

**OPTIKA<sup>®</sup>**  
MICROSCOPES  
I T A L Y

## IM-300 Series



**Routine Lab Inverted Microscopes**

# Your Preferred Inverted Microscope for Routine

## ROUTINE IN UNIVERSITIES, LABS & INDUSTRIES

- » Wide range to fulfill 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



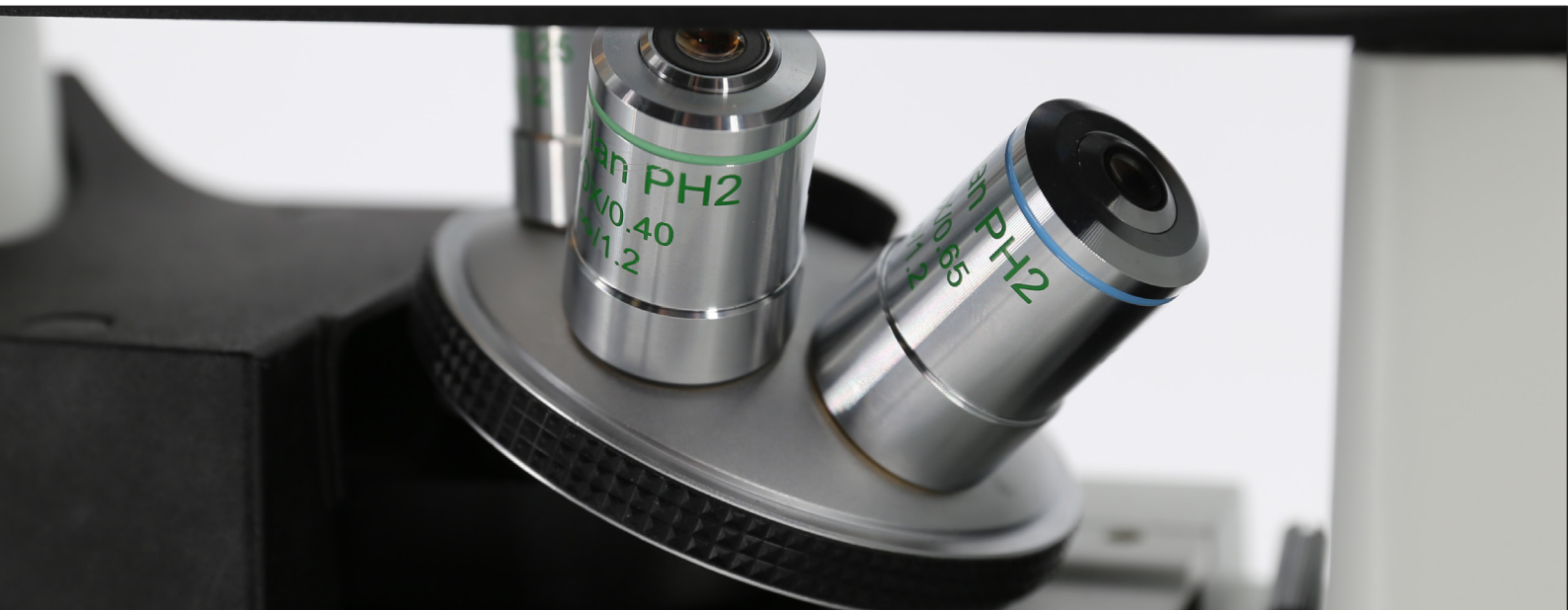
