

Upright and inverted epi-fluorescence microscopes FLUO B-383LD1 / B-383LD2 / B-383FL / B-500TiFL / XDS-2FL / XDS-3FL / XDS-3FL4 / SZP-FLUO / B-1000FL-LED / B-1000FL-HBO



FLUO Series

A complete range of microscopes, designed to meet your needs in fluorescence microscopy. Quality, innovative technology, power, safety and simplicity of use are the common characteristics of these instruments.

B-383LD1	Trinocular LED fluorescence microscope, E-PLAN IOS objectives, B filterset.	
B-383LD2	Trinocular LED fluorescence microscope, E-PLAN IOS objectives, B&G filtersets.	
B-383FL	Trinocular HBO fluorescence microscope, E-PLAN IOS objectives, B&G filtersets.	
SZP-FL	HBO fluorescence attachment for SZP stereomicroscope.	Á
B-500TiFL	Trinocular EPI fluorescence microscope, HBO illumination system.	
B-1000FL-LED	Trinocular microscope, LED fluorescence.	
B-1000FL-HBO	Trinocular microscope, HBO fluorescence.	
XDS-2FL	Inverted trinocular EPI fluorescence microscope, HBO illumination system.	
XDS-3FL	Inverted trinocular EPI fluorescence microscope, HBO illumination system, with FLUO objectives.	
XDS-3FL4	Inverted trinocular EPI fluorescence microscope, HBO illumination system, with quadruple filter holder.	



B-383LD2



B-1000FL-HBO Model





FLUO Series - LED Fluorescence

Imagine a fluorescence microscope that needs a lamp change every 50.000 hours. Imagine a fluorescence microscope with a cold light source that barely heats up during use. Imagine a fluorescence microscope that can be switched on, used immediately, switched off and then back on again. Imagine a fluorescence microscope that is so safe as to need no protection shield whatsoever, and that can be used by everyone, without any specific precaution. Imagine a fluorescence microscope that can be powered by batteries, as easily as a torchlight. Imagine a fluorescence microscope that is so sturdy and so compact that it can be used on the field, without any transport problems. You may think that such an instrument exists in your imagination only. Actually, such microscope is real, and its name is **OPTIKA B-383LD**. Developed by the **OPTIKA** Research labs, the **B-383LD** marks a revolution in the field of fluorescence microscopy. Strictly derived from the **B-383FL** model, of which it shares the body, the optics and the filter sets, the **B-383LD** employs high-power **LED** instead of the classical mercury vapour bulb.

The **LED** is tailored to the specific applications (FITC-TRITC).

The brightfield illuminator uses our **X-LED[™]** system, and the colour temperature closely matches sunlight. The microscope is available in two versions: **B-383LD1** and **B-383LD2**.

B-383LD1 Model - Technical specifications

Part	Desc	Description				
Head	Trinoc	Trinocular, 30° inclined, 360° rotating. Interpupillary adjustment 48-75 mm.				
Eyepieces	WF10	WF10X/20mm				
Nosepiece	5 pos	tion on reversed revolving nosepi	ece. Ball bearing rotation.			
Objectives	IOS E	PLAN 4x/0.10, 10x/0.25, 20x/0.40), 40x/0.65, and PLAN 50x/0.75 (no cover slide).			
Focusing syst	cem Coaxi	Coaxial coarse and fine.				
Stage		Double layer mechanical sliding stage, dimensions 216x150mm, moving range 78x54mm. Belt-drive in X direction.				
Condenser	Abbe	Abbe condenser, sliding-in, N.A. 1.25 with centering system.				
Illumination		Transmitted light: X-LED ³ , with manual brightness control. Epi-fluorescence: high-power blue LED				
Power supply	Extern	External power supply: Input 100-240Vac 50-60Hz / Output 6Vdc 1A				
Standard filte	rset					
Name	Excitation filter (nm)	ion filter (nm) Dichroic mirror cut-off (nm) Emission filter (nm)				
B (Blue)	460 – 490	90 505 515LP				

