

IM-5 Series



Routine & Research Lab Inverted Microscopes

The Best Option for Routine & Research

INTUITIVE YET SUPERIOR CONFIGURATIONS FOR PROFESSIONALS

- » Wide range to fulfill specific lab requirements
- » Valuable solutions for life and material sciences
- » Compliant with several observation methods

AN AFFORDABLE PARTNER WITH UNIQUE HIGH-END FEATURES

- » IOS LWD U-PLAN objectives for flat images on 24 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/24 eyepieces for the highest F.O.V. on an inverted microscope
- » Comfortable rubber cup to get rid of annoying external light
- » High eye-point for glasses wearers and dioptic adjustment

IM-5 & IOS U-PLAN: THE PERFECT COMBINATION

- » IOS Infinity corrected optical system
- » Full planarity optics on 24 mm (U-PLAN) according to ISO 19012-1
- » High-grade Semi-Apo lens available ideal for fluorescence



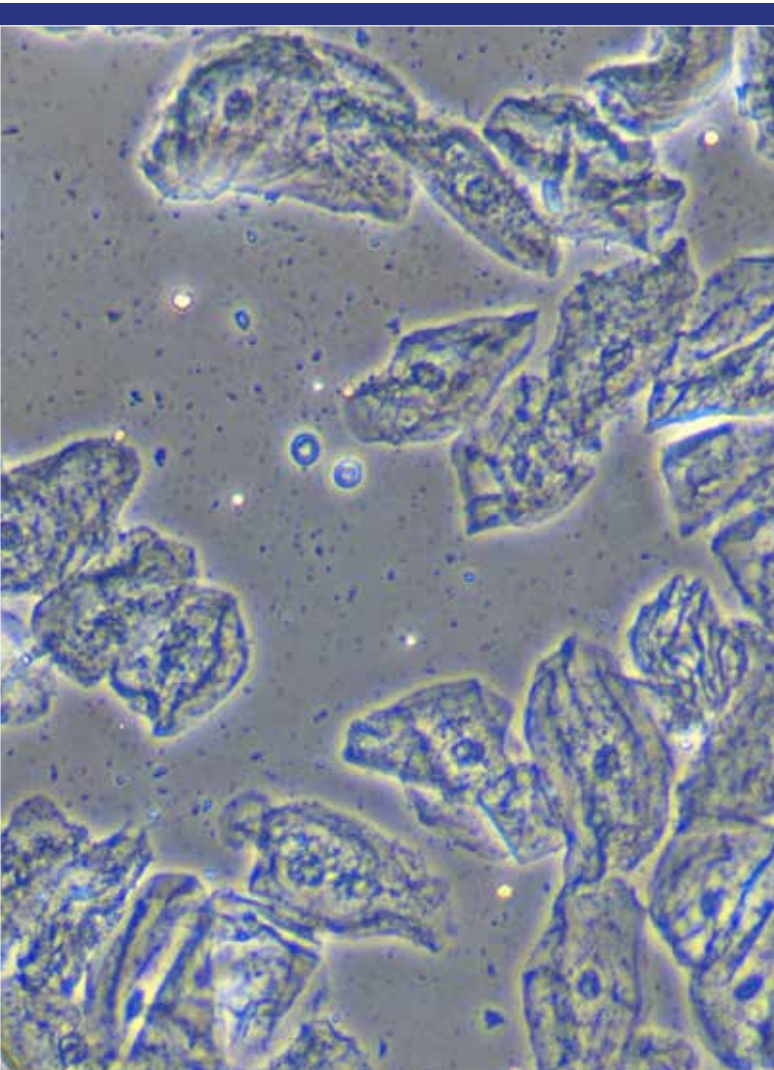
An Extensive Range of Different Configurations

OBSERVE EVEN THE MOST COMPLEX SAMPLES

- » Phase contrast lens for transparent sample examination
- » Motorized LED fluorescence available for specific purposes
- » High quality no cover glass objectives for material science

AUTOMATIC LED SELECTION & CONCEPTUAL INNOVATION IN LED FLUORESCENCE

- » Choose the fluorescence filter for motorized LED selection
- » Immediate operation, eliminating warm-up/cool-down times
- » Forget about lamp centering, adjustment and maintenance

