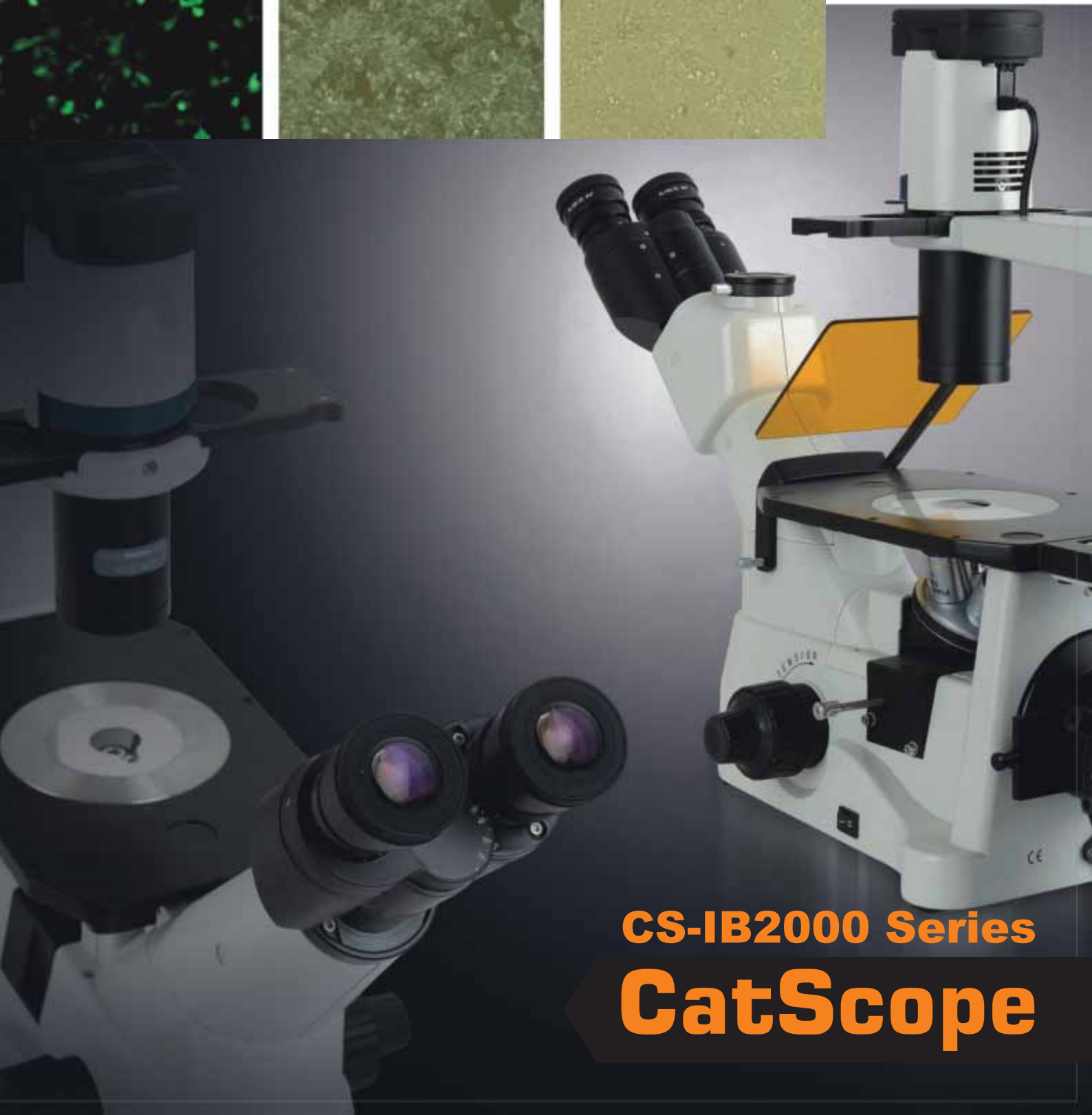
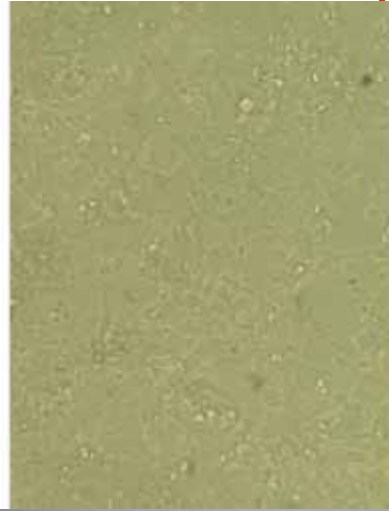
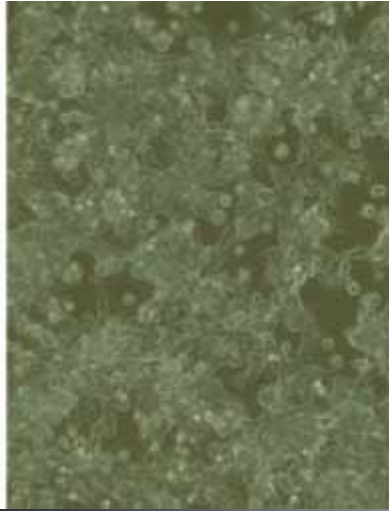
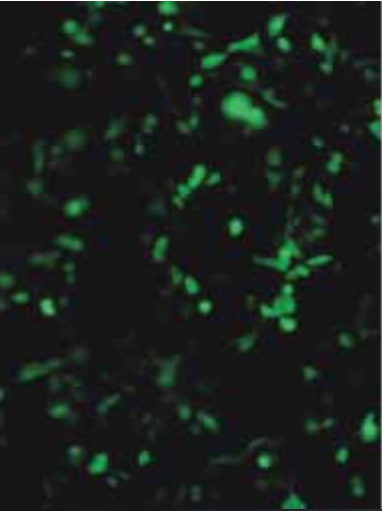


