Nikon

Biological Microscopes E600/E400

ECLIPSE

E600

E400

CFI60

Redefining Research a nd Clinical Microscopy

Nikon's exclusive **CFI**60 optics have revolutionized the expectations researchers have regarding biological microscopes, and provide the E600 and E400 with specifications superior to any comparable product. Featuring both outstanding optical performance and extreme versatility, these Eclipse models consistently give you better images, whatever the observation technique. The advanced mechanical design of the Eclipse series microscopes allows ergonomically sound operation in a natural posture as well as higher structural rigidity.

ECLIPSE E600

Outstanding optical performance and versatility
The E600 biological research microscope with Nikon's revolutionary CFI60 infinity optics provides dramatically improved performance in all applications. Ideal for epi-fluorescence and other sophisticated microscopy, the E600 opens up new dimensions in advanced research applications.

ECLIPSE E400

Optimized for comfort in extended clinical applications
Though extremely solid and stable, the E400 is remarkably compact and comfortable, allowing operation in a relaxed, natural posture. The result: less operator fatigue allowing for longer periods of observation.

CFI60

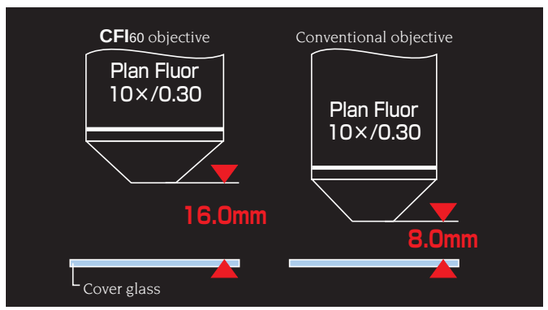
A Revolution in Optics

Innovative objective specifications

To ensure outstanding optical performance and flexibility into the future, Nikon has adopted completely new specifications for its **CFI**60 series objectives, including a 60mm parfocal distance, a 25mm thread size, and a standard 22mm field of view. Only Nikon's **CFI**60 optical system offers the widest available viewing fields for both observation and documentation.

Longer working distances with highest N.A.

Longer working distances at the highest numerical aperture, with the widest magnification range, are now a reality. The result: high resolution for brilliantly sharp images and unprecedented ease of operation.



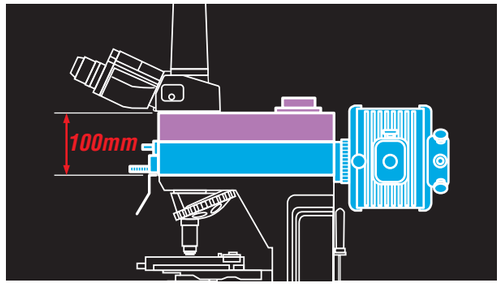
Greater working distance

Built-in flexibility for future upgrades

In order to give the E600/400 the flexibility to accommodate various intermediate attachments, with no sacrifice in optical performance and stability, a longer parallel optical beam between the objective and the tube lens was essential. Enhanced stand rigidity and a better method of attaching component accessories was also required. The Nikon design team accomplished these goals by using a longer focal length tube lens in its new **CFI**60 infinity optical system and a new multiple point rigid design for attaching accessories. Attaching multiple accessories like epi-fluorescence and other intermediate attachments in no way compromises the efficiency of Nikon's Eclipse microscopes.

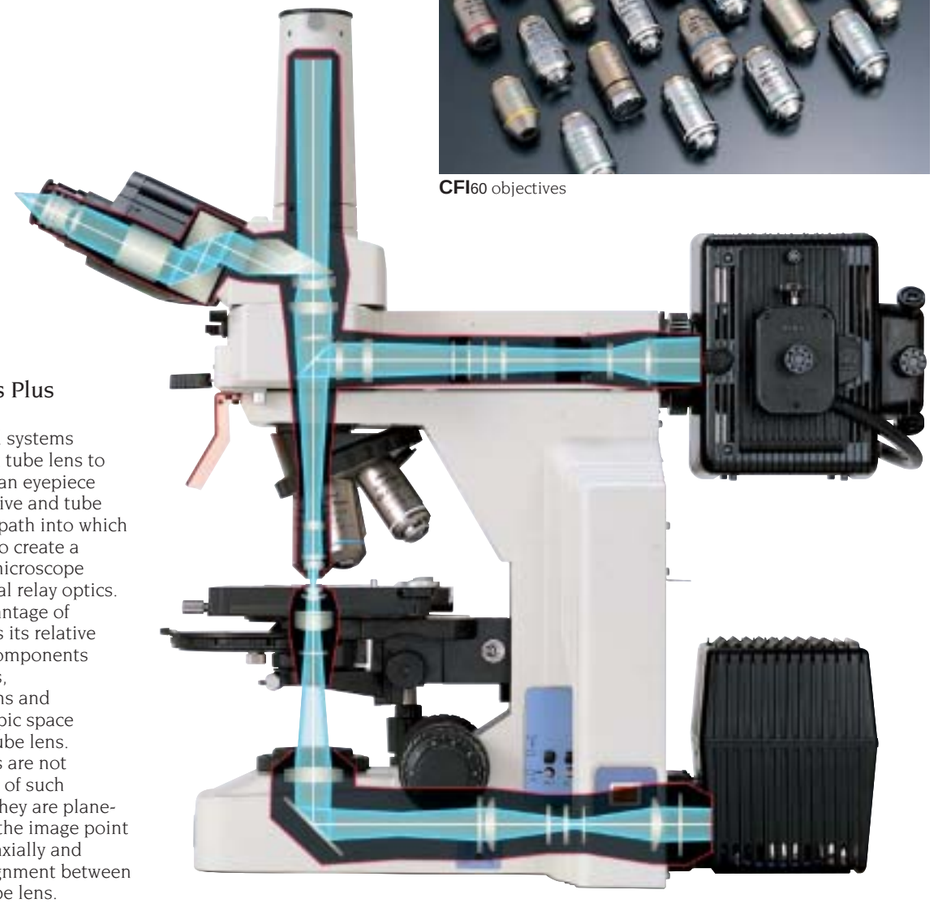
Universal objectives

These newly developed objectives allow the use of multiple observation techniques i.e. brightfield, darkfield, Nomarski DIC, epi-fluorescence or phase contrast, eliminating the need to change objectives, while maintaining the same degree of optical performance as dedicated lenses. This translates into faster observation and greater productivity.



Intermediate attachments

CFI60 objectives



CF Corrected Optics Plus Infinity Optics

The CFI60 infinity optical systems consist of an objective, a tube lens to converse the beam, and an eyepiece lens. Between the objective and tube lens is a parallel optical path into which modules can be placed to create a totally flexible modern microscope system without additional relay optics. The intrinsic design advantage of infinite image distance is its relative insensitivity to optical components (such as filters, analyzers, compensators, DIC prisms and reflectors) in the telescopic space between objective and tube lens. Infinity or parallel beams are not affected by the thickness of such components as long as they are plane-parallel. The location of the image point remains constant, both axially and laterally, as does the alignment between the objective and the tube lens.