B-383LD2 Model



B-383LD2



OPTIKA

B-383LD2 Model - Technical specifications

Part	Descri	ption					
Head	Trinocula	Trinocular, 30° inclined, 360° rotating. Interpupillary adjustment 48-75 mm.					
Eyepieces	WF10X/2	WF10X/20mm					
Nosepiece	5-positic	on reversed revolving nosepiece.	Ball bearing rotation.				
Objectives	IOS E-PL	AN 4x/0.10, 10x/0.25, 20x/0.40,	40x/0.65, and PLAN 50x/0.75	i (no cover slide).			
Focusing syste	em Coaxial d	Coaxial coarse and fine.					
Stage		Double layer mechanical sliding stage, dimensions 216x150mm, moving range 78x54mm. Belt-drive in X direction.					
Condenser	Abbe co	Abbe condenser, sliding-in, N.A. 1.25 with centering system.					
Illumination	Transmit Epi-fluor	Transmitted light: X-LED ³ , with manual brightness control. Epi-fluorescence: high-power white LED (for B ang G filtersets)					
Power supply	External	External power supply: Input 100-240Vac 50-60Hz / Output 6Vdc 1A					
Standard filters	Standard filterset						
Name	Excitation filter (nm)	er (nm) Dichroic mirror cut-off (nm) Emission filter (nm)					
B (Blue)	460 – 490	0 505 515LP					
G (Green)	510 – 550	570	570 590LP				

B-383FL Model

G (Green)

510 - 550

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B-383FL Model - Technical specifications

Part	Descri	Description				
Head	Trinocula	Trinocular, 30° inclined, 360° rotating. Interpupillary adjustment 48-75 mm.				
Eyepieces	WF10X/	WF10X/20mm				
Nosepiece	5-positio	on reversed revolving nosepiece.	Ball bearing rotation.			
Objectives	IOS E-PL	AN 4x/0.10, 10x/0.25, 20x/0.40,	40x/0.65, 100x/1.25 (oil)			
Focusing sys	tem Coaxial o	Coaxial coarse and fine.				
Stage		Double layer mechanical sliding stage, dimensions 216x150mm, moving range 78x54mm. Belt-drive in X direction.				
Condenser	Abbe co	Abbe condenser, sliding-in, N.A. 1.25 with centering system.				
Illumination	Transmit Epi-fluoi	Transmitted light: X-LED3, with manual brightness control. Epi-fluorescence: HBO 100W high pressure mercury bulb				
Power suppl	y External Fluoresc	External power supply: Input 100-240Vac 50-60Hz / Output 6Vdc 1A Fluorescence Power Supply 100W. Timer and current display.				
Standard filterset						
Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)			
B (Blue)	450 - 480	500	515LP			

570

590LP

SZP-FL Attachment



Part	Description
Description	Fluorescence attachment for SZP stereomicroscopes. Fluorescence observation for biology, industrial inspection, criminal justice, etc. Essential tool for security printing and mineral research.
Filterset	Standard: GFP-B (EX460-500, DM505, BA510-560) GFP-L (EX460-500, DM505, BA510)
Illumination	100W HBO high-pressure mercury vapor bulb. Average lamp lifetime: 400 hours. Input voltage: 110/240Vac, 50/60Hz, 1A ; Fuse: F8AL 250V. Maximum input power: 125W. Current and time counter LED displays.
Photo&Video Attachment	Trinocular output port

B-500TiFL Model - Technical specifications

Part	Description
Optical system	Mechanical tube lenght: IOS - Infinity Optical System; parfocal distance 45 mm.
Head	Trinocular, 30° inclined, 360° rotating. Diopter adjustment; interpupillary distance adjustment 55-75 mm.
Eyepieces	Wide Field 10x/22 mm.
Nosepiece	5-position reversed revolving nosepiece. Ball bearing linear guides.
Objectives	IOS Planachromatic FLUO 4x/0.13, 10x/0.30, 20x/0.50, 40x/0.75
Specimen stage	Double layer with mechanical sliding stage, 175x145 mm; moving range 76x51 mm.
Focusing system	Rack and pinion mechanism, with coaxial coarse and fine control knobs. Fine adjustment graduation 0.002 mm. Vertical movement range: 20 mm. Tension control on right side; upper stage drive stop on left side.
Condenser	Centrable Abbe condenser (swing-out type) with double lens. N.A. 0.9 Fitted with iris diaphragm. Height adjustment by a rack and pinion mechanism.
Transmitted illumination	X-LED ³ illumination system.
Incident illumination	HBO 100W high pressure mercury bulb for epi-fluorescence.

