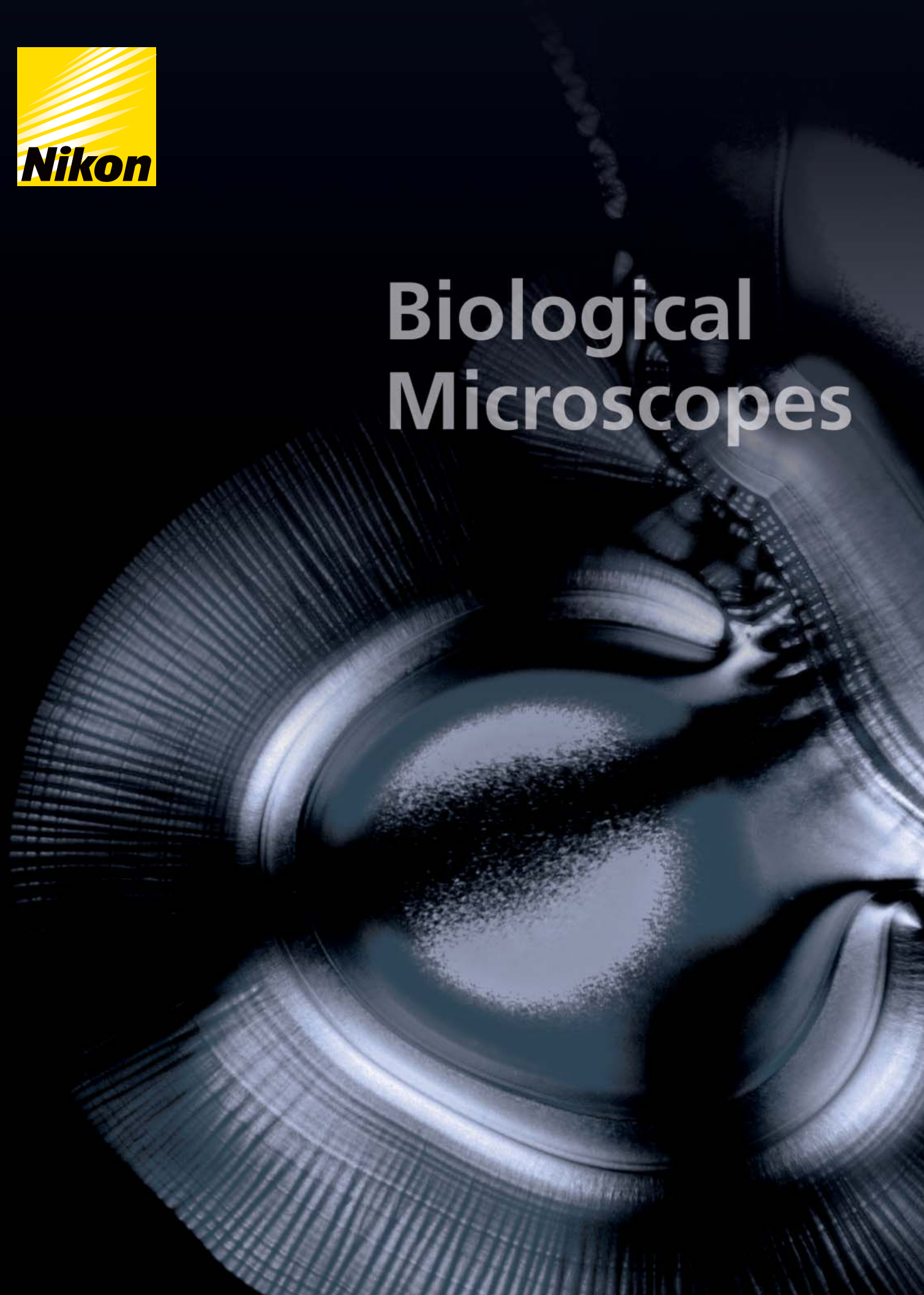
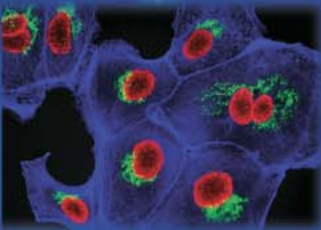
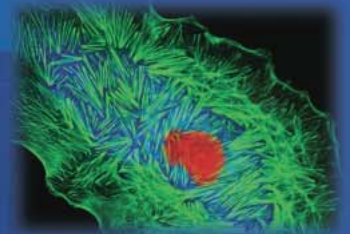
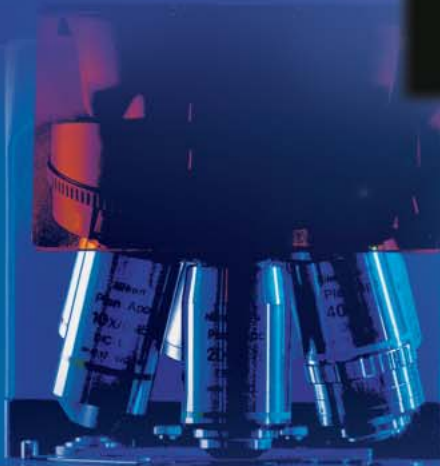
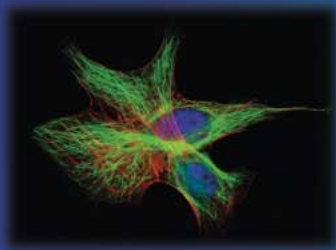
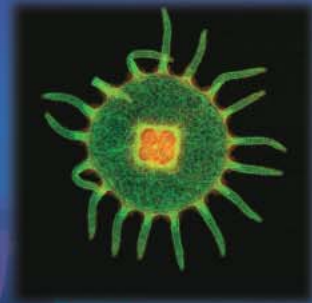




Biological Microscopes



Stellar lineup backed by leading-edge technologies, the ECLIPSE series and other biological models



The CFI60 is a breakthrough optical system combining Nikon's renowned CF design with infinity corrected optics. This revolutionary optical system adopts a completely new set of optical standards—a tube lens featuring a 200mm focal length, an objective with a 60mm parfocal distance and a 25mm thread size—to offer both superb optical performance and excellent expandability. Nikon's improvements to its objectives, epi-fluorescence attachment, DIC prisms and illumination system achieve even greater image quality and support the full spectrum of microscopy needs, including digital-image documentation and PC-based analysis.

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	Model	Brightfield	Macro Display	Darkfield	DIC	Phase Contrast	Polarizing	Epi-Fluorescence	HMC®
Upright Microscopes									
Motorized Advanced Research Microscope	90i	●100W	—	●	●	●	●Simple	●100W	—
Advanced Research Microscope	80i	●100W	—	●	●	●	●Simple	●100W	—
Clinical & Laboratory Microscopes	55i	●LED	—	—	—	—	—	●100W	—
	50i	●30W	—	●	—	●	●Simple	●100W	—
Clinical & Educational Microscope	E200	●20W(30W)	—	●	—	●	●Simple	●50W	—
Educational Microscope	YS100	●20W	—	—	—	●	—	—	—
Educational Microscope	YS50	●Mirror	—	—	—	—	—	—	—
Polarizing Microscope	LV100POL	●50W*	—	—	—	—	●	—	—
Polarizing Microscope	50iPOL	●30W	—	—	—	—	●	—	—
Educational Polarizing Microscope	E200POL	●20W(30W)	—	—	—	—	●	—	—
Microscope for Patch Clamp Experiments	FN1	●100W	—	—	●	●	—	●100W	—
Inverted Microscopes									
Motorized Advanced Inverted Research Microscope	TE2000-E TE2000-PFS	●100W(30W)	—	—	●	●(APC usable)	—	●100W	●
Advanced Inverted Research Microscope	TE2000-U	●100W(30W)	—	—	●	●(APC usable)	—	●100W	●
Inverted Research Microscope	TE2000-S	●30W(100W)	—	—	●	●(APC usable)	—	●100W	●
Inverted Microscope	TS100	●30W	—	—	—	●(APC usable)	—	●50W	●
	TS100-F	●30W	—	—	—	●(APC usable)	—	●50W	●
Digital Microscope	COOLSCOPE	●LED	●	—	—	—	—	—	—

* Brighter than 100W

COOLSCOPE



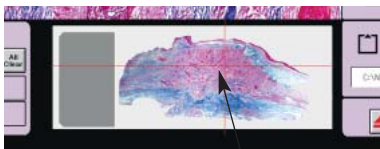
- On-monitor observations
- All operations by mouse-clicks
- Simultaneous Micro/Macro image display
- Memory function
- One-click stage shift
- Auto Focus
- Auto aperture/brightness adjustment
- Built-in digital camera
- Network capabilities
- Remote operation via Internet Explorer
- Magnification
 - Standard magnification type (5X, 10X, 20X, 40X)
 - Low magnification type (2X, 4X, 20X, 40X)
- SXGA high-definition image quality

All-in-one digital microscope that transcends the current concept of a microscope On-monitor observation, mouse-click operation

- Minimal configuration with just a tower main unit, monitor and mouse.
- Simple mouse clicks do the rest once the preparation is loaded.
- Elimination of microscope setups and optical adjustments.
- No more stooping over eyepieces—just observe the specimen on the monitor in a relaxed posture.
- Built-in digital camera for one-click image save as you see it on the monitor.
- Just connect COOLSCOPE to a projector for conference.
- Network capabilities enable observation and control of COOLSCOPE via Internet Explorer—convenient for consultation from a remote place.