Catalyst Biotech



CS-IB2000 Series
CatScope

CatScope CS-IB2000, a new generation of infinity color corrected optical system with extraordinary sturdy and durable ergonomic design present you a sharp and bright micro-image:

Wide-field high eye-point eyepieces,

» LWD plan achromatic objectives,

» Koehler illumination with iris aperture diaphragm,

» 360° rotatable condenser holder

» Upgradable for Fluorescence application



Catalyst Biotech

www.catalystbiotech.com



LPLAN series long working distance plan infinity color corrected objectives, designed for living—cells culture in laboratory, clear image, good contrast, and also have a good performance under fluorescence observation.

LPLAN PH series long working distance infinity phase contrast objectives. In addition to the realization of the bright field observation, the phase contrast observation function has been developed to make the view showing a sense of relief and a substantial increase in image contrast and resolution.

Series	Magnification	N.A.	W.D. (mm)	F.N. (mm)	Cover Glass Thickness (mm)	Immersion	Spring
Lplan Series	Lplan 4X	0.10	22	22	1.2	-	-
	Lplan 10X	0.25	7.94	22	1.2	-	-
	Lplan PH10X	0.25	7.94	22	1.2	-	-
	Lplan 20X	0.40	7.66	22	1.2	-	-
	Lplan PH20X	0.40	7.66	22	1.2	-	-
	Lplan 40X	0.60	3.71	22	1.2	-	-
	Lplan PH40X	0.60	3.71	22	1.2	-	-

Catalyst Biotech



Wide-field plan eyepiece

New designed high eye-point wide—field plan eyepiece PL10X/22, has a full bright diagram without chromatic circle. International popular 22mm field of view is convenient for target seeking and counting.



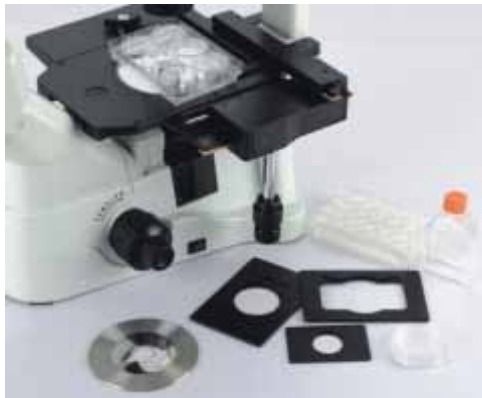
Phase contrast accessories

Select a matching phase contrast slide on the basis of the chosen illuminator. With the phase contrast objectives, phase contrast observation can be realized. Thus you can acquire a better it is better image contrast than the bright field. The cell image is with a strong sense of relief. You can use it to do a more detailed observation on those component parts of colorless transparent cells.

