

IM-3 Series

Inverted Microscopes For Routine Applications

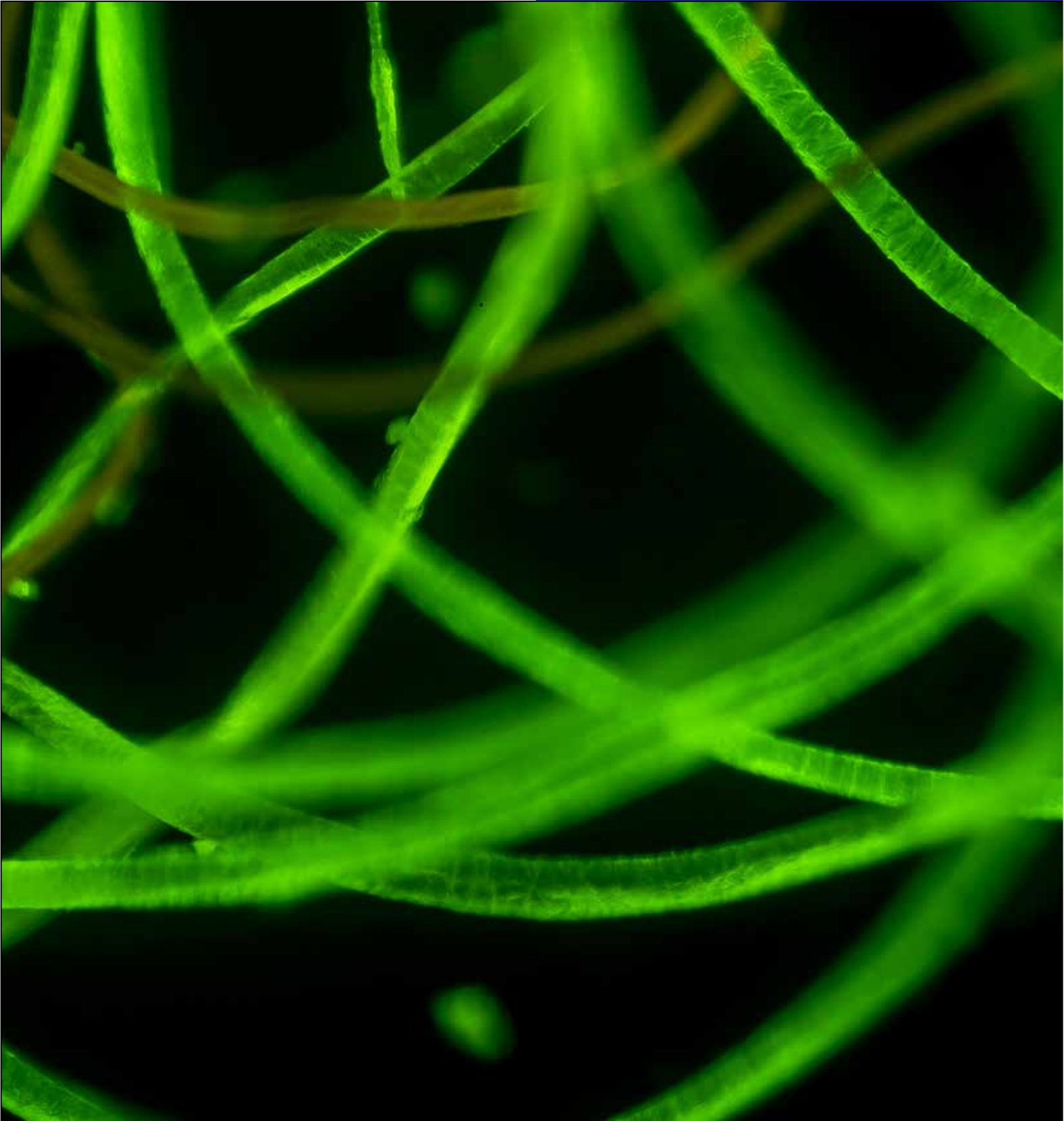
Your Preferred Inverted Microscope For Routine Applications

INTUITIVE, EASY USE FOR ALL LEVELS OF EXPERIENCE

- » Ergonomic controls for fast and efficient investigations
- » Excellent optics with high numerical aperture for brilliant images
- » Compact footprint to save space

FAST, EFFICIENT INVESTIGATIONS

- » Best-in-class LED illumination
- » Easy to use aperture diaphragm to adjust your brightfield view
- » Bright images also with light-demanding techniques as phase contrast



