Inverted Microscopes

1. BS-2009 Inverted Biological Microscope

BS-2009

Introduction

BS-2009 Inverted Biological Microscope is perfect for cell tissue observation and cultivation, specially designed for medical and health units, universities, research institutes to observe cultured living cells. With an innovative infinite optical system and ergonomic design, it has excellent optical performance and easy to operate features. This inverted biological microscope makes your work enjoyable. Digital cameras can be added to the trinocular head to take photos, videos and make measurement.

Feature

1. Excellent infinite optical system

Infinity optical system, perfect for cell tissue observation and cultivation.

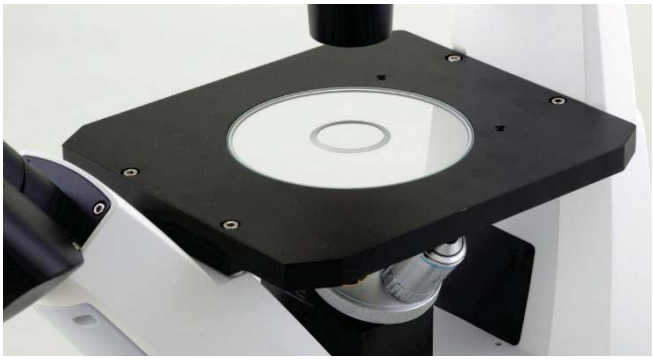
2. Viewing head

Butterfly binocular head, 360° rotatable, more convenient for users with different height.

3. Stage

Two types stage, applicable to samples of different sizes.

180mm*155mm mechanical stage



180mm*203mm fixed stage

4. Long working distance condenser

Long working distance condenser NA 0.32, WD=48mm

5. Camera adapter

Digital camera is located at the back of the microscope, which does not interfere with the user's operation.

6. Power supply

5-12V low voltage input, to ensure safe use.

Built-in LED illumination system which can be powered with power bank, laptop and vehicle power, ensures it being used anywhere and any condition

7. Objectives

New designed objectives for both bright field and phase contrast observation, not necessary to change objectives.

Application

BS-2009 Inverted microscope is used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. It can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. This microscope is widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

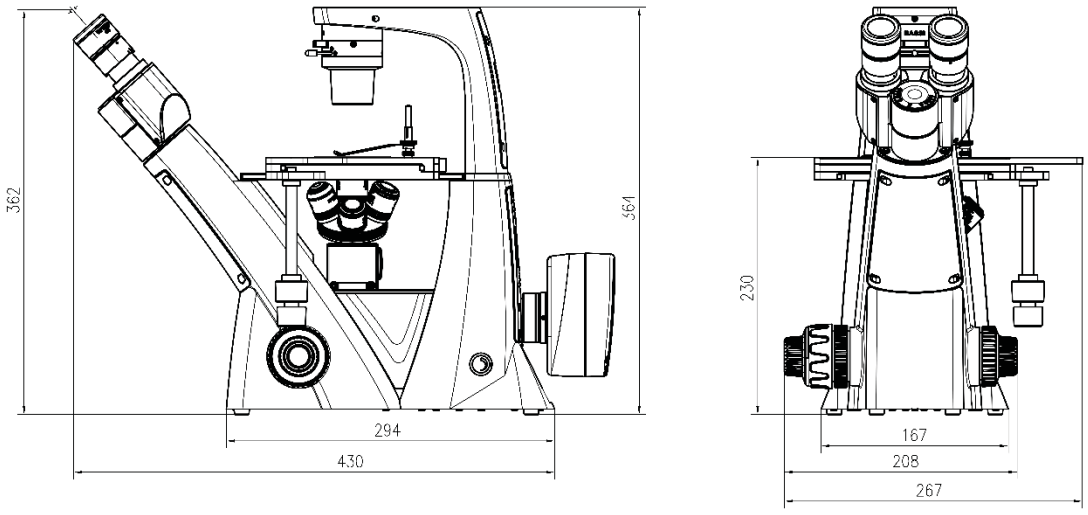
Specification

Item	Specification		BS-2009
Optical System	Infinite Optical System		●
Viewing Head	Inclined 45° trinocular tube, interpupillary distance: 48-75mm, splitting ratio: eyepiece: trinocular=70:30		●
Eyepiece	High eyepoint wide field eyepiece WF10X/20mm, eyepiece tube diameter Φ23.2mm		●
Objective	Infinity Long Working Distance Plan Objectives	4X/NA=0.11, WD=12.1mm	○
		10X/NA=0.25, WD=10.3mm	●
		20X/NA=0.45, WD=5.8mm	○
		40X/NA=0.65, WD=5.1mm	●
	Infinity Long Working Distance Plan Phase Contrast Objectives	10X/NA=0.25, WD=10.3mm	○
		20X/NA=0.45, WD=5.8mm	●
		40X/NA=0.65, WD=5.1mm	○
Nosepiece	Quadruple nosepiece		●
Centering Telescope	Centering telescope (Φ23.2mm)		○

Phase Annular Plate	10X phase annular plate	○
	20X/40X phase annular plate, for both 20X and 40X	●
Stage	Three-layer mechanical stage. Stage size: 180mm(X)*155mm(Y), moving range: 75mm*40mm. Scale: 0.1mm, round slide size: Φ110mm.	●
	Fixed stage, stage size: 180mm*204mm.	○
	Glass holder, outer diameter Φ110mm, inner diameter Φ30mm	●
	Drop-shaped metal holder, outer diameter Φ110mm, inner diameter Φ25mm	○
Focusing	Coaxial coarse and fine focusing adjustment, coarse stroke: 10mm, fine stroke per rotation: 0.2mm, fine division 2um.	●
Condenser	Long working distance condenser, N.A.0.32. Working distance:48mm	●
Illumination	5W LED lamp, input voltage: 100V-240V	●
Filter	Green filter (Φ21mm)	●
	Blue filter (Φ21mm)	○
	Yellow filter (Φ21mm)	○
	Grey filter (Φ21mm)	○
C-mount	Built-in 0.65X C-mount adapter	●
Packing	Packing size: 515mm*480mm*315mm, gross weight: 9kg, net weight: 7kg	●

Note: ● Standard Outfit, ○ Optional

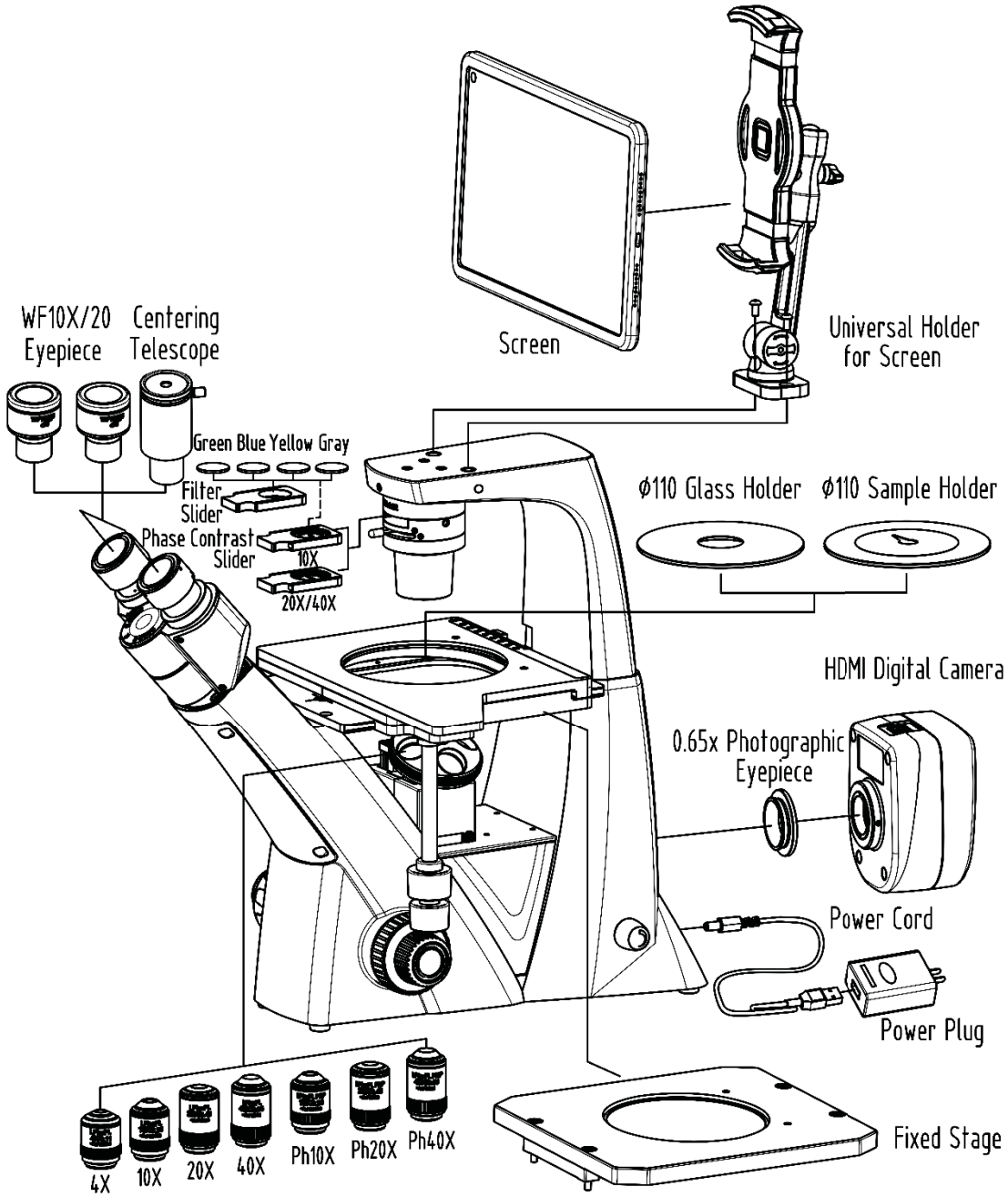
Dimension



BS-2009

Unit: mm

System Diagram



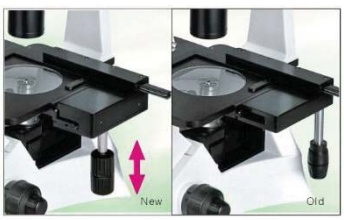
2. BS-2090 Inverted Biological Microscope

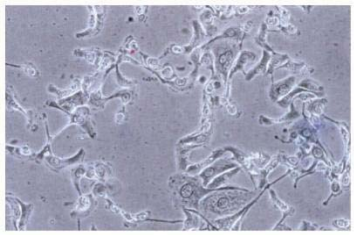
Introduction

BS-2090 Inverted Biological Microscope is a high level microscope which is specially designed for medical and health units, universities, research institutes to observe cultured living cells. It adopts an Infinite optical system, reasonable structure and ergonomic design. With an innovative optical and structure design idea, excellent optical performance and easy to operate system, this inverted biological microscope makes your works enjoyable. It has a trinocular head, so digital camera or digital eyepiece can be added to the trinocular head to take photos and videos.

Features

1. Excellent optical function with infinite optical system.
2. Innovative stand structure, sharp image display, convenient and special for viewing incubating cell tissue.

	With LWD Infinitive Plan Objective, Making Viewing Field Flatter and Brighter, Contrast Sharper, Living Cell Observing easier
	Advanced and Reliable Mechanical Stage with Knob Height and Tightness Adjustable

	Different Holders for Various Observations
	With pre-centerable Phase Annulus, Available to Observe Low Contrast or Transparent Specimens

Applications

BS-2090 Inverted microscope is used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. It can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. This microscope is widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

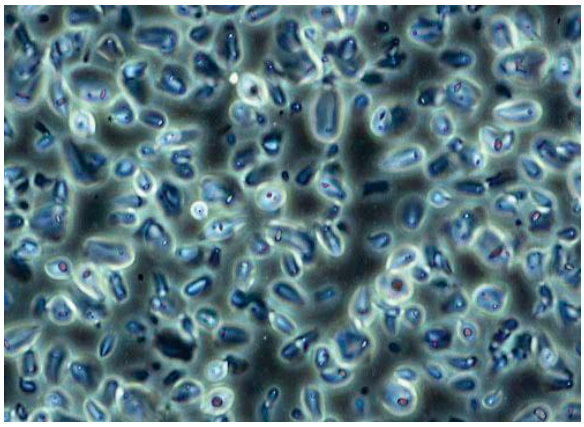
Specifications

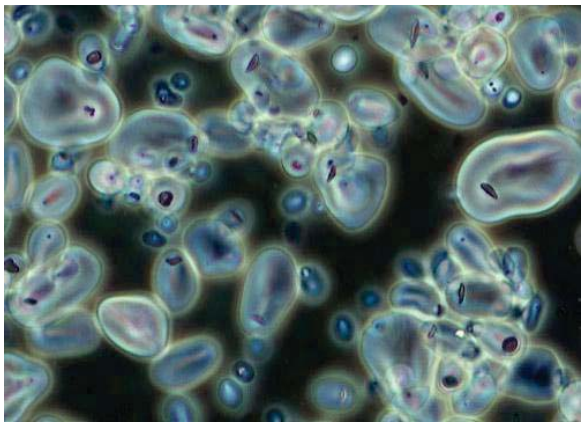
Model			BS-2090
Optical System	Infinite Optical System.		●
Viewing Head	Trinocular Head, Inclined at 30°, Interpupillary Distance 48-75mm		
Eyepiece	High-point, Extra Wide Field Eyepiece EW10×/ 22		●
Objective	LWD (Long Working Distance) Infinite Plan Objective	4×/ 0.1, WD 17.3mm	●
		10×/ 0.25, WD 10mm	○
		20×/ 0.4, WD 5.1mm	○
		40×/ 0.6, WD 2.1mm	●
	Infinite Plan Phase Objective	PH10×/ 0.25, WD 10 mm	●
		PH20×/ 0.4, WD 5.1mm	●
		PH40×/ 0.6, WD 2.1m	○
Nosepiece	Quintuple Nosepiece		●
Condenser	ELWD (Extra Long Working Distance) Condenser NA 0.3, LWD 72mm (Without Condenser the WD can be 150mm)		●
Centering	Centering Telescope (Φ30mm)		○
Phase Annulus	10X-20X Phase Annulus Plate (Fixed)		●
Stage	Plain Stage 160×250mm		●
	Glass Insert		●
	Attachable Mechanical Stage, X-Y Coaxial Control, Moving Rang120mm×78mm		○
	Auxiliary Stages 70mm×180mm		●

	Terasaki Holder	○
	Petri Dish Holder Φ35mm	○
	Slide Glass Holder Φ54mm	○
	Petri Dish Holder Φ90mm	○
Focusing	Coaxial Coarse and Fine Adjustment, Fine Division 0.002mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.2mm per Rotation, Moving Range up 8mm, down 3mm	●
Illumination	Halogen Lamp 6V/30W	●
	3W LED	○
Filter	Blue, Green and Frosted filters, Diameter 45mm,	●
Accessories	Photo Attachment	○
	Video Adapter with C Mount	○
	Inverted Fluorescence Attachment FI-100	○
Dimension& G.W.	46.5cm*39.5cm*64cm, 16kg	●

Note: ● Standard Outfit, ○ Optional

Sample Images





3. BS-2091 Inverted Biological Microscope

BS-2091

BS-2091F

Introduction

BS-2091 Inverted Biological Microscope is a high-level microscope which is specially designed for medical and health units, universities, research institutes to observe cultured living cells and tissues. With innovative infinite optical system and ergonomic design, it has excellent optical performance and easy to operate features. The microscope has adopted long life LED lamps as transmitted and fluorescence light source. The microscope has smooth and comfortable operation, intelligent energy conservation system, it could be the best assistant for your work.

Feature

1. Ergonomic viewing head

360° rotatable viewing head with 50mm-75mm adjustable inter-pupillary distance, the eye-point can be raised 34mm directly by rotating the tube at 65mm IPD, more convenient and faster than traditional way.

2. Safe and efficient LED

Both the transmitted and EPI-fluorescence illumination have adopted LED lamps, energy saving and long-lasting, low heat, the illumination is safe and stable. X-Y mechanical stage and various specimen holders are available.

3. Intelligent ECO system

Based on the concept of energy conservation and environment protection, BS-2091 has been designed with ECO system. The illumination power can be automatically on or off through infrared induction.

4. Marking objective is available

New designed "marking objective" with ink inside for marking the target, it is very practical and effective to extract the target cell when observe and culture the living cells.

5. Professional LED reflected fluorescence illumination system

BS-2091F is equipped with a professional LED reflected fluorescence illumination system, and can be equipped with high-quality fluorescence objective lenses and fluorescence filters, which can meet various research tasks.
The fluorescence module has 4 positions. The standard configuration is blue and green fluorescence filters. Up to 3 sets of fluorescence filters can be installed.

Using high-brightness narrow-band LED lamps as the light source, the service life can reach more than 50,000 hours, which is safe, efficient, does not need to be replaced, and is more environmentally friendly and energy-saving. BS-2091F inverted fluorescence microscope has added fluorescence filter status display, through the built-in sensor, the currently used fluorescence filter is displayed in front of the microscope, making research work more convenient and efficient.

6. Smart phone connection kit

Specially designed kit which can be inserted into the eyepiece tube for combining a smart phone on a microscope, keep record on time by taking photo or video.

7. Long working distance infinite plan achromatic objective and fluorescence objectives are available

Long working distance infinite plan and phase contrast achromatic objective

Long working distance fluorescence infinite plan and phase contrast achromatic objective

Infinite plan Relief phase contrast achromatic objective

Application

BS-2091 inverted microscope can be used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. They can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. These microscopes are widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

Specification

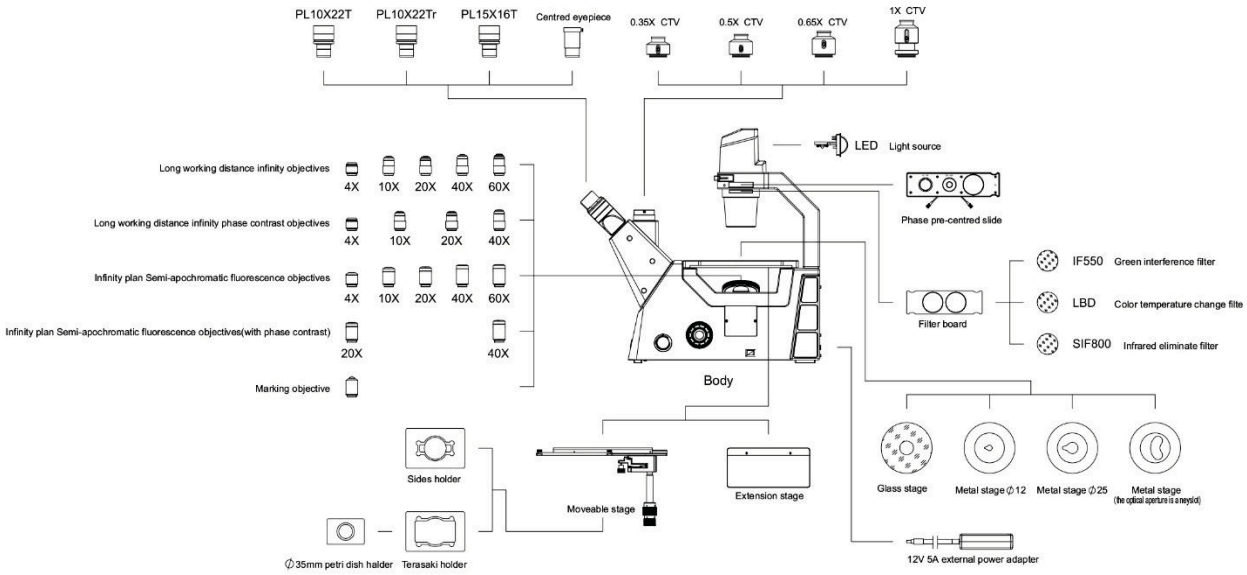
Item	Specification		BS-2091	BS-2091F
Optical System	Infinite color corrected optical system		●	●
Viewing Head	45° inclined trinocular head, 360° rotatable, fixed tube, interpupillary distance: 50-76mm, splitting ratio R:T=80:20		●	
	45° inclined trinocular head, 360° rotatable, fixed tube, interpupillary distance: 50-76mm, splitting ratio R:T=0:100 or 100:0			●
Eyepiece	High eyepoint wide field plan eyepiece PL10X/22mm, with adjustable diopter		●	●
	High eyepoint wide field plan eyepiece PL10X/22mm, with micrometer and adjustable diopter		○	○
	High eyepoint wide field plan eyepiece PL15X/16mm, with adjustable diopter		○	○
Objective	Infinite Long Working Distance Plan Achromatic Objectives	4X/NA=0.13, WD=10.75mm	○	○
		10X/NA=0.25, WD=7.45mm	○	○
		20X/NA=0.40, WD=6.92mm	○	○
		40X/NA=0.65, WD=2.74mm	○	○
		60X/NA=0.70, WD=1.28mm	○	○
	Infinite Long Working Distance Plan Achromatic Positive Phase Contrast Objectives	4X/NA=0.13, WD=10.75mm	●	○
		10X/NA=0.25, WD=7.45mm	●	○
		20X/NA=0.40, WD=6.92mm	●	○
		40X/NA=0.65, WD=2.74mm	●	○
	Infinity Long Working Distance Plan Fluorescence Objectives	4X/NA=0.13, WD=18.95mm	○	●
		10X/NA=0.30, WD=7.27mm	○	●
		20X/NA=0.45, WD=6.03mm	○	○
		40X/NA=0.65, WD=1.79mm	○	○

		60X/NA=0.75, WD=1.28mm	○	○
	Infinity Long Working Distance Plan Semi-Apochromatic Positive Phase Contrast Fluorescence Objectives	20X/NA=0.45, WD=6.12mm	○	●
		40X/NA=0.65, WD=1.79mm	○	●
	Marking lens	Marking lens	○	○
Nosepiece	Inward Quintuple Nosepiece		●	●
Condenser	N.A. 0.3 long working distance condenser, WD=72mm, detachable		●	●
	XDCD 0.3 condenser phase adjustable sliding plate, with two centering handles		●	●
Microscope Body	Biological transmitted frame. External wide voltage system, input 100-240V, output 12V/5A. 5W LED (cold or warm color optional, cold color temperature 4750K-5500K, warm color temperature 2850K-3250K) center set, brightness adjustable, with light brightness indicator and infrared sensor.		●	
	Biological transmitted & reflected frame. External wide voltage system, input 100-240V, output 12V/5A. Transmitted & reflected illumination is continuously adjustable and independently controlled, with light brightness indicator, with infrared sensor, with LED fluorescence indicator light. Transmitted illumination (cold or warm color optional, cold color temperature 4750K-5500K, warm color temperature 2850K-3250K), center set.			●
Stage	Attachable mechanical stage, moving range: 120mm(X)*80mm(Y), stage size: 215mm(W)*250mm(L)		○	●
	Extension stage, used to extend the stage		○	●
	Φ35 Petri dish holder		○	●
	Glass slide holder (Φ54mm and 26.5mm*76.5mm)		○	●
	Terasaki holder (Φ65mm and 56mm*81.5mm)		○	●
	Glass plate		●	●
	Metal plate (kidney type)		○	●
	Metal plate (Φ25mm)		●	○
	Metal plate (Φ12mm)		○	○
Focusing	Coaxial Coarse and Fine Adjustment, tension adjustment knob, Fine Division 0.002mm, Fine stroke 0.2mm per rotation, Coarse stroke 37.5mm per rotation. Moving Range: 9mm, focal plane up 6.5mm, down 2.5mm		●	●
EPI-Fluorescence Attachment	Four channel LED fluorescence illuminator, including 385nm/470nm/560nm three LED light source.			●
	UV1 band pass filter LED fluorescence module, for LED fluorescent lamp with a center wavelength of 385nm			○
	B1 band pass filter LED fluorescence module, for LED fluorescent lamp with a center wavelength of 470nm			●
	G1 band pass filter LED fluorescence module, for LED fluorescent lamp with a center wavelength of 560nm			●
	Eyes protective plate, used to prevent harm from fluorescence light			●
Filter	Green filter (Φ45)		●	●

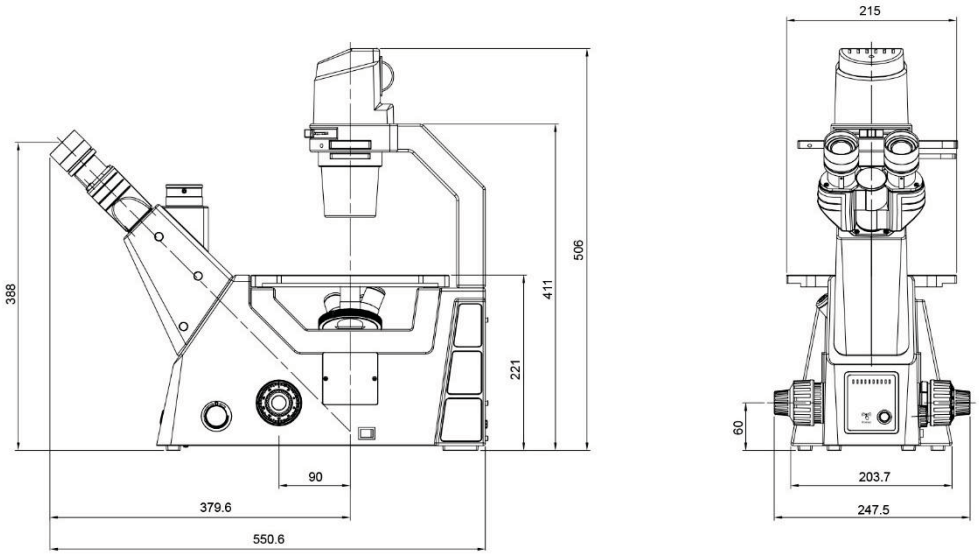
	LBD filter (Φ45), only for halogen lamps	○	○
Cell Phone Adapter	Cell phone adapter (used to connect to eyepiece)	○	○
	Cell phone adapter (used to connect to trinocular tube, include eyepiece)	○	○
C-mount Adapter	0.35X C-mount adapter, adjustable focus, not available for fluorescence observation	○	○
	0.5X C-mount adapter, adjustable focus	○	○
	0.65X C-mount adapter, adjustable focus	○	○
	1X C-mount adapter, adjustable focus	○	○
	Digital eyepiece interface	○	○
Other Accessories	Telescope (Φ30)	●	●
	Internal hexagonal Spanner M3	●	●
	Internal hexagonal Spanner M4	●	●

Note: ● Standard Outfit, ○ Optional

System Diagram

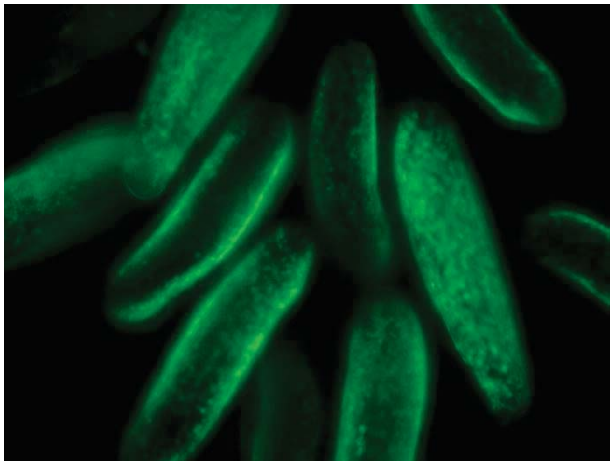
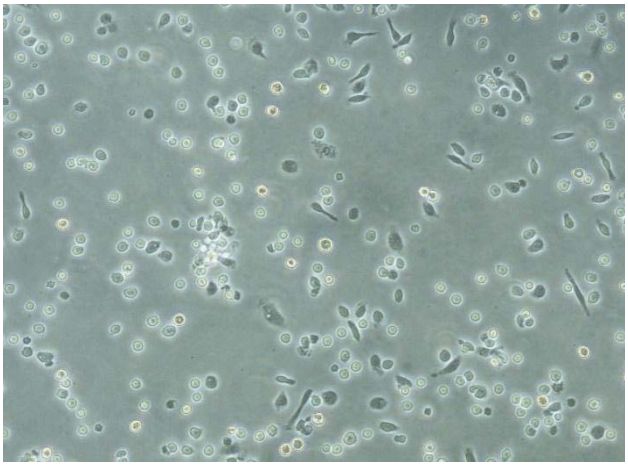
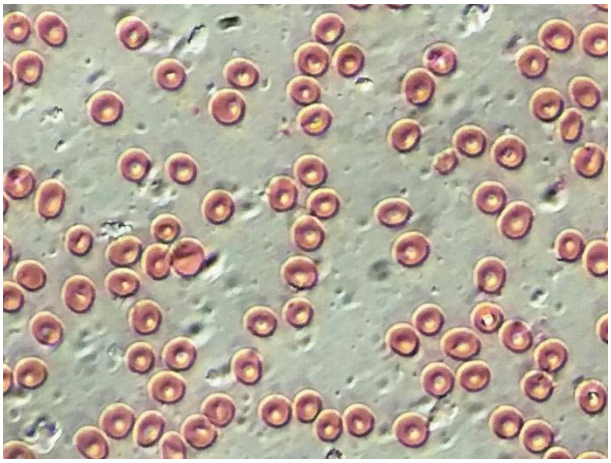
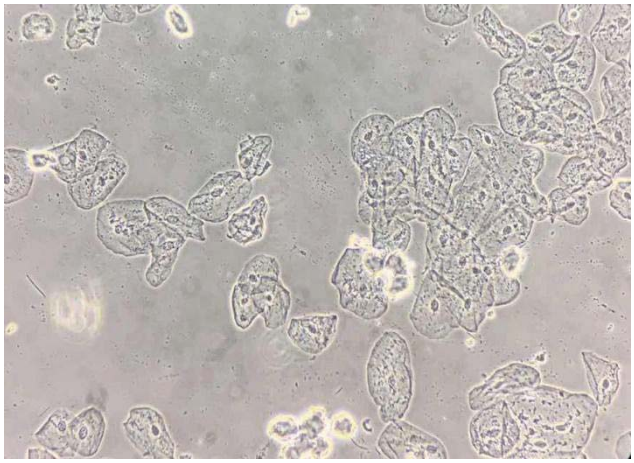


Dimension



Unit: mm

Sample Images

4. BS-2093A Inverted Biological Microscope

BS-2093A

BS-2093AF

Introduction

BS-2093A Inverted Biological Microscope is a high-level microscope which is specially designed for medical and health units, universities, research institutes to observe cultured living cells. With an innovative infinite optical system and ergonomic design, it has excellent optical performance and easy to operate features. This inverted biological microscope makes your work enjoyable. Digital cameras can be added to the trinocular head to take photos, videos and make measurement.