Transmission system

6V30W halogen bulb, with critical illumination or Koehler illumination could be chosen. In critical illumination mode, the frame is fixed and the filament is precentered. With aperture diaphragm, the condenser could be turned away. In Koehler illumination mode, the frame is rotatable and the filament center is adjustable. With field diaphragm and aperture diaphragm, the condenser can be removed.





Attachable mechanical stage

Moving range: 120x78mm. It can clamp all types of standard cell culture plates. With the help of related accessories, it could be used to move the dish, flask, slide and so on.



Scientific Camera Adapter

Microscopy image can be output to monitor or computer by connecting the camera device to the trinocular tube through an adapter.

Technical Specifications of CS-IB2000

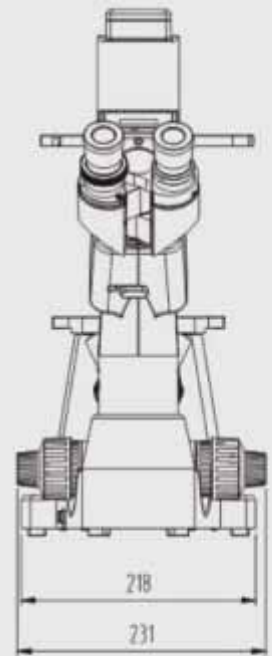
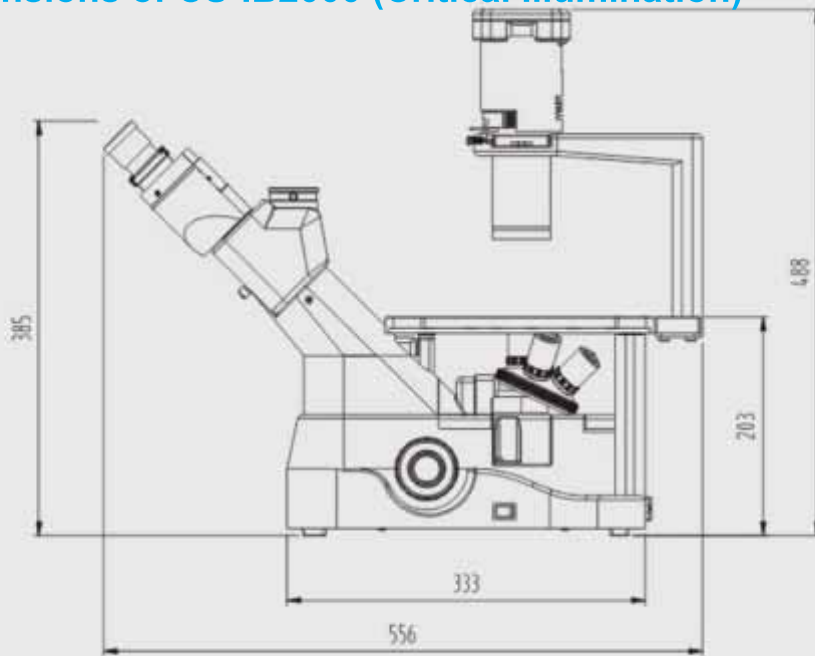
Optical System	Universal Infinity Corrected Optical System (UIS)
Head	Seidentopf Trinocular Head, Inclined at 45° and 360° rotatable Interpupillary Distance adjustment range: 54 - 75mm Diopter Adjustment: ±5°
Eyepiece	High-Point, Extra Wide Field EWF 10X/22mm
Nosepiece	Click-stop Revolving Quintuple Nosepiece with multiple ball bearing mechanism, Elastic nosepiece grip-ring
Objectives	<u>LWD Infinite Plan Objectives</u> - 4x/0.1, WD 22mm, 10x/0.25, WD 7.94mm, 40x/0.6, WD 3.71mm (Spring) <u>LWD Infinite Plan Phase Objectives</u> - PH10X/0.25, WD 7.94mm, PH 20X/0.4, WD 7.66mm (Spring), Anti-fungal, Parfocal, Parcentric, color-coded
Stage	Fixed stage with Circular Glass Plate (round slot) / Circular Metal Plate (kidney slot), Stage size: 250 x 160mm
Condenser	ELWD Condenser 0.3 N.A. with LWD of 72mm with Aperture Iris diaphragm LBD color-change filter and IF550 green contrast filter (Ø45mm)
Phase Annulus	10x-40x, Phase Annulus Slider Plate
Focusing	Coaxial Coarse and Fine Focusing Adjustment Knob for Vertical Objective Movement by Rack & Pinion Mechanism. Coarse adjustment range 9mm Fine Adjustment Precision 0.002mm
Illumination	6V/30W Halogen Illumination with Adjustable brightness
Power supply	85V-240V Universal Power Supply
Warranty	Two years against any manufacturing defects. One year on electronic components. No warranty on consumables

