

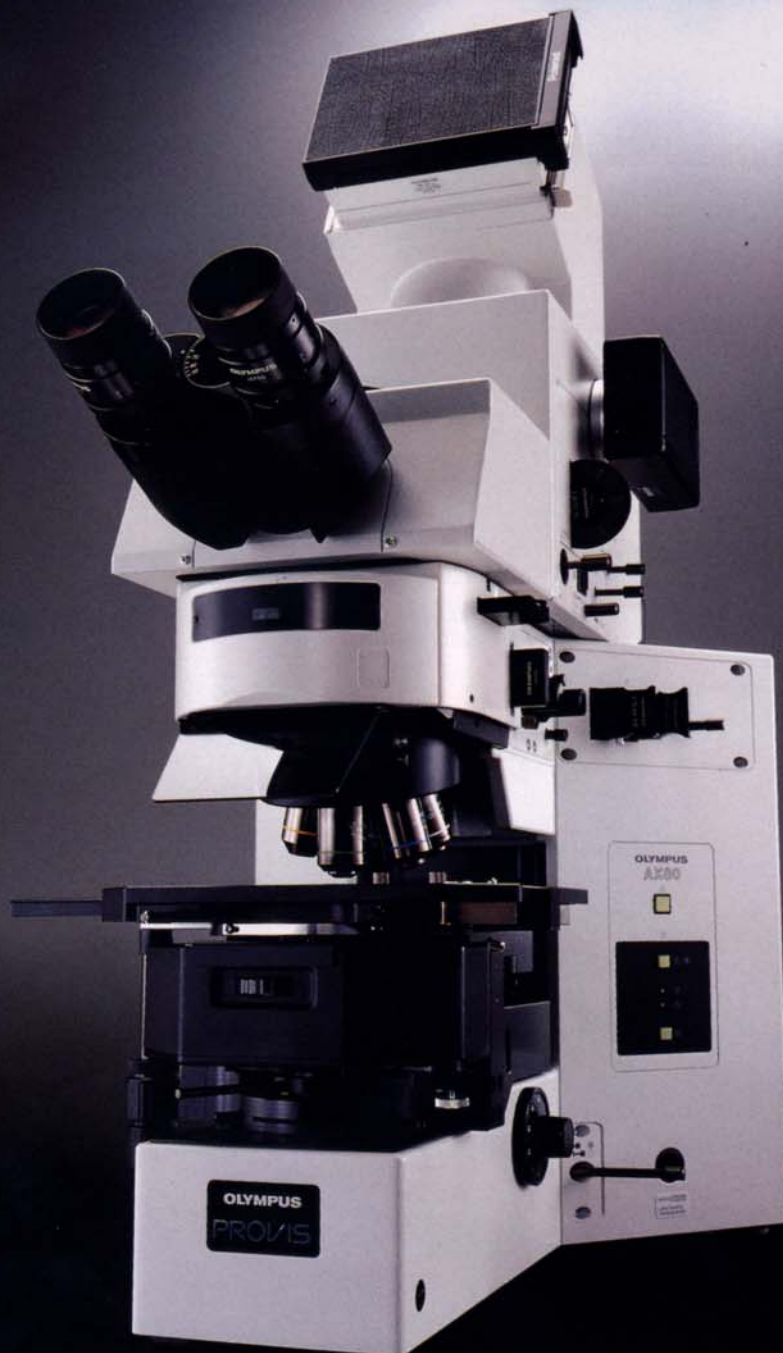
OLYMPUS®

AUTOMATIC RESEARCH
PHOTOMICROSCOPE

AX80

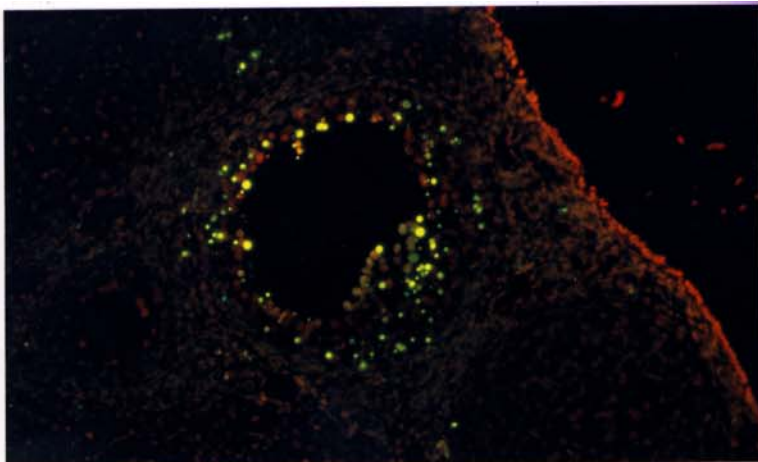
Olympus is about life. About photographic innovations that capture precious moments of life. About advanced medical technology that saves lives. About information- and industry-related products that make possible a better living. About adding to the richness and quality of life for everyone. Olympus. Quality products with a **FOCUS ON LIFE**