Ergonomics

Next-Generation Ergonomic Design

One-handed control
With our new innovative focusing system you can manipulate the fine focus knob and the stage handle with one hand. This leaves you with one hand free to operate a counter, a personal computer or some other device.

One-handed focus/stage control

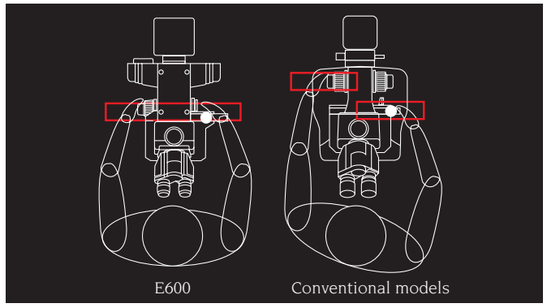
More comfortable head and eye position
The eyepiece tube angle is lower than on conventional models and assures better operator posture. An optional riser is available for taller operators who require eyepieces to be raised higher. Eye level can be raised up to 100mm.*

*Including intermediate attachments such as epi-fluorescence attachment and teaching head.

Comfortable viewing angle

Eye level riser

Strain-free posture
The stage handle and the focus control knob are equidistant from the operator and positioned so your hands rest comfortably on the desk in a more relaxed, natural posture. There is no need to twist your shoulders around, so there is much less strain. Also, main switches and controls, e.g. field diaphragm, light intensity knob and auto-photo preset switch, are all located in front at desktop height and within easy reach. A quick, 3 filter push-button type filter switching mechanism (E600 only) further enhances operational ease. The quick refocusing stopper and coarse focus tension controls are standard on both models

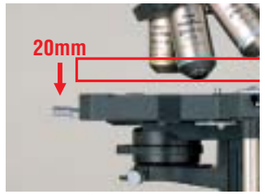


Position comparison of stage handle and focus control knob

Quick, push-button type filter switching (E600 only)

Auto photo preset switch

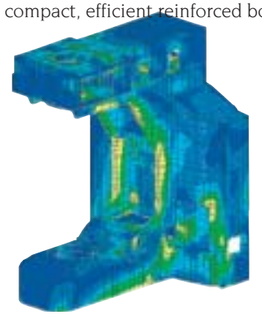
Low-profile stage
Stage height is approximately 20mm lower than on conventional models. This new design facilitates smooth nosepiece rotation, as well as correction ring and specimen handling, for quicker, more efficient, strain-free operation. A new cross-travel mechanism makes for smoother stage movements, and the elimination of projections on the stage top results in an extended stage rotation range. A super-hard coating safeguards the stage surface from abrasions and wear.



Low stage design

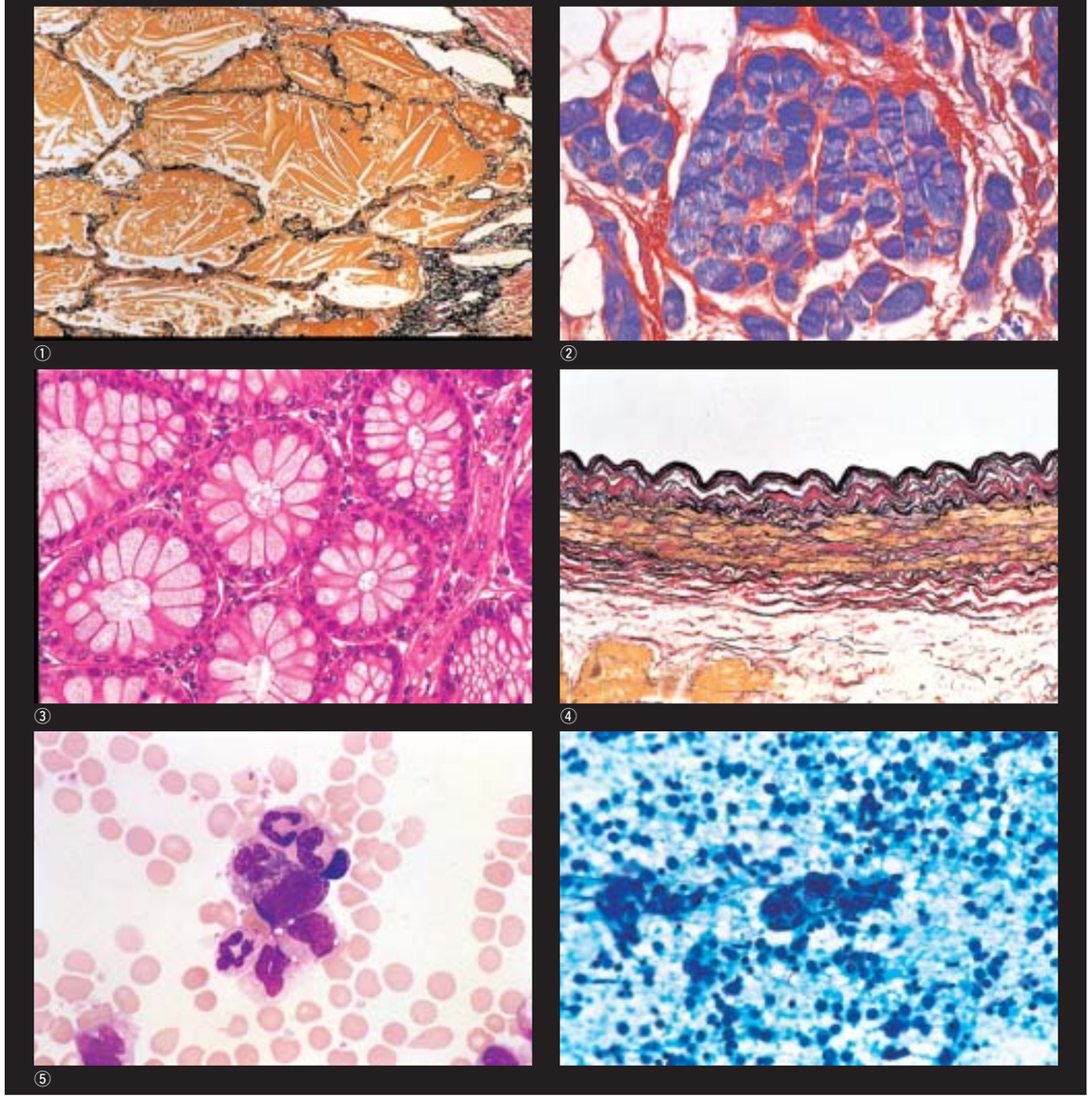
Ample space around the stage

CAE design for enhanced rigidity
Vibrations and deformation of the base not only deteriorate the image but also increase operator fatigue over the long run. Making full use of computer-aided engineering (CAE), Nikon managed to achieve both high vibration resistance and structural rigidity to ensure that these microscopes perform at peak optical levels. Both the E600 and E400 models have a compact, efficient reinforced body design.

