OPTIKA®
MICROSCOPES
ITALY

IM-3 Series

Routine Lab Inverted Microscopes

Your Preferred Inverted Microscope for Routine

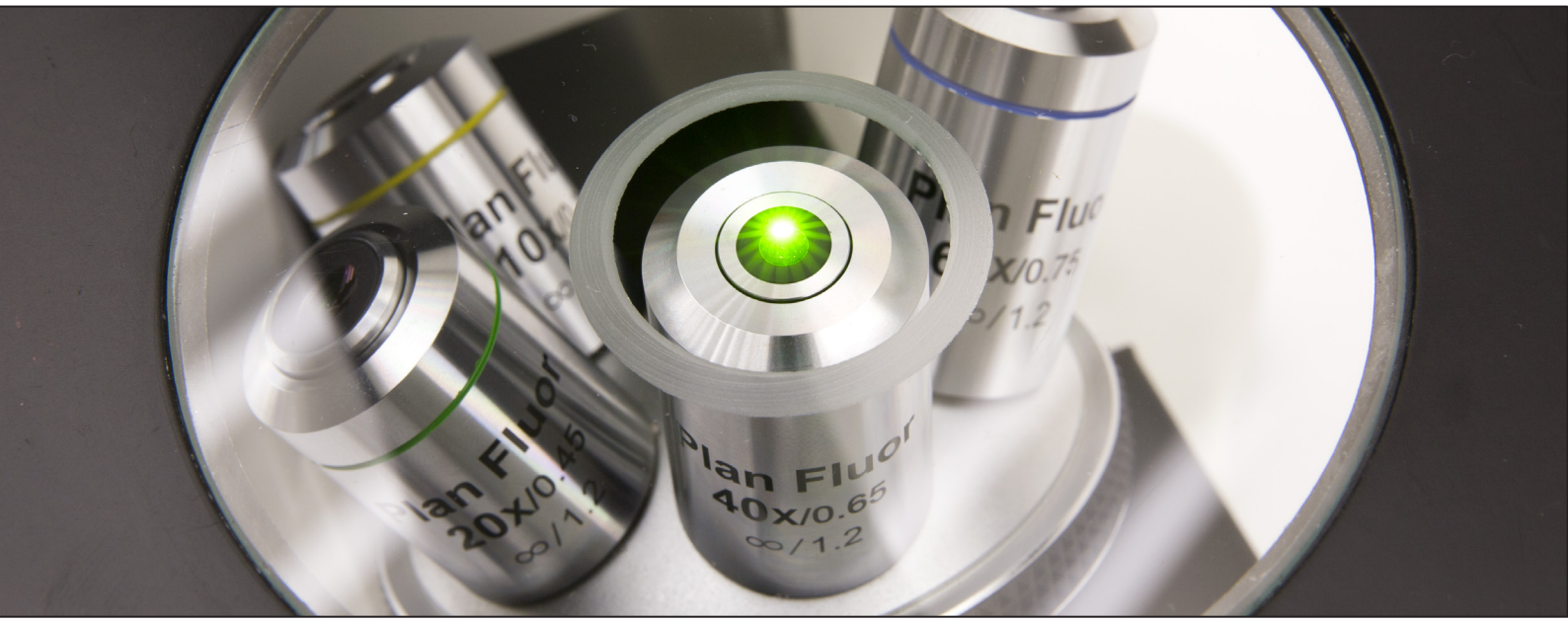
ROUTINE IN UNIVERSITIES, LABS & INDUSTRIES
» Wide range to fullfil specific lab requirements
» Valuable solutions for life and material sciences
» Compliant with several observation methods

AN AFFORDABLE PARTNER WITH HIGH-END FEATURES
» IOS LWD W-PLAN objectives for flat images on 22 mm FN
» Fast, efficient investigation with no particular sample prep
» Trinocular port with beam splitter for most light-demanding needs

Optically Impressive

MAINTAINING GOOD EYESIGHT
» 10x/22 eyepieces for large specimen view
» Comfortable rubber cup to get rid of annoying external light
» High eye-point for glasses wearers, dioptric adjustment (left eyepiece)

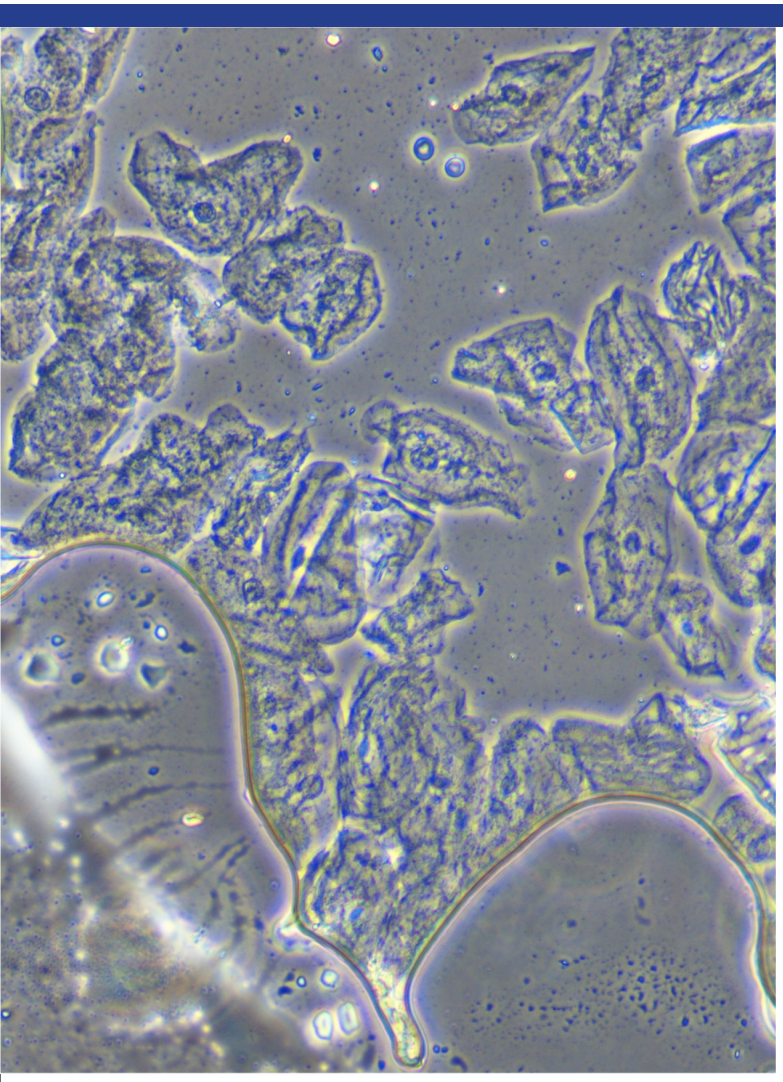
IM-3 & IOS W-PLAN: THE PERFECT COMBINATION
» IOS Infinity corrected optical system
» Full planarity optics on 22 mm (W-PLAN) according to ISO 19012-1
» High-grade Semi-Apo lens available ideal for fluorescence