## Optically Impressive

### 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, diopter adjustment (left eyepiece)

### IM-300 & 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



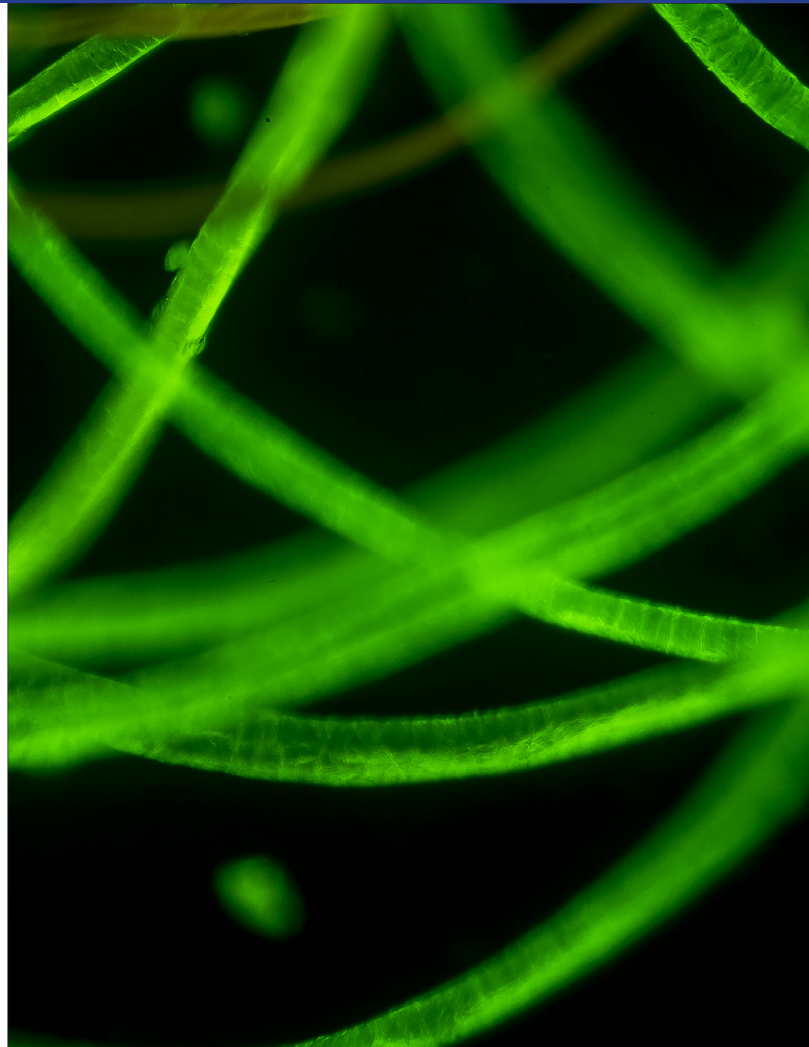
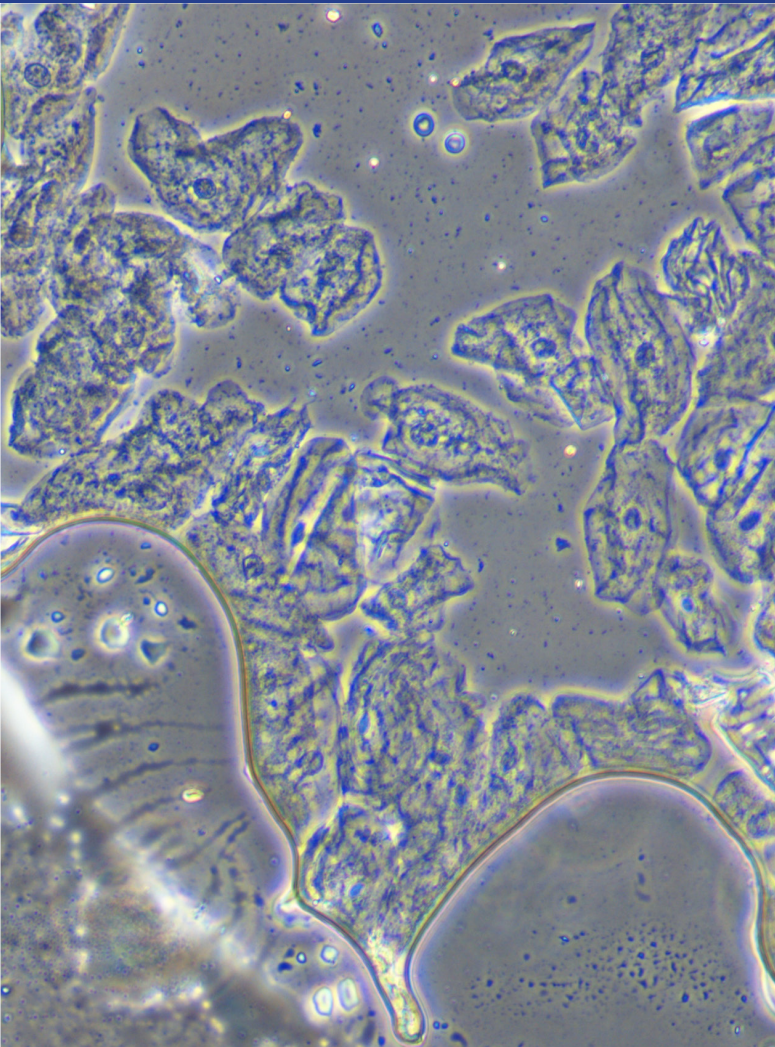
# An Extensive Range of Different Configurations