Feature

1. Wide field of view

Excellent infinite optical system, Wide field eyepiece, view field up to Φ22mm, more comfortable for observation.

2. Better nosepiece

More objectives can be installed on the large diameter quintuple nosepiece, easier to change objective.

3. Viewing head with two splitting ratios

Light distribution (both): 100:0 (100% for eyepiece) or 80:20 (80% for trinocular head and 20% for eyepiece).

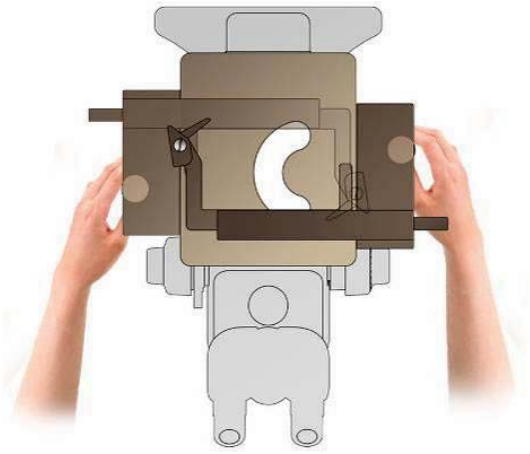
4. Long working distance condenser

Long working distance condenser, N.A. 0.30. Working distance: 72mm (with condenser).
Working distance: 195mm (without condenser), available for extra high culture dishes.

5. Large size stage

Large stage is convenient for research. Size: 210mm(X)*240mm(Y)mm, Moving range: 128mm(X)*80mm(Y).
Mechanical stage available for 96 holes plate.

6. Convenient for both hands



The knob of X-Y mechanical stage can be changed by left or right.

7. LED Epi fluorescence unit

Newly designed BFL2LED (5W LED lamp, B/G fluorescence filter) & BFL3LED (5W LED lamp, UV/B/G fluorescence filter) LED fluorescence unit can provide higher intensity and get clear images.

Application

BS-2093A Inverted microscope is used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. It can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. This microscope is widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

Specification

Item	Specification		BS-2093 A	BS-2093 AF	BS-2093 AF(LED)
Optical System	Infinite Optical System		●	●	●
Viewing Head	Inclined 45° trinocular tube, interpupillary distance: 48-76mm, splitting ratio: eyepiece: trinocular=100:0 or 20:80. Eyepiece tube diameter: 30mm		●	●	●
Eyepiece	Wide field plan eyepiece PL10X/22mm, with adjustable diopter		●	●	●
	Wide field eyepiece WF15×/ 16mm		○	○	○
	Wide field eyepiece WF20×/ 12mm		○	○	○
Objective	Long Working Distance Infinity Plan Achromatic Objective (L Plan FL)	2X/NA=0.06, WD=7.2mm	○	○	○
		4X/NA=0.11, WD=12.1mm	●	●	●
		10X/NA=0.25, WD=10.3mm	○	○	○
		20X/NA=0.45, WD=5.8mm	○	○	○
		40X/NA=0.65, WD=5.1mm	○	○	○
	Long Working Distance Infinity Plan Achromatic Phase Contrast Objective (L Plan FL PHP)	4X/NA=0.10, WD=9.2mm	○	○	○
		10X/NA=0.25, WD=10.3mm	●	●	●
		20X/NA=0.45, WD=5.8mm	●	●	●
		40X/NA=0.65, WD=5.1mm	●	●	●
	LWD Infinity Plan Fluor Objectives (L Plan Fluor)	10X/NA=0.3, WD=14mm	○	○	○
		20X/NA=0.45, WD=6.6mm	○	○	○
		40X/NA=0.65, WD=3.9mm	○	○	○
Nosepiece	Quintuple nosepiece		●	●	●
Condenser	Long working distance condenser, N.A. 0.3. Working distance: 72mm (with condenser), 195mm (without condenser)		●	●	●

Centering Telescope	Centering telescope (Φ30mm)	●	●	●
Phase Annulus	4X phase annulus plate	○	○	○
	10X phase annulus plate	●	●	●
	20X/40X phase annulus plate	●	●	●
Stage	Stage size: 210mm(X)*241mm(Y). Round size: Φ110mm. Coaxial coarse and fine adjustment, fine division 0.002mm, moving range 10mm	●	●	●
	Attached mechanical stage, available for 96 holes plate. X-Y coaxial control, moving range: 128mm(X)*80mm(Y)	●	●	●
	Φ65mm culture dish holder +Φ35mm culture dish holder	○	○	○
	Φ54mm culture dish holder	●	●	●
	Holder for blood cell counter	○	○	○
	Universal holder	○	○	○
	Glass holder	○	○	○
Focusing	Coaxial coarse and fine adjustment, fine division 0.002mm, moving range 10mm	●	●	●
Koehler Illumination	12V/30W halogen lamp, input voltage: 100V-240V	●	●	●
	5W LED lamp, input voltage: 100V-240V	○	○	○
Filter	Blue filter (Φ34mm)	●	●	●
	Green filter (Φ34mm)	●	●	●
	Amber/Gray filter (Φ34mm)	○	○	○
C-mount	0.35X C-mount adapter, adjustable focus	○	○	○
	0.5X C-mount adapter, adjustable focus	●	●	●
	0.65X C-mount adapter, adjustable focus	○	○	○
	1X C-mount adapter, adjustable focus	○	○	○
	Trinocular digital eyepiece interface	○	○	○
Epi-Fluorescence Attachment	Two channel fluorescence module: one 100W mercury lamp and B/G filters	○	●	○
	BFL2LED Two channel fluorescence module: 5W LED and B/G filters. Synchronize LED bulbs with color filters. The fluorescence brightness is more than twice that of four channel LED fluorescence module.	○	○	●
	BFL3LED Three channel fluorescence module: 5W LED and UV/B/G filters. Synchronize LED bulbs with color filters. The fluorescence brightness is more than twice that of four channel LED fluorescence module.	○	○	○
	Four channel fluorescence module: one 100W mercury lamp and V/UV/B/G filters	○	○	○
	Four channel fluorescence module: 5W LED and V/UV/B/G filters	○	○	○
Packing	1carton/set, Size: 66×59×33cm, GW: 18kgs, NW: 14kgs	●		
	2cartons/set, carton 1 Size: 52×47×49cm, GW: 18kgs, NW: 14kgs; carton 2 Size: 52×47×24cm, GW: 6kgs, NW: 4kgs		●	
	1carton/set, Size: 52×47×49cm, GW: 23kgs, NW: 18kgs			●

Note: ● Standard Outfit, ○ Optional

Accessories

1. Culture Dish Holder

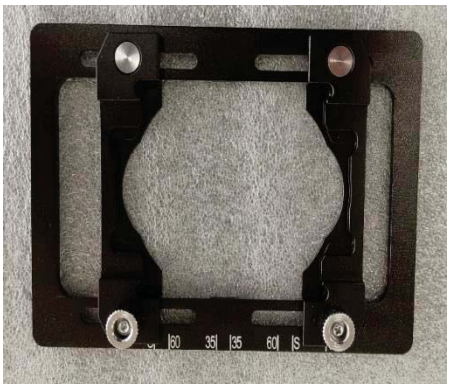
Φ65mm

Φ54mm

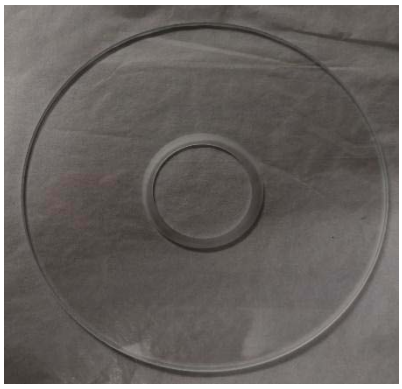
Φ35mm

blood cell counter holder

2. Universal holder and glass holder



Universal Holder



Glass Holder

3. Fluorescence Attachment

Four channel fluorescence module: 5W LED and V/UV/B/G filters

Mercury fluorescence attachment for BS-2093AF

4. Objectives

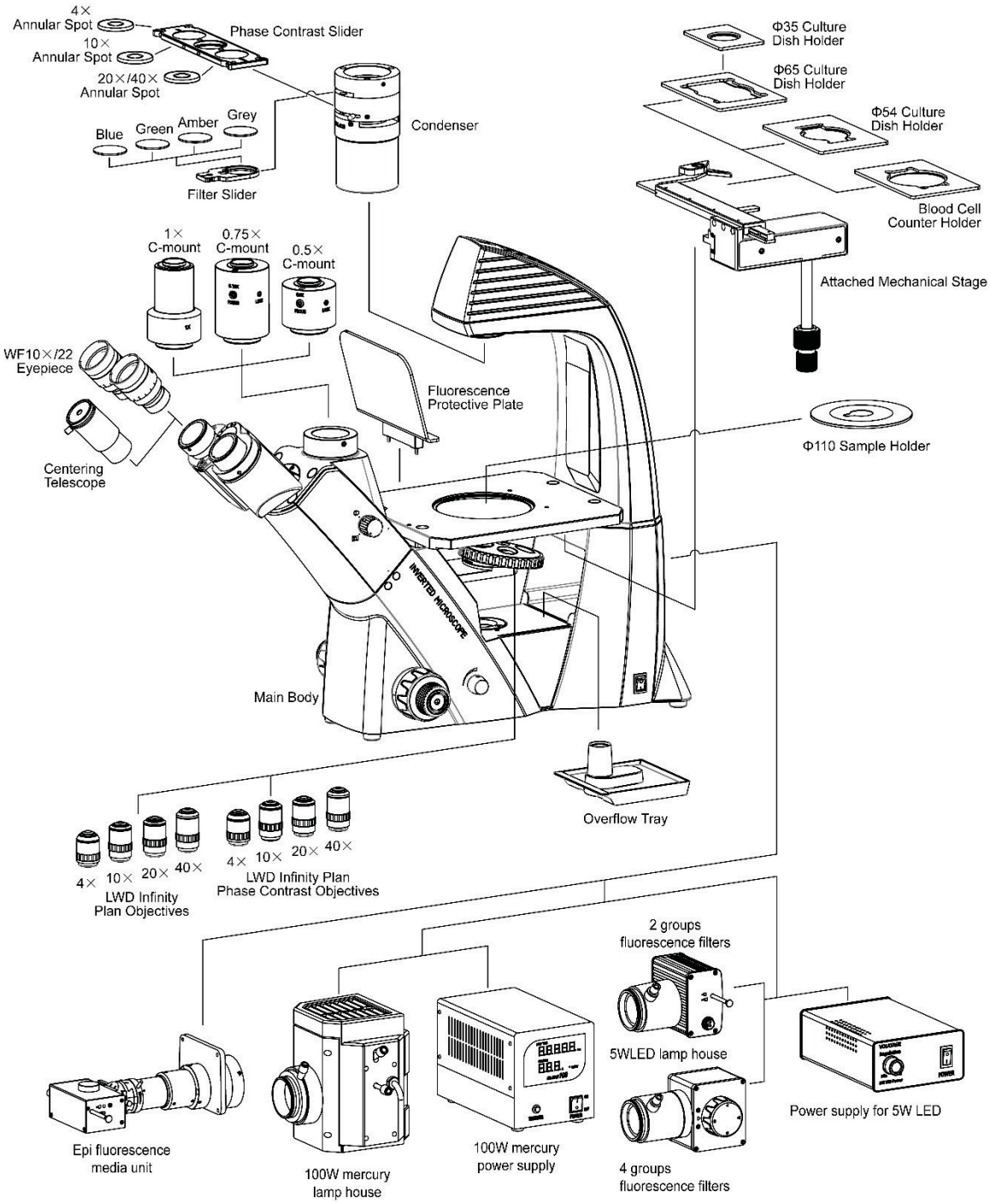
Objective Parameter List (Cover-glass thickness1.1mm)

	Objectives	N.A.	Working distance(mm)
LWD Infinity Plan Objectives	Plan FL 2X	0.06	7.2
	L Plan FL 4X	0.11	12.1
	L Plan FL 10X	0.25	10.3
	L Plan FL 20X	0.45	5.8
	L Plan FL 40X	0.65	5.1
	L Plan FL 2X	0.06	7.2
LWD Infinity Plan Phase Contrast Objectives	L Plan FL PHP 4X (Both for Bright Field & Phase Contrast)	0.10	9.2
	L Plan FL PHP 10X (Both for Bright Field & Phase Contrast)	0.25	10.3
	L Plan FL PHP 20X (Both for Bright Field & Phase Contrast)	0.45	5.8
	L Plan FL PHP 40X (Both for Bright Field & Phase Contrast)	0.65	5.1
LWD Infinity Plan Fluor Objectives	L Plan Fluor 10x	0.30	14.0
	L Plan Fluor 20x	0.45	6.6
	L Plan Fluor 40x	0.65	3.9

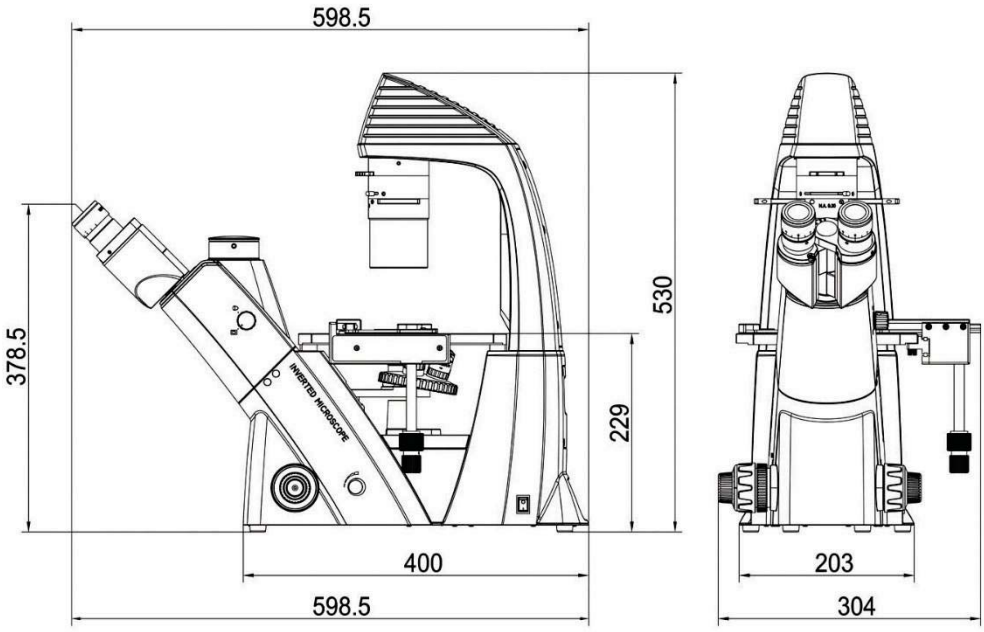
LWD Infinity Plan Objectives

LWD Infinity Plan Phase Contrast Objectives

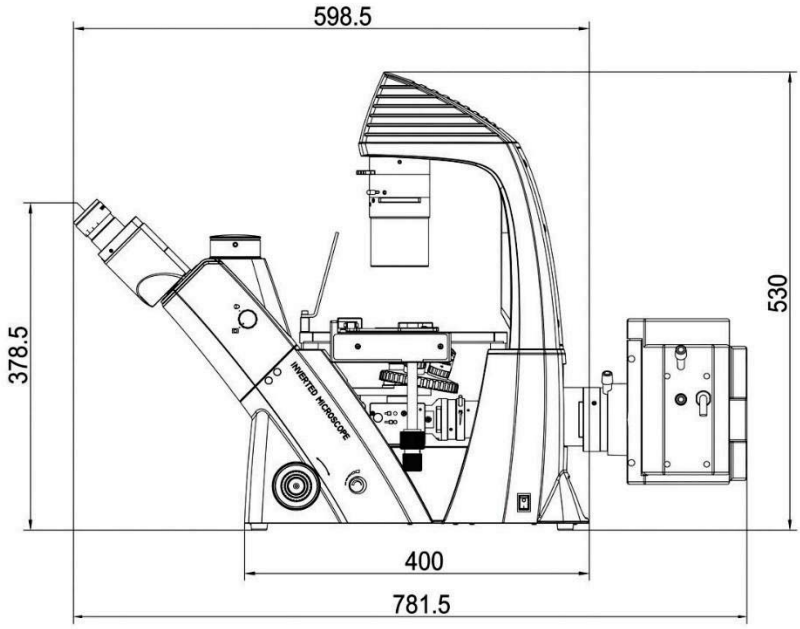
System Diagram



Dimension



BS-2093A



BS-2093AF

Unit: mm

5. BS-2093B Inverted Biological Microscope

BS-2093B

BS-2093BF(LED)

BS-2093B(seen from left side)

BS-2093BF(LED) (with cameras)

Introduction

BS-2093B Inverted Biological Microscope is a high-level microscope which is specially designed for medical and health units, universities, research institutes to observe cultured living cells. With an innovative infinite optical system and ergonomic design, it has excellent optical performance and easy to operate features. This inverted biological microscope makes your work enjoyable. Digital cameras can be added to the trinocular head to take photos, videos and make measurement.

Feature

1. Wide field of view

Excellent infinite optical system, Wide field eyepiece, view field up to Φ22mm, more comfortable for observation.

2. Better nosepiece

More objectives can be installed on the large diameter quintuple nosepiece, easier to change objective.

3. Viewing head with two splitting ratios

Light distribution (both): 100:0 (100% for eyepiece) or 80:20 (80% for trinocular head and 20% for eyepiece).

4. Camera ports

Both light ports for microscope digital camera and DSLR photography camera, available for observing with microscope digital camera and DSLR photography camera at the same time.
Special light port for SLR digital camera, 7°inclined up to be more convenient to observe the image of the DSLR camera.

5. ECO function

Automatic infrared induction for power on-off. Power off upon user leaving 10 minutes, and power on upon user approaching.

6. Kohler illumination

12V/50W Kohler illumination makes the field more even and brighter.

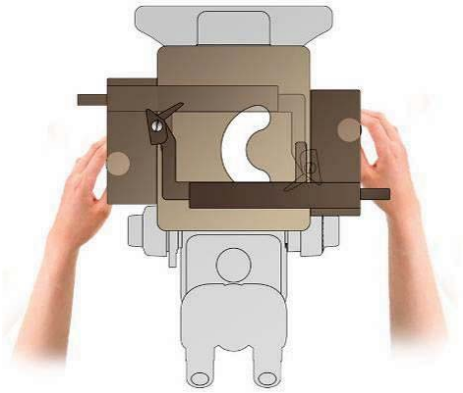
7. 4-hole rotating disc phase contrast condenser

4-hole rotating disc phase contrast condenser as standard to change bright field and phase contrast easily.

8. LED Epi fluorescence unit

Newly designed BFL2LED (5W LED lamp, B/G fluorescence filter) & BFL3LED (5W LED lamp, UV/B/G fluorescence filter) LED fluorescence unit can provide higher intensity and get clear images.

9. Convenient for both hands



The knob of X-Y mechanical stage can be changed by left or right.

Application

BS-2093B Inverted microscope is used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. It can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. This microscope is widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

Specification

Item	Specification		BS-2093 B	BS-2093 BF	BS-2093 BF(LED)
Optical System	Infinite Optical System		●	●	●
Viewing Head	Inclined 45° trinocular tube, interpupillary distance: 48-76mm, splitting ratio: eyepiece: trinocular=100:0 or 20:80. Eyepiece tube diameter: 30mm		●	●	●
Eyepiece	Wide field plan eyepiece PL10X/22mm, with adjustable diopter		●	●	●
	Wide field eyepiece WF15×/ 16mm		○	○	○
	Wide field eyepiece WF20×/ 12mm		○	○	○
Objective	Long Working Distance Infinite Plan Achromatic Objective (L Plan FL)	2X/NA=0.06, WD=7.2mm	○	○	○
		4X/NA=0.11, WD=12.1mm	●	●	●
		10X/NA=0.25, WD=10.3mm	○	○	○
		20X/NA=0.45, WD=5.8mm	○	○	○
		40X/NA=0.65, WD=5.1mm	○	○	○
	Long Working Distance Infinite Plan Achromatic Phase Contrast Objective (L Plan FL PHP)	4X/NA=0.10, WD=9.2mm	○	○	○
		10X/NA=0.25, WD=10.3mm	●	●	●
		20X/NA=0.45, WD=5.8mm	●	●	●
		40X/NA=0.65, WD=5.1mm	●	●	●
	LWD Infinite Plan Fluor Objectives (L Plan Fluor)	10X/NA=0.3, WD=14mm	○	○	○
		20X/NA=0.45, WD=6.6mm	○	○	○
		40X/NA=0.65, WD=3.9mm	○	○	○
Nosepiece	Quintuple nosepiece		●	●	●
Condenser	4-hole rotating disc phase contrast condenser, N.A.0.4, W.D.45mm, adjustable up and down.		●	●	●

Centering Telescope	Centering telescope (Φ30mm)	●	●	●
Phase Annulus	4X phase annular plate	●	●	●
	10X/20X/40X phase annular plate	●	●	●
Stage	Stage size: 210mm(X)*241mm(Y). Round size: Φ110mm. Coaxial coarse and fine adjustment, fine division 0.002mm, moving range 10mm	●	●	●
	Attached mechanical stage, available for 96 holes plate. X-Y coaxial control, moving range: 128mm(X)*80mm(Y)	●	●	●
	Φ65mm culture dish holder +Φ35mm culture dish holder	○	○	○
	Φ54mm culture dish holder	●	●	●
	Holder for blood cell counter	○	○	○
	Universal holder	○	○	○
	Glass holder	○	○	○
Focusing	Coaxial coarse and fine adjustment, fine division 0.002mm, moving range 10mm	●	●	●
Koehler Illumination	12V/50W halogen lamp, input voltage: 100V-240V	●	●	●
	5W LED lamp, input voltage: 100V-240V	○	○	○
Auto power on-off system	Power off automatically upon user leaving 10 minutes, power on automatically upon user approaching	○	○	○
Filter	Blue filter (Φ34mm)	●	●	●
	Green filter (Φ34mm)	●	●	●
	Amber/Gray filter (Φ34mm)	○	○	○
Adapter	Digital photography C-mount, for CANON or NIKON SLR Digital Photography Camera. 100% light for photography port	●	●	●
	0.35X C-mount adapter, adjustable focus	○	○	○
	0.5X C-mount adapter, adjustable focus	○	○	○
	0.65X C-mount adapter, adjustable focus	○	○	○
	1X C-mount adapter, adjustable focus	○	○	○
	Trinocular digital eyepiece interface	○	○	○
Epi-Fluorescence Attachment	Two channel fluorescence module: one 100W mercury lamp and B/G filters	○	●	○
	BFL2LED Two channel fluorescence module: 5W LED and B/G filters. Synchronize LED bulbs with color filters. The fluorescence brightness is more than twice that of four channel LED fluorescence module.	○	○	●
	BFL3LED Three channel fluorescence module: 5W LED and UV/B/G filters. Synchronize LED bulbs with color filters. The fluorescence brightness is more than twice that of four channel LED fluorescence module.	○	○	○
	Four channel fluorescence module: one 100W mercury lamp and V/UV/B/G filters	○	○	○
	Four channel fluorescence module: 5W LED and V/UV/B/G filters	○	○	○
Packing	1carton/set, Packing Size: 66cm×59cm×33cm, Gross Weight: 18kgs, Net Weight: 13.5kgs	●	●	●

Note: ● Standard Outfit, ○ Optional

Accessories

1. Culture Dish Holder

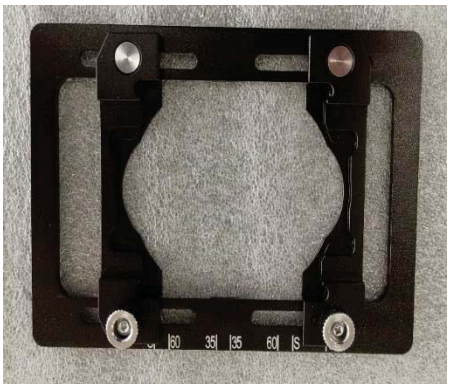
Φ65mm

Φ54mm

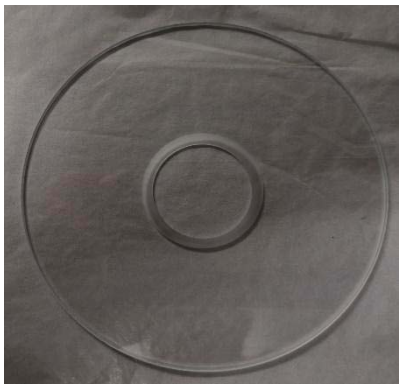
Φ35mm

blood cell counter holder

2. Universal holder and glass holder



Universal Holder



Glass Holder

3. Fluorescence Attachment

Four channel fluorescence module: 5W LED and V/UV/B/G filters

Mercury fluorescence attachment for BS-2093BF

4. Objectives

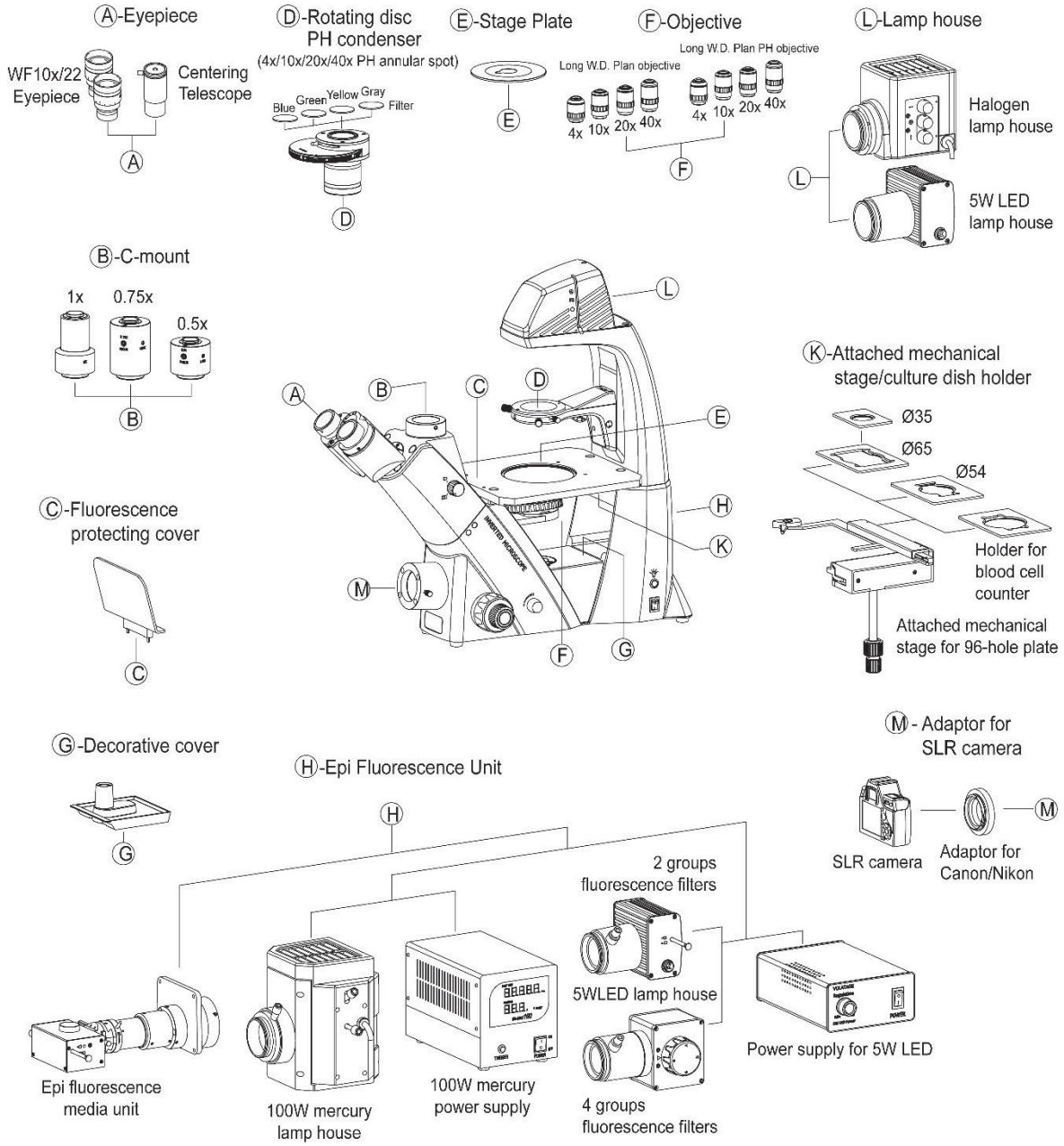
Objective Parameter List (Cover-glass thickness1.1mm)