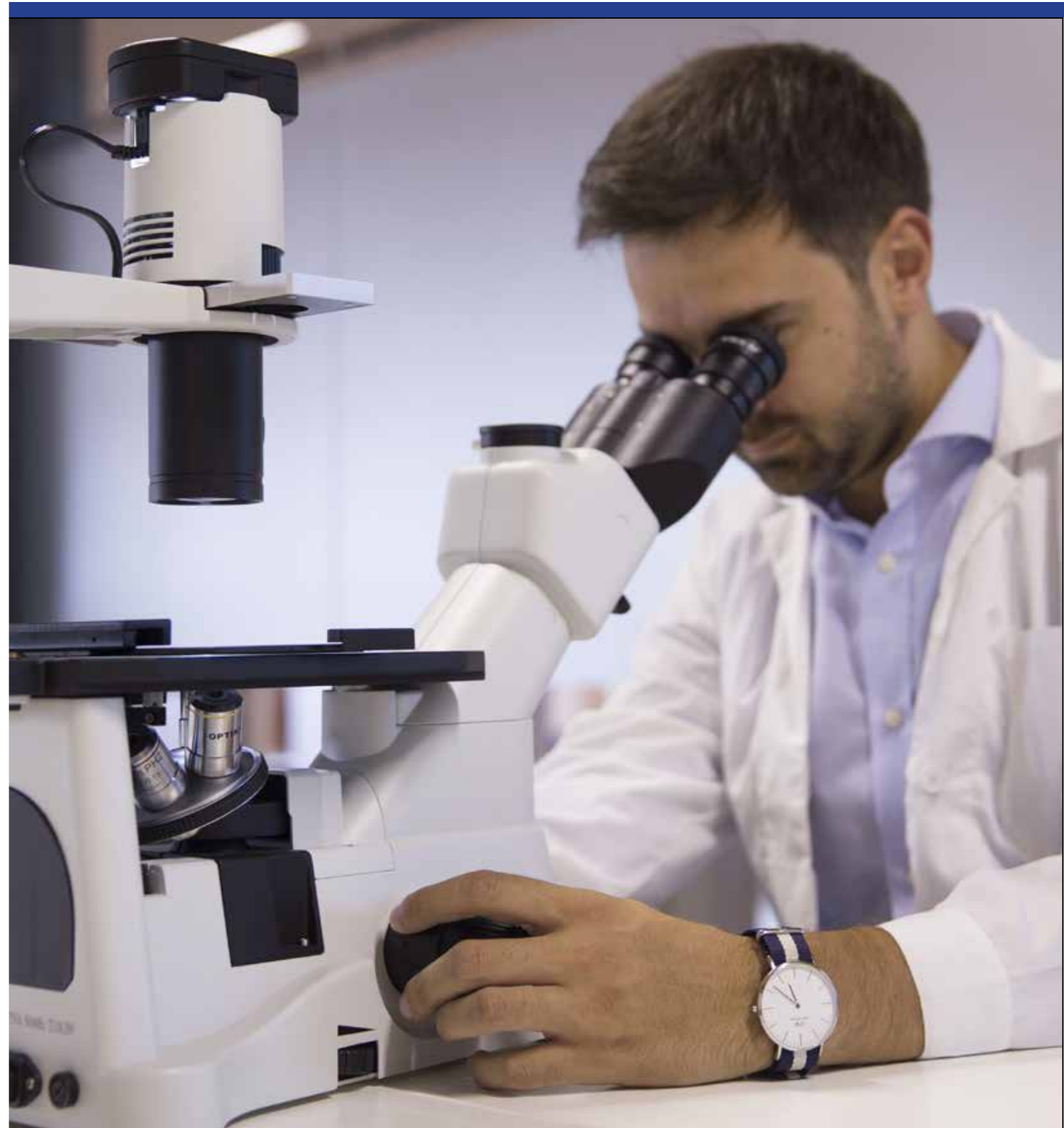
Adjust It To Your Individual Needs

DESIGNED TO FACILITATE YOUR DAILY ROUTINE

- » Removable condenser to increase the working distance (up to 150 mm)
- » Easy set-up of phase contrast with pre-centered slider
- » Contemporary ergonomic design

EXTEND YOUR COMFORT WITH OPTIONAL ACCESSORIES

- » Mechanical stage with X-Y translation
- » More space on the stage with load-bearing side extensions
- » Interchangeable metallic inserts for slides, Petri dishes and flasks



Improved Optical Performance, Long Working Distance

EXCELLENT CONTRAST & RESOLUTION

- » Comprehensive range of objectives for extended versatility
- » Full chromatic correction and field planarity for 22mm field
- » Enhanced image quality, high contrast and brightness

OBSERVE EVEN THE MOST COMPLEX SAMPLES

- » All models equipped with Infinity-Corrected IOS optics
- » Phase contrast objectives for examination of transparent samples
- » High-quality dry objectives for material science applications



Stay Connected With Your Specimen

EASY INTEGRATION WITH DIGITAL WORLD

- » Trinocular head with photo ports, activated with a touch of a lever
- » Complete range of adapters for all kinds of camera
- » Image fidelity thanks to pure white LED illumination

SOFTWARE TO SIMPLIFY YOUR WORKFLOW

- » Effective image capturing and live videos
- » Get fast, user-friendly, high resolution imaging
- » Annotate your images and measure distances



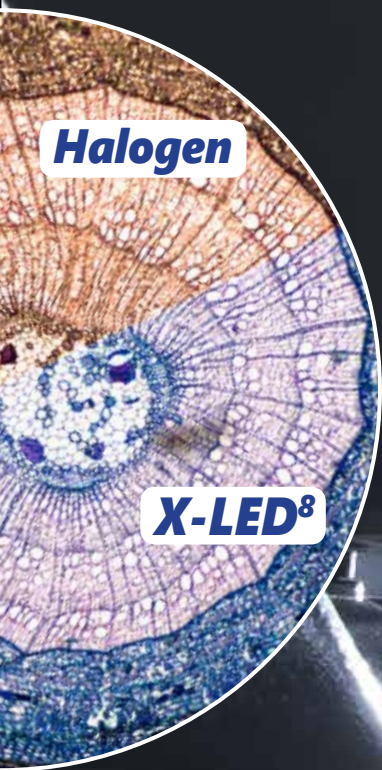
X-LED⁸ - Exclusive Lighting Source

POWERFUL AND UNIFORM ILLUMINATION

- » Unmatched colour fidelity and brightness of your specimen
- » Special technology able to double the light intensity
- » Constant pure-white colour temperature, 6,300 K

CUT ELECTRICITY BILLS BY 90%

- » Money & energy saving
- » Low power consumption, only 8 W
- » LED long lifetime (50,000 hours = 20 years at 8 hours/day usage)