## OBSERVE EVEN THE MOST COMPLEX SAMPLES

- » Phase contrast objective 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

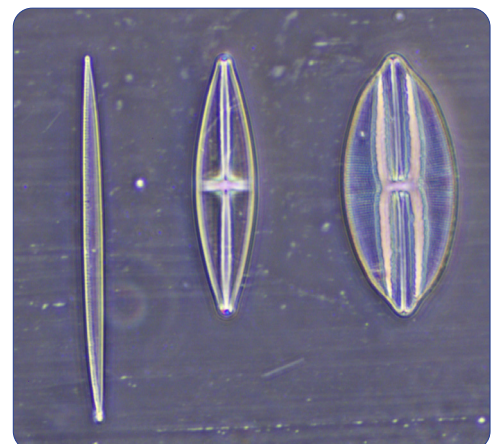


## RPC - Relief Phase Contrast

**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 observed under modulation contrast optics (RPC), transparent objects that are essentially not visible 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-LED<sup>8</sup> - 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)



Halogen

X-LED

OPTIKA  
ITALY

Multi-plug power supply

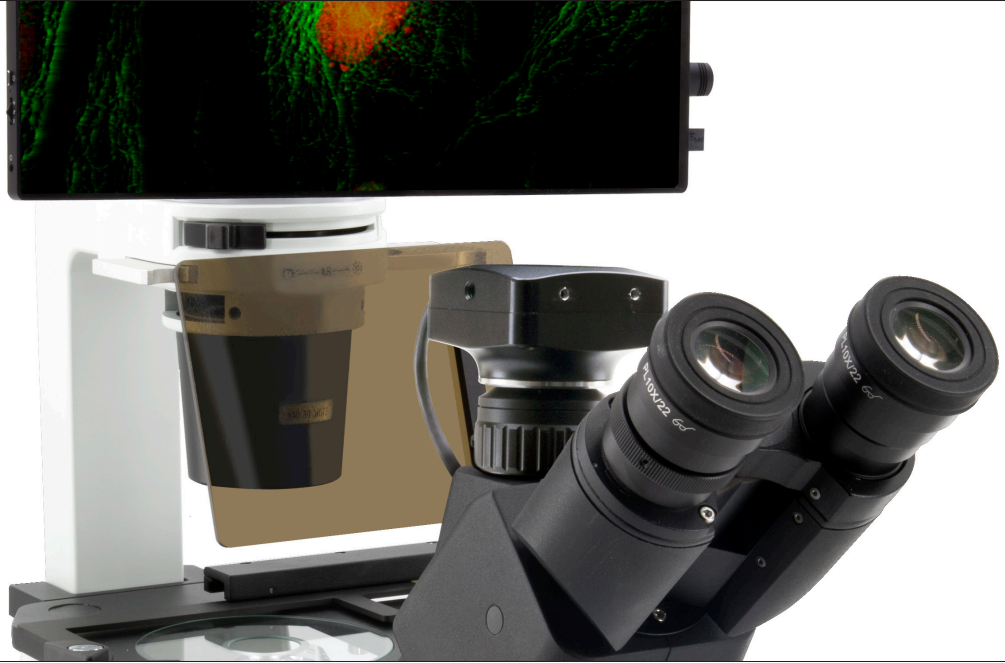
# Go Digital - Vivid Colors & Contrast For Stunning Images