Standard filters (included)

Additional filters (as option)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)		Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter cut-off (nm)
B (Blue)	450-490	495	500-550	,	V (Violet)	390-420	440	450LP
G (Green)	540-580	585	607-683		UV	325-375	415	435LP



MANY MORE FILTERSETS AVAILABLE ON REQUEST

FLUO Series - HBO Fluorescence



HB100W high-pressure mercury bulb for fluorescence





B-1000FL-LED Model







Type:

OPTIKA

LED FLUORESCENCE 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-LED⁸ (8W power). **Epi-illumination:** special attachment with built-in high-power colored LEDs.

Standard filtersets (included)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter wavelength (nm)
B (Blue)	450-490	495	520LP
G (Green)	500-540	565	575LP

B-1000FL-LED Model - Configuration chart

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



B-1000FL-HBO Model





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



BG



Version for epifluorescence analysis.

Transmitted illumination: X-LED⁸ (8W power).

Epi-illumination: special attachment with 100W mercury lamp and 6-position filter wheel.

Standard filtersets (included)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter wavelength (nm)
B (Blue)	460-490	500	520LP
G (Green)	510-550	570	590LP

Additional filters (as option)

Name	Excitation wavelength (nm)	Dichroic mirror cut-off (nm)	Barrier filter wavelength (nm)
V (Violet)	400-410	455	455LP
UV	330-385	400	420LP

B-1000FL-HBO Model - Configuration chart

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



XDS-2FL Model

The instrument

XDS-2FL is a routine inverted epifluorescence microscope. The basic structure is dedicated to the most demanding applications of routine fluorescence analysis. XDS-2FL offers, in the same unit, brightfield and phase contrast capabilities, thus extending its potentials to most multi-contrast applications.

Optical system

The epifluorescence optical system is implemented via the standard excitation filter-dichroic mirror-barrier filter combination, applied to a 100W Hg lamp. It is supplied with EWF10x/22mm extra-widefield eyepieces, long working distance IOS objectives, and a double filterblock set (blue and green excitation).

The extensive range of optional accessories allows a quick interchange of contrast mechanisms and a multi-contrast observation without removal of the specimen from the stage.

User comfort

XDS-2 is comfortable for the operator. The 22 mm extra-wide field is pleasant to use and minimizes operator stress. The special eyepieces are designed for eyeglass wearers.

Ergonomy

Every control is easy to reach, every component has been designed for a confortable use. The focusing and specimen translation controls are designed to allow to rest the wrists on the table. The brightfield light intensity regulation is placed very close to the focusing knobs. The specimen stage is fitted with a special glass insert that allows to see the objectives, for immediate identification of the magnification setup. The head implements an extremely innovative design, that permits adjustment to compensate for operator height.



XDS-2FL Model - **Technical specifications**

Part	Description	
Optical system	Infinity corrected system, 45 mm parfocality distance. Field number 22 mm.	
Head	Trinocular: 30° inclined, 360° rotating. Interpupillary distance: 48 - 75 mm. Adjustable dioptric compensation. Ergonomical head available as option.	
Eyepieces	Extra-wide field 10x/22mm, High-point.	
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.	
Objectives	Long working distance (LWD) infinity corrected (IOS) planachromatic: 4x/0.10 (working distance 18 mm), 10x/0.25 with phase ring (working distance 10 mm), 20x/0.40 with phase ring (working distance 2.6 mm). Corrected for 1.2 mm coverglass).	
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 119 x 70 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.	
Focusing system	Macro and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension.	
Condenser	Long working distance condenser, numerical aperture 0.30, working distance 72 mm. The con- denser can be removed in order to increase the working distance to 150 mm.	
Illumination	X-LED8 system precentered illuminator, with adjustable intensity, filter and phase ring holder and aperture diaphragm. Inverted epifluorescence: HBO 100W high pressure mercury bulb, knobs for lamp and back mirror alignment.	
Filtersets	Blue and Green fluorescence filtersets. No other as option.	