IM-3LD - The Latest, Modern LED Fluorescence

CONCEPTUAL INNOVATION FOR UNIQUE CONVENIENCE

- » Eliminate warm-up/cool-down times
- » Forget about lamp replacement and adjustment
- » No need for lamp maintenance

CHOOSE FOR THE LOWEST OPERATIONAL COSTS

- » Cost-effective, money saving technology
- » Lamp lifetime is extended to over 50,000 hours
- » Power consumption reduced to a minimum



Icons



Trinocular



Infinity-corrected optics



Transmitted light



Inclined head



Max. magnification



Polarized light



Field number



Anti-fungus treatment



Halogen lamp



Rotating head 360°



Incident light



X-LED illuminator

IM-3 Series

Dedicated Solutions For Specific Markets

OPTIKA is able to satisfy the most demanding requests, by offering inverted microscopes for reliable observation in brightfield, fluorescence, material science and phase contrast techniques. The very long **working distance of the condenser** (up to max. 150 mm) makes possible the use of even the largest samples.

Significant Time And Money Saving

The **IM-3 Series** has been designed to increase comfort and achieve significant benefits, especially in terms of time saving with quick and intuitive installation, pre-aligned phase contrast system and pre-aligned LED light source.

As time is money, these features bring to a drastic impact on cost reduction, even more evident thanks to the **exclusive illumination system** provided by OPTIKA.

The Widest Specimen Area Available (22mm Field Number)

The **F.O.V.** (field of view) of IM-3 Series is based on a very comfortable diameter of 22 mm; a natural and easy view is ensured, especially when typically required in a laboratory environment.

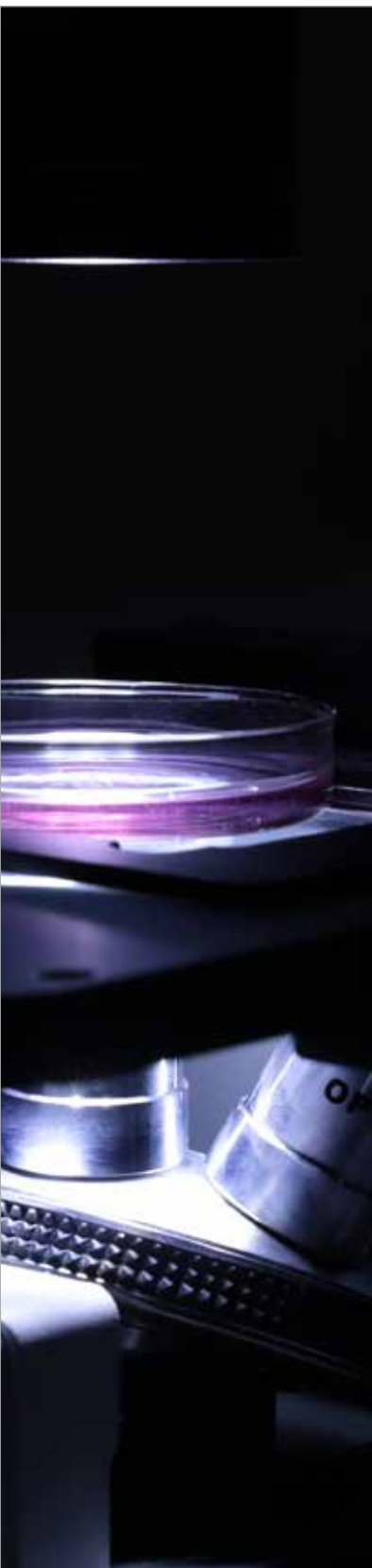
X-LED[®] Exclusive Lighting Source

X-LED[®] illumination system is based on a pure white high-efficiency LED and a special optics. It guarantees constant color temperature (6,300 K) for all intensity levels, no heat generation, and extreme electrical consumption efficiency. The whole system is pre-aligned and has a lifetime of 50,000 hours.

Conceptual And Technological Innovation in Fluorescence

The comprehensive range of fluorescence inverted microscopes enables the users to select the most appropriate model.

IM-3F is the best-seller for routine applications, whilst **IM-3FL4** provides a wider choice of custom fluorescence filter sets. The incredibly convenient and “creative” **IM-3LD** ensures pre-centered fluorescence, with fast set-up, minimum maintenance and relevant saving in time (no warm-up & cool-down).



Inverted Microscopes For Routine Applications

Get the most out of our accessories



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
Mechanical stage.

