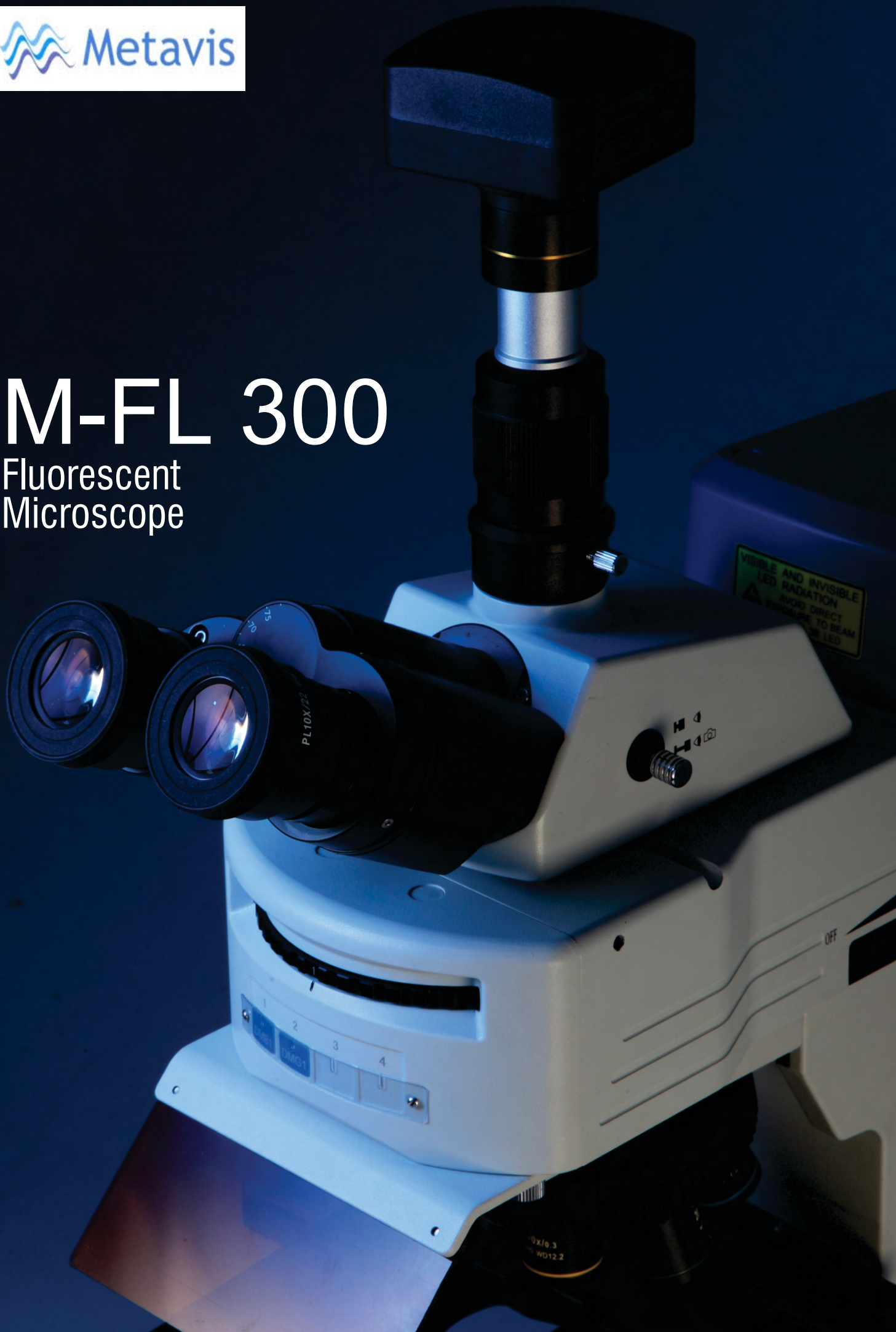


# M-FL 300

Fluorescent  
Microscope



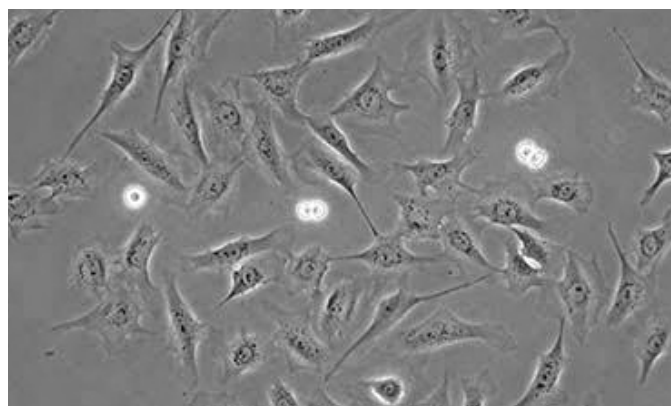
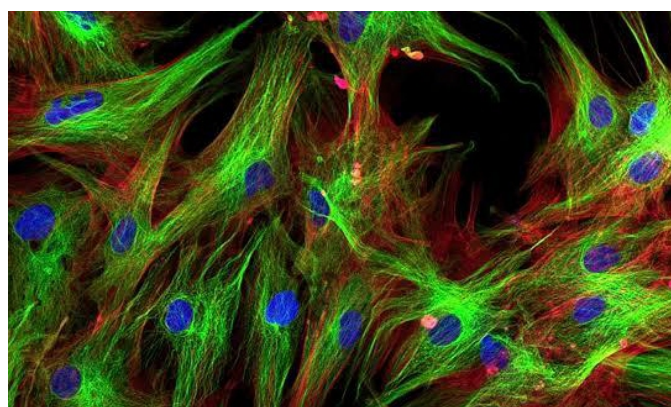
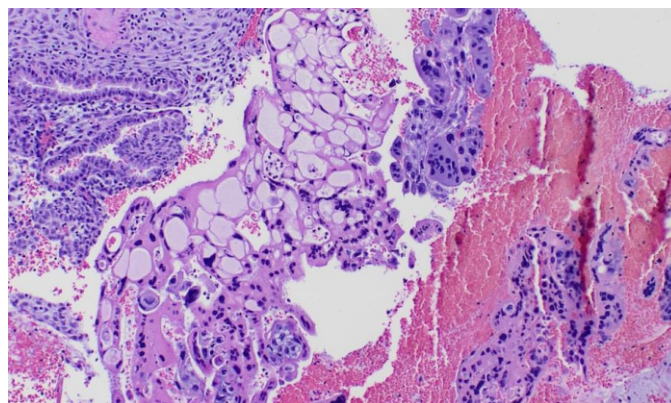


## New structure design, optimized optical system



### High rigidity body structure

Fire-new designed integrative Y-shaped body, all-metal diecasted under high pressure. High stability, no image dithering under high magnification observation, ensures the test precision of multi-channel fluorescence diagnosis.

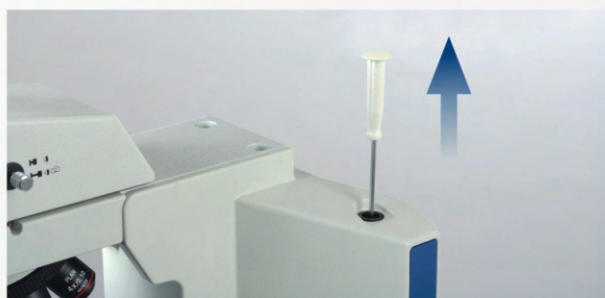


## Focus adjustment

Coaxial coarse and fine adjustment, according with ergonomics design, create the best comfort to operator.

## Screwdriver placement

To make the best of the available space, placing a screwdriver within touch, improves your working efficiency.



## Koehler illumination system

6V 30W transmitted system, presents a bright and uniform field under every magnification.

Fire-new designed telecentric Koehler illumination system, working with N.A.1.2/0.22 swing-out achromatic condenser, applies to 2X~100X observation.



## Safe carrying design

The hole on the back of the body make it safe and easy when carry the whole microscope.



## Movable working stage

175x145mm double-layer mechanical stage with operating handle in the right hand.

Damped specimen retainer design, two slides can be put together for testing and analyzing comparatively.

187x167mm large double-layer mechanical stage, is made by oxidized metal. Moving range: 80x55mm, precision: 0.1mm, operating handle in the right hand or left hand, linear driving.



