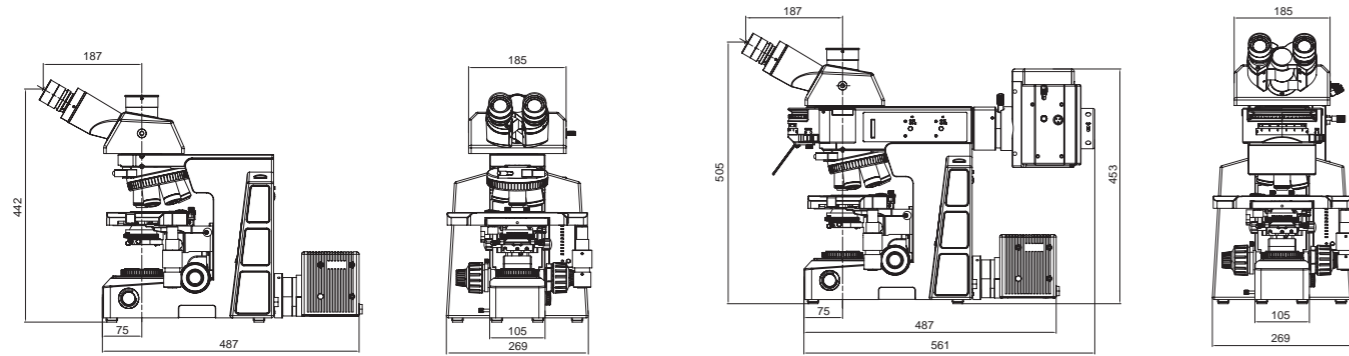


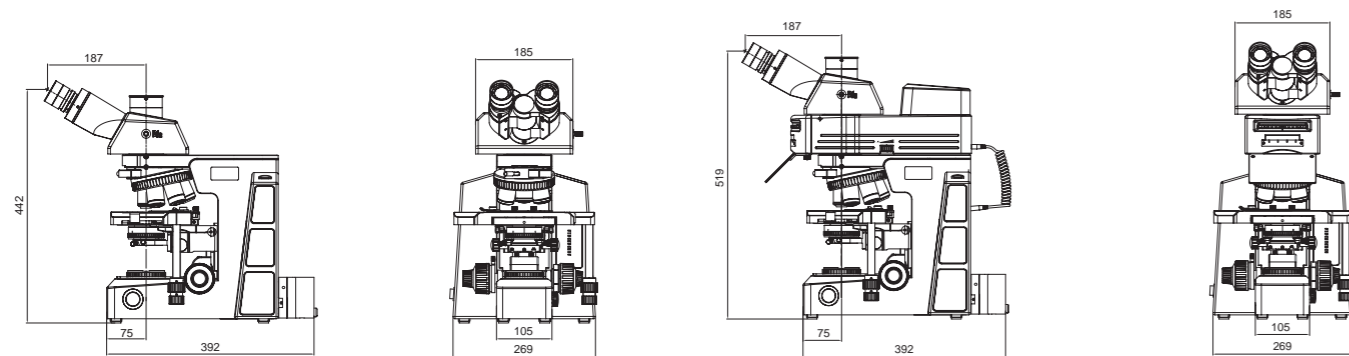
RX50 Dimension



RX50 Biological Microscope

RX50 Fluorescent Microscope

RX50LED Dimension



RX50 Biological Microscope

RX50 Fluorescent Microscope

YBOTECH

RX50 Biological Microscope

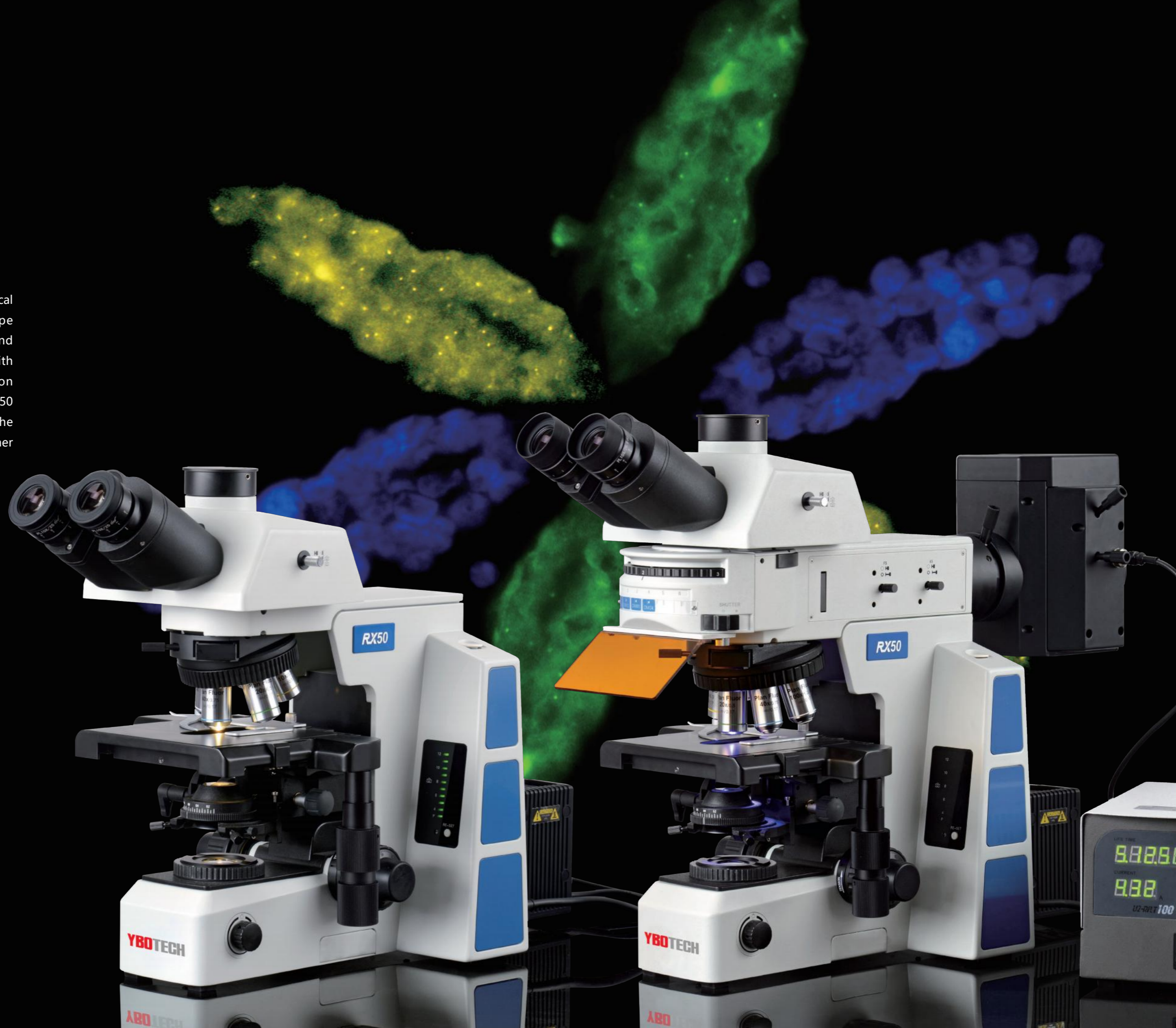


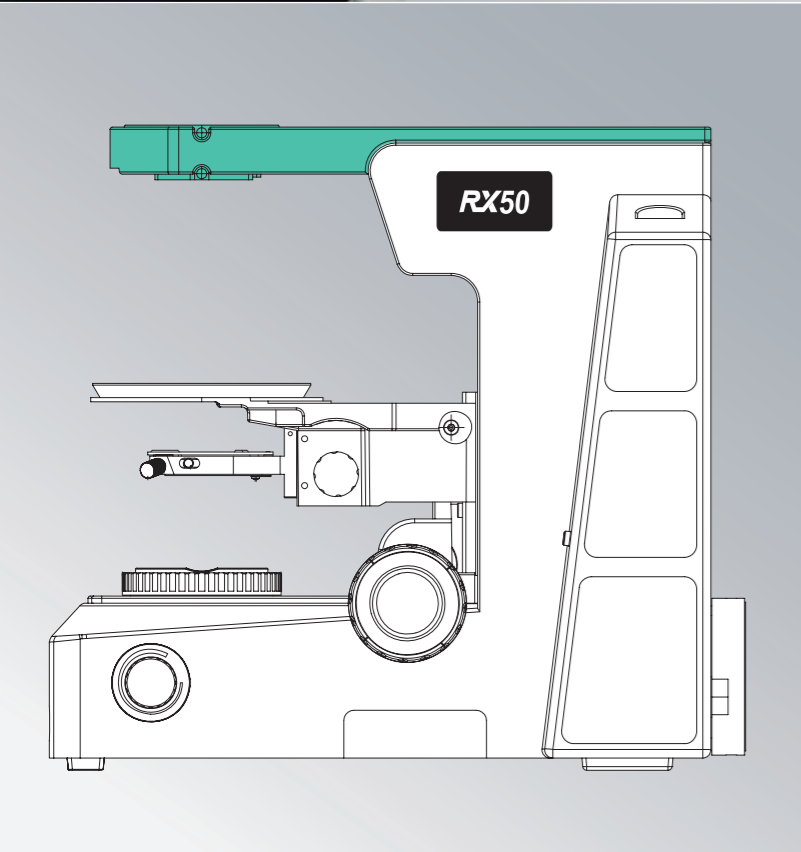
YBOTECH

Ybo Technologies Co., Ltd.
23 Floor, Building A, Future Tower, No. 800 Luzhou Avenue,
Hefei, Anhui, China
E-mail: info@ybotech.com
Website: <https://www.ybotech.com>

RX50

After years of research and development in optical technology field, RX50 biological microscope is designed to present a safe, comfortable and efficiency observation experience for users. With perfectly performed structure, high-definition optical image and simple operating system, RX50 realizes professional analysis, and meets all the needs of research in scientific, medical and other fields.





Large stage with adjustment in either hand

- In order to correct the shortcoming of horizon guide rail, new stage is designed with double-way linear driving mechanism. This change protects the stage from overload at the end of both rails, improves the rigidity and performance of the stage.
- The handle of the stage can be set at each side based on users' preference. The X, Y biaxial adjustments are designed with low position for comfortable operation.
- Two slices can be hold on the stage by using damping-type double clips, easy for comparative study. Moving range: 80mm X55mm; precision: 0.1mm.
- Processed with special craft, the surface of the stage is anticorrosive and anti-friction. The platform with an arc transition design reduces the stress concentration and damage from impact.
- Light barrier, which can effectively reduce the stray light, improves the image contrast in fluorescence observation.