PROVIS

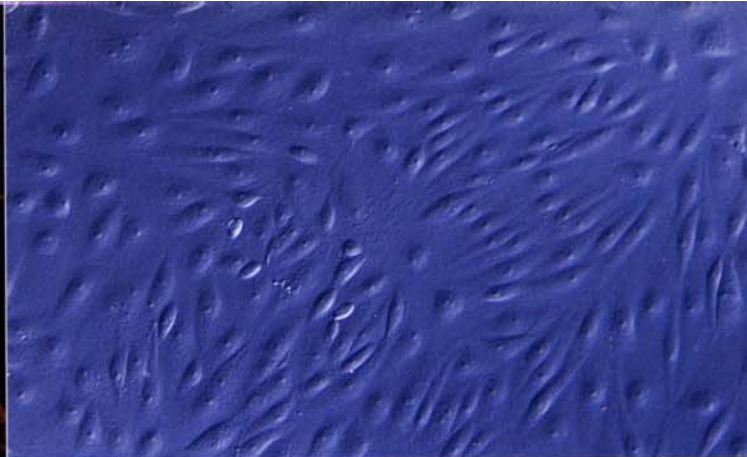


PROVIS





Mouse ovary (PI+FITC)



PtK₂ cell (DIC image)

Expanding the realm of leading-edge research with sophisticated automation and photometrics

WORLD CLASS OPTICS

Exceptional image resolution and contrast

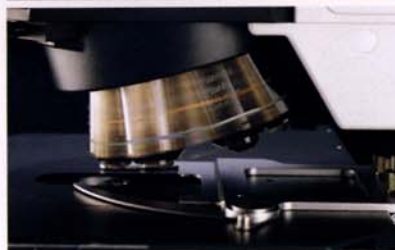
Superior image resolution and contrast are achieved in any observation method thanks to the Olympus original UIS infinity-corrected optical system. In this system, light travels from the objective through the body tube as parallel rays to be focused by the telan lens for an aberration-free image. Attachments can be added between the objective and the telan lens without resulting in magnification alterations to the total magnification.



AUTOMATIC OPERATION

Simplified method changeover & reliable recording

The AX80 offers an excellent level of automation thanks to the motorization of its revolving nosepiece, universal condenser, field stop for transmitted illumination and filter changeover, and its advanced auto focus and universal photo system. Optimum observation images are delivered with ease when the multicontroller is used to designate observation method and objectives. Reflected light fluorescence observation is achieved simultaneously with another observation method courtesy of motorized changeover of excitation wavelength.