## STAY CONNECTED WITH YOUR SPECIMEN, EASILY

- » Trinocular 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**

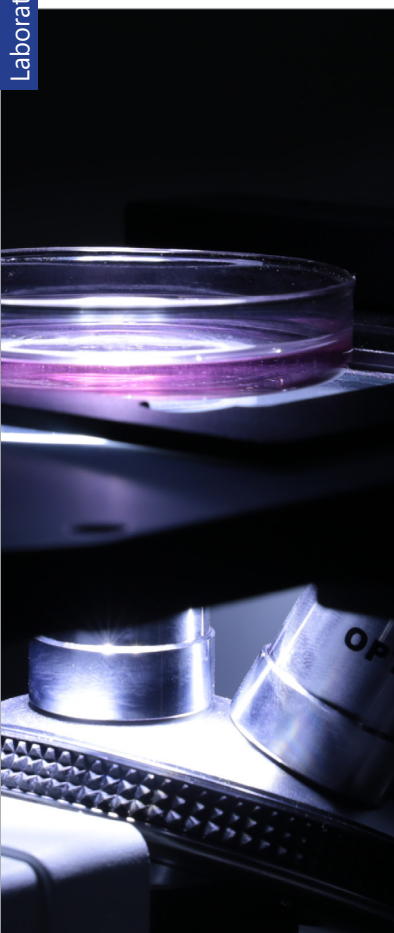
**RPC**

**RELIEF PHASE CONTRAST**

**PHASE CONTRAST**

**FLUORESCENCE**

# IM-300 Series



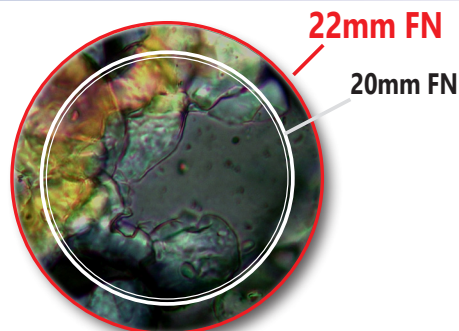
Inverted microscopes are useful for observing living cells or organisms at the bottom of a large container (e.g., a tissue culture flask) under more natural conditions than on a glass slide, as it occurs with a conventional microscope. IM-300 Series is engineered and designed to be your ideal solution for fast and reliable routine inspections, with the exclusive, state-of-the-art X-LED<sup>®</sup> 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<sup>®</sup> 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
- » HBO Fluorescence power supply



### 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

# Routine Lab Inverted Microscopes

## Get the most out of our accessories

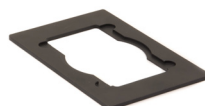


### DESIGNED TO FACILITATE YOUR DAILY ROUTINE

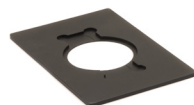
- » Removable condenser to increase the working distance
- » Mechanical stage and side extensions for great comfort (as optional)
- » Different inserts available according to the container used (as optional)



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



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



**M-793.3**  
Holder for slides and Petri 54mm diameter



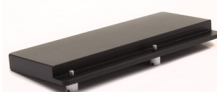
**M-793.4**  
Holder for 2+2 slides



**M-793.5**  
Holder for metallurgical samples



**M-793.6**  
Holder for Utermohl-Chamber (M-793.3 needed)



**M-793.7**  
Load bearing side extension



**M-792**  
Mechanical stage for IM-300  
(except IM-300LD2 and IM-300LD4)

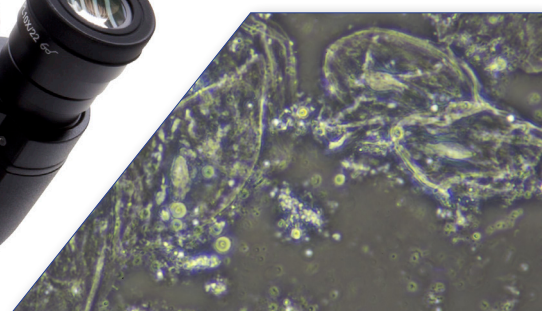


**M-792.2**  
Mechanical stage for IM-300  
(IM-300LD2 only)

# IM-300 - Brightfield & Phase Contrast Microscope

IM-300 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-LED<sup>®</sup>** makes it reliable for all transmitted light observations. For a more complete solution, choose among the several accessories available (objectives, mechanical stage, side extensions, holders and stage inserts).

-  22
- 
-  X-LED<sup>®</sup>
- 
-  IOS ∞
-  W-PLAN
-  PH
-  IVD AVAILABLE
- 



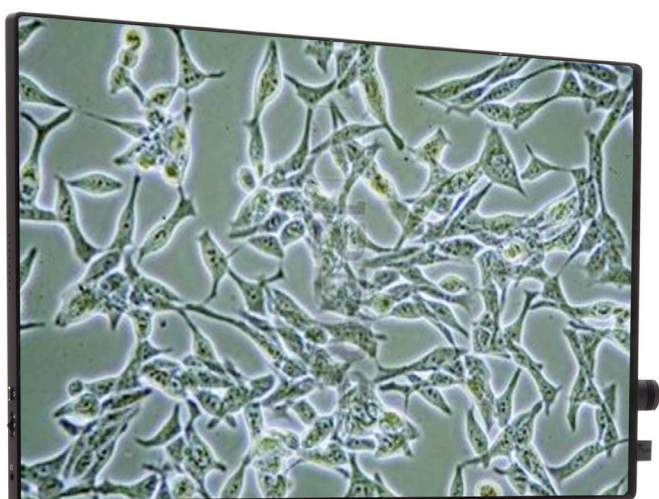
Part	Description
<b>Observation mode:</b>	Brightfield, phase contrast.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Fixed stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Supplied with blue and green filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.