CS-IB2000 can be upgraded with / for the following application:

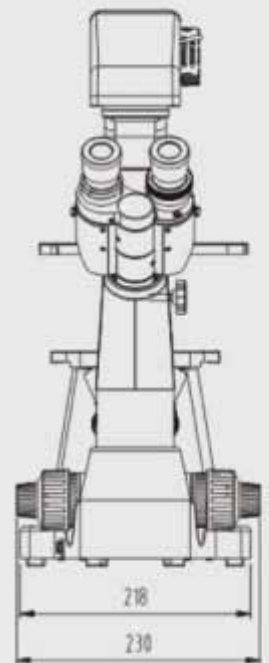
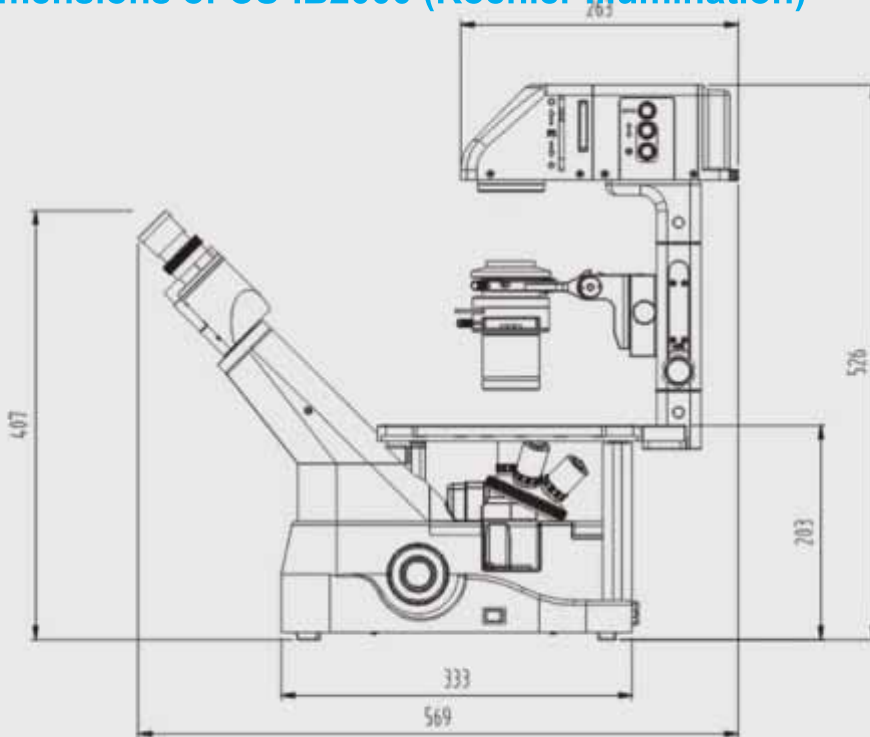
- » Attachable Mechanical Stage, X-Y Coaxial Control
Moving Range 120x78mm with a long right hand stage handle
- » LWD Infinite Plan Objective- 20X/0.4, WD 7.66mm
60X/0.7, WD 2.5mm
- » Infinite Plan Phase Objective- 40X/0.60, WD 3.71mm
- » Centering Telescope (Ø30mm)
- » Ø65mm Terasaki Holder (size : 56mm x 81.5mm)
- » Ø35mm Petri Dish Holder
- » Ø54mm Slide Glass Holder (size : 26.5mm x 76.5mm)
- » Auxiliary Plates for Plain Fixed Stage
- » LED Illumination
- » Fluorescence Application

The standard configuration is supplied with a fixed plain stage. The stage can be widened on both sides to accommodate large specimens with the optional paired auxiliary stage plates. A hard coating protects the stage from scratches and wear.