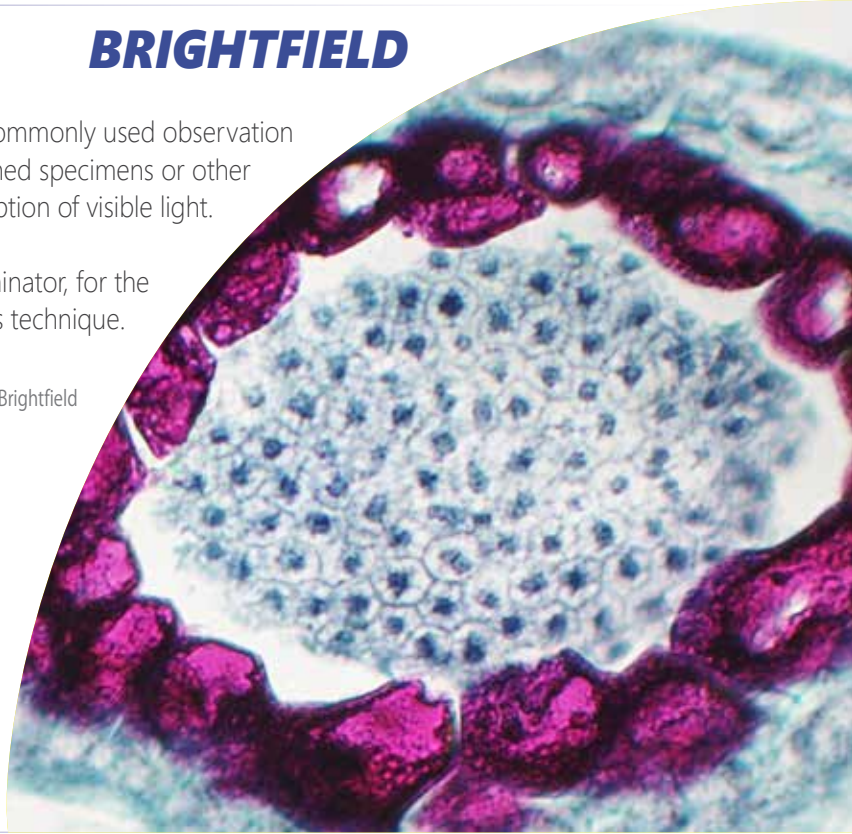
IM-3 Series

BRIGHTFIELD

Transmitted brightfield illumination is one of the most commonly used observation method in optical microscopy, and is ideal for fixed, stained specimens or other types of samples having high natural absorption of visible light.

IM-3 Series is fitted with high-efficiency LED brightfield illuminator, for the best outcome when using this technique.

Capsella middle embryo - IM-3 - Brightfield



FLUORESCENCE

The fluorescence microscopy is the most demanding technique in biology and biomedical sciences, as well as in materials science.

This method is capable to study organic and inorganic samples thanks to primary fluorescence (auto-fluorescence) or secondary (staining and labelling with fluorochromes)

IM-Series is tailored for applications in research, clinical and pharmaceutical diagnostic field.

Fluorescence illuminators available as mercury lamp (IM-3F & IM-3FL4) and also as LED (IM-3LD).

Cotton fibers - IM-3FL4 - UV Fluorescence



MATERIAL SCIENCE / METALLOGRAPHY

Reflected light microscopy is the method for observation of specimens that remain opaque even when ground to a thickness of few microns. The range of specimens falling into this category is incredibly wide and includes most metals, ores, ceramics, many polymers, semiconductors (unprocessed silicon, wafers, and integrated circuits), coal, plastics, paint, paper, wood, leather, glass inclusions, and a wide variety of specific materials.

Brass (not polished) - IM-3MET - Material Science

PHASE CONTRAST

Phase-contrast microscopy is a particular technique applied in transparent, non-stainable, samples like culture of living cells, microorganisms, lithographic patterns, latex dispersions, fibers, asbestos and subcellular particles. It reveals many cellular structures that are not visible with a simple brightfield microscope.