	Objectives	N.A.	Working distance(mm)
LWD Infinity Plan Objectives	Plan FL 2X	0.06	7.2
	L Plan FL 4X	0.11	12.1
	L Plan FL 10X	0.25	10.3
	L Plan FL 20X	0.45	5.8
	L Plan FL 40X	0.65	5.1
	L Plan FL 2X	0.06	7.2
LWD Infinity Plan Phase Contrast Objectives	L Plan FL PHP 4X (Both for Bright Field & Phase Contrast)	0.10	9.2
	L Plan FL PHP 10X (Both for Bright Field & Phase Contrast)	0.25	10.3
	L Plan FL PHP 20X (Both for Bright Field & Phase Contrast)	0.45	5.8
	L Plan FL PHP 40X (Both for Bright Field & Phase Contrast)	0.65	5.1
LWD Infinity Plan Fluor Objectives	L Plan Fluor 10x	0.30	14.0
	L Plan Fluor 20x	0.45	6.6
	L Plan Fluor 40x	0.65	3.9

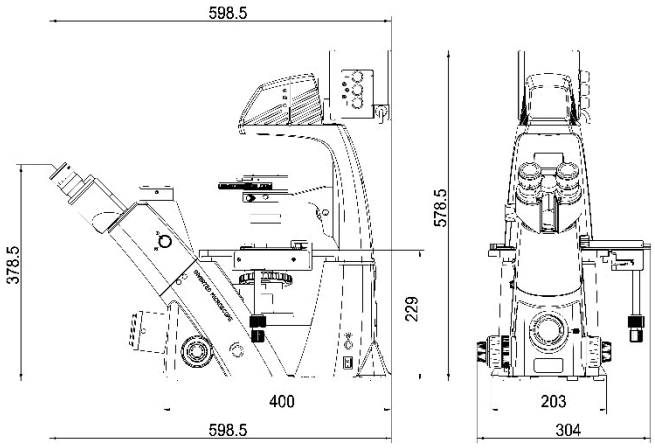
LWD Infinity Plan Objectives

LWD Infinity Plan Phase Contrast Objectives

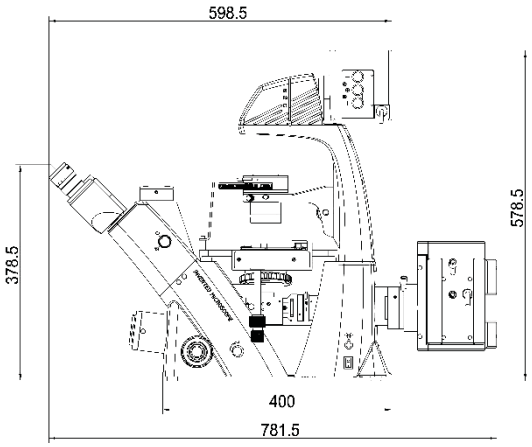
System Diagram



Dimension



BS-2093B



BS-2093BF

Unit: mm

6. BS-2094 Inverted Biological Microscope

BS-2094A

BS-2094B

Introduction

BS-2094 Series Inverted Biological Microscope are high level microscopes which are specially designed for medical and health units, universities, research institutes to observe cultured living cells. With innovative infinite optical system and ergonomic design, they have excellent optical performance and easy to operate features. The microscopes have adopted long life LED lamps as transmitted and fluorescence light source. Digital cameras can be added to the microscope on left side to take photos, videos and make measurement.

The main difference between BS-2094A and BS-2094B is that BS-2094B has an intelligent illumination management system, the illumination intensity will automatically change after you change the objectives and make the microscope to get the best illumination effect, BS-2094B also has a LCD screen to show the working mode like magnification, light intensity, transmitted or fluorescence light source, working or sleep etc.

BS-2094A(left side)

BS-2094A(front)

BS-2094A(right side)

BS-2094B(left side)

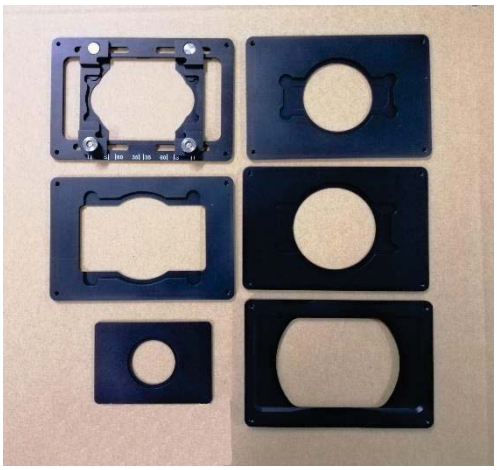
BS-2094B(front)

BS-2094B(right side)

Feature

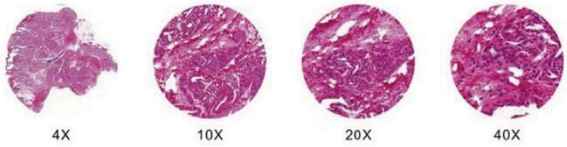
1. Excellent infinite optical system, Φ22mm wide field eyepiece, 45° inclined viewing head, more comfortable for observation.
2. Camera port is on left side, less disturb for operation. Light distribution (both): 100 : 0 (100% for eyepiece); 0 : 100 (100% for camera).
3. Long working distance condenser N.A. 0.30, Working distance: 75mm(with condenser), Working distance: 187mm (without condenser), available for extra high culture dishes. Condenser is detachable, without condenser, it is suitable for culture flask.

4. Large size stage, convenient for research. Stage Size: 170mm(X) × 250 (Y)mm, Mechanical stage moving range: 128mm (X) × 80 (Y)mm. 6 types of petri-dish holders are available.



5. BS-2094B has an intelligent illumination management system.

(1) Coded Quintuple Nosepiece can memorize the illumination brightness of each objective. When different objectives are converted to each other, the light intensity is automatically adjusted to reduce visual fatigue and improve work efficiency.



(2) Use a dimming knob to achieve multiple functions.

Click: Enter standby(sleep) mode

Double click: light intensity lock or unlock

Rotation: Adjust brightness

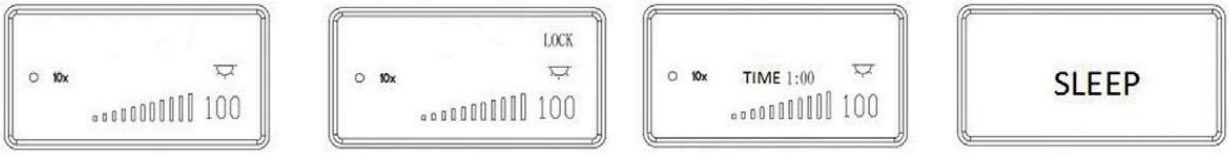
Press + clockwise rotate: Switch to the transmitted light source

Press + contrarotate: Switch to the fluorescence light source

Press 3 seconds: Set the time of turning off the light after leaving

(3) Display microscope working mode.

The LCD screen in the front of the microscope can display the working mode of the microscope, including magnification, light intensity, sleep mode and so on.



Start& working Lock mode Turn off the light in 1 hour Sleep mode

6. The microscope control mechanism has a reasonable layout and easy to Operate.

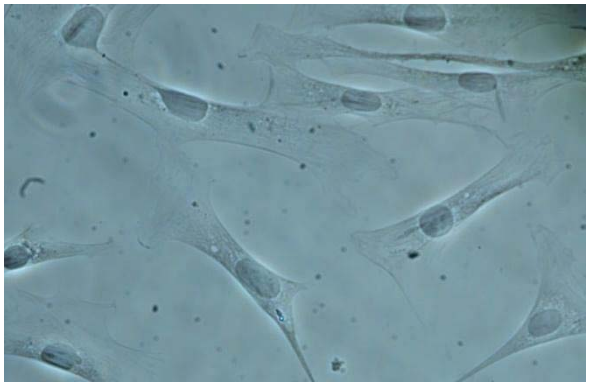
The frequently used control mechanisms of these microscopes are close to the user and in low-hand position. This kind of design makes operation more quickly and conveniently, and reduce the fatigue caused by the long observation. On the other hand, it reduces the airflow and dust caused by large amplitude operation, it is very effective to reduce the probability of sample pollution. It is a strong guarantee for the accuracy and repeatability of the experimental results.

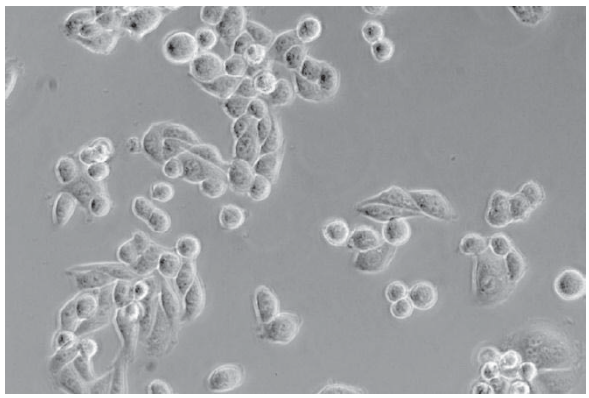
7. The microscope body is compact, stable and suitable for clean bench. The microscope body has been coated with anti-UV material and can be placed into the clean bench for sterilization under UV lamp. The distance between the eye point to the operation button and the focusing knob of the microscope is relatively short, and the distance from the stage is far away. It is available to make the viewing head and operating mechanism outside, and stage, objectives and sample inside the clean bench. So realize cell sampling and operation inside and observing comfortably outside.

8. Phase Contrast, Hoffman Modulation Phase Contrast and 3D Emboss Contrast observation method are available with transmitted illumination.

(1) Phase contrast observation is a microscopic observation technique that produces a high-contrast microscopic image of a transparent sample by utilizing a change in refractive index. The advantage is that the details of live cell imaging can be obtained without staining and fluorescence dyes.

Application range: Living cells culture, Micro-organism, Tissue slide, cell nuclei and organelles etc.





(2) Hoffman Modulation Phase Contrast. With slant light, Hoffman phase contrast changes phase gradient into light intensity variety, it can be used to observe unstained cells and living cells. Giving 3D effect for thick samples, it can greatly reduce the halo in thick specimens.

(3) 3D Emboss Contrast. No need for expensive optical components, just add a contrast adjustment slider to achieve a pseudo 3D glare-free image. Both glass culture dishes or plastic culture dishes can be used.

With Hoffman Modulation Phase Contrast

With 3D Emboss Contrast

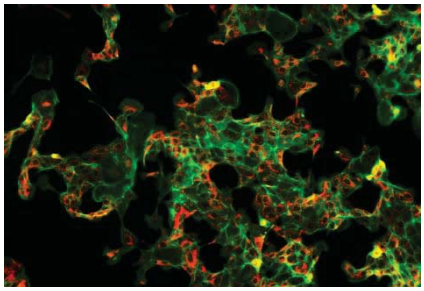
8. LED Fluorescence attachment is optional.

(1) LED light makes fluorescence observation easier.

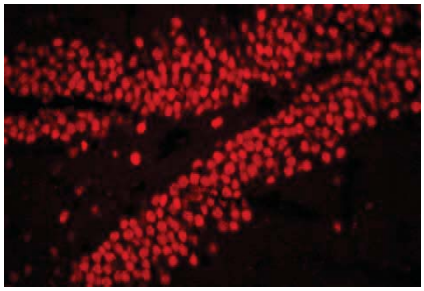
Fly-eye lens and Kohler illumination have provided a uniform and bright field of view, which is benefit to get high-definition images and perfect details. Compared with traditional mercury bulb, the LED lamp has much longer working life, it saves money and has greatly improved the working efficiency. The problems of preheating, cooling and high temperature of mercury lamp has also been solved.

(2) Suitable for a variety of fluorescence dyes.

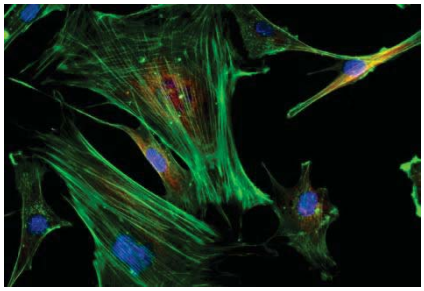
The LED fluorescence attachment has equipped with 3 fluorescence filter blocks, it can be applied to a wide range of dyes and capture clear high contrast fluorescence images.



Breast cancer



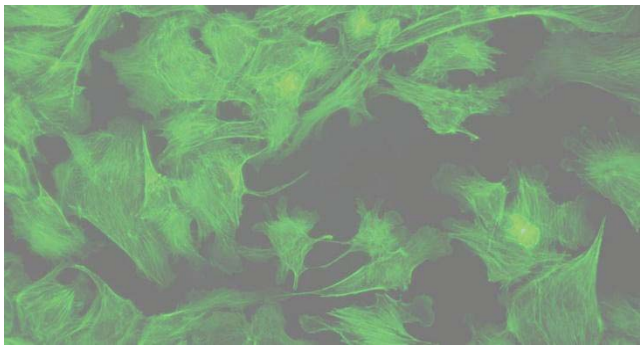
Hippocampus



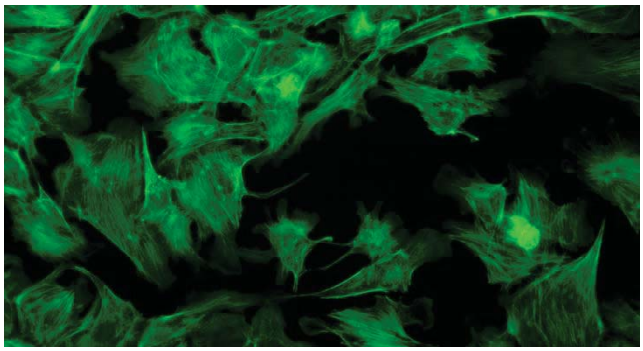
Mouse brain nerve cells

(3) Light barrier plate (contrast shield).

The light barrier plate can be attached to the condenser and effectively block the external light, increase the contrast of the fluorescence image and provide a high-quality fluorescence image. When need phase contrast observation, the light barrier plate is very convenient to be removed from the light path, avoiding influence on the quality of phase contrast.



Without Contrast barrier plate



With Contrast barrier plate

Application

BS-2094 series inverted microscopes are used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. They can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. These microscopes are widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

Specification

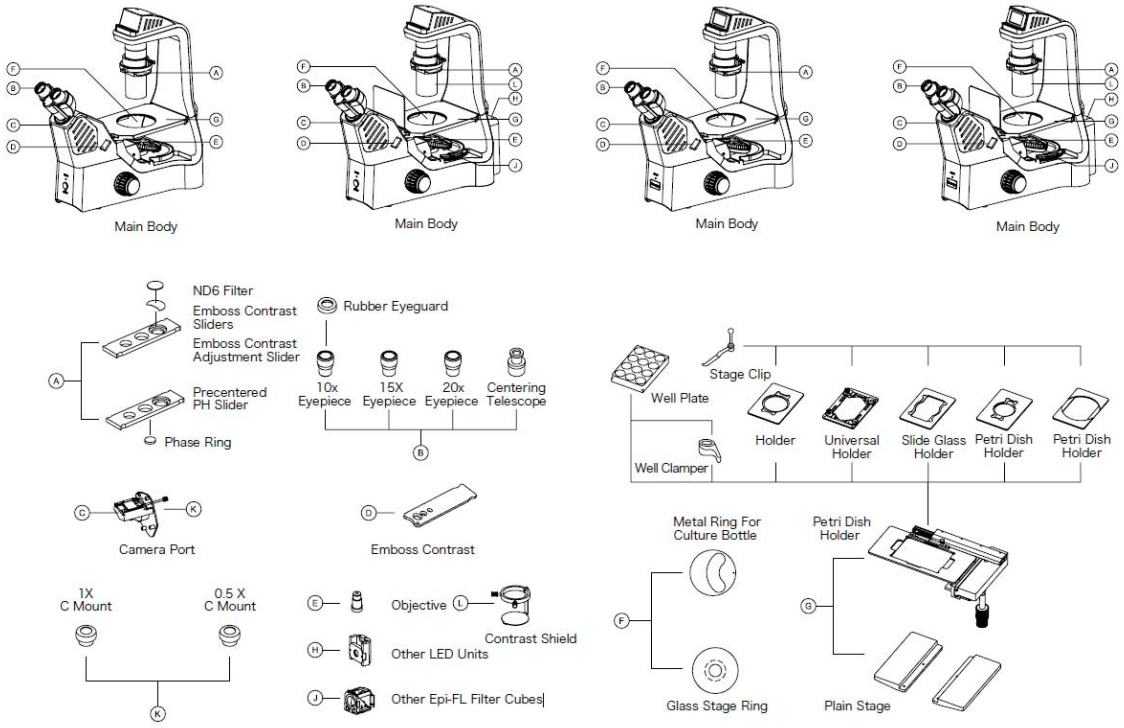
Item	Specification		BS-2094 A	BS-2094 AF	BS-2094 B	BS-2094 BF
Optical System	NIS 60 Infinite Optical System, Tube length 200mm		●	●	●	●
Viewing Head	Seidentopf Binocular Head, Inclined at 45°, Interpupillary Distance 48-75mm, Left side camera port, Light distribution: 100: 0 (100% for eyepiece), 0:100 (100% for camera), Eyepiece Tube Diameter 30mm		●	●	●	●
Eyepiece	SW10×/ 22mm		●	●	●	●
	WF15×/ 16mm		○	○	○	○
	WF20×/ 12mm		○	○	○	○
Objective (Parfocal distance 60mm, M25×0.75)	NIS60 Infinite LWD Plan Achromatic Objective	4×/0.1, WD=30mm	●	○	●	○
		10×/0.25, WD=10.2mm	○	○	○	○
		20×/0.40, WD=12mm	○	○	○	○
		40×/0.60, WD=2.2mm	○	○	○	○
	NIS60 Infinite LWD Plan Phase Contrast Achromatic Objective	PH10×/0.25, WD=10.2mm	●	○	●	○
		PH20×/0.40, WD=12mm	●	○	●	○
		PH40×/0.60, WD=2.2mm	●	○	●	○
	NIS60 Infinite LWD Plan Semi-APO Fluorescence Objective	4×/0.13, WD=17mm, cover glass=-	○	●	○	●
		10×/0.3, WD=7.4mm, cover glass=1.2mm	○	●	○	●
		20×/0.45, WD=8mm, cover glass=1.2mm	○	●	○	●
		40×/0.60, WD=3.3mm, cover glass=1.2mm	○	●	○	●

		60×/0.70, WD=1.8-2.6mm, cover glass=0.1-1.3mm	○	○	○	○
	NIS60 Infinite LWD Plan Semi-APO Phase Contrast Objective	4×/0.13, WD=17.78mm, cover glass=-	○	○	○	○
		10×/0.3, WD=7.4mm, cover glass=1.2mm	○	○	○	○
		20×/0.45, WD=7.5-8.8mm, cover glass=1.2mm	○	○	○	○
		40×/0.60, WD=3-3.4mm, cover glass=1.2mm	○	○	○	○
		60×/0.70, WD=1.8-2.6mm, cover glass=0.1-1.3mm	○	○	○	○
Nosepiece	Quintuple Nosepiece		●	●		
	Coded Quintuple Nosepiece				●	●
Condenser	Long Working Distance Condenser, N.A. 0.3, Working Distance 75mm (with condenser), 187mm (without condenser)		●	●	●	●
Telescope	Centering Telescope: used to adjust the center of phase annulus		●	●	●	●
Phase Annulus	10×-20×-40× Phase Annulus Plate (center adjustable)		●	●	●	●
	4× Phase Annulus Plate		○	○	○	○
Stage	Stage 170 (X)×250(Y) mm with glass insert plate (diameter 110mm)		●	●	●	●
	Attachable Mechanical Stage, X-Y Coaxial Control, Moving Rang: 128mm×80mm, accept 5 types of petri-dish holders, well plates and stage clips		●	●	●	●
	Auxiliary stage 70mm×180mm, used to extend the stage		○	○	○	○
	Universal Holder: used for Terasaki plate, glass slide and Φ35-65mm petri dishes		●	●	●	●
	Terasaki Holder: used for Φ35mm Petri Dish Holder and Φ65mm petri dishes		○	○	○	○
	Glass Slide and Petri Dish Holder Φ54mm		○	○	○	○
	Glass Slide and Petri Dish Holder Φ65mm		○	○	○	○
	Petri Dish Holder Φ35mm		○	○	○	○
	Petri Dish Holder Φ90mm		○	○	○	○
Focusing	Coaxial Coarse and Fine Adjustment, tension adjustment, Fine Division 0.001mm, Fine stroke 0.2mm per rotation, Coarse stroke 37.5mm per rotation. Moving Range: up 7mm, down 1.5mm; Without limitation can up to 18.5mm		●	●	●	●
Transmitted Illumination	3W S-LED, Brightness Adjustable		●	●	●	●
EPI-Fluorescence Attachment	LED illuminator, built-in Fly-eye lens, can be configured with up to 3 different LED light source and B, G, U fluorescence filter blocks		○	●	○	●
	LED light source and V, R, FITC, DAPI, TRITC, Auramine, mCherry		○	○	○	○

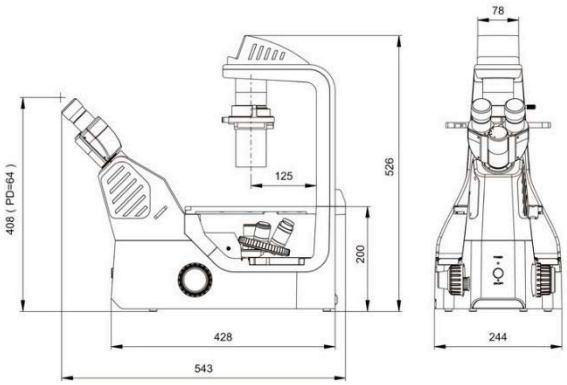
	fluorescence filter block				
Hoffman phase contrast	Hoffman Condenser with 10×, 20×, 40× insert plate, centering telescope and special objective 10×, 20×, 40×	○	○	○	○
3D Emboss Contrast	Main emboss contrast plate with 10×-20×-40× will be inserted into condenser	○	○	○	○
	Auxiliary emboss contrast plate will be inserted into slot which is near viewing head	○	○	○	○
C-mount Adapter	0.5× C-mount Adapter (focus adjustable)	○	○	○	○
	1× C-mount Adapter (focus adjustable)	●	●	●	●
Other Accessories	Warm stage	○	○	○	○
	Light barrier plate(contrast shield), can be attached to the condenser and block the external light	○	○	○	○
	Dust cover	●	●	●	●
Power Supply	AC 100-240V, 50/60Hz	●	●	●	●
Fuse	T250V500mA	●	●	●	●
Packing	2cartons/set, Packing Size: 47cm×37cm×39cm, 69cm×39cm×64cm Gross Weight: 20kgs, Net Weight: 18kgs	●	●	●	●

Note: ● Standard Outfit, ○ Optional

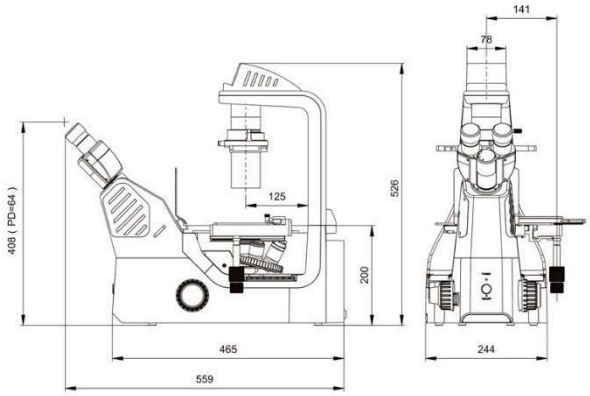
System Diagram



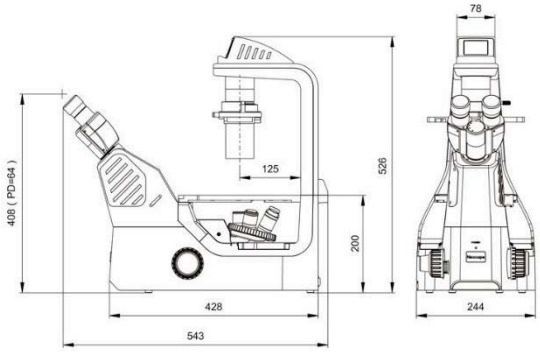
Dimension



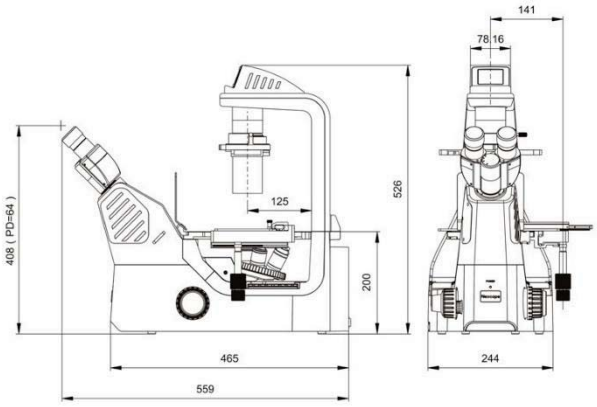
BS-2094A



BS-2094AF



BS-2094B



BS-2094BF

Unit: mm

7. BS-2094C Inverted Biological Microscope

BS-2094C

BS-2094CF

Introduction

BS-2094C Inverted Biological Microscope is a high level microscope which is specially designed for medical and health units, universities, research institutes to observe cultured living cells. With innovative infinite optical system and ergonomic design, it has excellent optical performance and easy to operate features. The microscope has adopted long life LED lamps as transmitted and fluorescence light source. Digital cameras can be added to the microscope on left side to take photos, videos and make measurement. The tilting head can offer a comfortable working mode. The angle of transmitted illumination arm can be adjusted, so petri-dish or flask can be easily moved out.

