



CS-U6000 Series
CatScope



CS-U6000 series microscopes are Infinity Color Corrected Optical System with upgraded Koehler Illumination System. Ergonomic design, steady system structure, easy operation, makes it suitable for various working environments. "Building blocks" design for combining multiple functions - Fluorescence, Phase Contrast, Simple Polarization, Dark-field attachments can be assembled on the basis of bright-field observation.

Wide-field high eye-point eyepieces and plan achromatic objectives make the effect of fluorescence observation more perfect. LED Fluorescence excitation illumination, breeding through the traditional type, is more stable, less radiation and comfortable for long working.

Rotatable Eyepiece tube design

Interpupillary distance adjustment range is 50-75mm and the eyepiece tube can be rotated 360°. The eye-point would be 34mm higher through rotating the eyepiece tube when interpupillary distance is 65mm. The traditional technology (using eye-point raiser to increase observation height) is replaced.



CS-U6000

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Objectives

In order to get perfect sharp images, we make continuous improvement on optical design. The new infinity achromatic optical system applies semi-apohromatic objective that can improve the quality and contrast ratio of the image. At the same time, the objectives are made of environment-friendly materials. The image is brighter and reverts to the natural color with the advanced multi-coating.

LPLAN series Infinity Plan Achromatic objectives, designed for observing biological samples, present sharp and contrast images and equally well even for fluorescence observation.



Plan-PH series Infinity Plan Phase Contrast objectives, improve clarity and contrast, especially suitable to observe colorless or light-colored cells.



CS-U6000

Series	Magnification	N.A.	W.D. (mm)	F.N. (mm)	Cover Glass Thickness (mm)	Immersion	Spring
Plan Series	Plan 4X	0.10	11.9	22	0.17	-	-
	Plan 10X	0.25	12.1	22	0.17	-	-
	Plan 20X	0.40	1.5	22	0.17	-	-
	Plan 40X	0.65	0.36	22	0.17	-	Yes
	Plan 60X	0.85	0.3	22	0.17	-	Yes
	Plan 100X	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

Broad beam imaging systems

Ø 20mm field plan high eye-point eyepieces with adjustable diopter avoid the phenomenon of margin breezing and yellowish green aperture. Wide field eyepieces can help in finding object fast and scan conveniently. Eyepieces can be locked by screws to prevent any accidental falls while working or moving the microscope.

High-powered single LED cold light illuminator

It maintains constant color temperature and provides bright white back-ground without filter and hence it is the best choice of observation for bright-field and photography. The illuminator supplies stable brightness and temperature difference never occurs even while working for long time. Comparing with halogen lamp, LED has lower power dissipation. Plug-type light system is on the left side, different from traditional system, making replacement a child's play.

