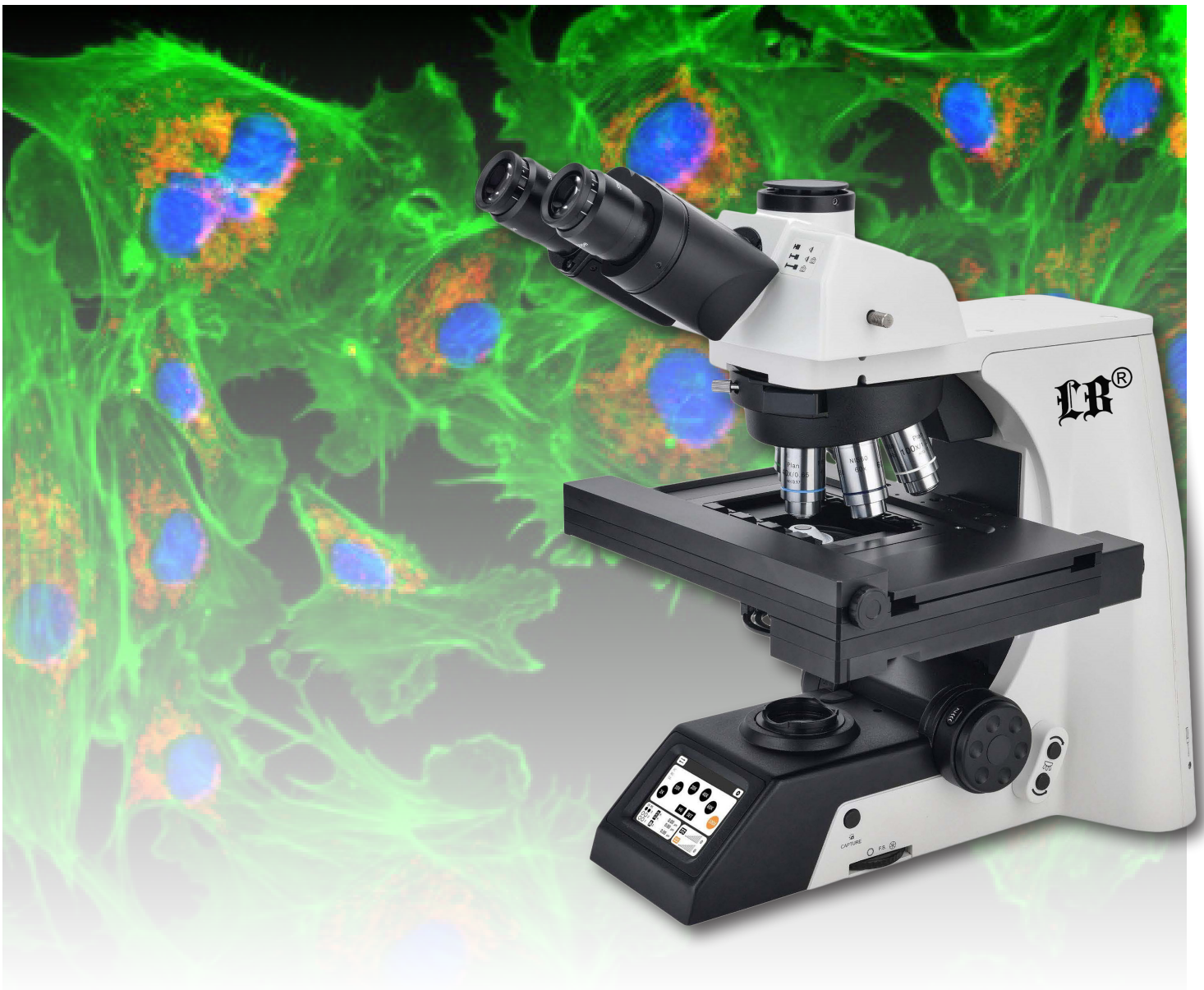




# LB-297

## Motorized Automatic Biological Microscope



## LB-297 Motorized Automatic Biological Microscope

**LB-297 Motorized Automatic Biological Microscope** have been designed to present a safe, comfortable and precision observation experience. The motorized X-Y stage and nosepiece, auto focusing, touch screen controller and powerful software will make your works easier. The software has motion controlling, depth of field fusion, objective lens switching, brightness controlling, auto focusing, area scanning, image stitching, 3D imaging functions. 4pcs slide can be placed on the stage for automatic scanning, a LCD touch screen in front of the microscope, which can show magnification and illumination information. With perfectly performed structure, high-definition optical image and ergonomical operations, **LB-297 Motorized Automatic Biological Microscope** realize professional analysis and meet all the needs of research in biological, medical, life science and other fields.

### APPLICATION

**LB-297 Motorized Automatic Biological Microscope** is an ideal instrument in biological, histological, pathological, bacteriology, immunizations and pharmacy field and can be widely used in medical and sanitary establishments, laboratories, institutes, academic laboratories, colleges and universities.

### FEATURES

#### 1. Adopt line motor and screw driving mode.



Low-hand electric focusing mechanism, independent operation of left and right hand wheels, three speed adjustment, focusing range 30mm, repeat positioning accuracy: 0.1 $\mu$ m.