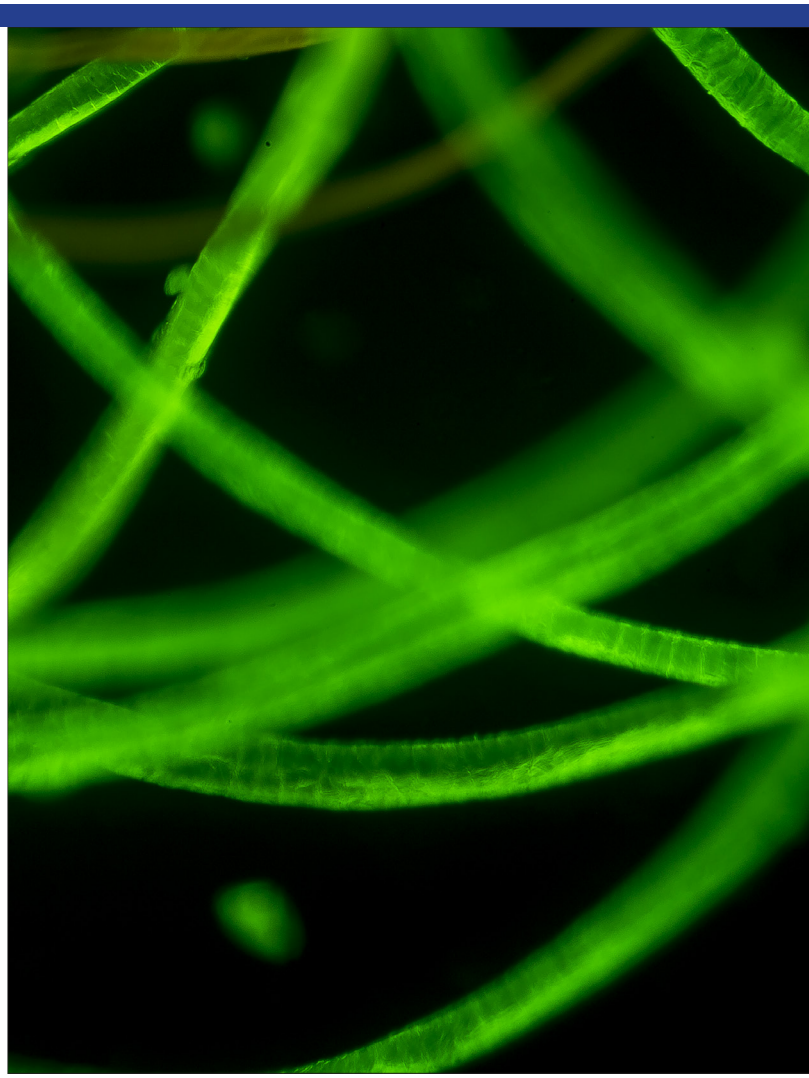


An Extensive Range of Different Configurations

OBSERVE EVEN THE MOST COMPLEX SAMPLES
» Phase contrast lens for transparent sample examination
» LED and HBO fluorescence available for specific purposes
» High quality no cover glass objectives for material science

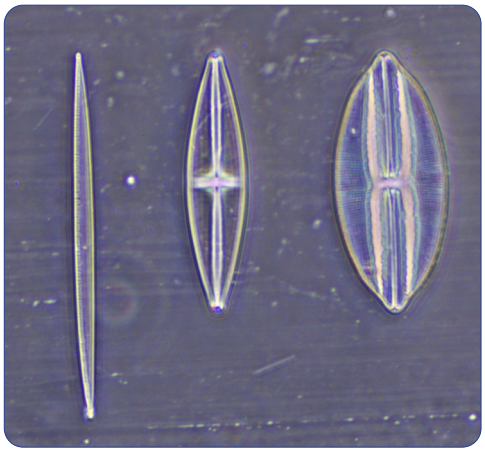
CONCEPTUAL INNOVATION IN LED FLUORESCENCE
» Choose the lowest operational cost, LED lifetime of 65,000 hours
» Immediate operation, eliminating warm-up/cool-down times
» Forget about lamp centering, adjustment and maintenance





RPC - Relief Phase Contrast

RPC system is designed to increase visibility and contrast in unstained and living material by detecting optical gradients (or slopes) and converting them into variations of light intensity. Typical applications are transparent specimens, bacteria, tissue culture work, spermatozoa, cells in glass containers, protozoa, mites, fibers, etc.
When viewed under modulation contrast optics, transparent objects that are essentially invisible in ordinary brightfield microscopy take on an apparent three-dimensional appearance dictated by phase gradients in the specimen. There are also no halos exhibited in the image, unlike the images produced with phase contrast optics.
RPC is recommended over **DIC** technique in case of specimens like crystals (with effects upon polarized light), or contained in specimen carriers such as plastic culture vessels, Petri dishes, etc.