Modular frame, improving the system compatibility

RX50 with modularization design, separated cross arm and main body, improves the system compatibility of biological and fluorescence frame.

Highly sensitive coaxial coarse and fine adjustment

Coaxial adjustment adopts double-stage driving, with adjustable tension tightness and upper limit stop, coarse range is 25mm and fine precision is 1 μ m. Not only accurately focus but also precision measurement is available.

Viewing head with multi-splitting ratio

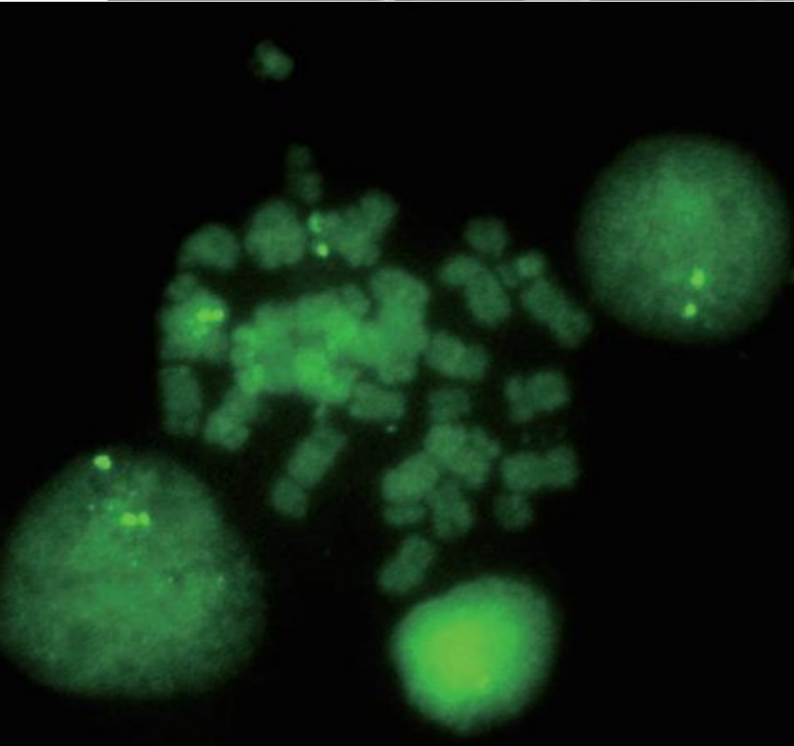
RX50 viewing head is designed of multiple options for splitting ratio. with wide beam imaging system, 26.5mm super wide filed of view is available.

Trinocular head with inverted image, splitting ratio Binocular: Trinocular=100:0 or 20:80 or 0:100. Except for concentrating 100% light to eyepiece tube or camera tube, there is another option with 20% light to eyepiece tube and 80% to camera tube, so that eyepiece observation and image output can be available at the same time. Trinocular head with erect image, splitting ratio Binocular:Trinocular=100:0 or 0:100. The moving

Multi-functional condenser

Disc condenser with 3 small holds and 5 big holds to attach different accessories for different observation requirement, such as bright field, dark field, phase contrast, DIC and polarizing. Fast switch and easy operation, is available to improve the working efficiency.





Multifunctional reflection illumination

In RX50 reflection fluorescent illumination, maximum 6 fluorescence filters can be assembled at the same time. Filters are placed in a rotary table for convenient switch. High precision and stable rotary table and high-performance imported filter ensures a drift-free image.

- There is a light shutter in front of the reflected illuminator. It is used to shut the fluorescent light to prevent fluorescence quenching of the slice.
- The light barrier can protect users from the harm of UV light.
- The use of ND attenuation filter, or aperture and field diaphragm rod can efficiently reduce the intensity of exciting light to protect the slice.
- After replacing the lamp, the centering objective helps users in adjusting the filament center to make sure a sufficient and uniform fluorescent illumination.

Power control system for mercury lamp

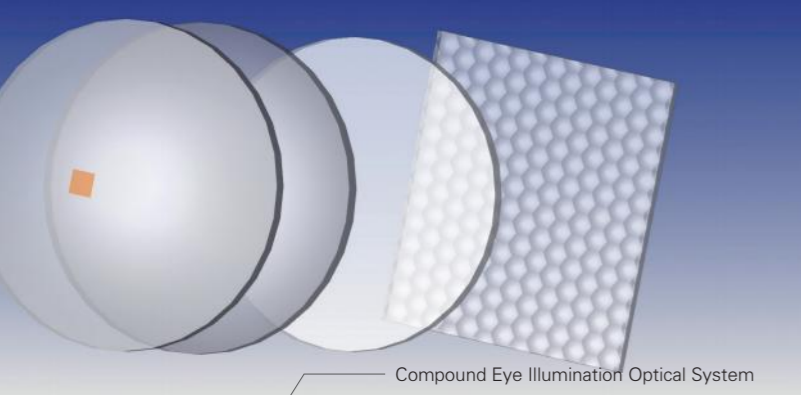
New digital power control system with operating time and current value, clearly shows the working state of the mercury lamp.

