

OLYMPUS®

SYSTEM MICROSCOPE

BX

BX50/BX40

Olympus leads the way with technological innovation in every facet of microscopy and has an unwavering commitment to developing products that fulfill the complex needs of our rapidly changing society. When it comes to quality and reliability, you can count on Olympus.

scanned by J.G. McHone 26 Feb 2010

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OLYMPUS
BX50

12
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OLYMPUS

UPlanF
20x/0.750
WD 0.17

UPlanF
40x/1.30
WD 0.08

The new shape of microscopy

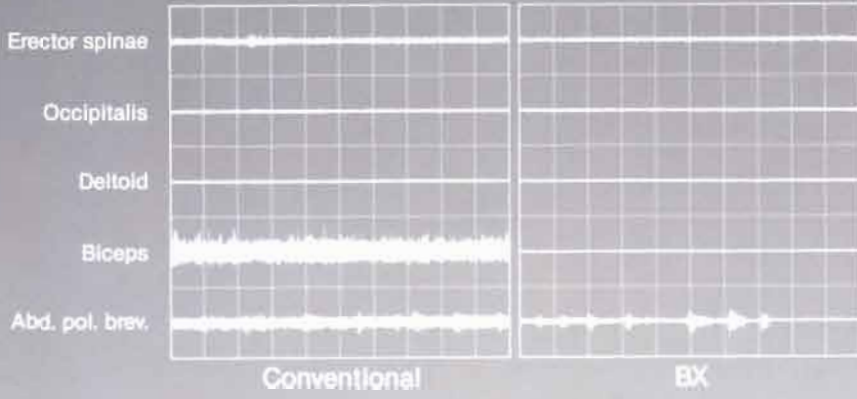
***Olympus answers the challenges
of today and tomorrow***

Olympus has made a concerted effort to meet the unique requirements in the field of microscopy by designing a new microscope system that embodies the wealth of experience and expertise of scientists and scientific technicians around the world. The result: the BX Microscope Series. With a uniquely ergonomic design, superior optics and outstanding versatility, the BX Series is the ideal choice to meet the uncompromising requirements of research scientists and clinical laboratories, both now and into the 21st century.



■ **Electrography chart comparison of muscle movement during observation.**

Note: Higher amplitude recording indicates greater stress; lower amplitude recording indicates lower stress.



Minimal stress on the upper back

Optimum eyepoint eliminates neck strain

A relaxed posture can be maintained with less stress on the shoulders

The wrists can be kept on the work surface, reducing forearm movement



Ergonomic Design for Maximum Operator Comfort

Ease of operation and prolonged fatigue-free observation are major demands of today's microscope users; they are also the strengths of the BX Series. The ergonomic design is a result of intensive studies into body posture, as well as hand and eye movement during prolonged microscope observation. The revolutionary shape of the frame allows the user's forearms to be supported by the table or bench surface and the ultra low stage control and coarse and high sensitivity fine focusing knobs can be manipulated in total comfort. The electrical components are housed in the back of the frame so that working space has expanded. Eyepoint height can be adjusted to satisfy any user. All these factors combine to ensure comfortable, efficient observation with less fatigue, even over prolonged periods. In fact, the longer you use a BX Series microscope, the more you will come to appreciate the benefits that this truly ergonomic design offers.



Less strain on the arms and wrists

Great care has been taken in the positioning of all knobs and controls in order to minimize hand movement. The stage controls and focusing knobs can easily be manipulated without having to raise the arms and wrists from the work surface. The tension of stage movement in both X and Y directions can also be adjusted to suit the individual operator.



Controls grouped for efficiency

All of the electrical controls that traditionally were placed in the microscope base now are located on the right "wing" of the BX stand. Illumination intensity control, with LED readout and voltage presetting switch all are grouped in a single conveniently positioned panel. This is easily visible when the user's eyes are moved only slightly away from the eyepieces.



The right shape for ease of use

The BX "Y" shape provides an uncluttered work surface, that is ideal for convenient positioning of a photomicrographic system control unit, cell counter or other ancillary equipment near the stand. It also provides superior tripod-like stability.



New tilting observation tube with eyepoint adjustment

One model of the available observation tubes is the U-TBI tilting binocular observation tube with eyepiece inclination continuously adjustable from 5°-35°, without an erect image. This provides the most comfortable eyepoint position, regardless of operator stature, and allows multiple users to use the microscope in total comfort. Most models of binocular or trinocular observation tubes can be combined with one or two eyepoint height adjusters, each of which raises the eyepoint by 30mm.



Built-in filters offer quick filter change-over

The BX50 features neutral density and color correction filters (ND6, ND25, LBD) built into the base. A quick flip of a lever, positioned in proximity to the focusing knob, offers fast, convenient positioning of filters in the transmitted light path. An optional filter cassette is also available to hold up to three additional filters.

Exceptional sharpness

Outstanding resolution

Outstanding flatness throughout the entire field of view

BX

Conventional

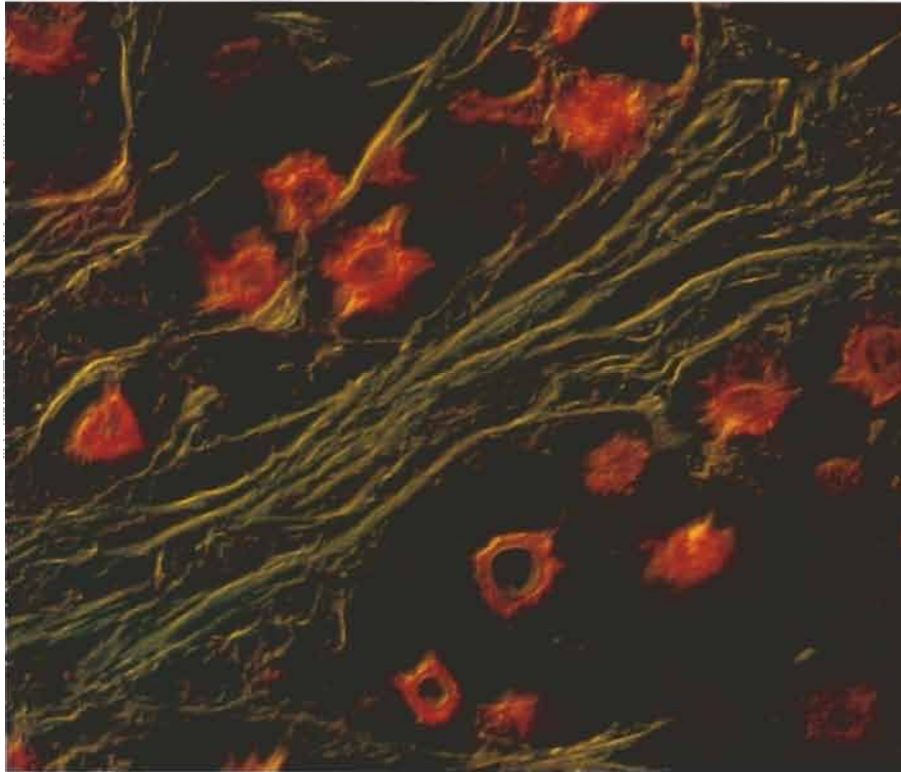
F.N.F.N.
20 22

Full compensation for chromatic aberrations

High contrast



The Olympus UIS Optical System: Extraordinary Images, Universal Applications



Cat brain/criptococcus, UPLFL40X.

(DIC-FL Combination)

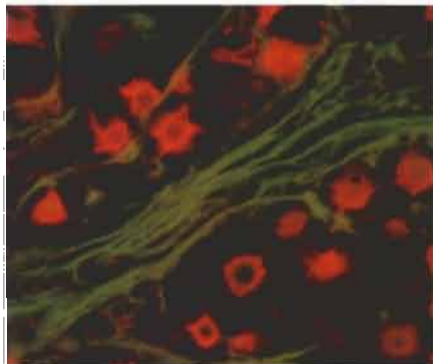
A wider field of view, brighter, sharper and higher contrast images, with no need to change objectives for different observation methods. . . . these were on the "wish list" for optics of the perfect clinical/research microscope that users asked us to design. The BX Series, with UIS infinity-corrected objectives effectively eliminates optical aberrations, and fulfills those user requests. UIS "universal" objectives are designed for use in brightfield, darkfield, Nomarski DIC, polarized light and, thanks to new glass technology and newly formulated internal coatings, for high UV transmission reflected light fluorescence microscopy.