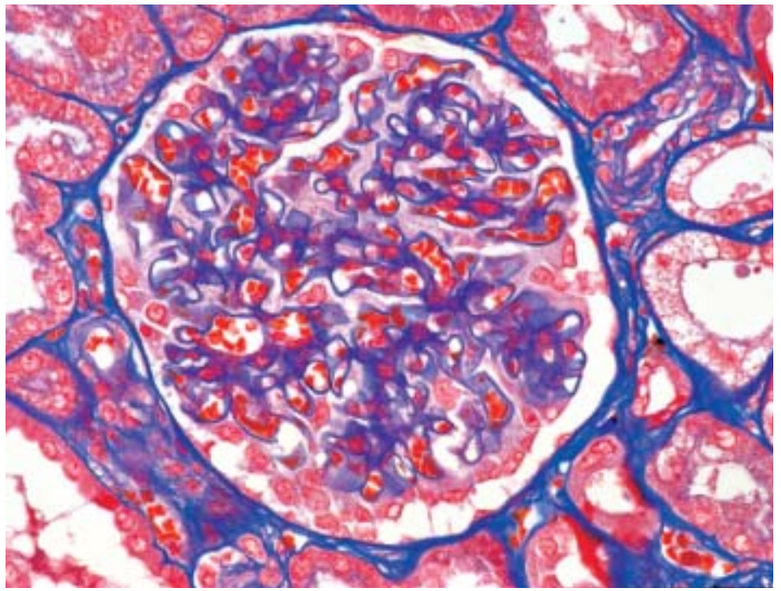


Excellent Optical Performance

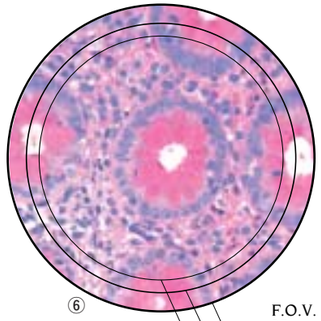
No matter what the observation technique, you can always count on the same high level of optical performance from the E600/E400. The **CFI**60 optics deliver superb overall performance, with high resolution and contrast, Nikon's famous chromatic aberration free correction (CF) and top transmission rates. This makes them the perfect tools for today's sophisticated research and clinical tasks.



Brightfield Observation



1X objective



Brilliant, Sharp Images from Low to High Magnifications

The E600/400 provide crystal-clear brightfield images with superior color fidelity. The 1X objective in particular is ideal for pathology and other applications requiring a larger visual and photographic field. **CFI**60 optics maintain incredible image sharpness over the broad range of magnifications from ultra low to high.

1X objective

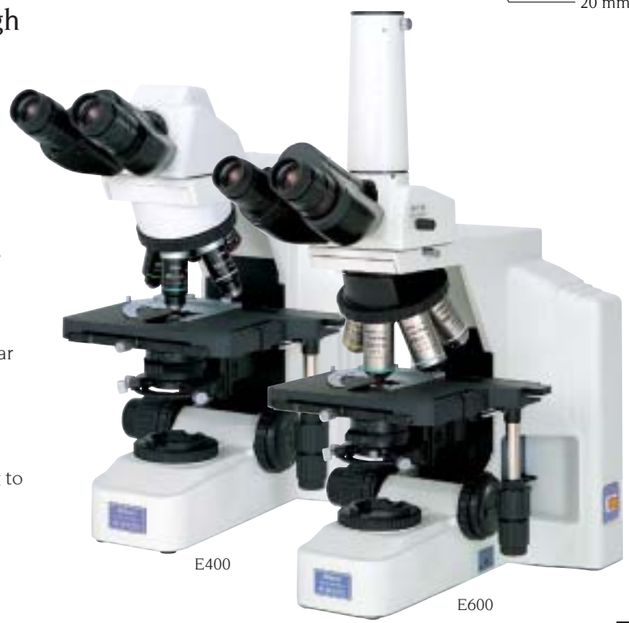
Ideal for whole mount specimens like embryos or brain slices, the ultra-low 1X objective allows you to observe and photograph the largest field of view possible.

Standard 22mm field of view

With a 22mm standard field of view, the E600/400 ensures clear images with minimal aberration and flare right up to the periphery of the field of view.

Optional ultra widefield eyepieces

The trinocular tubes F and T permit ultra-wide-field observations with a field of view of 25mm simply by switching to the optional Ultra Widefield Eyepieces.



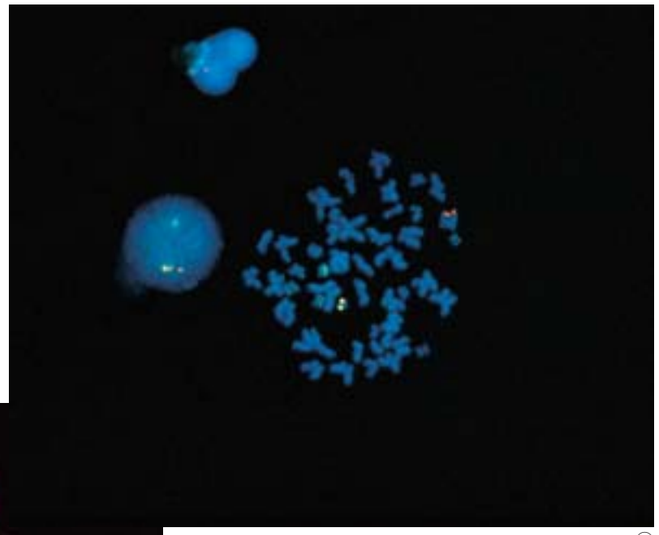
E400

E600

Epi-fluorescence

Epi-fluorescence Made Easy

A pronounced increase in the use of fluorescence techniques has been witnessed recently in research applications as well as clinical applications. The E600/E400 system as a whole excels at handling difficult fluorescence tasks, rendering images with superb clarity and high contrast. Fluorescence microscopy has never been easier.



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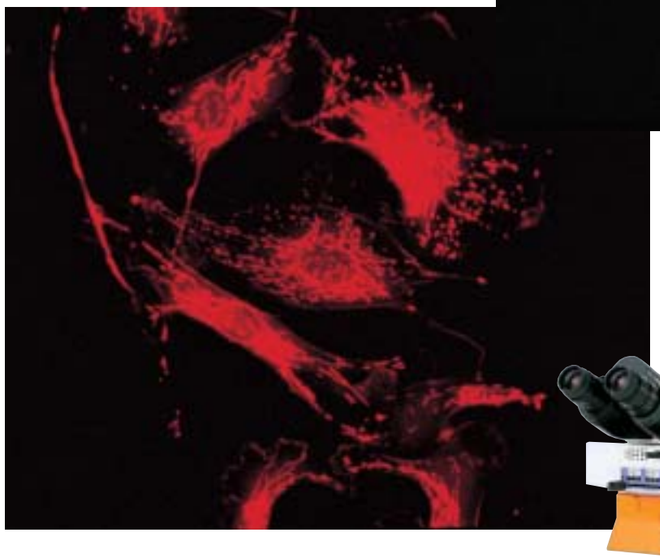


Epi-fluorescence set

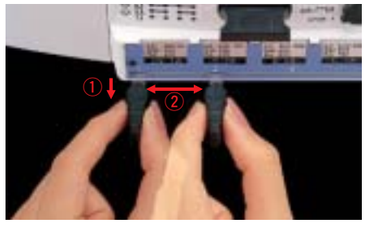
E400 epi-fluorescence set

E600 epi-fluorescence set

Four-filter linear slider

The epi-fluorescence attachment accepts up to four fluorescence filter cubes. For example, it can accommodate one multi-band filter plus three corresponding single-band filters, or any combination of filters you need.