Two power supply systems, providing multiple choices of high quality illumination

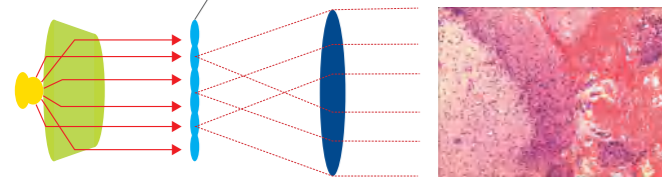
New developed 100W EHV DC mercury lamp house with improved thermal cycle greatly reduces the surface temperature of the lamp house and avoids the scald risk during operation. The filament center is easily adjustable.

75W xenon lamp for option.





Compound Eye Illumination Optical System



Compound Eye Illumination System

RX50 innovatively adopts the compound eye illumination system to improve the contrast ratio and effectively improve the illumination uniformity of the specimen surface. The brightness of the entire field of view is uniform, even at the edge of the field of view can be achieved uniform and bright background brightness under any magnification.

LED light source

LED light source is environment-friendly which compared with halogen lamps. Not only the imaging quality is more ideal, but also reduces fatigue and enhances the observation experience.

Upgraded mechanical stage

- RX50LED double-layer mechanical stage with X-axis & Y-axis rackless. X-axis rackless adopt the overload protection and avoid the potential hazard caused by moving rack.
- Under ultra-low hand position operation mode, no need to worry about soreness caused by prolonged operation. Users can put their elbows on workbench completely during the focusing process.

Comprehensively Improve the Convenience of Use

- Non swing out Abbe condenser avoids repeated operation during objectives switching and improves work efficiency;The NA is increased from NA0.9 to NA1.1, which fully meets the use of 4x-100x observation.
- The main power switch is set on the side of the RX50LED microscope body, and the one button switch is accessible; RX50LED is reduced the depth of the whole machine. Placing RX50LED on the standard 600mm wide desktop, the eyepiece and observation head will not exceed the edge of the desktop, so as to avoid personnel walking and colliding with the microscope.
- RX50LED adopts sextuple nosepiece, which can record the illumination brightness of each objective lens. The user can freely adjust the light source brightness of each objective lens, and the system automatically records the brightness. There is no need to adjust back and forth with the switching of magnification, which not only improves the work efficiency, but also reduces visual fatigue.

Wide Range of Applications

RX50LED can be widely used in basic scientific research, teaching and pathological analysis to meet the needs of biology, medicine and other laboratories for cell tissue observation.



RX50LED is reduced the depth of the whole machine.

It is designed to improve the efficiency of medical diagnosis



Professional software for fluorescence analysis, with powerful function and easy operation.

Fluorescence analysis software
Mvlmage Flu

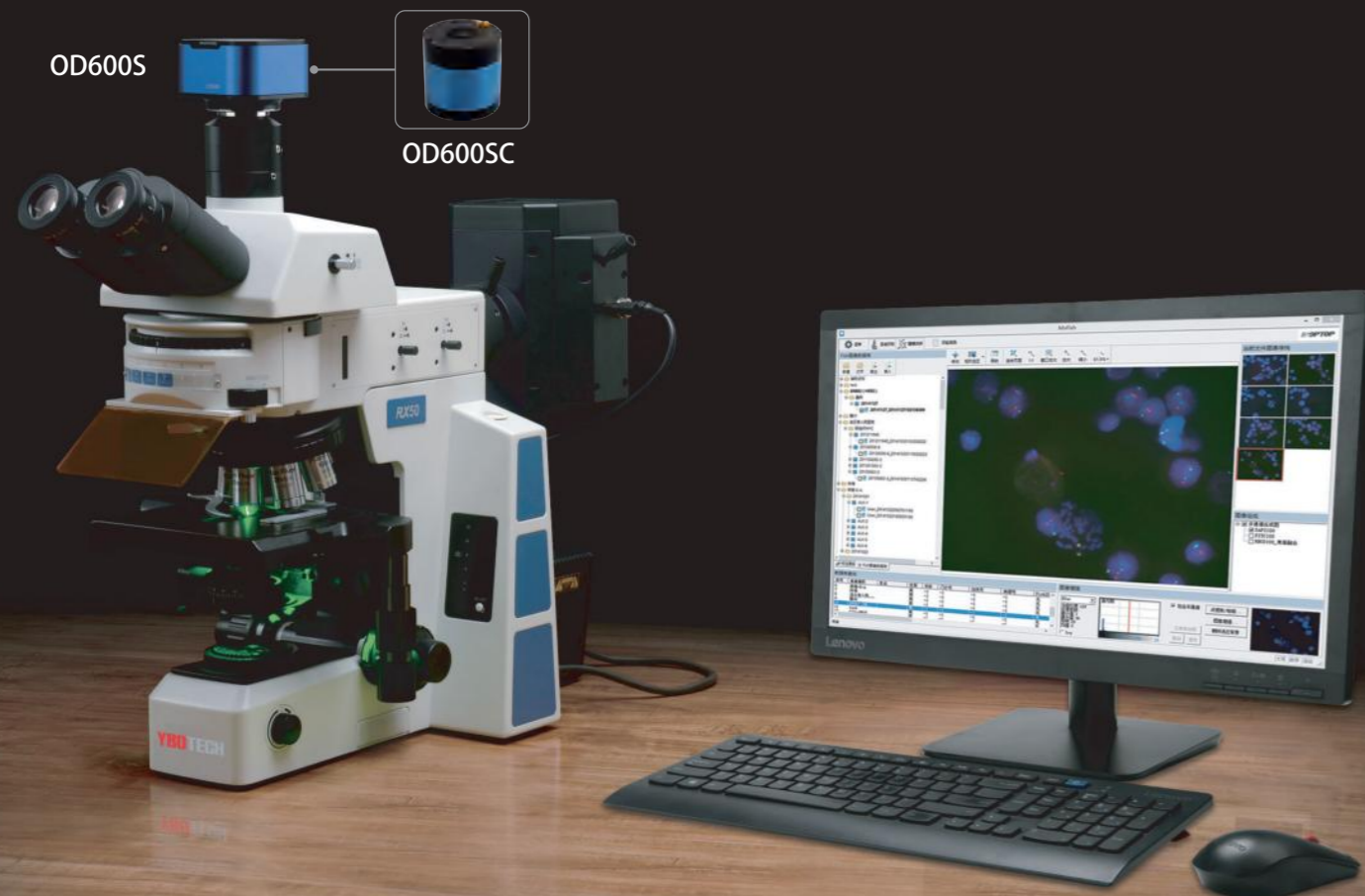
It is designed to capture, process and analyze the fluorescence image. The main function includes collection, combination and individual adjustment of multichannel fluorescence, probe library management, position compensation and so on.

