

# FLUO-UP900 Research Grade Fluorescence Microscope

Binocular / Trinocular



## Upright Microscope

Research grade, touch screen. programming...



## Full Köhler Illumination

with adjustable Koehler field diaphragm



## Motorized Nosepiece

Motorized, Coded Sextuple Nosepiece support function of Active Light Manager - automatic adjustment of the appropriate light ratio when changing the objective



## Motorized Mechanical Stage X,Y,Z

Controlled by joystick or touch screen, which can adjust by 15mm



## Light source

Coded 10W LED illumination with adjustable constant intensity light control. ECO mod – go to stand by in case 15 min, inactivity. The control of the LED source is also integrated in the software

### Full Motorized

FLUO-UP900 Series compound Bright field research grade Microscope  
This scientific research grade Microscope is equipped with an electric platform, autofocus, electric objective lens conversion, touch screen controller and powerful imaging software; through the precise connection between various parts, it can realize the functions of microscope observation, image acquisition and image processing, reducing repetitive operations. In addition, the microscope settings and parameter settings of the last operation can be restored to improve the stability and accuracy of microscope imaging. Microscope operation can be so fast and efficient.

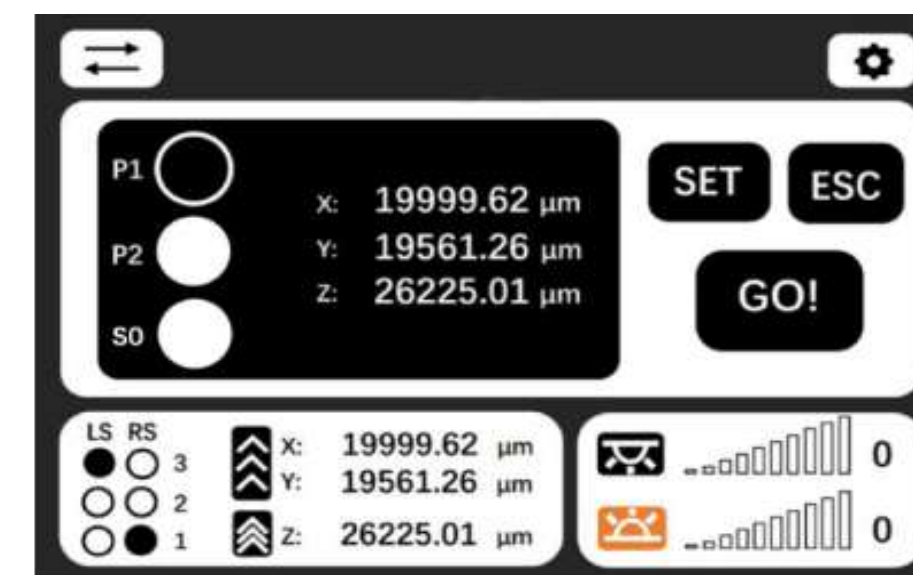
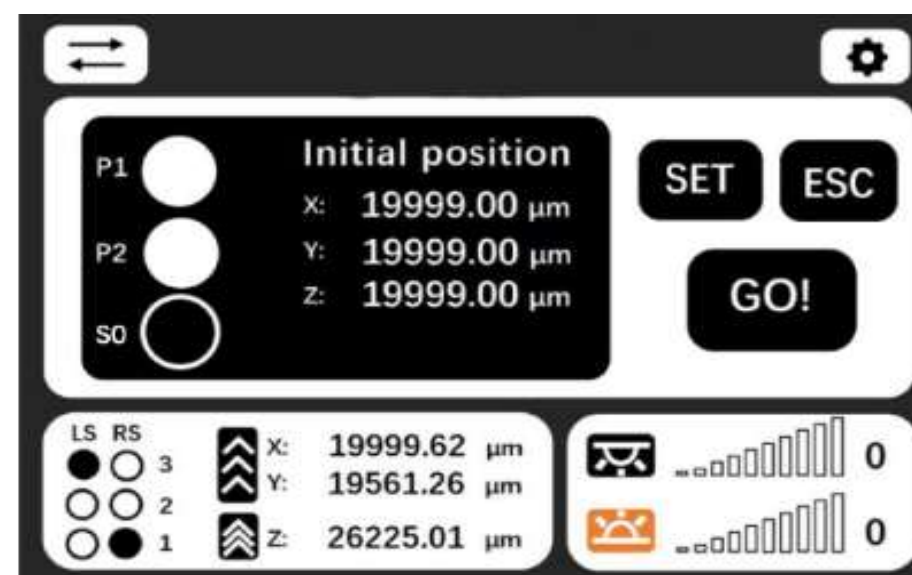
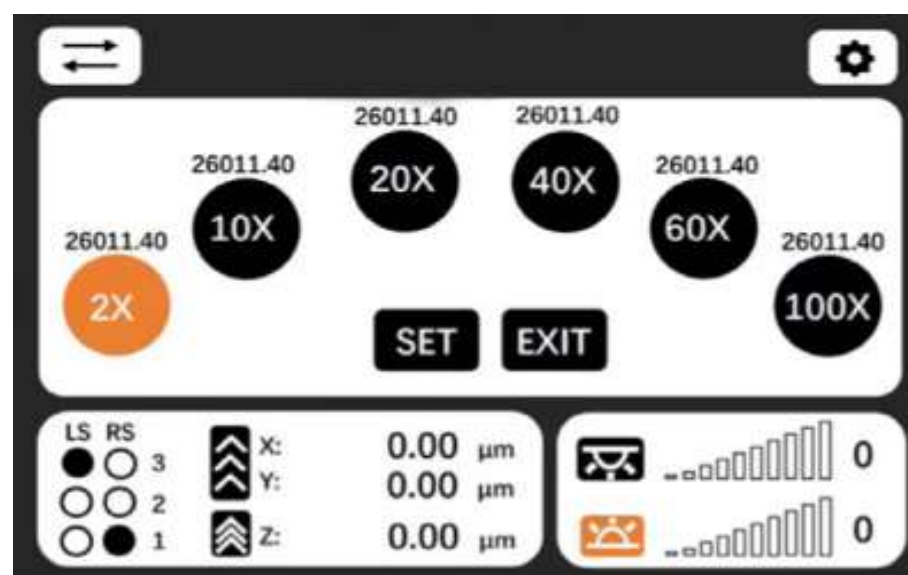
- Robust metal body structure
- Adjusting the intensity on the microscope stand
- Two integrated ergonomically positioned shooting buttons on the tripod on the left and right sides
- Optical system with full Köhler illumination.
- Binocular photo tube up to 15° inclined
- Fluorescent light source at your choice:
  - **Mercury light source:** Cost-effective, wide spectral range, simple to operate, effective life of 200 hours, suitable for observation needs of almost all dyes.
  - **Metal halide lamp:** It is brighter, a broad-spectrum light source, and has a use time of up to 2,000 hours. It is suitable for the observation needs of almost all dyes
  - **LED light source:** with a service life of up to 5,000 hours, cold light source, little damage to cells, and a small monochromatic spectrum range. The UP950 series can be installed with 4 LED light sources to meet the observation needs of various dyes.