E600 epi-fluorescence/ Nomarski DIC set



Quick filter slider switching

With the new mechanism, as few as two filter blocks can be selected by pulling the filter lever out one click stop, or alternatively, you can pull the lever out two clicks and lock the lever in the current position for brightfield or some other specific tests.

Easy filter replacement

Filter replacement is now easier than ever, as the filter assembly can be held in place by pulling the lever out into the lock position. Each filter block is fixed by a self-leveling clamp screw providing extreme registration between filter positions.

Front shutter

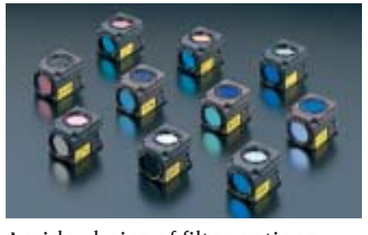
A unique shutter control is located up front, just below the eyepiece tube, for easy access in dimly-lit rooms; no need to remove your eye from the eyepiece or feel around for the shutter slider to prevent the specimen from fading.

CF collector lens

Ensures even illumination over the entire specimen area. This collector lens is color corrected for multi-color staining applications using a variety of excitation filters. It is ideal for applications like F.I.S.H. or triple stained fluorescence imaging.

Plan Fluor series objectives

Featuring both superb image flatness and high UV transmission rates, these objectives are ideal for epi-fluorescence observations.



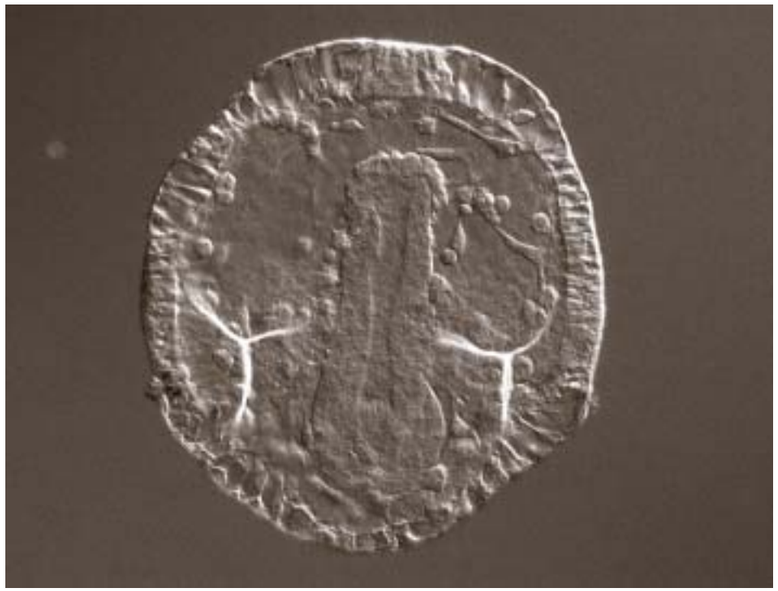
A wide choice of filter options

Filters to cover a multitude of application needs.

Nomarski DIC

Observe living cells in high definition DIC

The Senarmont method was chosen to optimize our Nomarski DIC system and to enhance ease of operation while eliminating the need to adjust the DIC contrast from above the objective. You can observe unstained living cells and microorganisms in 3D-relief-like images with unparalleled optical stability, and control the contrast from the base of the microscope for greater ease of use. The shear angle of our DIC system has been designed to provide increased contrast and is ideal for observing specimens like nematodes and Drosophilia embryos. The seven position Universal Turret Condenser accommodates three DIC, three phase and one brightfield positions . A dry 0.9 flip-out condenser top and 1.4 oil immersion top are available. An optional expander lens is available for use with the oil immersion 1.4 condenser for high N.A. DIC applications like video enhancement.



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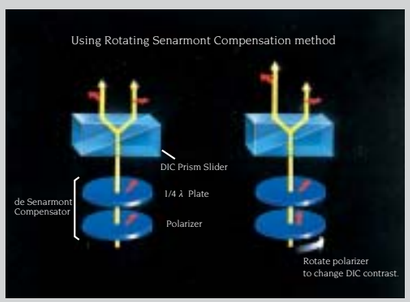
Nomarski DIC set

The Senarmont method

Contrast adjustment is accomplished by rotating the polarizer on the field lens, eliminating the risk of annoying image shifts. The revolving nosepiece houses individual prisms for each objective, thus guaranteeing optimal shear to match the N.A. of the condenser top lens and the objective.

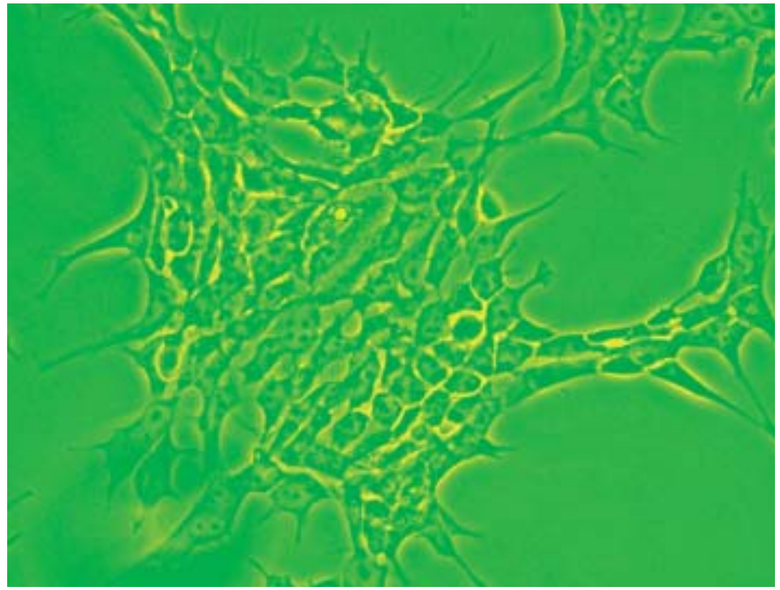


E600 Nomarski DIC set

Phase Contrast

High contrast and definition

This technique ensures well-defined, high contrast images and neutral background coloration, regardless of the magnification range.



Plan Fluor DLL objectives

With moderate contrast, these objectives are broadly used for phase contrast, epi-fluorescence, brightfield and Nomarski DIC microscopy.

Phase contrast set

E400 phase contrast set

E600 phase contrast set

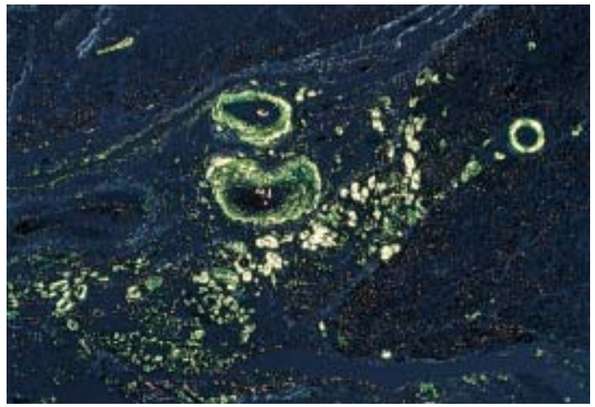
Simple polarizing

Ideal for observing amyloid and crystals

Set up simple polarizing observation by installing the polarizer over the field lens and the intermediate tube type analyzer. This accessory will allow for an ultra-widefield field of view of 25mm.