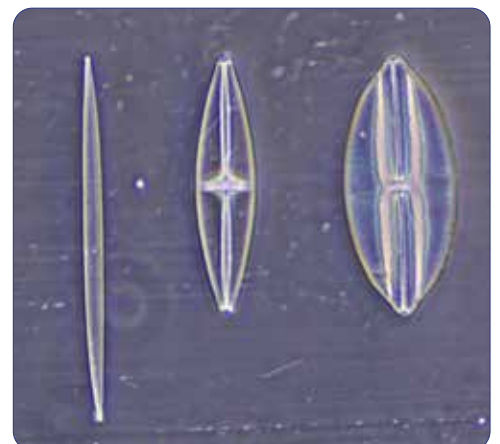


RPC Modulation Contrast

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.



Born To Be Professional

DESIGNED TO FACILITATE YOUR DAILY ACTIVITIES

- » Mechanical stage and side extensions for great comfort
- » Large, resistant stage to easily and quickly process samples
- » Different inserts available according to the container used

CREATE YOUR COMPLETE, FLEXIBLE WORKING STATION

- » Integrable micromanipulation system available
- » Hoffman® modulation contrast available
- » Stage top incubation system available



Go Digital - Vivid Colors & Contrast For Stunning Images

2

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

Laboratory



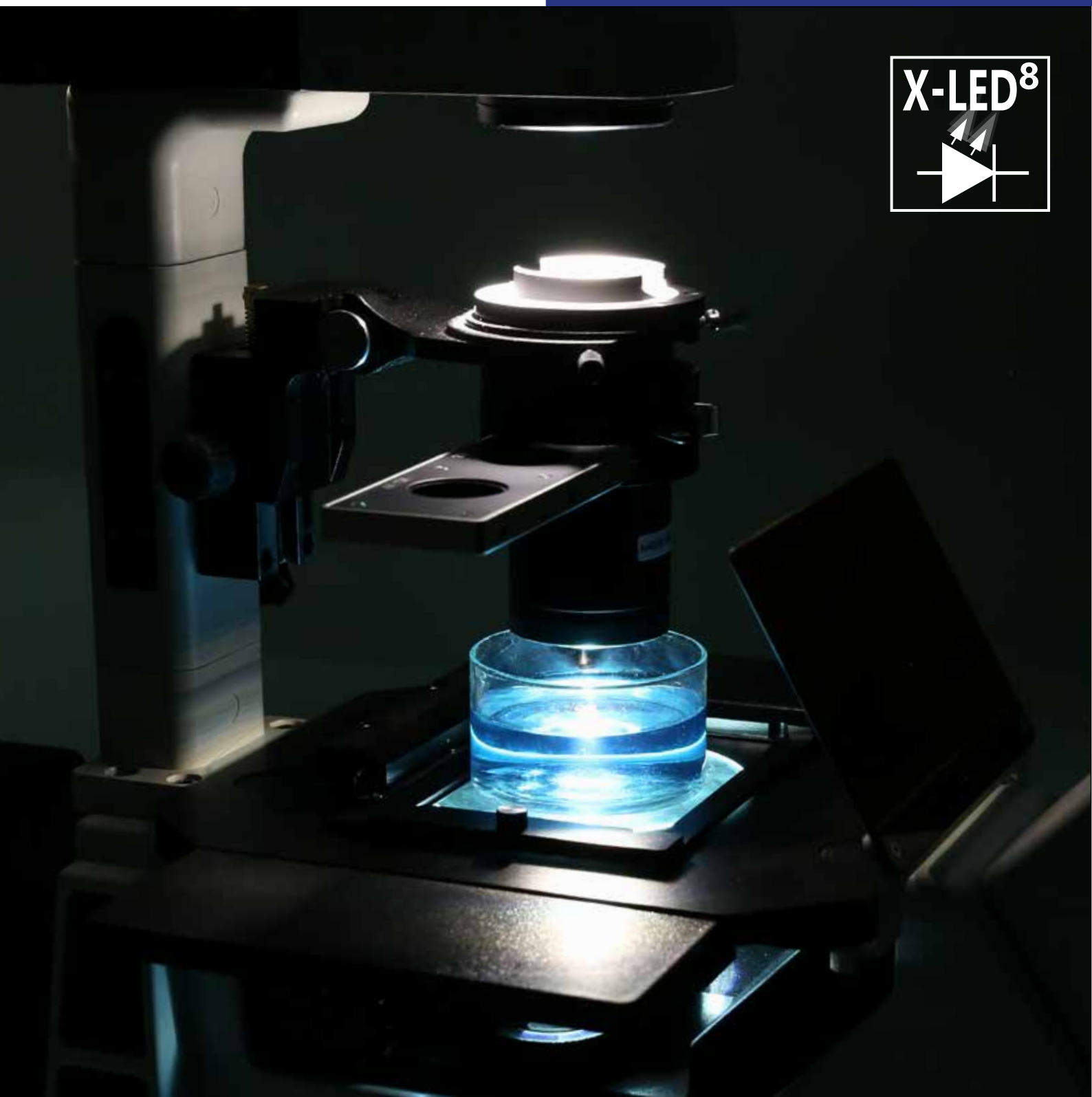
X-LED⁸ - Only Available at OPTIKA

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 (on X-LED⁸)
- » More efficient brightness than a 100 W (for X-LED⁸) halogen lamp