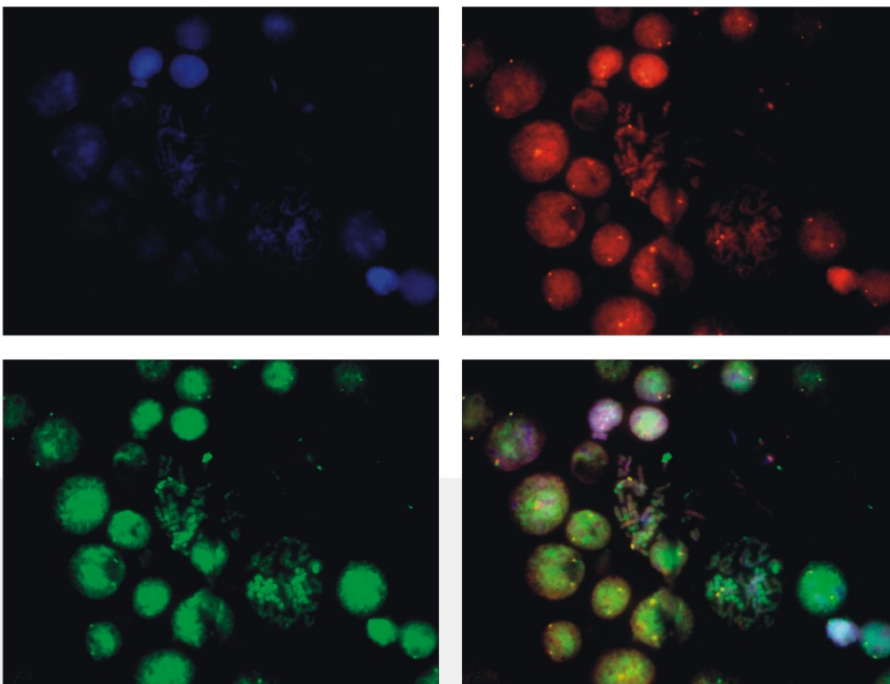


## Leading fluorescence microscopy

### Semi-apochromatic fluorescence objectives

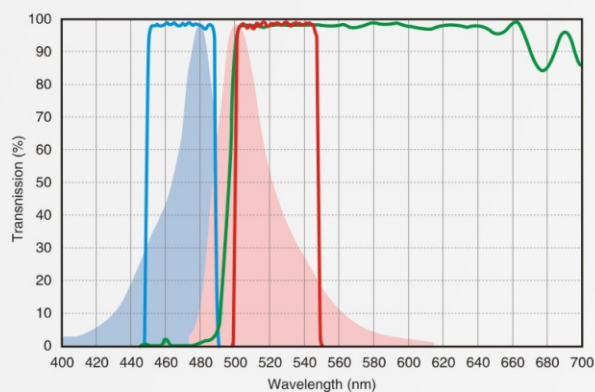
New professional infinity plan semi-apochromatic fluorescence objectives, the best choice for fluorescence observation. Aberration correction and large numerical aperture which is 25% bigger than ordinary objectives, present brighter and clearer image.

Adopting high quality environmental protection optical materials, show an excellent effect in fluorescence observation. With advanced multi-coating wide-band technology, takes the obvious advantages in bandwidth and UV transmittance.



### High-performance fluorescence filters

Imported high performance fluorescence filters, high spectral transmission, good depth and gradient of spectral lines. No cross color, high S/N ratio, high image contrast. Adopting stray light eliminating technology, high contrast between image and background, creates a perfect observation effect.



