

**OPTIKA®**  
M I C R O S C O P E S  
I T A L Y

## B-380 Series



**Middle-Level Routine Lab Upright Microscopes**

# Just What You Need. Right When Is Needed

## ROUTINE IN UNIVERSITIES, LABS & INDUSTRIES

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

## THE PREFERRED PARTNER FOR ROUTINE TASKS

- » Full planarity optics on 20 mm (N-PLAN) according to ISO 19012-1
- » Fixed Koehler illumination for crisp and contrasted images
- » Rounded edge, rackless stage to prevent scratches



## Multiple Observation Methods

**BRIGHTFIELD**

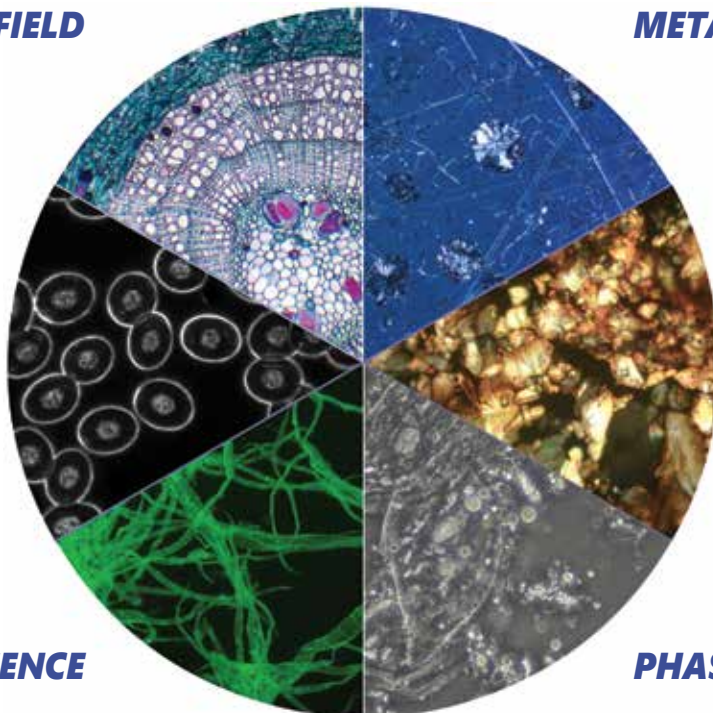
**METALLOGRAPHY**

**DARKFIELD**

**POLARIZATION**

**FLUORESCENCE**

**PHASE CONTRAST**



# 100x Oil/Water Objective – Only at OPTIKA

2

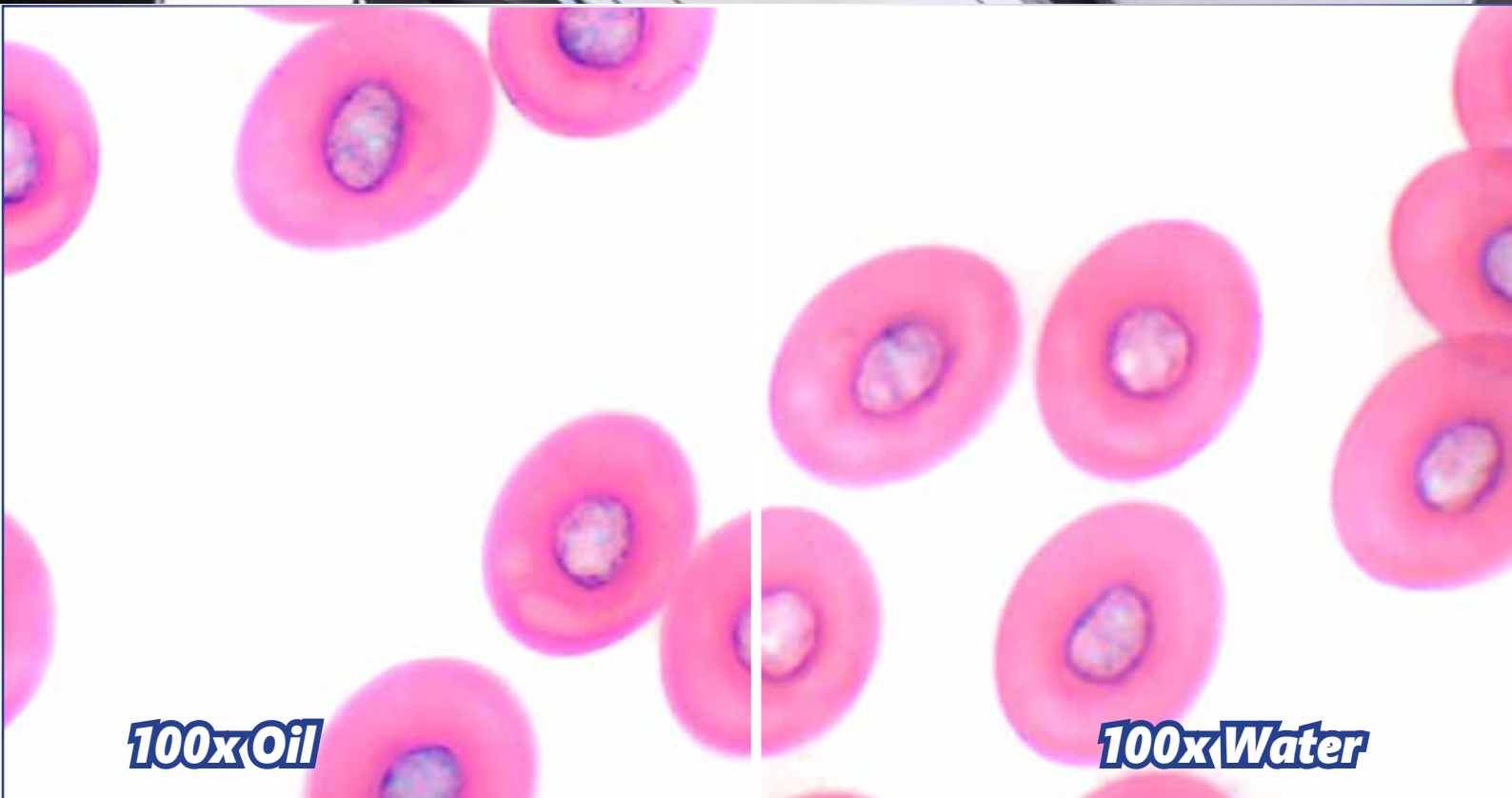
## SAME OBJECTIVE FOR OIL AND WATER USE

- » Oil represents the best media for high numerical aperture
- » Water combines results with convenience
- » Water is recommended especially for educational purposes