- » LED long lifetime (65,000 hours = 22 years at 8 hours/day usage)



Adjust It To Your Individual Needs

FULLY SETTABLE, ADJUSTABLE IN HEIGHT CONDENSER FOR PERFECT IMAGING

- » Full Koehler illumination for enhanced images
- » Field & aperture diaphragms, centrable; N.A. 0.50 condenser
- » Removable/rotatable condenser to increase the working distance

IMPROVED OPTICAL PERFORMANCE, LONG WORKING DISTANCE

- » Superior image quality, crisp and bright details
- » Excellent contrast and resolution due to high numerical apertures
- » Comprehensive range of objectives for extended versatility



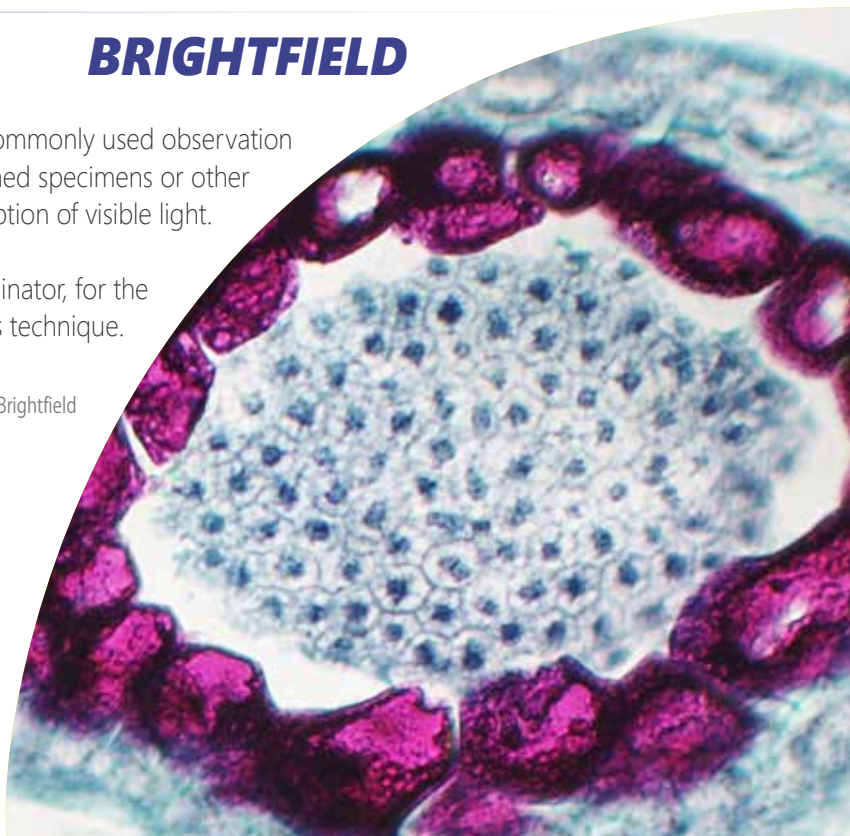
IM-5 Series

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



Multiple Observation Methods

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-5 Series



Significant Time And Money Saving

The IM-5 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.