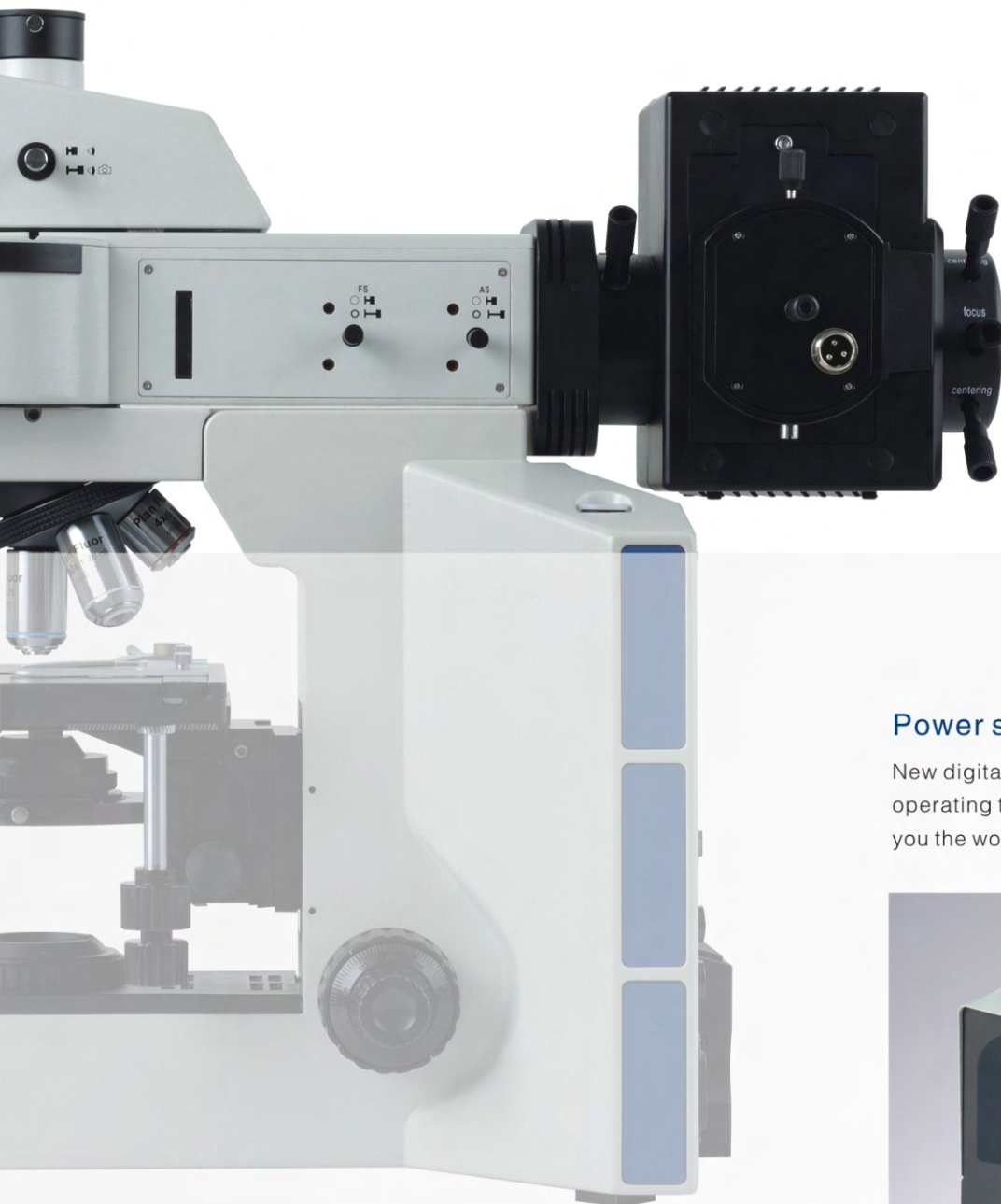


## Disc switching mechanism for filters

Newly designed high-precision disc switching mechanism, is easy to change filters. It guarantees the exact position of the switched filter, can be equipped with six fluorescence filters at most. Selecting driftless high-performance fluorescence filter system, ensures an accurate experiment result of FISH. High transmittance of spectrum without a cross color but a high S/N ratio, promotes dramatically fluorescence imaging contrast. The filter with stray light elimination technology, presents high contrast between image and its background, achieves the best effect of observation.

## Efficient illumination system

High-graded SiO<sub>2</sub> quartz, with the characteristics of refractory, corrosion-resistant and high UV through rate, makes the illumination more uniform and brighter. High temperature resistant composite plastic, with heat insulation, effectively prevent the heat of illuminator from transferring to the body. Alterable field diaphragm with adjustable center, effectively reduce the stray light to obtain the best observation effect.