Diatoms - IM-3 - Phase contrast

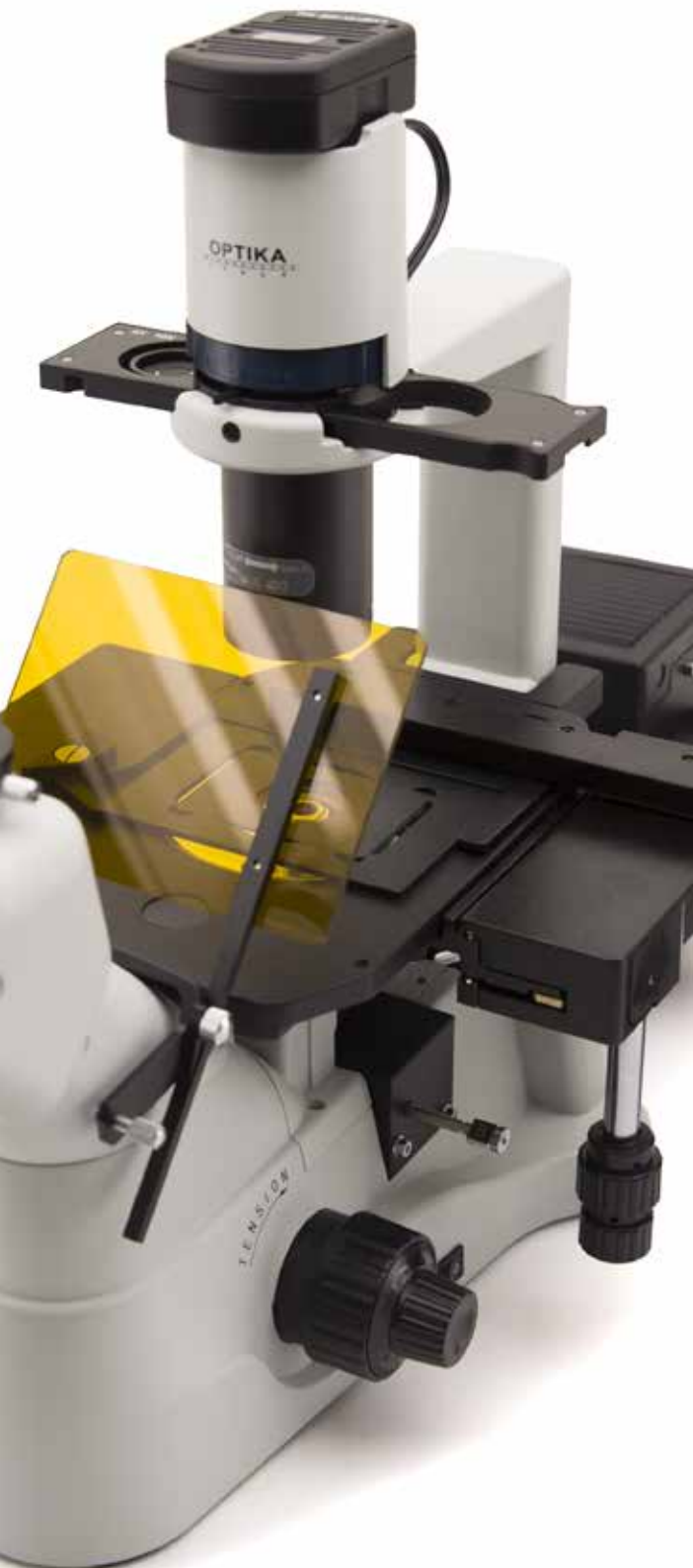
IM-3 Series - Overview

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[®]** 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.



Observation mode:

Incident and transmitted brightfield, incident polarization, fluorescence, phase contrast.

Heads:

Trinocular: 45° inclined.

Interpupillary distance:

Interpupillary distance: 50 - 75 mm.

Dioptric adjustment:

On the left eyepiece tube.

Eyepieces:

Plan Extra Wide Field, PL 10x/22, High Eyepoint.

Nosepiece:

Quintuple revolving nosepiece with bidirectional rotation on ball bearings.

Objectives:

IOS LWD PLAN (different models and magnifications available) with an anti-fungus treatment.

Specimen stage:

Fixed stage, dimension: 250x160 mm; with glass and metal stage inserts (except for IM-3MET: metal insert only). Optional mechanical stage and side extension.

Focusing:

Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

Adjustable tension of coarse focusing knob.

Condenser:

LWD pre-centered condenser, N.A. 0.30, working distance 72 mm. The condenser can be removed to extend the working distance up to 150 mm.

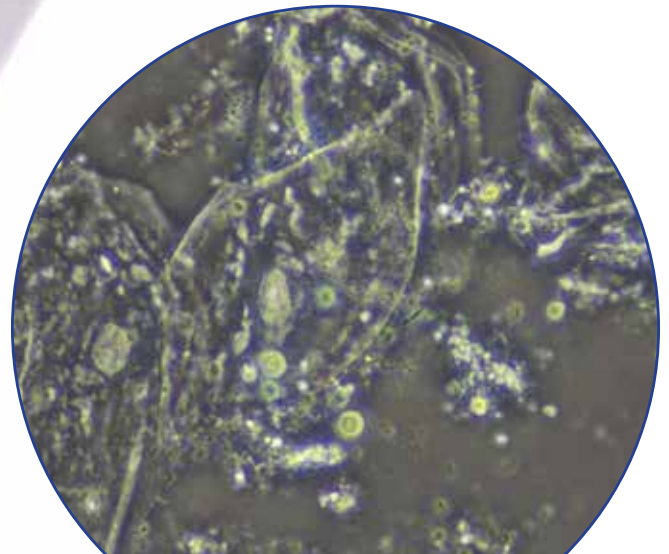
Illumination:

Transmitted: X-LED[®] with white 8 W LED and light intensity control (except for IM-3MET: 50 W halogen bulb).

Incident: Refer to each model for details about other illumination sources.

IM-3

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). For a more complete solution, choose among the **several accessories available** (objectives, translating stage, side extensions, holders and stage inserts).

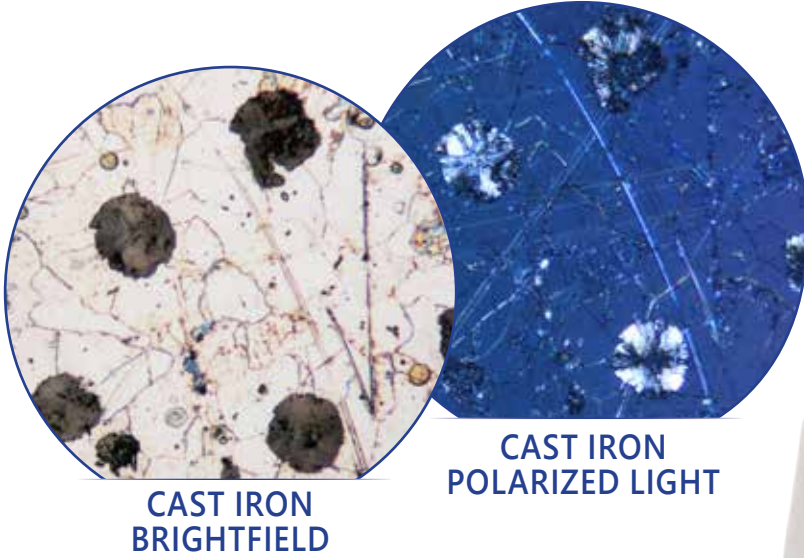


**EPITHELIAL CELLS
PHASE CONTRAST**

Part	Description
Objectives	<ul style="list-style-type: none">- IOS LWD W-PLAN PH objective 10x/0.25- IOS LWD W-PLAN PH objective 20x/0.40- IOS LWD W-PLAN PH objective 40x/0.65 All objectives are treated with an anti-fungus treatment.
Illumination	Transmitted light: 8 W X-LED [®] , manual brightness control.
Phase Contrast Filter sets	Interferential IF550 green filter, slider with phase rings (4x/10x, 20x/40x, BF position).

IM-3MET

IM-3 Series has a specific configuration designed for **material science and metallographic** applications, combining a sturdy but compact structure with dedicated components required in this field, like the dedicated objectives working **without cover slide** for processing large and heavy samples, engineered and designed to be your ideal solution for fast and reliable routine inspections. A **particularly simple and ingenious optical design** allows stable alignments and smooth and accurate movements.