## UNPARALLELED TIME & MONEY SAVING

- » Save time by forgetting about tedious cleaning
- » No time-wasting procedures for maintenance
- » No additional expenses due to inappropriate cleaning

Laboratory



**100xOil**

**100xWater**



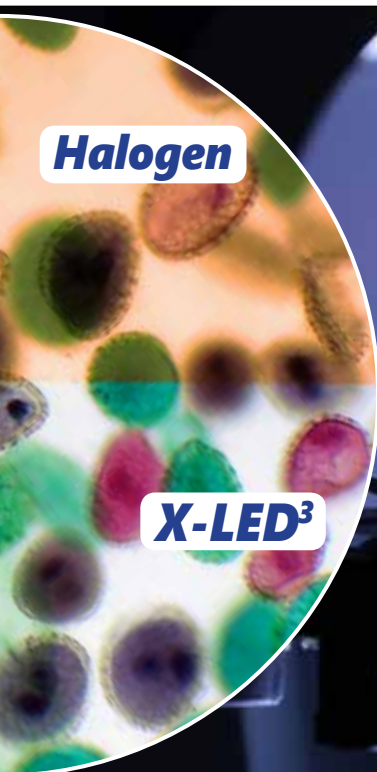
# **X-LED<sup>3</sup>** – Only Available at OPTIKA

## STATE-OF-THE-ART ILLUMINATION SYSTEM

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

## CUT ELECTRICITY BILLS BY 90%

- » Money & energy saving, only 3.6 W
- » More efficient brightness than a 50 W halogen lamp
- » LED long lifetime (65,000 hours = 22 years at 8 hours/day usage)



**Halogen**

**X-LED<sup>3</sup>**



Multi-plug power supply

# ALC - Only Available At OPTIKA

2

Laboratory

## AUTOMATIC LIGHT CONTROL IN 3 STEPS

- » When another objective is used
- » When the diaphragm aperture changes
- » When processing samples with different opacity

## FORGET ABOUT MANUAL LIGHT ADJUSTEMENT

- » Choose the light intensity according to your preference
- » Press the ALC button and the brightness is saved
- » The microscope will automatically regulate the light

### STEP 1

Set the brightness according to your preferences.



### STEP 2

Press the ALC button to save the brightness level.



### STEP 3

#### ***Forget about the illumination!***

The microscope will automatically adjust the brightness for you, in case of:

- Another objective is used
- The diaphragm aperture is changed
- Another specimen with different opacity is processed



# B-380 Series

This series incorporates all the experience gathered by OPTIKA Microscopes in the field of light microscopy, adapted specifically for common laboratory applications.

Suitable for routine microscopy with brightfield, darkfield (oil and dry), phase contrast, fluorescence and polarized light, designed to be extremely stable on the bench and last long.

## Purposely Designed For Intense Use, Effortless

Full of features that help being more comfortable especially in case of long-term use.

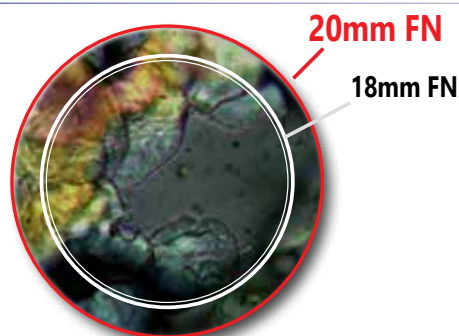
All the main controls are located close to each other to enable minimal movements and reinforce the advantages that the ergonomics brings to this series.

## X-LED<sup>3</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 (3.6 W only) proves the high efficiency of this system: incredibly high light intensity combined with low consumption.



## Large Specimen View (20 mm Field Number)

The **F.O.V.** (field of view) is based on a comfortable diameter of 20 mm.

This means that a wide area of the sample can be inspected and allows a natural and easy view, particularly needed in a laboratory environment.

## ALC - Automatic Light Control, Only Available At OPTIKA

### Incomparable Comfort With The Exclusive Automatic Light Control (ALC)

Light intensity is automatically adjusted by the microscope itself in order to maintain the same level as the one the user has previously chosen.

No matter if the aperture of the diaphragm changes, if another objective is used, and if the opacity of the sample is different...the microscope will set the light for you according to your preferences.

On **ALC Models**.

## Safe And Convenient Operations

Rounded edge rackless stage has been designed with a belt-driven mechanism that allows a smooth movement without any protruding part.

This design gives you a more compact solution and lowers any risk of injury after accidentally hitting the rack with your hands.





# Middle-Level Routine Lab Upright Microscopes

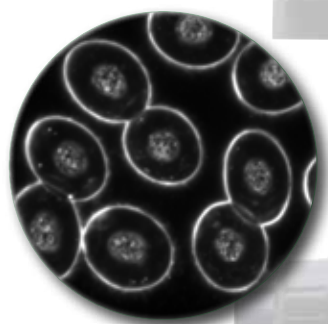
## Universal Condenser For Brightfield, Darkfield & Phase

OPTIKA B-380 phase contrast microscopes are equipped with a 5-position dedicated rotating condenser for brightfield (standard use), phase contrast (10x/20x, 40x and 100x phase diaphragms), and a darkfield position for dry objectives.



## Exclusive X-LED<sup>3</sup> Darkfield Condenser

The special condenser with integrated, exclusive X-LED<sup>3</sup> illuminator replaces any other external and expensive lighting source required for these applications and is ideal for great-looking, rich and high-quality specimen view.



## In fluorescence we can offer several options.

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

### Traditional, HBO Fluorescence

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

### Innovative, LED Fluorescence

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



## B-380 Series

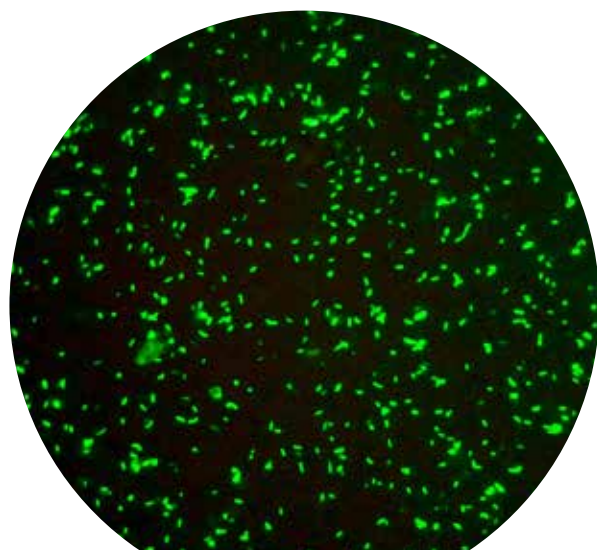


10x - Darkfield

### M-185

#### Darkfield condenser (dry)

With M-185 optional condenser you can easily obtain a darkfield view for dry objectives.