#### 2. Tilting Trinocular Head is optional.

- (1) The eye tube can be adjusted from 0°-35°.
- (2) Digital cameras or DSLR cameras can be connected to the trinocular tube.
- (3) The beam splitter has 3-position (100:0, 20:80, 0:100).
- (4) The splitter bar can be assembled on the either side according to user's requirements.



### 3. Nosepiece Rotating Buttons.

This microscope has the function of motorized rotating nosepiece with the 2 buttons.



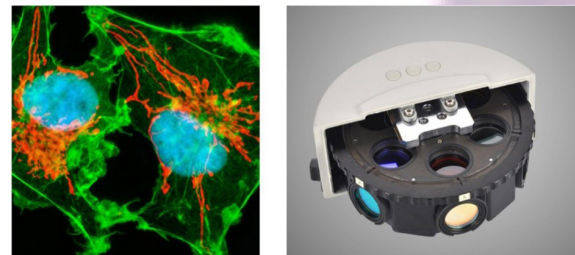
### 4. Light Intensity Management.

With motorized and coded nosepiece, when the objective is changed, the light intensity will also be changed accordingly. Thus, from low to high magnification, the field of view maintains the same brightness. There is no need to manually adjust the intensity of the light and also reduce eye fatigue. The long-life LED light source ensures uniform brightness while is easy to maintain.



### 5. 6-Position Turret for fluorescent filter blocks.

All the fluorescent filter blocks use the high-performance filter lens. Up to 6 filter blocks can be installed in the turret, that allows users to view different stained specimens with a turret.



Animal Fiber Cell

### 6. Can be controlled by the control handle and software.

This microscope can realize LED brightness, objective lens switching, auto focus, and electric adjustment of X-Y-Z axis through the software and control handle. The software can realize depth of field fusion, objective lens switching, brightness control, auto focus, area scanning, image stitching, 3D imaging and other functions.