BS-2094C has an intelligent illumination management system, the illumination intensity will automatically change after you change the objectives and make the microscope to get the best illumination effect, BS-2094C also has a LCD screen to show the working mode like magnification, light intensity, transmitted or fluorescence light source, working or sleep etc.

Feature

1. Excellent infinite optical system, Φ22mm wide field eyepiece, 5°-35° inclined viewing head, more comfortable for observation.
2. Camera port is on left side, less disturb for operation. Light distribution (both): 100 : 0 (100% for eyepiece); 0 : 100 (100% for camera).
3. Long working distance condenser N.A. 0.30, Working distance: 75mm(with condenser).
4. Large size stage, convenient for research. Stage Size: 170mm(X) × 250 (Y)mm, Mechanical stage moving range: 128mm (X) × 80 (Y)mm. Various of petri-dish holders are available.


Slide Glass Holder
Φ65mm


Universal Holder

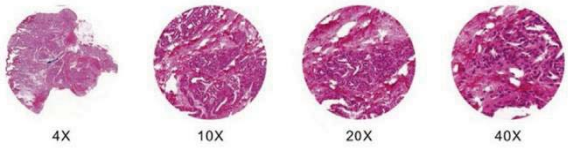

Terasaki Holder


Petri Dish Holder
Φ54mm


Peteri Dish Holder
Φ90mm

5. BS-2094C has an intelligent illumination management system.

(1) Coded Quintuple Nosepiece can memorize the illumination brightness of each objective. When different objectives are converted to each other, the light intensity is automatically adjusted to reduce visual fatigue and improve work efficiency.



(2) Use a dimming knob on left of the base to achieve multiple functions.

Click: Enter standby(sleep) mode

Double click: light intensity lock or unlock

Rotation: Adjust brightness

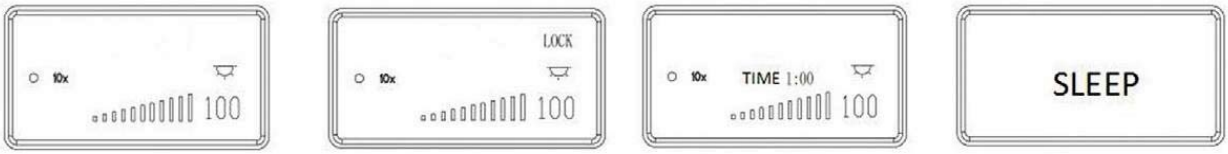
Press + clockwise rotate: Switch to the transmitted light source

Press + contrarotate: Switch to the fluorescence light source

Press 3 seconds: Set the time of turning off the light after leaving

(3) Display microscope working mode.

The LCD screen in the front of the microscope can display the working mode of the microscope, including magnification, light intensity, sleep mode and so on.



Start& working Lock mode Turn off the light in 1 hour Sleep mode

6. The microscope control mechanism has a reasonable layout and easy to Operate.

The frequently used control mechanisms of these microscopes are close to the user and in low-hand position. This kind of design makes operation more quickly and conveniently, and reduce the fatigue caused by the long observation. On the other hand, it reduces the airflow and dust caused by large amplitude operation, it is very effective to reduce the probability of sample pollution. It is a strong guarantee for the accuracy and repeatability of the experimental results.

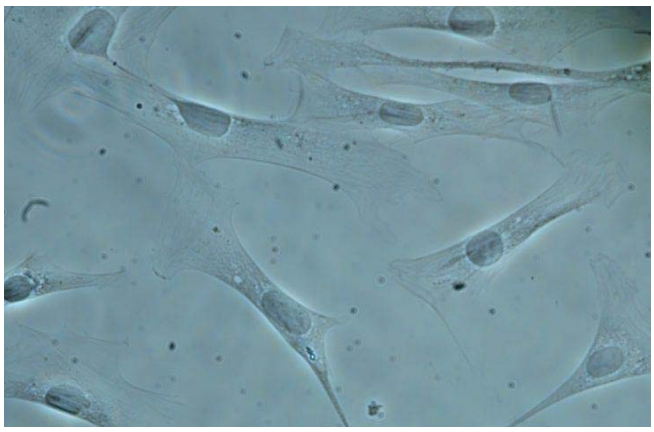
7. The microscope body is compact, stable and suitable for clean bench. The microscope body has been coated with anti-UV material and can be placed into

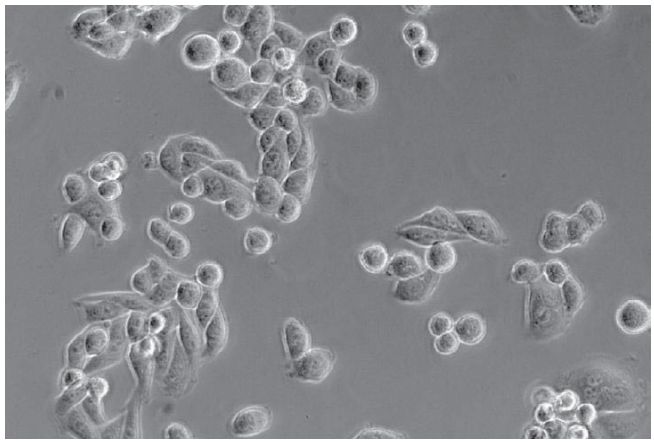
the clean bench for sterilization under UV lamp. The distance between the eye point to the operation button and the focusing knob of the microscope is relatively short, and the distance from the stage is far away. It is available to make the viewing head and operating mechanism outside, and stage, objectives and sample inside the clean bench. So realize cell sampling and operation inside and observing comfortably outside.

8. Phase Contrast, Hoffman Modulation Phase Contrast and 3D Emboss Contrast observation method are available with transmitted illumination.

(1) Phase contrast observation is a microscopic observation technique that produces a high-contrast microscopic image of a transparent sample by utilizing a change in refractive index. The advantage is that the details of live cell imaging can be obtained without staining and fluorescence dyes.

Application range: Living cells culture, Micro-organism, Tissue slide, cell nuclei and organelles etc.





(2) Hoffman Modulation Phase Contrast. With slant light, Hoffman phase contrast changes phase gradient into light intensity variety, it can be used to observe unstained cells and living cells. Giving 3D effect for thick samples, it can greatly reduce the halo in thick specimens.

(3) 3D Emboss Contrast. No need for expensive optical components, just add a contrast adjustment slider to achieve a pseudo 3D glare-free image. Both glass culture dishes or plastic culture dishes can be used.

With Hoffman Modulation Phase Contrast

With 3D Emboss Contrast

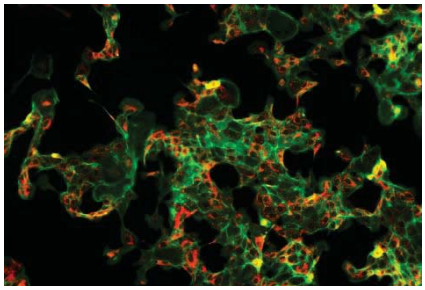
9. LED Fluorescence attachment is optional.

(1) LED light makes fluorescence observation easier.

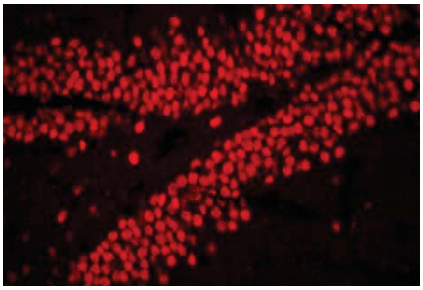
Fly-eye lens and Kohler illumination have provided a uniform and bright field of view, which is benefit to get high definition images and perfect details. Compared with traditional mercury bulb, the LED lamp has much longer working life, it saves money and has greatly improved the working efficiency. The problems of preheating, cooling and high temperature of mercury lamp has also been solved.

(2) Suitable for a variety of fluorescence dyes.

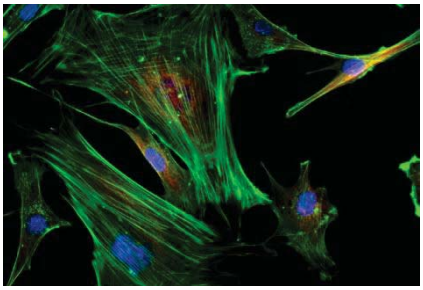
The LED fluorescence attachment has equipped with 3 fluorescence filter blocks, it can be applied to a wide range of dyes and capture clear high contrast fluorescence images.



Breast cancer



Hippocampus



Mouse brain nerve cells

10. With a tiltable viewing head, the most comfortable state of operation can be maintained regardless of whether you are sitting or standing.

11. Tiltable transmitted illumination column.

The culture dishes used for cell observation often have a larger volume and area, and the tiltable transmitted illumination column provides more space for sample replacement, which is more convenient for users to operate.

Application

BS-2094C inverted microscope can be used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. They can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. These microscopes are widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

Specification

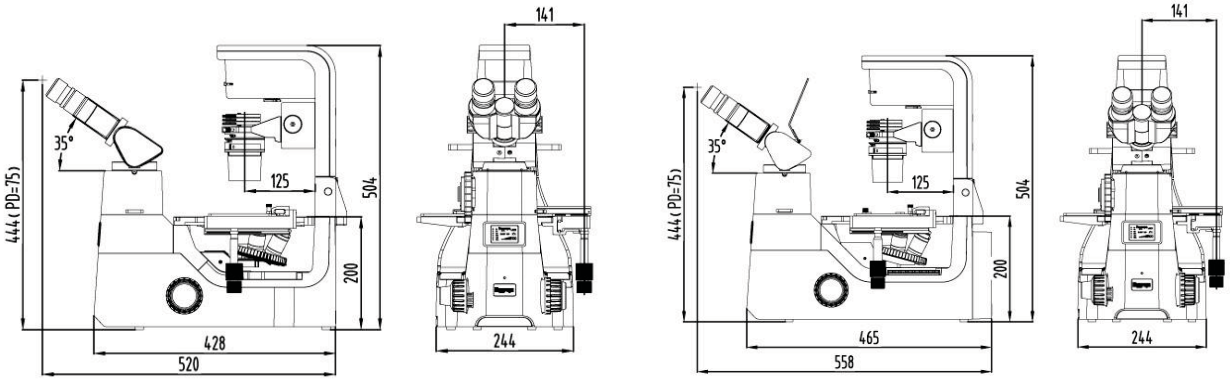
Item	Specification		BS-2094C	BS-2094CF
Optical System	NIS 60 Infinite Optical System, Tube length 200mm		●	●
Viewing Head	Seidentopf Tilting Binocular Head, adjustable 5-35° inclined, Interpupillary Distance 48-75mm, Left side camera port, Light distribution: 100: 0 (100% for eyepiece), 0:100 (100% for camera), Eyepiece Tube Diameter 30mm		●	●
Eyepiece	SW10×/ 22mm		●	●
	WF15×/ 16mm		○	○
	WF20×/ 12mm		○	○
Objective (Parfocal distance 60mm, M25×0.75)	NIS60 Infinite LWD Plan Achromatic Objective	4×/0.1, WD=30mm	●	○
		10×/0.25, WD=10.2mm	○	○
		20×/0.40, WD=12mm	○	○
		40×/0.60, WD=2.2mm	○	○
	NIS60 Infinite LWD Plan Phase Contrast Achromatic Objective	PH10×/0.25, WD=10.2mm	●	○
		PH20×/0.40, WD=12mm	●	○
		PH40×/0.60, WD=2.2mm	●	○
	NIS60 Infinite LWD Plan Semi-APO Fluorescence Objective	4×/0.13, WD=17mm, cover glass=-	○	●
		10×/0.3, WD=7.4mm, cover glass=1.2mm	○	●
		20×/0.45, WD=8mm, cover glass=1.2mm	○	●

		40×/0.60, WD=3.3mm, cover glass=1.2mm	○	●
		60×/0.70, WD=1.8-2.6mm, cover glass=0.1-1.3mm	○	○
	NIS60 Infinite LWD Plan Semi-APO Phase Contrast Objective	4×/0.13, WD=17.78mm, cover glass=-	○	○
		10×/0.3, WD=7.4mm, cover glass=1.2mm	○	○
		20×/0.45, WD=7.5-8.8mm, cover glass=1.2mm	○	○
		40×/0.60, WD=3-3.4mm, cover glass=1.2mm	○	○
		60×/0.70, WD=1.8-2.6mm, cover glass=0.1-1.3mm	○	○
Nosepiece	Coded Quintuple Nosepiece		●	●
Condenser	N.A. 0.3 Insert Plate Condenser, Working Distance 75mm		●	●
	N.A. 0.4 Insert Plate Condenser, Working Distance 45mm		○	○
Telescope	Centering Telescope: used to adjust the center of phase annulus		●	●
Phase Annulus	10×-20×-40× Phase Annulus Plate (center adjustable)		●	●
	4× Phase Annulus Plate		○	○
Stage	Stage 170 (X)×250(Y) mm with glass insert plate (diameter 110mm)		●	●
	Attachable Mechanical Stage, X-Y Coaxial Control, Moving Rang: 128mm×80mm, accept 5 types of petri-dish holders, well plates and stage clips		●	●
	Auxiliary stage 70mm×180mm, used to extend the stage		○	○
	Universal Holder: used for Terasaki plate, glass slide and Φ35-65mm petri dishes		●	●
	Terasaki Holder: used for Φ35mm Petri Dish Holder and Φ65mm petri dishes		○	○
	Glass Slide and Petri Dish Holder Φ54mm		○	○
	Glass Slide and Petri Dish Holder Φ65mm		○	○
	Petri Dish Holder Φ35mm		○	○
	Petri Dish Holder Φ90mm		○	○
Focusing	Coaxial Coarse and Fine Adjustment, tension adjustment, Fine Division 0.001mm, Fine stroke 0.2mm per rotation, Coarse stroke 37.5mm per rotation. Moving Range: up 7mm, down 1.5mm; Without limitation can up to 18.5mm		●	●
Transmitted Illumination	3W S-LED Koehler illumination, Brightness Adjustable		●	●
EPI-Fluorescence Attachment	LED illuminator, built-in Fly-eye lens, can be configured with up to 3 different LED light source and B, G, U fluorescence filter blocks		○	●
	LED light source and V, R, FITC, DAPI, TRITC, Auramine, mCherry fluorescence filters		○	○
Hoffman phase contrast	Hoffman Condenser with 10×, 20×, 40× insert plate, centering telescope and special objective 10×, 20×, 40×		○	○
3D Emboss Contrast	Main emboss contrast plate with 10×-20×-40× will be inserted into condenser		○	○
	Auxiliary emboss contrast plate will be inserted into slot near viewing head		○	○
C-mount Adapter	0.5× C-mount Adapter (focus adjustable)		○	○
	1× C-mount Adapter (focus adjustable)		●	●
Other Accessories	Warm stage		○	○
	Light shutter, can be used to block the external light		○	○
	Dust cover		●	●
Power Supply	AC 100-240V, 50/60Hz		●	●
Fuse	T250V500mA		●	●

Packing	2cartons/set, Packing Size: 47cm×37cm×39cm, 69cm×39cm×64cm, Gross Weight: 20kgs, Net Weight: 18kgs	●	●

Note: ● Standard Outfit, ○ Optional

Dimension



BS-2094C BS-2094CF

Unit: mm

8. BS-2095 Research Inverted Microscope

BS-2095A

BS-2095AF

BS-2095B

BS-2095BF

BS-2095CF

Introduction

As a research grade inverted microscope designed to meet advanced life science research, BS-2095 can meet your various needs. It is an all-around microscope that can achieve observation methods such as bright field, phase contrast, polarization, DIC, fluorescence, etc. It adopts an Infinite optical system, reasonable structure and ergonomic design. With an innovative optical and structure design idea, excellent optical performance and easy to operate system, this research inverted biological microscope makes your works enjoyable. It has a trinocular head, so digital camera or digital eyepiece can be added to the trinocular head to take photos and videos.

Fully considering the user's operating habits and adopting ergonomic design, it greatly reduces mechanical fatigue caused by long-term observation work. BS-2095C adopts high-speed electric control to simplify and visualize complex operations, making them easier and more convenient to operate.

Feature

1. Different models for different needs

BS-2095A is a manual research inverted microscope for bright field, phase contrast, fluorescence and DIC observation methods. A large display screen is added on BS-2095B for easier operation in darkroom. BS-2095C is full motorized research inverted microscope with operation screen to achieve fully motorized control.

2. Semi-apochromatic plan objectives

With multi-layer coating technology, semi-apochromatic objectives can compensate for spherical aberration and chromatic aberration from ultraviolet to near-infrared. The 20X and 40X semi-apochromatic objectives have built-in correction rings that can correct coverage errors caused by non-standard cover glass thickness.

3. Tilting transmitted illumination column

Tiltable transmitted illumination column ensures the users have a large workspace and easy for sample replacement.

4. Condenser meets various needs

The condenser can meet different observation methods including bright field, phase contrast and DIC, to provide maximum selection space for your experiment.

5. Multi optical ports

The left side of the microscope is equipped with an optical path output selection dial, which facilitates the allocation of optical images to different ports and provides expansion space for more optical image applications.

6. Intermediate magnification available

Through smooth dial operation, the intermediate magnification can achieve quick switching between 1x and 1.5x.

7. Touch screen

For easier operation in darkroom, BS-2095B has added a 4.3-inch touch screen display on the front panel to show the microscope usage status.

8. X/Y axis electric motorized stage

Equipped with the motorized stage with large stroke and high precision, BS-2095C can achieve quick positioning and is suitable for multi-point observation.

9. Motorized condenser turntable

The condenser module of BS-2095C can be motorized converted.

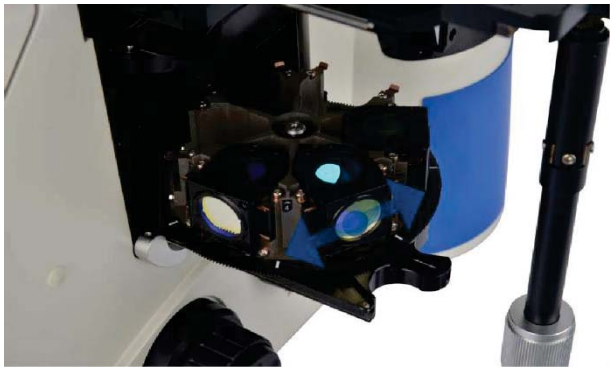
10. Z-axis auto focusing

BS-2095C can achieve fast and precise motorized Z-axis control.

11. Electric motorized nosepiece

BS-2095C can achieve motorized conversion of 6 objectives freely.

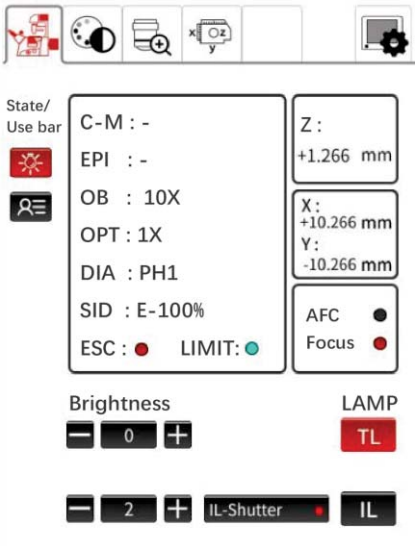
12. Electric fluorescence module turntable



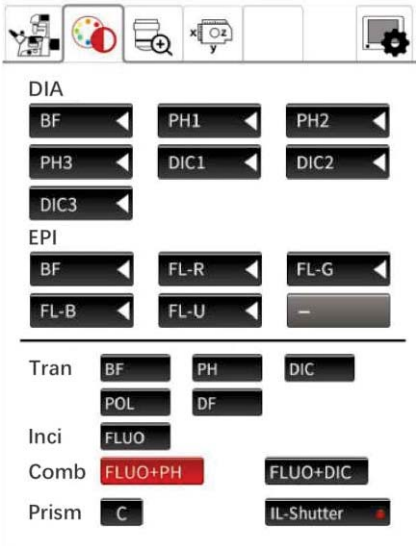
BS-2095C can achieve motorized conversion of 6-hole fluorescence modules on the turntable.

13. Full motorized control

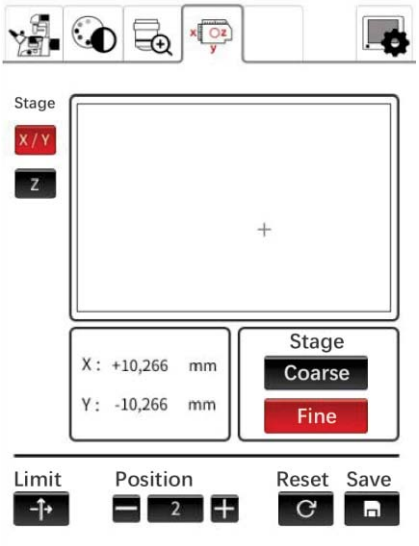
An operation screen is added at the front of BS-2095C, which can achieve almost all microscope controls, including motorized focusing, stage movement, objectives selection, condenser module conversion, intermediate magnification conversion, side optical port output selection, aperture adjustment, multifunctional turntable conversion and other functions. The control handle is integrated on the right side of the body, greatly saving space.



Microscope status display



observation method selection



stage control

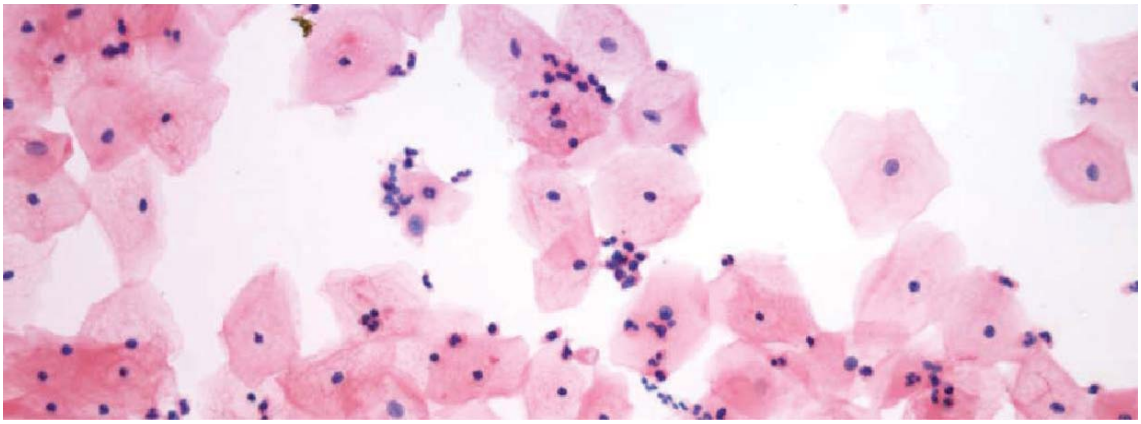
Application

BS-2095 Inverted microscope is used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. It can be used for continuous observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. This microscope is widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

1. Bright Field

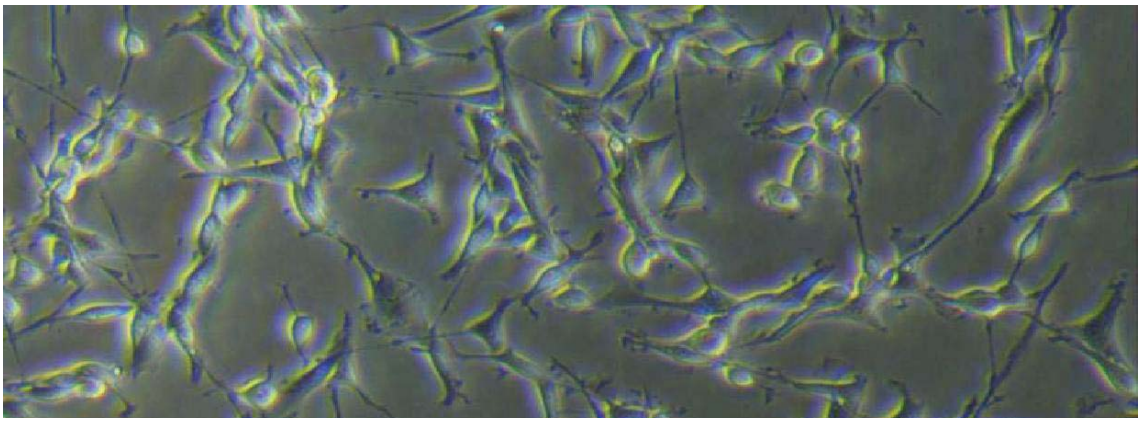
The unique NIS infinite optical system, combined with semi-apochromatic fluorescence objectives, effectively eliminates imaging problems such as field curvature, chromatic aberration, spherical aberration and coma, resulting

in brighter images with higher resolution and flatness at all magnifications.



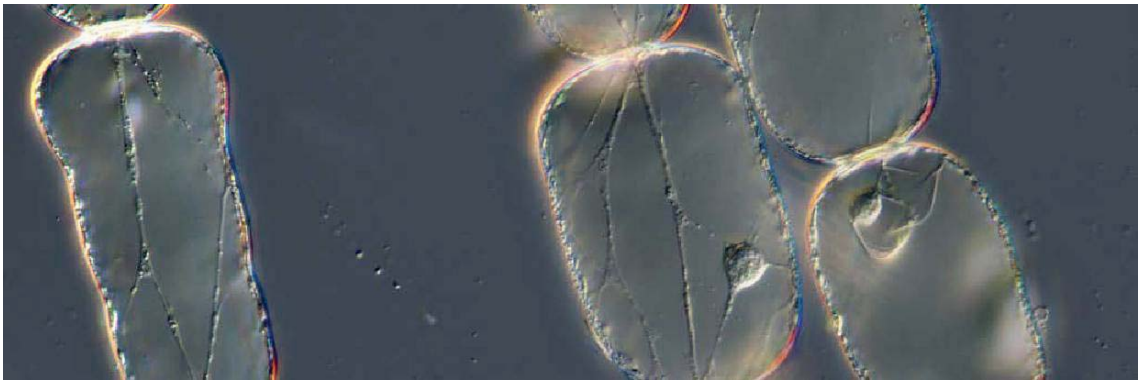
2. Phase Contrast

Phase contrast is an optical contrast technique that uses a phase contrast objective and a focusing ring. High efficiency halogen lamp can provide bright light sources for the system. Even at high magnification, clear images can be obtained.



3. DIC

Differential interference is a highly cost-effective optical technology that does not require expensive optical components. The relief contrast only needs a bright field objective and 2 phase contrast adjustment sliders. For thicker samples, such as induced pluripotent stem cells, differential interferometry can provide pseudo three-dimensional glare free images, while traditional phase contrast observation methods often result in halos. In addition, differential interferometry can be used in glass culture dishes and is a highly applicable observation technique.



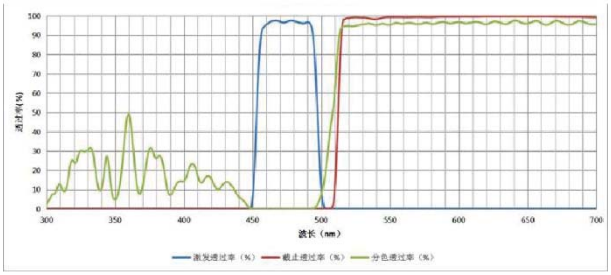
4. Fluorescence

Adopting the latest coating technology

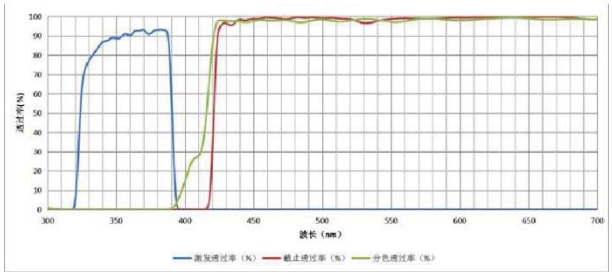
Adopting the latest advanced secondary ripple elimination coating technology, the transmittance of fluorescence is higher, the cutoff is more sensitive, and the detection efficiency is higher.

