by our R&D dept. it consists of a new combination of LED and optical technology.

A new high-efficiency single chip LED works in combination with a special optical lens, which allows to double the intensity of the light generated by the LED itself.

The result is a quantity of light equivalent to the light generated by a normal 30-35W halogen bulb, but with a colour temperature of 6300K. It means **white light** instead of the yellow one produced by halogen bulbs.

The electrical consumption (3.6W only) shows the high efficiency of the system: same light intensity with less than 10% of the consumption of a normal halogen bulb.

Last but not least, the lifetime of our LED: 50.000 hours, instead of 1.500 hours ...!



Standard LED



X-LED™

B-352A

Binocular microscope Achromatic objectives

B-353A

Trinocular microscope Achromatic objectives

B-352PL

Binocular microscope PL, quintuple nosepiece

B-353PL

Trinocular microscope PL, quintuple nosepiece

B-352PLi

Binocular microscope E-PL IOS, quintuple nosepiece

B-353PLi

Trinocular microscope E-PL IOS, quintuple nosepiece

B-352Ph

Binocular microscope for phase contrast, quintuple nosepiece

B-353Ph

Trinocular microscope for phase contrast, quintuple nosepiece

B-350 SERIES - Models

Optical system & objectives

The series B-350 microscopes are equipped, depending on the various models, with two different types of optical system: anti-fungus 160 mm standard and infinity corrected system (IOS). In both cases the field diameter of the system is 20 mm.

Microscope stand

Modern and ergonomic, this stand is made from die-cast aluminium. Macro and micrometric focusing (graduated, 0.002mm) with coaxial controls.

Adjustable focusing tension and upper sliding stop.

Heads

They are available in binocular or trinocular version suitable for photography/video applications.

Both heads are equipped with interpupillary distance control (55-75 mm) as well as with dioptic compensation. WF10x/20mm eyepieces also suitable for people wearing glasses.

All heads are 360° rotatable and 30° inclined.

Illuminator

The illuminating system consists of X-LED illuminator.

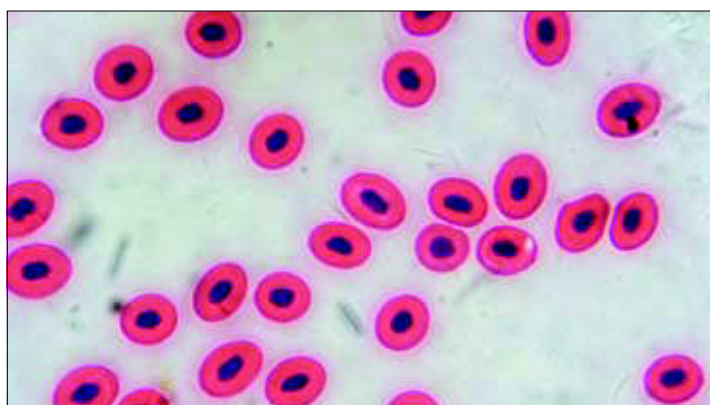
The brightness control takes place through a rheostat located on the right-hand side of the microscope base.

Condenser

Included in the package is an Abbe type condenser.

It can be centred through a double-control system and adjusted in height through a rack-and-pinion mechanism by means of control knobs located on both sides of the microscope stand.

The condenser is also fitted with an iris diaphragm whose aperture can be adjusted with graduated reference scale.



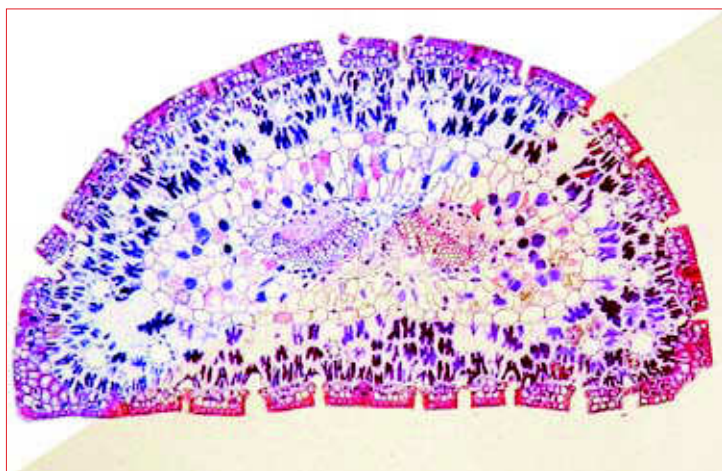
Frog, blood smear. Real picture taken from B-353PLi with 100x objective without immersion oil