FISH fluorescence analysis software Mvfish
Based on Mvlmage Flu, more functions are expanded, such as multi focal plane fusion, FISH point extract, thickness adjustment, brightness/contrast/gamma intensity adjustment, as well as data management.

SOPTOP cameras: OD600S, OD600SM, OD600SC, OD230R, equipped with SONY image sensor, fast and smoothly present clear image with high sensitivity and low noise.

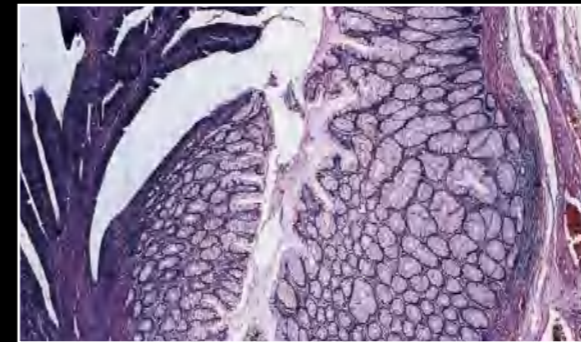
OD600SC Specification

Image Sensor	SONY ICX695 CCD (color)
Max. Resolution	2748 X 2200 (about 6.0 mega pixels)
Sensor Size	1"
Effective Pixels	4.54 μm x 4.54 μm
Image Region	12.5mm(H) x 10mm(V)
Spectral Response Range	380nm~650nm (with IRCF)
Video Format & Frame Rate	7.5@2748x2200, 14@2748x1092
Exposure Range & Mode	0.06ms~1h ROI Auto/Manual
White Balance	ROI white balance/Manual temp
Quantum Efficiency	75%@600nm
Cooling System	Double cycle thermoelectric cooling system
Power Supply	External power supply for cooling system, DC12V/3A

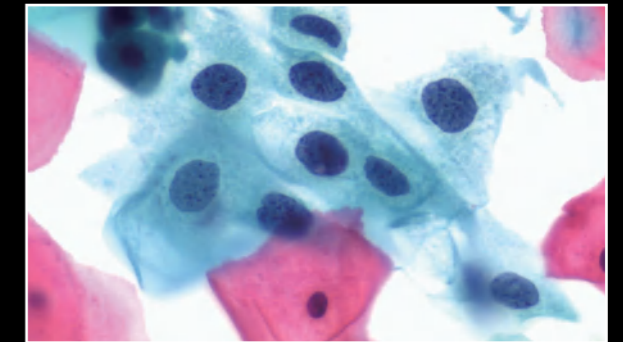


Different accessories for different functions

Bright Field for brighter image with higher resolution in all magnifications.

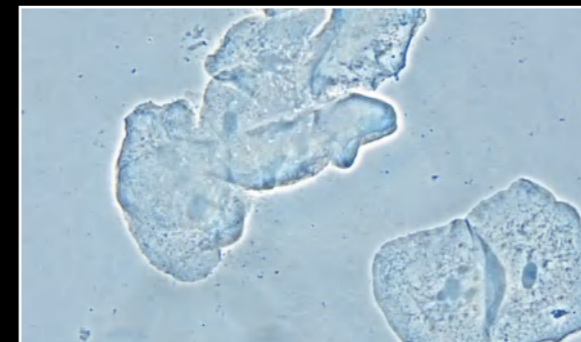


Colonic adenoma



Endometrial cancer

Phase Contrast for high-contrast image to high transparency samples.



Oral epithelial cell



Cheek epithelial cell

Different Interference for vivid stereo image according to sample feature.