Fluorescence observation is more comfortable

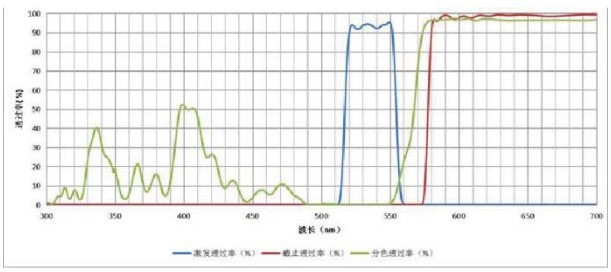
All fluorescence filter components are equipped with ultra-high performance color filters. The fluorescence lighting pillar can be equipped with six color filter groups, which can simultaneously image multiple stained specimens. High sensitivity fluorescence can achieve bright and high contrast imaging effects. The leading coating technology also reduces scattered light and spontaneous fluorescence, ensuring a higher signal-to-noise ratio.



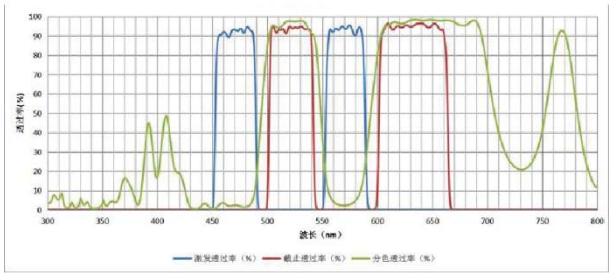
FITC Filters



DAPI Filters



TRITC Filters



B/G Filters

Specification

BS-2095A, BS-2095AF, BS-2095AF (LED)

Item	Specification	BS-2095A	BS-2095AF	BS-2095AF (LED)
Optical System	Infinite optical system	●	●	●
Eyepiece	SW10X/25mm, Φ30mm	●	●	●
	SW10X/22mm, Φ30mm	○	○	○
	EW12.5X/17.5mm, Φ30mm	○	○	○
	WF15X/16mm, Φ30mm	○	○	○

	WF20X/12mm, Φ30mm		○	○	○
Viewing Head	Trinocular head with Bertrand lens, inclined at 45°, Interpupillary 47-78mm, 3 position beam split ratio: 50/50, 100/0, 0/100		●	●	●
	Binocular ERGO head		○	○	○
Objectives	Infinite Plan Semi-APO Phase Contrast Objectives	4X/ NA=0.13, WD=16.5mm, cover glass 0-2mm	○	○	○
		10X/ NA=0.3, WD=8.1mm, cover glass 1.2mm	●	●	●
		20X/ NA=0.45, WD=7.5-8.8mm, cover glass 0-2mm	●	●	●
		40X/ NA=0.60, WD=3-4.4mm, cover glass 0-2mm	●	●	●
		60X/ NA=0.70, WD=1.8-2.6mm, cover glass 0.1-1.3mm	○	○	○
	Infinite Semi-APO Fluorescence Objectives	4X/ NA=0.13, WD=17mm	○	○	○
		10X/ NA=0.3, WD=7.4mm, cover glass 1.2mm	○	○	○
		20X/ NA=0.45, WD=8mm, cover glass 1.2mm	○	○	○
		40X/ NA=0.60, WD=3.3mm, cover glass 1.2mm	○	○	○
		60X/ NA=0.70, WD=1.8-2.6mm	○	○	○
	Infinite Plan Apochromatic Objectives	10X/ NA=0.45, WD=4.0mm	○	○	○
		20X/ NA=0.75, WD=1.1mm	○	○	○
		40X/ NA=0.95, WD=0.21mm	○	○	○
		(Oil) 60X/ NA=1.42, WD=0.25mm	○	○	○
		100X/ NA=1.45, WD=0.13mm	○	○	○
Nosepiece	6-hole nosepiece with DIC slot (DIC for transmitted and reflected)		●	●	●
Condenser	Long working distance condenser, NA0.55, WD=26mm, with 6-position plate		●	●	●
Illumination	Kohler illumination, 12V/100W halogen lamp		●	●	●
	ECO Auto-off function (automatically shut off in 15 mins if no users)		○	●	●
Focusing	Coaxial coarse & fine focusing. Movement range 9mm, coarse adjustment 2mm/rotation, fine adjustment 0.2mm/rotation		●	●	●
Internal Magnification	1X, 1.5X		●	●	●
Side Video Port	Switchable by turning plate, 3 models: left side port/eyepiece=50/50; right side port/eyepiece=20/80; left & right sides port/eyepiece=0/100		●	●	●
Dark Field	Dark field kit		○	○	○
Phase Contrast	Phase contrast kit		●	●	●
DIC	DIC kit		○	○	○
Hoffman Phase Contrast Attachment	Condenser		○	○	○
	Hoffman phase contrast 10X, 20X, 40X plug-in kit				
	Hoffman Phase Contrast Objectives	10X/ NA=0.25, WD=10.2mm			
		20X/ NA=0.24, WD=12mm			

		40X/ NA=0.6, WD=2.2mm			
	Centering telescope				
Stage	Three-layer mechanical stage, stage size: 340×230mm, movement range 130×85mm, flexible knob. Different small sizes stage could be attached to main stage		●	●	●
Fluorescence Attachment	Epi-fluorescence attachment with 100W HBO mercury lamp and B, G, UV fluorescence filters, field diaphragm, center adjustable.		○	●	○
	Epi-fluorescence attachment with 5W LED lamp of B, G, UV, R and B, G, UV fluorescence filters (input voltage: 100V-240V), field diaphragm, center adjustable.		○	○	●
	Multi-model plate structure, total 6 position, could be taken out from main frame and change different cube easily.		●	●	●
	V, FITC, DAPI, TRITC, Red, mCherry (Texas Red), FL-BG fluorescence filters		○	○	○
C-mount Adapter	0.5X C-mount adapter		○	○	○
	1× C-mount Adapter		○	○	○

BS-2095B, BS-2095BF, BS-2095BF (LED)

Item	Specification		BS-2095B	BS-2095BF	BS-2095BF (LED)
Optical System	Infinite optical system		●	●	●
Eyepiece	SW10X/25mm, Φ30mm		●	●	●
	SW10X/22mm, Φ30mm		○	○	○
	EW12.5X/17.5mm, Φ30mm		○	○	○
	WF15X/16mm, Φ30mm		○	○	○
	WF20X/12mm, Φ30mm		○	○	○
Viewing Head	Trinocular head with Bertrand lens, inclined at 45°, Interpupillary 47-78mm, 3 position beam split ratio: 50/50, 100/0, 0/100		●	●	●
	Binocular ERGO head		○	○	○
Objectives	Infinite Plan Semi-APO Phase Contrast Objectives	4X/ NA=0.13, WD=16.5mm, cover glass 0-2mm	○	○	○
		10X/ NA=0.3, WD=8.1mm, cover glass 1.2mm	●	●	●
		20X/ NA=0.45, WD=7.5-8.8mm, cover glass 0-2mm	●	●	●
		40X/ NA=0.60, WD=3-4.4mm, cover glass 0-2mm	●	●	●
		60X/ NA=0.70, WD=1.8-2.6mm, cover glass 0.1-1.3mm	○	○	○
	Infinite Semi-APO Fluorescence Objectives	4X/ NA=0.13, WD=17mm	○	○	○
		10X/ NA=0.3, WD=7.4mm, cover glass 1.2mm	○	○	○
		20X/ NA=0.45, WD=8mm, cover glass 1.2mm	○	○	○
		40X/ NA=0.60, WD=3.3mm, cover glass 1.2mm	○	○	○
		60X/ NA=0.70, WD=1.8-2.6mm	○	○	○

	Infinite Plan Apochromatic Objectives	10X/ NA=0.45, WD=4.0mm	○	○	○
		20X/ NA=0.75, WD=1.1mm	○	○	○
		40X/ NA=0.95, WD=0.21mm	○	○	○
		(Oil) 60X/ NA=1.42, WD=0.25mm	○	○	○
		100X/ NA=1.45, WD=0.13mm	○	○	○
Nosepiece	6-hole nosepiece with DIC slot (DIC for transmitted and reflected)		●	●	●
Condenser	Long working distance condenser, NA0.55, WD=26mm, with 6-position plate		●	●	●
Illumination	5W LED illumination (service life of minimum 50,000 hours)		●	●	●
	ECO Auto-off function (automatically shut off in 15 mins if no users)		○	●	●
Focusing	Coaxial coarse & fine focusing. Movement range 9mm, coarse adjustment 2mm/rotation, fine adjustment 0.2mm/rotation		●	●	●
Internal Magnification	1X, 1.5X		●	●	●
Side Video Port	Switchable by turning plate, 3 models: left side port/eyepiece=50/50; right side port/eyepiece=20/80; left & right sides port/eyepiece=0/100		●	●	●
Dark Field	Dark field kit		○	○	○
Phase Contrast	Phase contrast kit		●	●	●
DIC	DIC kit		○	○	○
Hoffman Phase Contrast Attachment	Condenser		○	○	○
	Hoffman phase contrast 10X, 20X, 40X plug-in kit				
	Hoffman Phase Contrast Objectives	10X/ NA=0.25, WD=10.2mm			
		20X/ NA=0.24, WD=12mm			
		40X/ NA=0.6, WD=2.2mm			
	Centering telescope				
Stage	Three-layer mechanical stage, stage size: 340×230mm, movement range 130×85mm, flexible knob. Different small sizes stage could be attached to main stage		●	●	●
Display	4.3-inch touch screen showing the microscope usage status		●	●	●
Fluorescence Attachment	Epi-fluorescence attachment with 100W HBO mercury lamp and B, G, UV fluorescence filters, field diaphragm, center adjustable.		○	●	○
	Epi-fluorescence attachment with 5W LED lamp and B, G, UV fluorescence filters (input voltage: 100V-240V), field diaphragm, center adjustable.		○	○	●
	Multi-model plate structure, total 6 position, could be taken out from main frame and change different cube easily.		●	●	●
	V, FITC, DAPI, TRITC, Red, mCherry (Texas Red), FL-BG fluorescence filters		○	○	○
C-mount Adapter	0.5X C-mount adapter		○	○	○
	1× C-mount Adapter		○	○	○

BS-2095C, BS-2095CF, BS-2095CF (LED)

Item	Specification		BS-2095C	BS-2095CF	BS-2095CF (LED)
Optical System	Infinite optical system		●	●	●
Eyepiece	SW10X/25mm, Φ30mm		●	●	●
	SW10X/22mm, Φ30mm		○	○	○
	EW12.5X/17.5mm, Φ30mm		○	○	○
	WF15X/16mm, Φ30mm		○	○	○
	WF20X/12mm, Φ30mm		○	○	○
Viewing Head	Trinocular head with Bertrand lens, inclined at 45°, Interpupillary 47-78mm, 3 position beam split ratio: 50/50, 100/0, 0/100		●	●	●
	Binocular ERGO head		○	○	○
Objectives	Infinite Plan semi-APO phase contrast objective	4X/ NA=0.13, WD=16.5mm, cover glass 0-2mm	○	○	○
		10X/ NA=0.3, WD=8.1mm, cover glass 1.2mm	●	●	●
		20X/ NA=0.45, WD=7.5-8.8mm, cover glass 0-2mm	●	●	●
		40X/ NA=0.60, WD=3-4.4mm, cover glass 0-2mm	●	●	●
		60X/ NA=0.70, WD=1.8-2.6mm, cover glass 0.1-1.3mm	○	○	○
	Infinite Semi-APO Fluorescence Objectives	4X/ NA=0.13, WD=17mm	○	○	○
		10X/ NA=0.3, WD=7.4mm, cover glass 1.2mm	○	○	○
		20X/ NA=0.45, WD=8mm, cover glass 1.2mm	○	○	○
		40X/ NA=0.60, WD=3.3mm, cover glass 1.2mm	○	○	○
		60X/ NA=0.70, WD=1.8-2.6mm	○	○	○
	Infinite Plan Apochromatic Objectives	10X/ NA=0.45, WD=4.0mm	○	○	○
		20X/ NA=0.75, WD=1.1mm	○	○	○
		40X/ NA=0.95, WD=0.21mm	○	○	○
		(Oil) 60X/ NA=1.42, WD=0.25mm	○	○	○
		100X/ NA=1.45, WD=0.13mm	○	○	○
Nosepiece	Motorized 6-hole nosepiece with DIC slot (DIC for transmitted and reflected)		●	●	●
Condenser	Motorized Long working distance condenser, NA0.55, WD=26mm, with 7-position plate		●	●	●
Transmitted Illumination	5W LED illumination (service life of minimum 50,000 hours)		●	●	●
Focusing	Motorized auto focusing mechanism, independent operation of left and right hand-wheels, three-speed speed adjustment, focusing range 9mm, repeat positioning accuracy: 0.1μm, motorized escape and recovery mechanism		●	●	●
Internal Magnification	1X, 1.5X		●	●	●

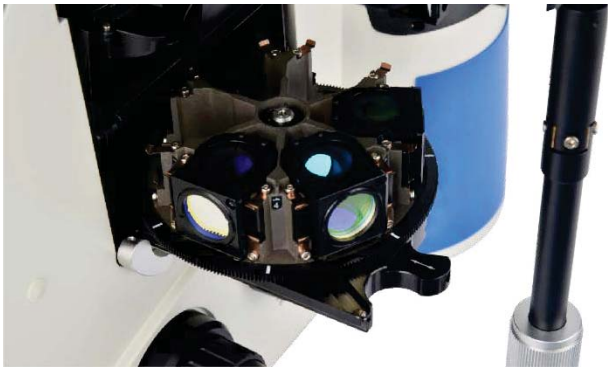
Side Video Port	Switchable by turning plate, 3 models: left side port/eyepiece=50/50; right side port/eyepiece=20/80; left & right sides port/eyepiece=0/100		●	●	●
Dark Field	Dark field kit		○	○	○
Polarizing Kit	Polarizer & analyzer		○	○	○
Phase Contrast	Phase contrast kit		●	●	●
DIC	DIC kit		○	○	○
Hoffman Phase Contrast Attachment	Condenser		○	○	○
	Hoffman phase contrast 10X, 20X, 40X plug-in kit				
	Hoffman Phase Contrast Objectives	10X/ NA=0.25, WD=10.2mm			
		20X/ NA=0.24, WD=12mm			
		40X/ NA=0.6, WD=2.2mm			
	Centering telescope				
Stage	Motorized Three-layer mechanical stage, stage size: 340×230mm, movement range 130(X)×100(Y)mm, flexible knob. Different small sizes stage could be attached to main stage		●	●	●
Display	Touch screen showing the microscope usage status		●	●	●
Fluorescence Attachment	Epi-fluorescence attachment with 100W HBO mercury lamp and B, G, UV fluorescence filters, field diaphragm, center adjustable.		○	●	○
	Epi-fluorescence attachment with 5W LED lamp and B, G, UV fluorescence filters (input voltage: 100V-240V), field diaphragm, center adjustable.		○	○	●
	Motorized multi-model filter block structure, total 6 position, could be taken out from main frame and change different cube easily.		●	●	●
	V, FITC, DAPI, TRITC, Red, mCherry (Texas Red), FL-BG fluorescence filters		○	○	○
C-mount Adapter	0.5X C-mount adapter		○	○	○
	1× C-mount Adapter		○	○	○

Note: ● Standard Outfit, ○ Optional

Accessories

1. Fluorescence module turntable

Adopting a multifunctional six-hole turntable structure, fluorescence modules can be easily removed from the main unit, making it convenient to replace various fluorescence excitation modules.



2. Diaphragm sliders

The three different types of light barrier sliders, including reflective field diaphragm, iris diaphragm and filter insert, enhance the multifunctionality of BS-2095 in live cell researches. When used in conjunction with iris diaphragm and fluorescence filter insert, the optimal fluorescence intensity can be adjusted according to the selected fluorescence module and objectives.

3. Fluorescence illumination

Mercury lamp

Standard OSRAM 100W HBO ultra-high pressure spherical mercury lamp, with high fluorescence brightness and uniform field of view. At the same time, a light gate is installed at the front of the vertical illuminator to cut off the fluorescence lighting at any time and protect the sample.

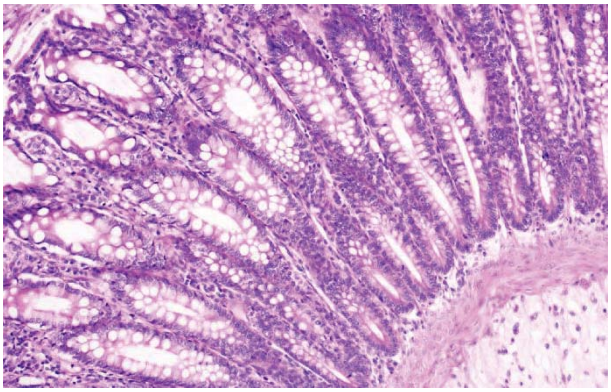
LED lamp

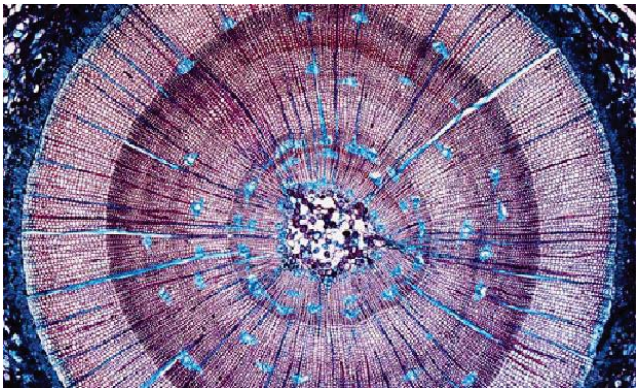
4-color LED illuminator, brightness adjustable. The lifespan of the bulb can be up to 10,000 hours. Low phototoxicity is friendly to fine samples such as cells. It solves the problems of traditional fluorescent mercury lamp requiring preheating, cooling, and high temperatures during use.

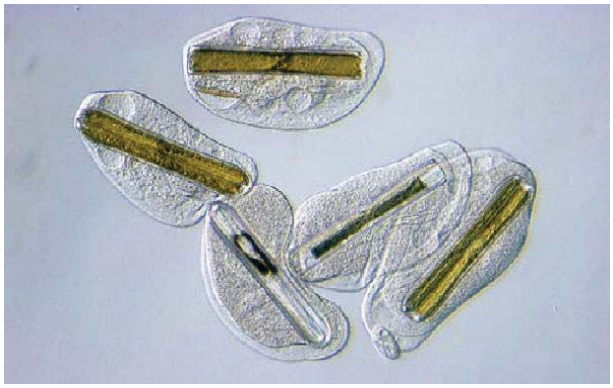
4. Hoffman phase contrast

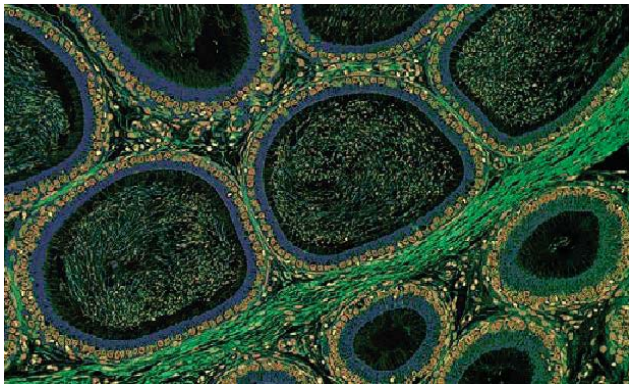
Hoffman phase contrast attachment, including condenser, Hoffman phase contrast 10X, 20X, 40X plug-in, 10X, 20X, 40X Hoffman phase contrast objectives and centering telescope.

Sample Images

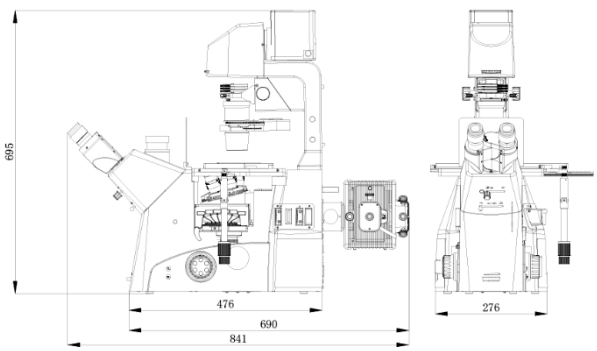




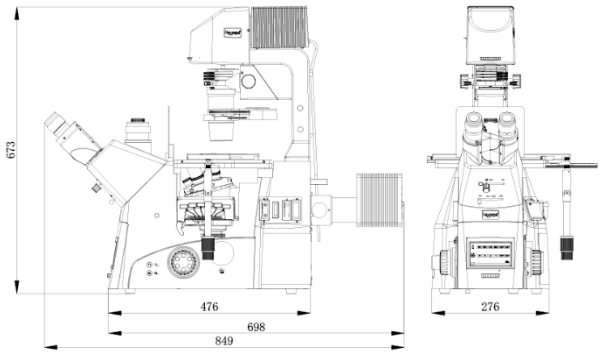




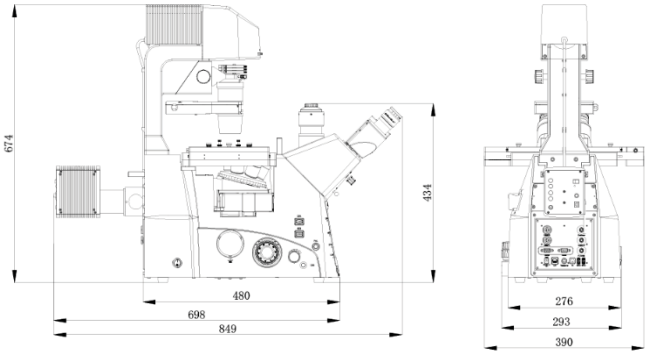
Dimension



BS-2095AF



BS-2095BF (LED)



BS-2095CF (LED)

9. BS-2097 Research Inverted Microscope

BS-2097

Introduction

As a highly scalable optical platform for living cell imaging, it combines excellent optical and mechanical properties, provides high-resolution, high-contrast microscopic images, the ergonomic design stand, bringing the researchers more convenient and comfortable. This new system can be widely used in cell biology, neurobiology, developmental biology, molecular biology, photobiology and other fields. BS-2097 inverted system microscope will be your choice of live cell imaging now and in the future.

Feature

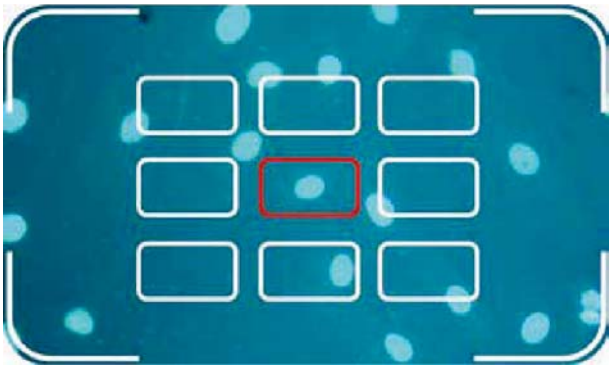
1. Elevation adjustable viewing head

BS-2097 is equipped with a 20-45° adjustable binocular viewing head, which can raise the eye point by 78mm (65mm interpupillary distance) as required. It can be observed easily and quickly even in a standing state, which is effective avoiding fatigue of eyes and limbs.

2. Integrated button

BS-2097 retains the traditional coarse and fine adjustment mode, cancels the gear mechanism, integrates electric control technology, and realizes manual and automatic integration. The brightness, objectives, attenuator turntable and fluorescence turntable can be quickly switched or rotated through the corresponding buttons on the button panels on both sides.

3. Auto Focus



AF one-key auto focus can quickly adjust the Z-axis height according to the real-time image, and eliminates the need for fine-adjusting steps and improves work efficiency.

4. Low-position platform handwheel

The low-position platform handwheel can be rotated 360°, which can effectively reduce the hand fatigue caused by long-term operation and is ergonomic and improves the convenience of operation.

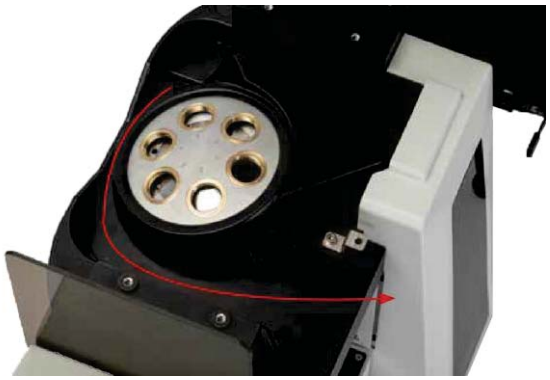
5. Tilting transmission lighting structure

The tilting structure of the transmission bracket ensures a large working space for users and facilitates the replacement of specimens.

6. Electric Nosepiece

By using the buttons on the side of the rack or PC control, the objective lens can be quickly switched, improving operational convenience.

7. Waste liquid drainage structure



The drainage groove structure is designed under the objective nosepiece, which can prevent the optical components and modules from accidentally being wetted by the cell culture medium or soaking liquid, contaminating and damaging the microscope, simplifying maintenance.

8. Integrated panel control

BS-2097 front digital display screen can display the status of multiple components such as microscope objective lens magnification, brightness, and fluorescence band in real time, and can complete the setting of all observation methods, the selection of optical port status, and the switch of fluorescence shutter, making repetitive experimental operations more convenient.

9. High scalability

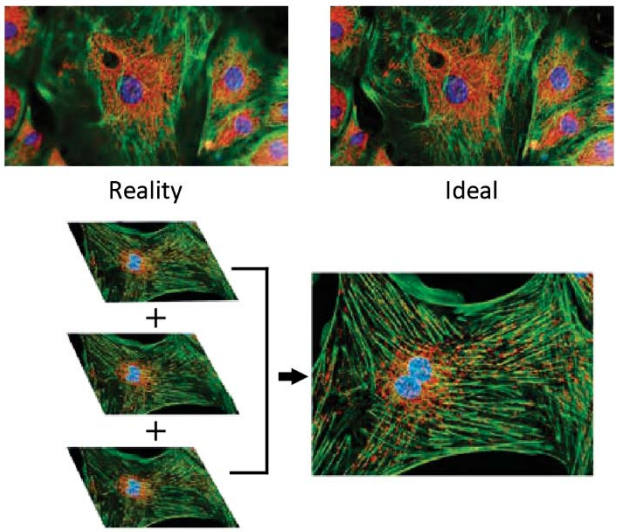
BS-2097 can flexibly configure single-layer / double-layer optical paths according to the application, providing possibility for system expansion. The double-layer optical path can be customized according to different needs, suitable for various modifications and self-developed.

10. Software

The software is able for fluorescence intensity analysis, real-time/automatic depth of field expansion, image stitching and so on.

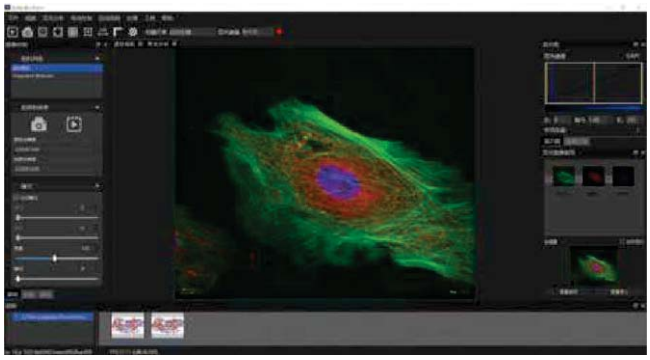
Image stitching

It is able to stitch the local image into a complete image.



Focus stacking

Users can set up and down moving distances, as well as movement steps, to move the stage up and down, automatically capture images of different depths of field, and stack the images.



Fluorescence synthesis

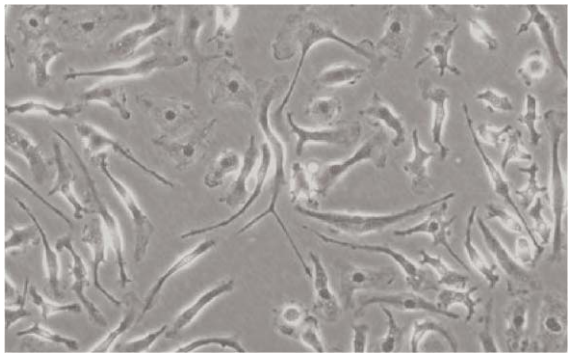
The image from different fluorescence channels, are able to be synthesized automatically and kept separately. Each image is available to be adjusted and the final composited image would be auto updated.