Simple polarizing set B
(swing-out type)

Simple polarizing set A



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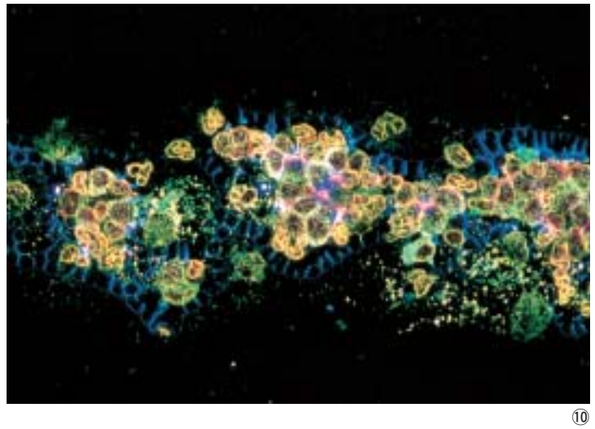
Darkfield

Easier operation in microbiology and hematology screening

You can choose between a dry or ultra darkfield oil type condenser. An optional condenser expander lens is also available for brighter illumination.

Darkfield condensers
(dry, oil)

Expander lens



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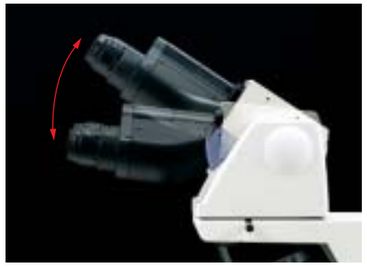


Ergonomic binocular tube

With this option, the operator can adjust not only the eyepiece tube tilt angle but also the eyepiece length to suit his or her build, obviating the need for physical adjustments, which cause discomfort and strain over hours of observation.

* Use of this accessory in combination with other equipment may produce darker images around the periphery.
* A maximum of two eye lever risers can be used with this accessory.

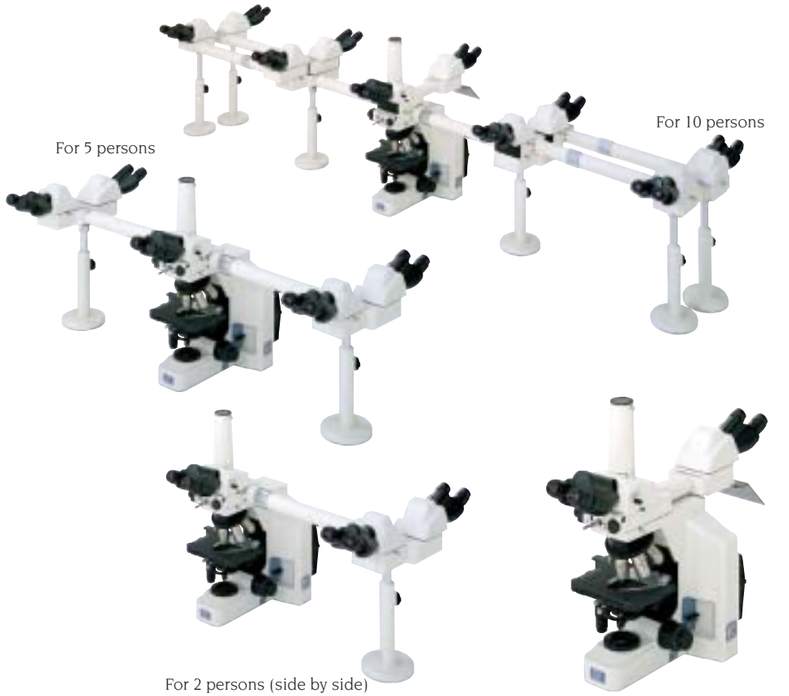
E400 with ergonomic binocular tube (prototype)

Eye level riser

If you need to adjust the eyepoint level further, an optional eye level riser is also available, which can be inserted between the eyepiece tube and the main body. Each riser is 25mm high and up to four can be used to raise the eye level to a maximum of 100mm*.

*Including intermediate attachments such as epi-fluorescence attachment and teaching head.

Teaching heads
Designed to blend in with the microscope, these modular accessories permit simultaneous observations of the same specimen by several persons (up to 10*), while delivering a constant degree of brightness, orientation and viewing height. Both face-to-face and side-by-side configurations are available for two-person observations, depending on your requirements.
*Up to 5 persons with E400



Double port
Installed between the main body and the trinocular eyepiece tube, the double port enables the operator to use two CCTV camera systems simultaneously or one CCTV camera and one 35mm camera.

Drawing tube
Designed exclusively for the infinity optical system, this drawing tube uses no relay lens and provides a 1X magnification. If so desired, 100% of the light can be sent to the observation port by swinging out the beamsplitter from the optical path.

Magnification module
This module allows the intermediate magnification to be changed to 1X, 1.25X, 1.5X, or 2X, and is excellent for high-resolution video enhanced DIC (VEC), image composition, and framing.

Quadrocular Adapter
By using this adapter, you can attach two CCTV cameras or one CCTV camera and one photomicrographic system to the trinocular eyepiece tube of the Eclipse E600 and E400 microscopes via the appropriate adapters. Yet, the eye level remains unchanged.

Photomicrographic Equipment

FX-III Series
Advanced photomicrography is simpler than ever with the following options. Select according to your needs.

U-III Advanced Photomicrography System
- Auto exposure with increased accuracy thanks to multi-point sensor
- 0.1% spot, 1% spot and 35% average metering
- Two Program Scanning Spot Metering modes for fluorescence: Ps and Pss for smaller objects
- Auto Brightness Finder with proximity sensor and shutter
- Auto DX film speed setting
- Auto bracketing
- Wind Lock (Multiple Exposure)
- AE Lock (Memory of Exposure Time)
- Photo data review
- Exposure sequence programming

H-III Automatic Photomicrography System
- Integrated design with built-in control box
- Auto exposure with increased accuracy thanks to multi-point sensor
- 1% spot and 35% average metering
- Shutter speed LED display
- Auto DX film speed setting
- AE Lock (Memory of Exposure Time)

P-III Manual Photomicrography System
- Manual shutter speed setting
- Uses a Nikon 35mm camera*
- 1 to 1/250 sec. shutter speed

*Some cameras cannot be used: for details please consult your dealer.


E600 with U-III

CCTV adapters
- 2.5X, 4X relay lenses for video enhanced contrast (VEC) applications
- 0.45X, 0.6X relay lenses for 1/2, 1/3, 2/3 inch CCD cameras
- 0.9 to 2.2X zoom relay lenses are also available

Double lamphouse adapter
This adapter allows two different light sources to be attached to a single microscope. This eliminates the need to change the lamphouse and the troublesome centering procedures that are necessary. Switching between two lamphouses is possible even while they are turned on.