Macro Image Display

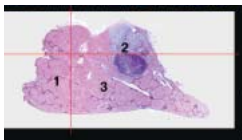
The whole image of a preparation is displayed with the point of observation indicated by crosshairs.



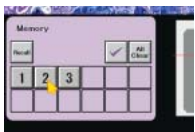
Observation point

Memory Function

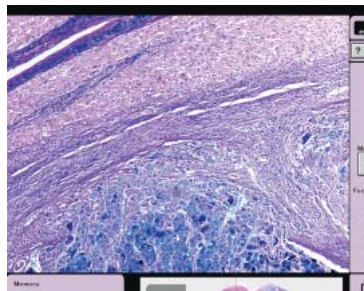
Observation conditions can be stored in memory for instant recall.



The stored point of an image is indicated by a number.



Click the number button.



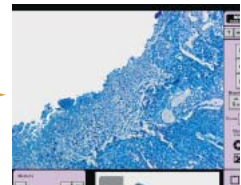
The image of a stored point is recalled, retaining its observation conditions.

One-Click Stage Shift

On macro image:

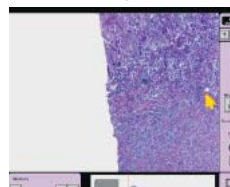


Click the point of interest.

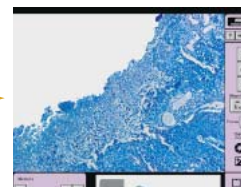


Micro image is displayed.

On micro image:



Click the point of interest.



It moves to the center of the screen.

Network Capabilities

Observation and control are possible from networked PCs in remote locations—ideal for consultation.



Motorized Advanced Research Microscope

ECLIPSE 90i

CFI60

Efficient automation in observation and imaging

- Integrated control of 90i and a Digital Sight-series DSC with application software ACT-2U.
- In a combination of 90i and a DS-5M digital camera, auto focus in brightfield and auto recording of microscope status are possible.
- One-click switching between observation methods, for example, from epi-fluorescence to DIC.
- Aperture and brightness* are automatically adjusted following the change of the magnification.
- Linear encoder built-in the body realizes high-precision motorized focus.
- Ergo Controller enables easy operation of XYZ movements and other motorized parts** in front of a PC.
- The DIH-E (Motorized)/M (Manual) digital imaging heads integrate a Hi S/N epi-fluorescence illuminator, optical zoom (0.8-2X), two ports and binocular tube into a single unit.
- Revolutionary Fly-Eye optics offers an excellent even illumination for digital imaging.
- New DIC system offers optimal contrast and resolution at any magnifications.

* Optional motorized ND filter unit is required.

** When motorized accessories are attached.



Configured with DIH-E and Ergo Controller

Advanced Research Microscope

ECLIPSE 80i

CFI60

Revolutionary optics perfect for digital imaging

- Built-in Fly-Eye optics ensure uniform illumination, perfect for digital imaging.
- The DIH-E (Motorized)/M (Manual) digital imaging heads integrate a Hi S/N epi-fluorescence illuminator, optical zoom (0.8-2X), two ports and binocular tube into a single unit. Both heads are selectable, depending on motorization requirements.
- The DIH-E/M and universal epi-fluorescence illuminator incorporate a Noise Terminator to boost signal-to-noise (S/N) ratio.
- New DIC system clearly visualizes minute structures of a specimen. Versatile DIC prisms are available—Standard, High contrast, High resolution—for the Universal Condenser Dry to support various specimens.
- Plan Apo VC objectives deliver high-resolution images, right to the edges.
- Auto recording of microscope status is possible in configuration with a DS-5M digital camera and DIH-E/M.



Configured with DIH-M

Clinical & Laboratory Microscopes

ECLIPSE 55i/50i

The ultimate in comfort that takes clinical microscopy to new heights

- 55i incorporates LED illumination—featuring a constant color temperature and lower power consumption—which is paramount for brightfield.
- 50i adopts a halogen light source with a built-in ND8 filter for various observation methods.
- New Ergonomic Tube matches varying eyepoints. A digital camera is also attachable with an optional DSC port.
- Hard and smooth stage, with stay-in-position handle.
- A retrofittable compact Cytodiagnostic Unit enables quick switching between 10X and 40X using a hand switch. When attached to 55i, it also keeps a constant brightness.
- Refocusing stage facilitates specimen exchange.
- Dedicated Epi-Fluorescence illuminator incorporates a 4-position filter turret with a lock mechanism to one or two positions.



55i configured with Ergonomic Tube and retrofittable Cytodiagnostic Unit

Clinical & Educational Microscope

ECLIPSE E200

Outstanding cost performance—striking image sharpness, operability and durability

- Adopts CFI60 infinity optics for this class of microscope. Plan objectives that excel in image flatness come standard.
- Newly developed one-touch refocusing stage for easier specimen handling.
- Focusing knob and stage handle are low-positioned and equidistant from operator, permitting one-handed operation in natural posture.
- Ergonomic binocular tube and eye-level risers are available for adjusting the eyepoint.
- Anti-mold treated.
- E200-F (model with field diaphragm) is also available.
- Various accessories are available, such as dedicated epi-fluorescence attachment.



Educational Microscopes

YS100/YS50

Legendary CF optics, simple operation and rigid design

- Durable, easy-to-rotate quadruple nosepiece.
- Condenser comes with aperture diaphragm that has position-guide markings for 4/10/40/60/100X.
- Anti-mold treatment for objectives, eyepieces, and eyepiece tube.
- Double-plate mechanical stage for the YS100.



YS100 (Halogen lamp model)



YS50 (Mirror illumination model)

Polarizing Microscopes

ECLIPSE LV100POL/50iPOL/E200POL

CFI60

CFI60 infinity optics provide greater sharpness on polarizing regions

- CFI60 optics deliver world-class optical performance.
- Excellent basic performance, operability, durability and, above all, outstanding image sharpness.
- LV100POL is a research polarizing microscope that boasts twice the rigidity of conventional models and a brightness exceeding 100W (12V-50W model with centering quintuple nosepiece). The built-in Fly-Eye optics ensures uniform illumination, making it ideal for digital imaging.
- ECLIPSE 50iPOL is compact yet possesses high functionality, such as a nosepiece with DIN standard compensator slot. (6V-30W model with centering quintuple nosepiece)
- E200POL is a cost-efficient and extremely compact model. (6V-20W model with quadruple nosepiece)



LV100POL



50iPOL



E200POL

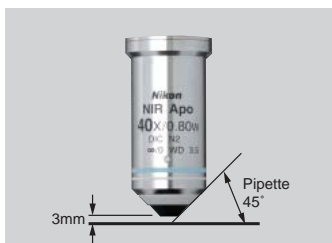
Microscope for Patch Clamp Experiments

ECLIPSE FN1

CFI60

Dedicated patch-clamp microscope with I-shaped body design—more room for smooth electrode manipulation

- Corrects axial chromatic aberration up to IR light (to 850nm). New 40X and 60X objectives for crisp high resolution IR-DIC imaging.
- 100X objective with NA 1.1 and working distance 2.5mm comes with a correction function for depth- and thermally-induced aberrations.
- Vertical motion nosepieces enables magnification changes without moving Petri dish (15mm or less in height).
- Easy switching between IR light and reflected illumination.
- With an optional variable magnification double port (0.35X, 2X, 4X), both wide field and high magnification observations can be carried out with a 16X objective alone.



All objectives have wide approach angles and long working distances (45° and 3mm with 40X objective).