50x - Fluorescence

### M-335

#### Objective 50x/0.75 IOS W-PLAN MET

For applications where no cover slide is required (such as sputum smear analysis for tuberculosis diagnosis), the M-335 objective provides excellent results for stunning images.





# Middle-Level Routine Lab Upright Microscopes

## Get the most of our accessories

### M-181

#### **Complete Phase Contrast Set with IOS W-PLAN PH obj. 10x, 20x, 40x, 100x, with Darkfield position**

The B-380 series can be upgraded at any time with phase contrast kits (M-179 with W-PLAN PH objectives and M-181 with IOS W-PLAN PH objectives) including all the components you need to inspect transparent specimens such as microorganisms, thin tissue slices, lithographic patterns, fibers, glass, etc.

#### **M-975.1 Ring with blue filter;**

Increase the colour temperature of light (toward the blue).

#### **M-977.1 Ring with green filter;**

Optimize the resolution of phase contrast.

#### **M-979.1 Ring with yellow filter;**

Decrease the colour temperature of light (toward the red).

#### **M-989.1 Ring with frosted glass filter;**

Increase the uniformity of illumination, even further.



**Blue filter**



**Green filter**



**Yellow filter**



**Frosted glass**



#### **M-156 Koehler field diaphragm**

Additional field diaphragm for upgrading the Fixed Koehler illumination system to a Full Koehler type. To be ordered on newly purchased B-380 microscope.

#### **M-975 Blue filter;**

Increase the colour temperature of light (toward the blue).

#### **M-977 Green filter;**

Optimize the resolution of phase contrast.

#### **M-979 Yellow filter;**

Decrease the colour temperature of light (toward the red).

#### **M-989 Frosted glass filter;**

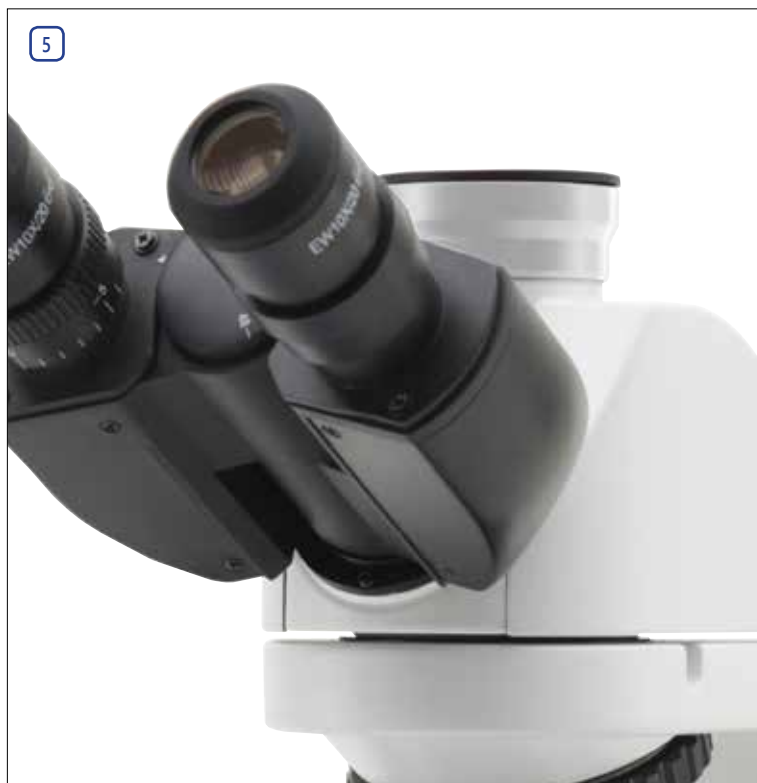
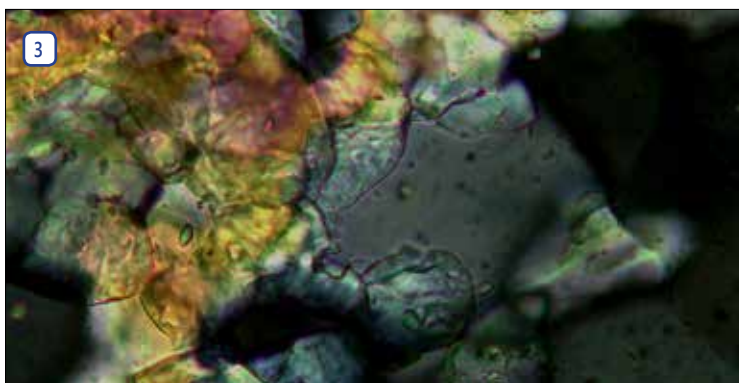
Increase the uniformity of illumination, even further.



# B-380 Series

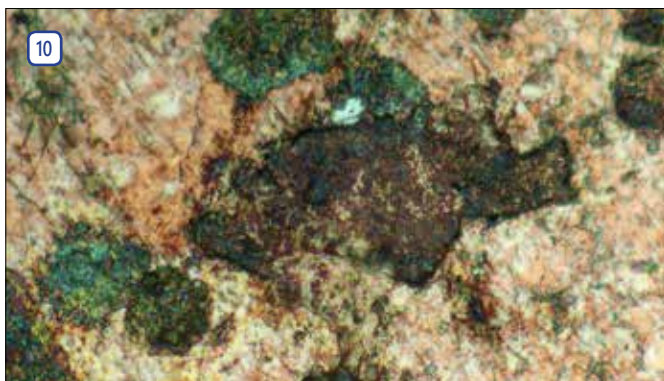
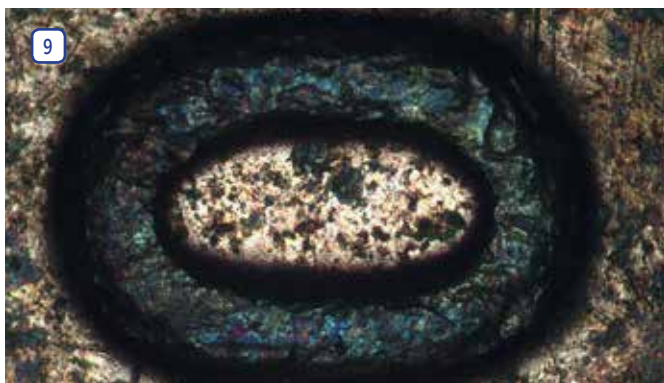
## Legend

1. Planachromatic Phase Contrast objectives.
2. Coded iris diaphragm for each objective.
3. B-383POL, tuff observed under polarized light.
4. Tilia three year stem at 4x magnification, B-383PL.
5. B-380 head with built-in Automatic Light Control system.
6. Head with Siedentopf adjustment system.
7. B-383POL attachment with Bertrand lens.
8. Handle for easy and comfortable transportation.
9. Coin at 4x magnification, B-383MET.
10. Coin at 50x magnification, B-383MET.
11. Innovative design of B-380 series.