Unsurpassed optical performance and extended field of view

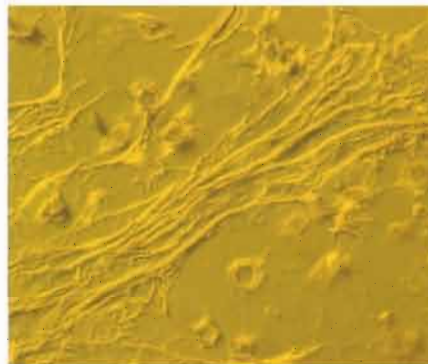
The innovative UIS infinity-correction optics deliver unsurpassed resolution and contrast. In addition to improved image quality, the standard field of view has been extended to F.N. 22. This is a 21% increase in the area of coverage over the conventional standard of F.N. 20, and significantly reduces scanning time. Superwide observation tubes utilize the flat F.N. 26.5 superwide field of view of the U Plan Apo and U Plan Fluorite series UIS objectives.

Universal objectives for a full range of observation methods

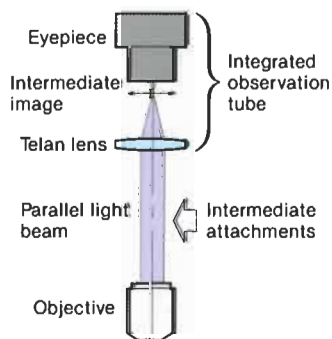
Brightfield, darkfield, fluorescence, Nomarski DIC and polarized light observations now can be accomplished with a single set of universal objectives. (UPLAPO, UPLFL Series). These research grade UIS universal objectives provide the flexibility and optical performance to readily switch between observation methods without having to change objectives and are particularly beneficial in settings where a variety of microscopy techniques are required.



(FL Only)



(DIC Only)



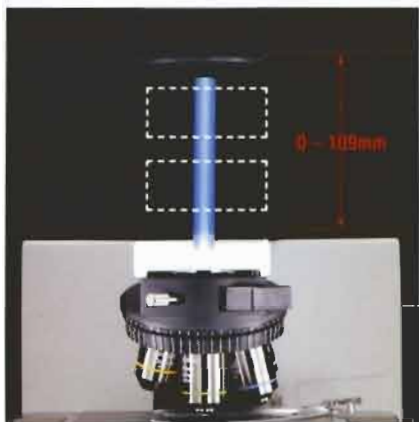
UIS infinity-corrected optical system

The Olympus UIS optical system maximizes the advantages of infinity-correction. As it passes through the objective, light travels through the body tube as parallel rays, which are focused by the telan lens to form a completely aberration-free intermediate image. Attachments can be added between the objective and the built-in telan lens in the observation tube, without any magnification factor alterations to total magnification. Additional correction lenses are not required, and the UIS optical system provides optimum images with any BX configuration.



UIS Optics and Frame Stability Combine for System Flexibility

Contemporary demands call for microscopes that are sturdy enough to hold heavy attachments, stable enough for high magnifications and adaptable enough for upgrades. These demands were met by Olympus engineers who designed the BX frame using highly advanced computer simulation techniques. Because of the incomparable benefits of the UIS optical system and higher frame stability, the BX series permits maximum flexibility in system configuration and offers the greatest potential for future upgrades.



Multiple intermediate attachments for maximum modularity

With the UIS infinity-corrected optical system, light travels from the objective to the telan lens as parallel beams. The same intermediate image plane is maintained, even when prism or sliders are interposed in this light path, and total magnification remains unchanged. Two intermediate attachments can be mounted, plus a compensator slider in the sextuple nosepiece.



Combined reflected fluorescence & transmitted light modes

The new incident light illuminator attachment accepts four fluorescence filter cubes in a rotating turret. This allows a choice of four different fluorescence wavelengths, or three wavelengths plus transmitted light observation. When combined with Universal objectives, simultaneous observation of reflected light fluorescence and transmitted light Nomarski DIC or phase contrast are easily accomplished.



Swift observation changeover

The Nomarski DIC prism can be easily inserted into the inward-facing sextuple revolving nosepiece, universal objectives accommodate various observation methods and all transmitted-light observations can be performed using the universal condenser. These combined methods assure swift changeover from one technique to another.

Special Features



Highly wear-resistant stage

Because all stages are subject to abrasion when specimen slides are continuously positioned and replaced, a tough, abrasion resistant ceramic material has been thermally imbedded in the surface of the standard BX stages. Although available to all users, the extraordinary durability of the stage surface is particularly beneficial for routine examinations such as cytology screening and many other high-throughput applications. In durability tests, this stage proved to be completely free of wear even after a million slide changes. Additional features include smooth beveled edges for safety and rotation capability to facilitate photomicrographic framing or adjusting specimen contrast in Nomarski DIC observation.



Stage control torque adjustment

The standard BX stages are all equipped with adjustable torque stage movement. Flexible tension adjustment in both the X and Y directions is possible at any time in accordance with the observation purpose or operator preference.



Sensitive, precise focus adjustment

Employment of a newly designed focusing mechanism has improved focusing accuracy. Especially with the BX50, 1 μ m fine focusing adjustment provides the sensitivity to bring the specimen into exact focus and is particularly beneficial at high magnifications. In addition, a convenient focusing stop saves time with refocusing and prevents accidental specimen/objective contact.



Improved parfocality

Stricter tolerances and precision manufacturing of all objective components have significantly improved parfocality. Greater parfocality between the objective lenses reduces the necessity of refocusing during magnification changes and contributes to greater observation efficiency.

The Olympus BX Series Sets New Ergonomic and Optical Design Standards for Ease-of-Use and Efficient Observation



Fatigue-free observation during prolonged routine examinations

BX40 System Microscope

The microscope of choice for routine brightfield observation, the BX40 also features bright 6V/30W halogen illumination, to accommodate phase contrast and darkfield microscopy. The light preset switch and stage focus are major time-savers, plus many other handy features help increase observation efficiency.

- Bright 6V/30W halogen illumination to accommodate all microscopy methods and photomicrography.
- Ceramic embedded stage surface for high-throughput slide changes.
- High-durability Nickel chromium (NiCr) plated steel focus drive system for long years of reliable use.
- Inward-facing nosepiece to facilitate slide change or specimen marking.
- Adjustable coarse focus lock.