Configuration with FN1 stage and Narishige micromanipulators

ECLIPSE TE2000 Series



Superb basic performance and expandability for all advanced live-cell applications

- Revolutionary Noise Terminator mechanism dramatically improves contrast in fluorescence images.
- Optional attachments like laser equipment mountable without modifying the microscope, thanks to a stratum structure and optional stage risers.
- Multi-port design supports wide varieties of observation/measuring needs.
- Retrofittable motorized options for all three models meet various requirements.
- CFI60 optics achieve both high NA and long W.D.
- New DIC system clearly visualizes minute structures of a specimen. Versatile DIC prisms are available—Standard, High contrast, High resolution types—to support various specimens.



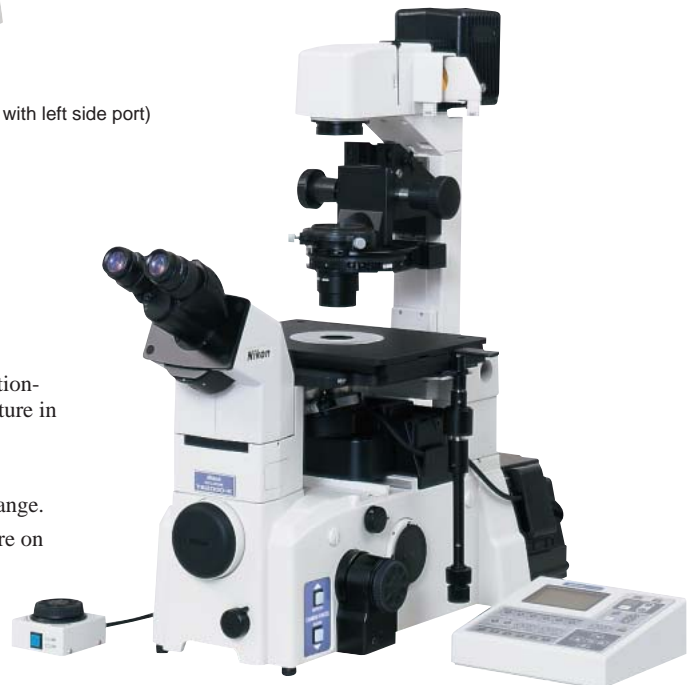
TE2000-S
(Manual model, with left side port)



TE2000-U
(Manual model, with front and both sides ports)

TE2000-E: motorized model

- Motorized focus with high-precision linear encoder and vibration-free optical path changeover mechanism facilitates image capture in 3D.
- Five output ports including bottom port.
- Objective anti-collision mechanism facilitates specimen exchange.
- External fine focusing unit enables fine focus control anywhere on the desktop.



TE2000-E
(Motorized model, with front, both sides and bottom ports)

Motorized Inverted Research Microscope with Continuous Focus Correction

ECLIPSE TE2000-PFS

CFI60

A powerful new model with real-time focus correction, strengthening the TE2000 series

- Corrects focus drift even during time-lapse observation or when adding reagents.
- Focus is continuously corrected at any plane of interest throughout the specimen by the Optical Offset feature.
- Focusing precision of less than 1/3 the focal depth of the objective is possible.
- The LED in the infrared range, which is used to detect focal points, does not intrude on wavelengths used for fluorescence observation, high-contrast visualization of single fluorescent molecules is possible.



ECLIPSE TE2000-PFS

Inverted Microscopes

ECLIPSE TS100/TS100-F

CFI60

New Apodized Phase Contrast objectives visualize minute details with greater resolution
Also supports fluorescence and HMC[®]

- Adopts CFI60 infinity optics for this class of microscope.
- Newly developed Apodized Phase Contrast objectives complement existing phase contrast series objectives to visualize minute details within a specimen.
- Both models support fluorescence microscopy.
- Hoffman Modulation Contrast[®] (HMC) observation is possible, enabling specimens in plastic Petri dishes to be viewed in 3D relief.
- Eyepiece tube inclination and comfortable eye-point height for natural viewing posture when sitting or standing.
- Low-profile 195mm-high stage with transparent acrylic stage ring for easy confirmation of objective in use.
- Quintuple backward-facing nosepiece offers plenty of clearance for easy rotation.



TS100 (Binocular tube model)

TS100-F (Trinocular tube model)

Note: Hoffman Modulation Contrast and HMC are registered trademarks of Modulation Optics, Inc.

Stereoscopic Microscope Series

Pursuing excellence in optical performance and operability

■ Parallel-optics System

- Nikon's unique OCC illumination (Oblique Coherent Contrast) is available with a C-DSD diascope stand, allowing colorless, transparent samples to be observed in high relief.
- Various accessories, such as epi-fluorescence attachment, teaching head, simple polarizing set, are available.
- Eyepiece tube is exchangeable from 20° inclination, low eyelevel, tilting eyepiece tube.

Stereoscopic Zoom Microscope **SMZ1500**

Top-of-the-line stereoscopic zoom microscope boasting a 15X zoom ratio, and high NA and resolution.



Stereoscopic Zoom Microscope **SMZ1000**

A 10X zoom ratio stereoscopic microscope offering superb optical performance and ergonomic operability.



Stereoscopic Zoom Microscope **SMZ800**

An affordable stereoscopic zoom microscope with a 6.3X zoom ratio offering excellent optical performance and expandability.



■ Twin Objective System

Stereoscopic Zoom Microscopes **SMZ645/660**

Standard stereoscopic zoom microscope models with a 6.3X zoom ratio.



SMZ660 (eyepiece tube inclination 60°)

SMZ645 (eyepiece tube inclination 45°)

Stereoscopic Microscope **SM-5**

Compact yet sturdy, its flexible design permits easy attachment to various instruments in production and quality control facilities at minimum costs.



Digital Cameras for Microscopes

High-definition Cooled Color Digital Camera

DXM 1200C

Mounted with a Peltier cooling mechanism; captures weak fluorescing images clearly by minimizing background noise.

- Super high resolution images with 12.6-mega output pixels.
- High sensitivity reduces shooting time and avoids photobleaching.
- High 15-fps (maximum) transfer rate ensures smooth live images.
- Easy-to-use control software facilitates large-volume shooting.



Configured with ECLIPSE 80i

Digital Camera System for Microscopes

Digital Sight Series

The Digital Sight series offers a choice of five camera heads and two control units, enabling an image capturing system to be assembled to suit each use.

High-speed color camera head DS-2Mv



- High frame rate, 2.0-megapixel color CCD.
- Sharp display of live images. Realizes high quality images.

High-definition color camera head DS-5M



- High-definition 5.0-megapixel color CCD.
- Suitable for capturing brightfield, darkfield, phase contrast and DIC images.

High-speed cooled monochrome camera head DS-2MBWc



- Cooling mechanism retains CCD at room temperature minus 20°C.
- Reduces heat noise. Captures fluorescence and darkfield images clearly.
- High-frame-rate and high-sensitivity 2.0-megapixel monochrome CCD.
- Sharp display of live images. Reduces photobleaching due to shorter shooting time.

High-definition cooled color camera head DS-5Mc



- Cooling mechanism retains CCD at room temperature minus 20°C.
- Reduces heat noise. Captures fluorescent and darkfield images clearly.
- High-definition 5.0-megapixel color CCD.

High-speed monochrome camera head DS-2MBW



- High-frame-rate and high-sensitivity 2.0-megapixel monochrome CCD.
- Sharp display of live images. Reduces photobleaching due to shorter shooting time.

PC-use control unit DS-U1



Configured with ECLIPSE 80i

- High speed transfer to PC via high-compatibility USB 2.0 connection.
- User-friendly image processing and analysis when coupled with control software ACT-2U.
- Interactive operation with ECLIPSE 90i or digital imaging head.

Standalone control unit DS-L1



Configured with ECLIPSE TS100F

- Incorporates 6.3-in. LCD monitor.
- Pre-programmed imaging modes for different observation methods.
- Network function allows image sharing.

True Spectral Imaging Confocal Laser Scanning Microscope System

DIGITAL ECLIPSE C1si

Spectra across a wide 320nm range captured with a single scan

- 32-channel simultaneous acquisition suppresses damage to specimens.
- Selectable wavelength resolution from 2.5, 5 or 10nm, independent of pin-hole diameter.
- Acquisition of accurate fluorescence spectra enables color rendering of fluorescence images with greater realism.
- Polarization-enhanced optical sensitivity with DEES improves brightness.
- DISP (Dual Integration Signal Processing) eliminates digitization dead time.
- Spectral imaging via simple switchover from a 3-channel PMT detector.