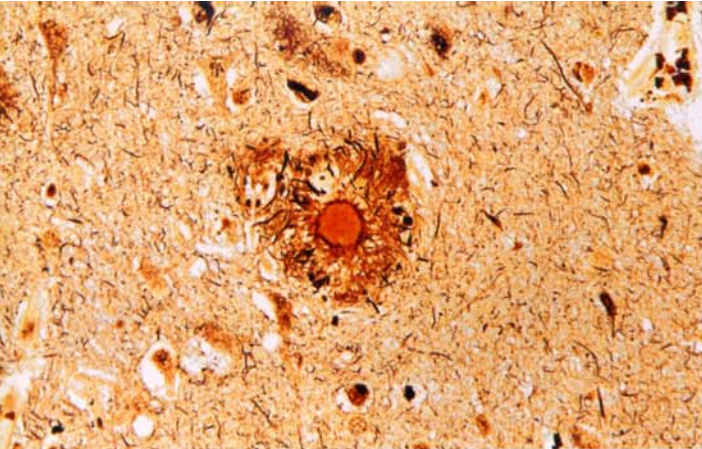
AUTO FOCUS

Revolutionary auto focus system

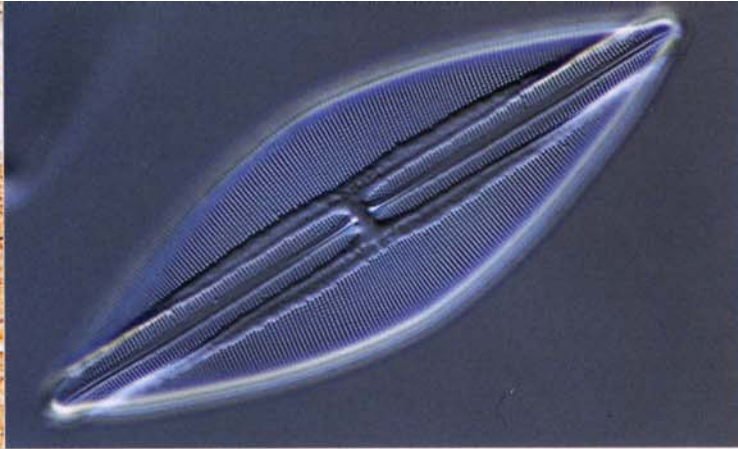
The AX80 incorporates a revolutionary auto focus system delivering precise auto focusing for objective magnification — 1.25x, 2x, 4x, 10x, 20x, 40x and 100x — in brightfield, darkfield, fluorescence*, polarizing* and Normaski DIC* observation methods. One-shot mode delivers a super-fast auto focus speed of 0.3-2 seconds for brightfield observation. The AX80 also offers the advantages of real-time mode. Focus thus remains sharp at all times regardless of objective or observation method changeovers or specimen movement.

* Require optional Memory Card.





temporal cortex of Alzheimer's disease



Diatom

Research /video documentation.

UNIVERSAL PHOTO SYSTEM

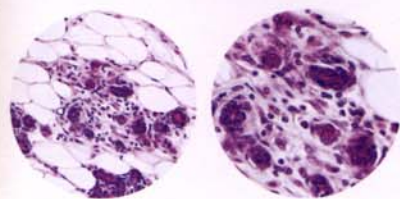
Zoom magnification & flexible spot measurement

Standard equipment for the AX80, the universal photo system incorporates advanced functions including a zoom magnification system with a 1x-2x zoom magnification change system for easy zooming and framing of a desired imaging area. A flexible spot measurement function* allows unrestricted movement of the 0.1% micro-spot and 1% spot measuring areas. The system also offers three automatic photometric modes such as Super FL mode, which provides for easy automatic exposure in fluorescence photomicrography.

* Functions within a 30% area of photo frame.



Flexible spot measurement



Zoom 1X

Zoom 2X

COMPUTER CONTROL

Easy computer operation for complex procedures

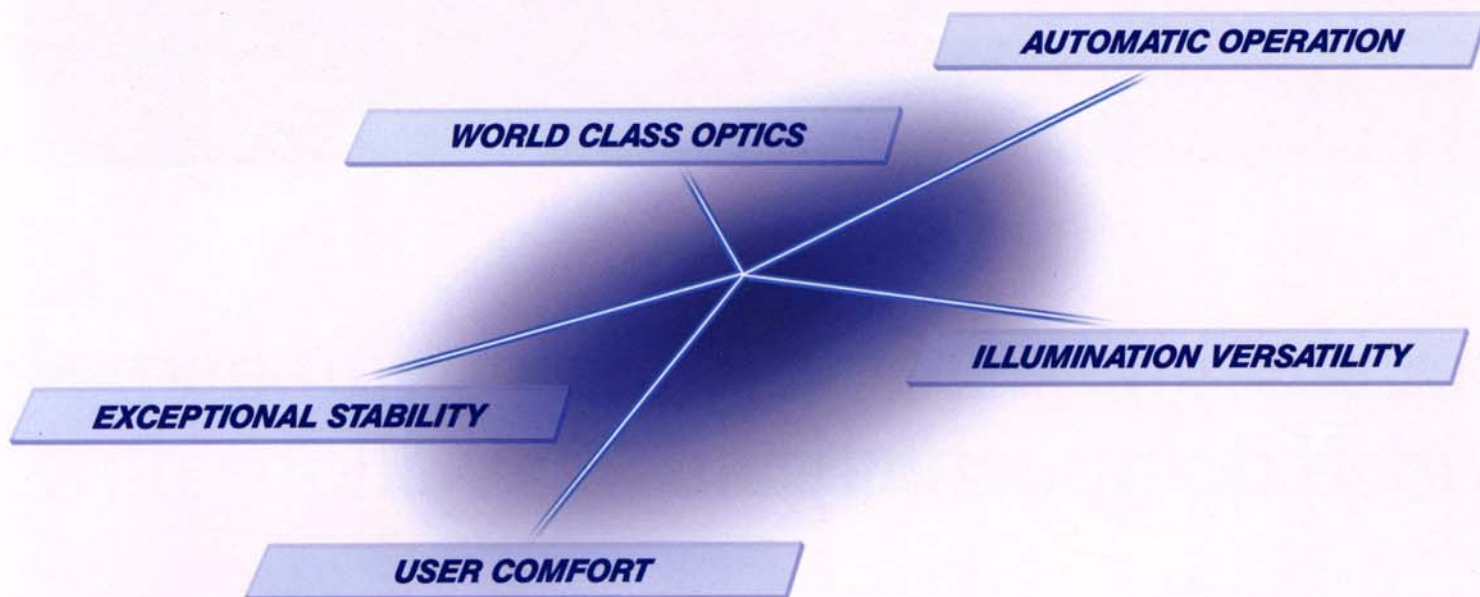
The AX80 provides for more complex procedures when the multi control box is linked to an external computer via an interface. A computer control system can thus be configured with ease for connected ancillary equipment used in F.I.S.H., patch clamping and other biological research applications. In addition to externally controlled observation, remote-controlled photomicrographic operation and high-speed data transmission are also possible.