CAST IRON
BRIGHTFIELD

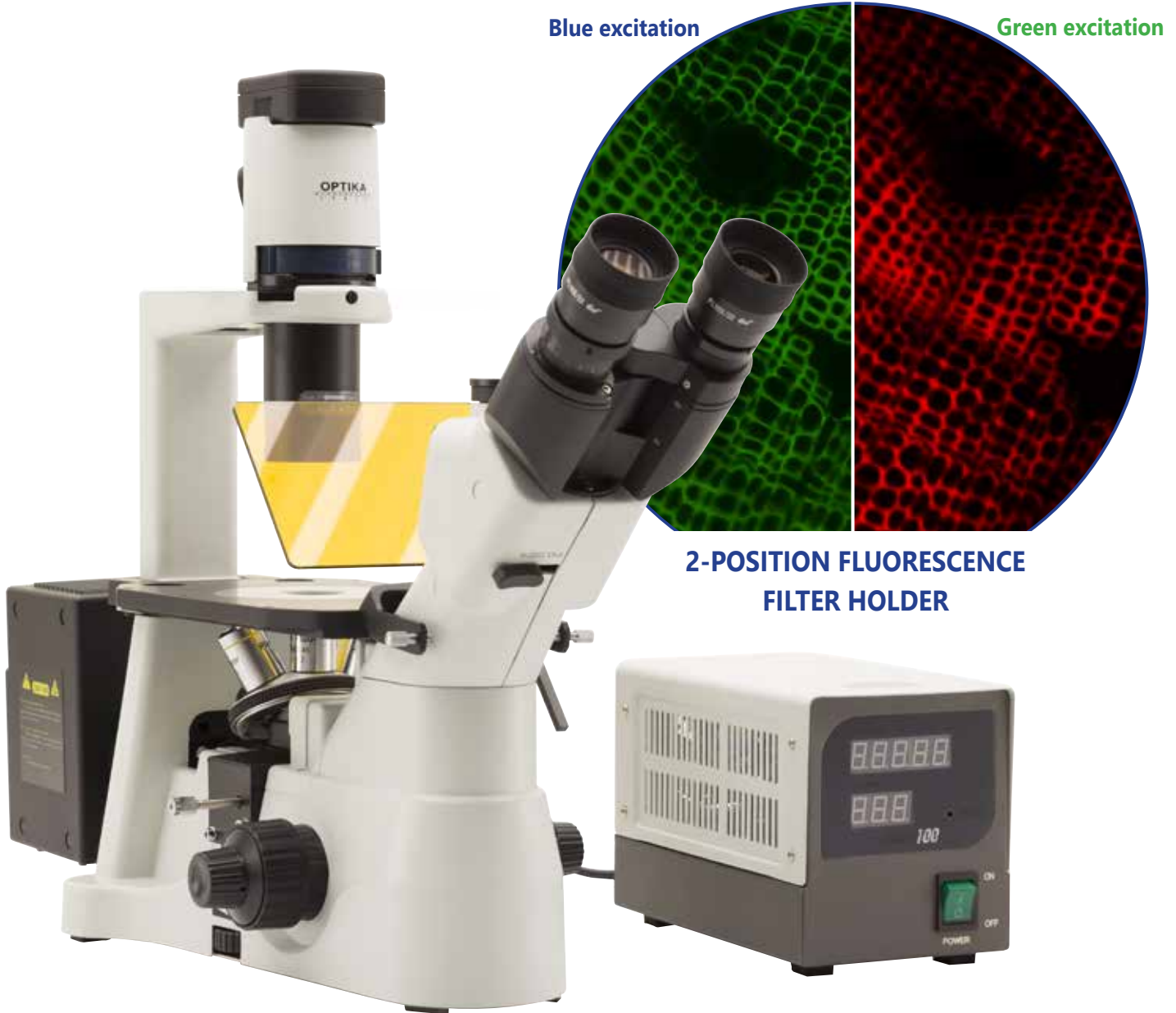
CAST IRON
POLARIZED LIGHT



Part	Description
Objectives	<ul style="list-style-type: none"> - IOS LWD U-PLAN MET objective 5x/0.15 - IOS LWD U-PLAN MET objective 10x/0.3 - IOS LWD U-PLAN MET objective 20x/0.45 - IOS LWD U-PLAN MET objective 50x/0.55 All objectives are treated with an anti-fungus treatment.
Diaphragms	Field diaphragm (centerable) and aperture diaphragm.
Illumination	Epi-illumination: 12 V / 50 W halogen bulb in external lamp housing. Centerable bulb and brightness control on left side of the frame.
Filter sets	Polarizer filter, rotatable analyzer filter, blue and green filters.

IM-3F

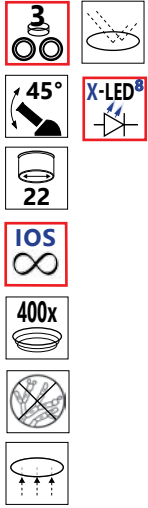
The inverted epi-fluorescence microscope IM-3F includes **IOS LWD W-PLAN objectives** (4x and 40x for brightfield; 10x and 20x for phase contrast). It can be upgraded at the maximum level with the **extensive range of optional accessories**, allowing a quick interchange of contrast mechanisms, multi-contrast observation without removing of the specimen from the stage. It comes with a **2-position filter holder** and can be combined with every kind of fluorescence filter set to be promptly customized and tailored for several applications.