Superior performance from routine examination to high-tech research

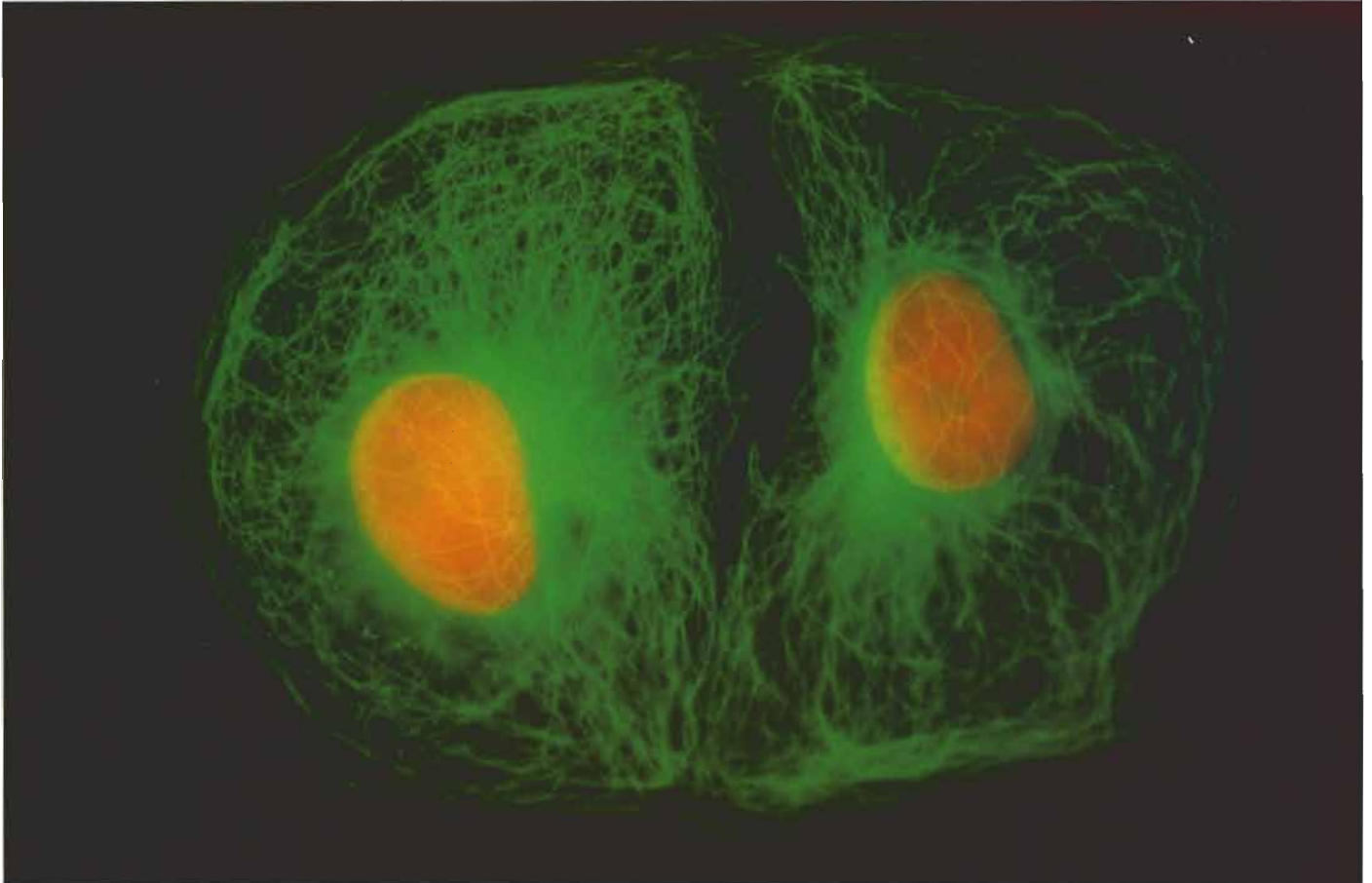
BX50 System Microscope

Offering superior performance covering applications from routine investigation to sophisticated research, the BX50 features the specifications to satisfy a wide range of observation requirements. Extra-bright 12V/100W halogen lamp illumination, three built-in filters and an extremely smooth $1\mu\text{m}$ sensitivity fine focus are only a few of the features that help the BX50 meet a variety of needs.

- Extra-bright 12V/100W halogen lamp for superior illumination for all transmitted light techniques or photomicrography.
- Built-in filters (ND6, ND25, LBD) with flip-in mounts.
- Silky-smooth $1\mu\text{m}$ sensitivity fine focus for precise adjustment at high magnification.
- Inward-facing sextuple revolving nosepiece accepts insertion of Nomarski DIC analyzer slider.
- High-rigidity frame accepts heavy attachments.

Fluorescence Images of Superb Quality

PtK₂ cells: microtubules stained with FITC and nuclei stained with PI.



The improved near ultraviolet transmission of the optical system, including the objectives and vertical illuminator ensures superb brightness, sharpness and contrast for fluorescence images. The new Universal illuminator attachment accepts four fluorescence filter cubes that combine dichroic mirrors with barrier and exciter filters, for swift changeover among four fluorescence wavelengths. Simultaneous observation of fluorescence and Nomarski DIC or phase contrast is easily accomplished.

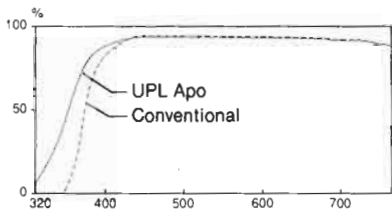


BX-FLA



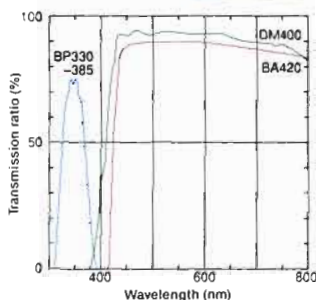
BX50+BX-FLA

■ Objectives' optical transmission characteristics

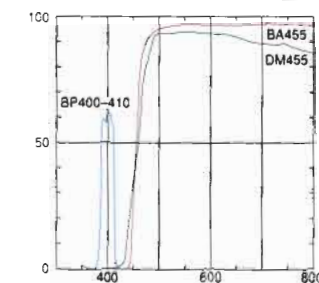


■ Characteristic curves of filters

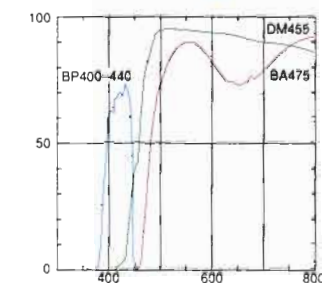
U Excitation (wide band) 1 U-MWU



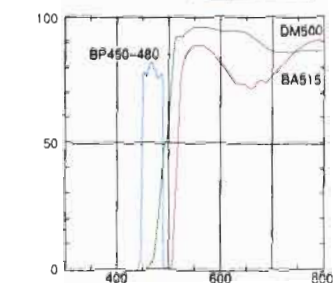
V Excitation (narrow band) 3 U-MNV



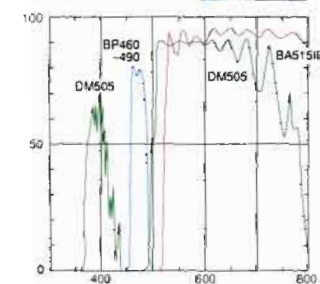
BV Excitation (wide band) 4 U-MWBV



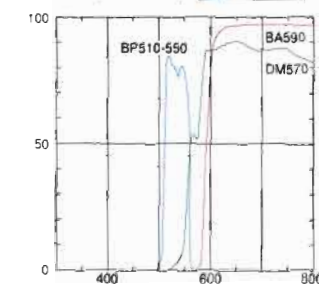
B Excitation (wide band) 6 U-MWB



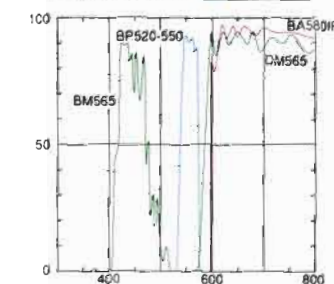
IB Excitation (wide band) 9 U-MWIB



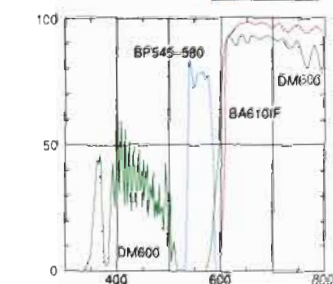
G Excitation (wide band) 11 U-MWG



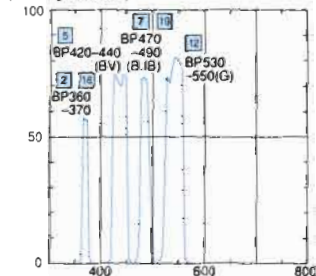
IG Excitation (wide band) 14 U-MWIG



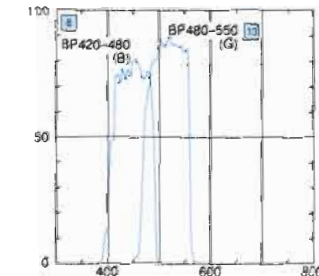
IY Excitation (wide band) 15 U-MWIY



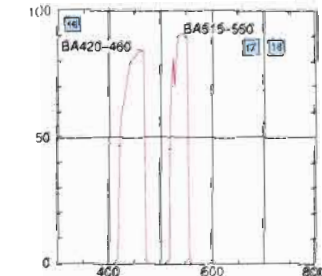
Narrow band excitation filter (excluding V excitation)