Dimensions of CS-IB2000 (Critical Illumination)

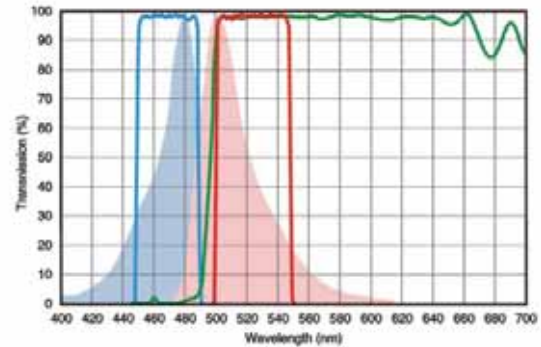


Dimensions of CS-IB2000 (Koehler Illumination)



High-performance fluorescence filters

Our selected 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. We choose stray light elimination of the background to the filter blocks. Thus, the background of the image becomes darker, and the fluorescence brighter.



CS-IB2000F Series

CatScope



LPLAN-FLUOR series, a new generation of professional infinity plan semi-apochromatic fluorescence objectives, adopts crystal optics materials, various types of chromatic aberration corrected perfectly, large numerical aperture design, which is **25%** higher than ordinary plan objective lens, provides high-resolution, high-contrast microscopic images. During Fluorescence observation, it excites the sample with brighter light and hence the images are clear and bright and the background is pure black. The system uses the high quality environmental protection materials, no auto-fluorescence, high UV through rate. Compared to ordinary bright-field achromatic lens in bandwidth and UV transmittance, the objectives are with wideband multi-coating technology have obvious advantages.

LPLAN-FLPH series infinity plan semi-apochromatic phase contrast fluorescence objectives, has bright field, phase contrast and fluorescence observation in one set objectives, thus, eliminating the inconvenience of replacing different kinds of objectives to improve the observation efficiency and comfort.

Series	Magnification	N.A.	W.D. (mm)	F.N. (mm)	Cover Glass Thickness (mm)	Immersion	Spring
Lplan Semi-Apochromatic Series	Lplan FL4X	0.13	18.52	25	1.2	-	-
	Lplan FL10X	0.30	7.11	25	1.2	-	-
	Lplan FL20X	0.45	5.91	25	1.2	-	-
	Lplan FLPH20X	0.45	5.91	25	1.2	-	-
	Lplan FL40X	0.65	1.61	25	1.2	-	-
	Lplan FLPH40X	0.65	1.61	25	1.2	-	-
	Lplan FL60X	0.75	1.04	25	1.2	-	-

Filter block switching mechanism

Two-band or three-band can be chosen. In two-band mechanism, each filter block is equipped with a draw bar to move handle more easily. In three-band mechanism, filter blocks are integrated into one group. There are three fluorescence channels and a bright field channel.



Efficient illumination system

Best material SiO₂, refractory and corrosion-resistant, high UV through rate, making the illumination more uniform and brighter. High temperature resistant composite plastic is used for insulation design to effectively prevent the heat of illuminator from transferring to the body. The illumination with adjustable field diaphragm, center adjustable, can effectively reduce the stray light to obtain best observed results. UV protection design, is used for the whole system effectively, to cut off ultraviolet radiation.



Mercury lamp power supply and control system

Light chamber is with protection device, i.e., if the light chamber door isn't closed, the circuit would be automatically cut off to prevent the mercury lamp from accidentally starting and avoid ultraviolet radiation. High pressure DC mercury lamp, high-intensity fluorescent lighting, ensures a high degree of stability, security and service life. The new digital power control system with a working timer and current display helps users to determine the status of the mercury lamp. There is also a safety trigger button to prevent accidental activation of the lamp.