# Middle-Level Routine Lab Upright Microscopes





# B-380 Series - Brightfield Models

## B-382PL-ALC



Brightfield binocular microscope with N-PLAN objectives, rackless stage and combining the exclusive **X-LED<sup>3</sup>** with **ALC** (Automatic Light Control) for great-looking, rich and high-quality view.

**Observation mode:** Brightfield.

**Head:** Binocular, 30° inclined, 360° rotating (when ALC cable is unplugged).

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

N-PLAN 4x/0.10

N-PLAN 10x/0.25

N-PLAN 40x/0.65

N-PLAN 100x/1.25 (Oil/Water)

All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 150x139 mm, 75x33 mm X-Y range.

**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.

**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) and brightness control. **ALC** system.

Multi-plug 100-240Vac/6Vdc external power supply.

## B-383PL



Brightfield trinocular microscope with N-PLAN objectives, rackless stage and the exclusive **X-LED<sup>3</sup>** for great-looking, rich and high-quality view.

**Observation mode:** Brightfield.

**Head:** Trinocular (fixed 50/50), 30° inclined, 360° rotating.

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

N-PLAN 4x/0.10

N-PLAN 10x/0.25

N-PLAN 40x/0.65

N-PLAN 100x/1.25 (Oil/Water)

All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 150x139 mm, 75x33 mm X-Y range.

**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.

**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) with brightness control.

Multi-plug 100-240Vac/6Vdc external power supply.

# B-380 Series - Brightfield Models

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Laboratory

## B-382PLi-ALC



Brightfield binocular microscope with IOS N-PLAN (Infinity Corrected) objectives, rackless stage and combining the exclusive **X-LED<sup>3</sup>** with **ALC** (Automatic Light Control) for great-looking, rich and high-quality view.

**Observation mode:** Brightfield.

**Head:** Binocular, 30° inclined, 360° rotating (when ALC cable is unplugged).

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

IOS N-PLAN 4x/0.10	IOS N-PLAN 10x/0.25
IOS N-PLAN 40x/0.65	IOS N-PLAN 100x/1.25 (Oil/Water)

All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.

**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.

**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) and brightness control. **ALC** system.  
Multi-plug 100-240Vac/6Vdc external power supply.

## B-383PLi



Brightfield trinocular microscope with IOS N-PLAN (Infinity Corrected) objectives, rackless stage and the exclusive **X-LED<sup>3</sup>** for great-looking, rich and high-quality view.

**Observation mode:** Brightfield.

**Head:** Trinocular (fixed 50/50), 30° inclined, 360° rotating.

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

IOS N-PLAN 4x/0.10	IOS N-PLAN 10x/0.25
IOS N-PLAN 40x/0.65	IOS N-PLAN 100x/1.25 (Oil/Water)

All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.

**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.

**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

# B-380 Series - Phase Contrast Models

## B-382PH-ALC



Phase contrast, darkfield and brightfield binocular microscope with W-PLAN objectives, rackless stage and combining the exclusive **X-LED<sup>3</sup>** with **ALC** (Automatic Light Control) for great-looking, rich and high-quality view.

<b>Observation mode:</b>	Brightfield, phase contrast and darkfield (dry).
<b>Head:</b>	Binocular, 30° inclined, 360° rotating (when ALC cable is unplugged).
<b>Interpupillary distance:</b>	Adjustable between 48 and 75 mm.
<b>Dioptric adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/20 mm, high eye-point and secured by screw.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	W-PLAN 4x/0.10                      W-PLAN PH 10x/0.25 W-PLAN PH 40x/0.65            W-PLAN PH 100x/1.25 (Oil/Water) All with anti-fungus treatment.
<b>Specimen stage:</b>	Double layer rackless mechanical stage, 150x139 mm, 75x33 mm X-Y range.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
<b>Condenser:</b>	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield.
<b>Illumination (Fixed Koehler type):</b>	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) and brightness control. <b>ALC</b> system. Multi-plug 100-240Vac/6Vdc external power supply.

## B-383PH



Phase contrast, darkfield and brightfield trinocular microscope with W-PLAN objectives, rackless stage and the exclusive **X-LED<sup>3</sup>** for great-looking, rich and high-quality view.

<b>Observation mode:</b>	Brightfield, phase contrast and darkfield (dry).
<b>Head:</b>	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
<b>Interpupillary distance:</b>	Adjustable between 48 and 75 mm.
<b>Dioptric adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/20 mm, high eye-point and secured by screw.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	W-PLAN 4x/0.10                      W-PLAN PH 10x/0.25 W-PLAN PH 40x/0.65            W-PLAN PH 100x/1.25 (Oil/Water) All with anti-fungus treatment.
<b>Specimen stage:</b>	Double layer rackless mechanical stage, 150x139 mm, 75x33 mm X-Y range.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
<b>Condenser:</b>	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield.
<b>Illumination (Fixed Koehler type):</b>	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.



# B-380 Series - Phase Contrast Models

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Laboratory

## B-382PHi-ALC



Phase contrast, darkfield and brightfield binocular microscope with IOS W-PLAN (Infinity Corrected) objectives, rackless stage and combining the exclusive **X-LED<sup>3</sup>** with **ALC** (Automatic Light Control) for great-looking, rich and high-quality view.

**Observation mode:** Brightfield, phase contrast and darkfield (dry).

**Head:** Binocular, 30° inclined, 360° rotating (when ALC cable is unplugged).

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

IOS W-PLAN PH 10x/0.25      IOS W-PLAN PH 20x/0.40  
IOS W-PLAN PH 40x/0.65      IOS W-PLAN PH 100x/1.25 (Oil)  
All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.

**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield.

**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) and brightness control. **ALC** system. Multi-plug 100-240Vac/6Vdc external power supply.

## B-383PHi



Phase contrast, darkfield and brightfield microscope with IOS W-PLAN (Infinity Corrected) objectives, rackless stage and the exclusive **X-LED<sup>3</sup>** for great-looking, rich and high-quality view.