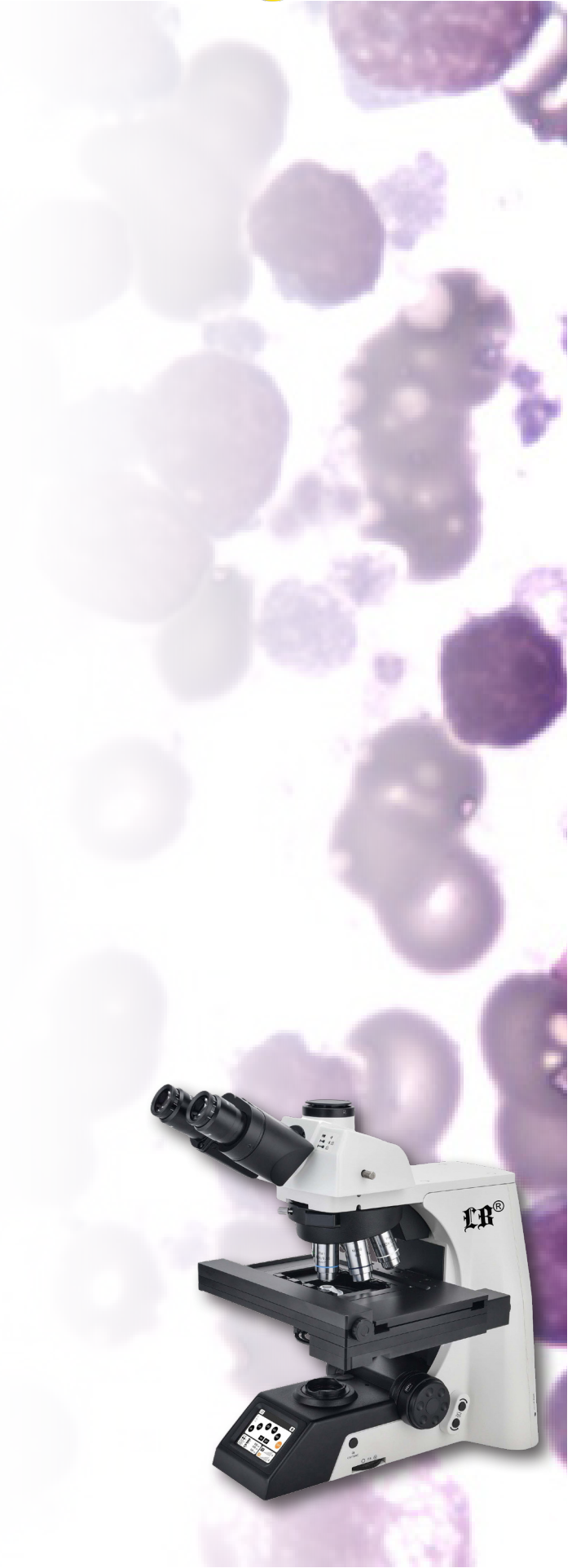
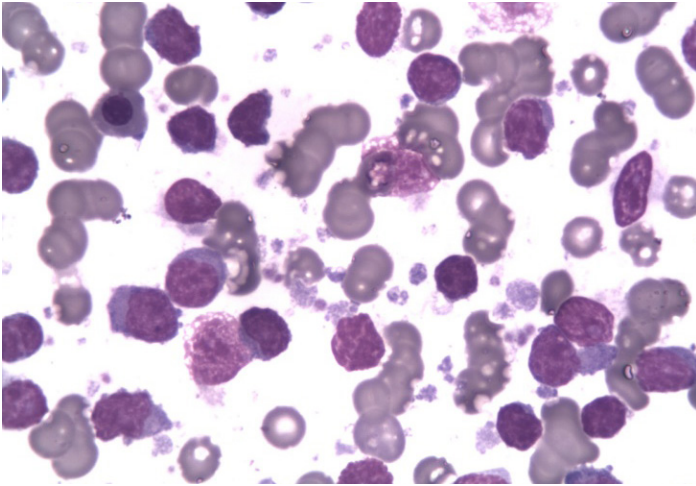
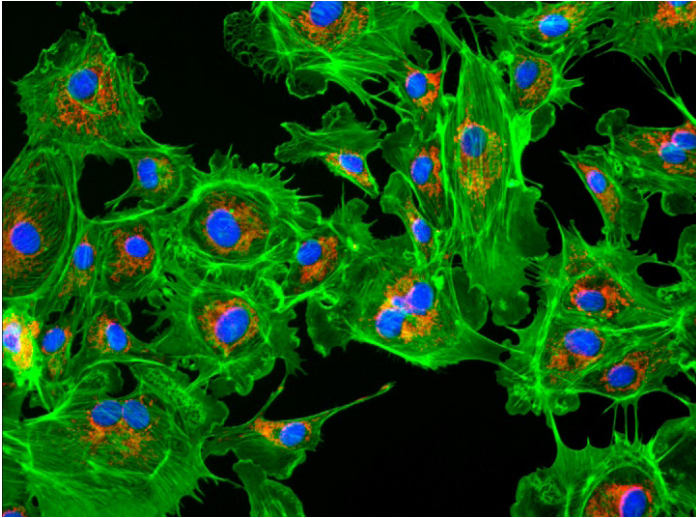