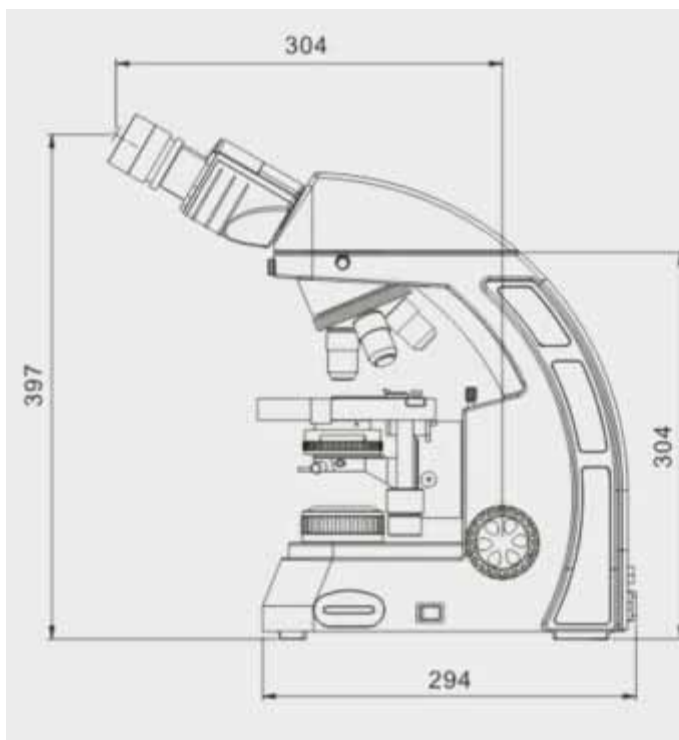


Stable main body design

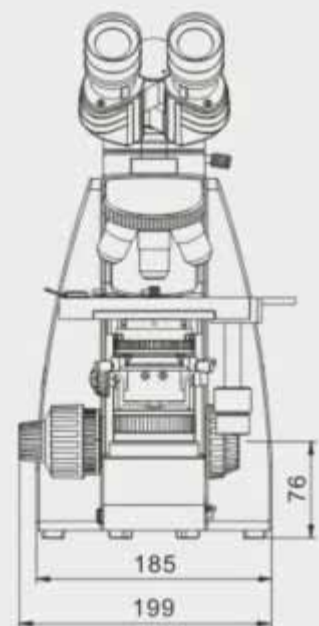
It adopts structural finite element analysis as optimum design. The triangular design ensures stability and rigidity. We keep enough space for various parts. And curved profile accord with the demands of aesthetic feeling.

Safe carrying design

The slot at the back of the body makes it safe and convenient to carry the microscope.

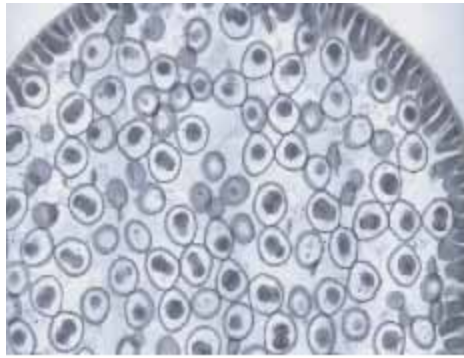


Dimensions of CS-U6000

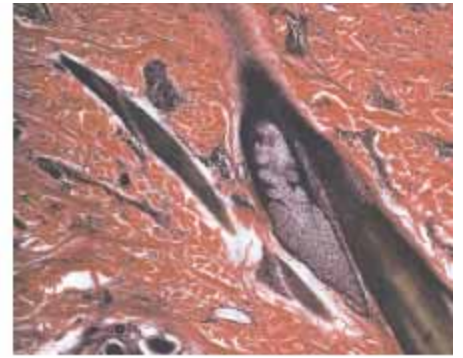


Bright-field observation

New plan achromatic objective used with Kohler illumination system can supply the sharp image after adjusting aperture diaphragm and field diaphragm. You can get high resolution and contrast ratio image at low or high magnification. 3W single LED illuminator supplies bright background. If required, It can be equipped with halogen illumination, 6V30W, in-lieu of LED illumination.



Animal Cell Division, Bright-Field 20X



Hair Follicle of Human Skin, Bright-Field 20X

Dark-field observation

Insert the dark-field slider into condenser socket and pull dark-field diaphragm in, and it's ready for dark-field observation. You can observe blood, flagellum, Treponema pallidum in dark-field at any times between 4X-40X without special dark-field condenser.



Simply polarizing observation

By Using simple polarizing device, placing the polarizer on collector and inserting analyzer into the viewing tube socket, the microscope would be ready for simple polarizing observation.



Phase contrast observation

Insert phase contrast slider into the condenser socket and replace the objectives with the desired phase contrast objectives.