Part	Description
Objectives	<ul style="list-style-type: none"> - IOS LWD W-PLAN objective 4x/0.13 - IOS LWD W-PLAN PH objective 10x/0.25 - IOS LWD W-PLAN PH objective 20x/0.40 - IOS LWD W-PLAN objective 40x/0.60 All objectives are treated with an anti-fungus treatment.
Illumination	Transmitted light: 8 W X-LED [®] , manual brightness control Epi-fluorescence light: HBO 100 W mercury lamp
Epi-fluorescence Filter sets	Blue and Green fluorescence filter sets: Fluorescence B: EX 460-490, DM 500, EM 520LP. Fluorescence G: EX 480-550, DM 570, EM 590LP.
Phase Contrast Filter sets	Interferential IF550 green filter, slider with phase rings (4x/10x, 20x/40x, BF position).

IM-3FL4

The advanced inverted epi-fluorescence microscope IM-3FL4 includes top-quality **IOS LWD U-PLAN F objectives** 10x, 20x and 40x, designed with special glass (low in auto-fluorescence). It can be upgraded at the maximum level with the **extensive range of optional accessories**, allowing a quick interchange of contrast mechanisms, multi-contrast observation without removing of the specimen from the stage. It comes with a **4-position filter holder** and can be combined with every kind of fluorescence filterset to be promptly customized and tailored for several applications.




**4-POSITION
FLUORESCENCE FILTER HOLDER**

Part	Description
Objectives	<ul style="list-style-type: none"> - IOS LWD U-PLAN F objective 10x/0.30 - IOS LWD U-PLAN F objective 20x/0.45 - IOS LWD U-PLAN F objective 40x/0.65 All objectives are treated with an anti-fungus treatment.
Illumination	Transmitted light: 8 W X-LED [®] , manual brightness control Epi-fluorescence light: HBO 100 W mercury lamp, knobs for lamp alignment, with centerable field diaphragm.
Epi-fluorescence Filter sets	Fluorescence B: EX 460-490, DM 500, EM 520LP; Fluorescence G: EX 480-550, DM 570, EM 590LP; Fluorescence UV (optional): EX 325-375, DM 400, EM 420LP; Fluorescence V (optional): EX 385-425, DM 440, EM 455LP.
Phase Contrast Filter sets	Interferential IF550 green filter.

IM-3LD

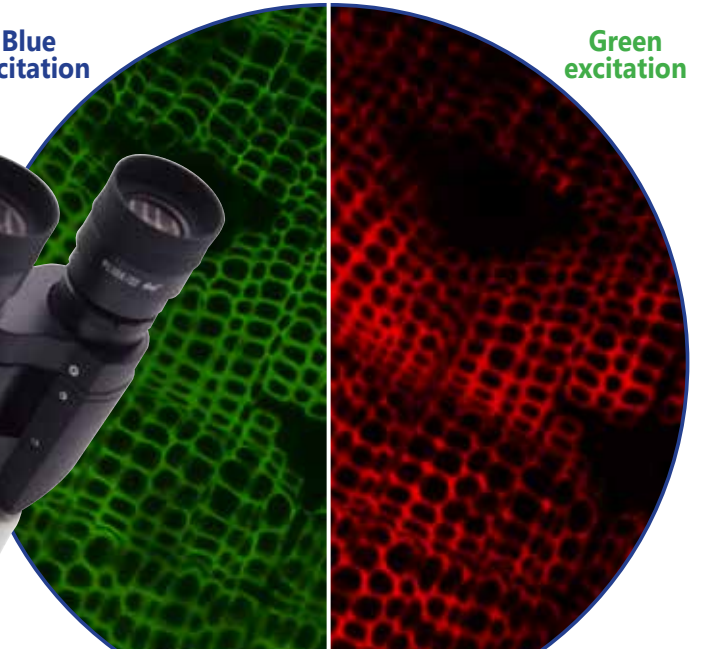
Robust and easy to operate, IM-3LD is offering premium performance in fluorescence microscopy, with the possibility to use a **double LED based fluorescence** channel (470 nm and 560 nm) suitable for visualization of various fluorochromes such as Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP, etc. (for blue excitation) and DiI, Blu Evans, Feulgen, Rhodamine, Texas Red, TRITC, PI, etc. (for green excitation). The standard configuration includes a **2-position filter holder** in addition to the brightfield position, 10xPH, 20xPH and 40xPH **IOS LWD W-PLAN PH** objectives, whilst other optical sets and an extended range of accessories are available to enhance operator's comfort during use.

-  3
-  45°
-  22
-  IOS
-  400x
- 
- 
-  X-LED®



Blue excitation

Green excitation



2-POSITION FLUORESCENCE FILTER HOLDER

Part	Description
Objectives	<ul style="list-style-type: none"> - IOS LWD W-PLAN PH objective 10x/0.25 - IOS LWD W-PLAN PH objective 20x/0.40 - IOS LWD W-PLAN PH objective 40x/0.65 All objectives are treated with an anti-fungus treatment.
Illumination	Transmitted light: 8 W X-LED®, manual brightness control. Epi-fluorescence light: 18 W high efficiency LED, manual brightness control.
Epi-fluorescence Filter set	Blue and Green fluorescence filter sets: Fluorescence B: EX 450-490, DM 495, EM 520LP. Fluorescence G: EX 540-580, DM 585, EM 590LP.
Phase Contrast Filter sets	Interferential IF550 green filter, slider with phase rings (4x/10x, 20x/40x, BF position).
Accessories	Anti-glow fluorescence cap.