Control Handle



| Item                     | Specification   |                                   |
|--------------------------|---|-----------------------------------|
| Optical System           | NIS60 Infinite Color Corrected Optical System   |                                   |
| Viewing Head             | Seidentopf Trinocular Head, 30° inclined, interpupillary distance: 47mm-78mm; splitting ratio Eyepiece:Trinocular=100:0 or 20:80 or 0:100   |                                   |
| Eyepiece                 | Super wide field plan eyepiece SW10X/25mm, diopter adjustable   |                                   |
| Objective                | N-PLN Plan Objective  | N-PLN 4X/NA=0.10, WD=30mm         |
|                          |   | N-PLN 10X/NA=0.25, WD=10.2mm      |
|                          |   | N-PLN 20X/NA=0.40, WD=12mm        |
|                          |   | N-PLN 40X/NA=0.65, WD=0.7mm       |
|                          |   | N-PLN 100X(Oil)/NA=1.25, WD=0.2mm |
| Nosepiece                | Motorized Backward Sextuple Nosepiece (with DIC slot)   |                                   |
| Condenser                | Universal Condenser (4X-100X)   |                                   |
| Transmitted Illumination | 3W S-LED lamp, center pre-set, intensity adjustable   |                                   |
| Focusing                 | Low-hand Motorized auto focusing mechanism, independent operation of left and right hand wheels, three-speed speed adjustment, focusing range 30mm, repeat positioning accuracy: 0.1μm, motorized escape and recovery mechanism |                                   |
| Stage                    | High-precision motorized X-Y double layers mechanical stage, size 275 X 239 X 44.5 mm; travel: X axis, 125mm; Y axis, 75mm. Repeat positioning accuracy ±1.5μm, maximum speed 20mm/s  |                                   |
| Control Handle           | 3D control handle, 4 gears speed  |                                   |
| Controller               | Communication interface: USB2.0 and RS232   |                                   |
| Other Accessories        | 0.5X C-mount Adapter  |                                   |
|                          | Dust Cover  |                                   |
|                          | Power Cord  |                                   |
|                          | Cedar Oil 5ml   |                                   |

**SAMPLE IMAGES**



## ACCESSORIES

### 1. N-PLN Series Plan Objectives.

The Plan objectives can provide flat high transmittance image from visible light to NIR light. They are usually used for bright-field viewing as the high signal-to-noise, high resolution and high contrast features.

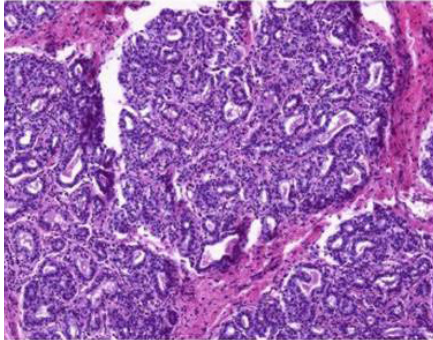
### 2. N-PLN PH Series Plan Phase Contrast Objectives.

These plan phase contrast objectives are specially designed for phase contrast observation. They are good choice for clinic and scientific research. These objectives can provide advanced flat image of 25mm FOV under transmitted bright field.

### 3. N-PLFN Series Plan Semi-APO Fluorescent Objectives.

Owe to the multilayers coating technology, these Semi-APO objectives can compensate the spherical aberration and the chromatic aberration from ultraviolet and infrared light. High-sensitive fluorescence performance of the objectives ensures the sharpness, definition and color rendition of images.