# IM-300D- Brightfield & Phase Contrast Microscope

-  15.6"
-  6 MP
-  22
- 
- 
- 
- 
- 
- 
- 



IM-300D 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-LED<sup>®</sup>** makes it reliable for all transmitted light observations.

For a more complete solution, choose among the several accessories available (objectives, mechanical stage, side extensions, holders and stage inserts). This model is equipped with an Intel micro PC, a 15.6" 4K touch screen, 6Mpx high-sensitivity color camera, Optika ProView image analysis software.



Part	Description
<b>Observation mode:</b>	Brightfield, phase contrast.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Fixed stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Supplied with blue (LBD) and green filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.
<b>Digital equipment:</b>	Intel micro PC with Image analysis software for imaging. 15.6" 4K touch screen; 6MP high-sensitivity color camera.

# IM-300F - 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-LED<sup>®</sup>** 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)	465 – 495	505	515LP
G (Green)	527 – 553	565	575LP



Part	Description
<b>Observation mode:</b>	Brightfield, phase contrast, HBO fluorescence.
<b>Epi-illumination and filter:</b>	HBO 100 W high pressure mercury lamp. 3-position filter holder; blue & green included.
<b>Head:</b>	Trinocular (2-position 100/0, 0/100), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Fixed stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield. Supplied with blue (LBD) and green filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.

# IM-300FL4 - 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-LED<sup>®</sup>** to ensure great-looking, rich and high-quality specimen view.