Ultrawide band excitation filter



Barrier filter for pigment separation



■ Mirror cube units

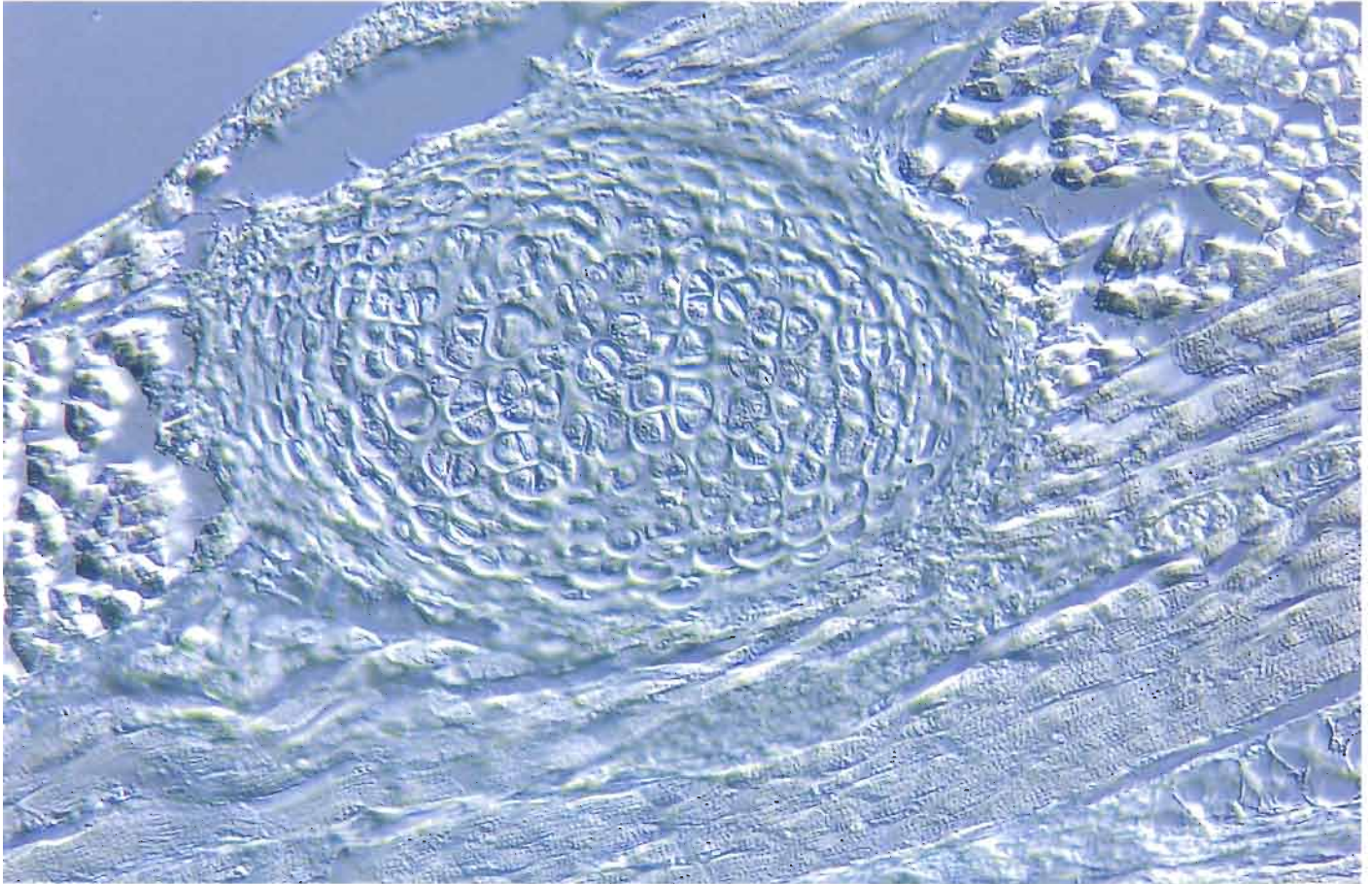
Cube	Excitation	Dichroic mirror	Excitation filter	Barrier filter	Application
1 U-MWU	U	DM400	BP330-385	BA420	●Autofluorescence observation ●DAPI: DNA ●Hoechst 33358,33342 chromosome
2 U-MNU	U	DM400	BP360-370	BA420	
3 U-MNV	V	DM455	BP400-410	BA455	●Catecholamine observation ●Serotonin Observation ●Tetracycline observation:bone,tooth
4 U-MWBV	BV	DM455	BP400-440	BA475	●Quinacrine mustard: chromosome ●Thioflavine S: lymphocyte ●Acridine: nucleic acid
5 U-MNBV	BV	DM455	BP420-440	BA475	
6 U-MWB	B	DM500	BP450-480	BA515	
7 U-MNB	B	DM500	BP470-490	BA515	
8 U-MSWB	B	DM500	BP420-480	BA515	●FITC: fluorescent anti-body observation ●Acridine orange: DNA, RNA ●Auramine tubercle bacillus
9 U-MWIB	IB	DM505	BP460-490	BA515IF	
10 U-MNIB	IB	DM505	BP470-490	BA515IF	
11 U-MWG	G	DM570	BP510-550	BA590	
12 U-MNG	G	DM570	BP530-550	BA590	●Rhodamine, TRITC: fluorescent anti-body observation ●Propidium iodide: DNA
13 U-MSWG	G	DM570	BP480-550	BA590	
14 U-MWIG	IG	DM565	BP520-550	BA580IF	
15 U-MWIY	IY	DM600	BP545-580	BA610IF	●Texas Red® : fluorescent anti-body observation.

■ Band pass mirror cube units

16 U-MNUA	U	DM400	BP360-370	BA420-460	Only portion stained by U excitation pigment can be observed in case of multi-staining with U excitation pigment and FITC.
17 U-MWIBA	IB	DM505	BP460-490	BA515-550	Only FITC stained portion can be observed in case of multi-staining with FITC and TRITC or Texas Red.
18 U-MNIBA	IB	DM505	BP470-490	BA515-550	Only FITC stained portion can be observed in case of multi-staining with FITC and TRITC or Texas Red.

Nomarski DIC with Higher Resolution and Contrast

Fetal mouse; unstained sagittal section.



Precision manufacturing and new coatings of the DIC prisms combine to produce images with the highest resolution and contrast. Nomarski differential interference contrast is achieved simply by inserting the analyzer slider into the nosepiece. Any combination of five optical elements can be inserted into the modular universal turret condenser, facilitating rapid changeover among different microscope observation methods. The universal turret condenser features interchangeable flip-out top lens elements for N.A. 1.4 oil immersion and N.A. 0.9 dry transmitted light microscopy.