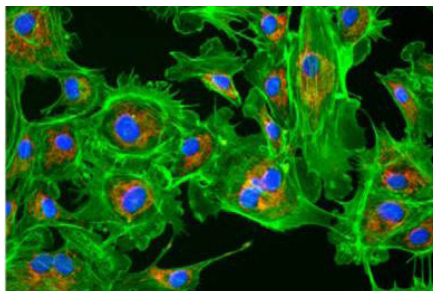
### 4. Bright field Viewing.



Mammary Gland (active stage)

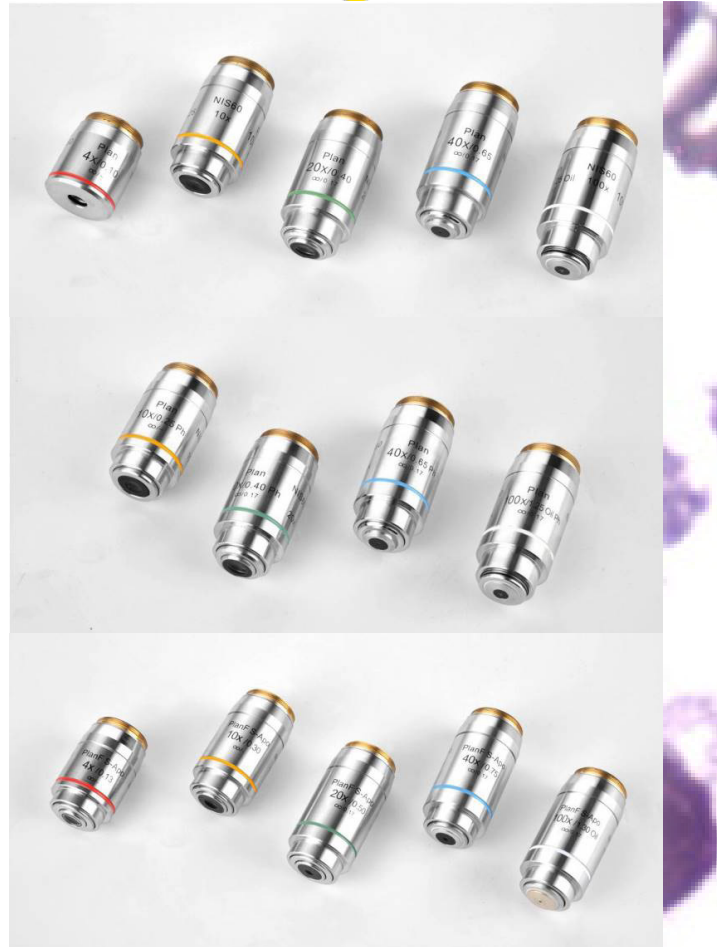
Brighter image, high resolution and flatness, suitable for all the magnifications.

### 5. Fluorescent Viewing.



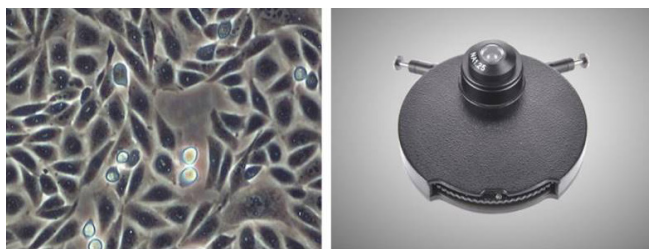
Arterial Cell

The compact epi-fluorescent components include noise elimination feature which ensures images captured are bright, with high contrast and high signal-to-noise ratio.