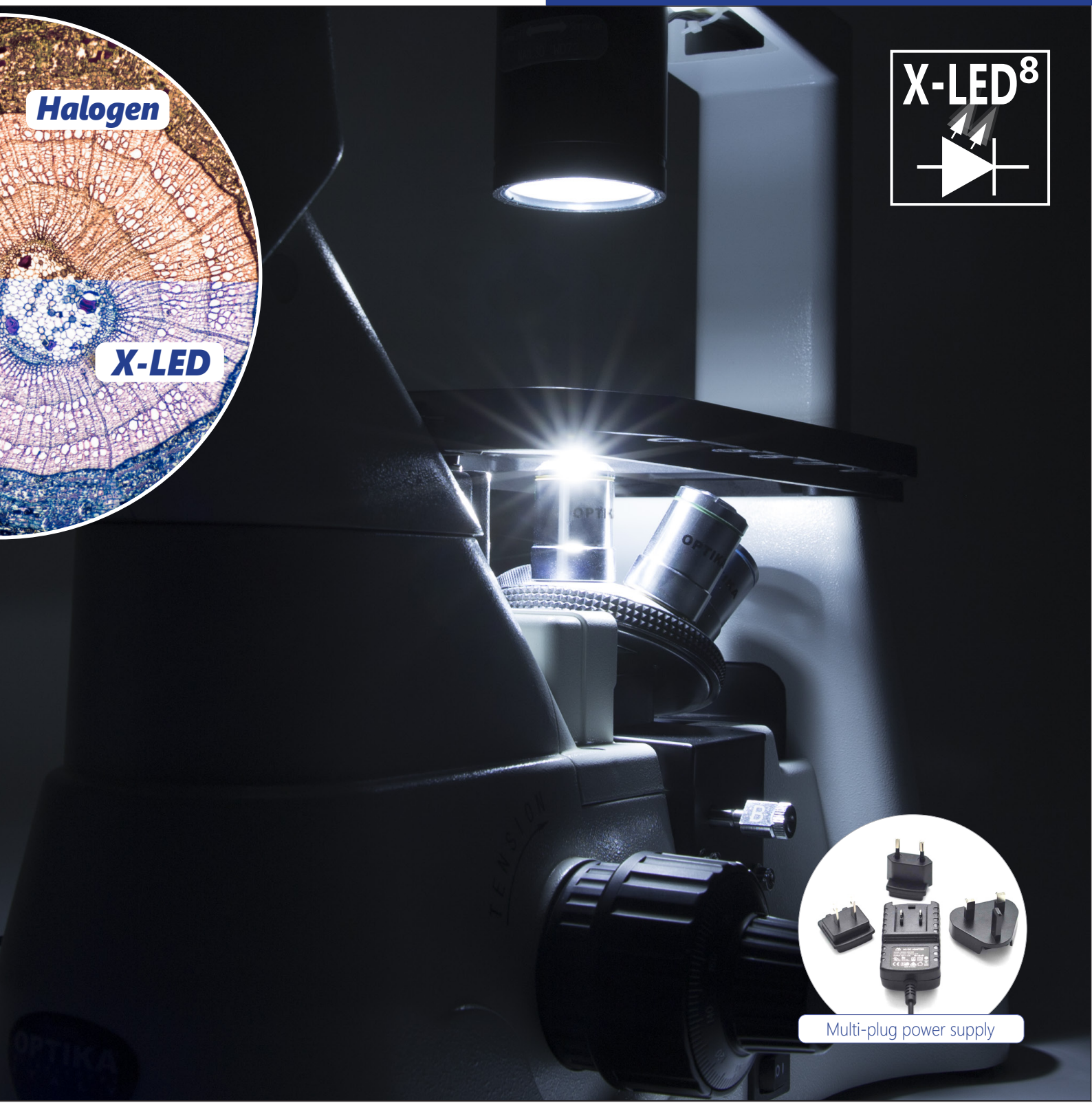
X-LED⁸ - Only Available at OPTIKA

STATE-OF-THE-ART ILLUMINATION SYSTEM

» Uncomparable light intensity, exclusive lens & collector design
» Constant pure-white color temperature at all intensity levels
» Unmatched color fidelity, uniformity and brightness

CUT ELECTRICITY BILLS BY 90%

» Money & energy saving, 8 W
» More efficient brightness than a 100 W halogen lamp
» LED long lifetime (65,000 hours = 22 years at 8 hours/day usage)



Go Digital - Vivid Colors & Contrast For Stunning Images

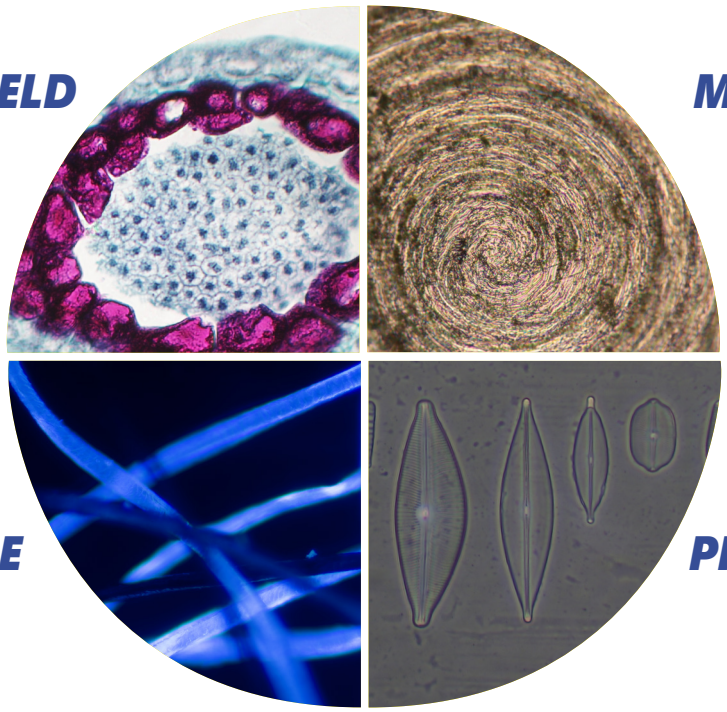
STAY CONNECTED WITH YOUR SPECIMEN, EASILY

» Trincular port to be always updated with the latest technology cameras, even in the future
» Wide range of cameras matching all the needs, including the more specific ones
» Modern C-mount focusable professional adapters for all kinds of cameras

PROFESSIONAL IMAGE ANALYSIS

» Multi-language software for live-view, picture and video in different file formats
» Advanced functions for pictures processing (EDF, stitching, multi-fluorescence combine)
» Powerful tools to perform measurements and generate custom reports

