

# EX20 Biological Microscope

For education and lab

EXCELLENT PERFORMANCE SIMPLE OPERATION STABILIZED STRUCTURE



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As technical improvement, manufacturer has right to make renovation in designing without notice

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SUNNY INSTRUMENTS  
*EX Series*

# EX20

Biological Microscope  
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*EXCELLENT PERFORMANCE*

*SIMPLE OPERATION*

*STABILIZED STRUCTURE*



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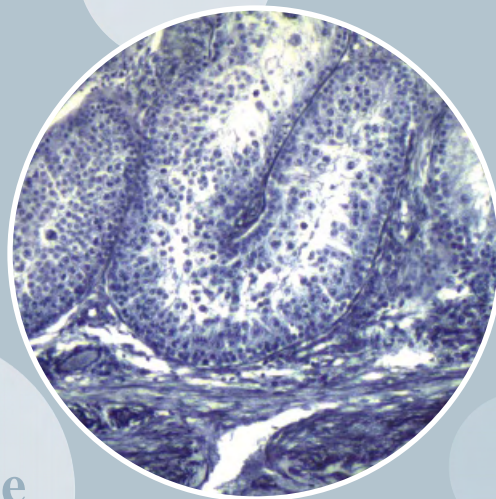
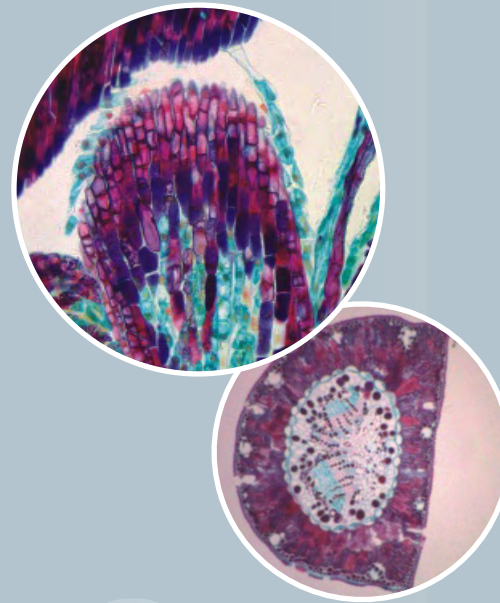
# EX20 Biological Microscope

According to the daily demands of teaching, EX 20 biological microscope has entirely new improved based on the traditional one.

With the infinite plan achromatic objective, EX 20 biological microscope provide high-resolution image. And the image is flat and sharp.

All the parts such as eyepiece, condenser, lifting platform have security locks and safety limit designs. This designs ensure the microscope more stable, solid, maintain excellent performance for long term.

Under different slides, EX20 biological microscope can fulfill various microscopic examinations such as brightfield, darkfield, simple phase contrast, simple polarizing. So EX20 biological microscope has highly performance-price ratio.



## EX20 Biological Microscope





Adhering to the EX series of stable, suitable, safe and efficient principle, and the features used for teaching, EX 20 has innovative design for adaptability and stability and makes observation simpler.



### Variety of illuminator methods available

Single 3W high power LED illuminator, close to sunlight. Under bright field observation, the background is bright and white, no need filter. So it is the best choice for brightfield observation and CCD photograph. The light source is cold and stable. It will not have temperature difference even working for long time and longer life with lower power consumption

Philips 6V20W Halogen illuminator;

Block-style mirror, If no power supply, it can collect natural light.



### Laboratory level infinity optical system

In the teaching microscope, We used the laboratory-level infinity optical system and the real professional infinity plan achromatic objective. High power objective used the semi-apochromatic objective design theory to provide a high resolution, high definition, high contrast microscopic image. Advanced professional plan eyepiece design, effective correction of the distortion field and color ring edge. Firm's structural design, can effectively prevent the eyepiece demolition by students, to avoid installation and damaged and dirty lens.

All kinds of micrometer and reticle can be installed.

### Sensitive dimming system

For the new dimming system, adjusting the lighting close to a straight line from low to high brightness dimming. It keeps sensitive and effective and overcome the jump phenomenon occurs when traditional microscope dimming the brightness and avoid the glare instantaneous cause dizziness. The new design is also conducive to the operation of the students and protection of dimming knob will not be damaged



### The security design of preventing faulty operation

There are special locking screws for eyepieces to prevent people will remove the eyepiece or causing accidental damage of falling out of the eyepiece when got dust coverl Condenser using a dedicated set screws fixed, undesirable, also to avoid damage.

Focus limit has the mechanical screws, and default before sale, which ensures accurate focus of the samples, but also protect the slide will not be damaged.



### Stable, compact body design

T-shaped base and EX Series classic curve flank created EX20 excellent stability and rigid compact design. The overall shape compact and beautiful and save lab space.