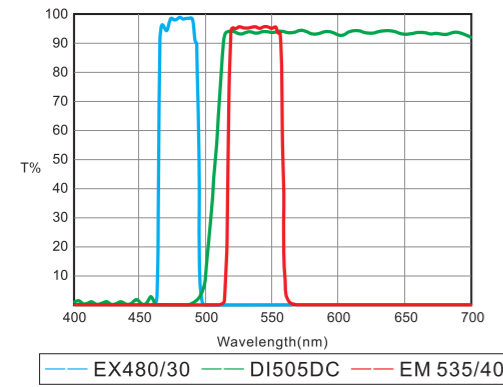
Oral epithelial cell



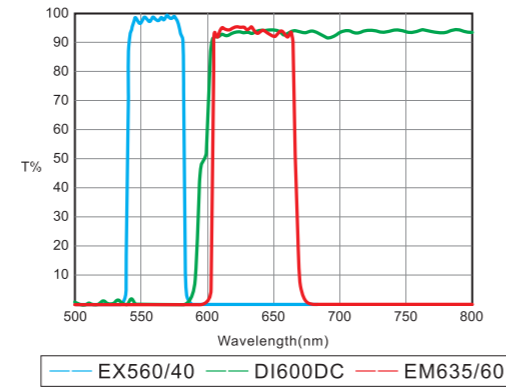
Bovine pulmonary artery endothelial cell

Standard parameters of fluorescent filters, substantially meet the needs of conventional scientific research. For some special requirements, specific filters also can be provided corresponding to fluorescent probes.

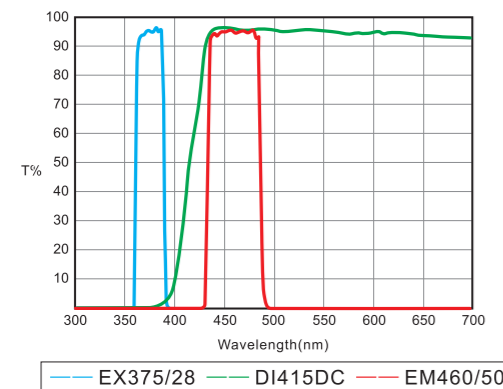
B1: EGFP/FITC/Cy2/AlexaFluor 488



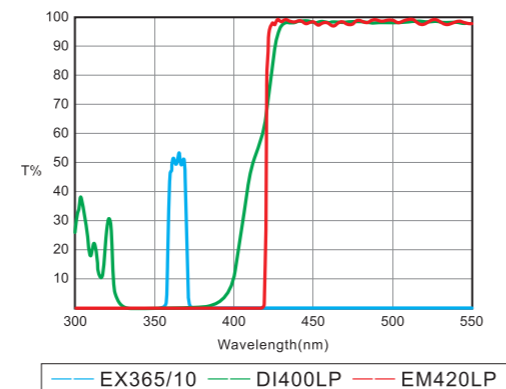
G1: Texas Red/mCherry/AlexaFluor 594



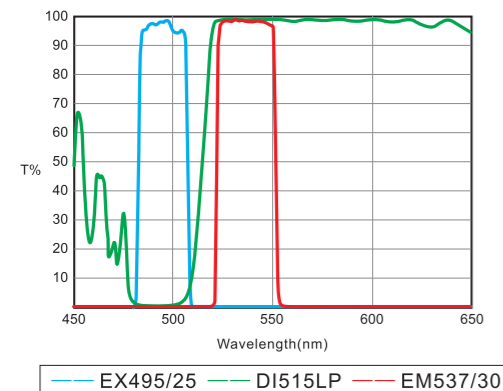
UV1: DAPI/Hoechst/AlexaFluor 350



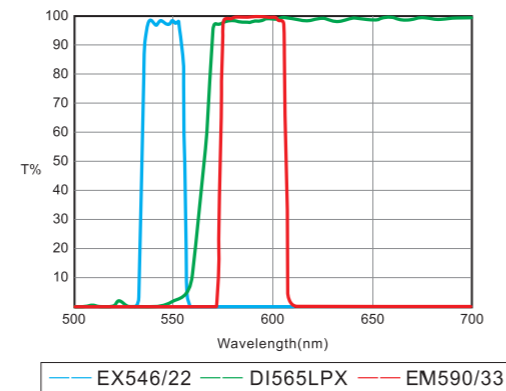
UV4: DAPI



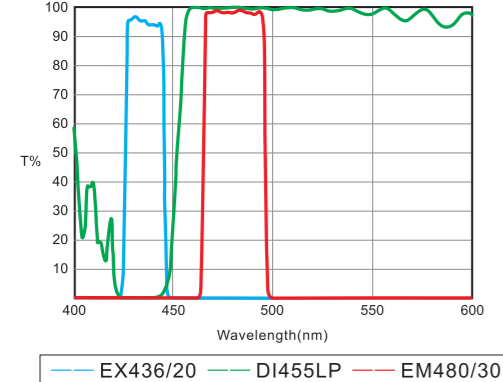
B5: SpectrumGreen/ZyGreen



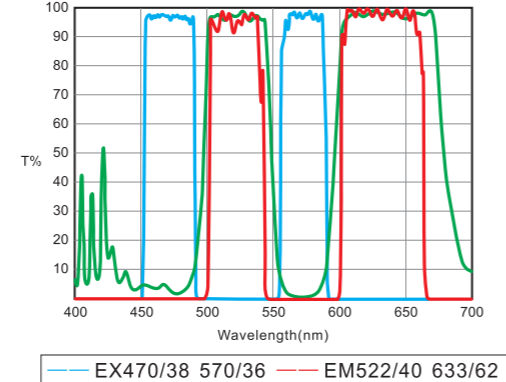
G4: SpectrumOrange/ZyOrange



V3: aqua



B/G: EGFP/mCherry (or FITC/TxRed)



Brand new plan achromatic objectives

Newly developed plan achromatic improve the flatness and perfect correction of chromatic aberration. The large NA design provides high-definition microscopic images in the full field of view.