**Observation mode:** Brightfield, phase contrast and darkfield (dry).

**Head:** (50/50), 30° inclined, 360° rotating.

**Interpupillary distance:** Adjustable between 48 and 75 mm.

**Dioptric adjustment:** On the left eyepiece tube.

**Eyepieces:** WF10x/20 mm, high eye-point and secured by screw.

**Nosepiece:** Quintuple revolving nosepiece, rotation on ball bearings.

**Objectives:**

IOS W-PLAN PH 10x/0.25      IOS W-PLAN PH 20x/0.40  
IOS W-PLAN PH 40x/0.65      IOS W-PLAN PH 100x/1.25 (Oil)  
All with anti-fungus treatment.

**Specimen stage:** Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.

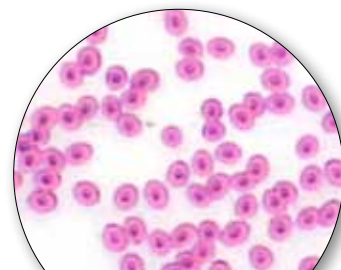
**Focusing:** Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.

**Condenser:** Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield.

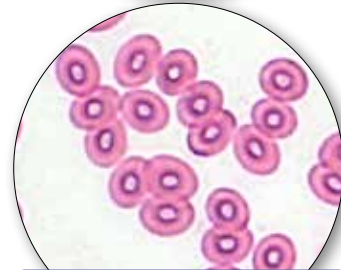
**Illumination (Fixed Koehler type):** X-LED<sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

# B-383DK - Darkfield Microscope

Laboratory upright microscope for brightfield and darkfield observations with N-PLAN objectives (and W-PLAN 100x with iris) for biology and especially darkfield fresh blood analysis and the exclusive **X-LED<sup>3</sup>** illumination system. The special condenser with integrated, exclusive X-LED3 illuminator replaces any other external and expensive lighting source required for these applications and is ideal for great-looking, rich and high-quality specimen view. Our immersion darkfield system provides the same result achieved by 150W external illuminators in combination with traditional cardioid darkfield condenser.



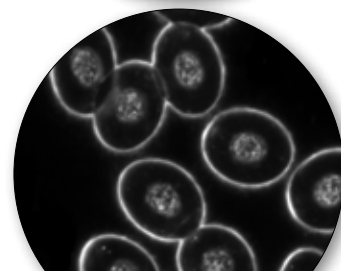
10x



40x



100x Brightfield



100x Darkfield

Part	Description
<b>Observation mode:</b>	Brightfield, oil immersion darkfield.
<b>Head:</b>	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
<b>Interpupillary distance:</b>	Adjustable between 48 and 75 mm.
<b>Dioptric adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/20 mm, high eye-point and secured by screw.
<b>Nosepiece</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	N-PLAN 4x/0.10 N-PLAN 10x/0.25 N-PLAN 40x/0.65 W-PLAN 100x/1.25 (oil) with iris All with anti-fungus treatment.

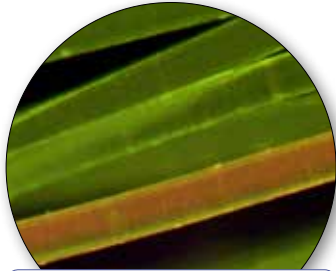
Part	Description
<b>Specimen stage:</b>	Double layer rackless mechanical stage, 150x139 mm, 75x33 mm X-Y range.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
<b>Brightfield condenser:</b>	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.
<b>Darkfieldfield condenser:</b>	Darkfield N.A. 1.36 (oil immersion) with built-in X-LED <sup>3</sup> .
<b>Transmitted illumination (Fixed Koehler type):</b>	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

# B-383FL - HBO Fluorescence Microscope

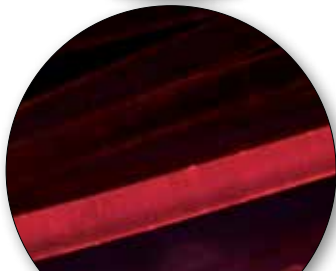
Laboratory upright microscope for brightfield and fluorescence observations with IOS N-PLAN objectives.

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>3</sup>** to ensure great-looking, rich and high-quality specimen view.

- 20
- 
- 
- X-LED<sup>3</sup>
- 
- IOS
- ∞
- N-PLAN
- 100x
- WATER
- FL



10x - Blue excitation



10x - Green excitation

### Standard filterset

Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B Blue	460 – 490	505	515LP
G Green	510 – 550	570	590LP



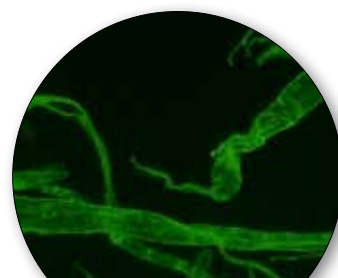
Part	Description
Observation mode:	Brightfield, HBO fluorescence.
Epi-illumination and filters:	HBO 100 W high pressure mercury lamp. 3-position filter holder; blue and green included.
Head:	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
Interpupillary distance:	Adjustable between 48 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/20 mm, high eye-point and secured by screw.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS N-PLAN 4x/0.10      IOS N-PLAN 10x/0.25 IOS N-PLAN 20x/0.40    IOS N-PLAN 40x/0.65 IOS N-PLAN 100x/1.25 (Oil/Water) All with anti-fungus treatment.

Part	Description
Specimen stage:	Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.
Transmitted illumination (Fixed Koehler type):	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

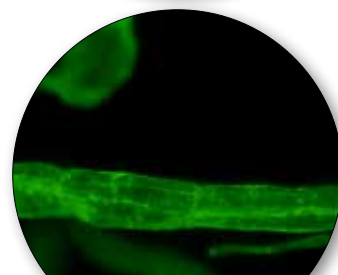


# B-383LD1 - LED Fluorescence Microscope

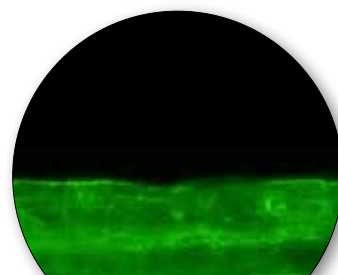
Entry-level laboratory upright microscope for brightfield and fluorescence observations with IOS N-PLAN objectives. The extremely powerful LED fluorescence illuminator is combined with blue excitation filter set for the visualization of the following fluorochromes: Acridine Yellow, Acridine Orange, Auramine, DiO, DTAF, FITC, GFP, YFP, etc. 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>3</sup>** to ensure great-looking, rich and high-quality specimen view.