Multiple Observation Methods



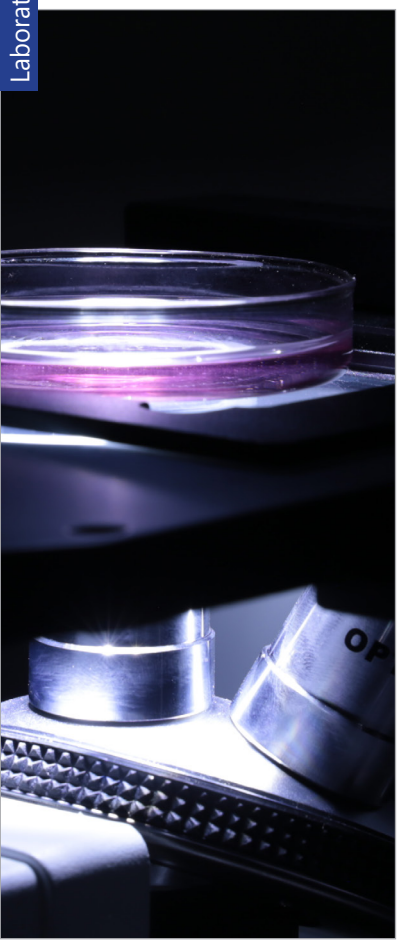
BRIGHTFIELD

METALLOGRAPHY

FLUORESCENCE

PHASE CONTRAST

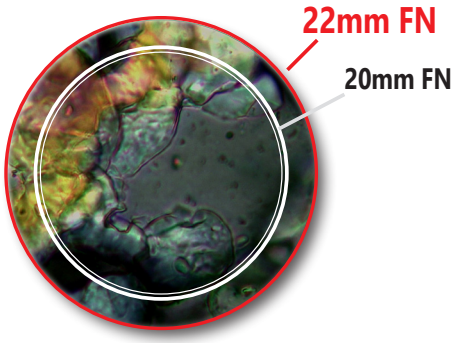
IM-3 Series



Inverted microscopes are useful for observing living cells or organisms at the bottom of a large container (e.g., a tissue culture flask) under more natural conditions than on a glass slide, as it occurs with a conventional microscope. IM-3 Series is engineered and designed to be your ideal solution for fast and reliable routine inspections, with the exclusive, state-of-the-art X-LED[8] illumination system. A particularly simple and ingenious optical design allows stable alignments and smooth and accurate movements. OPTIKA provides different configurations, including the innovative LED fluorescence technology for a new, enhanced experience.

X-LED[8] Exclusive Lighting Source

Special technology able to double the light intensity for incomparable performance, ensuring constant pure-white colour temperature (6,300K colour temperature).
Relevant money and energy saving thanks to the incredibly low energy consumptions which allows you to cut the electricity bills by 90%!
The electric consumption (8 W only) proves the high efficiency of this system: incredibly high light intensity combined with low consumption.



Large Specimen View (22 mm Field Number)

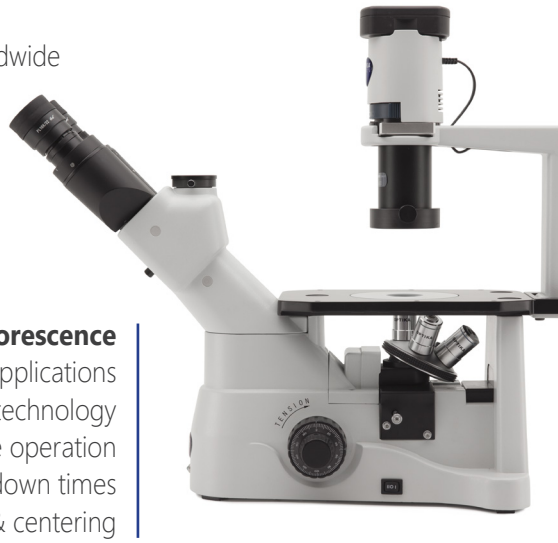
The **F.O.V.** (field of view) is based on a comfortable diameter of 22 mm.
This means that an extra wide area of the sample can be inspected and allows a natural and easy view, particularly needed in a laboratory environment.

In fluorescence we can offer several options.

According to your application and to the fluorochromes you are using, we can help you to identify the best light source.

Traditional, HBO Fluorescence

» The most used and diffused method, worldwide
» Wide spectrum range for future upgrades



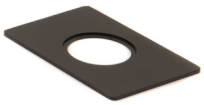
Innovative, LED Fluorescence

» Recommended for routine applications
» Cost-effective, money saving technology
» Ready for immediate operation
» Eliminate warm-up/cool-down times
» Forget lamp replacement & centering

Get the most out of our accessories

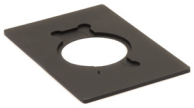
DESIGNED TO FACILITATE YOUR DAILY ROUTINE

» Removable condenser to increase the working distance
» Mechanical stage and side extensions for great comfort (as optional)
» Different inserts available according to the container used (as optional)



M-793.1
Holder for Petri diameter 38mm (M-793.2 needed).

M-793.2
Holder for Terasaki and Petri diameter 65mm.



M-793.3
Holder for slide and Petri diameter 54mm.

M-793.4
Holder for 2+2 slides.

M-793.5
Holder for metallurgical samples
(only for IM-3MET).

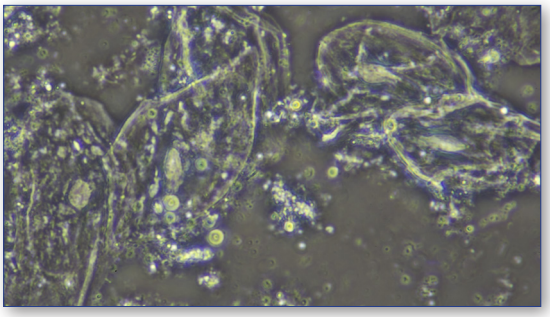
M-793.6
Holder for Utermöhl-Chamber (M-793.3 needed).

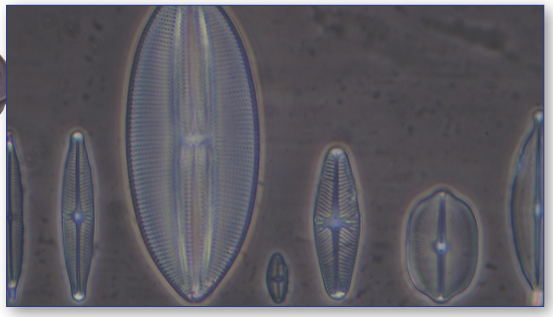
M-793.7
Load-bearing side extension.

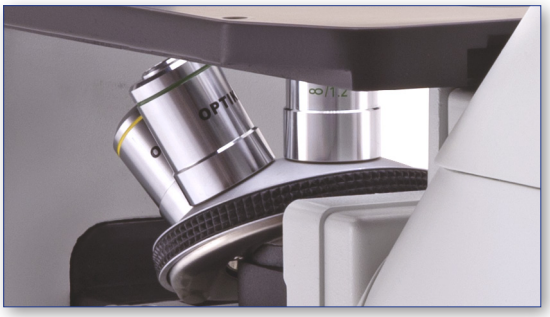
M-792 (M-792.2 for IM-3LD2 only)
Mechanical stage.

IM-3 - Brightfield & Phase Contrast Microscope

IM-3 looks at the challenge of the future with confidence, offering first-class optical quality and mechanical versatility, to extend its use with several accessories.
Ensuring top-level brightfield and phase contrast observation, as it comes with a set of 3 IOS LWD W-PLAN PH objectives (10x, 20x and 40x).
The high-efficiency ***X-LED⁸*** makes it reliable for all transmitted light observations.
For a more complete solution, choose among the several accessories available (objectives, translating stage, side extensions, holders and stage inserts).