		Excitation	Dichroic Mirror	Barrier Filter
Filter sets	Blue excitation	BP460-490	DM500	520LP
THEF SELS	Green excitation	BP480-550	DM570	590LP







XDS-3FL & XDS-3FL4 Model

The instrument

XDS-3FL is an advanced inverted epifluorescence microscope. Thanks to its special FLUO objectives, designed with quartz and special glasses (low in auto-fluorescence), XDS-3FL is upgradable with every kind of fluorescence filterset. The instrument offers, in the same unit, brightfield and phase contrast capabilities, thus extending its potentials to most multi-contrast applications.

Optical system

The epifluorescence optical system is implemented via the standard excitation filter-dichroic mirror-barrier filter combination, applied to a 100W Hg lamp. It is supplied with EWF10x/22mm extra-widefield eyepieces, long working distance IOS FLUO objectives, and a double filterblock set (blue and green excitation as standard configuration). The extensive range of optional accessories allows a quick interchange of contrast mechanisms, and multi-contrast observation without removal of the specimen from the stage.

Ergonomy

Every control is easy to reach, every component has been designed for confortable use. The focusing and specimen translation controls are designed to allow to rest the wrists on the table. The brightfield light intensity regulation is placed very close to the focusing knobs.

The specimen stage is fitted with a special glass insert, that allows to see the objectives, for immediate identification of the magnification setup. User comfort

XDS-3FL is comfortable for the operator.

OPTIKA

The 22 mm extra-wide field is pleasant to use and minimizes operator stress. The special eyepieces are designed for eyeglass wearers.

XDS-3FL/XDS-3FL4

MANY MORE FILTERSETS AVAILABLE ON REQUEST

XDS-3FL & XDS-3FL4 Model - Technical specification

Deut	Description		
Part	Description		
Optical system	Infinity corrected system, 45 mm parfocality distance. Field number 22 mm.		
Head	Trinocular: 45° inclined. Interpupillary distance: 48 - 75 mm. Adjustable dioptric compensation.		
Eyepieces	Extra-wide field 10x/22mm, High-point.		
Nosepiece	5 positions, with bidirectional rotation on ball bearings and click stop.		
Objectives	ves Long working distance (LWD) infinity corrected (IOS) planachromatic: FLUO 10X/0.3 (working distance 10 mm), FLUO 20X/0.45 (working distance 5.1 mm), FLUO 40X/0.65 (working distance 2.6 mm). Corrected for 1.2 mm coverglass.		
Specimen stage	Size: 250 x 230 mm. Translator with lowered ergonomic coaxial controls. X-Y translation: 120x80 mm. Interchangeable metallic inserts for specimen slides, Petri dishes and flasks.		
Focusing system	Macro- and micrometric regulation, with coaxial knobs on both sides of the stand. Adjustable tension.		
Condenser	denser can be removed in order to increase the working distance to 150 mm. Green IF550 filter and Blue LBD filter are provided. ion Brightfield: X-LED ⁸ system, precentered illuminator, with adjustable intensity and aperture diaphragm. Epi-fluorescence: HBO 100W high pressure mercury bulb, knobs for lamp alignment.		
Illumination			
Filtersets			

		Excitation	Dichroic Mirror	Barrier Filter
Filter sets	Blue excitation	BP460-490	DM500	520LP
	Green excitation	BP480-550	DM570	590LP
	Ultraviolet excitation	BP325-375	DM400	420LP
	Violet excitation	BP385-425	DM440	455LP