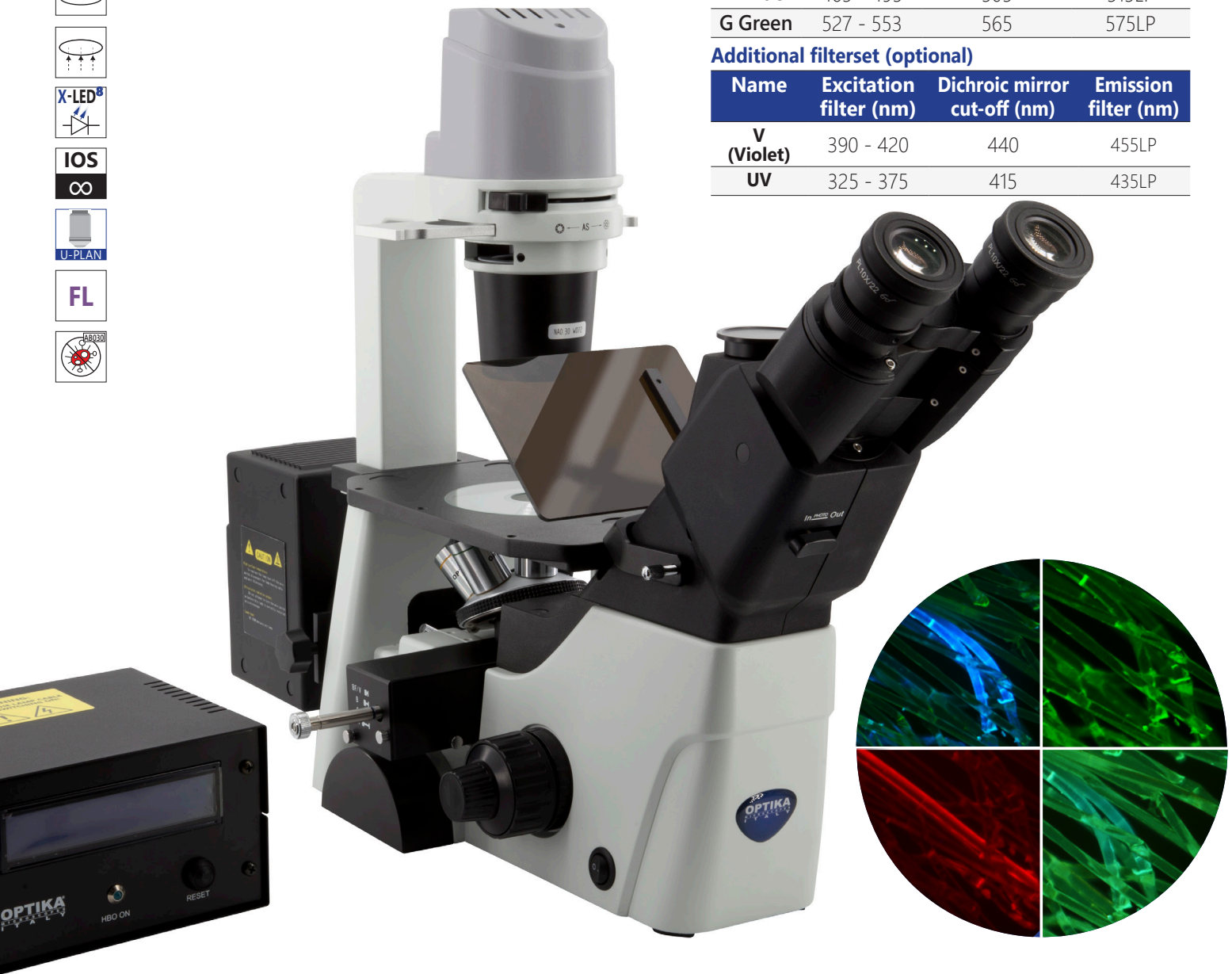


### Standard filterset

Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B Blue	465 - 495	505	515LP
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



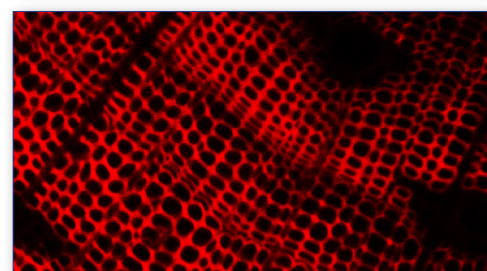
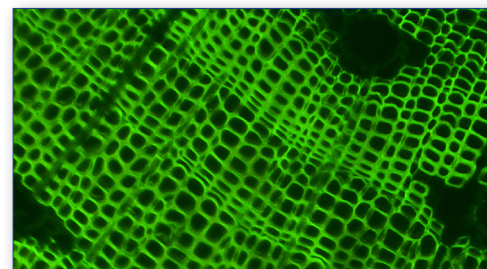
Part	Description
<b>Observation mode:</b>	Brightfield, HBO fluorescence.
<b>Epi-illumination and filter:</b>	HBO 100 W high pressure mercury lamp. 4-position filter holder; blue & green included.
<b>Head:</b>	Trinocular (2-position 100/0, 0/100), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Fixed stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Supplied with blue (LBD) filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/6Vdc external power supply.

# IM-300LD2 - 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: GFP, Alexa Fluor 488, Calcein, SYBR Green, FITC, Fluo-4, MitoTracker Green, Spectrum Gold, Propidium Iodide, Ethidium Homodimer I. 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-LED<sup>®</sup>** 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)	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
Blue	460	455 - 495	500	510LP
Green	523	510 - 550	570	575LP

Part	Description
<b>Observation mode:</b>	Brightfield, phase contrast, LED fluorescence.
<b>Epi-illumination and filter:</b>	High-power LED with brightness control. 3-position filter holder; blue and green filtersets included.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Fixed stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. With 4x/10x, 20x/40x phase contrast slider and brightfield.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. 100-240Vac/12Vdc external power supply.

# IM-300LD4 - 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-LED<sup>®</sup>** 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)

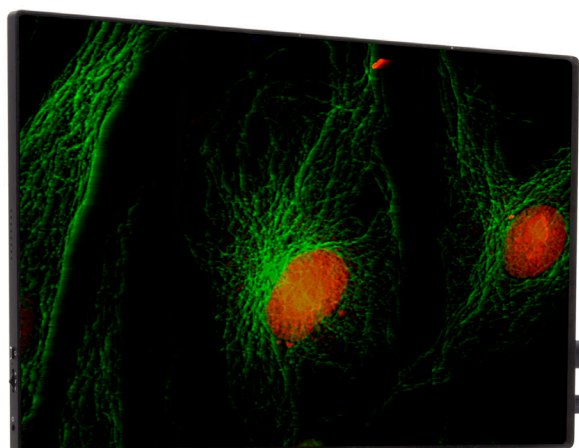
Name	LED emission (nm)	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
M-1230 - Blue	460	455 - 495	500	510LP
M-1230.1 - Blue (pass band)	460	455 - 495	500	518-542
M-1231 - Green	523	510 - 550	570	575LP
M-1231.1 - Green (pass band)	523	510 - 550	570	585-625
M-1232 - Violet	405	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 OPTIKA camera code C-PGAR.

Part	Description
<b>Observation mode:</b>	Brightfield, LED fluorescence.
<b>Epi-illumination and filter:</b>	High -Power LED with brightness control. 4-position filter holder; none included.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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
<b>Specimen stage:</b>	Mechanical stage, 250x290 mm, with round glass and metal stage, inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Supplied with blue (LBD) filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/12Vdc external power supply.