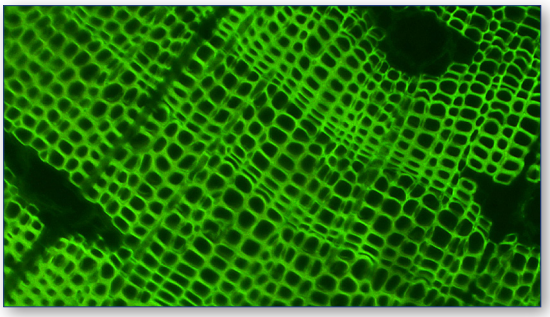


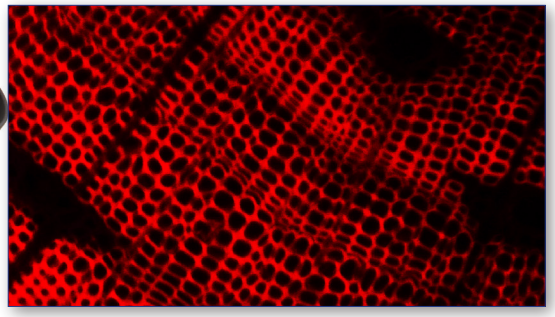
Part	Description
Observation mode:	Brightfield, phase contrast.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD W-PLAN PH 10x/0.25 IOS LWD W-PLAN PH 20x/0.40 IOS LWD W-PLAN PH 40x/0.65 All with anti-fungus treatment.

Part	Description
Specimen stage:	Fixed stage, 250x160 mm, with glass and metal stage inserts.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.

IM-3F - HBO Fluorescence Microscope

Routine inverted fluorescence microscope for transmitted brightfield, phase contrast and fluorescence observations with IOS LWD W-PLAN objectives.
The HBO fluorescence illuminator is combined with blue and green excitation filter set for the visualization of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP, etc. (blue) plus Rhodamine, Texas Red and TRITC (green).
Transmitted light through the exclusive ***X-LED⁸*** to ensure great-looking, rich and high-quality specimen view.





Standard filtersets

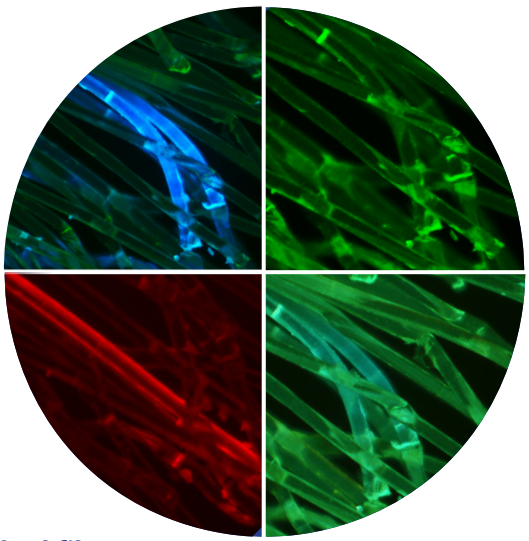
Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B (Blue)	450 – 490	495	520LP
G (Green)	527 – 553	565	575LP

Part	Description
Observation mode:	Brightfield, phase contrast, HBO fluorescence.
Epi-illumination and filter:	HBO 100 W high pressure mercury lamp. 3-position filter holder; blue & green included.
Head:	Trinocular (2-position 100/0, 0/100), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD W-PLAN 4x/0.13 IOS LWD W-PLAN PH 10x/0.25 IOS LWD W-PLAN PH 20x/0.40 IOS LWD W-PLAN 40X/0.60 All with anti-fungus treatment.

Part	Description
Specimen stage:	Fixed stage, 250x160 mm, with glass and metal stage inserts.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.

IM-3FL4 - HBO Fluorescence Microscope

Advanced inverted microscope for brightfield and fluorescence observations with Semi-Apo IOS LWD U-PLAN F objectives to enhance the visibility of the sample and increase the overall contrast. The HBO fluorescence illuminator provides an outstanding flexibility of use, standing the blue and green filter sets (supplied as standard) for Auramine, FITC, GFP and YFP (with blue filter set) plus Rhodamine, Texas Red and TRITC (with the green one), yet giving the possibility to combine any other specific filter sets for future upgrade. Transmitted light through the exclusive ***X-LED⁸*** to ensure great-looking, rich and high-quality specimen view.



Standard filterset

Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B Blue	460 - 490	500	520LP
G Green	527 – 553	565	575LP

Additional filterset (optional)

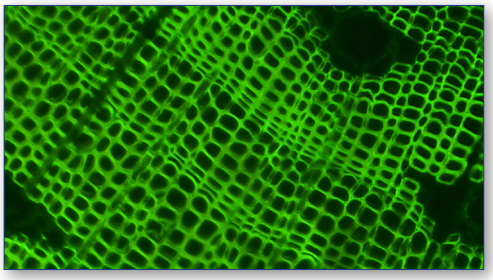
Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
V (Violet)	390 - 420	440	455LP
UV	325 - 375	415	435LP

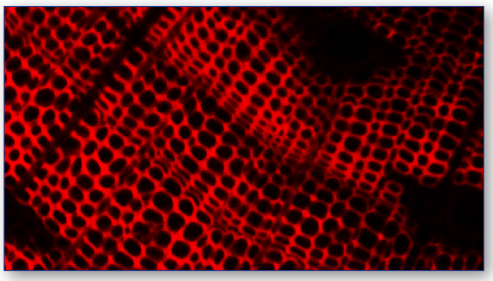
Part	Description
Observation mode:	Brightfield, HBO fluorescence.
Epi-illumination and filter:	HBO 100 W high pressure mercury lamp. 4-position filter holder; blue & green included.
Head:	Trinocular (2-position 100/0, 0/100), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD U-PLAN F 10x/0.30 IOS LWD U-PLAN F 20x/0.45 IOS LWD U-PLAN F 40x/0.65 All with anti-fungus treatment.

Part	Description
Specimen stage:	Fixed stage, 250x160 mm, with glass and metal stage inserts.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.

IM-3LD2 - LED Fluorescence Microscope

Routine inverted fluorescence microscope for transmitted brightfield, phase contrast and fluorescence observations with IOS LWD W-PLAN PH objectives.
The LED fluorescence illuminators are combined with blue and green excitation filter set for the visualization of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP, etc. (blue) plus Rhodamine, Texas Red and TRITC (green). LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related lamp replacement and adjustment. Transmitted light through the exclusive ***X-LED⁸*** to ensure great-looking, rich and high-quality specimen view.





