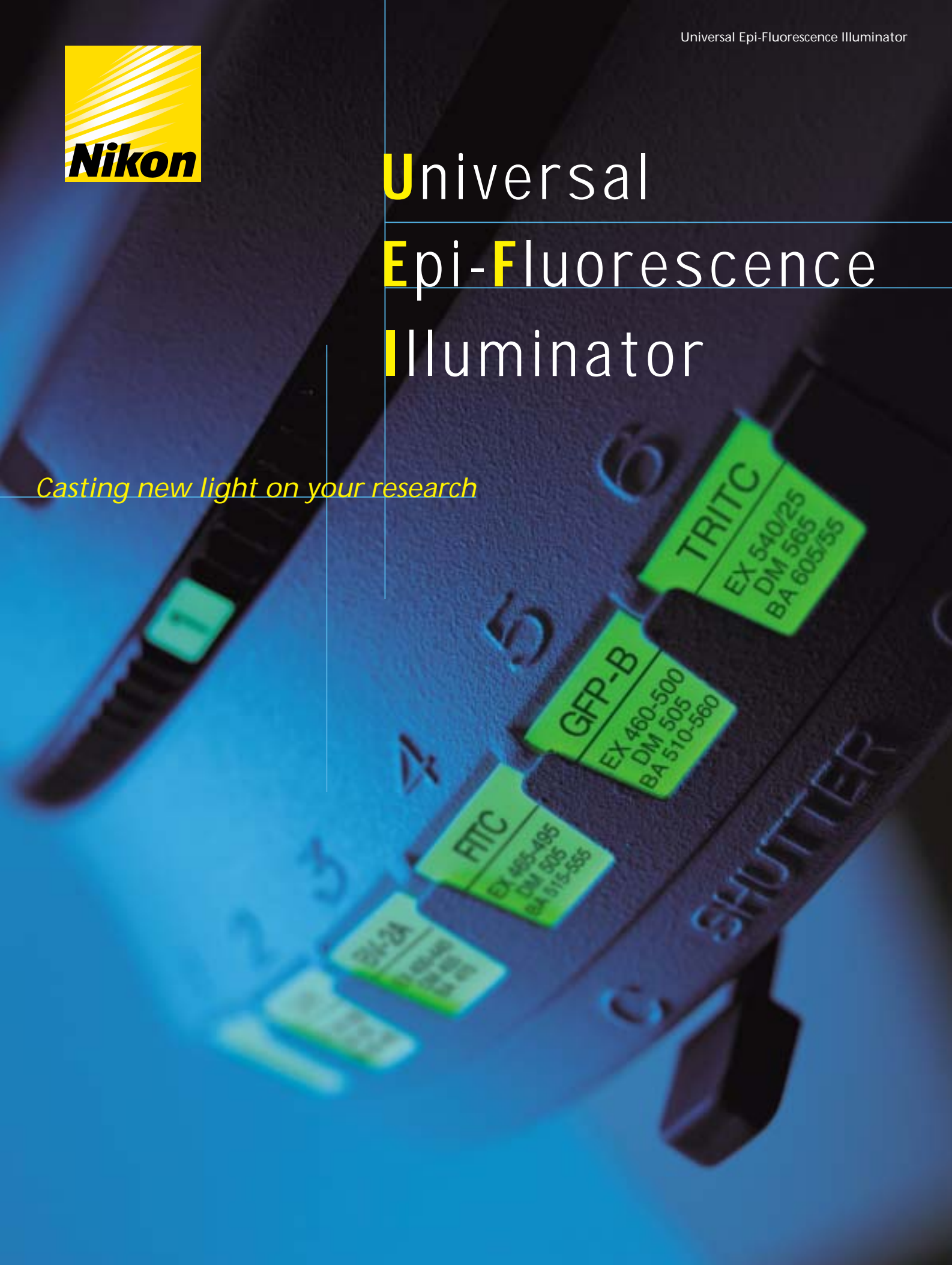
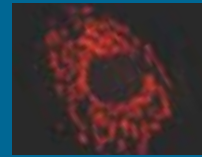