4x



10x



20x

## Standard filterset

Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B Blue	460 – 490	505	515LP

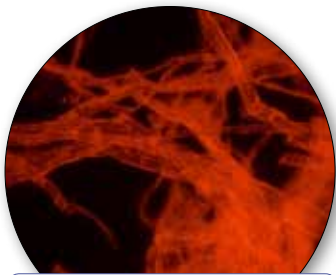
Part	Description
<b>Observation mode:</b>	Brightfield, LED fluorescence.
<b>Epi-illumination and filter:</b>	High-power blue LED with brightness control. 3-position filter holder; blue included.
<b>Head:</b>	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
<b>Interpupillary distance:</b>	Adjustable between 48 and 75 mm.
<b>Dioptric adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/20 mm, high eye-point and secured by screw.
<b>Nosepiece:</b>	Quintuple revolving nosepiece, rotation on ball bearings.
<b>Objectives:</b>	IOS N-PLAN 4x/0.10      IOS N-PLAN 10x/0.25 IOS N-PLAN 20x/0.40      IOS N-PLAN 40x/0.65 IOS N-PLAN 100x/1.25 (Oil/Water) All with anti-fungus treatment.

Part	Description
<b>Specimen stage:</b>	Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
<b>Condenser:</b>	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.
<b>Transmitted illumination (Fixed Koehler type):</b>	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

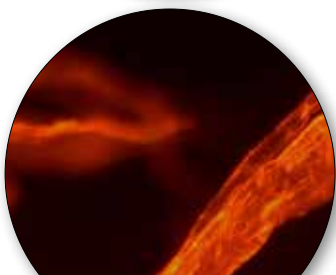
# B-383LD2 - LED Fluorescence Microscope

Laboratory upright microscope for brightfield and fluorescence observations with IOS N-PLAN objectives. The extremely powerful LED 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). 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>3</sup>** to ensure great-looking, rich and high-quality specimen view.

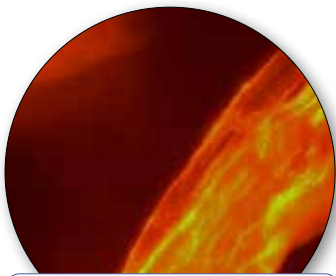
- **20**
- 
- 
- **X-LED<sup>3</sup>**
- **IOS**  
**∞**
- **N-PLAN**
- **100%**  
**WATER**
- **FL**



4x



10x



20x

### Standard filterset

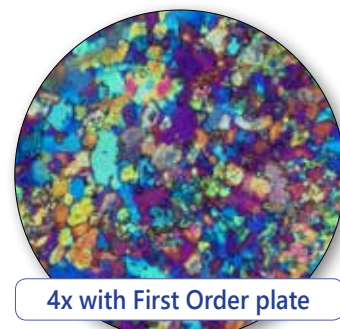
Name	Excitation filter (nm)	Dichroic mirror cut-off (nm)	Emission filter (nm)
B Blue	460 – 490	505	515LP
G Green	510 – 550	570	590LP

Part	Description
Observation mode:	Brightfield, LED fluorescence.
Epi-illumination and filters:	High-power wide spectrum LED with brightness control. 3-position filter holder; blue and green included.
Head:	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
Interpupillary distance:	Adjustable between 48 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/20 mm, high eye-point and secured by screw.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.
Objectives:	IOS N-PLAN 4x/0.10      IOS N-PLAN 10x/0.25 IOS N-PLAN 20x/0.40    IOS N-PLAN 40x/0.65 IOS N-PLAN 100x/1.25 (Oil/Water) All with anti-fungus treatment.

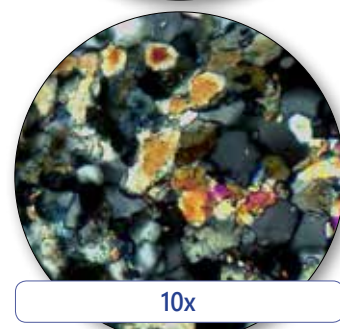
Part	Description
Specimen stage:	Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.
Transmitted illumination (Fixed Koehler type):	X-LED <sup>3</sup> with white 3.6 W LED (6,300K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

# B-383POL - Polarizing Microscope

Upright microscope for brightfield and polarizing light observations with strain-free IOS N-PLAN POL objectives. Complete of polarizer and analyzer filters, Bertrand lens for conoscopic observation, compensator plates and high-precision rotatable stages. It comes with the exclusive **X-LED<sup>3</sup>** illumination system to deliver bright and clear images, along with all the accessories to perform accurate polarization analysis in biology and materials science.



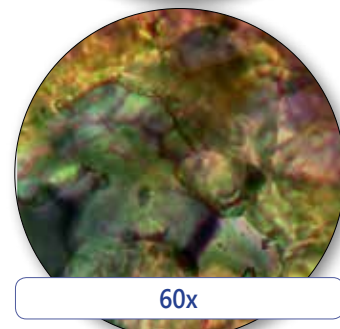
4x with First Order plate



10x



10x with First Order plate



60x

Part	Description
<b>Observation mode:</b>	Brightfield, transmitted polarized light and conoscopy.
<b>Bertrand lens and polarizing attachment:</b>	Swing-out type with centering mechanism for observation in conoscopy/orthoscopy. Rotatable analyzer from 0° to 90° with graduated scale. Tint plates: 1° order red ( $\lambda$ ); $\lambda/4$ ; Quartz wedge.
<b>Head:</b>	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
<b>Interpupillary distance:</b>	Adjustable between 48 and 75 mm.
<b>Dioptric adjustment:</b>	On the left eyepiece tube.
<b>Eyepieces:</b>	WF10x/20 mm, high eye-point and secured by screw. One with crosshair.
<b>Nosepiece:</b>	Quadruple revolving nosepiece, rotation on ball bearings. Centering system for each objective.

Part	Description
<b>Objectives (strain-free):</b>	IOS N-PLAN POL 4x/0.10 IOS N-PLAN POL 10x/0.25 IOS N-PLAN POL 40x/0.65 IOS N-PLAN POL 60x/0.80 All with anti-fungus treatment.
<b>Specimen stage:</b>	Rotatable stage with locking mechanism. Vernier scale with accuracy 0.1 mm. Diameter 160 mm. Specimen slide clamps.
<b>Focusing:</b>	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
<b>Condenser:</b>	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable. With rotating polarizing filter.
<b>Transmitted illumination (Fixed Koehler type):</b>	X-LED <sup>3</sup> with white 3.6 W LED (6.300 K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.