A new milestone achieved in Fluorescence Microscopy

- » 10% higher light intensity than HBO
- » 35% higher light intensity than Metal-Halide
- » Adjustable light intensity
- » The selection of filtersets automatically involves the switching on of the corresponding LEDs
- » Recommended for routine applications
- » Cost-effective, money saving technology
- » Ready for immediate operation
- » Eliminate warm-up/cool-down times
- » Forget lamp replacement & centering

LED Fluorescence Cubes (LED + Filterset) included

Name	LED emission (nm)	Excita-tion filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
Blue	460	455 - 495	500	510LP
Green	523	510 - 550	570	575LP

Part	Description
Observation mode:	Brightfield, phase contrast, LED fluorescence.
Epi-illumination and filter:	High-power LED with brightness control. 3-position filter holder; blue and green filtesets included.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD W-PLAN PH 10x/0.25 IOS LWD W-PLAN PH 20x/0.40 IOS LWD W-PLAN PH 40x/0.65 All with anti-fungus treatment.

Part	Description
Specimen stage:	Fixed stage, 250x160 mm, with glass and metal stage inserts. Mechanical stage as option.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. 100-240Vac/12Vdc external power supply.

IM-3LD4 - LED Fluorescence Microscope

Advanced fluorescence inverted microscope for transmitted brightfield and fluorescence observations with IOS LWD U-PLAN F objectives.
The extremely powerful LED Fluorescence Illuminators are combined with corresponding excitation filter sets for the visualization of most fluorochromes. LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related lamp replacement and adjustment.
Transmitted light through the exclusive ***X-LED⁸*** to ensure great-looking, rich and high-quality specimen view.

A new milestone achieved in Fluorescence Microscopy

- » Full-modular Fluorescence System
- » Interchangeable LED-Filtersets
- » 4 LED-Filtersets slots
- » 10% higher light intensity than HBO
- » 35% higher light intensity than Metal-Halide
- » Adjustable light intensity
- » The selection of filtersets automatically involves the switching on of the corresponding LEDs
- » Recommended for research applications
- » Cost-effective, money saving technology
- » Ready for immediate operation
- » Eliminate warm-up/cool-down times
- » Forget lamp replacement & centering

LED Fluorescence Cubes available (LED + Filterset)

Name	LED emission (nm)	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
M-1230 - Blue	460	455 - 495	500	510LP
M-1230.1 - Blue (pass band)	460	455 - 495	500	518-542
M-1231 - Green	523	510 - 550	570	575LP
M-1231.1 - Green (pass band)	523	510 - 550	570	585-625
M-1232 - Violet	405	390 - 420	440	450LP
M-1233 - UV	365	325 - 375	415	435LP
M-1233.1 - UV (pass band)	365	340 - 390	405	420-470
M-1234 - Red 1 *	623	590 - 650	660	665LP
M-1235 - Red 2 *	623	595 - 645	655	665 - 715
M-1236 - Deep Red *	660	623 - 678	685	690 - 750
M-1237 - Far Red *	740	720 - 760	770	780LP
M-1238 - Amber	590	582 - 603	610	615 - 645

** If the use of a camera is needed, when used for red emission fluorescence wavelengths above 650nm, please order it by specifying with "AR GLASS"*

Part	Description
Observation mode:	Brightfield, LED fluorescence.
Epi-illumination and filter:	High -Power LED with brightness control. 4-position filter holder; none included.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD U-PLAN F 10x/0.30 IOS LWD U-PLAN F 20x/0.45 IOS LWD U-PLAN F 40x/0.65 All with anti-fungus treatment.

Part	Description
Specimen stage:	Mechanical stage, 250x290 mm, with glass and metal stage inserts for slides and 54mm dia. Petri dishes.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/12Vdc external power supply.

IM-3LD4D - LED Fluorescence Microscope

Advanced fluorescence inverted microscope for transmitted brightfield and fluorescence observations with IOS LWD U-PLAN F objectives. The extremely powerful LED Fluorescence Illuminators are combined with corresponding excitation filter sets for the visualization of most fluorochromes. LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related lamp replacement and adjustment. Transmitted light through the exclusive ***X-LED⁸*** to ensure great-looking, rich and high-quality specimen view. This model is equipped with an Intel micro PC, a 12" screen, a 6Mpx high-sensitivity color camera, Optika ProView image analisys software for fluorescence and wireless mouse and keyboard.

A new milestone achieved in Fluorescence Microscopy

- » Full-modular Fluorescence System
- » Interchangeable LED-Filtersets
- » 4 LED-Filtersets slots
- » 10% higher light intensity than HBO
- » 35% higher light intensity than Metal-Halide
- » Adjustable light intensity
- » The selection of filtersets automatically involves the switching on of the corresponding LEDs
- » Recommended for research applications
- » Cost-effective, money saving technology
- » Ready for immediate operation
- » Eliminate warm-up/cool-down times
- » Forget lamp replacement & centering

LED Fluorescence Cubes available (LED + Filterset)

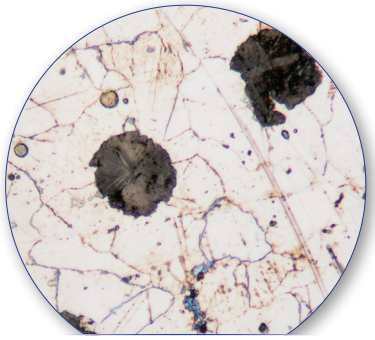
Name	LED emission (nm)	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
M-1230 - Blue	460	455 - 495	500	510LP
M-1230.1 - Blue (pass band)	460	455 - 495	500	518-542
M-1231 - Green	523	510 - 550	570	575LP
M-1231.1 - Green (pass band)	523	510 - 550	570	585-625
M-1232 - Violet	405	390 - 420	440	450LP
M-1233 - UV	365	325 - 375	415	435LP
M-1233.1 - UV (pass band)	365	340 - 390	405	420-470

Part	Description
Observation mode:	Brightfield, LED fluorescence.
Epi-illumination and filter:	High -Power LED with brightness control. 4-position filter holder; none included.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS LWD U-PLAN F 10x/0.30 IOS LWD U-PLAN F 20x/0.45 IOS LWD U-PLAN F 40x/0.65 All with anti-fungus treatment.

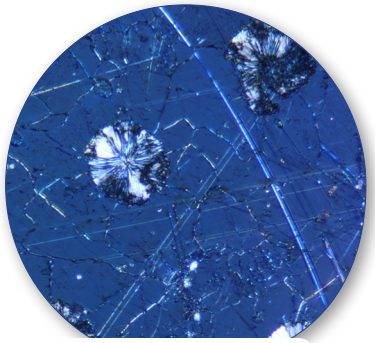
Part	Description
Specimen stage:	Mechanical stage, 250x290 mm, with glass and metal stage inserts for slides and 54mm dia. Petri dishes.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with upper limit stop.
Condenser:	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Removable to extend the working distance up to 150 mm.
Transmitted illumination:	X-LED⁸ with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/12Vdc external power supply.
Digital equipment:	Intel micro PC with Image analisys software for Fluorescence. 12" screen; 6Mpx high-sensitivity color camera. Supplied with wireless mouse & keyboard.