Cell counting

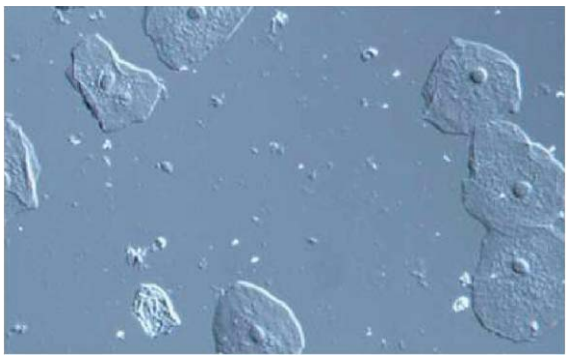
After clicking the cell counting menu button, segment the image in the current window, count cells based on the segmentation value, and display cell area, perimeter, and roundness.

Application

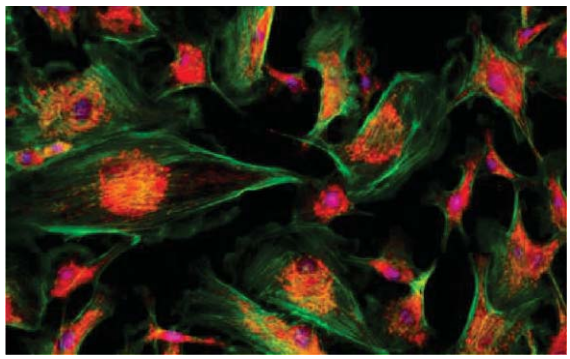
Bright Field



Phase Contrast



DIC



Fluorescence

Specification

Item	Specification		BS-2097
Optical System	Infinity Color Correction Optical System		●
Viewing Head	20-45 degree tilting binocular tube, interpupillary distance: 50-76mm		●
Eyepiece	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter		●
Objectives	Long Working Distance Plan Semi- Apochromatic Objectives	4X/NA=0.13, WD=17mm	○
		10X/NA=0.3, WD=8.8mm	○
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	○
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	○
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	○
	Long Working Distance Plan Semi- Apochromatic Positive Phase Contrast Objectives	4X/NA=0.13, WD=17mm	●
		10X/NA=0.3, WD=8.8mm	●
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	●
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	●
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	●
	Infinity Plan Apochromatic Objectives	4X/NA=0.16, WD=12.8mm	○
		10X/NA=0.4, WD=3.2mm	○
		20X/NA=0.75, WD=0.6mm	○
		40X/NA=0.95, WD=0.15mm	○
		60X/NA=0.9, WD=0.26mm	○
		(Oil) 60X/NA=1.25, WD=0.14mm	○
		(Oil) 100X/NA=1.35, WD=0.13mm	○
	Infinity Plan Super Apochromatic Objectives	10X/NA=0.4, WD=3.1mm	○
		20X/NA=0.8, WD=0.6mm	○
		40X/NA=0.95, WD=0.18mm	○
		(Oil) 60X/NA=1.42, WD=0.17mm	○
		(Oil) 100X/NA=1.45, WD=0.13mm	○
	Long Working Distance Plan Semi-Apochromatic Relief Phase Contrast Objectives	10X/NA=0.3, WD=8.8mm	○
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	○
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	○
Microscope Body & Nosepiece	Low position coarse and fine coaxial electric focusing mechanism, range: 10.5mm, precision: 1μm. Built-in electric left camera port, splitting ratio: 0:100 / 50:50 / 100:0, dual optical path, with fluorescence light barrier. Electric bright field sextuple nosepiece with DIC slot.		●
	Base mounting bracket		○
	Right camera port, splitting ratio: 100:0 / 0:100, field of view: 16mm. Built-in 1X CTV, C-mount adapter		○
Illumination	Pillar tilt mechanism, Koehler transmission illuminator, adjustable condenser holder with 65mm stroke. 4 filters holders with LBD, Green filter, Neutral filter for halogen models or Neutral filter for LED models		●
	Color temperature transition filter kit, for BS20970035		○
	Green contrast filter kit, for BS20970035		○
	12V/100W halogen illumination, filament center preset		○

	12V/100W halogen lamp	○
	10W cool color LED light illumination, color temperature 5000K	●
Condenser & Iris	Manual septuple condenser, NA 0.55, WD=27mm. 3 holds for Φ30mm (phase contrast), 4 holds for Φ38mm (DIC), support for bright field/black field/simple polarization/phase contrast/DIC, with fluorescence light barrier. (BS20970038)	●
	4X Phase contrast annular iris (for BS20970038)	●
	10X Phase contrast annular iris (for BS20970038)	●
	20X/40X/60X Phase contrast annular iris (for BS20970038)	●
	4X/10X/20X Black field kit, for BS20970038	○
	Super long working distance manual condenser with 5 holes, NA 0.3, WD=73mm, support for 4X-60X phase contrast, simple polarizing observation and 10X-40X relief phase contrast observation. (BS20970043)	○
	4X Phase contrast annular iris (for BS20970043)	○
	10X Phase contrast annular iris (for BS20970043)	○
	20X/40X/60X Phase contrast annular iris (for BS20970043)	○
	10X Oblique iris (for BS20970043) for relief phase contrast observation	○
	20X Oblique iris (for BS20970043) for relief phase contrast observation	○
	40X Oblique iris (for BS20970043) for relief phase contrast observation	○
	360 degree rotatable polarizer (for BS20970043), mandatory for relief phase contrast observation	○
DIC	Transmitted DIC kit	○
	10X transmitted DIC ring (for BS20970038)	○
	20X transmitted DIC ring (for BS20970038)	○
	40X/60X transmitted DIC ring (for BS20970038)	○
	Analyzer kit (for BS20970038)	○
	Polarizer kit (for BS20970038)	○
Fluorescence Module	Fluorescence attachment with 8 holes, with manual shutter	●
	Cable 30cm, connecting the fluorescence attachment to the frame	●
	Dust cap	●
	B fluorescence filter cube	●
	G fluorescence filter cube	●
	UV fluorescence filter cube	●
	L type fluorescence attachment, with filter plugboard, ND25 attenuation piece, ND50 attenuation piece	●
	100W mercury lamp house	●
	Fluorescence power supply	●
	100W DC mercury lamp	●
	Extension accessory	●
	Fluorescence centering objective	●
Stage	Manual mechanical stage, size: 300mm(X)*240mm(Y), moving range: 135mm(X)*85mm(Y), stage thickness: 30mm. Right universal handle, X/Y axis limitable and lockable, moving range 50mm * 50mm after locked; with pressure clap for holding slices and culture flasks, with Φ110mm replaceable disc (inner Φ30), with metal stage plate with waist shaped hole.	●

Electric Control Box & PC	Electric control box, input voltage 90-265VAC wide voltage, output 12V100W or 12V10W.Digitally adjustable output voltage through CAN, in addition to three outputs of 24V5A/15V5A/5V5A, equipped with forced air cooling, including one 3C power cord.	●
	DB26 Cable 200cm, connecting the electric control box to the frame	●
	DELL PRECISIOM T3650 (I7 11700,16GB/256GB+1TB/P620) +P2722H	○
	DB9 Cable 200cm, connecting the PC to the electric control box	●
	USB-CAN card. When the customer purchases computer by themselves and requires computer to control microscope electric control, it must be paired.	●
	PCIE-CAN card. When the customer purchases computer by themselves and requires computer to control microscope electric control, it must be paired.	○
Telescope	Telescope (Φ30)	●
C-mount Adapter	0.5X C-mount adapter, adjustable focus	○
	0.65X C-mount adapter, adjustable focus	●
	1X C-mount adapter, adjustable focus	○
Other Accessories	Fluorescence free oil 30ml	○
	Internal hexagonal Spanner M3 for phase contrast adjusting screw	●
	Internal hexagonal Spanner M4	●
	Internal hexagonal Spanner M5	●

Note: ● Standard Outfit, ○ Optional

Accessories

1. Long Working Distance Semi-Apochromat Objectives

A complete set of long working distance semi-apochromatic objective lenses has been developed for cell observation. The objective lens with correction rings have a strong advantage in observing glass substrates and petri dished of different thicknesses, achieving precise focusing by correcting coverage differences.

Long Working Distance Plan Semi-Apochromatic Objectives

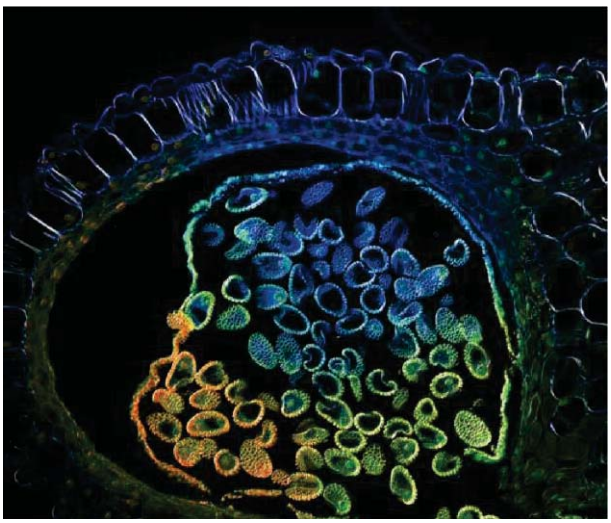
Long Working Distance Plan Semi Apochromatic Positive Phase Contrast Objectives

Long Working Distance Plan Semi-Apochromatic Relief Phase Contrast Objectives

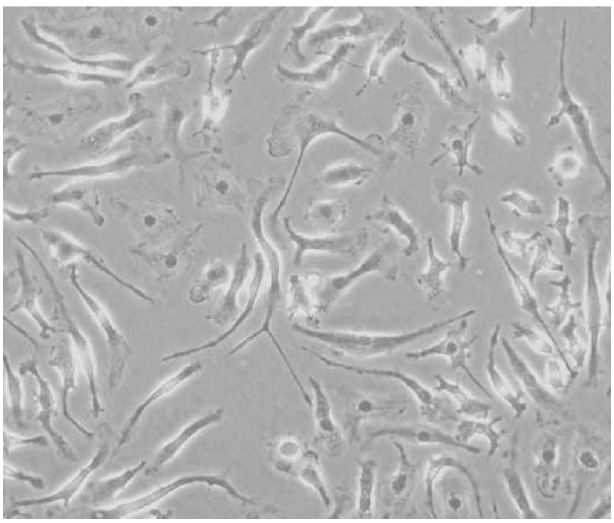
2. Infinite Plan Apochromatic Objectives

3. Infinite Plan Super Apochromatic Objectives

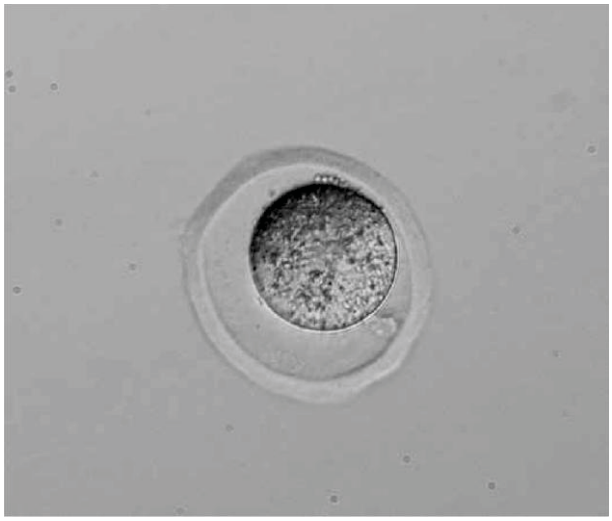
Sample Image



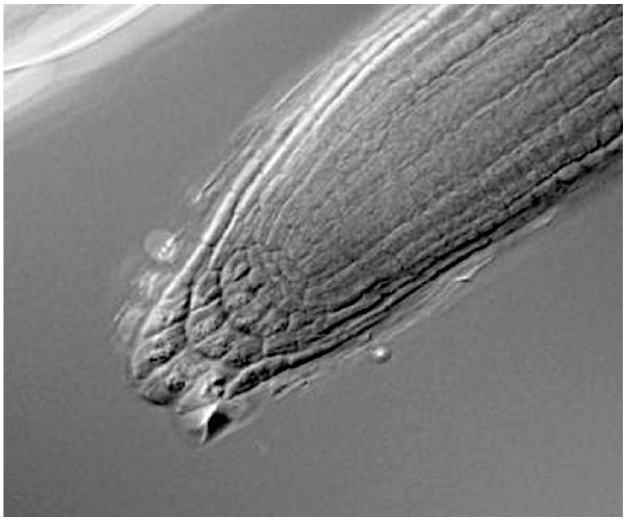
Anther of Lily Fluorescence



Normal rat kidney cells Phase contrast

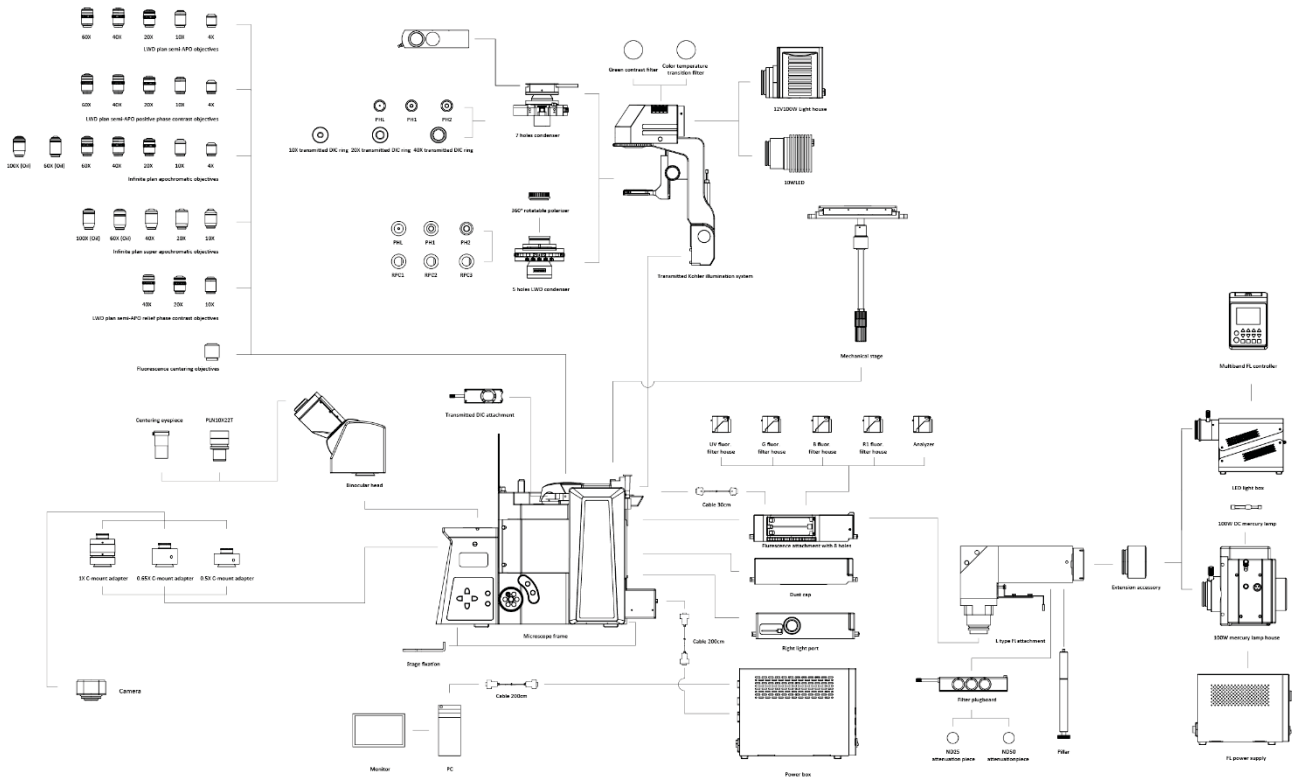


Mouse fertilized egg Relief phase contrast

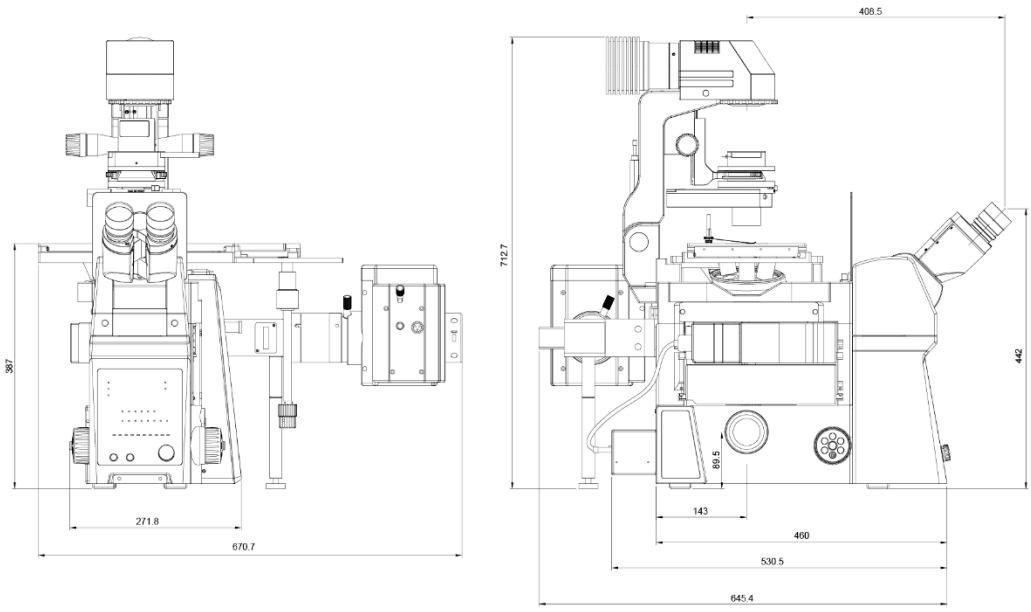


Arabidopsis roots DIC

System Diagram



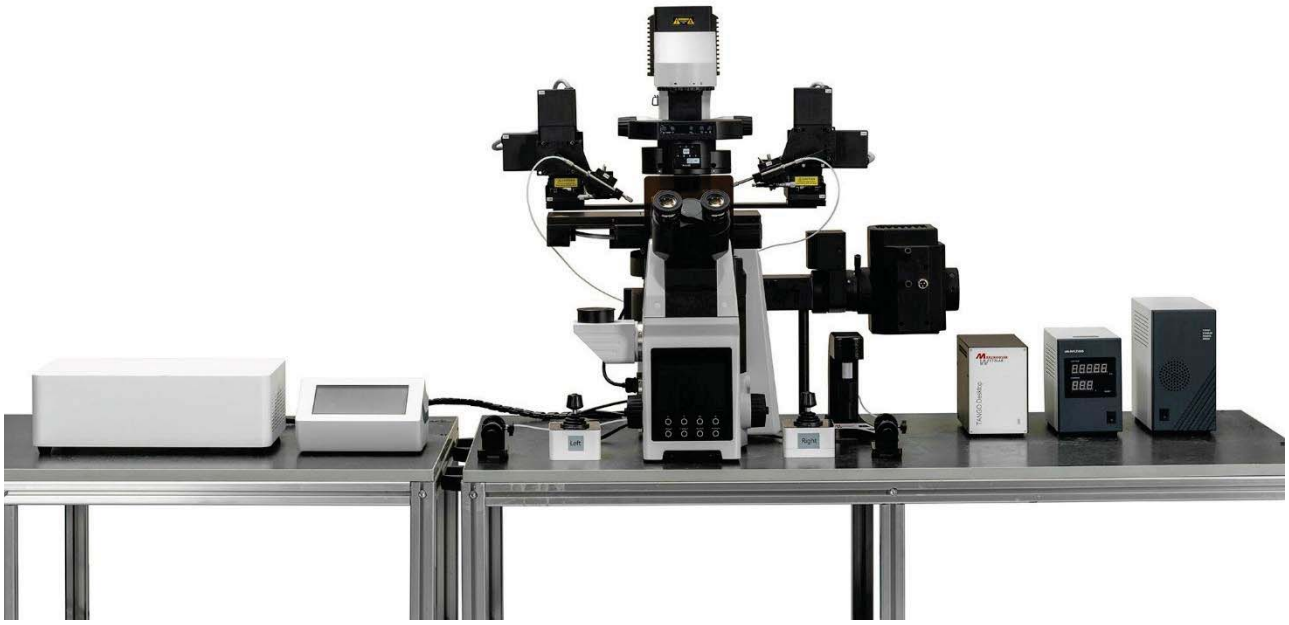
Dimension



Unit:mm

10. BS-2097MM Research Inverted Microscope with Micromanipulator

Configuration



BS-2097MM

Introduction

As a highly scalable optical platform for living cell imaging, it combines excellent optical and mechanical properties, provides high-resolution, high-contrast microscopic images, the ergonomic design stand, bringing the researchers more convenient and comfortable. This new system can be widely used in cell biology, neurobiology, developmental biology, molecular biology, photobiology and other fields. BS-2097MM inverted system microscope will be your choice of live cell imaging now and in the future.

The Microscope Operation Console is a high-precision device with integrated software and hardware control. It enables precise and efficient microscopic injection, providing a diverse range of solutions for microscopic operations in the field of scientific research.

Feature

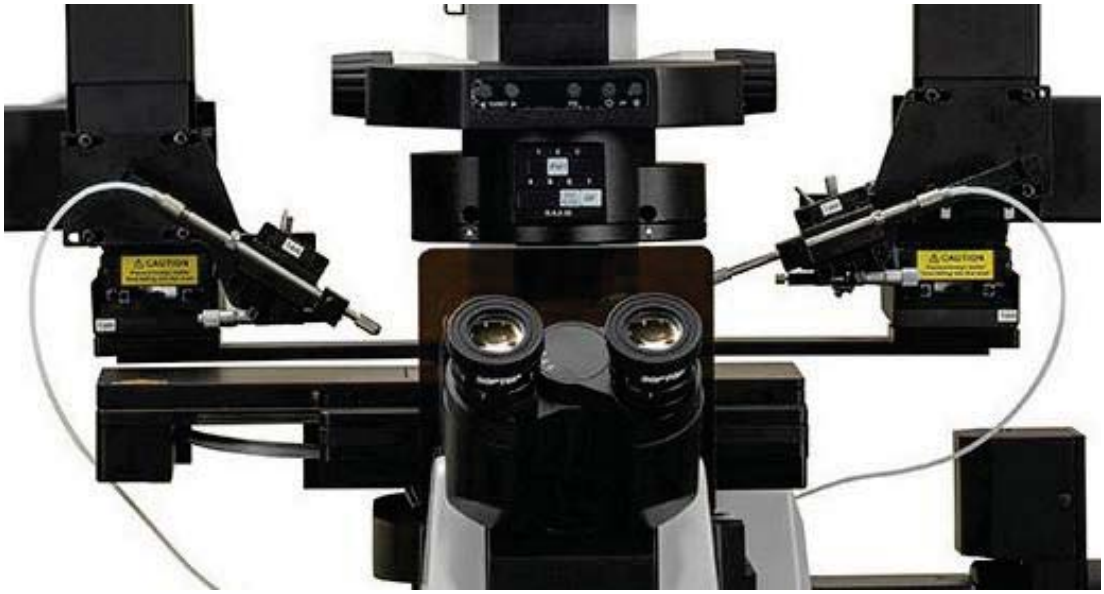
1. High Precision Control

Electric Control System: X-Y-Z three-axis electric control, stable and real-time response.

Nanometer-level precision: 20mm travel distance, 100nm movement precision, precise control, accurate operation.

2. Flexible and adjustable motion

Two control modes, joystick or software, are available. Both allow choosing the appropriate motion speed as needed. The R-axis and T-axis can be manually adjusted to meet various operational requirements, facilitating easy and high-precision displacement adjustments.



3. Convenient and efficient operating experience

The software features precise point-to-point and input displacement positioning, one-key return to zero, one-key needle finding, and position recording. It also includes one-key return to recorded positions. Additionally, it offers screen pointing for automatic positioning after point selection and macro-operation functions, streamlining experimental steps and enhancing work efficiency.

4. Advanced temperature control system

Utilizing PID control technology, the temperature control precision can reach ±0.1 degrees, ensuring experiment stability and safety.

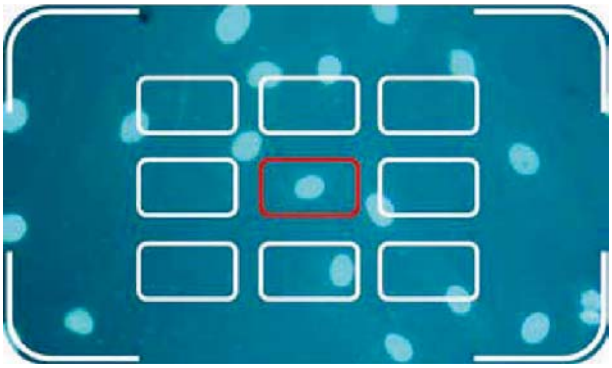
5. Elevation adjustable viewing head

BS-2097MM is equipped with a 20-45° adjustable binocular viewing head, which can raise the eye point by 78mm (65mm interpupillary distance) as required. It can be observed easily and quickly even in a standing state, which is effective avoiding fatigue of eyes and limbs.

6. Integrated button

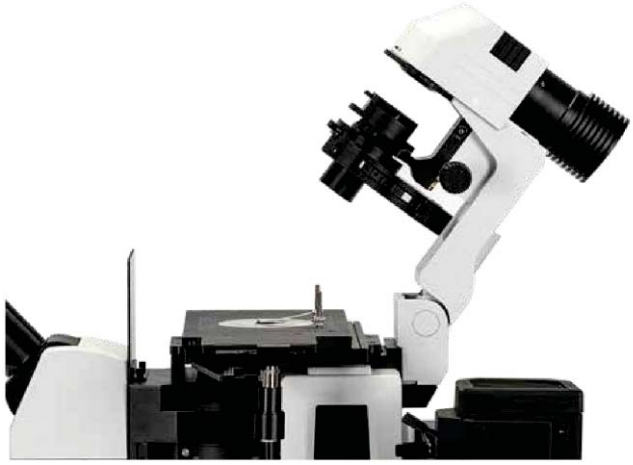
BS-2097MM retains the traditional coarse and fine adjustment mode, cancels the gear mechanism, integrates electric control technology, and realizes manual and automatic integration. The brightness, objectives, attenuator turntable and fluorescence turntable can be quickly switched or rotated through the corresponding buttons on the button panels on both sides.

7. Auto Focus



AF one-key auto focus can quickly adjust the Z-axis height according to the real-time image, and eliminates the need for fine-adjusting steps and improves work efficiency.

8. Tilting transmission lighting structure



The tilting structure of the transmission bracket ensures a large working space for users and facilitates the replacement of specimens.

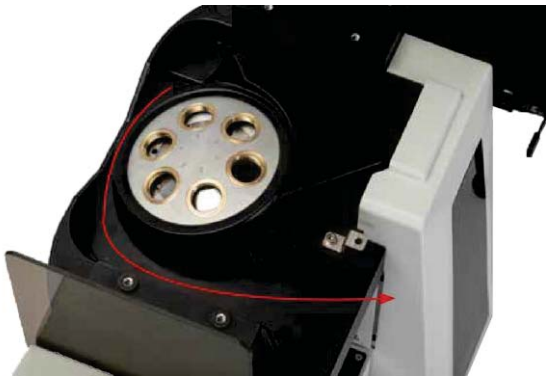
9. Low-position platform handwheel

The low-position platform handwheel can be rotated 360°, which can effectively reduce the hand fatigue caused by long-term operation and is ergonomic and improves the convenience of operation.

10. Electric Nosepiece

By using the buttons on the side of the rack or PC control, the objective lens can be quickly switched, improving operational convenience.

11. Waste liquid drainage structure



The drainage groove structure is designed under the objective nosepiece, which can prevent the optical components and modules from accidentally being wetted by the cell culture medium or soaking liquid, contaminating and damaging the microscope, simplifying maintenance.

12. Integrated panel control

BS-2097MM front digital display screen can display the status of multiple components such as microscope objective lens magnification, brightness, and fluorescence band in real time, and can complete the setting of all observation methods, the selection of optical port status, and the switch of fluorescence shutter, making repetitive experimental operations more convenient.