U-UCDB

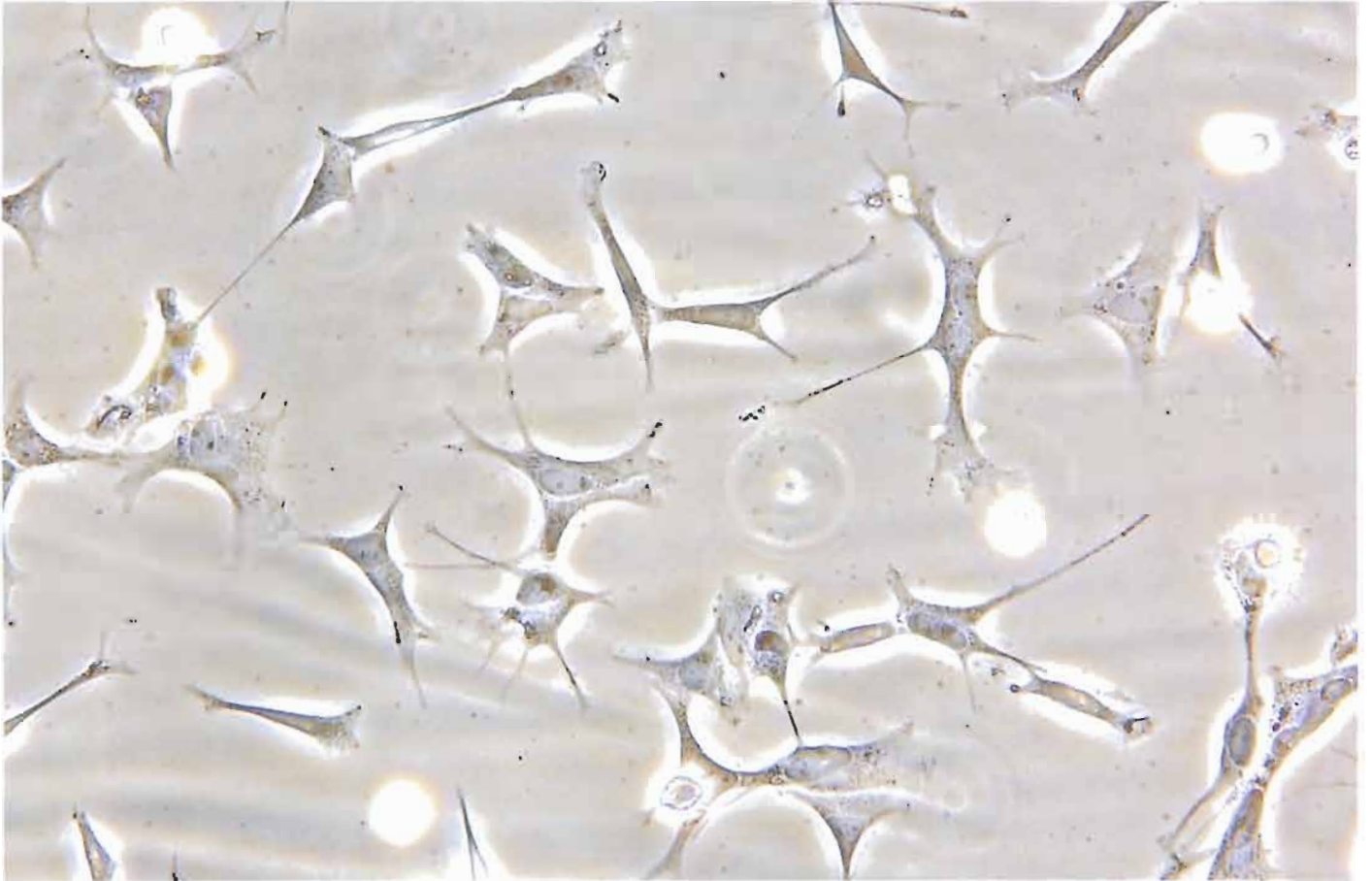


BX50+U-UCDB
(with photo tube)

BX50+U-UCDB
(with video port)

Phase Contrast Examination of Living Cells and Microorganisms

Brain cells; phase contrast illumination.



A newly formulated coating for the phase contrast annuli enhance resolution, contrast and staining effects for the examination or identification of phase specimens. The BX phase contrast turret condenser features instant changeover from phase to brightfield or darkfield.



BX-PHD

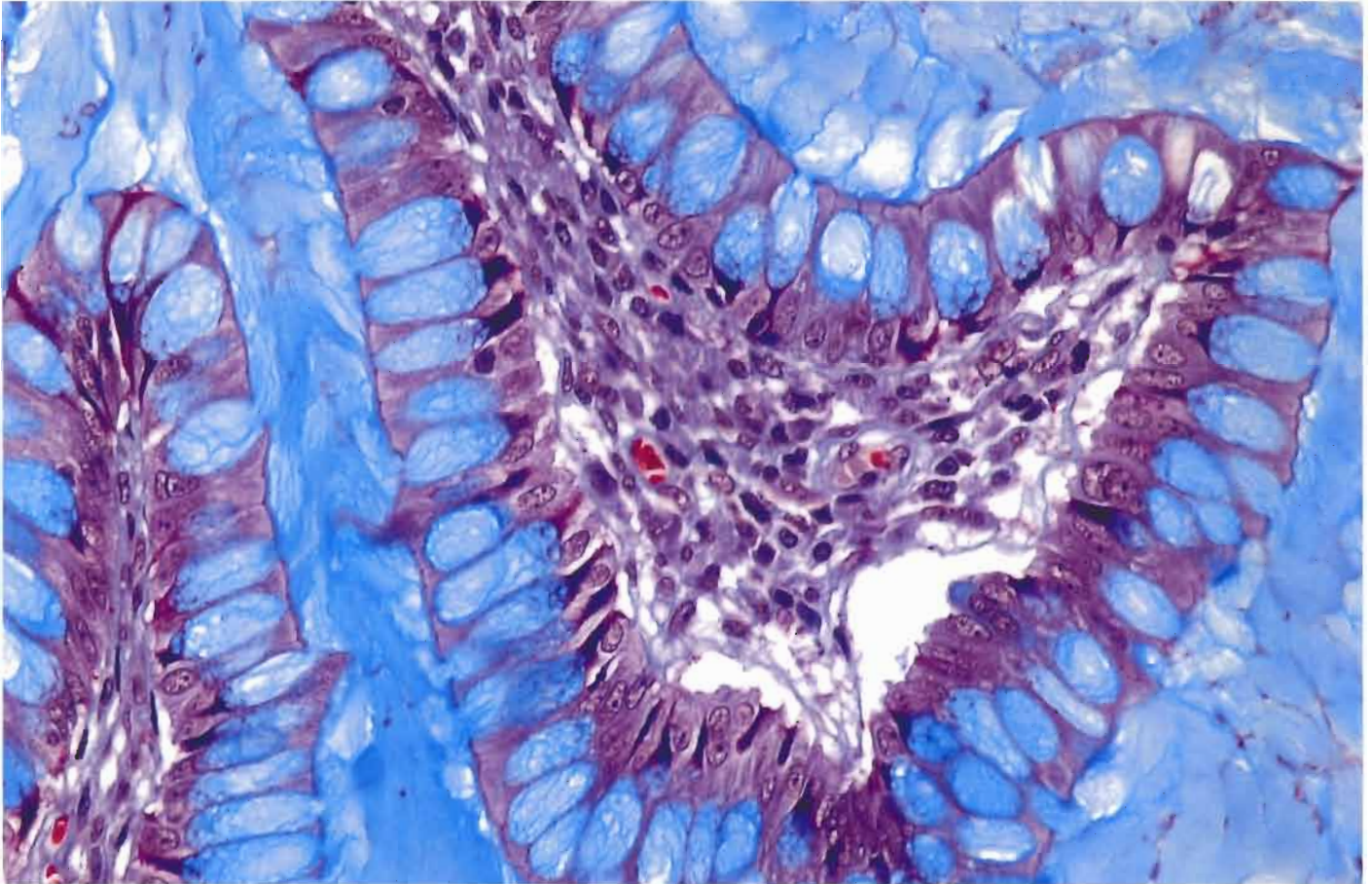


BX40+BX-PHD

BX50+BX-PHD

Outstanding Brightfield Image Quality

Mucus cells; brightfield.



The "cutting edge" technology of the Olympus UIS infinity-corrected optical system, with world-class UIS objectives, delivers matchless resolving power and contrast, both visually and photographically.



U-AAC+PLAPO Objectives



BX50+U-SWTR

BX40+U-TBI

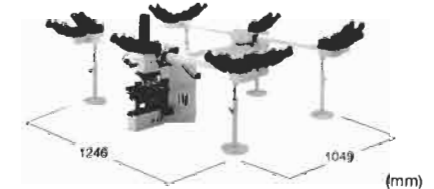
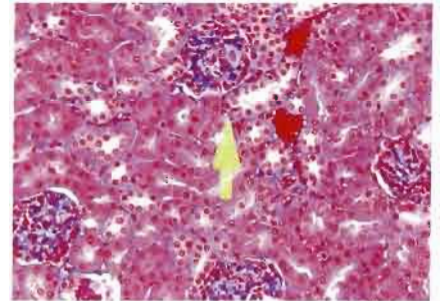
Attachments for Group Observation



BX50+BX-DMDO

BX-DMDO Multi-viewing Attachment (for 10 persons)

- As a convenient method to facilitate discussion between researchers, the BX-DMDO enables the same image to be viewed by up to 10 persons at once.
- The arrow pointer can be moved to indicate any area of the specimen. Pointer color (green or orange) can be changed, and brightness adjusted.