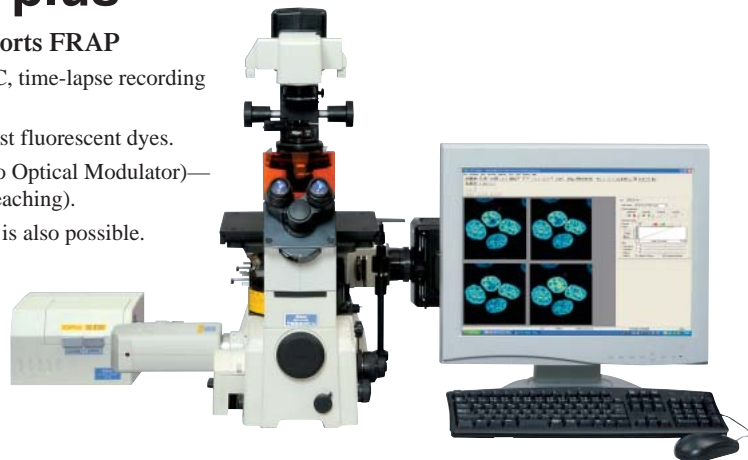


Modular Confocal Microscope System

DIGITAL ECLIPSE C1 plus

The C1 personal confocal microscope now supports FRAP

- Simultaneous 3-channel fluorescence, 3-channel plus DIC, time-lapse recording and spatial analysis are possible.
- Filters can be easily exchanged by users to match the latest fluorescent dyes.
- ROI scanning is possible with an optional AOM (Acousto Optical Modulator)—perfect for FRAP (Fluorescence Recovery After Photobleaching).
- Bi-Directional Scan improves frame rates. Scan Rotation is also possible.
- A greater variety of lasers can be mounted.



Evanescence Wave Imaging System

TIRF 2 System

Visualizes single fluorescence molecules in living cells in real time

- A unification of a laser TIRF unit and epi-fluorescence illumination system. Switching the systems is elementary.
- Responds to various levels of research such as from epi-fluorescence observation of living organisms to observation of living cells at the molecular level.
- Captures single molecule activity in living cells with an extraordinary high S/N ratio where they contact the coverglass.
- 60X TIRF objective is adjustable to correct image deteriorations caused by temperature changes from 23°C to 37°C.
- The TE2000's unique "stratum structure" allows the simultaneous mounting of laser tweezers.



White light TIRF system

Easily realizes TIRF observation without using laser illumination

- A TIRF function has been provided with the epi-fluorescence attachment. TIRF observation using mercury illumination is available. Xenon and high-intensity halogen can also be used.
- Simply inserting an exclusive aperture (60X, 100X) enables switching to TIRF.
- The wide wavelength band of mercury illumination makes multiple wavelength observation possible by changing the filter. No worries for interference patterns.



Photic stimulation unit

Easily realizes photic stimulation without a confocal microscope system

- Compact and easy to attach, easy to operate.
- Observation of molecule movement by photic stimulation in a cell is possible, using fluorescence protein such as Kaede (photo conversion) and PA-GFP (photo activation).
- Achieves short wavelength correction up to 405nm (h-line). Combined with VC series objectives, in which aberration is corrected to 405nm, it illuminates the targeted area with high precision.



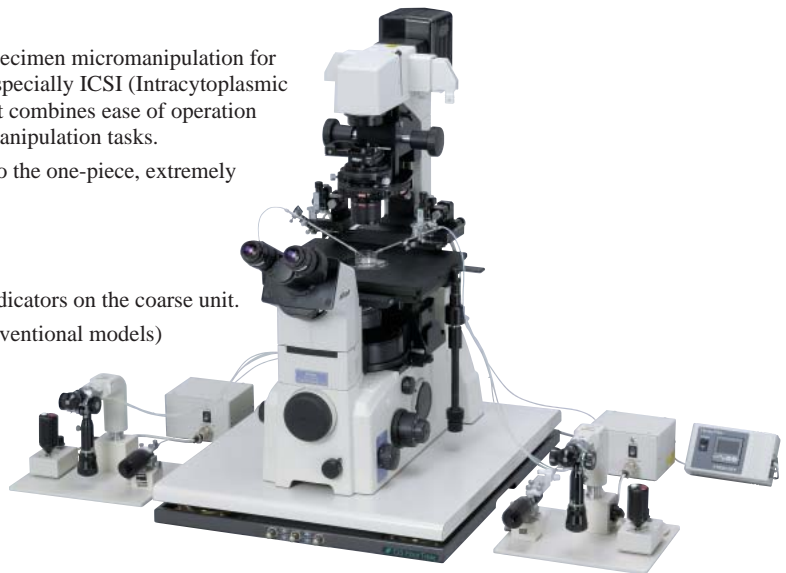
Oil Hydraulic Micromanipulation Systems

NT-88-V3 Series

The NT-88-V3 series provides microscopic and precise specimen micromanipulation for experiments in the fields of IVF (In Vitro Fertilization), especially ICSI (Intracytoplasmic Sperm Injection), biotechnology, and electrophysiology. It combines ease of operation with the utmost in precision to handle a variety of micromanipulation tasks.

- Assembly of the micromanipulator is fast and easy due to the one-piece, extremely stable mounting adapter.
- Easy-to-use hanging-type joystick.
- Smooth operation without needle drift.
- Needle top can be easily adjusted thanks to alignment indicators on the coarse unit.
- Compact and stable design (less than half the size of conventional models)

(Manufactured by Narishige Co., Ltd.)



Water Hydraulic Micromanipulation System

MHW-3

Needle drift caused by changes in room temperature has been decreased to the lowest possible level.

Optimized for long hours of micromanipulation, such as in electrophysiologic patch-clamp experiments.

(Manufactured by Narishige Co., Ltd.)



Main Accessories

Motorized Universal Epi-Fluorescence Attachment (80i)

Remote controller has CW/CCW switches for rotation of epi-fluorescence filter turret and epi-shutter IN/OUT switch.



Simple Polarizing Accessories (90i, 80i, 50i)

For observing birefringent samples such as collagen, amyloids and crystals.



Simple Polarizing set A

Simple Polarizing set B
(with swing-out rotatable polarizer)

Sensitive Color Polarizing Accessories (90i, 80i, 50i)

For gout and pseudo-gout tests.



Teaching Heads (90i, 80i, 50i)

The 50i can be configured with a two-person side-by-side or face-to-face version. The 90i/80i has versions that can handle up to 10 people. Structures can be selected flexibly, depending on use.

Two-person face-to-face version



Five-person version

Drawing Tube (90i, 80i, 55i, 50i)

Microscope images can be easily traced while being observed.

- Original optical system delivers images of 1x without a relay lens.
- Low-magnification drawing kit available for drawing wider areas.



Double Port (90i, 80i, 55i, 50i)

Mounted between a microscope body and trinocular tube, the double port enables the simultaneous mounting of two CCTV cameras or a CCTV camera and photomicrographic equipment.



Quadrocular Adapter (90i, 80i, 55i, 50i)

Two CCTV cameras or a photomicrographic system can be simultaneously mounted on a trinocular eyepiece tube via this adapter and switched.



Magnification Module (90i, 80i, 55i, 50i)

The turret system allows the intermediate magnification to be changed from 1X to 1.25X, 1.5X or 2X.



Main Accessories

Double-lamphouse Adapter

(90i, 80i, 55i, 50i, TE2000)



The double-lamphouse adapter allows two different light sources to be simultaneously attached to the microscope, and switched without turning it off. It eliminates the need to change the lamphouse and carry out time-consuming centering procedures.

Stage Incubation System INU-NI-F1

For long-hour tissue/cell incubation under a microscope.
All-in-one compact body.
(Manufactured by Tokai Hit Co., Ltd.)



Microscope Stage Automatic Thermal Control System Thermo plate

Facilitates the thermal control of the specimen being observed and makes it more accurate.
Standard series (accuracy $\pm 0.3^{\circ}\text{C}$, glass thickness 1.0mm)
(Manufactured by Tokai Hit Co., Ltd.)

For upright microscopes
MATS-U505S (rectangular type, W142 x D115 mm)



For inverted microscopes
MATS-U505R30 (ring type $\phi 108\text{mm}$, thickness at center 50 x 50 mm area 0.5mm)
MATS-U505R (ring type $\phi 108\text{mm}$)



For stereo diascope stands

MATS-USMZSL (fitted with base of C-DSS/DSD/BD stands)



MATS-USMZSS (fitted with base of C-DS diascope stand)



MATS-USMZR (ring type $\phi 180\text{mm}$)



MATS-U4020WF (wide working-area type W430 x D205 x H75-100mm; glass thickness 1.6mm)



Photomicrographic Equipment

FX-III Series

Advanced photomicrographic units that capture micro images clearly

Easy to use and compact, the FX-III series consists of three models to meet the wide-ranging demands of photomicrography.