EXCEPTIONAL STABILITY

Rigid Y-shape frame for stability & versatility

Exceptional versatility comes courtesy of the rigid Y-shape frame of the AX80 which supports the heaviest attachments. To reduce heat, the power supply was removed from the body of the AX80, which also boasts a heat-insulating structure. In addition to a wider work surface, the AX80 also offers vibration-resistant rigidity for optimum results of electrophysical experiments.





A powerful vision of future research from Olympus.

The PROVIS AX80 answers demands for automated microscopic procedure to bring higher standards to advanced research.

Increased versatility and freedom to conduct high-level research are assured thanks to the AX80's automation of observation and photo and video documentation.

Extraordinary images are delivered by the world class UIS infinity-corrected optical system of this microscope.

Olympus' top-of-the-line microscope, the AX80 offers unprecedented levels of automation and precision to fulfill the most demanding requirements of cutting-edge research.

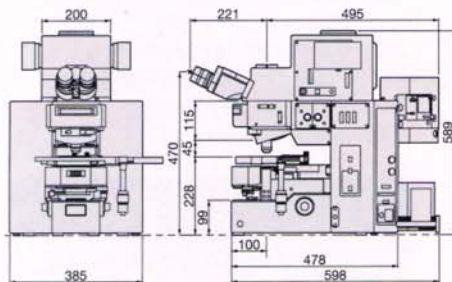


*PROVIS stands for "PROfessional ViSion."