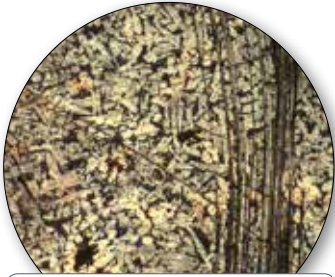
# B-383MET - Metallurgical Microscope

2

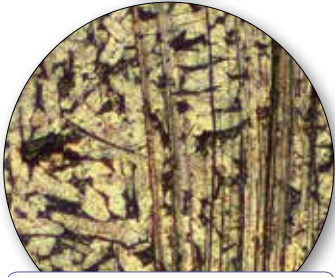
Laboratory

Brightfield upright microscope with IOS W-PLAN MET objectives and metallurgical attachment combining the exclusive **X-LED<sup>3</sup>** lighting source both for incident and transmitted illumination. The NCG (no cover glass) objectives are especially designed for microscopy use without a cover slip ideal for metallographic samples and other opaque specimens.

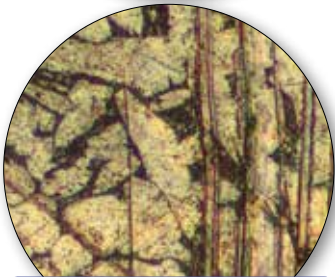
- 20
- X-LED<sup>3</sup>
- IOS
- W-PLAN
- MET
- POL



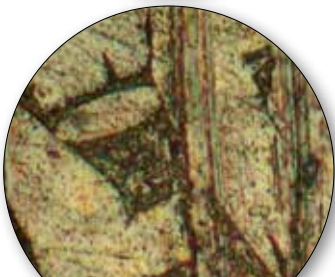
4x



10x



20x



50x

Part	Description
Observation mode:	Brightfield, incident polarized light.
Epi-illumination and polarizing filters:	X-LED <sup>3</sup> with white 3.6 W LED (6.300 K) with brightness control. Field and aperture diaphragms, polarizer & analyzer filters.
Head:	Trinocular (fixed 50/50), 30° inclined, 360° rotating.
Interpupillary distance:	Adjustable between 48 and 75 mm.
Dioptric adjustment:	On the left eyepiece tube.
Eyepieces:	WF10x/20 mm, high eye-point and secured by screw.
Nosepiece:	Quintuple revolving nosepiece, rotation on ball bearings.

Part	Description
Objectives (strain-free):	IOS W-PLAN MET 4x/0.10 IOS W-PLAN MET 10x/0.25 IOS W-PLAN MET 20x/0.40 IOS W-PLAN MET 50x/0.75 All with anti-fungus treatment.
Specimen stage:	Double layer rackless mechanical stage, 233x147 mm, 78x54 mm X-Y range. With tempered glass plate.
Focusing:	Coaxial coarse (adjustable tension) and fine focusing mechanism with limit stop to prevent the contact between objective and specimen.
Condenser:	Abbe N.A. 1.25, with objective-coded iris diaphragm, focusable and centerable.
Transmitted illumination (Fixed Koehler type):	X-LED <sup>3</sup> with white 3.6 W LED (6.300 K) with brightness control. Multi-plug 100-240Vac/6Vdc external power supply.

# B-380 Series - Comparison chart

Model	Head	Eyepieces	Nosepiece	Objectives	Stage	Focusing	Condenser	Illumination
<b>B-382PL-ALC</b>	Binocular, 30° inclined	WF 10x/20	Quintuple, reversed	N-PLAN 4x, 10x, 40x, 100x (oil/ water)	Rackless double layer, 150x139mm, moving range 75x33mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	3.6 W X-LED <sup>3</sup> , brightness control, ALC control. Fixed Koehler
<b>B-383PL</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	N-PLAN 4x, 10x, 40x, 100x (oil/ water)	Rackless double layer, 150x139mm, moving range 75x33mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-382PLi-ALC</b>	Binocular, 30° inclined	WF 10x/20	Quintuple, reversed	IOS N-PLAN 4x, 10x, 40x, 100x (oil/ water)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	3.6 W X-LED <sup>3</sup> , brightness control, ALC control. Fixed Koehler
<b>B-383PLi</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS N-PLAN 4x, 10x, 40x, 100x (oil/ water)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-382PH-ALC</b>	Binocular, 30° inclined	WF 10x/20	Quintuple, reversed	W-PLAN 4x, 10xPH, 40xPH, 100xPH (oil)	Rackless double layer, 150x139mm, moving range 75x33mm	Coaxial coarse and fine, limit stop, adjustable tension	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield	3.6 W X-LED <sup>3</sup> , brightness control, ALC control. Fixed Koehler
<b>B-383PH</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	W-PLAN 4x, 10xPH, 40xPH, 100xPH (oil)	Rackless double layer, 150x139mm, moving range 75x33mm	Coaxial coarse and fine, limit stop, adjustable tension	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-382PHi-ALC</b>	Binocular, 30° inclined	WF 10x/20	Quintuple, reversed	IOS W-PLAN 10xPH, 20xPH, 40xPH, 100xPH (oil)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield	3.6 W X-LED <sup>3</sup> , brightness control, ALC control. Fixed Koehler
<b>B-383PHi</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS W-PLAN 10xPH, 20xPH, 40xPH, 100xPH (oil)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Phase condenser (10x/20x, 40x, 100x) with darkfield (dry) and brightfield	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-383DK</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	N-PLAN 4x, 10x, 40x, W-PLAN 100x (oil, with iris diaphragm)	Rackless double layer, 150x139mm, moving range 75x33mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable. Additional darkfield condenser, N.A. 1.36, built-in X-LED <sup>3</sup>	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-383FL</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS N-PLAN 4x, 10x, 20x, 40x, 100x (oil/water)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	<b>Transmitted:</b> 3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler <b>Incident:</b> HBO 100 W high- pressure mercury bulb
<b>B-383LD1</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS N-PLAN 4x, 10x, 20x, 40x, 100x (oil/water)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	<b>Transmitted:</b> 3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler <b>Incident:</b> High-power blue LED
<b>B-383LD2</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS N-PLAN 4x, 10x, 20x, 40x, 100x (oil/water)	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	<b>Transmitted:</b> 3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler <b>Incident:</b> High-power wide spectrum LED
<b>B-383POL</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20 (one with crosshair reticle)	Quadruple, reversed	Strain-free IOS N-PLAN POL 4x, 10x, 40x, 60x	Round, 360° rotating, 160mm diameter, with sample clips and stop knob	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable. With rotating polarizer	3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler
<b>B-383MET</b>	Trinocular, 30° inclined, 360° rotating	WF 10x/20	Quintuple, reversed	IOS W-PLAN MET 4x, 10x, 20x, 50x	Rackless double layer, 233x147mm, moving range 78x54 mm	Coaxial coarse and fine, limit stop, adjustable tension	Abbe N.A. 1.25, iris diaphragm, focusable and centrable	<b>Transmitted and incident:</b> 3.6 W X-LED <sup>3</sup> , brightness control. Fixed Koehler