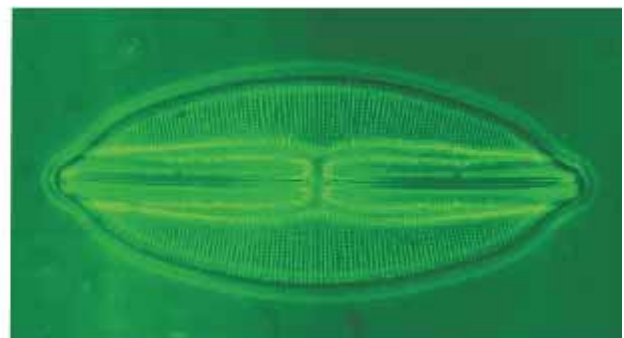
There are two kinds of phase contrast sliders:

1. SL1 (used with 10X/40X phase objectives) and
2. SL2 (used with 20X/100X phase objectives).

You can also use the disc phase contrast condenser to observe at different magnifications without any interruption.

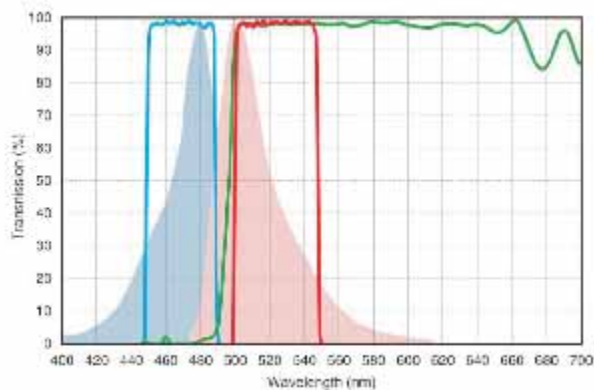
The disc phase contrast condenser has two different models:

1. It can be used with 10X/20X/40X/100X phase contrast objectives along with bright-field position.
2. It can be used with 10X/40X/100X phase contrast objectives along with dark-field observation at 4X-40X and also the bright-field observation.