### High precision and easy to operate

The micro electric control platform provides controlled movement in three directions: X, Y, and Z.

Only one USB cable is needed to connect the computer to the built-in controller of the fuselage to achieve integrated electric control; the built-in Z-axis adopts a high-precision motor screw structure to ensure nano-scale Z-axis layer cutting scanning; the imported screw adopts extrusion technology and has Features such as enhanced consistency and elimination of backlash errors; flexible platform control program can meet a variety of motion needs. The matching control joystick is powerful and easy to operate.



### Touch control screen, space saving, flexible control

The front-mounted touch control screen integrated with the microscope does not occupy the desktop space. The interface is simple, easy to operate, and programmable control simplifies repetitive observation and imaging processes. Powerful functions: three-axis coordinate display, speed gear display, objective lens electric switching, objective lens dual hole orientation switching, position memory and return, relative coordinate display, objective lens parfocal compensation, temporary upper limit setting, platform escape and recovery, display screen Day/night mode etc.



Fluorescence filters: high precision and easy to use

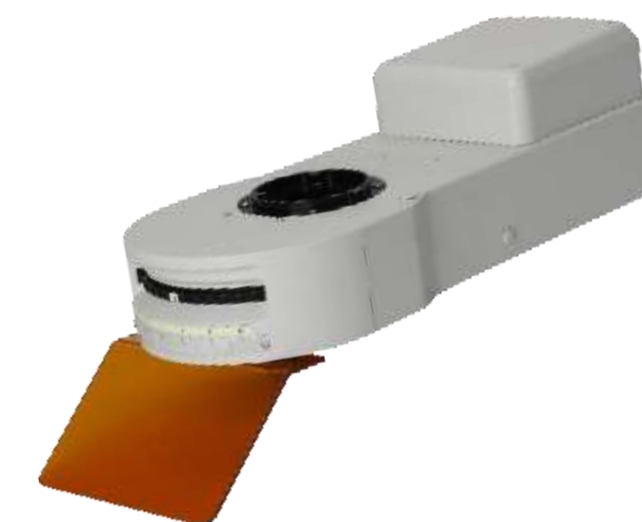
In order to make the fluorescence transmittance higher, the cutoff sharper, and the detection effect better, we use outstanding sub-ripple elimination coating technology on all fluorescence color filter sets. Highly sensitive fluorescence detection exposes cells to less excitation light, while a higher signal-to-noise ratio (S/N) produces fluorescent images with bright colors and dark backgrounds



Mercury light source: cost-effective, wide spectral range, simple to operate, effective life of 200 hours, suitable for observation needs of almost all dyes



Metal halide lamp: It is brighter, a broad-spectrum light source, and has a use time of up to 2,000 hours. It is suitable for the observation needs of almost all dyes.



LED light source: with a service life of up to 5,000 hours, cold light source, little damage to cells, and a small monochromatic spectrum range. The UP950 series can be installed with 4 LED light sources to meet the observation needs of various dyes



**Turntable excitation module device**

The fluorescence turntable can be equipped with 6 color filter sets, which can image multiple stained specimens at the same time. At the same time, switching the excitation module only requires one click, which is convenient and fast, improves work efficiency, and effectively reduces dye quenching



Adjustable Microscope Binocular head 0 ° to 30 °

**COLO Workstation:** Computer controlled Plus Motorized Microscope Imaging System Software

Provides integrated control for microscopes, cameras, motorized platforms and various components, and provides functions such as motorized control, autofocus, sequence scanning, fixed-point scanning, surface fitting scanning, and full-field focusing scanning. Intuitive and simple interactive interface, fast and flexible data acquisition method, combined with COLO NOMIS basic imaging analysis software, realize functions such as measurement, synthesis and data recording. Consist module for multichannel fluorescence, manual panorama, manual extended focus,,

Technical Specification:

Processor: Intel® CPU with 6 cores, 3 GHz clock frequency, eg Intel® Core® i5 12500 CPU

Memory: 16 GB RAM

PCI Express Connectors:

1 x PCI Express Generation 3 x16

Graphics adapter: Support resolution of 1920 x 1200 pixels (minimum), 32 Bit true color,

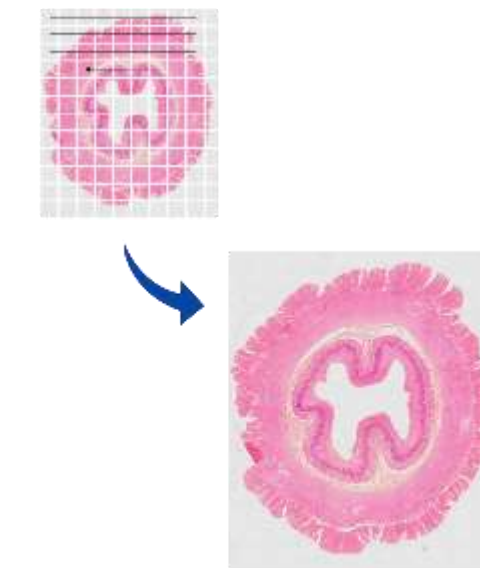
DirectX® 11.0 or higher, eg integrated Intel® UHD Graphics 630 or associated graphics card NVIDIA T 1000 8GB

