

## B-290 Series

Routine laboratory microscopes



# B-290 Series

This series incorporates all the experience gathered by OPTIKA Microscopes in the field of light microscopy, adapted specifically for routine laboratory brightfield applications. These microscopes are suitable for routine microscopy and have an ergonomic design for comfortable long-term use. All main controls are located close to each other, which enable operation with minimal movements.

- B-292** Binocular microscope 1000x, E-PLAN objectives, belt drive stage, X-LED illumination.
- B-292PLi** Binocular microscope 1000x, IOS objectives, belt drive stage, X-LED illumination.
- B-293** Trinocular microscope 1000x, E-PLAN objectives, belt drive stage, X-LED illumination.
- B-293PLi** Trinocular microscope 1000x, IOS objectives, belt drive stage, X-LED illumination.

## X-LED<sup>3</sup> - The future of illumination

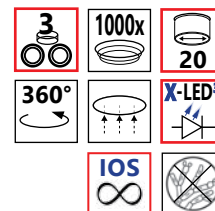
OPTIKA is proud to introduce its own revolutionary LED powered illumination system. Developed by our R&D dept. it consists of a new combination of LED and optical technology.

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 standard 50W 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 standard halogen bulb. Last but not least, the lifetime of our LED is 50.000 hours, instead of 1.500 hours ...!



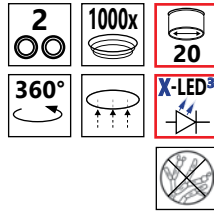
### B-293PLi



# B-290 Series



## B-292



### Heads

Available in binocular or trinocular version. The heads are equipped with interpupillary distance control (48-75 mm) as well as with dioptic compensation. All heads are 360° rotatable and 30° inclined.

### Optical system

The optical system has been developed for demanding users; it consists of high quality components which guarantee an high image contrast and an excellent optical resolution. The optical components have been designed and treated with special techniques to prevent the formation of moulds and fungi.

### Stand

The stand has a modern and ergonomic design. It is easy to carry the microscope thanks to the large opening behind the revolving nosepiece, to be used as a handle. The opening allows the user to see clearly the objectives and the samples, as requested in discussion groups.

### 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 controls on materials and production processes are optimized through the procedures established by **ISO 9001:2008** quality system.

## Stage

Innovative belt drive system

## B-290 Series - Technical specifications

Model	Head	Eyepieces	Nosepiece	Objectives	Stage	Focusing	Illuminator	Condenser	Power supply
<b>B-292</b>	Binocular, 360° rotating, 30° inclined.	Wide Field 10x/20mm	Quadruple, reversed	E-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 150x133 mm with X-Y moving range 75x50mm. <b>Belt-drive</b> in X direction	Coaxial coarse and fine focusing	X-LED <sup>3</sup> system with adjustable intensity	Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 6Vdc output
<b>B-292PLi</b>	Binocular, 360° rotating, 30° inclined.	Wide Field 10x/20mm	Quadruple, reversed	Infinity corrected E-PLAN 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 150x133 mm with X-Y moving range 75x50mm. <b>Belt-drive</b> in X direction	Coaxial coarse and fine focusing	X-LED <sup>3</sup> system with adjustable intensity	Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 6Vdc output
<b>B-293</b>	Trinocular, 360° rotating, 30° inclined	Wide Field 10x/20mm	Quadruple, reversed	E-PLAN Achromatic 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 150x133 mm with X-Y moving range 75x50mm. <b>Belt-drive</b> in X direction	Coaxial coarse and fine focusing	X-LED <sup>3</sup> system with adjustable intensity	Sliding-in 1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 6Vdc output
<b>B-293PLi</b>	Trinocular, 360° rotating, 30° inclined.	Wide Field 10x/20mm	Quadruple, reversed	Infinity corrected E-PLAN 4x/0.10, 10x/0.25, 40x/0.65, 100x/1.25	Double layer, 150x133 mm with X-Y moving range 75x50mm. <b>Belt-drive</b> in X direction	Coaxial coarse and fine focusing	X-LED <sup>3</sup> system with adjustable intensity	Sliding-in, 1.25 N.A. Abbe type with adjustable height and iris diaphragm	100-240 Vac 50-60 Hz external power adapter 6Vdc output

# B-290 Series - Accessories

## B-292 - B-293

M-160 Eyepiece WF10x/20mm.  
M-161 Eyepiece WF15x/16mm.  
M-162 Eyepiece WF20x/10mm.  
M-163 Micrometer eyepiece WF10x/20mm.  
M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.

M-164 Objective 4x/0,10 E-PLAN.  
M-165 Objective 10x/0,25 E-PLAN.  
M-166 Objective 20x/0,40 E-PLAN.  
M-167 Objective 40x/0,65 E-PLAN.  
M-168 Objective 60x/0,80 E-PLAN.  
M-169 Objective 100x/1,25 E-PLAN (Oil).

M-174 Polarizing set, filters only (for B-290 series).  
M-175 Rotating table for polarizing set.  
M-069 Solar battery pack.  
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-666.290 Heating stage, with digital temperature controller B-290 series.

## B-292PLi - B-293PLi

M-160 Eyepiece WF10x/20mm.  
M-161 Eyepiece WF15x/16mm.  
M-162 Eyepiece WF20x/10mm.  
M-163 Micrometer eyepiece WF10x/20mm.  
M-005 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.

M-144 Objective E-PLAN IOS 4x/0,10.  
M-145 Objective E-PLAN IOS 10x/0,25.  
M-146 Objective E-PLAN IOS 20x/0,40.  
M-147 Objective E-PLAN IOS 40x/0,65.  
M-148 Objective E-PLAN IOS 100x/1,25 (Oil).  
M-149 Objective E-PLAN IOS 60x/0,80.

M-174 Polarizing set, filters only (for B-290 series).  
M-175 Rotating table for polarizing set.  
M-069 Solar battery pack.  
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-666.290 Heating stage, with digital temperature controller B-290 series.

## 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-LED<sup>3</sup>).  
Charging modes: with solar panel (12h),  
with external USB power supply (not included)  
or from PC USB port (5h).



## 15104 - Lens cleaner, 50ml

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.

## Headquarters and Manufacturing Facilities

**OPTIKA® S.r.l.** 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** spain@optikamicroscopes.com

**OPTIKA® China** china@optikamicroscopes.com

**OPTIKA® USA** usa@optikamicroscopes.com

**OPTIKA® Hungary** hungary@optikamicroscopes.com