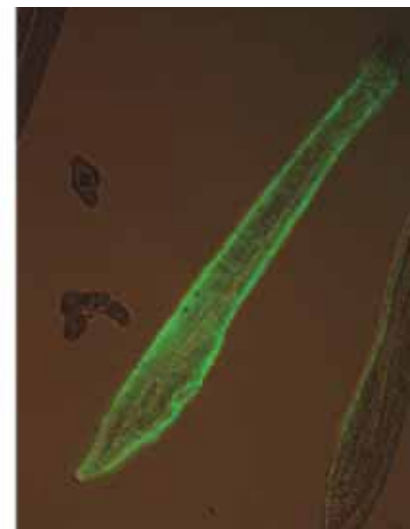
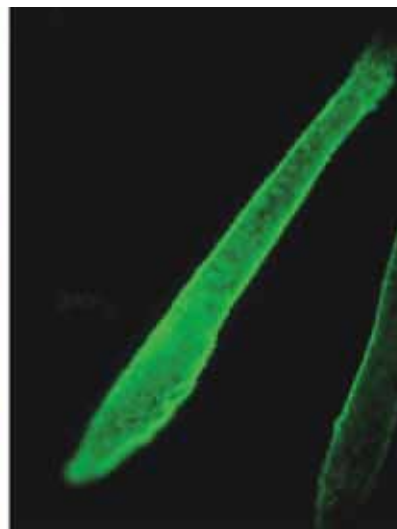


Technical Specifications of CS-IB2000F

Optical System	Universal Infinity Corrected Optical System (UIS)
Head	Seidentopf Trinocular Head, Inclined at 45° and 360° rotatable Interpupillary Distance adjustment range: 54 - 75mm Diopter Adjustment: ±5°
Eyepiece	High-Point, Extra Wide Field EWF 10X/22mm
Nosepiece	Click-stop Revolving Quintuple Nosepiece with multiple ball bearing mechanism, Elastic nosepiece grip-ring
Objectives	<u>LWD Infinite Plan Fluorescence Objectives</u> - 4x/0.13, WD 18.52mm, 10x/0.3, WD 7.11mm <u>LWD Infinite Plan Phase Objectives</u> - PH10X/0.25, WD 7.94mm <u>LWD Infinite Semi-Apochromatic Fluorescence Phase Objectives</u> - 20x/0.45, WD 5.91mm, 40x/0.65, WD 1.61mm Anti-fungal, Parfocal, Parcentric, color-coded
Stage	Fixed Plain stage with Circular Glass Plate (round slot) / Circular Metal Plate (kidney slot), Stage size: 250 x 160mm Auxiliary Plates for Fixed Plain Stage Attachable Mechanical Stage with X-Y Coaxial Control Moving Range 120x78mm with a long right hand stage handle Ø65mm Terasaki Holder (size : 56mm x 81.5mm) Ø54mm Slide Glass Holder (size : 26.5mm x 76.5mm) Ø35mm Petri Dish Holder
Condenser	ELWD Condenser 0.3 N.A. with LWD of 72mm with Aperture Iris diaphragm LBD color-change filter and IF550 green contrast filter (Ø45mm)
Phase Annulus	10x-40x, Phase Annulus Slider Plate
Focusing	Coaxial Coarse and Fine Focusing Adjustment Knob for Vertical Objective Movement by Rack & Pinion Mechanism. Coarse adjustment range 9mm Fine Adjustment Precision 0.002mm
Illumination	6V/30W Halogen Illumination with Adjustable brightness
Power supply	85V-240V Universal Power Supply
Reflected Fluorescence Illumination System	Reflected Illuminator (Koehler Illumination) - with iris field diaphragm (centering adjustable). Mercury lamp house - with adjustable - Filament center and Focal distance. Digital power controller with wide voltage range of 90-245V AC. 100W DC mercury bulb. Band-pass Fluorescent Filters : Blue & Green. 30ND25 Attenuation plate.
Warranty	Two years against any manufacturing defects. One year on electronic components. No warranty on consumables