Eyepiece tubes

The standard binocular is inclined at a low 25 degree angle for better operator posture. The eyepoint level can be adjusted by using optional eye level risers.

Binocular tube B | Trinocular tube F | Trinocular tube T | Ergonomic binocular tube

Binocular tube B	F.O.V. 22mm
Trinocular tube "F" UW	Two-way: 100 : 0 or 0 : 100 (observation : photo) F.O.V. 22mm or 25mm with eyepiece reticule orientation adjustment mechanism
Trinocular tube "T" UW	Three-way: 100 : 0, 20 : 80, or 0 : 100 (observation : photo) F.O.V. 22mm or 25mm with eyepiece reticule orientation adjustment mechanism
Ergonomic binocular tube	F.O.V. 22mm with tilting angle of 8° to 32° and telescopic mechanism of ±15mm movement

Eyepieces

These eyepieces have a wide top lens, thin outer diameter and high eyepoint for the most comfortable viewing possible.

Type (magnification)		F.O.V.	Remarks
①	CFI UW 10X	25mm	
	CFI UW 10X M	25mm	With photomask reticule
②	CFI 10X	22mm	
	CFI 10X M	22mm	With photomask reticule
③	CFI 12.5X	16mm	
④	CFI 15X	14.5mm	

Condensers

Deliver even illumination over a wider field of view.

Type		N.A.	Object distance (mm)	Magnification
①	Achromat/Aplanat condenser	1.40	1.6	10–100X
②	Swing-out condenser	0.9/0.22	1.8	2–100X
③	Achromat condenser	0.8	4.2	4–100X
④	Abbe condenser	0.9	1.9	4–100X
⑤	Low power condenser	0.13	10.2	1–4X
⑥	LWD condenser	0.65	10.2	4–40X
⑦	Darkfield condenser (oil)	1.2–1.43	1.5	20–100X
⑧	Darkfield condenser (dry)	0.8–0.95	4	20–40X
⑨	Phase contrast condenser	0.9	1.9	10–100X
⑩	Universal Turret condenser (dry)	0.9	2.3	2–100X
	Universal Turret condenser (oil)	1.40	1.6	20–100X

Objectives

Nikon's new optical standard provides a 60mm parfocal distance, a 25mm thread size and a standard 22mm field of view for the new CFI Plan Achromat and CFI Achromat series objectives. CFI60 objectives have longer working distances with higher numerical apertures to enhance your microscopy performance.

ND3 filters for Achromat, Plan Achromat objectives (for 4X, 10X, 20X; excluding DL lenses)

Achromat

Achromat for Phase Contrast

Plan Achromat

Plan Achromat for Phase Contrast

Plan Fluor

Plan Fluor for Phase Contrast

Plan Apochromat

Plan Apochromat for Phase Contrast

Description	N.A.	W.D.	Remarks
For Brightfield			
Achromat			
CFI Achromat 4X	0.10	30.00	
CFI Achromat 10X	0.25	6.10	
CFI Achromat 20X	0.40	2.10	
CFI Achromat 40X	0.65	0.65	Spring loaded
CFI Achromat 60X	0.80	0.30	Spring loaded
CFI Achromat 100X oil	1.25	0.18	Spring loaded
Plan Achromat			
CFI Plan Achromat UW 1×	0.04	3.20	
CFI Plan Achromat UW 2×	0.06	7.50	
CFI Plan Achromat 4×	0.10	30.00	
CFI Plan Achromat 10×	0.25	10.50	
CFI Plan Achromat 20×	0.40	1.30	
CFI Plan Achromat 40×	0.65	0.57	Spring loaded
CFI Plan Achromat 50×oil	0.90	0.40	Spring loaded
CFI Plan Achromat 100×oil	1.25	0.17	Spring loaded
CFI Plan Achromat NCG 40×	0.65	0.48	Spring loaded No cover glass
CFI Plan Achromat NCG 100×	0.90	0.26	Spring loaded No cover glass
Plan Fluor			
CFI Plan Fluor 4×	0.13	17.10	
CFI Plan Fluor 10×	0.30	16.00	
CFI Plan Fluor 20×	0.50	2.10	
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 60×	0.85	0.3	Spring loaded C.C.0.11-0.23
CFI Plan Fluor 100×oil	1.30	0.20	Spring loaded Stopper
CFI Plan Fluor 100×oil with iris	0.5-1.3	0.20	Spring loaded IRIS
Plan Apochromat			
CFI Plan Apochromat 2×	0.10	8.50	
CFI Plan Apochromat 4×	0.20	15.70	
CFI Plan Apochromat 10×	0.45	4.00	
CFI Plan Apochromat 20×	0.75	1.00	Spring loaded
CFI Plan Apochromat 40×	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×	0.95	0.15	Spring loaded C.C.0.11-0.23
CFI Plan Apochromat 60×oil	1.40	0.21	Spring loaded Stopper
CFI Plan Apochromat 60×Water Immersion	1.20	0.22	Spring loaded C.C.0.15-0.18
CFI Plan Apochromat 100×oil	1.40	0.13	Spring loaded Stopper
CFI Plan Apochromat NCG 100×oil	1.40	0.17	Spring loaded Stopper
For Phase Contrast			
Achromat			Phase ring
CFI Achromat DL 10X	0.25	6.10	Ph1
CFI Achromat DL 20X	0.40	2.10	Ph1
CFI Achromat DL 40X	0.65	0.65	Spring loaded Ph2
CFI Achromat DL 100X oil	1.25	0.18	Spring loaded Ph3
Plan Achromat			
CFI Plan Achromat DL 10×	0.25	10.50	Ph1
CFI Plan Achromat DL 20×	0.40	1.25	Ph1
CFI Plan Achromat DL 40×	0.65	0.55	Spring loaded Ph2
CFI Plan Achromat DL 100×oil	1.25	0.18	Spring loaded Ph3
Plan Fluor			
CFI Plan Fluor DLL 10×	0.30	16.00	Ph1
CFI Plan Fluor DLL 20×	0.50	2.10	Ph1
CFI Plan Fluor DLL 40×	0.75	0.72	Spring loaded Ph2
CFI Plan Fluor DLL 100×oil	1.30	0.20	Spring loaded Stopper Ph3
Plan Apochromat			
CFI Plan Apochromat DM20×	0.75	1.00	Spring loaded Ph2
CFI Plan Apochromat DM40×	0.95	0.14	Spring loaded C.C.0.11-0.23 Ph2
CFI Plan Apochromat DM40×oil	1.00	0.16	Spring loaded Stopper Ph3
CFI Plan Apochromat DM60×	0.95	0.15	Spring loaded C.C.0.11-0.23 Ph2
CFI Plan Apochromat DM60×oil	1.40	0.21	Spring loaded Stopper Ph3
CFI Plan Apochromat DM100×oil	1.40	0.13	Spring loaded Stopper Ph3

Epi-fluorescence filters

Nikon offers the following filter combinations to meet almost every application.