## Power supply for mercury lamp

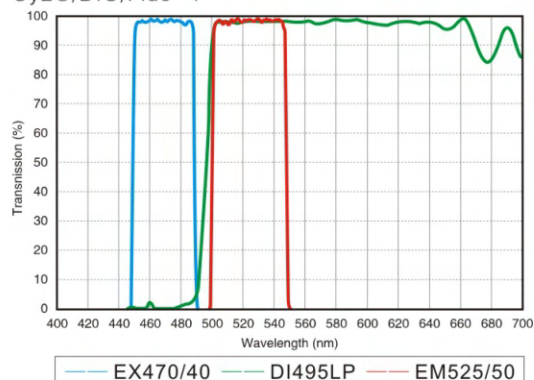
New digital power control system, displaying operating time and current value, clearly show you the working state of mercury lamp.



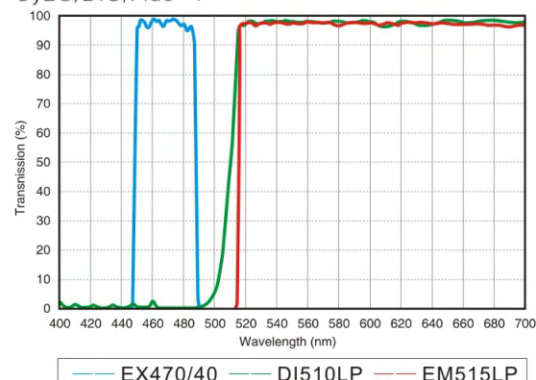


## Common fluorescence filter parameter

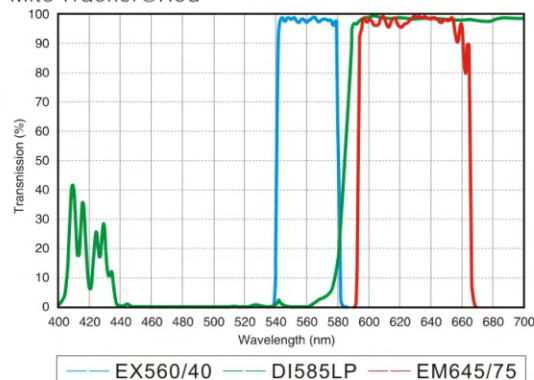
B1: EGFP/GFP/FITC /Alexa Fluor@488  
Cy2@/DIO/Fluo-4



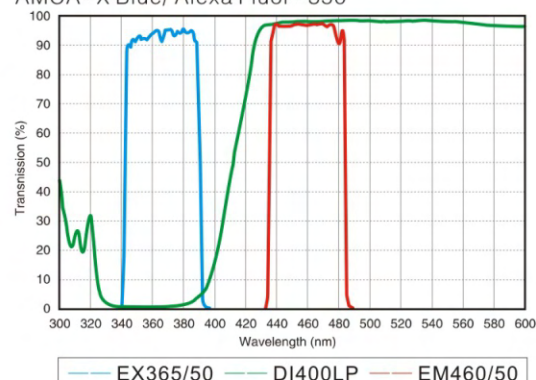
B2: EGFP/GFP/FITC /Alexa Fluor@488  
Cy2@/DIO/Fluo-4



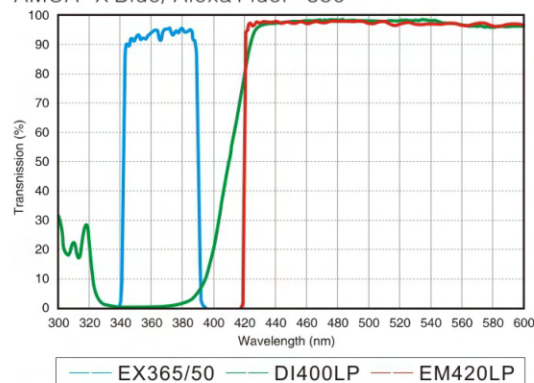
G1: TexasRED@/TexasRed@-X/Cy3.5  
Mito Tracker@Red



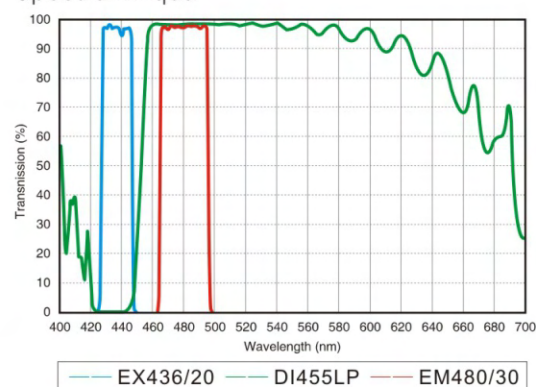
UV1: DAPI/Hoechst 33342/33258 AMCA/  
AMCA-X Blue/ Alexa Fluor® 350