IM-3MET- Metallurgical Microscope

Routine inverted microscope with IOS LWD U-PLAN MET objectives for material science and metallographic applications, combining a sturdy yet compact structure with dedicated components required in this field, like the NCG (no cover glass) objectives working without cover slide ideal for metallographic samples and other opaque specimens. A particularly simple and ingenious optical design allows stable alignments and smooth and accurate movements.



CAST IRON
BRIGHTFIELD



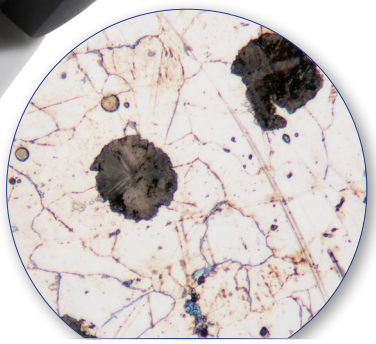
CAST IRON
POLARIZED LIGHT

Part	Description
Observation mode:	Brightfield, simple polarized light on incident light.
Epi-illumination and polarizing filters:	Halogen 12 V/50 W with brightness control. With aperture and field (centrable) diaphragms. With polarizer and analyzer.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.

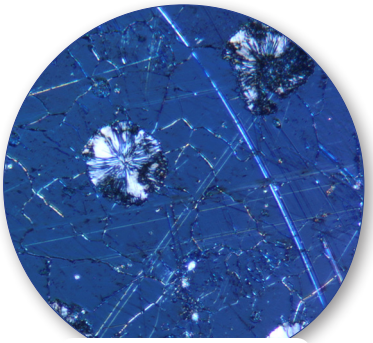
Part	Description
Objectives:	IOS LWD U-PLAN MET 5x/0.15 IOS LWD U-PLAN MET 10x/0.30 IOS LWD U-PLAN MET 20x/0.45 IOS LWD U-PLAN MET 50x/0.55 All with anti-fungus treatment.
Specimen stage:	Fixed stage, 250x160 mm, with metal stage insert.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

IM-3METLD- Metallurgical Microscope

LED routine inverted microscope with IOS LWD U-PLAN MET objectives for material science and metallographic applications, combining a sturdy yet compact structure with dedicated components required in this field, like the NCG (no cover glass) objectives working without cover slide ideal for metallographic samples and other opaque specimens. A particularly simple and ingenious optical design allows stable alignments and smooth and accurate movements.
This model is equipped with an 18W LED lighting system.



CAST IRON
BRIGHTFIELD



CAST IRON
POLARIZED LIGHT

Part	Description
Observation mode:	Brightfield, simple polarized light on incident light.
Epi-illumination and polarizing filters:	LED 18 W with brightness control. With aperture and field (centrable) diaphragms. With polarizer and analyzer.
Head:	Trinocular (2-position 100/0, 50/50), 45° inclined.
Interpupillary distance:	Adjustable between 50 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/22 mm, high eye-point and with rubber cups.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.

Part	Description
Objectives:	IOS LWD U-PLAN MET 5x/0.15 IOS LWD U-PLAN MET 10x/0.30 IOS LWD U-PLAN MET 20x/0.45 IOS LWD U-PLAN MET 50x/0.55 All with anti-fungus treatment.
Specimen stage:	Fixed stage, 250x160 mm, with metal stage insert.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

IM-3 Series - Comparison chart

Common features:
- **Head:** Trinocular (2-position), 45° inclined.
- **Eyepieces:** WF10x/22mm, high eye-point.
- **Nosepiece:** Quintuple, reversed, on ball bearings.
- **Stage:** Fixed, 250x160 mm (mechanical stage and side extension available as accessories).
- **Focusing mechanism:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

Model	Type	Objectives	Condenser	Incident illumination	Fluorescence slider	Transmitted illumination
IM-3	BF, PH	IOS LWD W-PLAN PH 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	-	-	8 W X-LED[8], brightness control
IM-3F	BF, FL, PH	IOS LWD W-PLAN 4x, 10xPH, 20PH, 40x	LWD, N.A. 0.30, iris diaphragm	FL HBO with blue and green filtersets	2-position +BF	8 W X-LED[8], brightness control
IM-3FL4	BF, FL	IOS LWD U-PLAN F 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	FL HBO with blue and green filtersets	3-position +BF	8 W X-LED[8], brightness control
IM-3LD2	BF, FL, PH	IOS LWD W-PLAN PH 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	FL LED with blue and green filtersets	2-position +BF	8 W X-LED[8], brightness control
IM-3LD4	BF, FL	IOS LWD U-PLAN F 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	LED Fluorescence Cubes as optional	4-position	8 W X-LED[8], brightness control
IM-3LD4D	BF, FL	IOS LWD U-PLAN F 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	LED Fluorescence Cubes as optional	2-position	8 W X-LED[8], brightness control
IM-3MET	MET	IOS LWD U-PLAN MET 5x, 10x, 20x, 50x	-	Halogen bulb, 12 V/50 W, brightness control	-	-
IM-3METLD	MET	IOS LWD U-PLAN MET 5x, 10x, 20x, 50x	-	LED 18 W, brightness control	-	-

IM-3 Series - Optical performance

IM-3 / IM-3LD2 / IM-3F

Eyepiece			10x (M-780)	
Field number (mm)			22	
Objective	N.A.	W.D. (mm)	Total magnification	Field of view (mm)
4x	0.13	10.40	40x	5.50
10x PH	0.25	7.30	100x	2.20
20x PH	0.40	6.80	200x	1.10
40x PH	0.60	3.00	400x	0.55
60x	0.70	1.70	600x	0.37

IM-3FL4 / IM-3LD4 / IM-3LD4D

Eyepiece			10x (M-780)	
Field number (mm)			22	
Objective	N.A.	W.D. (mm)	Total magnification	Field of view (mm)
4x	0.13	18.52	40x	5.50
10x	0.30	7.11	100x	2.20
20x	0.45	5.91	200x	1.10
40x	0.65	1.61	400x	0.55
60x	0.75	1.04	600x	0.37

IM-3MET / IM-3METLD

Eyepiece			10x (M-780)		15x (M-601)	
Field number (mm)			22		16	
Objective	N.A.	W.D. (mm)	Total magnification	Field of view (mm)	Total magnification	Field of view (mm)
5x	0.15	10.80	50x	4.40	75x	3.20
10x	0.30	10	100x	2.20	150x	1.60
20x	0.45	4	200x	1.10	300x	0.80
50x	0.55	7.90	500x	0.44	750x	0.32
100x	0.80	2.10	1000x	0.22	1500x	0.16