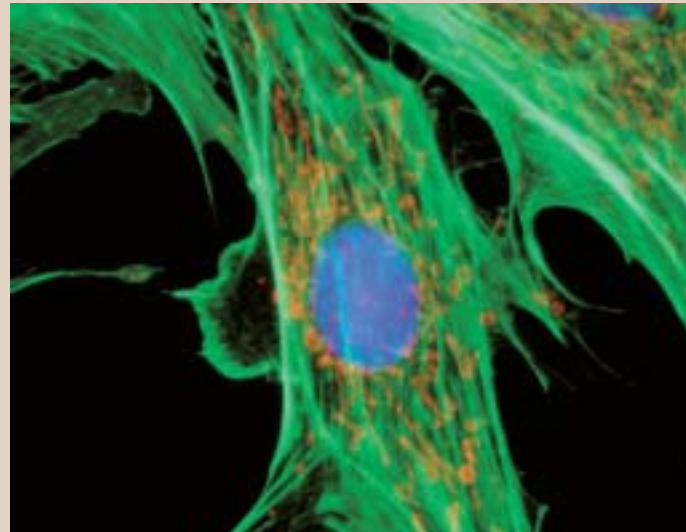
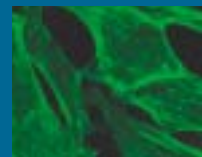
Universal Epi-Fluorescence Illuminator

Casting new light on your research





Epi-Illuminator that leads scientific research to exciting new heights!

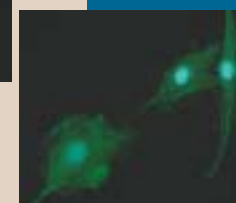
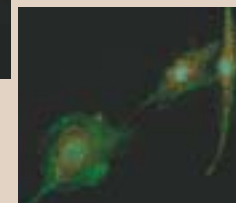
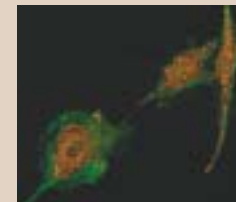


Universal applications

Nikon's new universal epi-fluorescence illuminator has been totally redesigned to take advantage of technology advances in both transmission and signal to noise performance. Even very faint fluorescing specimens can be easily imaged. Moreover, this illuminator can be used in combination with all transmitted light techniques. In addition, by simply inserting different reflectors the new universal epi-illuminator can also be used for industrial and material science applications.

Sharper fluorescence images

The demand to record even the faintest fluorescence signals required an innovative approach by Nikon that has significantly improved the relationship of signal to noise. Nikon's Noise Terminator effectively prevents stray light from the reflector from entering the optical path, resulting in higher contrast and even blacker backgrounds.



Bovine Pulmonary artery endothelial cells
(From left)
Mitochondria/F-actin emphasized
Average excitation
Nuclei/F-actin emphasized



Up to 6 reflectors

The new epi-illuminator can accept up to six different reflectors, which include fluorescence as well as epi brightfield and darkfield cubes. Filter cubes are easily exchanged, without any tools, from the front of the illuminator. Included are centerable field and aperture diaphragms.

Continuously variable excitation light balance

Nikon's continuously variable excitation light balance slider (optional) allows the investigator to balance the excitation intensity of multiple stained specimens. This is especially advantageous when trying to image multiple stained specimens that exhibit a large degree of different intensities.