OIPN Plan Achromatic Objective Series

Professional Plan Semi-apochromatic Objectives

PLAN-FLUOR series of infinite plan semi-apochromatic objective are specially developed for fluorescence observation. The image is bright and clear, the background is pure black, and the ultraviolet fluorescence is more prominent. It is the best choice for professional fluorescence observation of all kinds of cells and pathological sections.



Plan-Fluor Upright Fluorescent Plan Semi-apochromatic Objective Series

Professional plan fluorite objectives

PLAN-FLUOR series infinity plan semi-apochromatic objectives, are 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 for ultraviolet fluorescence.



Omnipotent plan apochromatic objectives

UPlanAPO series plan apochromatic objectives, designed for advanced research and microscopy photograph. Converging the optic axes of red, green and blue to one focal plane, correcting the axial chromatic aberration, the original color of samples is able to be presented. And the resolution and effective magnification are improved based on large numerical aperture.

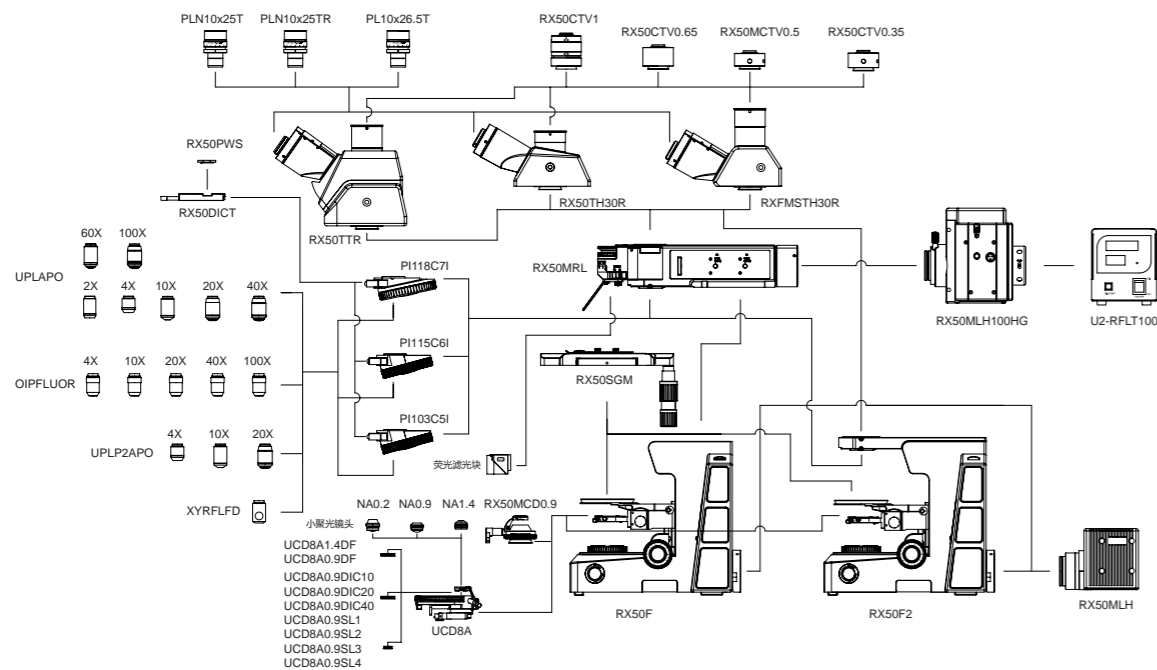


Model	Magnification	N.A.	Working Distance (mm)	Cover-glass Thickness (mm)	Oil	Spring
Plan semi-apochromatic objectives	4X	0.13	16.43	0.17	/	/
	10X	0.30	8.10	0.17	/	/
	20X	0.50	2.03	0.17	/	/
	40 X	0.75	0.74	0.17	/	Spring
Plan apochromatic objectives	100X	1.28	0.14	0.17	Oil	Spring
	2X	0.08	6.20	0.17	/	/
	4X	0.13	16.6	0.17	/	/
	10X	0.40	2.10	0.17	/	/
	20X	0.75	0.60	0.17	/	Spring
	40X	0.95	0.15	0.17	/	Spring
Plan apochromatic phase contrast objectives	60X	0.90	0.26	0.17	/	Spring
	100X	1.35	0.13	0.17	Oil	Spring
	4X	0.13	16.6	0.17	/	/
	10X	0.40	2.5	0.17	/	/
20X	0.75	0.6	0.17	/	Spring	