IM-3 Series - Accessories

Eyecups & Eyepieces

M-601	WF15x/16 eyepiece, high eyepoint
M-780	PL10x/22 eyepiece, high eyepoint, with rubber cup
M-781	PL10x/22 micrometric eyepiece, high eyepoint, with rubber cup

Objectives

IOS W-PLAN

M-1049	IOS W-PLAN objective 2x/0.05
M-782	IOS LWD W-PLAN objective 4x/0.10
M-773	IOS LWD W-PLAN objective 40x/0.60
M-786	IOS LWD W-PLAN objective 60x/0.70

IOS W-PLAN PH

M-782.1	IOS LWD W-PLAN PH objective 4x/0.13
M-783N	IOS LWD W-PLAN PH objective 10x/0.25
M-784N	IOS LWD W-PLAN PH objective 20x/0.40
M-785	IOS LWD W-PLAN PH objective 40x/0.65

IOS U-PLAN F

M-800	IOS LWD U-PLAN F objective 4x/0.13
M-801	IOS LWD U-PLAN F objective 10x/0.30
M-802	IOS LWD U-PLAN F objective 20x/0.45
M-803	IOS LWD U-PLAN F objective 40x/0.65
M-804	IOS LWD U-PLAN F objective 60x/0.75

IOS U-PLAN F PH

M-1177	IOS LWD U-PLAN F PH objective 20x/0.45
M-1178	IOS LWD U-PLAN F PH objective 40x/0.65

IOS U-PLAN MET

M-1100	IOS LWD U-PLAN MET objective 5x/0.15
M-1101	IOS LWD U-PLAN MET objective 10x/0.30
M-1102	IOS LWD U-PLAN MET objective 20x/0.45
M-1103	IOS LWD U-PLAN MET objective 50x/0.55
M-1104	IOS LWD U-PLAN MET objective 100x/0.80 (dry)

IOS LWD U-PLAN RPC

M-861	IOS LWD U-PLAN RPC objective 4x/0.13
M-862	IOS LWD U-PLAN RPC objective 10x/0.25
M-863	IOS LWD U-PLAN RPC objective 20x/0.40
M-864	IOS LWD U-PLAN RPC objective 40x/0.65

Attachments

M-797	HBO fluo attachment, 2-pos. (B & G filter set), EU (only for IM-3)
M-798	HBO fluo attachment, 4-pos. (B & G filter set), EU (only for IM-3)

Stages

M-792	Mechanical stage
M-792.2	Mechanical stage (for IM-3LD2 only)

Condensers & Filters

M-676	Empty fluorescence filterblock (only for IM-3F)
M-677	Fluorescence filter set V (filterblock included) (only for IM-3F)
M-677.1	Fluorescence filter set V (filterblock NOT included) (only for IM-3F & IM-3FL4)
M-677ND	Neutral density filter, 25% transmission (only for IM-3F & IM-FL4)
M-678	Fluorescence filter set UV-DAPI (filterblock included) (only for IM-3F)
M-678.1	Fluorescence filter set UV-DAPI (filterblock NOT included) (only for IM-3F & IM-3FL4)
M-678ND	Neutral density filter, 50% transmission (only for IM-3F & IM-3FL4)
M-1230	Blue LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1230.1	Blue (pass band)LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1231	Green LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1231.1	Green (pass band) LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1232	Violet LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1233	UV LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1233.1	UV (pass band) LED Fluorescence Cube (LED+Filterset), for IM-3LD4
M-1234	Red 1 LED Fluorescence Cube (LED+Filterset), for IM-3LD4 *
M-1235	Red 2 LED Fluorescence Cube (LED+Filterset), for IM-3LD4 *
M-1236	Deep Red LED Fluorescence Cube (LED+Filterset), for IM-3LD4 *
M-1237	Far Red LED Fluorescence Cube (LED+Filterset), for IM-3LD4 *
M-1238	Amber LED Fluorescence Cube (LED+Filterset), for IM-3LD4

Camera Adapters

M-113.1	Ring adapter, 30mm (for monocular and binocular microscopes)
M-115	0.35x C-Mount projection lens
M-114	0.5x C-Mount projection lens
M-118	0.75x C-Mount projection lens
M-173	C-Mount projection lens for APS-C/full frame reflex cameras (trino)
M-620	0.35x focusable C-Mount adapter (biological microscopes)
M-620.1	0.5x focusable C-Mount adapter (biological microscopes)
M-620.2	0.65x focusable C-Mount adapter (biological microscopes)
M-620.3	1x focusable C-Mount adapter (biological & stereomicroscopes)
M-699	Universal adapter for C-Mount projection lens (trino)

Miscellaneous

15104	Cleaning kit
DC-004	TNT dust cover, large, 700(l)x550(h) mm
M-005	Micrometric slide, 26x76mm, with 2 scales (1mm/100 & 10mm/100)
M-151	HBO 100W high-pressure mercury bulb for fluorescence (only for IM-3F & IM-3FL4)
M-151.1	HBO 100W high-pressure mercury bulb for fluorescence (OSRAM) (only for IM-3F & IM-3FL4)
M-622	Halogen bulb 12V/50W (only for IM-3MET)
M-785.2N	Slider with phase rings (4x/10x, 20x/40x, BF) (except for IM-3MET)
M-793.1	Holder for Petri 38mm diameter (M-793.2 needed) (except for IM-3MET)
M-793.2	Holder for Terasaki and Petri 65mm diameter (except for IM-3MET)
M-793.3	Holder for slides and Petri 54mm diameter (except for IM-3MET)
M-793.4	Holder for 2+2 slides (except for IM-3MET)
M-793.5	Holder for metallurgical samples (only for IM-3MET)
M-793.6	Holder for Utermohl-Chamber (M-793.3 needed) (except for IM-3MET)
M-793.7	Load bearing side extension
M-860	Slider with rotating 10x-20x-40x OPTIKA Modulation Contrast slit
M-860.1	Slider with rotating 4x OPTIKA Modulation Contrast slit
M-1004.N	Centering telescope, 30mm diameter
VP-IM3	IQ/OQ/PQ manual for IM-3 series
AB-030	Antibacterial surface treatment, only for newly purchased microscope

** If the use of a camera is needed, when used for red emission fluorescence wavelengths above 650nm, please order it by specifying with "AR GLASS"*

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.

v 6.7 - OPTIKA reserves the right to make corrections, modifications, enhancements, improvements and other changes to its products at any time without notice.

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