AX80 Specifications

Item	AX80
Type	AX80TF: Y-shape frame with built-in transmitted illuminator AX80TRF: Y-shape frame with built-in transmitted/incident light vertical illuminator
Optical system	UIS optical system (infinity-corrected/compensation-free).
Microscope stand	12V100W halogen (2,000hrs, long-life type), precentered.
	Motorized field diaphragm.
	6 built-in motorized filter changers (ND1.5, ND6, ND25, ND50, IF550, LBD).
	One external filter can be user installed (manual operation).
Incident light illumination (AX80TRF only)	Universal vertical illuminator, 12V100W halogen/Hg100W/Xe75W applicable (when using U-ULH), motorized mirror unit changer, excitation light shutter (interlocking operation when changing an objective/observation method.) Max. 3 filter sliders (6 filters) attachable (when using AX-RFCH).
Illumination adjustment	1-12V (adjustable in units of 0.1V by the jog dial), light preset switch, changeover switch for transmitted/incident light.
Focus	Motorized vertical stage movement by roller guide, stage travel range: 10mm, coaxial coarse and fine focus (coarse/fine changeover by U-MCB), coarse stroke per rotation: 1mm, sensitivity: less than 0.5 μ m.
Operation control position	Main switch located at power supply (U-PS), sub-main switch, changeover switch for transmitted/incident light illumination, light pre-set switch: right wing of frame (all the other operations are performed by U-MCB).
Power supply (U-PS)	100/120/220/230/240V automatic changeover, main switch attached.
Revolving nosepiece	Motorized sextuple nosepiece, motorized quintuple nosepiece for darkfield observation.
Stage	Stroke range: 52mm x 76mm (with vernier), holds 2 slides (detachable), torque adjustable, selectable from right handle or left handle; knob position (tip): 57mm from desktop.
Condenser holder	Vertical stroke range: 10mm, centering adjustment function, both-side condenser movement control knobs.
Observation tube	F.N. 26.5 (super widefield), adjustable interpupillary distance range: 50-76mm, inclined 24°, magnification (direct optical path: 1x, optical path through zoom: 1-2x (zoom)).
Camera	35mm cameras 2 pcs, Large format camera, TV camera (all can be attached at the same time), selectable by U-MCB.
Photomicrography unit	4-step observation optical path: 1. binocular (direct): 100% 2. binocular (through zoom): 100% 3. TV port (direct): 100% 4. TV port (through zoom): 100%, 2-step optical path through zoom: 1. through zoom: 100% 2. through zoom: 20%, photo: 80% (only in case of selection 2. or 4. in observation optical path)
	2-step photo optical path: 1. photometry: 100% 2. camera: 100% (automatic changeover)
	3-step camera optical path: 1. 35mm right 2. 35mm left 3. Large format
	All above changeovers are achieved automatically by U-MCB. Photo release can be achieved only via 2 or 4 of observation path and 2 of path through zoom. 2-step AF observation optical path (motorized changeover): 1. through zoom 100% 2. through zoom 50%, through AF 50% (can be achieved only via 2 or 4 of observation optical path), automatically changes to zoom 100% when in photo release mode.
Photo magnification	35mm camera: 2.5x-5x, Large format camera: 7.5x-15x
Zoom	Motorized control by fixed magnification switch or jog dial of U-MCB. Zoom ratio: 2x
Photoframe reticule	Manual insertion, bright frame operation (red/yellow), illumination adjustment (7 levels + Off).
Shutter	Pulse control electromagnetic shutter, shutter speed: max. 1/125 sec.
Photometry	2-dimensional image analysis memory mode by the CCD. 0.1% spot measurement, 1% spot measurement, 30% average measurement, flexible spot measurement area, spot color selectable (red/yellow).
Photometry condition	5 exposure modes: Auto mode, FL Auto mode, Super FL Auto mode, Manual mode, Time mode, Auto exposure range: 1/125 sec. -68 min. ISO: 3-25,600 (automatic setting by DX code, manual setting also possible), 13-step exposure control (0.25-4. every 1/3 step), auto bracketing function, 8-step reciprocity failure correction, multi-exposure, AE lock, exposure time recall, data/scale imprinting function (with special unit).
Camera back	35mm (PM-C35DX): auto loading/wind/rewind and automatic film end detection, data imprinting unit can be attached, automatic setting of the ISO value by DX code. Frame counting number is retained for data back-up. Data imprinting unit (PM-DI35): backlid exchange type, Large format camera back (attached to U-DLF), Polaroid (PM-CP-3)
Multi control box (U-MCB)	Transparent touch panel, jog dial control, plasma display, centralized control of all automatic functions including photometry, memory card function: can register, recall, delete, print information of photometry and observation. External interface function: selectable from RS232C, GPIB or printer interface (optional)
Eyeiece	10x, F.N. 26.5 (super widefield view)
Auto focus function	Contrast method by optical-path difference Working modes: real time mode/one shot mode (changeable), Magnification: 1.25x, 2x, 4x, 10x, 20x, 40x, 100x. Applicable observation methods: (transmitted illumination) brightfield, darkfield, Nomarski DIC*, polarizing* and fluorescence* (only in incident light illumination). *Require optional Memory Card
Objectives	PlanApo set: PlanApo 2x UPlanApo 20x UPlanApo set: PlanApo 2x UPlanApo 20x UPlanFL set: PlanApo 2x UPlanFL 20x UPlanApo 4x UPlanApo 40x UPlanApo 4x UPlanApo 40x UPlanFL 4x UPlanFL 40x UPlanApo 10x UPlanApo 100x O UPlanApo 10x UPlanApo 100x O UPlanFL 10x UPlanFL 100x O
Condenser	Motorized universal condenser: N.A. 0.16-0.9 (N.A.0.16-1.4, when oil top-lens in), objectives (1.25x-100x), Motorized function: turret, aperture diaphragm, top-lens interchangeable, auto polarizing plate attachment. Applicable for transmitted brightfield, darkfield, phase-contrast, Nomarski DIC, simple polarizing observation.

AX80 Dimensions (AX80TRF)

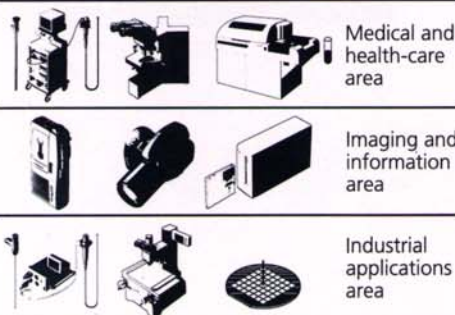


Weight: approx. 60kg (standard set)
Power consumption: 300VA



Specifications are subject to change without any obligation on the part of the manufacturer.

Olympus business areas



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