RX50 Specifications

Optical system	Infinity color corrected optical system
Viewing head	Inverted image, 30° inclined gemel trinocular head, interpupillary distance: 50mm~76mm; splitting ratio R:T=100:0 or 20:80 or 0:100
	Erect image, 30° inclined gemel trinocular head, interpupillary distance: 50mm~76mm; splitting ratio R: T=100:0 or 0:100
Eyepiece	High eyepoint wide field plan eyepiece PL10X25mm, diopter adjustable
	High eyepoint wide field plan eyepiece PL10X26.5mm, diopter adjustable
Objective	Plan semi-apochromatic objectives (4X/10X/20X/40X/100X)
	Plan apochromatic objectives (2X/4X/10X/20X/40X/60X/100X)
	Plan apochromatic phase contrast objectives (4X/10X/20X)
Nosepiece (with DIC slot)	Quintuple nosepiece
	Sextuple nosepiece, is able to be updated to memory the brightness
Frame	Biological frame (transmitted), low-position coaxial coarse and fine adjustment, coarse adjustment distance: 25mm; fine precision: 0.001mm. With coarse adjustment stop and tightness adjustment. Built-in 100-240V_AC50/60Hz wide voltage transformer, intensity adjustable by digital set and reset; built-in transmitted filters LBD/ND6/ND25).
	Fluorescence frame (transmitted), low-position coaxial coarse and fine adjustment, coarse adjustment distance: 25mm; fine precision: 0.001mm. With coarse adjustment stop and tightness adjustment. Built-in 100-240V_AC50/60Hz wide voltage transformer, intensity adjustable by digital set and reset; built-in transmitted filters LBD/ND6/ND25).
Stage	Double layers mechanical stage, size: 187mm X168mm; moving range: 80mm X55mm; precision: 0.1mm; two-way linear drive, tension adjustable
Condenser	Swing-out type achromatic condenser (N.A.0.9)
	Multi-functional condenser with built-in polarizer, is available to attach phase contrast/dark field/DIC accessory
Reflected fluorescence illuminator	Sextuple reflected fluorescence illuminator with iris field diaphragm and aperture diaphragm, central adjustable; with filter slot and polarizing slot; with fluorescence filters (UV/B/G for option).
	100W mercury lamp house, filament center and focus adjustable; with reflected mirror, mirror center and focus adjustable.
	Imported OSRAM 100W mercury lamp.
Transmitted illuminator	12V/100W halogen lamp house for transmitted light, center pre-set, intensity adjustable
Other accessories	Camera adapter:0.35/ 0.5X/0.65X/1X focusing C-mount; Cooling CCD camera, Centering objective for fluorescence observation; Professional software for fluorescence analysis; High precision micrometer, scale value 0.01mm

RX50 System diagram



RX50LED Specifications

Optical system	Infinity color corrected optical system
Viewing head	Inverted image, 30° inclined gemel trinocular head, interpupillary distance: 50mm~76mm; splitting ratio R:T=100:0 or 20:80 or 0:100
	Erect image, 30° inclined gemel trinocular head, interpupillary distance: 50mm~76mm; splitting ratio R: T=100:0 or 0:100
Eyepiece	Inverted image, 5~35 degree tilting head, interpupillary distance: 50mm~76mm; splitting ratio R:T=50:50 or 100:0 or 0:100
	High eyepoint wide field plan eyepiece PL10X23mm, with reticle, diopter adjustable
Objective	High eyepoint wide field plan eyepiece PL10X25mm, with reticle, diopter adjustable
	Plan achromatic objectives (4X、 10X、 20X、 40X、 100X)
	Plan semi-apochromatic fluorescent objectives (4X、 10X、 20X、 40X、 100X)
Nosepiece (with DIC slot)	Plan apochromatic objectives (4X、 10X、 20X、 40X、 100X)
	Upright plan apochromatic phase contrast objectives (4X、 10X、 20X、 40X、 60X、 100X)
Frame	Sextuple nosepiece, is able to be updated to memory the brightness
Stage	Compound eye illumination system, low-position coaxial coarse and fine adjustment, coarse adjustment distance: 25mm; fine precision: 0.001mm. With coarse adjustment stop and tightness adjustment. External wide voltage transformer, input 100V-240V, output 15V/2.67A, wide band single 3WLED lighting, continuous adjustable light intensity. The upper and lower light sources are powered by the microscope body.
Condenser	Double layers mechanical stage, size: 187mm X168mm; moving range: 80mm X55mm; precision: 0.1mm; two-way linear drive, tension adjustable
	Non swing-out Abbe condenser (NA1.1) with variable aperture diaphragm
Reflected fluorescence illuminator	Swing-out type achromatic condenser (N.A.0.9)
	Multi-functional condenser with built-in polarizer, is available to attach phase contrast/dark field/DIC accessory
Other accessories	4-channel LED fluorescent illuminator, with fluorescent eye protection plate, with B1 (or B2), G1 (or G2), UV2 (or UV1), B4 special fluorescent filters for pulmonary tuberculosis (optional)
Other accessories	Camera adapter:0.35/ 0.5X/0.65X/1X focusing C-mount; Cooling CCD camera, Centering objective for fluorescence observation; Professional software for fluorescence analysis; High precision micrometer, scale value 0.01mm

RX50LED System diagram