13. High scalability

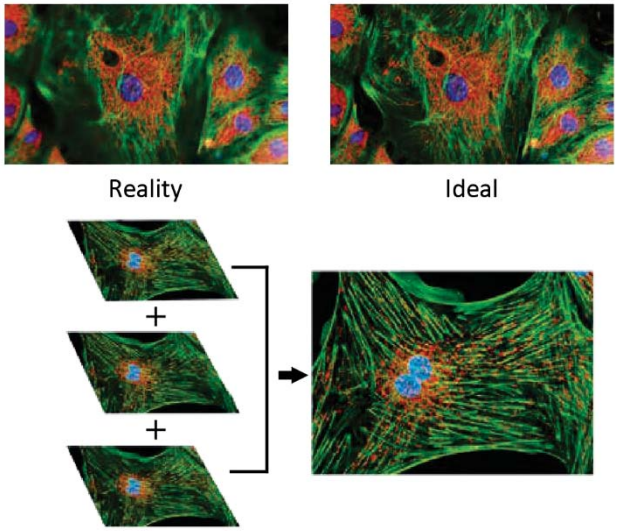
BS-2097MM can flexibly configure single-layer / double-layer optical paths according to the application, providing possibility for system expansion. The double-layer optical path can be customized according to different needs, suitable for various modifications and self-developed.

14. Software

The software is able for fluorescence intensity analysis, real-time/automatic depth of field expansion, image stitching and so on.

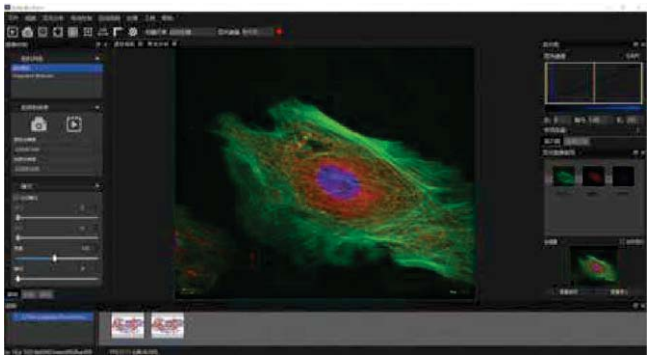
Image stitching

It is able to stitch the local image into a complete image.



Focus stacking

Users can set up and down moving distances, as well as movement steps, to move the stage up and down, automatically capture images of different depths of field, and stack the images.



Fluorescence synthesis

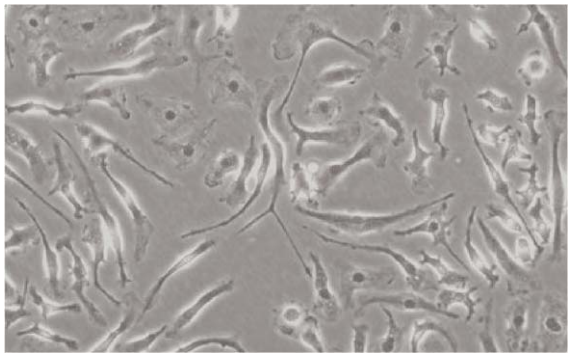
The image from different fluorescence channels, are able to be synthesized automatically and kept separately. Each image is available to be adjusted and the final composited image would be auto updated.

Cell counting

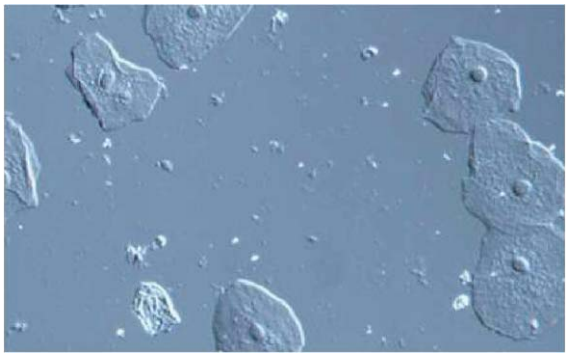
After clicking the cell counting menu button, segment the image in the current window, count cells based on the segmentation value, and display cell area, perimeter, and roundness.

Application

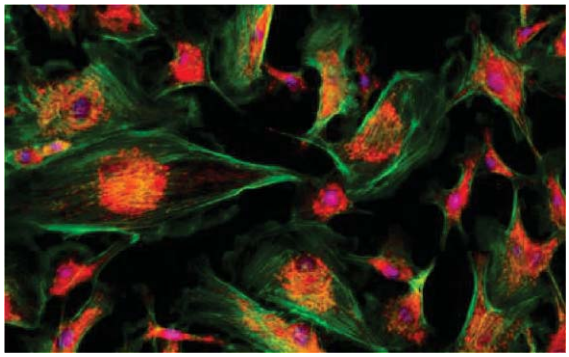
Bright Field



Phase Contrast



DIC



Fluorescence

Specification

Item	Specification		BS-2097MM
Optical System	Infinity Color Correction Optical System		●
Viewing Head	20-45 degree tilting binocular tube, interpupillary distance: 50-76mm		●
Eyepiece	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter		●
Objectives	Long Working Distance Plan	4X/NA=0.13, WD=17mm	○
	Semi-Apochromatic	10X/NA=0.3, WD=8.8mm	●
	Objectives	20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	●

		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	●
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	○
	Long Working Distance Plan Semi-Apochromatic Positive Phase Contrast Objectives	4X/NA=0.13, WD=17mm	○
		10X/NA=0.3, WD=8.8mm	○
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	○
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	○
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	○
	Infinity Plan Apochromatic Objectives	4X/NA=0.16, WD=12.8mm	○
		10X/NA=0.4, WD=3.2mm	○
		20X/NA=0.75, WD=0.6mm	○
		40X/NA=0.95, WD=0.15mm	○
		60X/NA=0.9, WD=0.26mm	○
		(Oil) 60X/NA=1.25, WD=0.14mm	○
		(Oil) 100X/NA=1.35, WD=0.13mm	○
	Infinity Plan Super Apochromatic Objectives	10X/NA=0.4, WD=3.1mm	○
		20X/NA=0.8, WD=0.6mm	○
		40X/NA=0.95, WD=0.18mm	○
		(Oil) 60X/NA=1.42, WD=0.17mm	○
		(Oil) 100X/NA=1.45, WD=0.13mm	○
	Long Working Distance Plan Semi-Apochromatic Relief Phase Contrast Objectives	10X/NA=0.3, WD=8.8mm	●
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	●
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	●
Microscope Body & Nosepiece	Low position coarse and fine coaxial electric focusing mechanism, range: 10.5mm, precision: 1μm. Built-in electric left camera port, splitting ratio: 0:100 / 50:50 / 100:0, dual optical path, with fluorescence light barrier. Electric bright field sextuple nosepiece with DIC slot.		●
	Base mounting bracket		○
	Right camera port, splitting ratio: 100:0 / 0:100, field of view: 16mm. Built-in 1X CTV, C-mount adapter		○
Illumination	Pillar tilt mechanism, Koehler transmission illuminator, adjustable condenser holder with 65mm stroke. 4 filters holders with LBD, Green filter, Neutral filter for halogen models or Neutral filter for LED models		●
	Color temperature transition filter kit, for BS20970035		○
	Green contrast filter kit, for BS20970035		○
	12V/100W halogen illumination, filament center preset		○
	12V/100W halogen lamp		○
	10W cool color LED light illumination, color temperature 5000K		●
Condenser & Iris	Manual septuple condenser, NA 0.55, WD=27mm. 3 holds for Φ30mm (phase contrast), 4		○

	holds for Φ38mm (DIC), support for bright field/black field/simple polarization/phase contrast/DIC, with fluorescence light barrier. (BS20970038)	
	4X Phase contrast annular iris (for BS20970038)	○
	10X Phase contrast annular iris (for BS20970038)	○
	20X/40X/60X Phase contrast annular iris (for BS20970038)	○
	4X/10X/20X Black field kit, for BS20970038	○
	Super long working distance manual condenser with 5 holes, NA 0.3, WD=73mm, support for 4X-60X phase contrast, simple polarizing observation and 10X-40X relief phase contrast observation. (BS20970043)	●
	4X Phase contrast annular iris (for BS20970043)	○
	10X Phase contrast annular iris (for BS20970043)	●
	20X/40X/60X Phase contrast annular iris (for BS20970043)	●
	10X Oblique iris (for BS20970043) for relief phase contrast observation	●
	20X Oblique iris (for BS20970043) for relief phase contrast observation	●
	40X Oblique iris (for BS20970043) for relief phase contrast observation	●
	360 degree rotatable polarizer (for BS20970043), mandatory for relief phase contrast observation	●
DIC	Transmitted DIC kit	○
	10X transmitted DIC ring (for BS20970038)	○
	20X transmitted DIC ring (for BS20970038)	○
	40X/60X transmitted DIC ring (for BS20970038)	○
	Analyzer kit (for BS20970038)	○
	Polarizer kit (for BS20970038)	○
Fluorescence Module	Fluorescence attachment with 8 holes, with manual shutter	●
	Cable 30cm, connecting the fluorescence attachment to the frame	●
	Dust cap	●
	B fluorescence filter cube	●
	G fluorescence filter cube	●
	UV fluorescence filter cube	●
	L type fluorescence attachment, with filter plugboard, ND25 attenuation piece, ND50 attenuation piece	●
	100W mercury lamp house	●
	Fluorescence power supply	●
	100W DC mercury lamp	●
	Extension accessory	●
	Fluorescence centering objective	●
Stage	Manual mechanical stage, size: 300mm(X)*240mm(Y), moving range: 135mm(X)*85mm(Y), stage thickness: 30mm. Right universal handle, X/Y axis limitable and lockable, moving range 50mm * 50mm after locked; with pressure clap for holding slices and culture flasks, with Φ110mm replaceable disc (inner Φ30), with metal stage plate with waist shaped hole.	●
Electric Control Box & PC	Electric control box, input voltage 90-265VAC wide voltage, output 12V100W or 12V10W.Digitally adjustable output voltage through CAN, in addition to three outputs of 24V5A/15V5A/5V5A, equipped with forced air cooling, including one 3C power cord.	●

	DB26 Cable 200cm, connecting the electric control box to the frame	●
	DELL PRECISIOM T3650 (I7 11700,16GB/256GB+1TB/P620) +P2722H	○
	DB9 Cable 200cm, connecting the PC to the electric control box	●
	USB-CAN card. When the customer purchases computer by themselves and requires computer to control microscope electric control, it must be paired.	●
	PCIE-CAN card. When the customer purchases computer by themselves and requires computer to control microscope electric control, it must be paired.	○
Camera	8.9 mega-pixel, monochrome camera, SONY IMX267, frame rate 32fps@4096*2160, USB3.0, image size 1"	○
	5 mega-pixel, color camera, SONY IMX264, frame rate 35fps, USB3.0, image size 2/3"	●
	6 mega-pixel, color camera, SONY ICX695, frame rate 7.5fps, USB3.0, image size 1"	○
	6 mega-pixel, color cooling camera, SONY ICX695, frame rate 7.5fps, USB3.0, image size 1"	○
	6 mega-pixel, monochrome camera, SONY ICX695, frame rate 7.5fps, USB3.0, image size 1"	○
	6 mega-pixel, monochrome cooling camera, SONY ICX695, frame rate 7.5fps, USB3.0, image size 1"	○
Telescope	Telescope (Φ30)	●
C-mount Adapter	0.5X C-mount adapter, adjustable focus	○
	0.65X C-mount adapter, adjustable focus	●
	1X C-mount adapter, adjustable focus	○
Other Accessories	Fluorescence free oil 30ml	○
	Internal hexagonal Spanner M3 for phase contrast adjusting screw	●
	Internal hexagonal Spanner M4	●
	Internal hexagonal Spanner M5	●

Micromanipulator configuration

Left-handed Fully Automatic Micromanipulator	1. Control mode: Joystick handle control and software control. 2. XYZ axis: automatic control, stroke 20mm, precision 100nm. 3. Movement speed: handle control 0-1000μm/s stepless speed change, software control three gears optional (high speed 1000μm/s, medium speed 200μm/s, low speed 20um/s). 3. R-axis (angle) manual adjustment, stroke 20°-90°, precision 10'. 4. T-axis (oblique) manual adjustment, the maximum stroke is 100mm. 5. Accurate displacement function of jogging displacement and input displacement. 6. One-key return to zero, one-key needle finding and position recording function (multiple positions can be recorded), and one key return to record position function. 7. It has the function of taking points on the screen, that is, point out the desired position on the computer screen, and the injection needle can be automatically positioned. 8. Software programming function: Various motion trace programs can be compiled and saved in the form of files. If you need to perform the same action next time, you can directly call the program. Equipped with a control handle: you can control the direction and speed of motion. Including Microscope Adapter, Motion Controller, Operating Handle and Software.	●
Right-hand Fully Automatic	1. Control mode: Joystick handle control and software control. 2. XYZ axis: automatic control, stroke 20mm, precision 100nm.	●

Micromanipulator	3. Movement speed: handle control 0-1000μm/s stepless speed change, software control three gears optional (high speed 1000μm/s, medium speed 200μm/s, low speed 20um/s). 3. R-axis (angle) manual adjustment, stroke 20°-90°, precision 10'. 4. T-axis (oblique) manual adjustment, the maximum stroke is 100mm. 5. Accurate displacement function of jogging displacement and input displacement. 6. One-key return to zero, one-key needle finding and position recording function (multiple positions can be recorded), and one key return to record position function. 7. It has the function of taking points on the screen, that is, point out the desired position on the computer screen, and the injection needle can be automatically positioned. 8. Software programming function: Various motion trace programs can be compiled and saved in the form of files. If you need to perform the same action next time, you can directly call the program. Equipped with a control handle: you can control the direction and speed of motion. Including Microscope Adapter, Motion Controller, Operating Handle and Software.	
Hydraulic injector	1. Maximum injection capacity: 333 μL 2. Manual momentum per revolution: 4.4 μL/r 3. Manual per fine grid momentum revolution: 55nL 4. Applicable glass capillary outer diameter: 1mm 5. Applicable operation types: injection or extraction of cells	●
Heating Stage	The controllable temperature of the heating stage is 5-60℃, with an accuracy of ± 0.1℃, PID control, 50W	○

Note: ● Standard Outfit, ○ Optional

Accessories

1. Long Working Distance Semi-Apochromat Objectives

A complete set of long working distance semi-apochromatic objective lenses has been developed for cell observation. The objective lens with correction rings have a strong advantage in observing glass substrates and petri dished of different thicknesses, achieving precise focusing by correcting coverage differences.

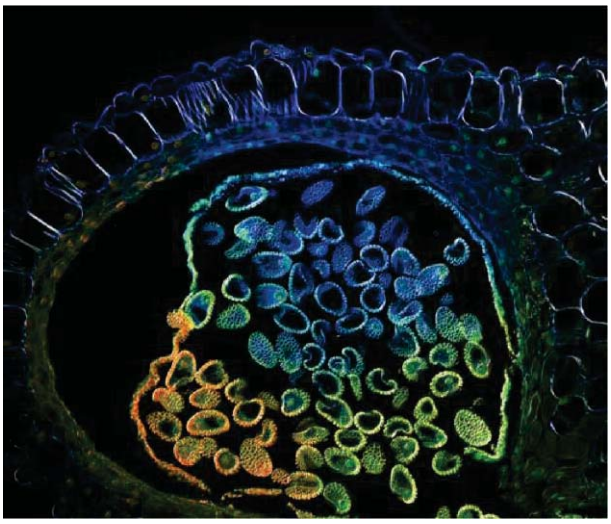
Long Working Distance Plan Semi-Apochromatic Objectives

Long Working Distance Plan Semi Apochromatic Positive Phase Contrast Objectives

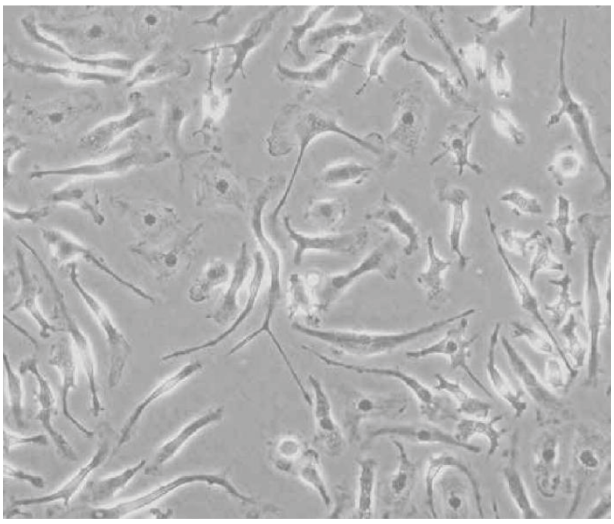
2. Infinite Plan Apochromatic Objectives

3. Infinite Plan Super Apochromatic Objectives

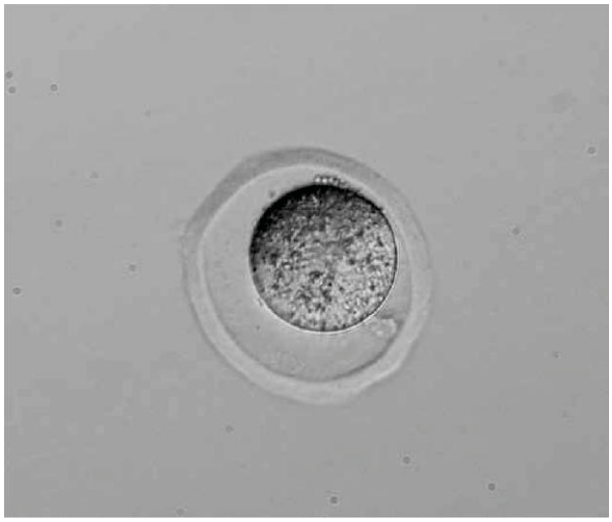
Sample Image



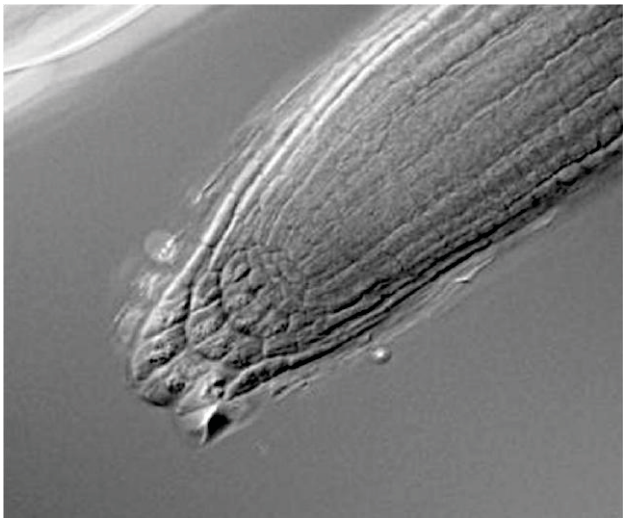
Anther of Lily Fluorescence



Normal rat kidney cells Phase contrast

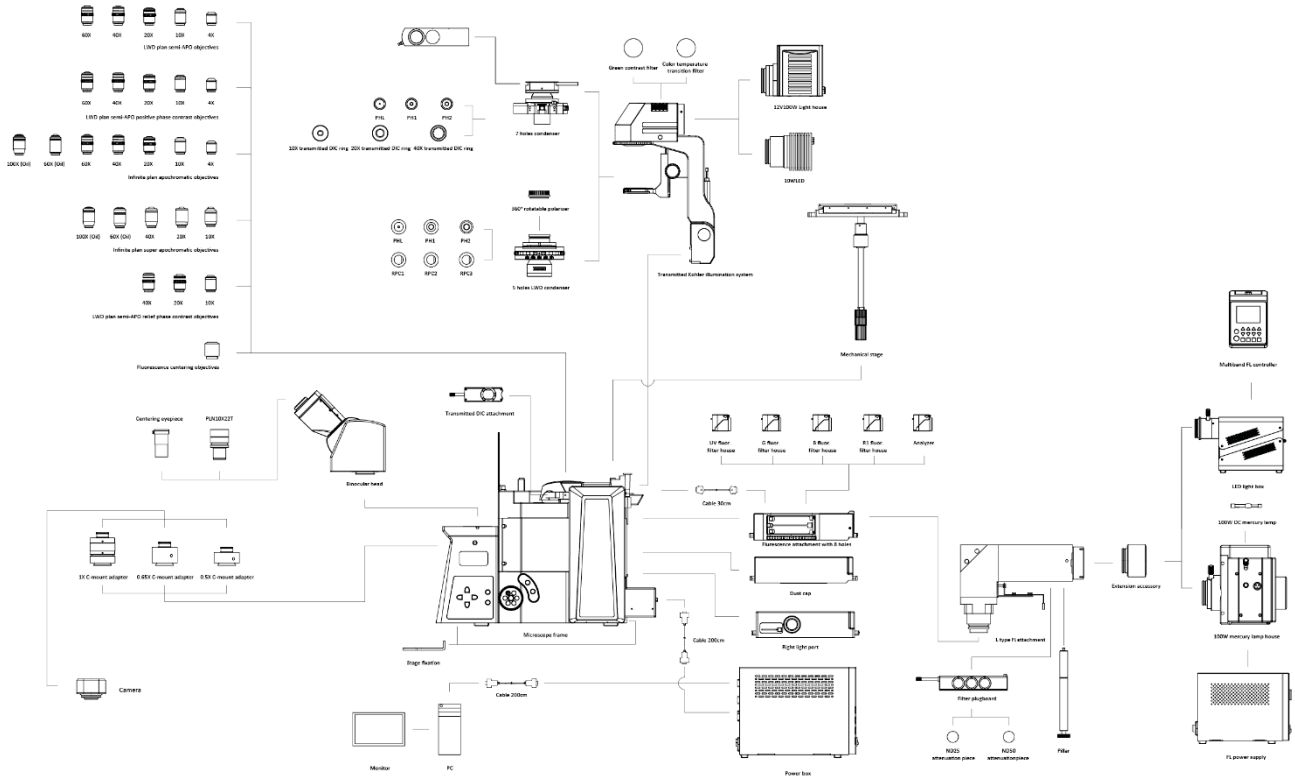


Mouse fertilized egg Relief phase contrast

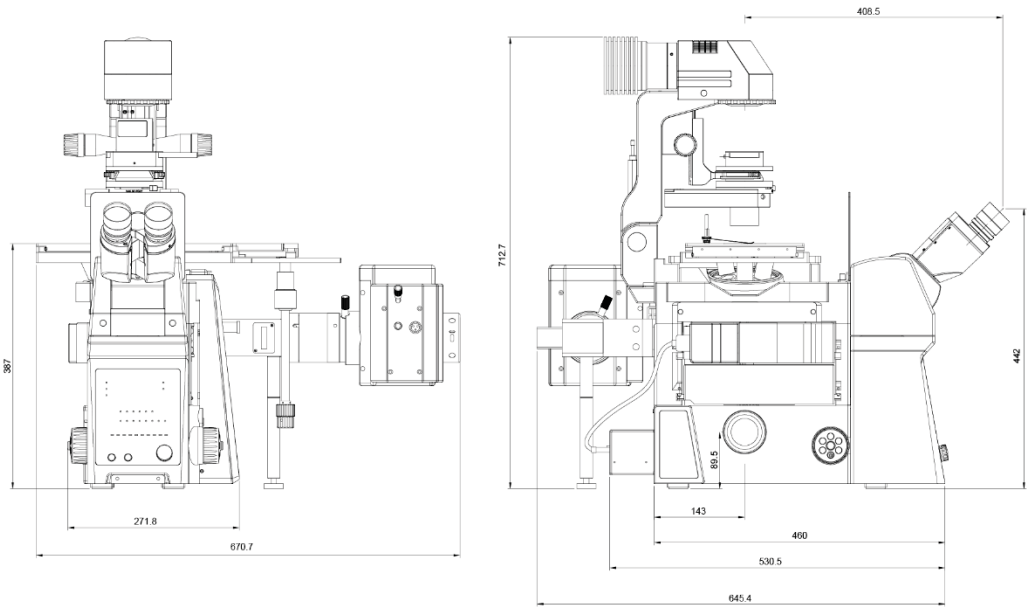


Arabidopsis roots DIC

System Diagram

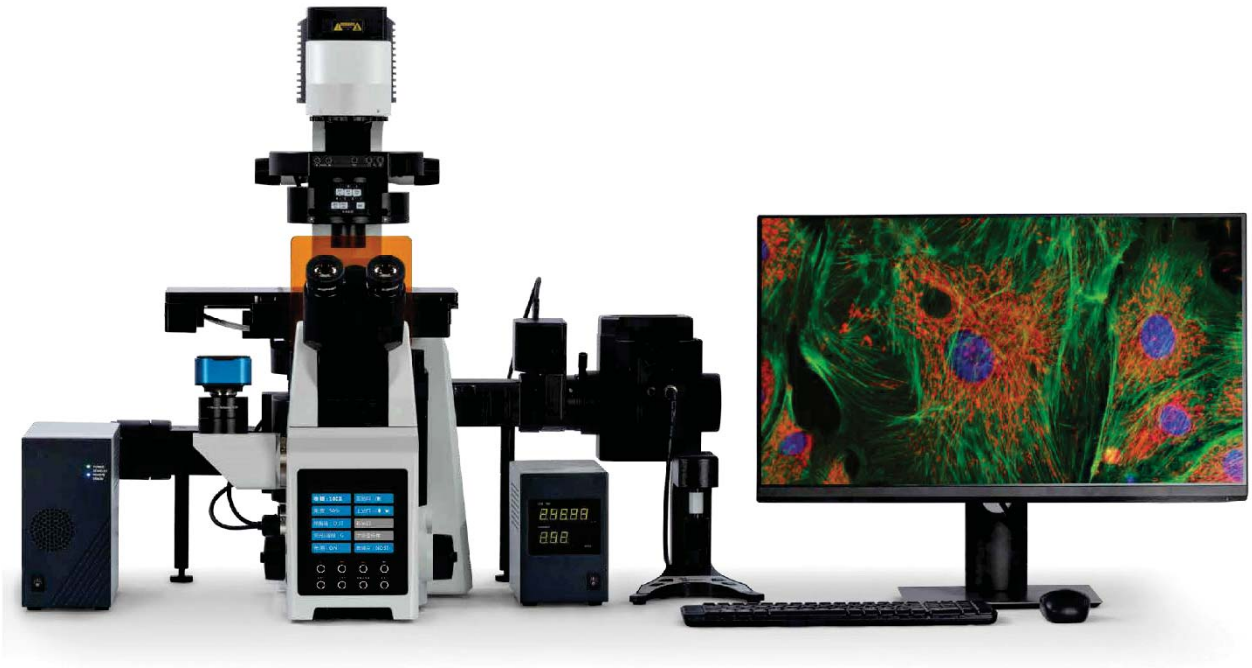


Dimension



Unit: mm

11. BS-2098 Research Inverted Microscope



BS-2098

Introduction

As a representative of Chinese optical, mechanical, electrical and computing integrated microscope, BS-2098 fully automatic research inverted microscope integrates multiple technologies such as electrical control, fluorescence, phase contrast, relief phase contrast, simple polarization, DIC, and objective lens with correction ring. A three-level electric control of single machine, TPC and computer is realized. BS-2098 has powerful expansion functions, providing a more complete solution for life science research.

With flexible structural design and excellent optical performance, BS-2098 can provide you with high-definition wide-field images, providing powerful technical support for cell observation, single-cell patch clamp, microinjection and other research and applications.

Feature

1. Elevation adjustable viewing head

BS-2098 is equipped with a 20-45° adjustable binocular viewing head, which can raise the eye point by 78mm (65mm interpupillary distance) as required. It can be observed easily and quickly even in a standing state, which is effective avoiding fatigue of eyes and limbs.

2. Integrated button

BS-2098 retains the traditional coarse and fine adjustment mode, cancels the gear mechanism, integrates electric control technology, and realizes manual and automatic integration. The brightness, objectives, attenuator turntable and fluorescence turntable can be quickly switched or rotated through the corresponding buttons on the button panels on both sides. AF one-key auto focus can quickly adjust the Z-axis height according to the real-time image, and eliminates the need for fine-adjusting steps and improves work efficiency.

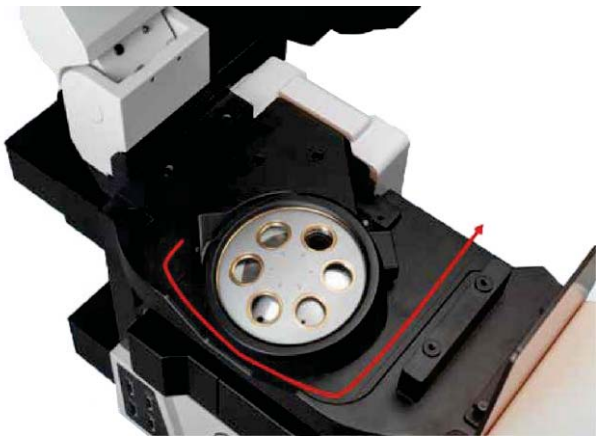
3. Low-position platform handwheel

The low-position platform handwheel can be rotated 360°, which can effectively reduce the hand fatigue caused by long-term operation and is ergonomic and improves the convenience of operation.