# IM-300LD4D - 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-LED<sup>®</sup>** to ensure great-looking, rich and high-quality specimen view. This model is equipped with an Intel micro PC, a 15.6" 4K touch screen, 6Mpx high-sensitivity color camera and Optika ProView image analysis software for fluorescence.

## 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
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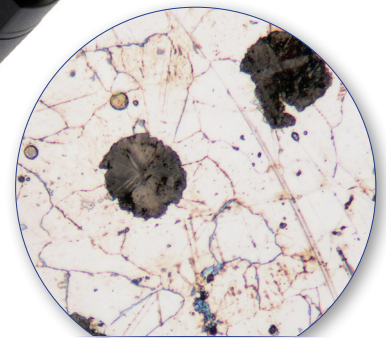
Name	LED emission (nm)	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
M-1230 - Blue	460	455 - 495	500	510LP
M-1230.1 - Blue (pass band)	460	455 - 495	500	518-542
M-1231 - Green	523	510 - 550	570	575LP
M-1231.1 - Green (pass band)	523	510 - 550	570	585-625
M-1232 - Violet	405	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

Part	Description
<b>Observation mode:</b>	Brightfield, LED fluorescence.
<b>Epi-illumination and filter:</b>	High -Power LED with brightness control. 4-position filter holder; none included.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	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.

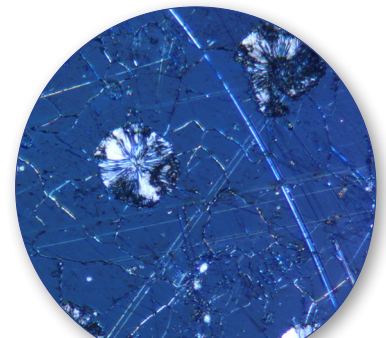
Part	Description
<b>Specimen stage:</b>	Mechanical stage, 250x290 mm, with round glass and metal stage inserts for slides and 54mm dia. Petri dishes.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.
<b>Condenser:</b>	LWD pre-centered condenser, N.A. 0.30, W.D. 72 mm. Supplied with blue (LBD) filter.
<b>Transmitted illumination:</b>	X-LED <sup>®</sup> with white 8 W LED (6,300K) with brightness control. With aperture diaphragm. Multi-plug 100-240Vac/12Vdc external power supply.
<b>Digital equipment:</b>	Intel micro PC with Image analysis software for Fluorescence. 15.6" 4K touch screen; 6MP IR sensitive high-sensitivity color camera.

# IM-300METLD- 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
<b>Observation mode:</b>	Brightfield, simple polarized light.
<b>Epi-illumination and polarizing filters:</b>	LED 18 W with brightness control. With centrable aperture and field diaphragms. With polarizer and 360° analyzer. Supplied with blue (LBD) filter.
<b>Head:</b>	Trinocular (2-position 100/0, 50/50), 45° inclined.
<b>Interpupillary distance:</b>	Adjustable between 50 and 75 mm.
<b>Diopter adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/22 mm, high eye-point and with rubber cups.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.

Part	Description
<b>Objectives:</b>	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.
<b>Specimen stage:</b>	Fixed stage, 250x160 mm, with round metal stage insert.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism.

# IM-300 Series - Comparison chart

Model	Type	Objectives	Condenser	Incident illumination	Fluorescence slider	Transmitted illumination	Digital equipment
<b>IM-300</b>	BF, PH	IOS LWD W-PLAN PH 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	-	-	8 W X-LED <sup>®</sup> , brightness control	-
<b>IM-300D</b>	BF, PH	IOS LWD W-PLAN PH 10x, 20x, 40x	LWD, N.A. 0.30, iris diaphragm	-	-	8 W X-LED <sup>®</sup> , brightness control	Intel micro PC 15.6" 4K touch screen; 6MP high-sensitivity color camera.
<b>IM-300F</b>	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 <sup>®</sup> , brightness control	-
<b>IM-300FL4</b>	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 <sup>®</sup> , brightness control	-
<b>IM-300LD2</b>	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 <sup>®</sup> , brightness control	-
<b>IM-300LD4</b>	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 <sup>®</sup> , brightness control	-
<b>IM-300LD4D</b>	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 <sup>®</sup> , brightness control	Intel micro PC 15.6" 4K touch screen, 6MP IR sensitive high-sensitivity color camera.
<b>IM-300METLD</b>	MET	IOS LWD U-PLAN MET 5x, 10x, 20x, 50x	-	LED 18 W, brightness control	-	-	-