Hard drive: 1 x 512 GB SSD NVMe

USB interface: 2 x USB 2.0 and 2 x USB 3.0

Monitor 27" TFT display, vertical resolution 1200 pixels

Operating system: Microsoft® Windows® 10 x64 Professional



## FLUO-UP900

Optical system	UIS2 optical system
Microscope body	Microscope frame for transmitted & reflected microscopy
Viewing head	Widefield trinocular viewing head, 30 degree inclined, with beamsplitter: 0/100, 50/50,
	Interpupillary distance adjustment between 45-78mm, with eyetube diameter $\Phi$ 30mm
	FOV width: 26.5mm
Eyepiece	A pair of super widefield high eyepoint eyepiece SWH10X/25mm
Nosepiece	Sextuple coded nosepiece, with 6 objective positions
	RMS thread of objective lens, with DIC slot
Objective	PLAN10XPH, Infinite Plan Achromatic Phase Contrast Objective 10x - NA0.25, WD: 10.8mm
	PLAN 20X, Infinite Plan Achromatic Objective, 20x - NA0.40, WD: 1.5mm
	PLAN 40X, Infinite Plan Achromatic Objective, 40x - NA0.65, WD: 15mm
	PLAN 100X, Infinite Plan Achromatic Objective, 100x - NA1.25, WD: 0.21mm

# FLUO-UP900

Stage	Mechanical stage 235mmx150mm with insert from Gorilla glass and travel range 76 x 54 mm
	Gorilla glass insert, with right handle
Focus	Vertical stage movement: 25 mm stage stroke with coarse adjustment limit stopper, torque adjustment for coarse adjustment knobs, stage mounting position variable, high sensitivity fine focusing knob, minimum adjustment gradations: 1 $\mu$ m
Condenser	Universal condenser, with 8 positions including position for BF observation, 3 position for phase contrast observation, 3 position for DIC observations and 1 position for dark field positions With phase contrast ring for 10x objective NA0.9 Top lens for universal condenser
Transmitted light source	Built-in Koehler illumination for transmitted light, light preset switch, light intensity manager switch
	High color reproductivity 18W LED light source

## FLUO-UP900

### Epi-illuminator

Illumination method: Bright field, dark field, fluorescence  
Aperture diaphragm: Yes/centerable  
Field diaphragm: Yes/Centerable

Polarized slot: Yes  
Filter slot: Yes  
Auxiliary focus: None  
Turret position: 4  
With fluorescent protection plate

### Fluorescent light source

MG100 ultra-high-power long-life LED fluorescent solid light source (can be used for FISH)

Light-emitting unit: Critical solid-state light-emitting diode  
Wavelength range: 350nm~390nm, 410NM-740nm

Electronic light gate: 2 channels independent  
Dimming: 0~100% stepless continuous  
Subdivision accuracy: 1% gradual

Wick life: 50,000 hours  
Light decay period: 30% decay after 25,000 hours

Refresh frequency: 100MHz  
High speed photography: Supports up to 16,000FPS  
Power supply: 100W

Cooling system: active circulating heat pipe

Light controller (MC-100): Keyboard with LCD display  
(MC-100 must be selected together)

## FLUO-UP900

### Light Controller

MC100 Light controller used to control MG100 high-power long life LED fluorescent solid light source

Support 1% brightness step adjustment, Support electronic light shutter

Color LCD display, Brightness display, wavelength display

Support PC control (pulse, strobe, duty cycle adjustment)

### Fluorescent filter

GR/OR bicolor excitation filter cube  
U-FF-GR/OR, EX: 480~560nm

Dichroic: 517/613nm, Emission: 523-617nm, (for FISH)  
Multi-band filter (ext: 385, 475, 555 and 630 nm

Em: 425/30 (DAPI, Hoechst 33342, Hoechst 33258, Alexa Fluor 350, Alexa Fluor 405) + 514/30 (Cy2, eGFP, Alexa Fluor 488)

FITC/ Fluorescein) + 592/25  
(TRITC, Cy3, tdTomato, Alexa Fluor 546, Alexa Fluor 555, DsRed, mOrange, DyLight 549, Spectrum Orange) + 709/100 (Alexa Fluor 633, Alexa Fluor 647, Cy5)

### C mount

0.5X C mount adapter for digital camera

### Digital camera

UNISON-5PA digital camera, 5.0M/IMX264(C, GS), 2/3"(8.45x7.07) CMOS, pixel size: 3.45x3.45, FPS/Resolution: 35@2448x2048,50@1224x1024, with image process software

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