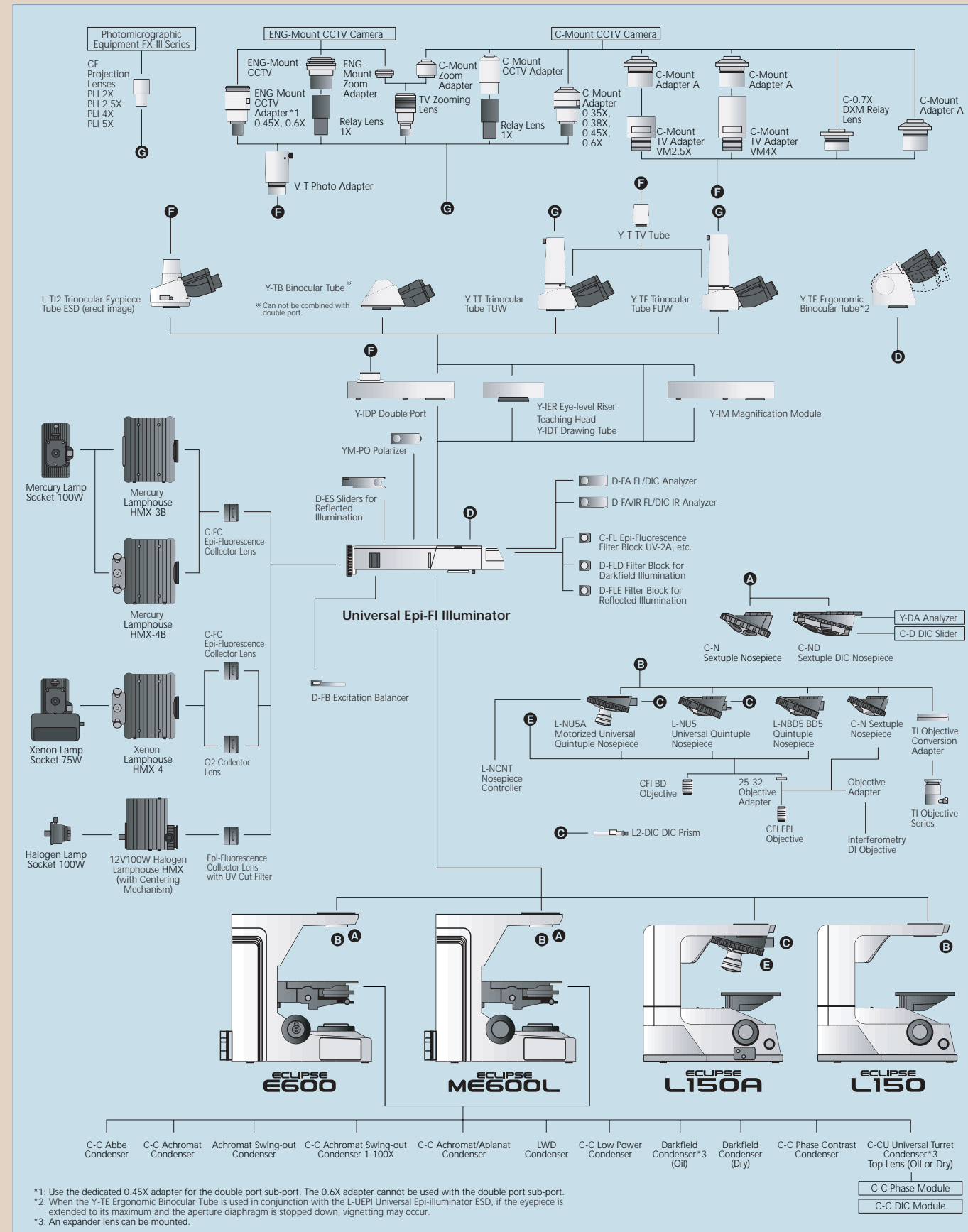
Easy to see in a dark room

The labels that identify the name and position of the filter cube glow in the dark for easy identification.

Ideal for Material Science applications

This illuminator can be configured for reflected light brightfield, darkfield, differential interference contrast (DIC), and polarized light by using a combination of reflectors, polarizers, analyzers, and Nikon's CFI LU 60 objectives.