### Safely handle design

The handle on the back of main body guarantee it safe when move the microscope.

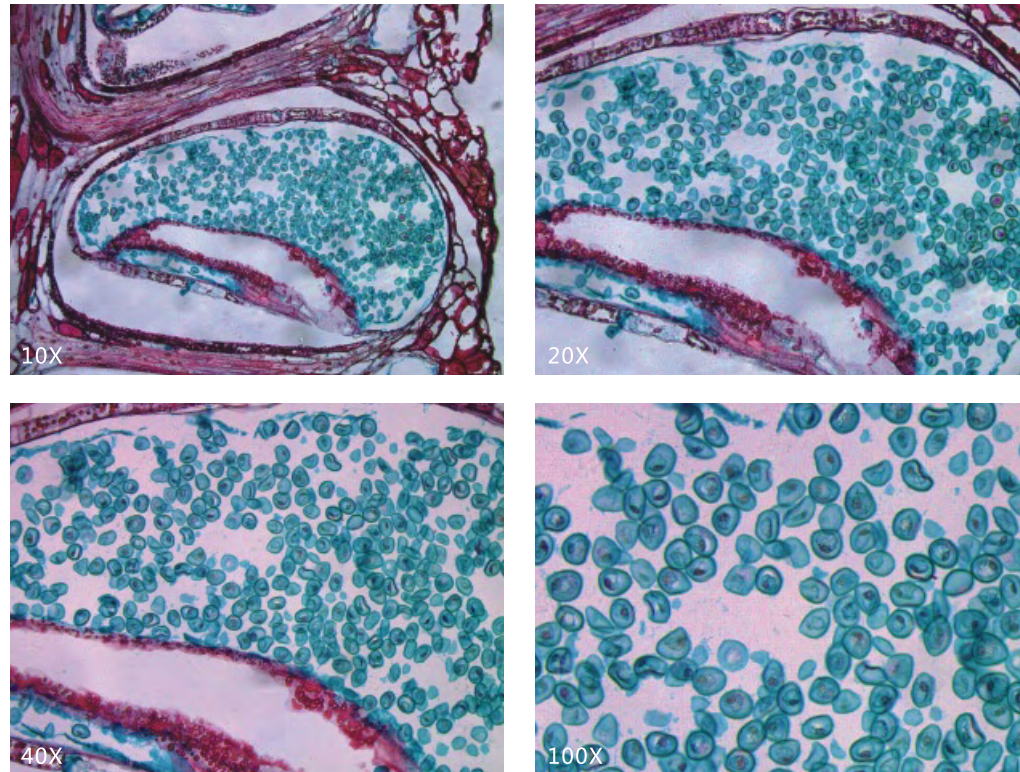


According to conventional teaching and experimental observation of the need, EX20 integrated bright field, simple polarizing, simple dark field, simple phase contrast four major functions, highly performance-price ratio.

## Brightfield observation

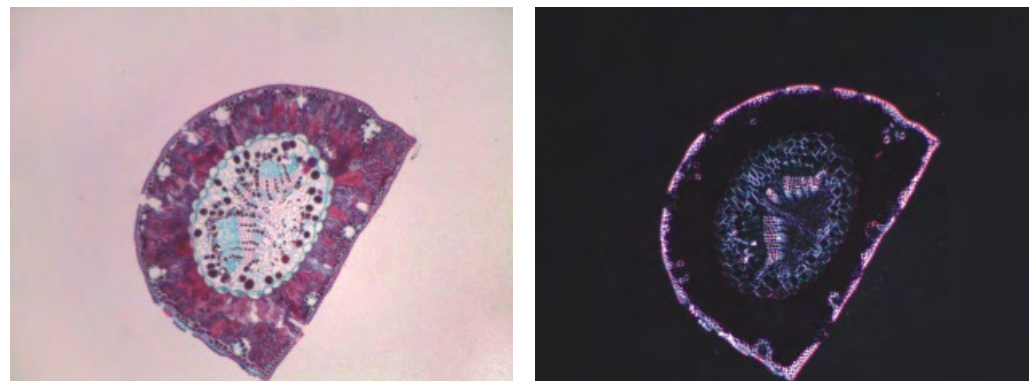
From low magnification to high, Koehler illumination system and Infinity achromatic optics system ensure the sharp and bright, high-quality image.

Male cestode strobila Brightfield



## Simply polarizing observation

Using simply polarizing device can detecting the birefringence material such as animal cells, plant cells, body fluids crystallization. Just putting polarizer on collector and inserting analyzer into the viewing tube socket then we can fulfill simply polarizing observation handily.