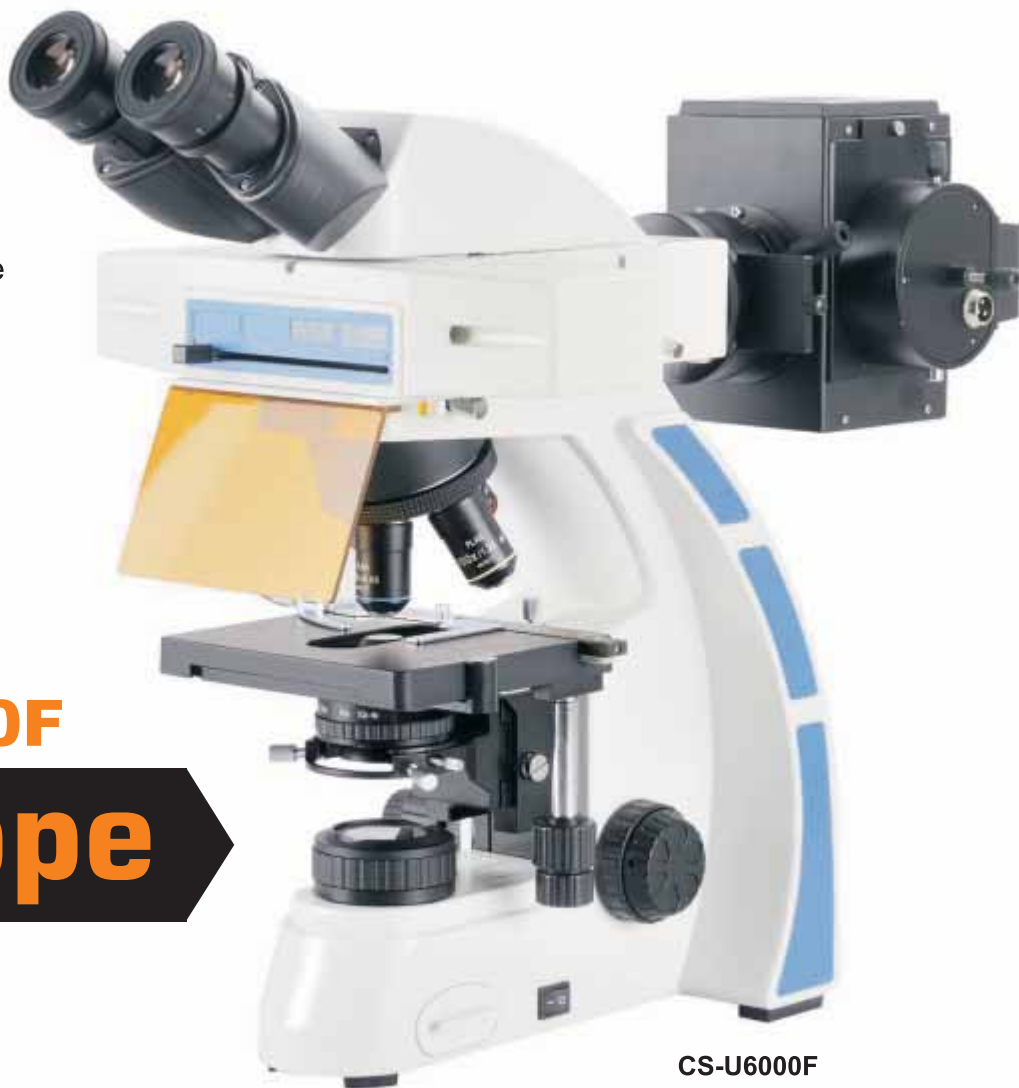


High Performance Fluorescence Filters

High performance fluorescence filters not only have a high transmittance of the spectrum, but also have good depth and steepness of the cutoff line. Without a cross color but a high S/N ratio, *fluorescence* imaging contrast was promoted dramatically. Adopting stray light elimination technology, presents high contrast between image and its background, creates a perfect observation effect.



Using our fluorescence illuminator and different filters, professional fluorescence observation can be achieved. Standard B & G wave band are specially applicable for GFP, FITC, CY2, Alexa Fluor 488, Texas Red, Mito Tracker Red and other protein detection, immunofluorescence analysis fluorescent probe. The microscope at most can be mounted with four fluorescent excitation filter.



CS-U6000F

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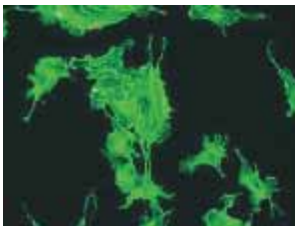


Semi-Apochromatic Fluorescence Objectives

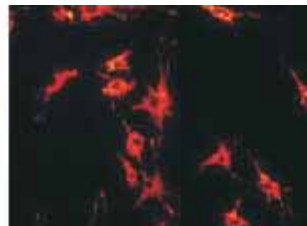
Professional infinity plan semi-apochromatic fluorescence objectives (Plan-Fluor) are the best choice for fluorescence observation.

Adopting crystal optics materials perfectly corrects all kinds of chromatic aberrations. Large numerical aperture which is 25% more than the ordinary objectives, 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.. With advanced multi-coating wide-band technology, it helps in bandwidth and UV transmittance.

Series	Magnification	N.A.	W.D. (mm)	F.N. (mm)	Cover Glass Thickness (mm)	Immersion	Spring
Plan Fluor Series	Plan Fluor4X	0.13	18.5	25	0.17	-	-
	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	-