U-III

Easiest to use, most advanced photomicrographic system.

Top-end auto-exposure model with highly sensitive multi-point sensor ensures accurate exposure from 35% average light measurement to 0.1% spot measurement. Suitable for serious fluorescence applications.



U-III

H-III

Controller built into the compact body.

Easy to operate and space-saving. Auto exposure is possible, with 1% spot and 35% integrated average measurement.

P-III

Manual exposure model for high-quality photomicrography at an affordable price. Uses a Nikon 35mm SLR camera, whose light meter ensures accurate exposures.

Epi-fluorescence Filters

For TE2000, 90i/80i/50i/55i

Filter Characteristics

	Filters	Wavelengths	Characteristics	Applications
U V	UV-1A	EX 365/10 DM 400 BA 400	<ul style="list-style-type: none"> Narrow band pass – only 365nm (i line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> DAPI Hoechst 33258/33342 AMCA Cascade Blue® Autofluorescence
	UV-2A	EX 330-380 DM 400 BA 420	<ul style="list-style-type: none"> Standard filter block for UV 	
	UV-2B	EX 330-380 DM 400 BA 435	<ul style="list-style-type: none"> Darker background than UV-2A 	
	UV-2E/C (DAPI)	EX 340-380 DM 400 BA 435-485	<ul style="list-style-type: none"> For DAPI, cutting off FITC (green) and TRITC (red) Soft-coated type for high signal/noise Band-Pass Barrier Filter used to cut off green and red 	
V	V-2A	EX 380-420 DM 430 BA 450	<ul style="list-style-type: none"> Standard filter block for V 	<ul style="list-style-type: none"> Catecholamine Serotonin Tetracycline
B V	BV-1A	EX 435/10 EM 455 BA 470	<ul style="list-style-type: none"> Narrow band pass – only 435nm (g line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> Quinacrine Quinacrine Mustard (QM) Thioflavine S Acriflavine
	BV-2A	EX 400-440 DM 455 BA 470	<ul style="list-style-type: none"> Standard filter block for BV 	
B	B-1A	EX 470-490 DM 505 BA 520	<ul style="list-style-type: none"> Narrower excitation range than B-2A FITC+Counter-stain (TRITC, PI) 	<ul style="list-style-type: none"> FITC Acridine Orange Auramine O Coriphosphine O Bodipy® Fluo-3 DIO
	B-1E	EX 470-490 DM 505 BA 520-560	<ul style="list-style-type: none"> For FITC (green), cutting off Rhodamine red Band-Pass Barrier Filter used to cut off red 	
	B-2A	EX 450-490 DM 505 BA 520	<ul style="list-style-type: none"> Standard filter block for B For FITC + Counter-stain (TRITC, PI) 	
	B-2E/C (FITC)	EX 465-495 DM 505 BA 515-555	<ul style="list-style-type: none"> Soft coated type for high signal/noise For FITC (green), cutting off Rhodamine red Band-pass Barrier Filter used to cut off red 	
	B-3A	EX 420-490 DM 505 BA 520	<ul style="list-style-type: none"> Wide band pass – recommended for halogen illumination only 	
G	G-1B	EX 546/10 DM 575 BA 590	<ul style="list-style-type: none"> Narrow band pass – only 546nm (e line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> TRITC Rhodamine B200 Propidium iodide R-Phycocerythrin B-Phycocerythrin Dil Ethidium Bromide
	G-2A	EX 510-560 DM 575 BA 590	<ul style="list-style-type: none"> Standard filter block for G 	
	G-2B	EX 510-560 DM 575 BA 610	<ul style="list-style-type: none"> 610nm barrier provides darker background and deep red emission 	
	G-2E/C (TRITC)	EX 540/25 DM 565 BA 605/55	<ul style="list-style-type: none"> For TRITC (Rhodamine) Soft coated type for high signal/noise Band-Pass Barrier Filter used to cut off reds above 643nm 	
Y	Y-2E/C (Texas Red)	EX 540-580 DM 595 BA 600-660	<ul style="list-style-type: none"> For Texas Red® Soft coated type for high signal/noise Band-Pass Barrier Filter used to cut off reds above 660nm 	<ul style="list-style-type: none"> Texas Red®

Multi-Band Filters

Filters	Abbreviations	Applications
Dual	F-R	FITC Rhodamine
	F-T	FITC Texas Red
	D-F	DAPI FITC

Filters	Abbreviations	Applications
Triple	D-F-R	DAPI FITC Rhodamine
	D-F-T	DAPI FITC Texas Red

Filters for Fluorescent Protein

Models	Wavelengths	Characteristics	Applications
GFP-L	EX480/40, DM505, BA510	GFP long-pass type	GFP
GFP-B	EX480/40, DM505, BA535/50	GFP band-pass type	GFP

High Quality Filters

Each filter/mirror has a very sharp rising edge at the corresponding wavelength, minimizing signal crossover.

Filters	Wavelengths
CFP HQ	EX420-445, DM450, BA460-510
GFP HQ	EX455-485, DM495, BA500-545
YFP HQ	EX490-500, DM510, BA520-560

For E200, TS100, E1000/800/600/400

Filter Characteristics

	Filters	Wavelengths	Characteristics	Applications
U V	UV-1A	EX 365/10 DM 400 BA 400	<ul style="list-style-type: none"> Narrow band pass — only 365nm (i line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> DAPI Hoechst 33258/33342 AMCA Cascade Blue®
	UV-2A	EX 330-380 DM 400 BA 420	<ul style="list-style-type: none"> Standard filter block for UV 	
	UV-2B	EX 330-380 DM 400 BA 435	<ul style="list-style-type: none"> Darker background than UV-2A 	
	UV-2E/C* (DAPI)	EX 340-380 DM 400 BA 435-485	<ul style="list-style-type: none"> For DAPI, cutting off FITC (green) and TRITC (red) Soft-coated type for high signal/noise Band-Pass Barrier Filter used to cut off green and red 	
V	V-2A	EX 380-420 DM 430 BA 450	<ul style="list-style-type: none"> Standard filter block for V 	<ul style="list-style-type: none"> Catecholamine Serotonin Tetracycline
B V	BV-1A	EX 435/10 EM 455 BA 470	<ul style="list-style-type: none"> Narrow band pass — only 435nm (g line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> Quinacrine Quinacrine Mustard (QM) Thioflavine S Acriflavine
	BV-2A	EX 400-440 DM 455 BA 470	<ul style="list-style-type: none"> Standard filter block for BV 	
B	B-1A	EX 470-490 DM 505 BA 520	<ul style="list-style-type: none"> Narrower excitation range than B-2A FITC+Counter-stain (TRITC, PI) 	<ul style="list-style-type: none"> FITC Acridine Orange Auramine O Coriophosphine O Bodipy® Fluo-3 DIO
	B-1E	EX 470-490 DM 505 BA 520-560	<ul style="list-style-type: none"> Hard coated type for FITC Band-Pass Barrier Filter used to cut off red 	
	B-2A	EX 450-490 DM 505 BA 520	<ul style="list-style-type: none"> Standard filter block for B For FITC + Counter-stain (TRITC, PI) 	
	B-2E	EX 450-490 DM 505 BA 520-560	<ul style="list-style-type: none"> Similar to FITC For FITC (green), cutting off Rhodamine red Band-Pass Barrier Filter used to cut off red 	
	B-2E/C* (FITC)	EX 465-495 DM 505 BA 515-555	<ul style="list-style-type: none"> Soft coated type for high signal/noise For FITC (green), cutting off Rhodamine red Band-pass Barrier Filter used to cut off red 	
	B-3A	EX 420-490 DM 505 BA 520	<ul style="list-style-type: none"> Wide band pass — recommended for halogen illumination only 	
G	G-1B	EX 546/10 DM 575 BA 590	<ul style="list-style-type: none"> Narrow band pass — only 546nm (e line) of Mercury spectrum used Narrow band pass minimizes auto-fluorescence and photo-bleaching 	<ul style="list-style-type: none"> TRITC Rhodamine B200 Propidium iodide R-Phycoerythrin B-Phycoerythrin Dil Ethidium Bromide
	G-2A	EX 510-560 DM 575 BA 590	<ul style="list-style-type: none"> Standard filter block for G 	
	G-2E/C* (TRITC)	EX 540/25 DM 565 BA 605/55	<ul style="list-style-type: none"> For TRITC (Rhodamine) Soft coated type for high signal/noise Band-Pass Barrier Filter used to cut off reds above 643nm 	
Y	Y-2E/C* (Texas Red)	EX 540-580 DM 595 BA 600-660	<ul style="list-style-type: none"> For Texas Red® Soft coated type for high signal/noise Band-Pass Barrier Filter used to cut off reds above 660nm 	<ul style="list-style-type: none"> Texas Red®

Filters for Fluorescent Protein

Models	Wavelengths	Characteristics	Applications
GFP-L	EX480/40, DM505, BA510	GFP long-pass type	GFP
GFP-B	EX480/40, DM505, BA535/50	GFP band-pass type	GFP

For SMZ1500/1000/800

Filters for Fluorescent Protein

Filters	Wavelengths	Characteristics	Applications
GFP-L	EX460-500, DM505, BA510	GFP Long-pass type	GFP
GFP-B	EX460-500, DM505, BA510-560	GFP band-pass type	GFP

Note:

The lineup is constantly updated. For the latest information, please contact your local Nikon representative. The excitation filters or barrier filters in each filter cube are interchangeable. For custom setup, blank cubes without filters are also available. Please consult with your local Nikon distributor for a complete list of filters locally available or inquire about special custom filter combinations.