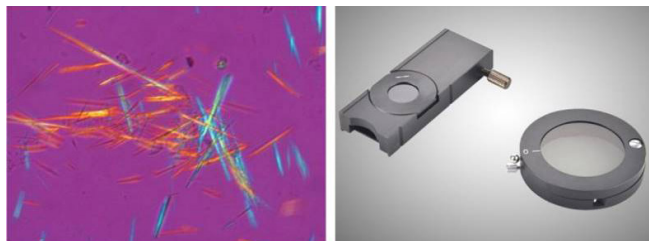
### 6. Phase Contrast Viewing.



Rat Ovarian Cell

Users can get high contrast image of neutral background color whatever the magnification is. It is suitable for viewing non-stained specimen.

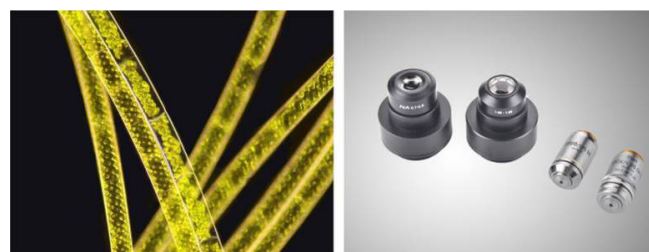
### 7. Polarizing Viewing.



Uric Acid Crystal