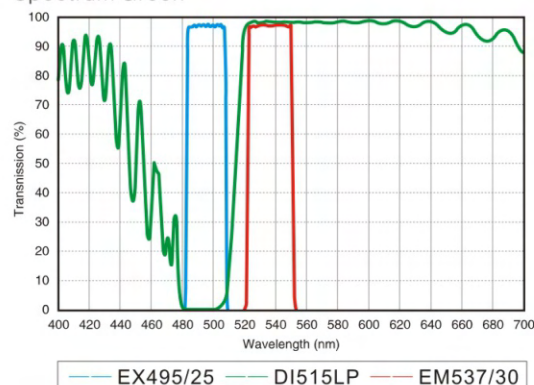
UV2: DAPI/Hoechst 33342/33258 AMCA/  
AMCA-X Blue/ Alexa Fluor® 350



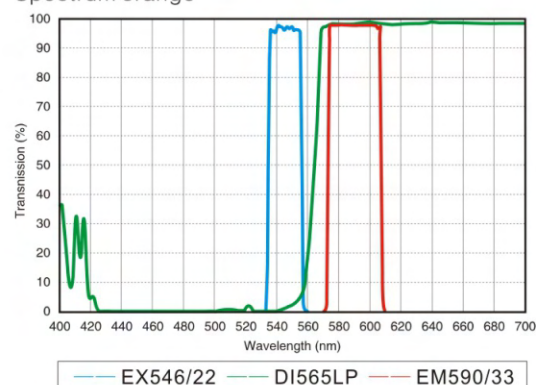
Spectrum Aqua



Spectrum Green



Spectrum orange







LPLAN series infinity plan achromatic objectives, designed for observing lab pathology and biological cell slices, present sharp and contrast image, work well even in fluorescence observation.



PLAN-PH series infinity phase contrast objectives, improve clarity and contrast , especially suitable to observe colorless or light-colored cells.

PLAN-FLUOR series infinity plan semi-apochromatic objectives, is the best choice for fluorescence observation. Adopting crystal optics materials, perfectly corrects all kinds of chromatic aberrations. Large numerical aperture design presents high resolution, high contrast micro-images. In fluorescence observation, the image is clear and bright while the background is pure black, prominent in ultraviolet fluorescence.

## M - FL 300 objective

Series	Magnification	N.A.	W.D.	F.N.	Cover glass thickness	Immersion	Spring
Plan series	Plan2X	0.06	5.0	22	—	/	/
	Plan4X	0.10	11.9	22	0.17	/	/
	Plan10X	0.25	12.1	22	0.17	/	/
	Plan20X	0.40	1.5	22	0.17	/	/
	Plan40X	0.65	0.36	22	0.17	/	Yes
	Plan60X	0.85	0.3	22	0.17	/	Yes
	Plan100X	1.25	0.18	22	0.17	Oil	Yes
Plan PH series	Plan PH10X	0.25	12.1	22	0.17	/	/
	Plan PH20X	0.40	1.5	22	0.17	/	/
	Plan PH40X	0.65	0.36	22	0.17	/	Yes
	Plan PH100X	1.25	0.18	22	0.17	Oil	Yes
	Plan Fluor4X	0.13	18.5	25	0.17	/	/
Plan Fluor series	Plan Fluor10X	0.30	10.6	25	0.17	/	/
	Plan Fluor20X	0.50	2.33	25	0.17	/	/
	Plan Fluor40X	0.75	0.6	25	0.17	/	/
	Plan Fluor100X	1.28	0.21	25	0.17	Oil	/