## IM-300 Series - Optical performance

### IM-300 / IM-300LD2 / IM-300F

Eyepiece		10x (M-780)		
Field number (mm)	22			
Objective	N.A.	W.D. (mm)	Total magnification	Field of view (mm)
2x	0.08		20x	
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
40x	0.60	3.00	400x	0.55
60x	0.70	1.70	600x	0.37

### IM-300FL4 / IM-300LD4 / IM-300LD4D

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-300METLD

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-300 Series - Accessories

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Laboratory

## Eyecups & Eyepieces

- M-601 WF15x/16 eyepiece, high eyepoint (30mm Ø)
- M-780 PL10x/22 eyepiece, high eyepoint, rubber cup (30mm Ø)
- M-781 PL10x/22 micrometric eyepiece, high eyepoint, rubber cup (30mm Ø)

## Objectives

### IOS W-PLAN

- M-1049 IOS W-PLAN objective 2x/0.08
- M-782 IOS LWD W-PLAN objective 4x/0.13
- 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

## Fluo Attachments

- M-676 Empty fluorescence filterblock
- M-677 Fluorescence filter set V (filterblock included)
- M-677.1 Fluorescence filter set V (filterblock NOT included)
- M-677ND Neutral density ND filter, 25% transmission
- M-678 Fluorescence filter set UV-DAPI (filterblock included)
- M-678.1 Fluorescence filter set UV-DAPI (filterblock NOT included)
- M-678ND Neutral density ND filter, 50% transmission
- M-797 HBO fluo attachment, 2-pos. (B&G filter set)
- M-798 HBO fluo attachment, 4-pos. (B&G filter set)
- M-1230 Blue LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1230.1 Blue (pass band)LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1231 Green LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1231.1 Green (pass band) LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1232 Violet LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1233 UV LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1233.1 UV (pass band) LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1234 Red 1 LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1235 Red 2 LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1236 Deep Red LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1237 Far Red LED Fluorescence Cube (LED+Filterset), for IM-300LD4
- M-1238 Amber LED Fluorescence Cube (LED+Filterset), for IM-300LD4

## Stages

- M-792 Mechanical stage for IM-300 (except IM-300LD2 and IM-300LD4)
- M-792.2 Stage Mechanical stage for IM-300 (IM-300LD2 only)
- M-793.1 Holder for Petri 38mm diameter (M-793.2 needed)

- M-793.2 Holder for Terasaki and Petri 65mm diameter
  - M-793.3 Holder for slides and Petri 54mm diameter
  - M-793.4 Holder for 2+2 slides
  - M-793.5 Holder for metallurgical samples
  - M-793.6 Holder for Utermohl-Chamber (M-793.3 needed)
  - M-793.7 Load bearing side extension
- ## Condensers & Filters
- M-1004.N Centering telescope (30mm Ø)
  - M-785.2N Slider with phase rings (4x/10x, 20x/40x, BF)
  - M-860 Slider with rotating 10x-20x-40x OPTIKA Modulation Contrast (OMC) (IM-300/IM-5)
  - M-860.1 Slider with rotating 4x OPTIKA Modulation Contrast (OMC) (IM-300/IM-5)

## Camera Adapters

- M-113.1 Ring adapter, 30mm (for monocular and binocular microscopes)
- M-114 0.5x C-Mount projection lens
- M-115 0.35x C-Mount projection lens
- M-118 0.75x C-Mount projection lens
- M-173 T2-Mount projection lens for APS-C/full frame reflex cameras (trino) (T2 ring not included)
- M-620 0.35x focusable C-Mount adapter
- M-620.1 0.5x focusable C-Mount adapter
- M-620.2 0.65x focusable C-Mount adapter
- M-620.3 1x focusable C-Mount adapter
- M-699 Universal adapter for projection lens (trino)

## Accessories

- AB-030 Antibacterial surface treatment, for B-800/1000, IM-300/5/7, IS
- AB-040 Antibacterial surface treatment, for B-800/1000, IM-300/5/7, IS
- DC-004 TNT dust cover, large, 700(l)x550(h) mm
- M-005 Micrometric slide, 26x76mm, 2 scales (1mm/100 & 10mm/100)
- M-151.1 HBO 100W high-pressure mercury bulb for fluorescence
- M-787 Cut-off filter (infrared)
- M-977 Green filter, 45mm diameter
- VP-IM300 IQ/OQ/PQ manual for IM-300

\* 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 7.5 - 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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