# B-380 Series - Accessories

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Laboratory

## ACCESSORIES FOR B-380

M-001	Huygens 5x eyepiece.
M-160	EW10x/20 eyepiece, high eyepoint, with rubber cup.
M-161	EW15x/16 eyepiece, with rubber cup.
M-162	WF20x/12 eyepiece.
M-163	EW10x/20 eyepiece, high eyepoint, with micrometric scale (10mm/100um) & rubber cup.
M-008.1	EW10x/20 eyepiece, high eyepoint, with pointer & rubber cup.
M-164	N-PLAN objective 4x/0.10 (only for B-382PL-ALC, B-383PL, B-383DK).
M-165	N-PLAN objective 10x/0.25 (only for B-382PL-ALC, B-383PL, B-383DK).
M-166	N-PLAN objective 20x/0.40 (only for B-382PL-ALC, B-383PL, B-383DK).
M-167	N-PLAN objective 40x/0.65 (only for B-382PL-ALC, B-383PL, B-383DK).
M-168	N-PLAN objective 60x/0.85 (only for B-382PL-ALC, B-383PL, B-383DK).
M-169	N-PLAN objective 100x/1.25 (OIL/WATER immersion) (only for B-382PL-ALC, B-383PL).
M-144	IOS N-PLAN objective 4x/0.10 (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-145	IOS N-PLAN objective 10x/0.25 (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-146	IOS N-PLAN objective 20x/0.40 (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-147	IOS N-PLAN objective 40x/0.65 (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-149	IOS N-PLAN objective 60x/0.80 (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-148	IOS N-PLAN objective 100x/1.25 (OIL/WATER immersion) (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL).
M-059	W-PLAN objective 100x/1.25OI (oil iris) (only for B-383DK).
M-170	W-PLAN PH objective 10x/0.25 (only for B-383PH, B-382PH-ALC).
M-171	W-PLAN PH objective 20x/0.40 (only for B-383PH, B-382PH-ALC).
M-172	W-PLAN PH objective 40x/0.65 (only for B-383PH, B-382PH-ALC).
M-182	W-PLAN PH objective 100x/1.25 (Oil) (only for B-383PH, B-382PH-ALC).
M-1120.N	IOS W-PLAN PH objective 10x/0.25 (only for B-383PHi, B-382PHi-ALC).
M-1121.N	IOS W-PLAN PH objective 20x/0.40 (only for B-383PHi, B-382PHi-ALC).
M-1122.N	IOS W-PLAN PH objective 40x/0.65 (only for B-383PHi, B-382PHi-ALC).
M-1123.N	IOS W-PLAN PH objective 100x/1.25 (Oil) (only for B-383PHi, B-382PHi-ALC).
M-144P	IOS N-PLAN POL objective 4x/0.10 (only for B-383POL).
M-145P	IOS N-PLAN POL objective 10x/0.25 (only for B-383POL).
M-146P	IOS N-PLAN POL objective 20x/0.40 (only for B-383POL).
M-147P	IOS N-PLAN POL objective 40x/0.65 (only for B-383POL).
M-149P	IOS N-PLAN POL objective 60x/0.80 (only for B-383POL).
M-148P	IOS N-PLAN POL objective 100x/1.25 (OIL/WATER immersion) (only for B-383POL).
M-335	IOS W-PLAN MET objective 50x/0.75 (only for B-383LD1, B-383LD2, B-383FL, B-383MET).
M-337	IOS W-PLAN MET objective 4x/0.10 (only for B-383MET).
M-338	IOS W-PLAN MET objective 10x/0.25 (only for B-383MET).
M-339	IOS W-PLAN MET objective 20x/0.40 (only for B-383MET).
M-179	Complete PH Set – W-PLAN PH obj. 10x, 40x, 100x – Condenser for BF/DF/PH (only for B-383PL, B-382PL-ALC, B-383DK).
M-181	Complete PH Set – IOS W-PLAN PH obj. 10x, 20x, 40x, 100x – Condenser for BF/DF/PH (only for B-382PLi-ALC, B-383PLi, B-383LD1, B-383LD2, B-383FL, B-383MET).
M-151	HBO100W high-pressure mercury bulb for fluorescence (for B-383FL only).
M-151.1	HBO 100W high-pressure mercury bulb for fluorescence (OSRAM High-Grade)
M-635	Heating stage, with digital temperature controller (only on newly purchased microscopes, for models with 233x147mm rackless stage).
M-174.1	Polarizing set, filters only (for B-380 series).
M-175	Rotating table for polarising set (For all models with 150x139mm rackless stage).
M-175.1	Rotating table for polarising set (For all models with 233x147mm rackless stage).
M-185	DF condenser for dry objectives.
M-156	Field diaphragm for Koehler illumination (only on newly purchased microscopes) (for all, except B-383POL).
M-975.1	Ring with blue filter, 45 mm diameter.
M-977.1	Ring with green filter, 45 mm diameter.
M-979.1	Ring with yellow filter, 45 mm diameter.
M-989.1	Ring with frosted glass filter, 45 mm diameter.
M-173	Photo adapter for APS-C and Full Frame Reflex cameras.
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-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 microscopes).
M-699	Universal adapter for M-173.
M-069	Solar charger.
M-005	Micrometric slide, 26x76mm, with 2 X scales (1mm/100div. for biological / 10mm/100div. for stereo).
DC-002	Plastic dust cover, medium - 490(l)x490(h) mm
DC-003	TNT dust cover, medium - 600(l)x550(h) mm.
15008	OPTIKA immersion oil 10ml.
15104	Cleaning kit.
VP-380	IQ/OQ/PQ Validation Protocols.

### 15104 - Cleaning kit

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



### M-069 - Solar battery pack

Included battery: rechargeable – Lithium-Poly. Capacity: 2600 mAh. Output voltage: 5.5Vdc. - Dimensions: 120x73x10 mm. Autonomy: over 6 hours at medium intensity (X-LED<sup>3</sup>). Charging modes: with solar panel (12h), with external USB power supply (not included) or from PC USB port (5h).



### How to connect the cameras to our microscopes.

Please refer to the Adapter reference list on Digital section.



v 1.3.0 - 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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