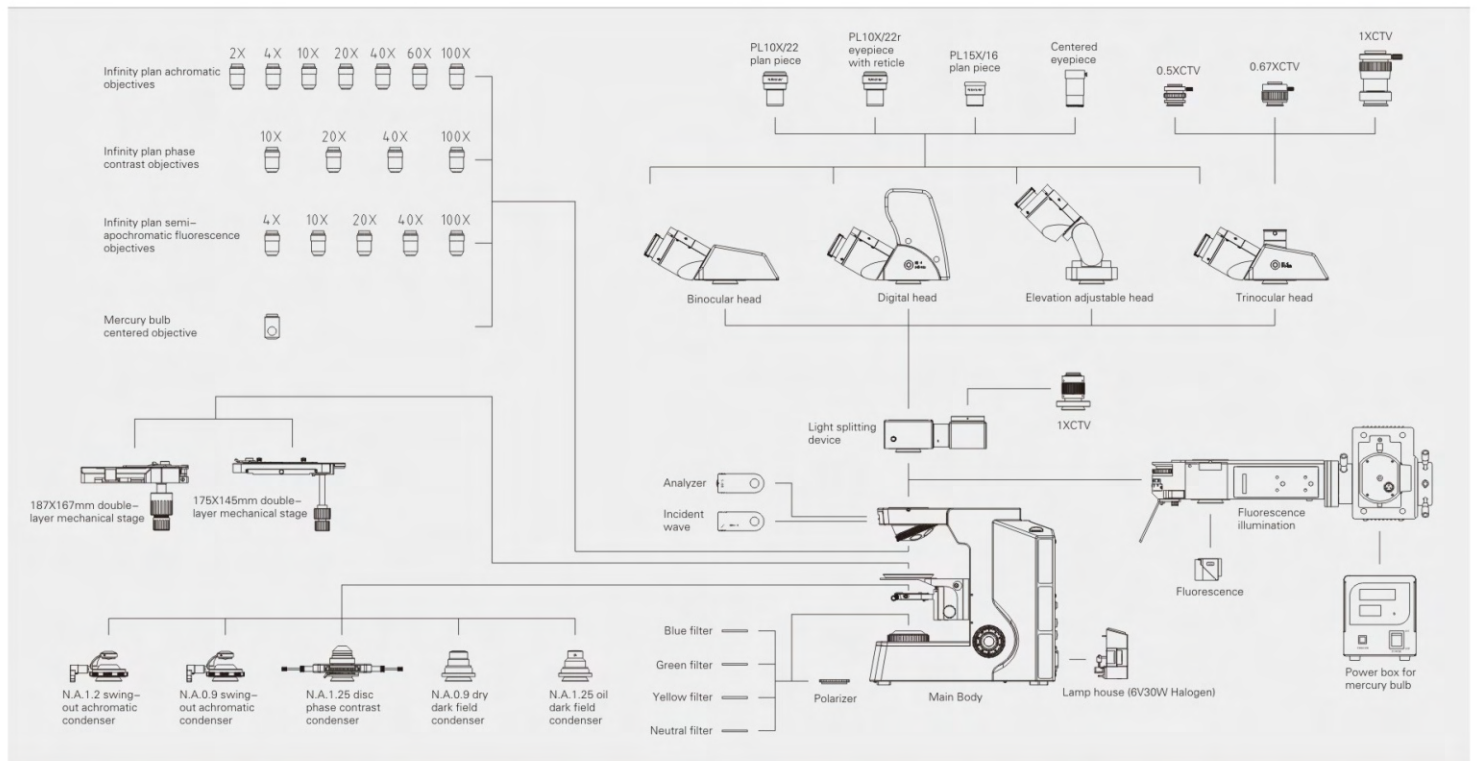


## M - FL 300 series Specification

Optical system	Infinity color corrected optical system
Viewing head	Efficient infinity gemel binocular head, 30° – 60° elevation adjustable; 360° rotatable; interpupillary adjustable distance: 54–75mm; diopter +/-5 adjustable
	30° inclined gemel binocular head; 360° rotatable; interpupillary adjustable distance: 54–75mm; diopter +/-5 adjustable
	30° inclined gemel trinocular head, splitting ratio R:T=50:50 or R:T=0:100; 360° rotatable; interpupillary adjustable distance: 54–75mm; diopter +/-5 adjustable
	30° inclined digital binocular head; 360° rotatable; interpupillary adjustable distance: 54–75mm; diopter +/-5 adjustable
Eyepiece	High eye-point wide field plan eyepiece PL10x22mm, PL15x16mm
Objective	Infinity plan achromatic / phase contrast /semi-apochromatic fluorescence objectives
Nosepiece	Revolving quadruple nosepiece/ Sextuple nosepiece
Body	Coaxial focus system with upper limited and tension adjustment; coarse range: 30mm; fine precision: 0.002mm; focus height adjustable
Stage	175x145mm double layer mechanical stage, rotatable; with special fabrication processing, anti-corrosive and anti-friction; moving range: 76x50mm, precision : 0.1mm
	187x167mm double layer mechanical stage, moving range: 80x55mm, precision: 0.1mm