Filter Characteristics

	Filters	Wavelengths	Characteristics	Applications
U V	UV-2A	EX 330-380 DM 400 BA 420	●Standard filter block for UV	●DAPI ●Hoechst 33258/33342 ●AMCA ●Cascade Blue®
	UV-2E/C* (DAPI)	EX 340-380 DM 400 BA 435-485	●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	
	UV-1A	EX 365/10 DM 400 BA 400	●Narrow band pass — only 365nm (i line) of Mercury spectrum used ●Narrow band pass minimizes auto-fluorescence and photo-bleaching	
	UV-2B	EX 330-380 DM 400 BA 435	●Darker background than UV-2A	
V	V-2A	EX 380-420 DM 430 BA 450	●Standard filter block for V	●Catecholamine ●Serotonin ●Tetracycline
	V-1A	EX 405/10 DM 430 BA 435	●Narrow band pass — only 450nm (h line) of Mercury spectrum used ●Narrow band pass minimizes auto-fluorescence and photo-bleaching	
	V-2B	EX 380-420 DM 430 BA 460	●Darker background than V-2A	
B V	BV-2A	EX 400-440 DM 455 BA 470	●Standard filter block for BV	●Quinacrine ●Quinacrine Mustard (QM) ●Thioflavine S ●Acriflavine
	BV-1A	EX 435/10 EM 455 BA 470	●Narrow band pass — only 435nm (g line) of Mercury spectrum used ●Narrow band pass minimizes auto-fluorescence and photo-bleaching	
	BV-2B	EX 400-440 DM 455 BA 480	●Darker background than BV-2A	
B	B-3A	EX 420-490 DM 505 BA 520	●Wide band passs — recommended for halogen illumination only	●FITC ●Acridine Orange ●Auramine O ●Coriphosphine O ●Bodipy® ●Fluo-3 ●DIO
	B-2A	EX 450-490 DM 505 BA 520	●Standard filter block for B ●For FITC + Counter-stain (TRITC, PI)	
	B-2E/C* (FITC)	EX 465-495 DM 505 BA 515-555	●Soft coated type for high signal/noise ●For FITC (green), cutting off Rhodamine red ●Band-pass Barrier Filter used to cut off red	
	B-1A	EX 470-490 DM 505 BA 520	●Narrower excitation range than B-2A ●FITC+Counter-stain (TRITC, PI)	
	B-2E	EX 450-490 DM 505 BA 520-560	●Similar to FITC ●For FITC (green), cutting off Rhodamine red ●Band-Pass Barrier Filter used to cut off red	
	B-1E	EX 470-490 DM 505 BA 520-560	●Hard coated type for FITC ●Band-Pass Barrier Filter used to cut off red	
G	G-2A	EX 510-560 DM 575 BA 590	●Standard filter block for G	●TRITC ●Rhodamine B200 ●Propidium iodide ●R-Phycoerythrin ●B-Phycoerythrin ●DiI ●Ethidium Bromide
	G-1A	EX 546/10 DM575 BA 580	●Narrow band pass — only 546nm (e line) of Mercury spectrum used ●Narrow band pass minimizes auto-fluorescence and photo-bleaching	
	G-2E/C* (TRITC)	EX 540/25 DM 565 BA 605/55	●For TRITC (Rhodamine) ●Soft coated type for high signal/noise ●Band-Pass Barrier Filter used to cut off reds above 643nm	
	G-1B	EX 546/10 DM 575 BA 590	●Narrow band pass — only 546nm (e line) of Mercury spectrum used ●Narrow band pass minimizes auto-fluorescence and photo-bleaching	
	G-2B	EX 510-560 DM 575 BA 610	●610nm barrier provides darker background and deep red emission	
Y	Y-2E/C* (Texas Red)	EX 540-580 DM 595 BA 600-660	●For Texas Red® ●Soft coated type for high signal/noise ●Band-Pass Barrier Filter used to cut off reds above 660nm	●Texas Red®

Multi-Band Filters*

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

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

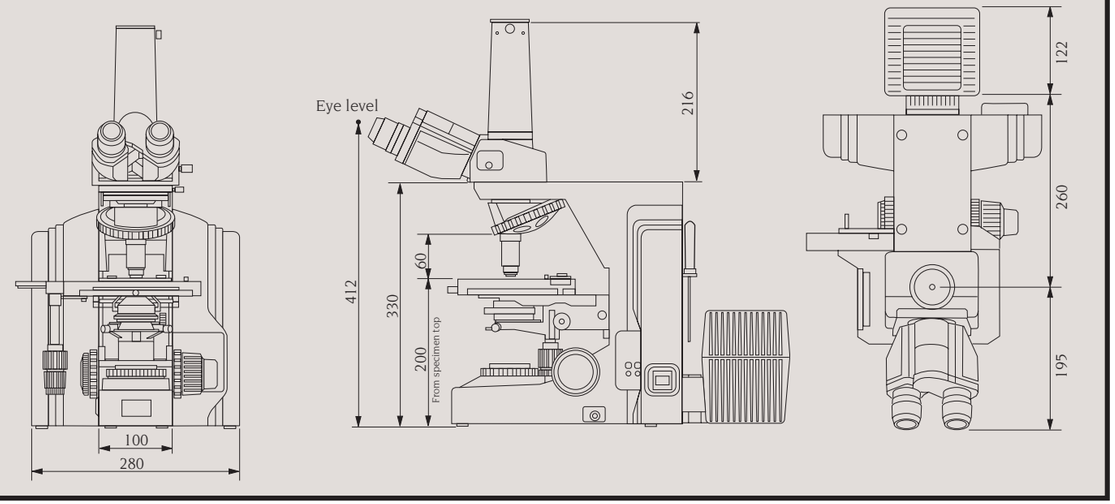
*Items in asterisks are made by Chroma Technology Corp. These products are soft coated, therefore consumables.

GFP Filters*

Filters	Wavelengths	Characteristics	Applications
GFP (R) -LP	EX 480/40 DM 505 BA 510	•Long-pass type GFP red shifted mutants	•GFP
GFP (R) -BP	EX480/40 DX 505 BA 533/50	•Band-pass type for GFP red shifted mutants	•GFP