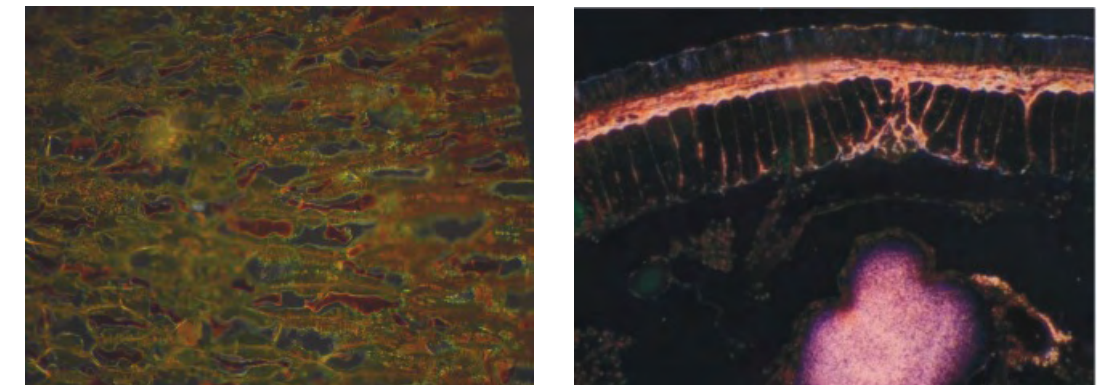


Pine needles brightfield

Pine needles orthogonal polarized

## Darkfield observation

Insert the darkfield spill into condenser socket and pull darkfield diaphragm in and so on, then can fulfill simply darkfield observation. You can observe tozoon, bacterial flagellum, leptospira in darkfield at any times between 4X-40X without special darkfield condenser.

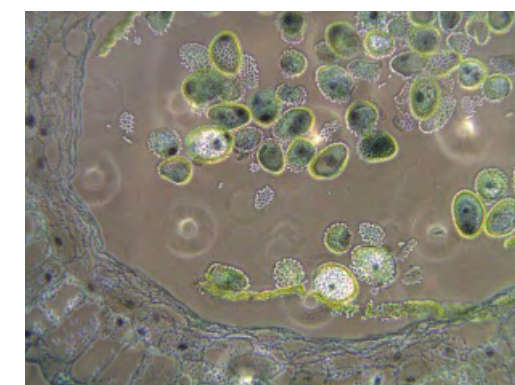


Cell plasmodesmata 20x darkfield

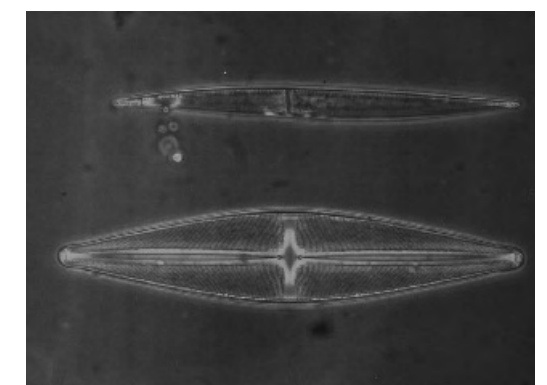
Earthworm cross section 10x darkfield

## Phase contrast observation

To insert a simple phase contrast flapper into the slot of condenser, then depending on the phase contrast objective, push the matching phase contrast ring into the optical path, phase contrast can be observed, simple and practical, suitable for phase contrast observation of some basic occasions. Simple flapper into SL1 (adaptation 10X/40X) and SL2 (adaptation 20X/100X).



Liliun pollen 40x phase



Diatom 20x phase



### Trinocular Head

Trinocular head can connect with many kinds of video & photo accessories, output the image to monitor or computer, and do image analysis, processing, preservation and transmission



### Video & Photo Accessories



Through special C-mount and relay mirror, mount the digital camera on the microscope, take pictures quickly and acquire image.

### Various filters for optional



When under phase contrast observation, you can choose the green filter or IF550 phase contrast interference filter to get the best observation effect

When using halogen illumination, choose blue filter or LBD filter can help to get best image contrast

According to the actual requirement, you can choose different filters to adjust the color of background to get the required result.

### Field Diaphragm Accessories

Standard specification is fixed Koehler illuminator. According to actual requirement, can select variable field diaphragm. Rotate into microscope condenser, very easy to install.