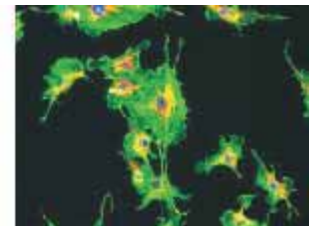
Alexa Fluor 488 Cytoplasm



Mito Tracker Red

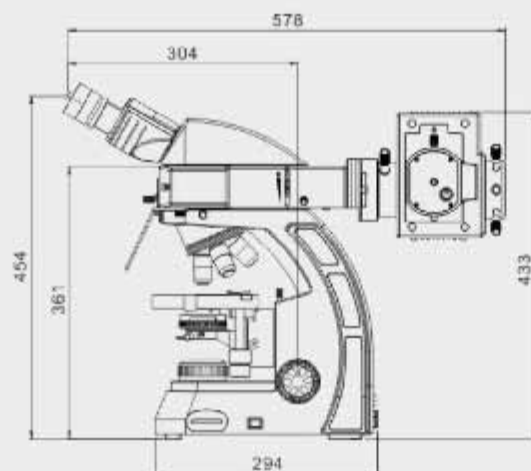


DAPI Nucleus



Artery Endothelium Cell of OX Lung 20X UV/B/G

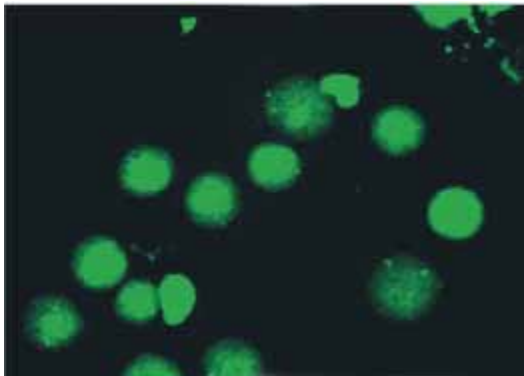
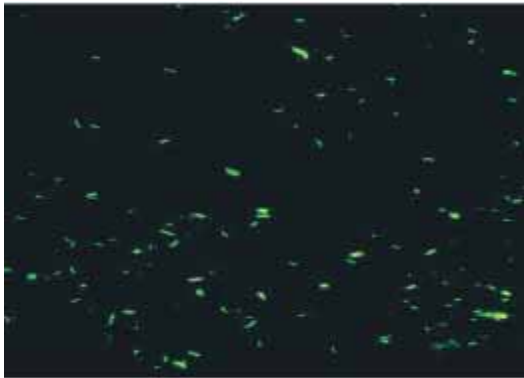
Dimensions of CS-U6000F



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CS-U6000FL single-band LED fluorescence microscope is designed for special diagnosis such as Tuberculosis. Different filter-LED modules of choice, help you realize different fluorescence observations. Compared with traditional mercury lamp, LED illumination does not need preheat or cooling. It can be started immediately, which helps in improving work efficiency. Stable light, low temperature, low radiation, ensures safe usage for long working hours. The light intensity is adjustable, hence, you can obtain the exact fluorescence light according to your requirements.



CS-U6000FL

Innovative single band LED Fluorescence microscope

CS-U6000FL

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Different LED fluorescence modules

Apart for TB test module B4, you can select B1, G1 or UV2 fluorescence module according to different applications. You can also choose several modules and replace them whenever you need.

Intensity control knob

Rotating the knob, you could adjust fluorescence intensity simply and easily.

Fluorescence illumination with DC power supply

6V/2A direct-current power supply, external transformer. Easy connection and safe for use.

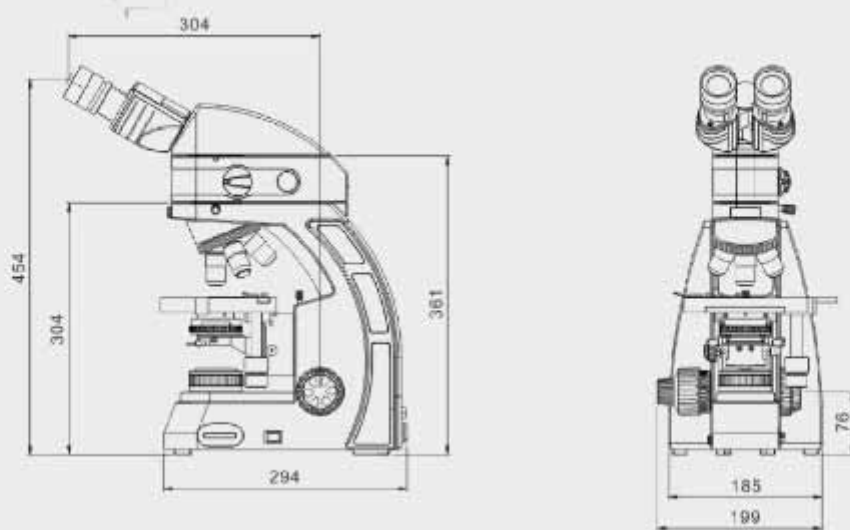
Effortless switching from bright-field to fluorescence