CFI60 Objectives

Description	NA	W.D. (mm)	Remarks
Brightfield			
Achromat flat field			
CFI Achromat 4×	0.10	30.0	
CFI Achromat 10×	0.25	7.0	
CFI Achromat LWD 20×	0.40	3.9	
CFI Achromat 40×	0.65	0.65	Spring loaded
CFI Achromat LWD 40×C	0.55	2.7-1.7	C.C.0-2
CFI Achromat 60×	0.80	0.3	Spring loaded
CFI Achromat 100× oil	1.25	0.23	Spring loaded
CFI Achromat 100× oil, iris	0.5-1.25	0.23	Spring loaded with iris
Plan Achromat			
CFI Plan Achromat UW 1×	0.04	3.2	
CFI Plan Achromat UW 2×	0.06	7.5	
CFI Plan Achromat 4×	0.10	30.0	
CFI Plan Achromat 10×	0.25	10.5	
CFI Plan Achromat 20×	0.40	1.2	
CFI Plan Achromat 40×	0.65	0.56	Spring loaded
CFI Plan Achromat 40× NCG	0.65	0.48	Spring loaded No cover glass
CFI Plan Achromat 50× oil	0.90	0.35	Spring loaded
CFI Plan Achromat 100× oil	1.25	0.20	Spring loaded
CFI Plan Achromat 100× WI	1.10	2.5	Spring loaded with temperature correction ring
CFI Plan Achromat 100× NCG	0.90	0.26	Spring loaded No cover glass
Plan Fluor			
CFI Plan Fluor 4×	0.13	17.1	
CFI Plan Fluor 10×	0.30	16.0	
CFI Plan Fluor 20×	0.50	2.1	
CFI Plan Fluor ELWD 20×C	0.45	8.1-7.0	C.C.0-2
CFI Plan Fluor 20× MI	0.75	Oil 0.35; Glycerin 0.34; Water 0.33	Spring loaded Multi-immersion; Oil-glycerin-water
CFI Plan Fluor 40×	0.75	0.72	Spring loaded
CFI Plan Fluor 40× oil	1.30	0.2	Spring loaded Stopper
CFI Plan Fluor ELWD 40×C	0.60	3.7-2.7	C.C.0-2
CFI Plan Fluor 60×C	0.85	0.3	Spring loaded C.C.0.11-0.23
CFI Plan Fluor 60× oil, iris	0.5-1.25	0.22	Spring loaded with iris
CFI Plan Fluor ELWD 60×C	0.70	2.1-1.5	C.C.0.5-1.5
CFI Plan Fluor 100× dry	0.90	0.3	Spring loaded C.C.0.14-0.2
CFI Plan Fluor 100× oil	1.30	0.2	Spring loaded Stopper
CFI Plan Fluor 100× oil, iris	0.5-1.3	0.2	Spring loaded with iris
Plan Apochromat			
CFI Plan Apochromat 2×	0.10	8.5	
CFI Plan Apochromat 4×	0.20	15.7	
CFI Plan Apochromat 10×	0.45	4.0	
CFI Plan Apochromat 20×	0.75	1.0	Spring loaded
CFI Plan Apochromat 40×C	0.95	0.14	Spring loaded C.C.0.11-0.23
CFI Plan Apochromat 40× oil	1.00	0.16	Spring loaded Stopper
CFI Plan Apochromat 60×C	0.95	0.15	Spring loaded C.C.0.11-0.23
CFI Plan Apochromat 100X NCG oil	1.40	0.17	
Plan Apochromat VC			
CFI Plan Apochromat VC 60X oil	1.40	0.13	Spring loaded Stopper
CFI Plan Apochromat VC 60X WI	1.20	0.27	Spring loaded CC.0.15-0.18; Water-immersion
CFI Plan Apochromat VC 100X oil	1.40	0.13	Spring loaded Stopper
Plan Apochromat TIRF			
CFI Plan Apochromat TIRF 60X oil	1.45	0.13	Spring loaded C.C. 0.10-0.22
CFI Plan Apochromat TIRF 100X oil	1.45	0.13	Spring loaded CG 0.17
S Fluor			
CFI S Fluor 4×	0.20	15.5	
CFI S Fluor 10×	0.50	1.2	Spring loaded
CFI S Fluor 20×	0.75	1.0	Spring loaded
CFI S Fluor 40×C	0.90	0.3	Spring loaded C.C.0.11-0.23
CFI S Fluor 40× oil	1.30	0.22	Spring loaded
CFI S Fluor 100× oil, iris	0.5-1.30	0.2	Spring loaded
Water Dipping			
CFI Fluor 10× W	0.30	2.0	Water dipping
CFI Fluor 20× W	0.50	2.0	Water dipping
CFI Fluor 40× W	0.80	2.0	Water dipping
CFI Fluor 60× W	1.00	2.0	Water dipping
CFI Plan Fluor 10×W	0.3	3.5	Water dipping
CFI75 LWD 16×W	0.8 (at 16×)	3.0	Water dipping
CFI APO 40×W	0.8	3.5	Water dipping

Description	NA	W.D. (mm)	Remarks
Phase Contrast			
Achromat flat field			Phase ring
CFI Achromat DL 10×	0.25	7.0	Ph1
CFI Achromat ADL 10×	0.25	6.2	CG 1.2 Ph1
CFI Achromat LWD DL 20×	0.40	3.9	Ph1
CFI Achromat LWD DL 20×F	0.40	3.1	CG 1.2 Ph1
CFI Achromat LWD ADL 20×F	0.40	3.1	CG 1.2 Ph1
CFI Achromat DL 40×	0.65	0.65	Spring loaded Ph2
CFI Achromat LWD DL 40×C	0.55	2.7-1.7	C.C.0-2 Ph2
CFI Achromat LWD ADL 40×F	0.55	2.1	CG 1.2 Ph1
CFI Achromat LWD ADL 40×C	0.55	2.7-1.7	C.C.0-2 Ph2
CFI Achromat DL 100× oil	1.25	0.23	Spring loaded Ph3
Plan Achromat			
CFI Plan Achromat DL 10×	0.25	10.5	Ph1
CFI Plan Achromat DL 20×	0.40	1.2	Ph1
CFI Plan Achromat DL 40×	0.65	0.56	Spring loaded Ph2
CFI Plan Achromat DL 100× oil	1.25	0.2	Spring loaded Ph3
Plan Fluor			
CFI Plan Fluor DL 4×	0.13	16.4	CG 1.2 PhL
CFI Plan Fluor DLL 10×	0.30	16.0	Ph1
CFI Plan Fluor DL 10×	0.30	15.2	CG 1.2 Ph1
CFI Plan Fluor DLL 20×	0.50	2.1	Ph1
CFI Plan Fluor ELWD DM 20×C	0.45	8.1-7.0	C.C.0-2 Ph1
CFI Plan Fluor ELWD ADL 20×C	0.45	8.1-7.0	C.C.0-2 Ph1
CFI Plan Fluor DLL 40×	0.75	0.72	Spring loaded Ph2
CFI Plan Fluor ELWD DM 40×C	0.60	3.7-2.7	C.C.0-2 Ph2
CFI Plan Fluor ELWD ADL 40×C	0.60	3.7-2.7	Spring loaded C.C.0-2 Ph2
CFI Plan Fluor ELWD DLL 60×C	0.70	2.1-1.5	C.C.0.5-1.5 Ph2
CFI Plan Fluor DLL 100× oil	1.30	0.2	Spring loaded Stopper Ph3
CFI Plan Fluor ADH 100X oil	1.30	0.2	Spring loaded Stopper Ph3
Plan Apochromat			
CFI Plan Apochromat DM20×	0.75	1.0	Spring loaded Ph2
CFI Plan Apochromat DM40×C	0.95	0.14	Spring loaded C.C.0.11-0.23 Ph2
CFI Plan Apochromat DM40× oil	1.0	0.16	Spring loaded Stopper Ph3
CFI Plan Apochromat DM60×C	0.95	0.15	Spring loaded C.C.0.11-0.23 Ph2
CFI Plan Apochromat DM60× oil	1.40	0.13	Spring loaded Stopper Ph3
CFI Plan Apochromat DM100× oil	1.40	0.13	Spring loaded Stopper Ph3
Water Dipping			
CFI Fluor DLL 40×W	0.80	2.0	Water dipping Ph2
Hoffman Modulation Contrast®			
CFI HMC 10×	0.25	6.2	CG 1.2
CFI HMC LWD 20×F	0.40	3.1	CG 1.2
CFI HMC LWD 40×C	0.55	2.7-1.7	C.C.0-2