It is quite suitable for viewing collagen, amyloid and crystal etc., double refracting specimens.

### 8. Dark-field Viewing.



Spirogyra

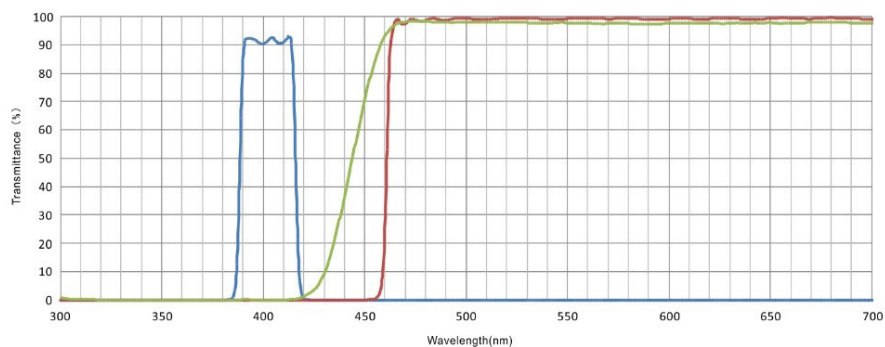
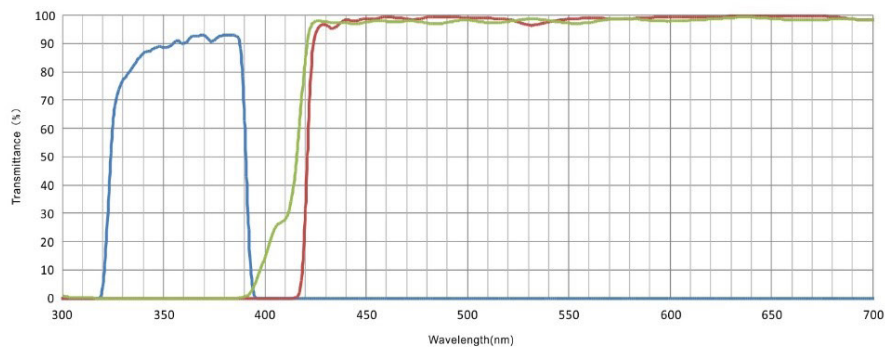
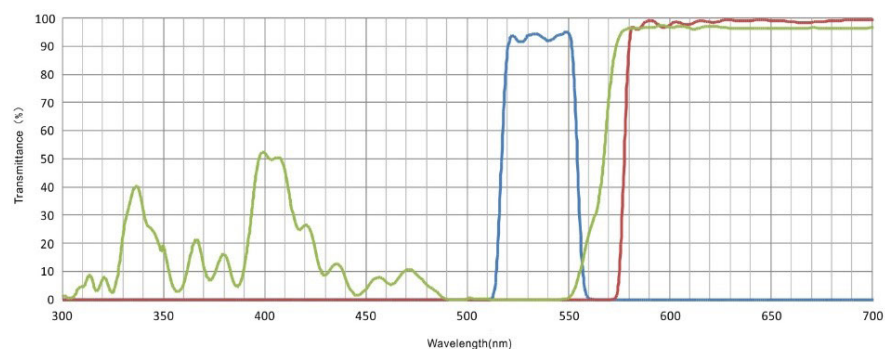
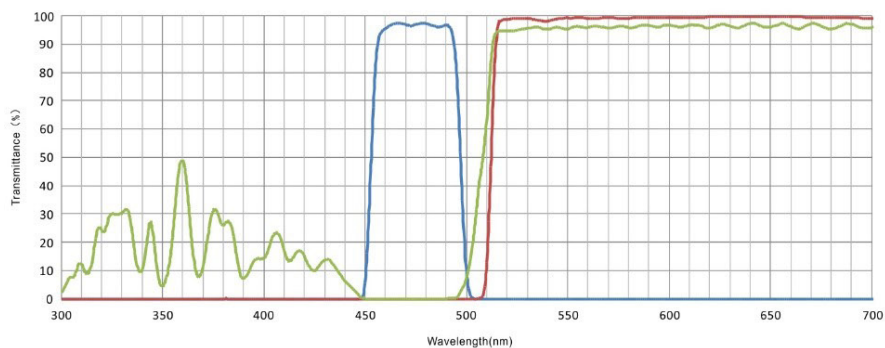
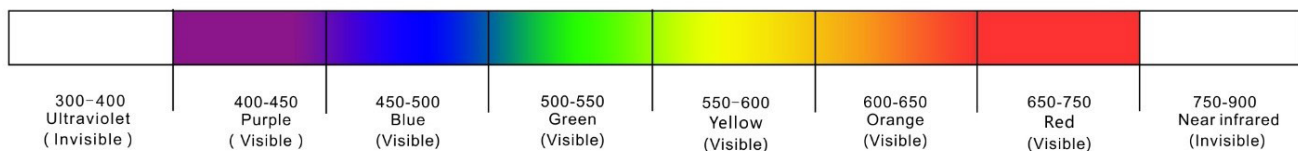
It can be used for clearly viewing of blood or flagellum etc., fine structing.