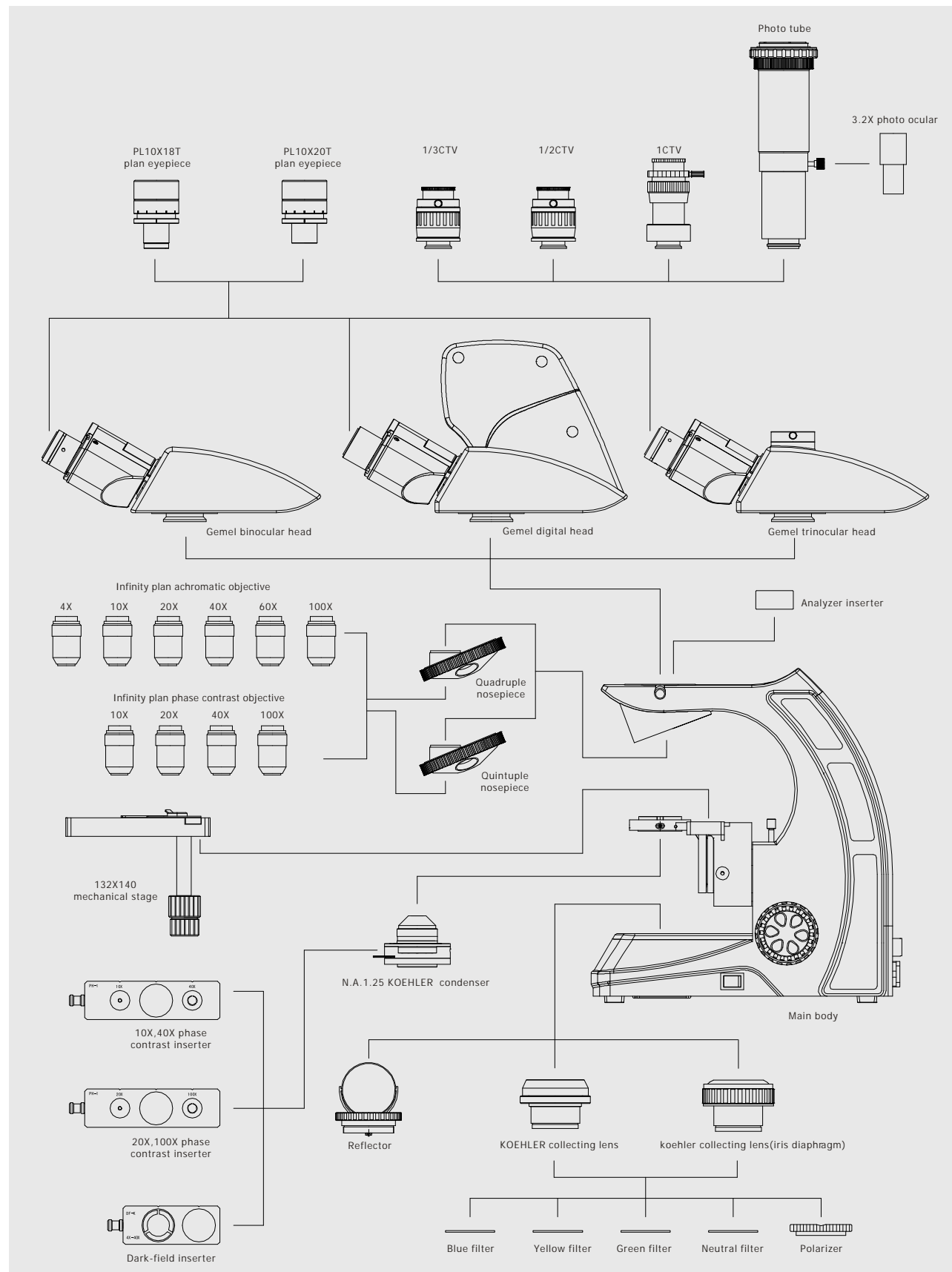


### Digital Microscope



DMEX20 digital microscope, adopt 3 mega. pixels digital CMOS chip, 1/2" target surface. Progressive scan, USB2.0 output, high transmission speed and Signal-to-Noise ratio, can do the real-time image capture.

PhotoLib professional image processing software, covering all conventional image processing functions, and advanced particle automatically identify and quantitative analysis capabilities, to fully meet the requirements of your professional image analysis



EX20 Configuration Chart :

Model	EX20
Optical system	Infinity color corrected optical system
Eyepiece	PL10X/18T, FN18mm with adjustable diopter
	PL10X/20T, FN20mm with adjustable diopter
Objective	OIP Infinity Plan Achromatic objectives
Viewing head	30° inclined Gemel Binocular Head
	30° inclined Gemel Trinocular Head, Light splitting ratio R:T=8:2
	30° inclined Gemel Digital Head (3 mega. pixel)
Nosepiece	Reversed quadruple nosepiece
	Reversed quintuple nosepiece
Stage:	140X132mm mechanical stage, move range 76X50mm
Condenser	N.A.1.25 Koehler illuminatory condenser(with socket for phase contrast and darkfield accessories )
Focus	Coaxial focus system with tension adjustable,coarse:25mm per rotation, with upper limit and tightness adjustment.
Illuminator	100V-240V flucturate of voltage, Single high brightness 3W LED with continuous intensity control
	100V-240Vflucturate of voltage, Philips 6V/20W halogen bulb with continuous intensity control

EX20 Dimension Chart: mm