CG : Cover Glass thickness (mm)
CC : Correction Collar (mm)

Condensers

For Upright Microscopes

Type	NA	Magnifications
D-CUD-E Motorized Universal Condenser Dry	0.13*1/0.9*2	2-100X
D-CUD Universal Condenser Dry	0.13*1/0.9*2	2-100×
D-CUO DIC Condenser Oil	1.4	20-100×
C-C Achromat /Aplanat Condenser	1.4	10-100×
C-C Achromat Swing-out Condenser 1-100X	0.12*3/0.8*4	1-100×
C-C Slide Achromat Condenser 2-100X	0.9	2-100×
Achromat Swing-out Condenser 2-100X	0.22*1/0.9*2	2-100×

Type	NA	Magnifications
C-C Achromat Condenser	0.85	4-100×
C-C Abbe Condenser	0.9	4-100×
C-C Low Power Condenser	0.15	1-4×
LWD Achromat Condenser	0.65	4-40×
C-C Phase Contrast Condenser	0.9	4-100×
Darkfield Condenser Dry	0.8-0.95	10×-40×
Darkfield Condenser Oil	1.2-1.43	20×-100×

*1 (2-4X) *2 (10-100X) *3 (1-4X) *4 (4-100X)

For Inverted Microscopes

Type	NA	W.D. (mm)	Ph module	HMC module	DIC module	Magnifications	
T-CT-E Motorized System Condenser/System Condenser	ELWD condenser lens	0.3	75	L.1.2		2-60×	
	LWD condenser lens	0.52	30	L.1.2.3	MC1.MC2.MC3	LWD N1, LWD N2, LWD NR	4-100×
	HMC condenser lens	0.4	44		MC1.MC2.MC3		10-40×
High N.A. Condenser	Dry top lens	0.85	5			HNA N2, HNA NR	10-100×
	Water immersion top lens	0.9	4				10-100×
	Oil immersion top lens	1.4	1.92			HNA N2, HNA NR	10-100×
TE-C ELWD Condenser	0.3	75	L.1.2.3			2-20×	
TE-C SLWD Condenser	0.12	190	L.1			4-40×	
TE-C HMC Condenser	0.4	44				10-40×	

DIC Sliders and Condenser Modules

Combinations for 90i/80i DIC Sliders and Condenser Modules

		Universal Condenser Dry/Motorized Universal Condenser Dry						DIC Condenser Oil					
		Standard		High Contrast		High Resolution		Standard		High Resolution			
		Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders		
10x	Plan Fluor 10x	N1 Dry	10x										
	S Fluor 10x												
	Fluor 10x W												
20x	Plan Fluor 20x	N1 Dry	20x		20x-C			20x					
	Plan Apo 20x												
	S Fluor 20x												
	Plan Fluor 20x MI												
	Fluor 20x W												
40x	Plan Fluor 40x	N2 Dry	40x I		40xI-C			40x I					
	Plan Apo 40x												
	S Fluor 40x												
	Plan Fluor 40x Oil		40x II					40x II					
	S Fluor 40x Oil												
	Fluor 40x W												
	Plan Apo 40x Oil			40x III					40x III				
Plan Apo 60x Oil A													
60x	Plan Apo 60x	N2 Dry	60x I		60x I-R	NR Dry	60x I-R	N2 Oil	60x I	NR Oil	60x I-R		
	Fluor 60x W												
	Plan Apo VC 60x Oil												
	Plan Fluor 60x Oil												
	Plan Apo TIRF 60x Oil		60x II				60x II	60x II-R	60x II	60x II-R			
	Plan Apo 60x WI												
	Plan Apo VC 60x WI												
	Plan Fluor 60x												
100x	Plan Apo VC 100x Oil	N2 Dry	100x I				100x I-R		100x I		100x I-R		
	Plan Fluor 100x Oil		100x II				100x II-R	100x II	100x II	100x II-R			
	Plan Fluor 100x SH												
	Plan Apo TIRF 100x												
	Plan Apo 100x NCG Oil												
	Plan Apo 100x Oil												

Combinations for TE2000 DIC Sliders and Condenser Modules

		System Condenser LWD Dry/Motorized System Condenser LWD Dry				High Magnification Condenser Lens Dry				High Magnification Condenser Lens Oil						
		Standard		High Contrast		High Resolution		Standard		High Resolution		Standard		High Resolution		
		Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	Condenser Module	DIC Sliders	
ELWD	Plan Fluor ELWD 20x C	LWD N1 Dry	T-C 20x I													
	Plan Fluor ELWD 40x C		T-C 40x IV													
	Plan Fluor ELWD 60x C		T-C 60x III													
10x	Plan Fluor 10x	LWD N1 Dry	10x													
	S Fluor 10x															
	Fluor 10x W															
20x	Plan Fluor 20x	LWD N1 Dry	20x		20x-C			20x			20x					
	Plan Apo 20x															
	S Fluor 20x															
	Plan Fluor 20x MI															
	Fluor 20x W															
40x	Plan Fluor 40x	LWD N2 Dry	40x I		40x I-C			40x I			40x I					
	Plan Apo 40x															
	S Fluor 40x															
	Plan Fluor 40x Oil		40x II				40x II		40x II		40x II					
	S Fluor 40x Oil															
	Fluor 40x W			40x III						40x III			40x III		40x III	
	Plan Apo 40x Oil															
60x	Plan Apo 60x Oil A	LWD N2 Dry	60x I		60x I-R	LWD NR Dry	60x I-R	HNA N2 Dry	60x I	60x I	HNA N1 Dry	60x I	HNA NR Oil	60x I		
	Plan Apo 60x															
	Fluor 60x W															
	Plan Apo VC 60x Oil															
	Plan Fluor 60x Oil		60x II				60x II	60x II	60x II	60x II	60x II	60x II	60x II			
	Plan Apo TIRF 60x Oil															
	Plan Apo 60x WI															
	Plan Apo VC 60x WI															
Plan Fluor 60x																
100x	Plan Apo VC 100x Oil	LWD N2 Dry	100x I				100x I-R		100x I		100x I		100x I			
	Plan Fluor 100x Oil		100x II				100x II-R	100x II	100x II	100x II	100x II	100x II	100x II			
	Plan Fluor 100x SH															
	Plan Apo TIRF 100x															
	Plan Apo 100x NCG Oil															
	Plan Apo 100x Oil															