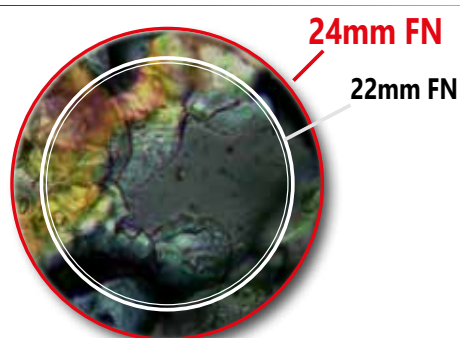
As time is money, these features bring to a drastic impact on cost reduction, even more evident thanks to the exclusive illumination system provided by OPTIKA.

X-LED[®] 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) proves the high efficiency of this system: incredibly high light intensity combined with low consumption.



The Widest Specimen Area Available (24mm Field Number)

The **F.O.V.** (field of view) is based on a very comfortable diameter of 24 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.

Panel With LED Illumination Indicator And ECO Function

IM-5 ensures significant repeatability since the level of light intensity can be seen at any time from the frontal panel in order to reproduce the same conditions. "ECO" button makes the microscope more environmentally sensitive, with automatic switch-off after 20 minutes of inactivity.



Routine & Research Lab Inverted Microscopes

In fluorescence we offer the latest technology.

IM-5FLD is a state-of-the art LED fluorescence microscope, equipped with motorized selection of the best LED according to the filter selected (blue, green, UV and an empty position fo optional filter) by using the filter holder slide.

Innovative, LED Fluorescence

- » 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



M-793.4
Holder for 2+2 slides.
(Only for IM-5 and IM-5FLD)



M-793.5
Holder for small metallurgical samples.
(Only for IM-5MET)



M-793.6
Holder for Utermöhl-Chamber.
(Only for IM-5 and IM-5FLD)

Accessories included



Holder for Petri diameter 38mm.
(Included with IM-5 and IM-5FLD)



Holder for Terasaki and Petri
diameter 65mm.
(Included with IM-5 and IM-5FLD)



Holder for slide and Petri
diameter 54mm.
(Included with IM-5 and IM-5FLD)

IM-5 - Brightfield & Phase Contrast Microscope

Phase contrast, brightfield and darkfield (dry) trinocular inverted microscope ideal for laboratory requirements (especially cell culture), with freely configurable lenses according to customer's preferences, FN 24 high eyepoint, infinity corrected optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 8 W **X-LED[®]**. Sturdy and incredibly reliable, it is equipped with all the main controls in ergonomic position and with long lasting LED illumination to provide over 20 years of use.



IM-5 - Specifications



| Part | Description |
|-------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Head: | Trinocular (split ratio: 100/0, 50/50), 45° inclined. |
| Dioptric adjustment: | Both eyepieces. |
| Eyepieces: | WF10x/24 mm, high eyepoint and with retractable rubber cups. |
| Nosepiece: | Quintuple ball bearings revolving nosepiece, reversed. |
| Objectives: | Selectable according to customer's preferences. All with anti-fungus treatment. |
| Specimen stage: | Fixed stage, 215x250 mm and attachable mechanical stage, 290x250 mm, 120x80 mm X-Y movement range. |
| 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: | Abbe N.A. 0.50, removable, with iris diaphragm and slider for phase contrast. |
| Transmitted illumination (Full Koehler): | X-LED [®] with white 8 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/12Vdc external power supply. |

IM-5 is freely configurable in terms of objectives, by choosing among:

Included ■ Optional □

Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22:

| | | |
|-------|-----------------------------------|---|
| 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 | □ |

Positive Phase Contrast Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22:

| | | |
|---------|--------------------------------------|---|
| 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 | □ |

Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25:

| | | |
|-------|-------------------------------------|---|
| 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 | □ |

Positive Phase Contrast Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25:

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

IM-5FLD - LED Fluorescence Microscope

Phase contrast, brightfield and darkfield (dry) LED fluorescence trinocular inverted microscope, with freely configurable lenses according to customer's preferences, FN 24 high eyepoint, infinity corrected optical system, coaxial focusing, mechanical stage, Abbe condenser and powerful, uniform, white color temperature 8 W **X-LED8**. The 4-position epi-fluorescence attachment is powered by extremely powerful 5 W LEDs fluorescence illuminator and combined with blue, green and UV excitation filters for the visualization of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP (blue filter) plus Rhodamine, Texas Red and TRITC (green filter) plus Alexa Fluor® 350, 7- Amino-4-methylcoumarin, 6-Aminoquinoline, Calcofluor® White, Dansyl cadaverine, DAPI, Dapoxyl, DIDS, Europium (III) Chloride, Fluoro-Gold™, Fura-2, Hoechst 33342 & 33258, 1,5 IAEDANS, Indo-1, Marina Blue®, 4-Methylumbelliferone, PBF1, Pyrene, SBF1, Y66F, Y66H (UV filter) among the others. LED fluorescence ensures unparalleled convenience eliminating warm-up/cool-down times and all the inconveniences related lamp replacement and adjustment. Sturdy and incredibly reliable, it is equipped with all the main controls in ergonomic position and with long lasting, efficient LED illumination to provide over 20 years of use.



IM-5FLD - Specifications



| Part | Description |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Head: | Trinocular (split ratio: 100/0, 0/100), 45° inclined. |
| Dioptric adjustment: | Both eyepieces. |
| Eyepieces: | WF10x/24 mm, high eyepoint and with retractable rubber cups. |
| Epi-fluorescence illumination & filters: | High-power 5 W LEDs with brightness control, motorized LED selection with centrable field diaphragm, 4-position filter holder; blue (EX 450-490, DM 495, EM 500-550), green (EX 540-580, DM 585, EM 608-682) and UV (EX 340-390, DM 400, EM 420LP) excitation filters included. |
| Nosepiece: | Quintuple ball bearings revolving nosepiece, reversed. |
| Objectives: | Selectable according to customer's preferences. All with anti-fungus treatment. |
| Specimen stage: | Fixed stage, 215x250 mm and attachable mechanical stage, 290x250 mm, 120x80 mm X-Y movement range. |
| 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: | Abbe N.A. 0.50, removable, with iris diaphragm and slider for phase contrast. |
| Transmitted illumination (Full Koehler): | X-LED [®] with white 8 W LED and brightness control. Color temperature: 6,300 K. Multi-plug 100-240Vac/12Vdc external power supply. |

Fluorescence filtersets

| Name | Excitation filter (nm) | Dichroic mirror cut-off (nm) | Emission filter (nm) |
|-------------------------|------------------------|------------------------------|----------------------|
| B (Blue) | 450 – 490 | 495 | 500 - 550 |
| G (Green) | 540 – 580 | 585 | 607 - 682 |
| UV (Ultraviolet) | 340 -390 | 400 | 420LP |

IM-5FLD is freely configurable in terms of objectives, by choosing among:

Included ■ Optional □

| Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22: | | |
|-----------------------------------------------------------------------------------------------------|-----------------------------------|---|
| 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 | □ |

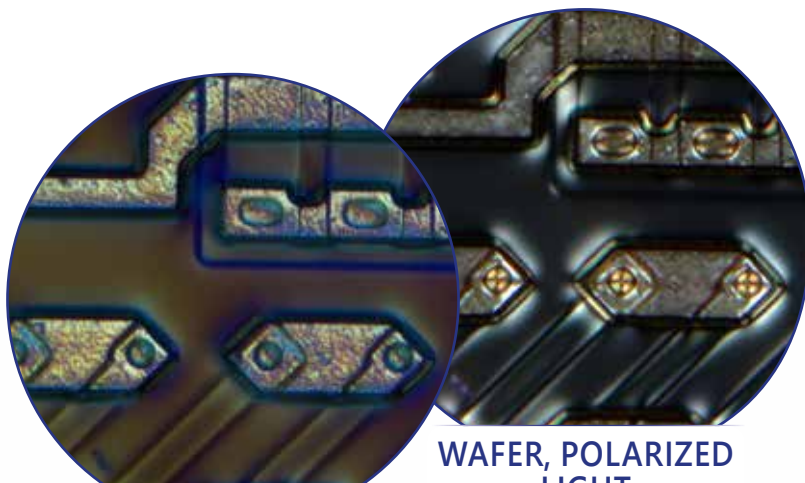
| Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25: | | |
|-------------------------------------------------------------------------------------------------------|-------------------------------------|---|
| M-800 | IOS LWD U-PLAN F objective 4x/0.13 | □ |
| 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 | □ |

| Positive Phase Contrast Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22: | | |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------|---|
| 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 | □ |

| Positive Phase Contrast Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25: | | |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|---|
| M-1177 | IOS LWD U-PLAN F PH objective 20x/0.45 | □ |
| M-1178 | IOS LWD U-PLAN F PH objective 40x/0.65 | □ |