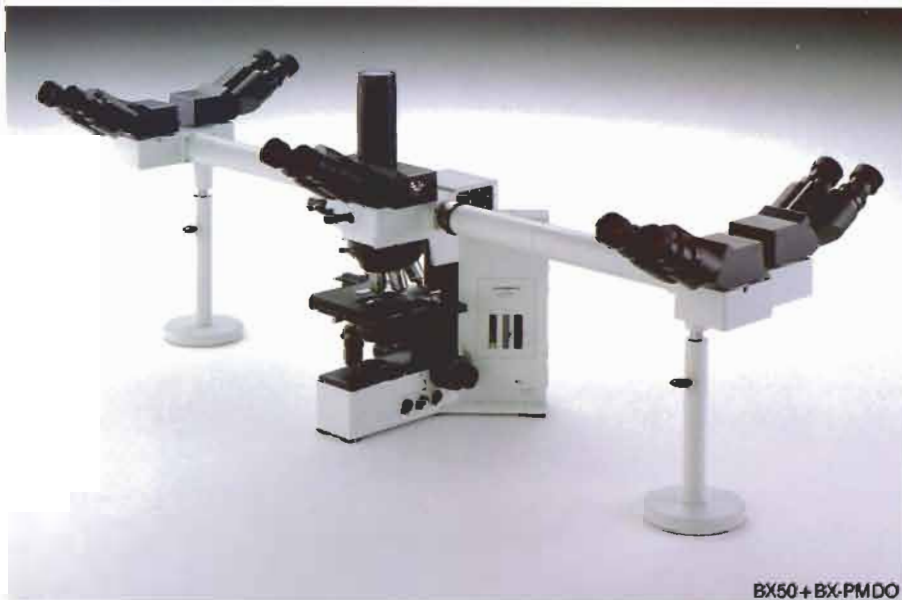


BX-PMDO Multi-viewing Attachment (for 5 persons)

- Permits simultaneous observation of the same specimen image in the same orientation by up to five persons.

BX-BDO/BX-SDO Dual-viewing Attachment

- Two dual observation types are available. While the BX-SDO is designed for two persons sitting side by side, the BX-BDO is designed for two persons sitting opposite each other.
- The features are exactly the same as the Multi-viewing attachment, except that it permits observation by two persons.
- The second observer of BX-BDO may manipulate the pointer by means of an additional lever located on the opposite side from the main lever.



BX50+BX-PMDO



BX50+BX-SDO



BX50+BX-BDO

Broad Lineup of Photomicrography Systems and Video Adapters

Sophisticated fluorescence photomicrography — made easy
Recent trends have confirmed the increasing importance of fluorescence microscopy techniques and the need to accurately document fluorescence images. Both the state-of-the-art PM30 and the PM20 feature sophisticated functions specifically designed to handle the unique conditions of fluorescence photomicrography with ease and precision.

PM30 Automatic Photomicrography System

The exclusive Super FL Auto mode provides fully automatic exposure control for effortless fluorescence photomicrography. Auto mode accommodates all other observation methods and a host of other convenient features facilitate superior, trouble-free photomicrography.

- Super FL Auto with fully automatic exposure control for fluorescence photomicrography.
- Three exposure measurement areas: 0.1% micro-spot, 1% spot as well as 30% field averaging.
- Data storage in internal memory or on optional memory cards.
- RS-232C port for computerized control.
- Auto bracketing.



PM20 Automatic Photomicrography System

The PM20 features a new FL Auto mode with specially developed exposure adjustment for precise fluorescence photomicrography. A versatile system for all photomicrography needs, the PM20 is also extremely compact.

- Two auto modes including a new FL Auto mode specifically for fluorescence photomicrography.
- 1% spot and 30% field averaging measurement areas.
- Ultra-compact control unit with convenient Jog Dial and backlit LCD screen.
- Internal memory stores four photomicrographic condition settings.
- Auto bracketing





Direct image projection for high-quality video monitoring

The BX trinocular observation tubes accept a variety of video adapters in place of the detachable vertical tube for direct mounting of most video cameras. As UIS Series objectives have optical corrections completed in the objectives themselves, this makes it possible to project the corrected primary image directly onto the video camera chip, without the need for intermediate optics, ensuring the best possible video images.



Direct image video ports



Video ports



Mount adapters



BX-POL

BX-POL Simple Polarizing Attachment

Simple polarized light observation can be performed simply by inserting an analyzer in the revolving nosepiece and placing a polarizer on the light exit window. This accessory is extremely useful for detecting birefringent specimen details.



U-DA

U-DA Drawing Attachment

Very useful in the accurate sketching of a magnified specimen image seen through the microscope with a magnification ratio of 16X.



U-FC

U-FC Filter Cassette

The U-FC filter cassette quickly attaches to the transmitted light path window at the base of the microscope and enables fast insertion of up to three filters in the light path. U-FC accepts all commercially available $\phi 45\text{mm}$ frameless filters.



U-CA

U-CA Magnification Changer

A simple turn of the turret increases intermediate magnification from 1X by three levels: 1.25X, 1.6X and 2X without changing the visual or photo eyepieces.



U-EPA

U-EPA Eyepoint Adjuster

The U-EPA allows the eyepoint position to be raised by 30mm. In addition, the flexibility of the UIS infinity-corrected optical system permits up to two eyepoint adjusters to be attached between the frame arm and observation tube.

A Comprehensive Selection of High-Performance UIS Optics

Objectives



UPLAPO Series

The UPLAPO Series of top-performance universal Plan Apochromat objectives offer unsurpassed resolution, contrast and field flatness over the entire field of view F.N. 26.5 in fluorescence, Nomarski DIC and polarized observations in transmitted light.



UPLFL (UPLFL-PH) Series

These universal objectives perform superbly with a wide range of microscopic techniques including brightfield, Nomarski DIC and polarized light observations in transmitted light as well as incident light fluorescence observation. The UPLFL-PH Series is designed for phase-contrast microscopy.



ACH (ACH-PH) Series

These cost-effective standard objectives for transmitted light brightfield observation are best-suited to routine work as well as educational and training purposes. The ACH-PH Series is designed for phase-contrast microscopy.



PLAPO Series

Outstanding resolution and contrast characteristics make these top-performance Plan Apochromat objectives ideal for transmitted light brightfield microscopy. Corresponds to superwide field of view F.N. 26.5.



PL (PL-PH) Series

These standard objectives are suited to clinical laboratory and examination work. They ensure superb field flatness up to F.N. 22 with brightfield observation in transmitted light. For phase-contrast microscopy, the PL-PH Series is also available.



No cover objectives

These objectives are specially designed for microscopy work performed without a cover lens such as the observation of blood smears. While the apochromat design ensures thorough color compensation, the universal design is also available for a wide range of observations.

Objectives

Objectives	Item	Numerical Aperture	Working Distance	Cover Glass Thickness	Remarks
Achromat Objectives	ACH 10x	0.25	6.10 mm	—	
	ACH 20x	0.40	3.00 mm	—	
	ACH 40x	0.65	0.45 mm	0.17 mm	
	ACH 60x	0.8	0.23 mm	0.17 mm	
	ACH 100x O	1.25	0.13 mm	—	Oil
	ACH 100x OI	0.55-1.25	0.13 mm	—	Iris
Plan Achromat Objectives	PL 4x	0.10	22.00 mm	—	
	PL 10x	0.25	10.50 mm	—	
	PL 20x	0.40	1.20 mm	0.17 mm	
	PL 40x	0.65	0.56 mm	0.17 mm	
	PL 50x OI	0.50-0.90	0.20 mm	—	Iris
	PL 100x O	1.25	0.15 mm	—	Oil
Universal Plan Semi-Apochromat Objectives	UPLFL 4x	0.13	17.00 mm	—	
	UPLFL 10x	0.30	10.00 mm	—	
	UPLFL 20x	0.50	1.60 mm	0.17 mm	
	UPLFL 40x	0.75	0.51 mm	0.17 mm	
	UPLFL 100x O	1.30	0.10 mm	0.17 mm	Oil
	UPLFL 100x OI	0.60-1.30	0.10 mm	0.17 mm	Oil, Iris
Universal Plan Apochromat Objectives	UPLAPO 4x	0.16	13.00 mm	—	
	UPLAPO 10x	0.40	3.10 mm	0.17 mm	
	UPLAPO 20x	0.70	0.65 mm	0.17 mm	
	UPLAPO 40x	0.85	0.20 mm	0.11-0.23 mm	C.C.
	UPLAPO 40x OI	0.50-1.00	0.12 mm	—	Oil, Iris
	UPLAPO 100x OI	0.50-1.35	0.10 mm	0.17 mm	Oil, Iris