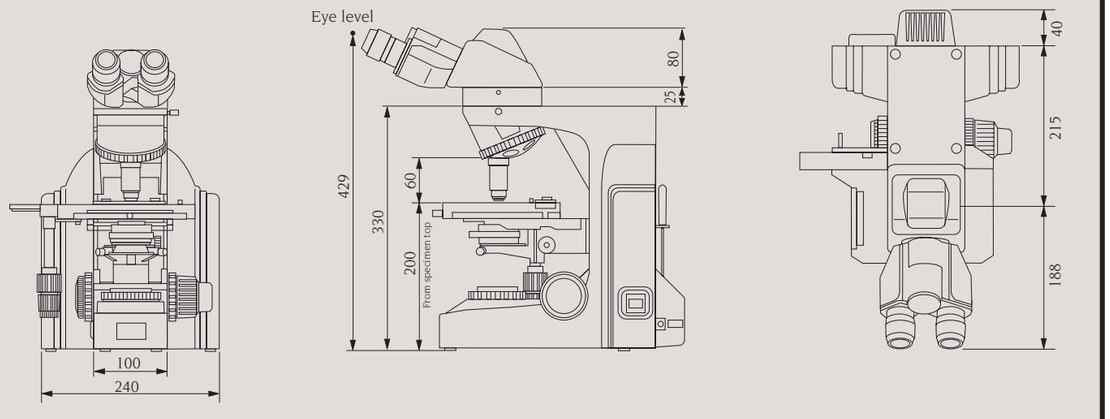
E600

Unit: mm

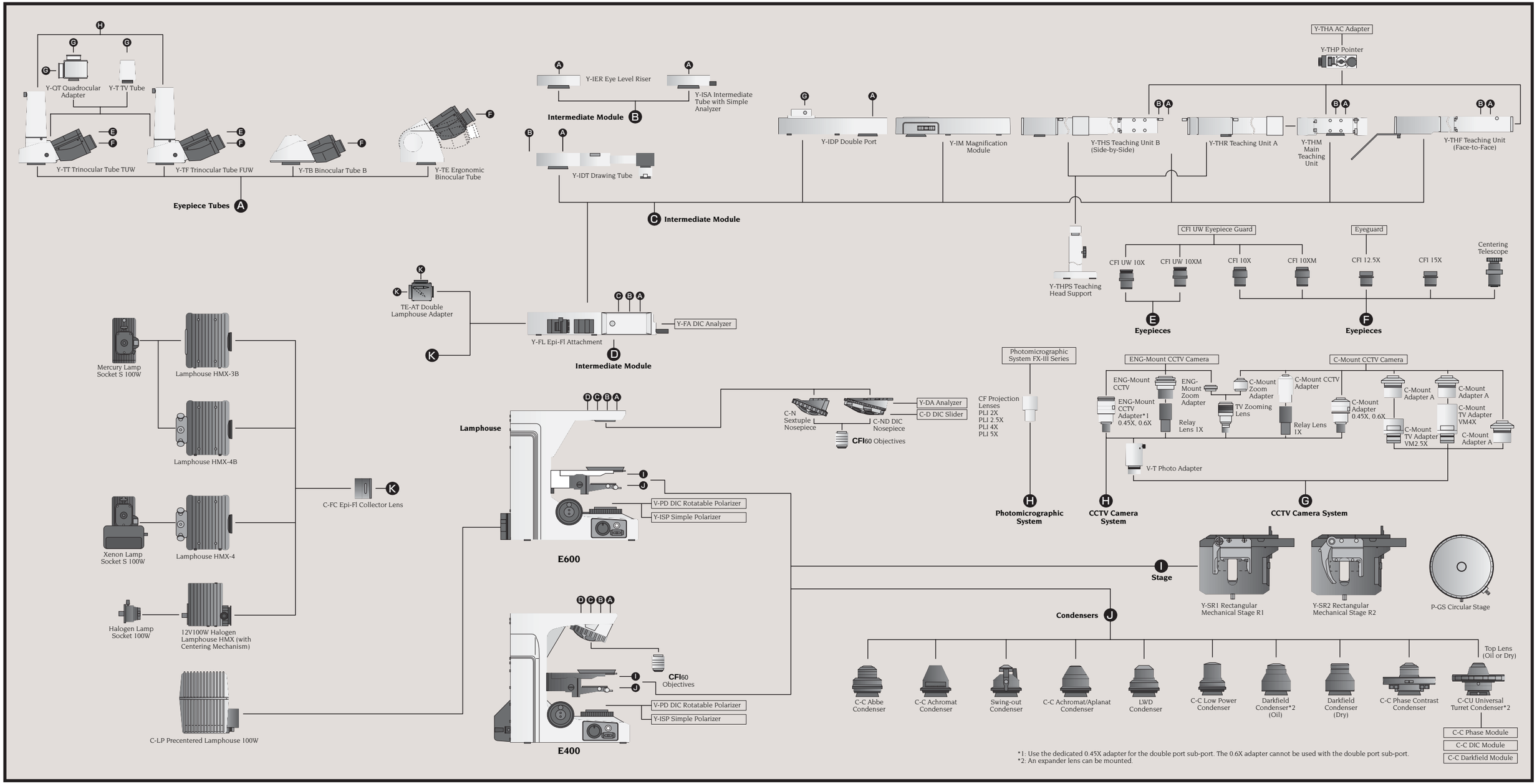


E400

Unit: mm



System Diagram



Specifications

	E600	E400
Magnification	10 –1500X for observation 2 – 500X for 35mm photomicrography	
Optical system	CFI60 (infinity optical system) Parfocal distance: 60mm	
Eyepiece tube	Binocular tube Trinocular tube "F", UW Trinocular tube "T", UW Ergonomic binocular tube Siedentopf type (interpupilary distance: 50 – 75 mm) Eyelevel can be adjusted by eyelevel riser (thickness of 1 piece: 25mm)	
Eyepiece	10X (F.O.V.: 22mm), 10X M photo mask (F.O.V.: 22mm), 12.5X (F.O.V.: 16mm), 15X (F.O.V.: 14.5mm), UW 10X (F.O.V.: 25mm), UW 10X M photo mask (F.O.V.: 25mm)	
Photo lens	PLI projection lens: 2X, 2.5X, 4X, 5X	
Nosepiece	Sextuple nosepiece, Sextuple DIC nosepiece (with analyzer slot)	Quintuple nosepiece fixed to main body
Coarse/fine focusing	Fine: 0.1mm per rotation, Coarse: 12.7mm per rotation Minimum reading: 1 micron on left side knob Coarse motion torque adjustable; Refocusing stopper incorporated; Stage handle and focusing knob are at equal distance from the operator	
Stage	Super hard coated surface Rectangular 160.5mm x 208.5mm surface stage, 78mm x 54mm cross travel range using low-positioned coaxial X and Y motion control knob on right-hand side	
Substage	Detachable (Can be shifted 15mm below); Vertical movement: 25mm	Fixed on main body; Vertical movement: 30mm
Illumination	12V 100W LL halogen lamp, precentered and prefocused; Auto photo preset switch	6V 30W halogen lamp, precentered and prefocused; Auto photo preset switch
Filter	Filter magazine incorporated (ND8, ND32, NCB11) Up to 2 optional filters (dia. 45mm) mountable on field lens unit Diffuser incorporated; can be swung out from optical path by tool	Up to 2 optional filters (dia. 45mm) mountable on field lens unit; Diffuser incorporated
Intermediate attachment	Epi-fluorescence illuminator (4 filter blocks mountable); Double port (2 ways: 100/0, 55/45); Teaching head; Drawing tube, Magnification module	

Photo samples courtesy of:
Photos ①, ②, ③, ④, ⑤, ⑥, ⑨, ⑩: Mr. Hideki Itoh, Central Photography Laboratory, Sapporo Medical University
Photo ⑦: Mr. Fumiharu Yagasaki, M.D., First Department of Internal Medicine, Saitama Medical School
Photo ⑧: Dr. Shinya Inoué, Architectural Dynamics in Living Cells Program, Marine Biological Laboratory (U.S.A.)

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

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Printed in Japan (0112-08)T

Code No. 2CE-MVZH-9

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