Condenser	N.A.0.9 swing-out type achromatic condenser; N.A.1.2/0.22 swing-out type achromatic condenser; N.A.1.25 quintuple phase contrast condenser; N.A.0.9 dry dark field condenser; N.A.1.25 oil dark field condenser
Reflected fluorescence illumination system	XYRFLP reflected fluorescence Koehler illumination with alterable field diaphragm and aperture diaphragm (center adjustable)
	XYLH100HG mercury lamp house with viewfinder; the center and focal length of viewfinder & filament are adjustable
	U2-RFLT100 digital power control box of mercury lamp, wide voltage: 100–240VAC
	Imported OSRAM 100W DC mercury bulb; disc fluorescence filters: UV/VB/G; 30ND25–RFLP / 30ND50–RFLP attenuation plate
Transmitted illumination system	Wide voltage: 100–240V, built-in transmitted Koehler illumination; 6V/30W halogen, pre-centered, intensity adjustable
Polarizing kit	Analyzer 360° rotatable; polarizer and analyzer can be out of light path
Filter	Yellow, green, blue, neutral filter
Light splitting device	R:T=70:30 or 100:0, special 1x CTV
Camera adapter	0.5xCTV, 0.67xCTV, 1xCTV

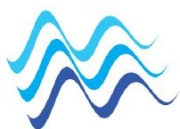
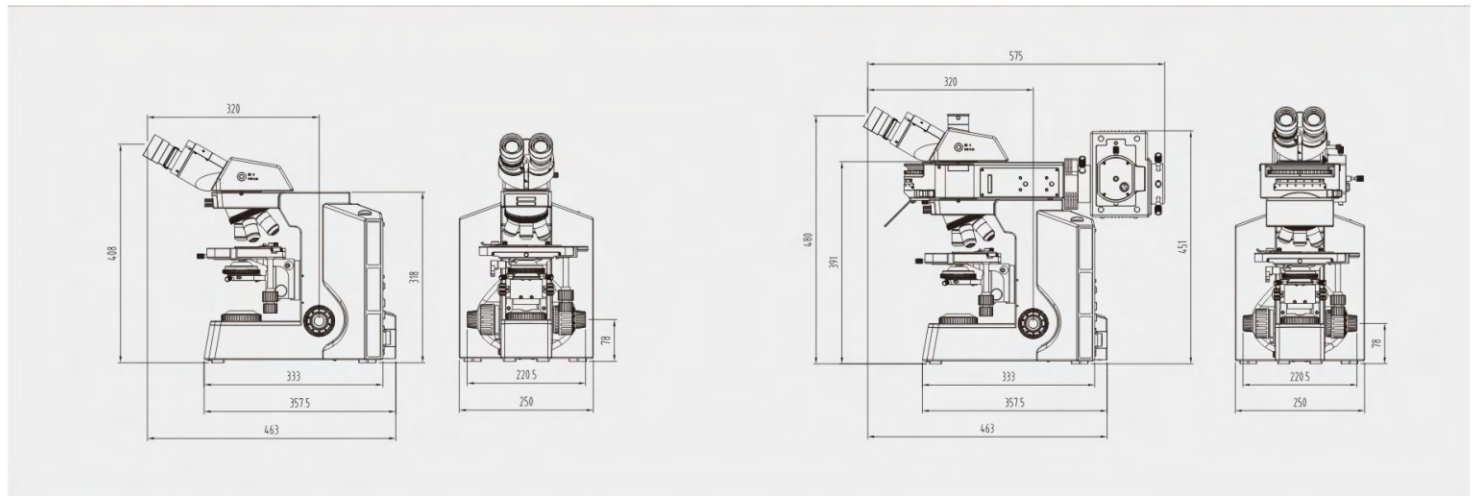


## M - FL 300 series System diagram



M - FL 300 biological model dimension: mm

M - FL 300 Fluorescence model dimension: mm



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