FLUO Series - Accessories

Accessories for B-383LD1 / B-383LD2 / B-383FL
Eyepiece WF10x/20mm. Eyepiece EW15x/16mm. Eyepiece WF20x/10mm. Micrometer eyepiece WF10x/20mm. Micrometer cyepiece WF10x/20mm. Micrometer eyepiece WF10x/20mm. Micrometer eyepiece WF10x/20mm. Objective 4x/0,10 IOS E-PLAN. Objective 10x/0,25 IOS E-PLAN. Objective 20x/0,40 IOS E-PLAN. Objective 40x/0,65 IOS E-PLAN. Objective 60x/0,80 IOS E-PLAN. Objective 50x/0.75 IOS PLAN MET. Objective 50x/0.75 IOS E-PLAN. Objective 100x/1,25 IOS E-PLAN. Objec
Accessories for B-500TiFL
Ergo binocular head 30°-60°. Eyepiece EWF15x/16mm. Eyepiece micrometer EWF10x/22mm. 26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm. Objective IOS PLAN Achromatic for phase contrast 10x/0,25. Objective IOS PLAN Achromatic for phase contrast 20x/0,40. Objective IOS PLAN Achromatic for phase contrast 20x/0,40. Objective IOS PLAN Achromatic for phase contrast 100x/1,25 (Oil). Objective IOS FLUOR PLAN Achromatic 4x/0.13. Objective IOS FLUOR PLAN Achromatic 20x/0.50. Objective IOS FLUOR PLAN Achromatic 100x/1,30. Objective IOS FLUOR PLAN Achromatic 100x/1,30. Polarising set (Polarizer and Analyzer filters). Lambda filter for polarising set. Rotating table for polarising set. Complete phase contrast set with plan IOS obj. 10x, 20x, 40x, 100x. Heating stage, with digital temperature controller (only for biological microscopes). Photo adapter for REFLEX camera with FULL FRAME sensor. Universal adapter for M-114, M-116, M-173 and eyepiece cameras. Focusable C-Mount adapter for 2/3" sensor. Focusable C-Mount adapter for 2/3" sensor. Focusable C-Mount adapter for 2/3" sensor. HBO100W high-pressure mercury bulb for fluorescence. Empty fluorescence filterblock for B-500TiFL. Fluorescence filterset (filterblock included) V for B-500TiFL. Flu

Accessories for XDS-2FL

M-755	Ergonomical binocular head.
M-755.1	Trinocular attachment for Ergonomical binocular head (M-755).
M-017	Eyepiece EWF10x/22mm.
M-021	Evepiece micrometer EWF10x/22mm.
M-005	26x76 mm micrometric slide. Range 1 mm, div. 0,01 mm.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-770	Objective IOS LWD PLAN Achromatic 4x/0,10 (w.d. 18mm)

M-771 M-772 M-773 M-774 Objective IOS LWD PLAN Achromatic for phase contrast 10x/0,25 (w.d. 10mm). Objective IOS LWD PLAN Achromatic for phase contrast 20x/0,40 (w.d. 5,1mm). Objective IOS LWD PLAN Achromatic 40x/0,60 (w.d. 2,6mm). Objective IOS LWD PLAN Achromatic for phase contrast 40x/0,60 (to use with M-776). Phase ring 40x (to use with M-774). HBO100W high-pressure mercury bulb for fluorescence. C-mount adapter for 1/3",1/2" and 2/3" sensor. M-776 M-151 M-778 C-mount adapter for 1/3, 1/2 and 2/3 school. Dust cover type 7. Photo adapter for APS-C and Full Frame Reflex cameras. C-Mount adapter for 1/2" sensor. C-Mount adapter for 2/3" sensor. M-036 M-173 M-114 M-116

Accessories for XDS-3FL/XDS-3FL4

Accessories for B-1000FL-LED / B-1000FL-HBO

M-005 M-613	Micrometric slide, 26x76mm, range 1mm, div. 0,01mm Polarizing set (Polarizer and Analyzer filters).
M-615	Lambda filter for polarizing set.
M-617.1N	Phase contrast set with IOS PLAN objective 40x.
M-690	Eyecup (pair).
1.1.1	
M-619	Photo tube adapter for full frame SLR camera.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-620	Focusable C-Mount adapter for 1/3" sensor.
M-620.1	Focusable C-Mount adapter for 1/2" sensor.
M-620.2	Focusable C-Mount adapter for 2/3" sensor.
M-151	HBO 100W high-pressure mercurybulb for fluorescence.
M-1164	Empty fluorescence filterblock for B-1000FL-HBO.
M-1165	Fluorescence filterset V (filterblock included) for B-1000FL-HBO.
M-1166	Fluorescence filterset UV-DAPI (filterblock included) for B-1000FL-HBO.
M-699	Universal adapter for M-114, M-116, M-173 and eyepiece cameras
M-114	C-Mount adapter for 1/2" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-113.1	Ring adapter, 30mm (for monocular and binocular microscopes).
M-ND25	Neutral density filter ND25 (for B-1000FL-HBO).
15000	OPTIKA immercian ail 10ml

OPTIKA immersion oil, 10ml. 15008

How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.

Headquarters and Manufacturing Facilities

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