### 9. Fluorescent filters.

| Model | Description                       | Excitation  | Dichroic Mirror | Barrier Filter |
|-------|-----------------------------------|---|-----------------|----------------|
| FL-B  | B filter block                    | BP460-495   | DM505           | BA510          |
| FL-B1 | B1 filter block                   | BP460-495   | DM505           | BA510-550      |
| FL-G  | G filter block                    | BP510-550   | DM570           | BA575          |
| FL-U  | U filter block                    | BP330-385   | DM410           | BA420          |
| FL-V  | V filter block                    | BP400-410   | DM455           | BA460          |
| FL-R  | R filter block                    | BP620-650   | DM660           | BA670-750      |
| FL-O  | Fluorescent Block without filters | Optional Excitation and Barrier Filters is $\Phi$ 25mm, Dichroic Mirror is 5.8X37.5/1mm, the filters can be installed in the block. |                 |                |

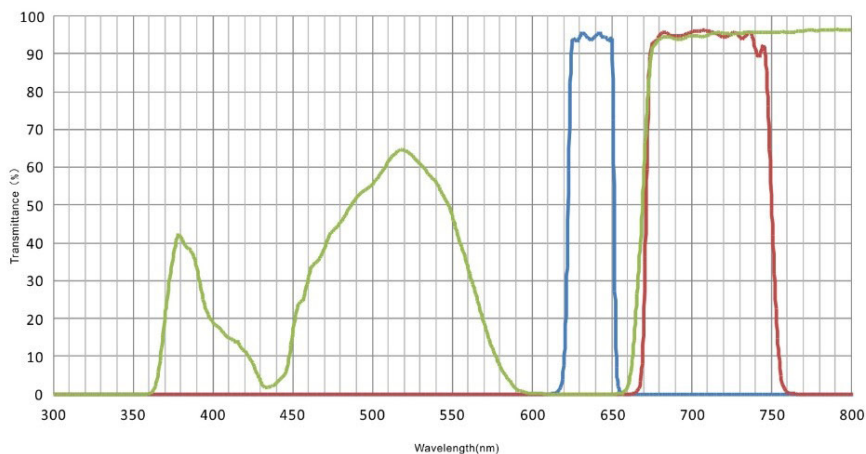


Spectral range



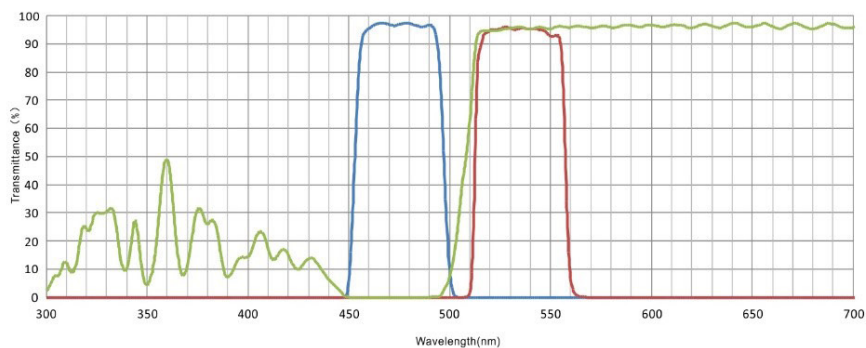


Spectral range



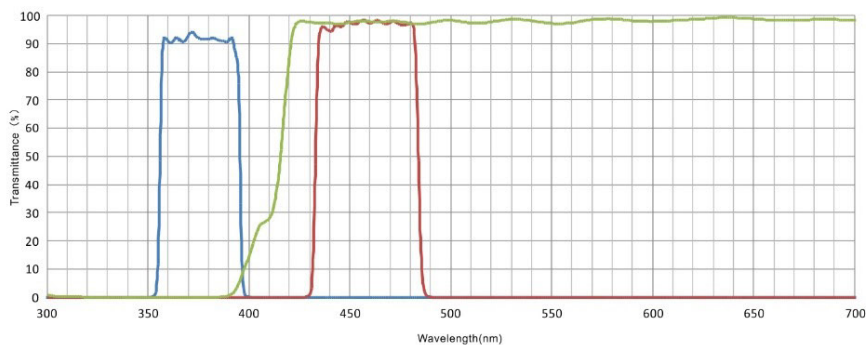
FL-R

- BP620-650
- DM660
- BA670-750



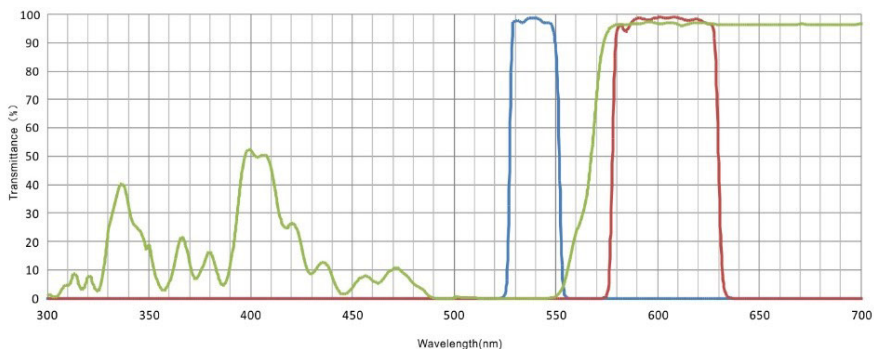
FL-FITC

- BP460-495
- DM505
- BA510-550



FL-DAPI

- BP360-390
- DM415
- BA435-485



FL-TRITC

- BP528-553
- DM565
- BA578-633