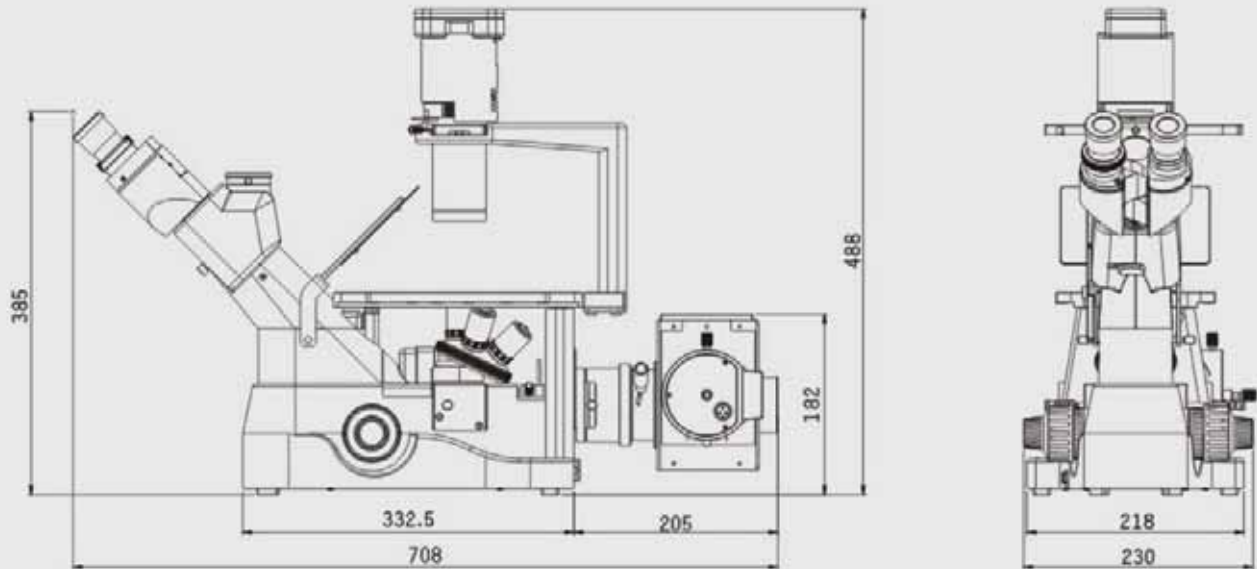
CS-IB2000F can be upgraded with / for the following application:

- » LWD Infinite Plan Fluorescence Objective-
20X/0.45, WD 5.91mm
40X/0.65, WD 1.61mm
60X/0.75, WD 1.04mm
- » Centering Telescope (Ø30mm)
- » LED Illumination

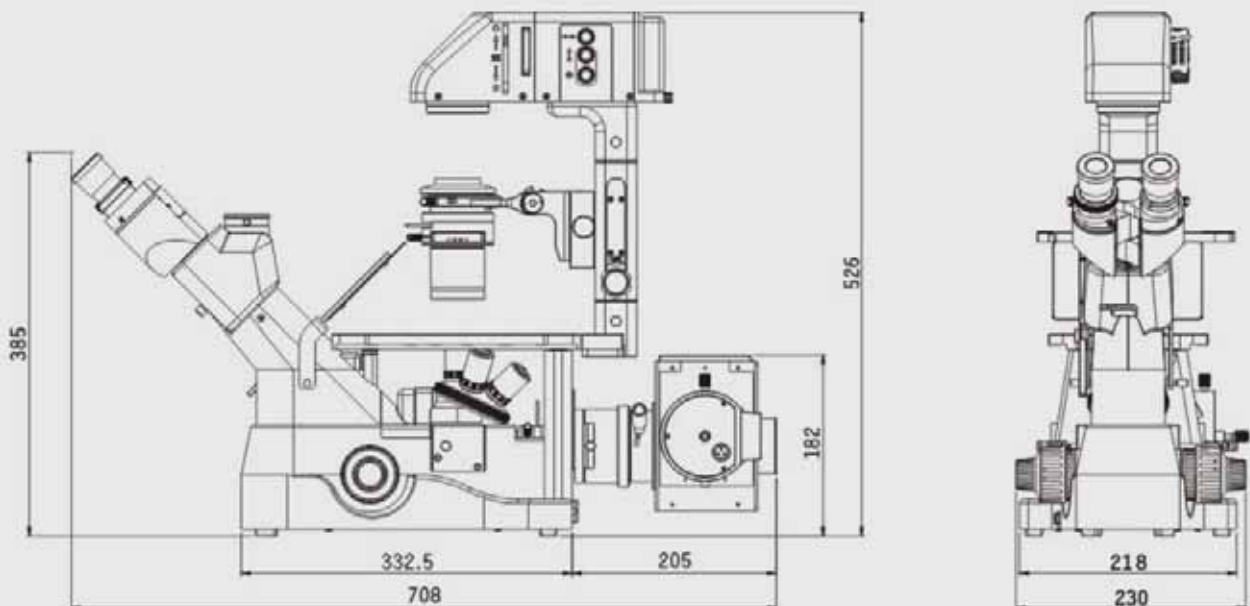




Dimensions of CS-IB2000F (Critical Illumination)