IM-3 Series - Comparison chart

Model	Head	Eyepieces	Nosepiece	Objectives	Stage	Focusing	Condenser	Illuminator
IM-3	Trinocular, 45° inclined	PL 10x/22	Quintuple	IOS LWD W-PLAN PH 10x, 20x, 40x	Fixed, 250x160 mm with glass and metal stage inserts	Coaxial coarse and fine, limit stop	LWD, N.A. 0.30, iris diaphragm, removable	Transmitted: 8 W X-LED [®] , manual brightness control
IM-3F	Trinocular, 45° inclined	PL 10x/22	Quintuple	IOS LWD W-PLAN PH 10x, 20x IOS LWD W-PLAN 4x, 40x	Fixed, 250x160 mm with glass and metal stage inserts	Coaxial coarse and fine, limit stop	LWD, N.A. 0.30, iris diaphragm, removable	Transmitted: 8 W X-LED [®] , manual brightness control Epi-fluorescence: HBO 100 W mercury lamp
IM-3FL4	Trinocular, 45° inclined	PL 10x/22	Quintuple	IOS LWD U-PLAN F 10x, 20x, 40x	Fixed, 250x160 mm with glass and metal stage inserts	Coaxial coarse and fine, limit stop	LWD, N.A. 0.30, iris diaphragm, removable	Transmitted: 8 W X-LED [®] , manual brightness control Epi-fluorescence: HBO 100 W mercury lamp
IM-3LD	Trinocular, 45° inclined	PL 10x/22	Quintuple	IOS LWD W-PLAN PH 10x, 20x, 40x	Fixed, 250x160 mm Fixed, 250x160 mm with glass and metal stage inserts	Coaxial coarse and fine, limit stop	LWD, N.A. 0.30, iris diaphragm, removable	Transmitted: 8 W X-LED [®] , manual brightness control Epi-fluorescence: 18 W LED, manual brightness control
IM-3MET	Trinocular, 45° inclined	PL 10x/22	Quintuple	IOS LWD U-PLAN MET 5x, 10x, 20x, 50x	Fixed, 250x160 mm with metal stage insert	Coaxial coarse and fine, limit stop	Field stop (centerable) and aperture stop	Epi-illumination: Halogen bulb 50 W, manual brightness control

Accessories

ACCESSORIES FOR IM-3 / IM-3F / IM-3FL4 / IM-3LD

M-780	Eyepiece PL 10x/22.
M-781	Eyepiece micrometer PL 10x/22.
M-601	Eyepiece WF 15x/16.
M-005	Micrometer slide for software calibration, 1 mm/10 um, 10 mm/100 um.
M-773	IOS LWD W-PLAN objective 40x/0.60.
M-782	IOS LWD W-PLAN objective 4x/0.13.
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.
M-786	IOS LWD W-PLAN objective 60x/0.70.
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.
M-785.2N	Slider with phase rings (4x/10x, 20x/40x, BF position)
M-788	Photo adapter for REFLEX camera with FULL FRAME sensor.
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-699	Universal adapter for M-114, M-115, M-116, M-173 and eyepiece cameras.
M-792	Mechanical stage for IM-3 series.
M-793.1	Holder for Petri diameter 38 mm (M-793.2 needed).
M-793.2	Holder for Terasaki and Petri diameter 65 mm.
M-793.3	Holder for slide and Petri diameter 54mm.
M-793.4	Holder for 2+2 slides.
M-793.6	Holder for Utermöhl-Chamber (M-793.3 needed).
M-793.7	Load-bearing side extension for IM-3 series.
M-676	Empty fluorescence filter cube (only for IM-3F).
M-677	Fluorescence filter set (mounted on filter cube) V (only for IM-3F).
M-678	Fluorescence filter set (mounted on filter cube) UV-DAPI (only for IM-3F).
M-151	HBO100 W high-pressure mercury bulb for fluorescence (only for IM-3F / IM-3FL4).
M-677.1	Fluorescence filter set V (only for IM-3FL4).
M-678.1	Fluorescence filter set UV-DAPI (only for IM-3FL4).
M-677ND	Neutral density filter ND25 (only for IM-3F / IM-3FL4).
M-678ND	Neutral density filter ND50 (only for IM-3F / IM-3FL4).
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-114	C-Mount adapter for 1/2" sensor.
M-115	C-Mount adapter for 1/3" sensor.
M-116	C-Mount adapter for 2/3" sensor.
DC-004	TNT dust cover, large.
15104	Cleaning kit.
VP-IM3	IQ/OQ/PQ Validation Protocols.

ACCESSORIES FOR IM-3MET

M-780	Eyepiece PL 10x/22.
M-781	Eyepiece micrometer PL 10x/22.
M-601	Eyepiece WF 15x/16.
M-005	Micrometer slide for software calibration, 1 mm/10 um, 10 mm/100 um.
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).
M-699	Universal adapter for M-114, M-115, M-116, M-173 and eyepiece 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-622	Halogen bulb 12 V/50 W (only for IM-3MET).
M-792	Mechanical stage for IM-3 series.
M-793.5	Holder for metallurgical samples.
M-793.7	Load-bearing side extension for IM-3 series.
M-114	C-Mount adapter for 1/2" sensor.
M-115	C-Mount adapter for 1/3" sensor.
M-116	C-Mount adapter for 2/3" sensor.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
M-788	Photo adapter for REFLEX camera with FULL FRAME sensor.
DC-004	TNT dust cover, large.
15104	Cleaning kit.
VP-IM3	IQ/OQ/PQ Validation Protocols.



How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.

15104 - Cleaning kit

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



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® India india@optikamicroscopes.com

OPTIKA® USA usa@optikamicroscopes.com
OPTIKA® Hungary hungary@optikamicroscopes.com