On the basis of practical application, rotating the FL to BF knob, you can achieve two different observations. Switch to the FL channel, you can do TB test fluorescence observation or Immunofluorescence assay.

Switch to the BF channel, you can do pathology inspection or experimental observation with transmission light.



Dimensions of CS-U6000FL



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Technical Specifications of CS-U6000

Optical System	Infinity Color Corrected Optical System
Head	Seidentopf Trinocular Head, Inclined at 30° and 360° rotatable Interpupillary Distance adjustment range: 54 - 75mm Diopter Adjustment: $\pm 5^\circ$
Eyepiece	High Eye-point WF PL10X/20mm
Nosepiece	Quadruple, Backward tilted, Click-stop Revolving mechanism with multiple ball bearing
Objectives	Infinity Plan Achromatic Objectives Anti-fungal, Parfocal, Parcentric, color-coded 4X, 10X, 40X (Spring), 100X (Spring, Oil)
Stage	Anti-corrosive & Anti-friction Double Layer Mechanical Stage Double Slide holder Stage size: 150 x 140mm Movement range: 76mm (x-axis) x 50mm (y-axis), Precision: 0.1mm controlled with a long right hand stage handle
Condenser	N.A. 1.25 Koehler Illuminatory Condenser with socket for phase contrast and dark-field accessories
Focusing	Coaxial focus system with upper limit and tension adjustment Focusing Adjustment by Rack & Pinion Mechanism. Coarse range : 30mm, Fine focusing interval: 0.002mm
Illumination	Built-in transmitted Koehler Illumination system, pre-centered 3W LED Illumination, with Adjustable brightness
Power supply	100V-240V Universal Power Supply

Options in-lieu of mentioned standard specification:

- » Seidentopf Binocular Head
- » Eye piece PL10X/22mm
- » Quintuple nose-piece
- » Halogen Illumination 6V/30W

CS-U6000 can be upgraded for the following application:

- » Plan Achromat 2X Objective
- » Plan Achromat 20X Objective
- » Micro-Photography
- » Phase Contrast Application
- » Simple Polarization Kit
- » Dark Field Application
- » Fluorescence Application
(Mercury / LED Illumination)

Technical Specifications of CS-U6000F

Same as CS-U6000

Infinity Plan Achromatic Objectives are replaced with
Infinity Plan Semi-Apochromatic Fluorescence Objectives

Fluorescence Unit:

Epi-Fluorescence Illumination unit

B & G Excitation Filters

(Maximum Four Excitation Filters can be mounted)

100W Mercury Lamp House

100W Mercury Power Source

Technical Specifications of CS-U6000FL

Same as CS-U6000

Infinity Plan Achromatic Objectives are replaced with
Infinity Plan Semi-Apochromatic Fluorescence Objectives

Fluorescence Unit:

Epi-Fluorescence Illumination unit with brightness adjustable knob, and can switch between fluorescence observation and bright field observation

- » B1 Excitation Filter (470nm, For FITC/EGFP/GFP/Alexa Fluor@488Cy2@/DIO/Fluo-4) **OR**
 - » G1 Excitation Filter (560nm, For Texas RED@/TexasRed @-X/Cy3.5Mito Tracker@Red) **OR**
 - » UV Excitation Filter (385nm, For DAPI/Hoechst 33342/ 33258 AMCA/AMCA-X Blue/Alexa Fluor@350) **OR**
 - » B4 Excitation Filter (455nm, For TB)
- LED Lamp House with Power Source