IM-5MET - Metallurgical Microscope

Industrial and materials science inverted microscope especially designed for opaque specimens (including metals microstructure investigation and studies such as grain size, grain boundaries, phases, transformation, inclusions, and non-metals, as well as sample preparation and treatment) in metallography labs. Freely configurable lenses according to customer's preferences, FN 24 high eyepoint, infinity corrected optical system, coaxial focusing, mechanical stage, and epi-illumination attachment powered by halogen 12 V/100 W with brightness control. Sturdy and incredibly reliable, it is equipped with all the main controls in ergonomic position and with long lasting, efficient LED illumination to provide over 20 years of use.



WAFER, DIC

WAFER, POLARIZED LIGHT



IM-5MET - Specifications



| Part | Description |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Head: | Trinocular (split ratio: 100/0, 50/50), 45° inclined. |
| Dioptric adjustment: | Both eyepieces. |
| Eyepieces: | WF10x/24 mm, high eyepoint, secured by screw and with retractable rubber cups. |
| Epi-illumination & filters: | Halogen 12 V/100 W with brightness control. With field and aperture diaphragms, polarizer and analyzer filters. |
| Nosepiece: | Quintuple ball bearings revolving nosepiece, reversed. |
| Objectives: | Selectable according to customer's preferences. All with anti-fungus treatment. |
| Specimen stage: | Mechanical stage, 240x250 mm. |
| Focusing: | Coaxial coarse and fine focusing mechanism with limit stop to prevent the contact between objective and specimen. Adjustable tension of coarse focusing knob. |

IM-5MET is freely configurable in terms of objectives, by choosing among:

Included ■ Optional □

| MET Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 25: | | |
|---------------------------------------------------------------------------------------------------------|----------------------------------------------|---|
| 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) | □ |

| MET Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25: | | |
|-----------------------------------------------------------------------------------------------------------|------------------------------------------------|---|
| M-1171 | IOS LWD U-PLAN F MET objective 5x/0.15 | □ |
| M-1172 | IOS LWD U-PLAN F MET objective 10x/0.30 | □ |
| M-1173 | IOS LWD U-PLAN F MET objective 20x/0.50 | □ |
| M-1174 | IOS LWD U-PLAN F MET objective 50x/0.80 | □ |
| M-1175 | IOS LWD U-PLAN F MET objective 100x/0.90 (dry) | □ |

| MET Infinity-corrected Plan-Achromatic, Long Working Distance objectives, for brightfield and darkfield, field flatness up to F.N. 25: | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---|
| M-1094 | IOS LWD U-PLAN MET BD objective 5x/0.15 | □ |
| M-1095 | IOS LWD U-PLAN MET BD objective 10x/0.30 | □ |
| M-1096 | IOS LWD U-PLAN MET BD objective 20x/0.45 | □ |
| M-1097 | IOS LWD U-PLAN MET BD objective 50x/0.55 | □ |
| M-1098 | IOS LWD U-PLAN MET BD objective 100x/0.80 (dry) | □ |

| MET Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, for brightfield and darkfield, field flatness up to F.N. 25: | | |
|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|---|
| M-1180 | IOS LWD U-PLAN F MET BD objective 5x/0.15 | □ |
| M-1181 | IOS LWD U-PLAN F MET BD objective 10x/0.30 | □ |
| M-1182 | IOS LWD U-PLAN F MET BD objective 20x/0.50 | □ |
| M-1183 | IOS LWD U-PLAN F MET BD objective 50x/0.80 | □ |
| M-1184 | IOS LWD U-PLAN F MET BD objective 100x/0.90 (dry) | □ |

IM-5 Series - Comparison Chart

Common features:

- **Head:** Trinocular (2-position 100/0, 0/100), 45° inclined.
- **Eyepieces:** PL10x/24 mm, with dioptic adjustment, high eye-point and rubber cups. Dioptic adjustment on both eyepieces.
- **Focusing mechanism:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

| Model | Type | Nosepiece | Stage | Condenser | Incident illumination | Fluorescence slider | Transmitted illumination |
|----------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------------|---------------------|--------------------------------------------------------------|
| IM-5 | BF, PH | Quintuple revolving nosepiece, rotation on ball bearings | Fixed, 215x250 mm can be equipped with mechanical (included), 290x250 mm, 120x80 mm movement range | N.A. 0.50 Köhler, W.D. 28 mm, rotatable to extend the W.D. | - | - | 8 W X-LED [®] , brightness control and ECO function |
| IM-5FLD | BF, FL, PH | Quintuple revolving nosepiece, rotation on ball bearings | Fixed, 215x250 mm can be equipped with mechanical (included), 290x250 mm, 120x80 mm movement range | N.A. 0.50 Köhler, W.D. 28 mm, rotatable to extend the W.D. | FL LED with Blue, Green and UV filtersets | 4-position | 8 W X-LED [®] , brightness control and ECO function |
| IM-5MET | BF MET, DF MET | Quintuple revolving nosepiece, rotation on ball bearings. With 26 mm thread holes, 5 adapter rings (for RMS objectives) and DIC slot | Rackless, mechanical, 240x250 mm, 50x50 mm movement range | - | Halogen bulb, 12 V/100 W, brightness control and ECO function | - | - |



IM-5 Series - Optical Performance

Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 4x | 0.13 | 10.40 | 40x | 6.0 |
| 40x | 0.60 | 3.10 | 400x | 0.60 |
| 60x | 0.70 | 1.70 | 600x | 0.40 |

Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 4x | 0.13 | 18.52 | 40x | 6.0 |
| 10x | 0.30 | 7.11 | 100x | 2.4 |
| 20x | 0.45 | 5.91 | 200x | 1.2 |
| 40x | 0.65 | 1.61 | 400x | 0.60 |
| 60x | 0.75 | 1.04 | 600x | 0.40 |

Positive Phase Contrast Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 22:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 4x | 0.13 | 10.40 | 40x | 6.0 |
| 10x | 0.25 | 7.30 | 100x | 2.4 |
| 20x | 0.40 | 6.80 | 200x | 1.2 |
| 40x | 0.60 | 3.00 | 400x | 0.60 |

Positive Phase Contrast Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 20x | 0.45 | 5.91 | 20x | 1.2 |
| 40x | 0.65 | 1.61 | 400x | 0.60 |

MET Infinity-corrected Plan-Achromatic, Long Working Distance objectives, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 5x | 0.15 | 10.80 | 50x | 4.8 |
| 10x | 0.30 | 10.00 | 100x | 2.40 |
| 20x | 0.45 | 4.00 | 200x | 1.20 |
| 50x | 0.55 | 7.90 | 500x | 0.48 |
| 100x | 0.80 | 2.10 | 1000x | 0.24 |

MET Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 5x | 0.15 | 19.50 | 50x | 4.8 |
| 10x | 0.30 | 10.9 | 100x | 2.40 |
| 20x | 0.50 | 3.20 | 200x | 1.20 |
| 50x | 0.80 | 1.2 | 500x | 0.48 |
| 1000x | 0.90 | 1.00 | 1000x | 0.24 |

MET Infinity-corrected Plan-Achromatic, Long Working Distance objectives, for brightfield and darkfield, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 5x | 0.15 | 9.00 | 50x | 4.8 |
| 10x | 0.30 | 9.00 | 100x | 2.40 |
| 20x | 0.45 | 3.40 | 200x | 1.20 |
| 50x | 0.55 | 7.50 | 500x | 0.48 |
| 100x | 0.80 | 2.00 | 1000x | 0.24 |

MET Infinity-corrected Semi-Apochromatic, Long Working Distance objectives, for brightfield and darkfield, field flatness up to F.N. 25:

| Eyepiece | | 10x (M-880) | | |
|--------------|------|-------------|---------------------|--------------------|
| Field number | | 24 (mm) | | |
| Objective | N.A. | W.D. (mm) | Total magnification | Field of view (mm) |
| 5x | 0.15 | 13.50 | 50x | 4.8 |
| 10x | 0.30 | 9.00 | 100x | 2.40 |
| 20x | 0.50 | 2.50 | 200x | 1.20 |
| 50x | 0.80 | 1.00 | 500x | 0.48 |
| 100x | 0.90 | 1.00 | 1000x | 0.24 |