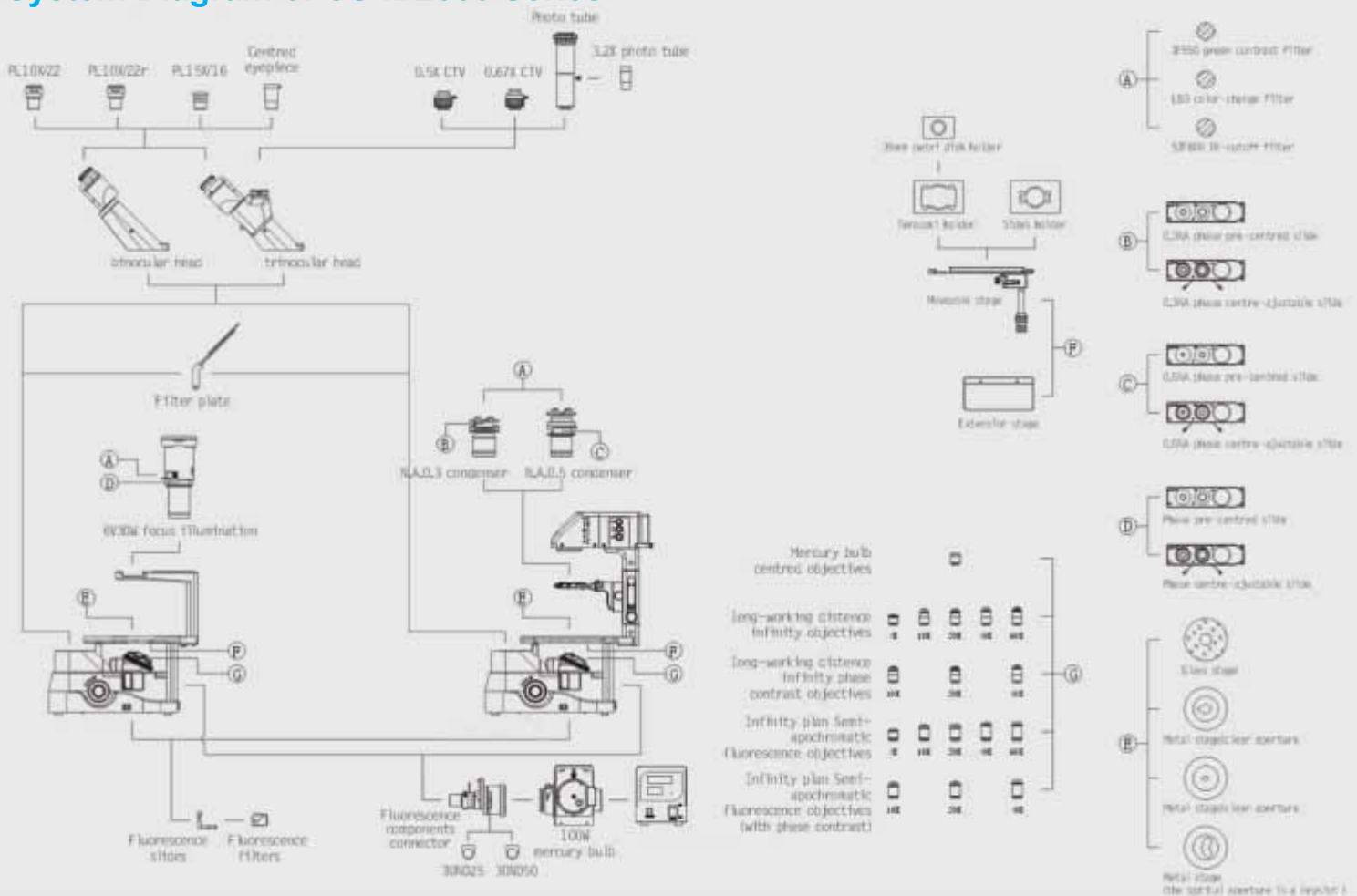


Dimensions of CS-IB2000F (Koehler Illumination)





System Diagram of CS-IB2000 Series



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