Specifications

Upright Microscopes

Model	90i	80i	55i	50i	E200	YS100	YS50	LV100 POL	50i POL	E200POL	FN1	
Optical system	CFI60 infinity optical system					CF system		CFI60 infinity optical system				
Focusing unit	Motorized coaxial coarse/fine/super-fine focusing	Manual coaxial coarse/fine focusing										
Eyepiece tube	Y-TB Binocular Tube C-TE Ergonomic Binocular Tube Y-TF Trinocular Tube FUW Y-TT Trinocular Tube TUW D-DH-E Digital-imaging Head E D-DH Digital-imaging Head M		Y-TB Binocular Tube C-TE Ergonomic Binocular Tube Y-TF Trinocular Tube FUW Y-TT Trinocular Tube TUW		E2-TB Binocular Tube E2-TF Trinocular Tube C-TE Ergonomic Binocular Tube	YS-TM Monocular Tube YS-TB Binocular Tube Trinocular Tube FJ	YS-TM Monocular Tube YS-TB Binocular Tube	P-TT Polarizing Trinocular Tube; P-TB Polarizing Binocular Tube		E2-TB Binocular Tube E2-TF Trinocular Tube	Y-TB Binocular Tube C-TE Ergonomic Binocular Tube Y-TF Trinocular Tube FUW Y-TT Trinocular Tube TUW	
Eyepiece lens	CFI10x (F.O.V. 22) CFI10x M (F.O.V. 22) CFI 12.5x (F.O.V. 16) CFI 15x (F.O.V. 14.5) CFI UW 10x (F.O.V. 25) CFI UW 10x M (F.O.V. 25)				CFI E 10x (F.O.V. 20) CFI E 15x (F.O.V. 12)	CFW N 10x (F.O.V. 18) CFW N 15x (F.O.V. 12)		10x (F.O.V. 22mm), 10x CM with crosshair and micrometer scale		CFI10x (F.O.V. 22), CFI10x M (F.O.V. 22), CFI 12.5x (F.O.V. 16) CFI10x CM (F.O.V. 22)	CFI10x (F.O.V. 22) CFI10x M (F.O.V. 22) CFI 12.5x (F.O.V. 16) CFI 15x (F.O.V. 14.5) CFI UW 10x (F.O.V. 25) CFI UW 10x M (F.O.V. 25)	
Illumination	12V-100W halogen lamp		LED	6V-30W halogen lamp	6V-20W halogen lamp (6V-30W halogen lamp available)	6V-20W halogen lamp	Mirror illumination	Diascopic illuminator: 12V-50W halogen lamp "LV-HL50W type" - brighter than 100W, 12V-100W light source optional	Diascopic illuminator: 6V-30W halogen lamp "HK type"	6V-20W halogen	12V-100W Halogen	
	—							Episcopic illuminator: 12V-50W halogen lamp - brighter than 100W				
Nosepiece	D-ND6-E Motorized Setuple DIC Nosepiece D-N7-E Motorized Septuple Nosepiece		C-N Sextuple Nosepiece J-CY Cytodiagnostic Unit			Quadruple Nosepiece (fixed)		Reversed centering quintuple nosepiece (detachable); With DIN compensator slot		Quadruple Nosepiece (fixed)	Double sliding nosepiece (for CFI60 lenses) Single objective holder (for CFI ₇₅ 16X lens)	
	D-NI7 Intelligent Septuple Nosepiece D-NID6 Intelligent Sextuple DIC Nosepiece C-N Sextuple Nosepiece D-ND6 Sextuple DIC Nosepiece											
Stage	D-S-E Motorized XY Stage C-SRR Rotatable Mechanical Stage	80i (centering type): C-SRR Rotatable Mechanical Stage 80i (standard type): C-SR Rectangular Mechanical Stage Cross travel 78(X) x 54(Y) mm	C-SR Rectangular Mechanical Stage Cross travel 78(X) x 54(Y) mm			Mechanical Stage Cross travel 54(Y) x 78(X) mm	Mechanical Stage Cross travel 40(Y) x 76(X) mm	Plain Stage Mechanical Stage	Top-grade polarizing circular graduated stage Rotatable 360° horizontally; Click stops each 45°	Polarizing circular graduated stage; Rotatable 360° horizontally; Mechanical stage attachable;	Circular Graduated Stage Mechanical Stage available	Triplet plate rectangular stage
Weight	Approx. 18.2kg (standard trinocular set)	Approx. 13.9kg (standard binocular set)	Approx. 13.8kg (standard binocular set)			Approx. 8kg (standard set)	Approx. 7.2kg (YS100-B)	Plain stage: approx. 4.8kg Mechanical stage: approx. 5.3kg	Approx. 16kg (standard trinocular set)	Approx. 14kg (standard binocular set)	Approx. 9kg (E2BP-11)	Approx. 12kg

Inverted Microscopes

Model	TE2000-U/TE2000-S/TE2000-E/TE2000-PFS	TS100/TS100-F
Optical system	CFI60 infinity optical system	
Focusing unit	Via nosepiece up/down movement E: motorized/manual, U/S: manual, PFS: PFS/motorized/manual Minimum fine reading E: 0.05µm U/S: 1µm	Via nosepiece up/down movement Manual coaxial coarse/fine focusing
Eyepiece tube	T-TD Binocular Tube D T-TS Binocular Tube S T-TERG Binocular Ergonomic Tube D T-TI Intermediate Tube for Eclipse i-Series trinocular tubes and teaching heads	TS 100: Binocular tube (fixed) TS100-F: Trinocular eyepiece tube (fixed)
Eyepiece lens	CFI 10x (F.O.V. 22) CFI 12.5x (F.O.V. 16) CFI 15x (F.O.V. 14.5)	C-W 10x (F.O.V. 22) C-W 15x (F.O.V. 16)
Illumination	TE2000-U/TE2000-E/TE2000-PFS 12V-100W halogen lamp*1 TE2000-S 6V-30W halogen lamp*2	6V-30W halogen lamp
Nosepiece	T-N6 Sextuple Nosepiece T-ND6 Sextuple DIC Nosepiece T-ND6-E Motorized Sextuple (E, PFS) DIC Nosepiece*3	Fixed quintuple nosepiece
Stage	T-SR Rectangular Stage T-SP Plain Stage T-SAM Attachable Mechanical Stage T-SSR Short-handle Stage	Plain stage with acrylic transparent stage ring T1-SM Attachable Mechanical Stage
Weight	TE2000-U: approx. 36kg (epi-fl set) TE2000-S: approx. 32kg (phase contrast set) TE2000-E: approx. 45kg (epi-fl set), TE2000-PFS; Approx. 50kg (Epi-fl set)	TS100: approx. 10.5kg (phase contrast set) TS100-F: approx. 11.0kg (phase contrast set)

*1 6V-30W illumination is available as option for TE2000-U/TE2000-E/TE2000-PFS.

*2 12V-100W illumination is available as option for TE-2000S.

*3 Standard for TE2000-E/TE2000-PFS. Available as option for TE2000-U/TE-2000S.

Stereoscopic Zoom Microscopes

Model	SMZ1500	SMZ1000	SMZ800	SMZ645/660	SM-5
Optical system	Parallel-optics zoom system			Twin zooming objective	Twin objective
Total magnification Varies depending on eyepiece and objective used	3.75-540x	4-480x	5-378x	4-300x	10-60x
When coaxial episcopic illuminator is attached	5.6-506x	6-540x	7.5-425x		
Eyepiece tube	P-BT Standard Binocular P-BLT Low Eye-level Binocular P-BERG Tilting Binocular			Fixed	
Eyepiece inclination	20° (Standard binocular and low eye-level binocular) 0-30° (Tilting binocular)			SMZ645: 45° SMZ660: 60°	45°
Interpupillary distance adjustment	48-75mm			52-75mm	56-75mm
Eyepiece lens (with diopter adjustment)	C-W10xA (F.N. 22), C-W15x (F.N. 16) C-W20x (F.N. 125), C-W30x (F.N. 7)				SM E10xA (F.N. 23; stadard), SM E15xA (F.N. 14) SM E20xA (F.N. 12), C-W30xA (F.N. 7)
Zoom range	0.75-11.25x	0.8-8.0x	1-6.3x	0.8-5x	—
Zoom ratio	15:1	10:1	6.3:1	6.3:1	—
Objectives	P-HR Plan Apo 0.5x P-HR Plan Apo 1x P-HR Plan APo 1.6x	P-Plan Apo 0.5x, P-Plan Apo 1x P-ED Plan 1.5x P-ED Plan 2x	P-Achro 0.5x P-Plan 1x P-ERG Ergonomic Plan 1x	Auxiliary objectives: G-AL 0.5x (W.D. 211mm) G-AL 0.7x (W.D. 150mm) G-AL 1.5x (W.D. 61mm) G-AL2x (W.D. 43.5mm) G-AL ERG 0.77-1.06x (W.D. 102-48mm)	2x (fixed) Auxiliary objectives: AL5 (0.5x), AL7 (0.7x)
	Objectives for other models can be used on some conditions.				
Working distance (in standard configuration or 1x objective)	54mm	70mm	78mm	115mm	100mm
Weight	Approx. 7.5kg (P-BT Standard Binocular +C-PS160 Plain Stand)	Approx. 6.5kg (P-BT Standard Binocular + C-PS160 Plain Stand)	Approx. 5kg (P-BT Standard Binocular + C-PS160 Plain Stand)	Approx. 4.5kg	Microscope unit: approx. 1.5kg Stand: approx. 1.9kg

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WARNING

TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USING YOUR EQUIPMENT.



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