IM-5 Series - Accessories

Eyecups & Eyepieces

| | |
|-------|---------------------------------------------------------------------|
| M-880 | PL10x/24 eyepiece, high eyepoint, focusable, with rubber cup |
| M-881 | PL10x/24 micrometric eyepiece, high eyepoint, focusable, rubber cup |
| M-882 | WF15x/16 eyepiece, high eyepoint, focusable, with rubber cup |

Objectives

IOS W-PLAN

| | |
|-------|-----------------------------------|
| 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 (Brightfield)

| | |
|--------|----------------------------------------------|
| 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 U-PLAN MET (Brightfield & Darkfield)

| | |
|--------|-------------------------------------------------|
| M-1094 | IOS LWD U-PLAN MET BD objective 5x/0.15 |
| M-1095 | IOS LWD U-PLAN MET BD objective 10x/0.30 |
| M-1096 | IOS LWD U-PLAN MET BD objective 20x/0.45 |
| M-1097 | IOS LWD U-PLAN MET BD objective 50x/0.55 |
| M-1098 | IOS LWD U-PLAN MET BD objective 100x/0.80 (dry) |

IOS U-PLAN F MET (Brightfield)

| | |
|--------|------------------------------------------------|
| M-1171 | IOS LWD U-PLAN F MET objective 5x/0.15 |
| M-1172 | IOS LWD U-PLAN F MET objective 10x/0.30 |
| M-1173 | IOS LWD U-PLAN F MET objective 20x/0.50 |
| M-1174 | IOS LWD U-PLAN F MET objective 50x/0.80 |
| M-1175 | IOS LWD U-PLAN F MET objective 100x/0.90 (dry) |

IOS U-PLAN F MET (Brightfield & Darkfield)

| | |
|--------|---------------------------------------------------|
| M-1180 | IOS LWD U-PLAN F MET BD objective 5x/0.15 |
| M-1181 | IOS LWD U-PLAN F MET BD objective 10x/0.30 |
| M-1182 | IOS LWD U-PLAN F MET BD objective 20x/0.50 |
| M-1183 | IOS LWD U-PLAN F MET BD objective 50x/0.80 |
| M-1184 | IOS LWD U-PLAN F MET BD objective 100x/0.90 (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 |

Condensers & Filters

| | |
|---------|-------------------------------------------------------------|
| M-550 | Interferential green filter IF550 (except for IM-5MET) |
| M-677ND | Neutral density filter, 25% transmission (only for IM-5MET) |
| M-678ND | Neutral density filter, 50% transmission (only for IM-5MET) |

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 |
| CL-36 | Halogen bulb 12V/100W (only for IM-5MET) |
| DC-005 | TNT dust cover, extra large, 820(l)x550(h) mm |
| M-005 | Micrometric slide, 26x76mm, with 2 scales (1mm/100 & 10mm/100) |
| M-641 | Adapter for micromanipulator plate (only for IM-5) |
| M-793.1 | Holder for Petri 38mm diameter (M-793.2 needed) (except for IM-5MET) |
| M-793.2 | Holder for Terasaki and Petri 65mm diameter (except for IM-5MET) |
| M-793.3 | Holder for slides and Petri 54mm diameter (except for IM-5MET) |
| M-793.4 | Holder for 2+2 slides (except for IM-5MET) |
| M-793.5 | Holder for metallurgical samples (only for IM-5MET) |
| M-793.6 | Holder for Utermohl-Chamber (M-793.3 needed) (except for IM-5MET) |
| M-793.7 | Load bearing side extension (except for IM-5MET) |
| M-860 | Slider with rotating 10x-20x-40x OPTIKA Modulation Contrast slit |
| M-860.1 | Slider with rotating 4x OPTIKA Modulation Contrast slit |
| M-870 | DIC slider with Nomarski prism for reflected light (only for IM-5MET) |
| VP-IM5 | IQ/OQ/PQ manual for IM-5 series |
| AB-030 | Antibacterial surface treatment, only for newly purchased microscope |

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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