Objectives	Item	Numerical Aperture	Working Distance	Cover Glass Thickness	Remarks
Plan Apochromat Objectives	PLAPO 1.25x	0.04	5.1 mm	—	
	PLAPO 2x	0.06	6.20 mm	—	
	PLAPO 40x	0.95	0.13 mm	0.11-0.23 mm	C.C.
	PLAPO 60x O	1.40	1.10 mm	0.17 mm	Oil
	PLAPO 100x O	1.40	0.10 mm	0.17 mm	Oil
No cover Objectives	UMPLFL 40x	0.75	0.63 mm	0	
	UMPLFL 100x	0.95	0.31 mm	0	
	MPLAPO 50x	0.95	0.3 mm	0	
	MPLAPO 100x O	1.40	0.08 mm	0	Oil

Phase Objectives	Item	Numerical Aperture	Working Distance	Phase Ring No.	Remarks
Achromat Objectives	ACH 10x PH	0.25	6.10 mm	PH-1	
	ACH 20x PH	0.40	3.00 mm	PH-1	
	ACH 40x PH	0.65	0.45 mm	PH-2	
	ACH 100x O PH	1.25	0.13 mm	PH-3	Oil
Plan Achromat Objectives	PL 10x PH	0.25	10.50 mm	PH-1	
	PL 20x PH	0.40	1.20 mm	PH-1	
	PL 40x PH	0.65	0.56 mm	PH-2	
	PL 100x O PH	1.25	0.15 mm	PH-3	Oil
Plan Semi-Apochromat Objectives	UPLFL 10x PH	0.30	10.00 mm	PH-1	
	UPLFL 20x PH	0.50	1.60 mm	PH-1	
	UPLFL 40x PH	0.75	0.51 mm	PH-2	
	UPLFL 100x O PH	1.30	0.10 mm	PH-3	Oil

C.C.: Correction Collar

Eyepieces/Photo Eyepieces



Eyepieces

Photo eyepieces

WH/SWH Eyepieces

WH/SWH eyepieces are designed for use with the UIS objectives that guarantee field flatness even when multiple incident light illuminators or intermediate attachments are mounted between the frame and objectives. The field number of 22 and 26.5 are available.

Eyepieces	Item	Field Number	Diopter Adjustment	Remarks	Diameter of Micrometer
Widfield Eyepieces	WH 10x	22			24
	WH 10xH	22	-8~+2	dioptr correction	24
	WH 15x	22			24
	CROSSWH 10xH	22	-8~+2	dioptr correction crossline	---
Super Widfield Eyepiece	SWH 10xH	26.5	-8~+2	dioptr correction	---
Finder Eyepieces	35 WH 10x	22	-8~+2	35mm photo mask	---
	35 SWH 10x	26.5	-8~+2	35mm photo mask	---
	PWH 10x	22	-8~+2	3 1/4" x 4 1/4" photo mask	---
	PSWH 10x	26.5	-8~+2	3 1/4" x 4 1/4" photo mask	---

PE2.5x, 3.3x, 4x, 5x Photo Eyepieces

Used in conjunction with UIS objectives, these photo eyepieces produce high-quality, high-contrast photomicrographs and video recordings.

Condensers

An extensive range of condensers is available, including universal, ultra-low magnification, and Abbe condensers.



Brightfield condensers

Phase-contrast condenser

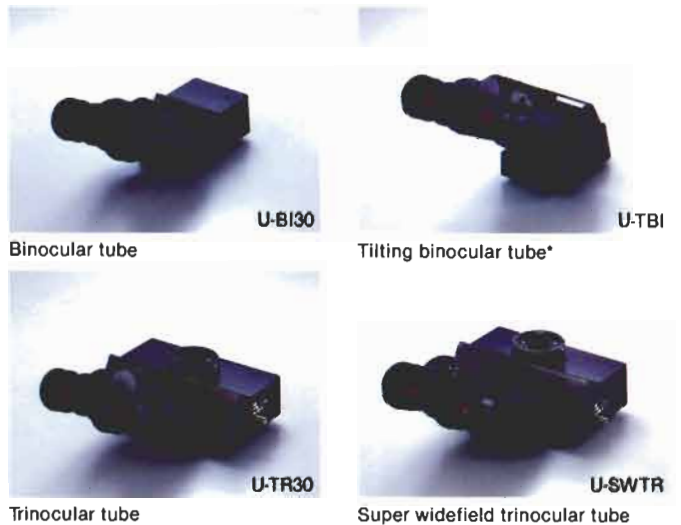


Universal condenser

Darkfield condensers

Observation Tubes

BX Series observation tubes range from a widefield binocular and tilting binocular tube to a widefield trinocular and super widefield trinocular tube.



Binocular tube

Tilting binocular tube*

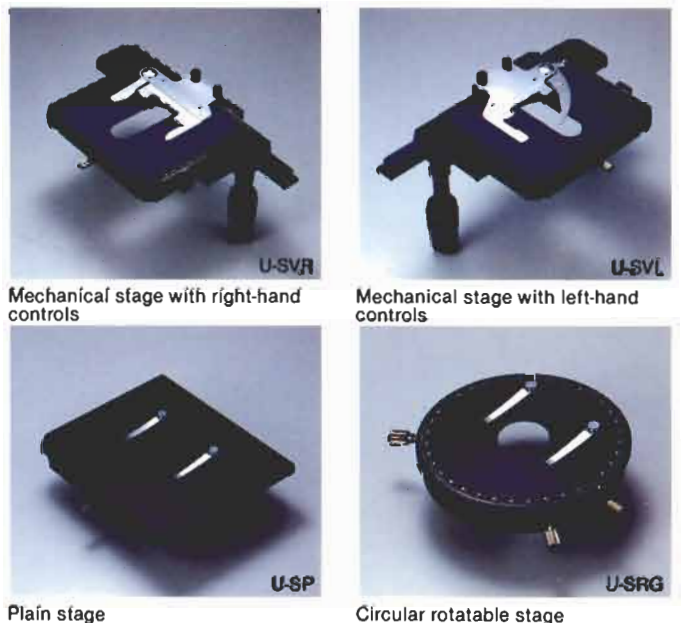
Trinocular tube

Super widefield trinocular tube

*Note: Slight vignetting may occur in the periphery of the field of view in combination with an additional intermediate attachment.

Stages

The standard stages are ceramic-coated for extreme durability, and are available with left or right stage drive handles (two lengths are also available) and single or dual slide holders. Special stages include a plain stage and circular rotatable stage.