B-352A B-353A

Quadruple nosepiece 4x 10x 40x
100x Achromatic objectives

X-LED™

X-LED versus Halogen



B-350 SERIES - Models



B-352PL
B-353PL

Quintuple nosepiece
4x 10x 40x 100x
Plan achromatic objectives

X-LED™



B-350 SERIES - Models



B-352PLi **B-353PLi**

Quintuple nosepiece
4x 10x 40x 100x
Plan achromatic IOS objectives

X-LED™

IOS™
objectives



B-352Ph **B-353Ph**

Quintuple nosepiece
4x 10xPh 40xPh 100xPh
Plan achromatic objectives

X-LED™

Technical specifications

Model	Head	Eyepiece	Objectives	Revolver	Stage	Focusing	Condenser	Illuminator
B-352A	Binocular 360° rotating 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil immersion)	Quadruple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-353A	Trinocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Achromatic 4x, 10x, 40x, 100x (oil immersion)	Quadruple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-352PL	Binocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10x, 40x, 100x (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-353PL	Trinocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10x, 40x, 100x (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-352PLi	Binocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic IOS 4x, 10x, 40x, 100x (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-353PLi	Trinocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic IOS 4x, 10x, 40x, 100x (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	1.25 N.A. Abbe type, with cen- tring system	X-LED™ , non- rechargeable, with brightness control
B-352Ph	Binocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10xPh, 40xPh, 100xPh (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	Phase conden- ser (10x, 40x, 100x) with darkfield (dry) and brightfield	X-LED™ , non- rechargeable, with brightness control
B-353Ph	Trinocular 360° rota- ting 30° inclined	Wide Field 10X / 20 mm	Plan Achromatic 4x, 10xPh, 40xPh, 100xPh (oil immersion)	Quintuple nosepiece	Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine focusing system, with focusing stop mecha- nism	Phase conden- ser (10x, 40x, 100x) with darkfield (dry) and brightfield	X-LED™ , non- rechargeable, with brightness control



B-350 SERIES - Photo-Video application

The B-350 series can be connected to our Optikam and DIGI systems without any additional accessory.
For T-mount (reflex) and C-mount cameras, specific adaptors are readily available.



B-350 SERIES - Accessories

- M-301 WF10x/20mm high-point eyepiece
 M-302 WF16x/12mm high-point eyepiece
 M-303 WF10x/20mm high-point micrometer eyepiece
 M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm
 M-310 4x/0.10 achromatic objective
 M-311 10x/0.25 achromatic objective
 M-312 20x/0.40 achromatic objective
 M-313 40x/0.65 achromatic objective
 M-314 60x/0.80 achromatic objective
 M-315 100x/1.25 (oil immersion) achromatic objective
 M-320 4x/0.10 plan achromatic objective
 M-321 10x/0.25 plan achromatic objective
 M-322 20x/0.40 plan achromatic objective
 M-323 40x/0.65 plan achromatic objective
 M-324 60x/0.80 plan achromatic objective
 M-325 100x/1.25 (oil immersion) plan achromatic objective
 M-330 4x/0.10 IOS plan achromatic objective
 M-331 10x/0.25 IOS plan achromatic objective
 M-332 20x/0.40 IOS plan achromatic objective
 M-333 40x/0.65 IOS plan achromatic objective
 M-334 100x/1.25 (oil immersion) IOS plan achromatic objective
 M-340 10x/0.10 plan achromatic objective for phase contrast
 M-341 40x/0.65 plan achromatic objective for phase contrast
 M-342 100x/1.25(oil) plan achromatic objective for phase contrast
 M-350 10x/0.25 IOS plan achromatic objective for phase contrast
 M-351 20x/0.40 IOS plan achromatic objective for phase contrast
 M-352 40x/0.65 IOS plan achromatic objective for phase contrast
 M-353 100x/1.25 (oil) IOS plan achromatic objective for phase contrast
 M-360 Complete phase contrast set with PLAN obj. 10x, 40x, 100x. With darkfield condenser
 M-361 Complete phase contrast set with IOS E-PLAN obj. 10x, 20x, 40x, 100x
 M-362 Polarising set (filters only)
 M-363 Rotating table for polarising set
 M-364 Darkfield condenser for dry objectives
 M-365 Photo tube adapter for SRL cameras
 M-366 CCD camera adapter
 M-031 Dust cover type 3
 M-974 Blue filter, 32 mm diameter
 M-976 Green filter, 32 mm diameter
 M-978 Yellow filter, 32 mm diameter
 M-988 Frosted glass filter, 32 mm diameter