System Diagram



Filter Lineup

Epi-fluorescence Filters

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

Filter Characteristics

	Filters	Wavelengths	Characteristics	Applications
UV	UV-2A	EX 330-380 DM 400 BA 420	•Standard filter block for UV	<ul style="list-style-type: none"> •DAPI •Hoechst 33258/33342 •AMCA •Cascade Blue® •Autofluorescence
	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 	
	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 	
	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	<ul style="list-style-type: none"> •Catecholamine •Serotonin •Tetracycline
BV	BV-2A	EX 400-440 DM 455 BA 470	•Standard filter block for BV	<ul style="list-style-type: none"> •Quinacrine •Quinacrine Mustard (QM) •Thioflavine S •Acriflavine
	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 	
B	B-3A	EX 420-490 DM 505 BA 520	•Wide band pass – recommended for halogen illumination only	<ul style="list-style-type: none"> •FITC •Acridine Orange •Auramine O •Coriophosphine O •Bodipy® •Fluo-3 •DIO
	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-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) 	
	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 	
G	G-2A	EX 510-560 DM 575 BA 590	•Standard filter block for G	<ul style="list-style-type: none"> •TRITC •Rhodamine B200 •Propidium iodide •R-Phycoerythrin •B-Phycoerythrin •Dil •Ethidium Bromide
	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 	
	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 	
	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	<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 	•Texas Red®

Multi-Band Filters

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

Dedicated Filters for Epi-fluorescence Reagents

Models	Wavelengths	Features	Reagents
GFP-L	EX480/40, DM505, BA510	GFP long-pass type (red-shift mutant)	GFP
GFP-B	EX480/40, DM505, BA535/50	GFP band-pass type (red-shift mutant)	GFP

Note: Filters are consumables. For filters other than the above, please consult Nikon or its local representative.

Other filter combinations are available. Please ask your local Nikon distributor for a complete list of filters or inquire about special custom filter combinations possible.

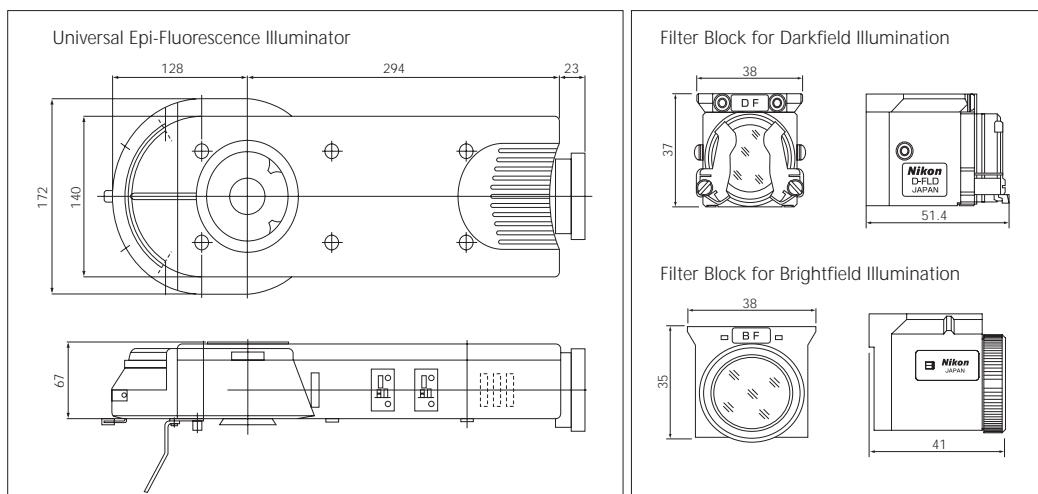
Universal Epi-Fluorescence Illuminator

Specifications	
Models to be used with	E600, E600FN, L150, L150A, ME600L
Observation methods*1	Epi-Fluorescence Episcopic Brightfield Episcopic Darkfield Episcopic DIC Episcopic Simple Polarizing
Usable lamphouses	HMX-3B/HMX-4B (Mercury), HMX-4 (Xenon), HMX (Halogen)
Field diaphragm	Centerable, detachable; Diaphragm diameter $\phi 1$ to $\phi 9$
Aperture diaphragm	Centerable, detachable; Diaphragm diameter $\phi 1$ to $\phi 9$
ND filter*2	ND 4, ND8, ND16
Number of cassette attachments	6 pcs.
Noise Terminator function	Available
F.O.V.	25mm
Epi-FL filter cube	$\phi 25$ New Epi-FL filter (Noise Terminator)

*1 Mirror cassette with UV cut filter each for reflected BF and DF are optional.

*2 Optional sliders (ND4, 32/UV-cut) are available for incident illuminator.

Dimensional Diagram



Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. August 2003. ©2003 NIKON CORPORATION

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



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