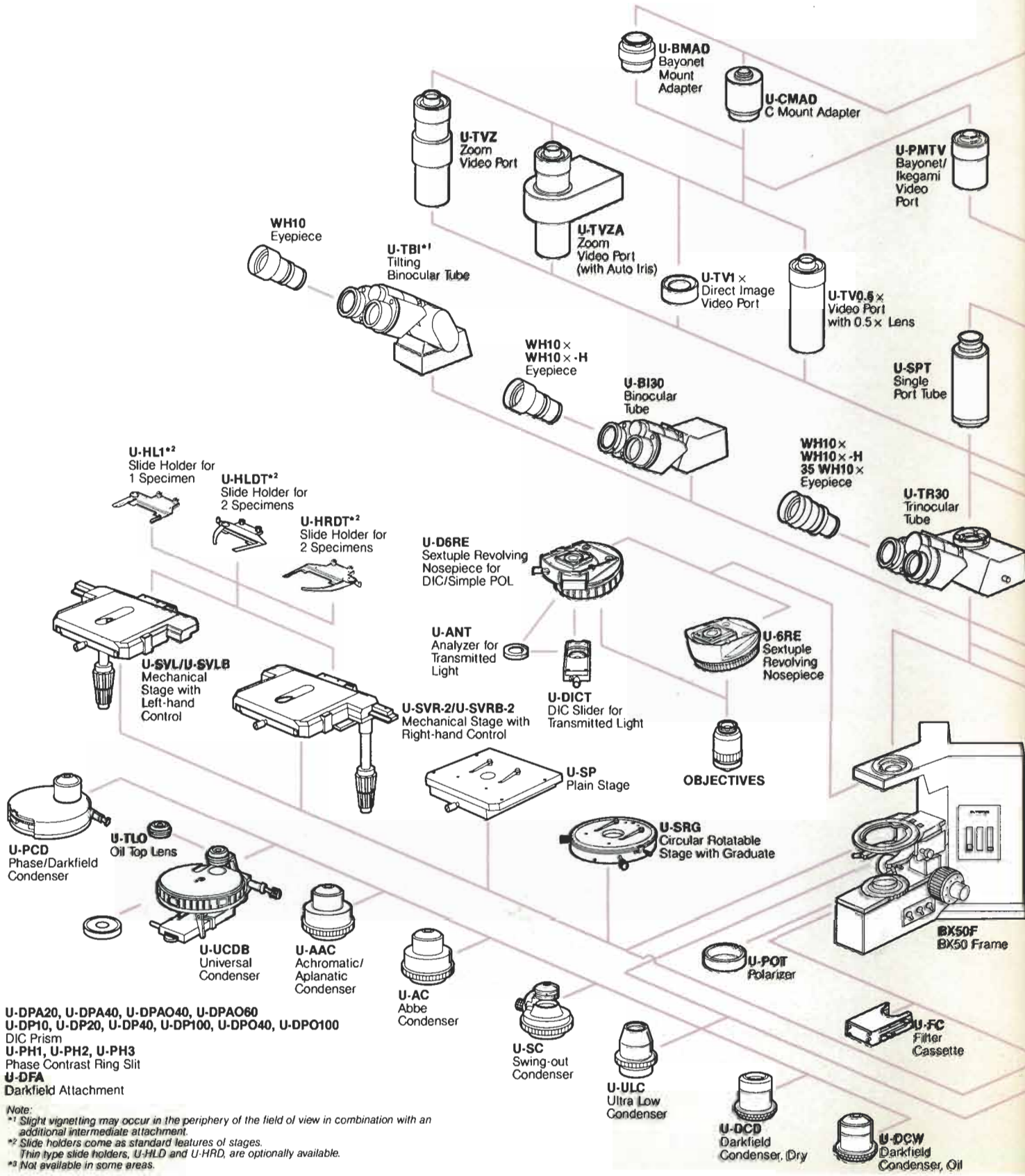
Mechanical stage with right-hand controls

Mechanical stage with left-hand controls

Plain stage

Circular rotatable stage

BX50/BX40 SYSTEM DIAGRAM



Note:
 *1 Slight vignetting may occur in the periphery of the field of view in combination with an additional intermediate attachment.
 *2 Slide holders come as standard features of stages.
 Thin type slide holders, U-HLD and U-HRD, are optionally available.
 *3 Not available in some areas.

VIDEO SYSTEM

U-PMTVC
C Mount
Video Port

PHOTO SYSTEM

PE
Photo Eyepiece

U-TV0.5x
U-TV1x

U-DPT
Double Port
Tube

U-VPT³
Video Camera
Integrated
Photo Tube

SWH10x H
35 SWH10x
Eyepiece for
Super Widefield

U-LH100
Lamp House
for 100W
Halogen

OBJECTIVES

U-LS30
Lamp
Socket for 30W
Halogen

BX40F
BX40 Frame

U-LH100
Lamp House
for 100W
Halogen

U-UCLH
Collector Lens
for 100W
Halogen

U-UCLHG/XEB
Collector Lens
for Hg/Xe
Type B

U-ULH
Universal
Lamp Housing

U-ND6, U-ND25
ND Filter

MIRROR UNIT
Mirror Unit for
Fluorescence

U-URA
Universal
Reflected Light
Illuminator

U-UCV
Conversion Lens

U-UCLHG/XEA
Collector Lens
for Hg/Xe
Type A

U-AN
Analyzer for
Reflected Light

U-ULS100HG
Lamp Socket
for 100W Hg

U-ULS100H
Lamp Socket
for 100W
Halogen

U-DO
Dual Observation
Attachment

U-SWTR
Super Widefield
Trinocular Tube

U-MDO10B
Multi Discussion
Observation
Body

U-MDO10R
Multi Discussion
Observation
Body

U-SDO
Sideview
Attachment

U-MDOB
Multi Discussion
Observation
Body

U-MDOSV
Multi Discussion
Observation
Sideviewer

U-CA
Magnification
Changer

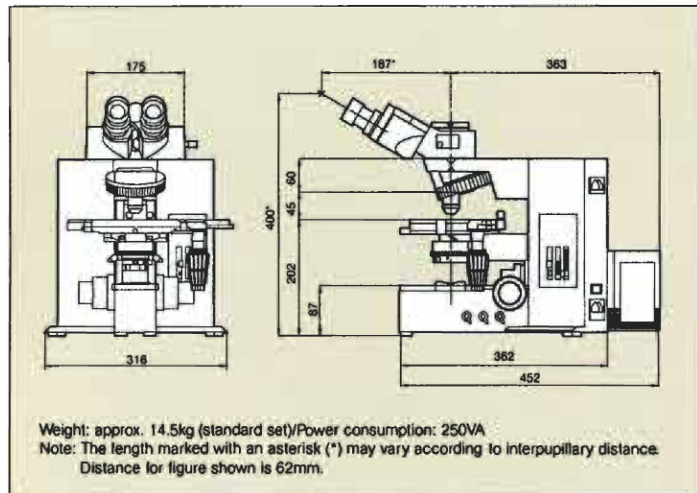
U-EPA
Eyepoint
Adjuster

U-DA
Drawing
Attachment

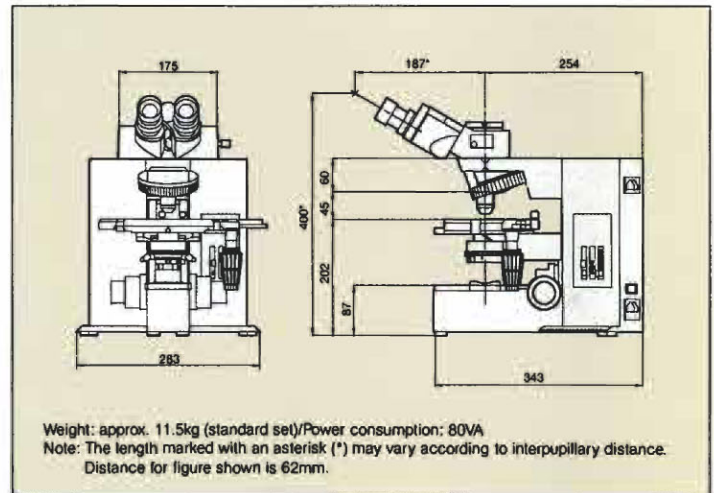
■ BX50/BX40 Specifications

Item		BX50	BX40
Microscope stand	Optical system	UIS optical system	
	Focus	Vertical stage movement; 25mm stroke with coarse adjustment upper limit stopper. Torque adjustment for coarse adjustment knobs; stage mounting position variable. High sensitivity focusing handle (minimum fine focus adjustment gradations: 1µm increments).	
	Illuminator	Built-in Koehler illumination for transmitted light. 12V 100W halogen bulb (pre-centered). Light preset switch. Light intensity LED indicator. Built-in filters (LBD-IF, ND6, ND25).	Built-in Koehler illumination for transmitted light. 6V 30W halogen bulb (pre-centered). Light preset switch. Light intensity LED indicator.
Revolving nosepiece		Interchangeable reversed sextuple nosepiece	Fixed reversed quintuple nosepiece
Observation tube	Widefield (F.N. 22)	Widefield binocular, inclined 30°; widefield tilting binocular, 5°-35°; widefield trinocular, inclined 30°.	
	Super widefield (F.N. 26.5)	Super widefield trinocular, inclined 30°.	
Stage		Ceramic-coated coaxial stage with left or right hand low drive controls; with rotating mechanism and torque adjustment mechanism.	
Condenser		Abbe (NA 1.25), Swing-out Achromatic (NA 0.9), Achromatic/Aplanatic (NA 1.4)	

■ BX50 Dimensions

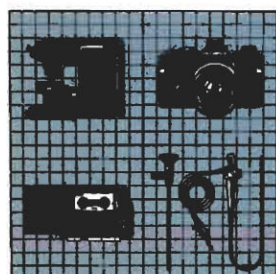


■ BX40 Dimensions



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Specifications are subject to change without notice.



Photographic,
 Medical,
 Microscopic,
 Industrial & Business Equipment

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