CS-U6000F

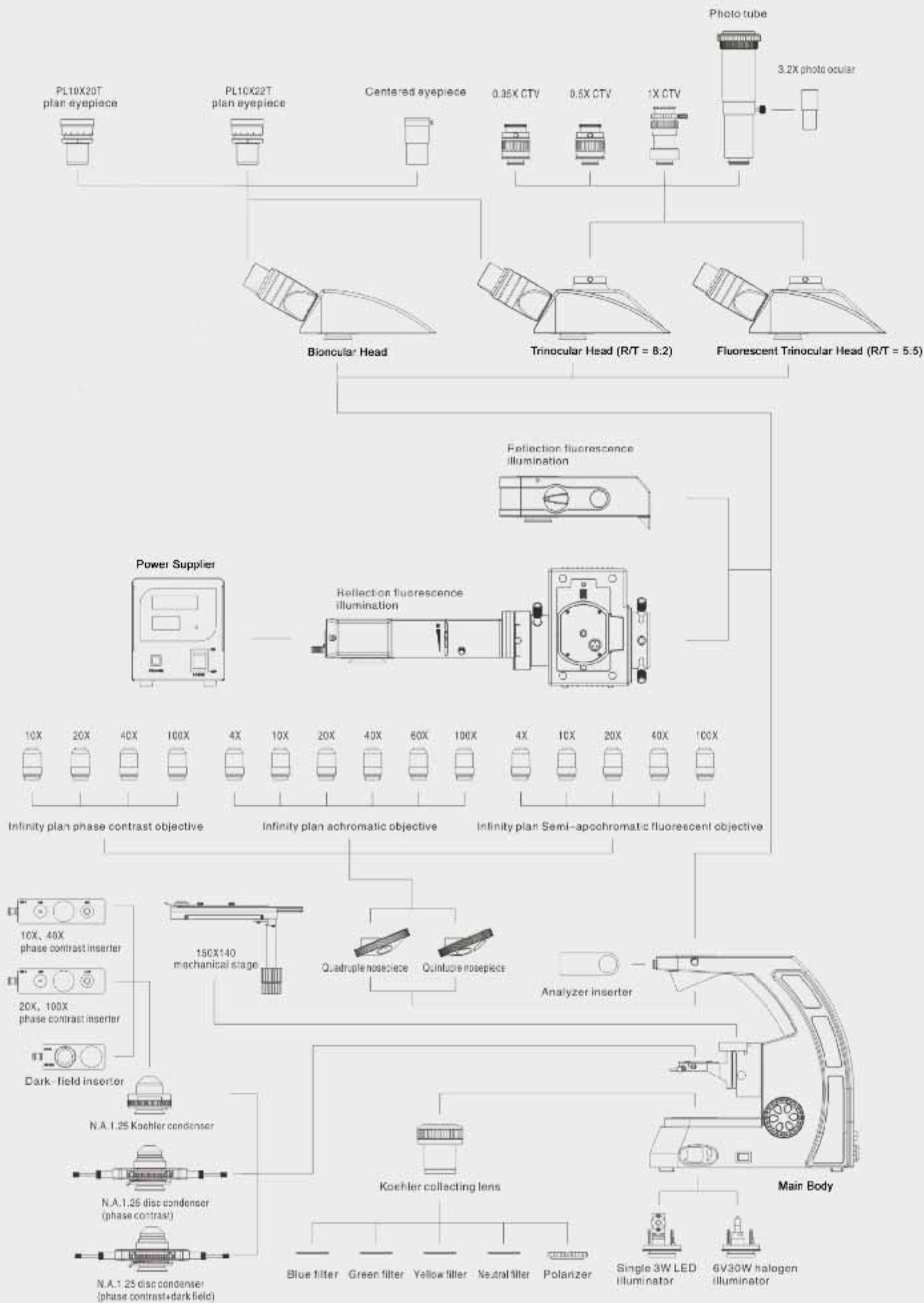


CS-U6000FL

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System Diagram of CS-U6000 Series





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