4. Tilting transmission lighting structure

The tilting structure of the transmission bracket ensures a large working space for users and facilitates the replacement of specimens.

5. Waste liquid drainage structure



The drainage groove structure is designed under the objective nosepiece, which can prevent the optical components and modules from accidentally being wetted by the cell culture medium or soaking liquid, contaminating and damaging the microscope, simplifying maintenance.

6. Integrated panel control

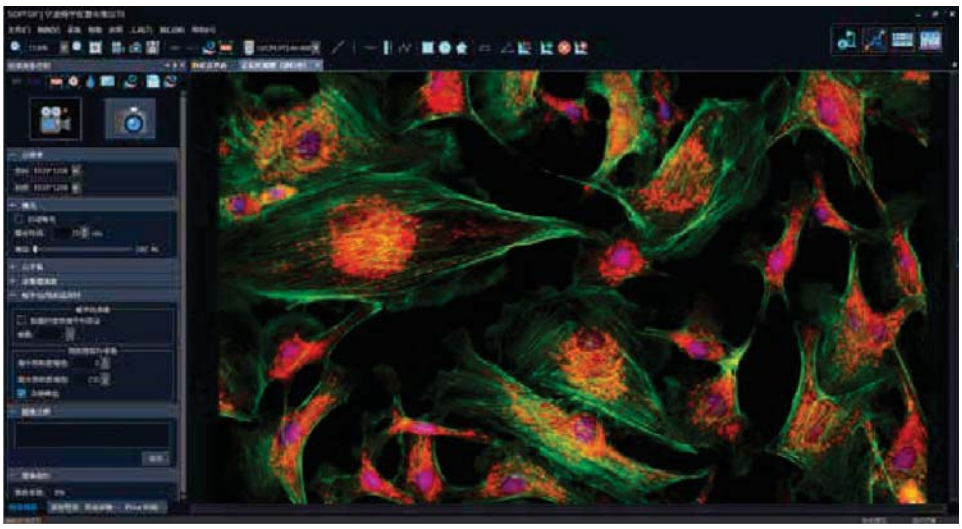
BS-2098 front digital display screen can display the status of multiple components such as microscope objective lens magnification, brightness, and fluorescence band in real time, and can complete the setting of all observation methods, the selection of optical port status, and the switch of fluorescence shutter. Greatly enhance the customer experience and make research work more convenient.

7. High scalability

BS-2098 has a very large rack that provides redundant space for third-party configurations. You can choose single-layer or double-layer optical path according to your needs, up to 16 color filters can be replaced. Multi-light port design can be equipped with confocal module, wide-field fluorescence camera, infrared camera, etc., providing maximum scalability for the research work.

8. Software

With 50 different image adjustment and processing algorithms, the software is able for photography, image stitching, auto focusing, DOF extension, multichannel acquisition, image measurement. One-click to generate a report, reliable and effective.



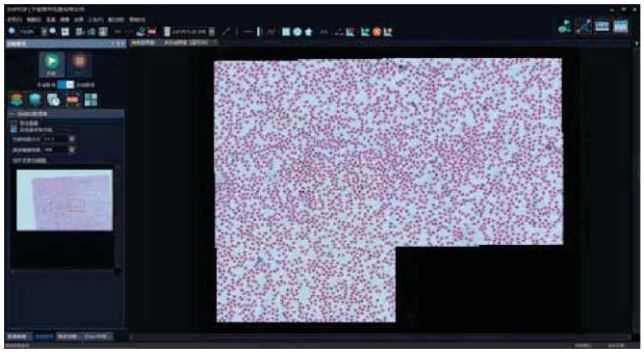
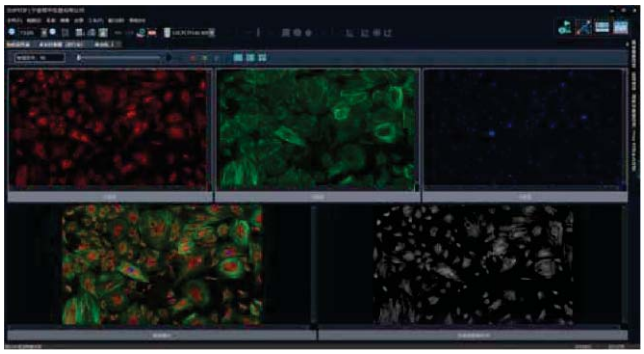


Image stitching

It is able to stitch the local image, with 8*8 field of view.

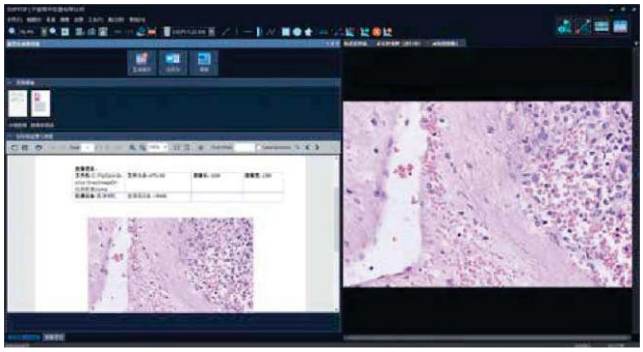
Cell measurement

Image software with measuring function, is available to analyze cell size, intercellular space, synapse length and so on, including distance, angle, rectangle and round measurement.



Fluorescence synthesis

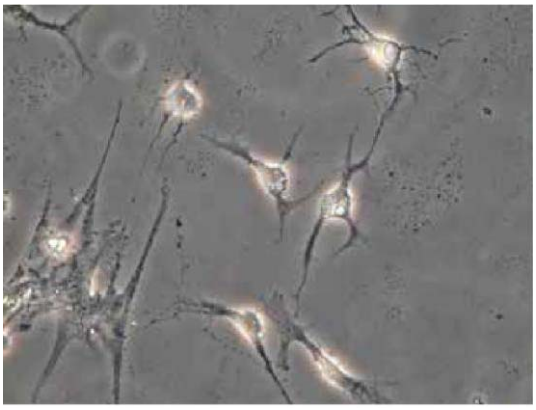
The image from different fluorescence channels, are able to be synthesized automatically and kept separately. Each image is available to be adjusted and the final composited image would be auto updated.



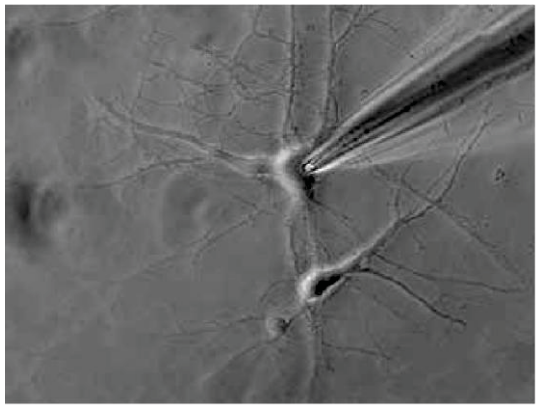
Report generation

Built-in module to fast generate a report, supports to output WORD document.

Application



Cell observation



Single-cell patch clamp

Microinjection and other research and applications

Specification

Item	Specification		BS-2098
Optical System	Infinity Color Correction Optical System		●
Viewing Head	20-45 degree tilting binocular tube, interpupillary distance: 50-76mm		●
Eyepiece	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter		●
Objectives	Long Working Distance Plan Semi- Apochromatic Objectives	4X/NA=0.13, WD=17mm	○
		10X/NA=0.3, WD=8.8mm	○
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	○
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	○
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	○
	Long Working Distance Plan Semi- Apochromatic Positive Phase Contrast Objectives	4X/NA=0.13, WD=17mm	●
		10X/NA=0.3, WD=8.8mm	●
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	●
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	●
		60X/NA=0.7, WD=1.42-2.1mm, coverslip thickness: 0-1.3mm	●
	Infinity Plan Apochromatic Objectives	4X/NA=0.16, WD=12.8mm	○
		10X/NA=0.4, WD=3.2mm	○
		20X/NA=0.75, WD=0.6mm	○
		40X/NA=0.95, WD=0.15mm	○
		60X/NA=0.9, WD=0.26mm	○
		(Oil) 60X/NA=1.25, WD=0.14mm	○
		(Oil) 100X/NA=1.35, WD=0.13mm	○
	Infinity Plan Super Apochromatic Objectives	10X/NA=0.4, WD=3.1mm	○
		20X/NA=0.8, WD=0.6mm	○
		40X/NA=0.95, WD=0.18mm	○
		(Oil) 60X/NA=1.42, WD=0.17mm	○
		(Oil) 100X/NA=1.45, WD=0.13mm	○
	Long Working Distance Plan Semi-Apochromatic Relief Phase Contrast Objectives	10X/NA=0.3, WD=8.8mm	○
		20X/NA=0.45, WD=6.5-7.6mm, coverslip thickness: 0-2mm	○
		40X/NA=0.6, WD=2.85-4.05mm, coverslip thickness: 0-2mm	○
Microscope Body & Nosepiece	Low position coarse and fine coaxial electric focusing mechanism, range: 10.5mm, precision: 1μm. Built-in electric upper camera port, splitting ratio: 100:0 / 0:100. Built-in electric left camera port, splitting ratio: 0:100 / 50:50 / 100:0, dual optical path, with fluorescence light barrier. Electric bright field sextuple nosepiece with DIC slot and upper optical port CTV adapter.		●
	Base mounting bracket		○
	Right camera port, splitting ratio: 100:0 / 0:100, field of view: 16mm. Built-in 1X CTV, C-mount adapter		○
Illumination	Pillar tilt mechanism, Koehler transmission illuminator, adjustable condenser holder with 65mm stroke. 4 filters holders with LBD, Green filter, Neutral filter for halogen models or Neutral filter for LED models.		●
	12V/100W halogen illumination, filament center preset		●

	12V/100W halogen lamp	●
	10W cool color LED light illumination, color temperature 5000K	○
Condenser & Iris	Electric septuple condenser, NA 0.55, WD=27mm. 3 holds for Φ30mm (phase contrast), 4 holds for Φ38mm (DIC), support for bright field/phase contrast/DIC (with polarizing kit) (BS20980036)	●
	Cable 100cm	●
	4X Phase contrast annular iris (for BS20980036)	●
	10X Phase contrast annular iris (for BS20980036)	●
	20X/40X/60X Phase contrast annular iris (for BS20980036)	●
	Super long working distance manual condenser with 5 holes, NA 0.3, WD=73mm, support for 4X-60X phase contrast, simple polarizing observation and 10X-40X relief phase contrast observation. (BS20980041)	○
	4X Phase contrast annular iris (for BS20980041)	○
	10X Phase contrast annular iris (for BS20980041)	○
	20X/40X/60X Phase contrast annular iris (for BS20980041)	○
	10X Oblique iris (for BS20980041) for relief phase contrast observation	○
	20X Oblique iris (for BS20980041) for relief phase contrast observation	○
	40X Oblique iris (for BS20980041) for relief phase contrast observation	○
	360 degree rotatable polarizer (for BS20980041), mandatory for simple polarizing and relief phase contrast observation	○
DIC	Transmitted DIC kit	○
	10X transmitted DIC ring (for BS20980036)	○
	20X transmitted DIC ring (for BS20980036)	○
	40X/60X transmitted DIC ring (for BS20980036)	○
	Analyzer kit (for BS20980036)	○
Fluorescence Module	Fluorescence attachment with 8 holes, with electric shutter	●
	Cable 20cm	●
	Dust cap	●
	B fluorescence filter cube	●
	G fluorescence filter cube	●
	UV fluorescence filter cube	●
	L type fluorescence attachment, with filter plugboard, ND25 attenuation piece, ND50 attenuation piece	●
	100W mercury lamp house	●
	Fluorescence power supply	●
	100W DC mercury lamp	●
	Electric attenuation holder with 5 holes, with bright field/light barrier/ ND6/ND25/ND50 (no need to use extension accessory) (BS20980064)	○
	Cable 100cm (mandatory for BS20980064)	○
	Extension accessory (must be chosen when BS20980064 is not selected)	●
Stage	Manual mechanical stage, size: 300mm(X)*240mm(Y), moving range: 135mm(X)*85mm(Y), stage thickness: 30mm. Right universal handle, X/Y axis limitable and lockable, moving range 50mm * 50mm after locked; with pressure clap for holding slices and culture flasks, with	●

	Φ110mm replaceable disc (inner Φ30), with metal stage plate with waist shaped hole.	
	Marzhauser electric stage, moving range: 120mm(X)*80mm(Y), resolution: 0.02μm, repeatability: 1μm, with control box and operating handle, with slide holder.	○
	Φ36 petri dish holder (for Marzhauser electric stage)	○
	96 holes petri dish holder (for Marzhauser electric stage)	○
	Terasaki holder (for Marzhauser electric stage)	○
	PRIOR electric stage, moving stage:114mm(X)*75mm(Y), resolution: 0.01um, two-way, repeatability: 0.2um, with controller, electric control box and cable, with slide holder	○
	Φ36 petri dish holder, with adjustable petri dish sample holder (for PRIOR electric stage)	○
	96 holes petri dish holder, recessed porous plate sample holder, suitable for 85*128mm orifice plate	○
	Terasaki holder, concave cells with bottle sample holder, suitable for 85*128mm culture flask	○
Electric Control Box & PC	Electric control box, input voltage 90-265VAC wide voltage, output 12V100W or 12V10W.Digitally adjustable output voltage through CAN, in addition to three outputs of 24V5A/15V5A/5V5A, equipped with forced air cooling, including one 3C power cord.	●
	DB26 Cable 200cm, connecting the electric control box to the frame	●
	7-inch LCD display controller, capable of operating the electronic control components of the body, with a 12V 5A medical adapter, including DB9 external cable.	○
	DELL PRECISIOM T3650 (I7 11700, 16GB/256GB+1TB/P620) +P2722H	○
	DB9 Cable 200cm, connecting the PC to the electric control box	●
	USB-CAN card. When the customer purchases computer by themselves and requires computer to achieve microscope electric control, it must be paired.	●
	PCIE-CAN card. When the customer purchases computer by themselves and requires computer to achieve microscope electric control, it must be paired.	○
Telescope	Telescope (Φ30)	●
C-mount Adapter	0.5X C-mount adapter, adjustable focus	○
	0.65X C-mount adapter, adjustable focus	●
	1X C-mount adapter, adjustable focus	○
Other Accessories	Fluorescence free oil 30ml	○
	Internal hexagonal Spanner M3 for phase contrast adjusting screw	●
	Internal hexagonal Spanner M4	●
	Internal hexagonal Spanner M5	●

Note: ● Standard Outfit, ○ Optional

Accessories

1. Long Working Distance Semi-Apochromat Objectives

A complete set of long working distance semi-apochromatic objective lenses has been developed for cell observation. The objective lens with correction rings have a strong advantage in observing glass substrates and petri dished of different thicknesses, achieving precise focusing by correcting coverage differences.

Long Working Distance Plan Semi-Apochromatic Objectives

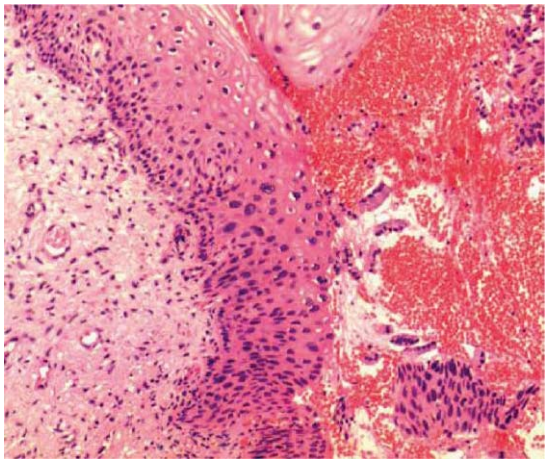
Long Working Distance Plan Semi Apochromatic Positive Phase Contrast Objectives

Long Working Distance Plan Semi-Apochromatic Relief Phase Contrast Objectives

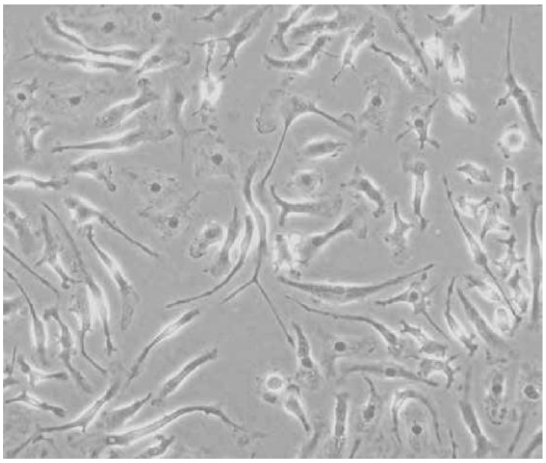
2. Infinite Plan Apochromatic Objectives

3. Infinite Plan Super Apochromatic Objectives

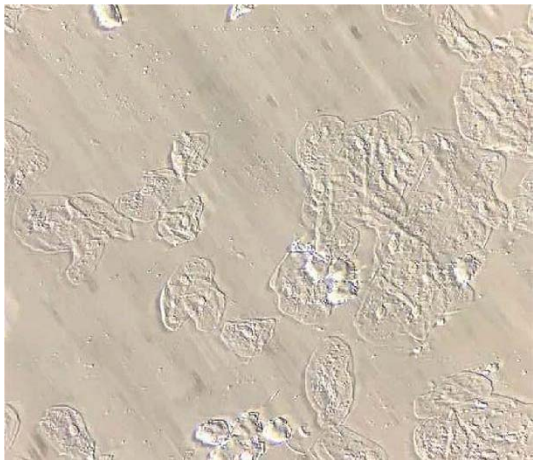
Sample Image



Skin papilloma Bright field / 40X

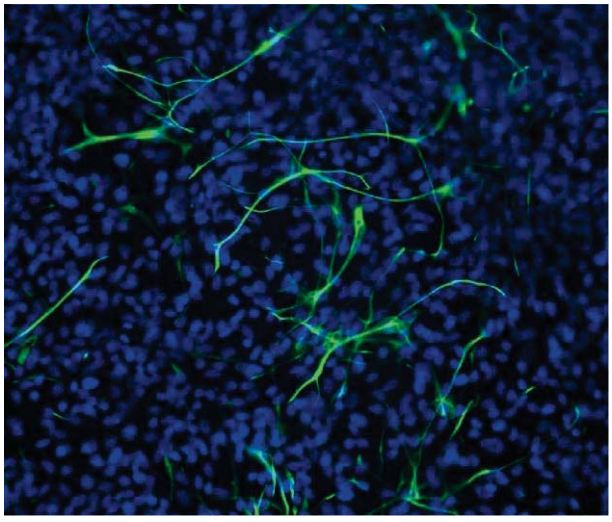


Normal rat kidney cells Phase contrast /10X



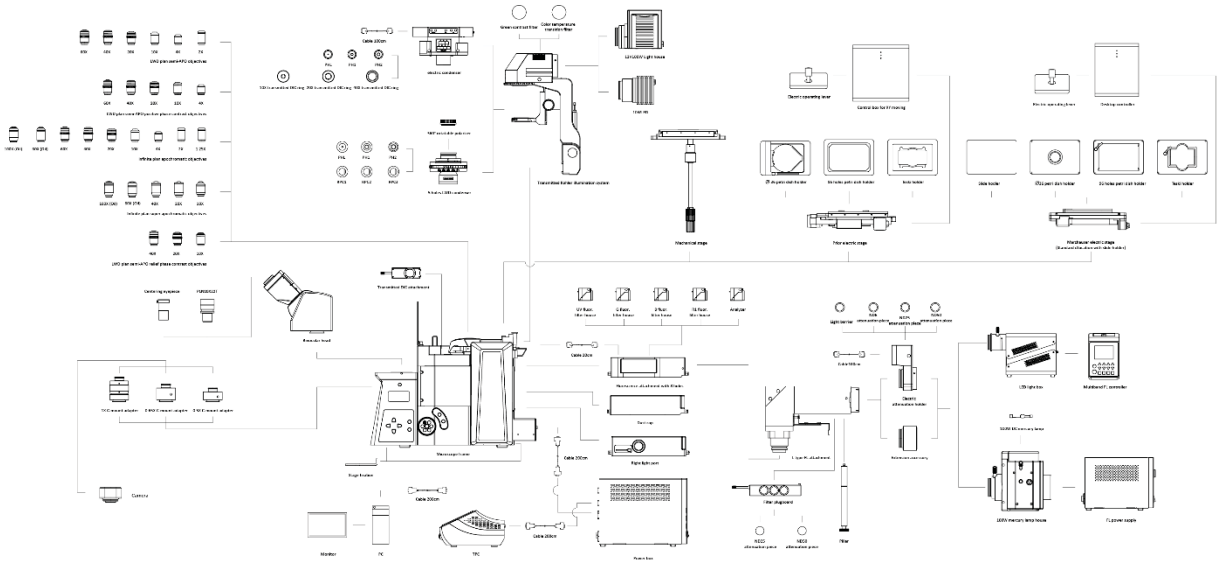
Oral epithelial cells Relief phase contrast / 10X

Nematode DIC / 40X

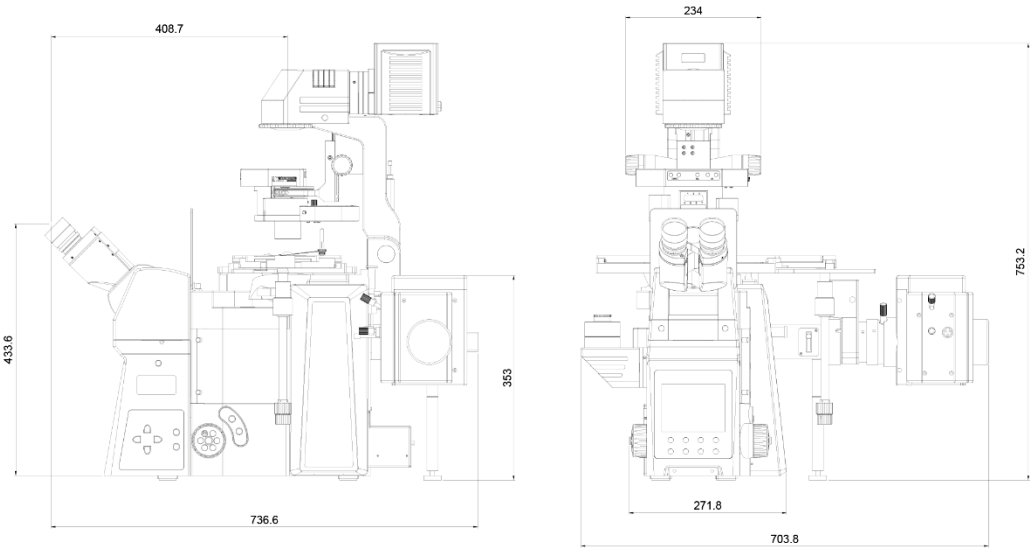


Human smooth muscle cells Fluorescence / 20X

System Diagram



Dimension



Unit:mm

12. BS-2190A Inverted Biological Microscope

BS-2190A

BS-2190AF

Introduction

BS-2190A series Inverted Biological Microscopes are specially designed for observation of cell tissues culture and can be used to observe cell growth processes, tissue contours and internal structures. Optional professional fluorescence attachment can be used to observe autofluorescence phenomena in cells, fluorescence transfection, protein transfer and other fluorescence phenomena of biological cells.

With innovative infinite optical system and ergonomic design, the microscopes have excellent optical performance and easy to operate features. The microscopes have smooth and comfortable operation, they could be used for medical and health units, universities, research institutes to observe cultured living cells and tissues.

Feature

1. Color corrected infinite optical system, excellent optical performance and great images.
2. Application of high-contrast and low chromatic phase contrast observation, access to detailed examination of internal structure of the cells.
3. Supply long working distance and high N.A. objectives to get the flat and clear images.
4. Long working distance condenser has capacity to use revolution bottle and suitable for many sample petri-dishes.
5. Well-designed body structure, steady and reliable and better anti-vibration performance.
6. Low position coaxial coarse and fine adjustment, ergonomic design.
7. Professional vertical fluorescence technology, to get clear and bright fluorescence images.
8. Long working distance infinite plan achromatic objective, phase contrast objective and fluorescence objectives are available.

Long working distance infinite plan and phase contrast achromatic objective

Long working distance fluorescence infinite plan and semi-APO phase contrast objective

Application

BS-2190A series inverted microscopes can be used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. They can be used for continuous

observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. These microscopes are widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

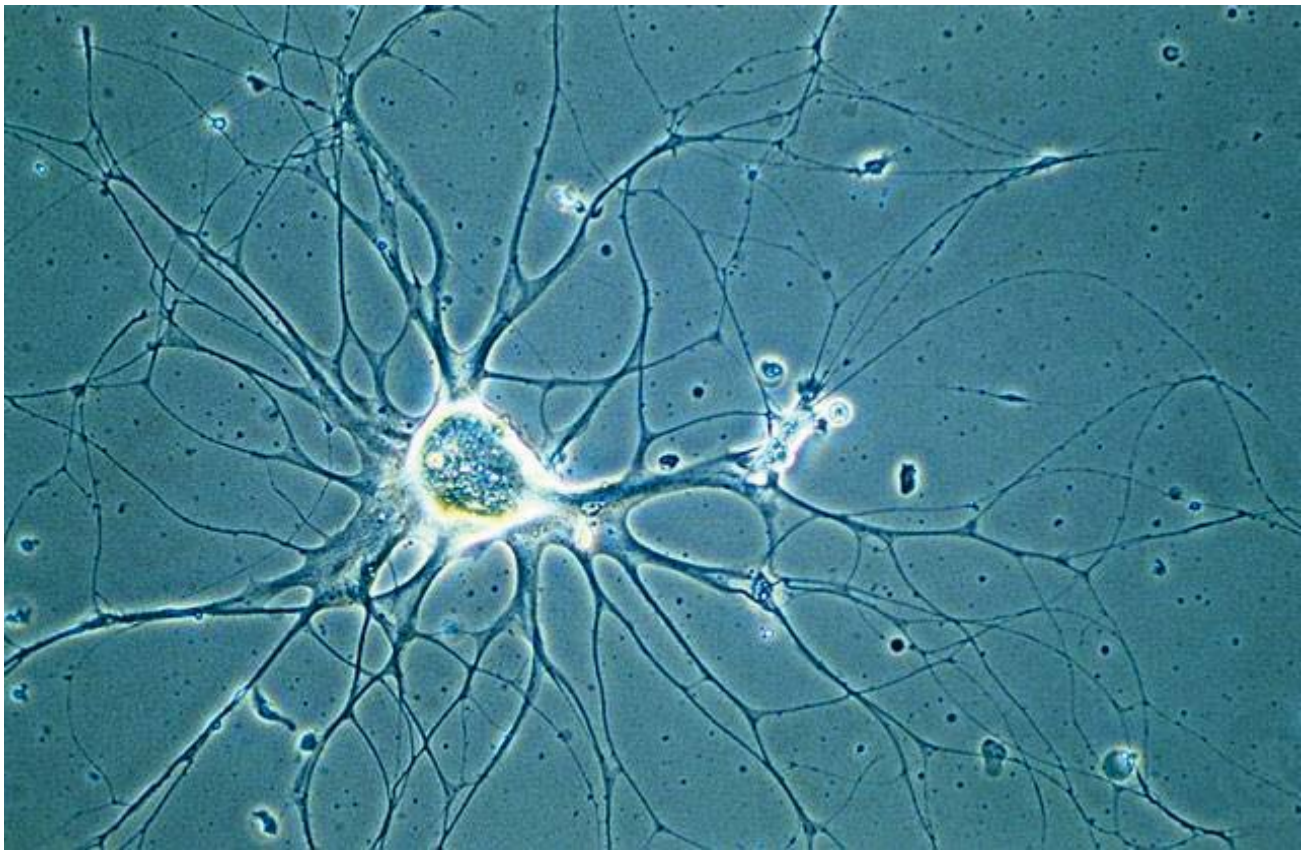
Specification

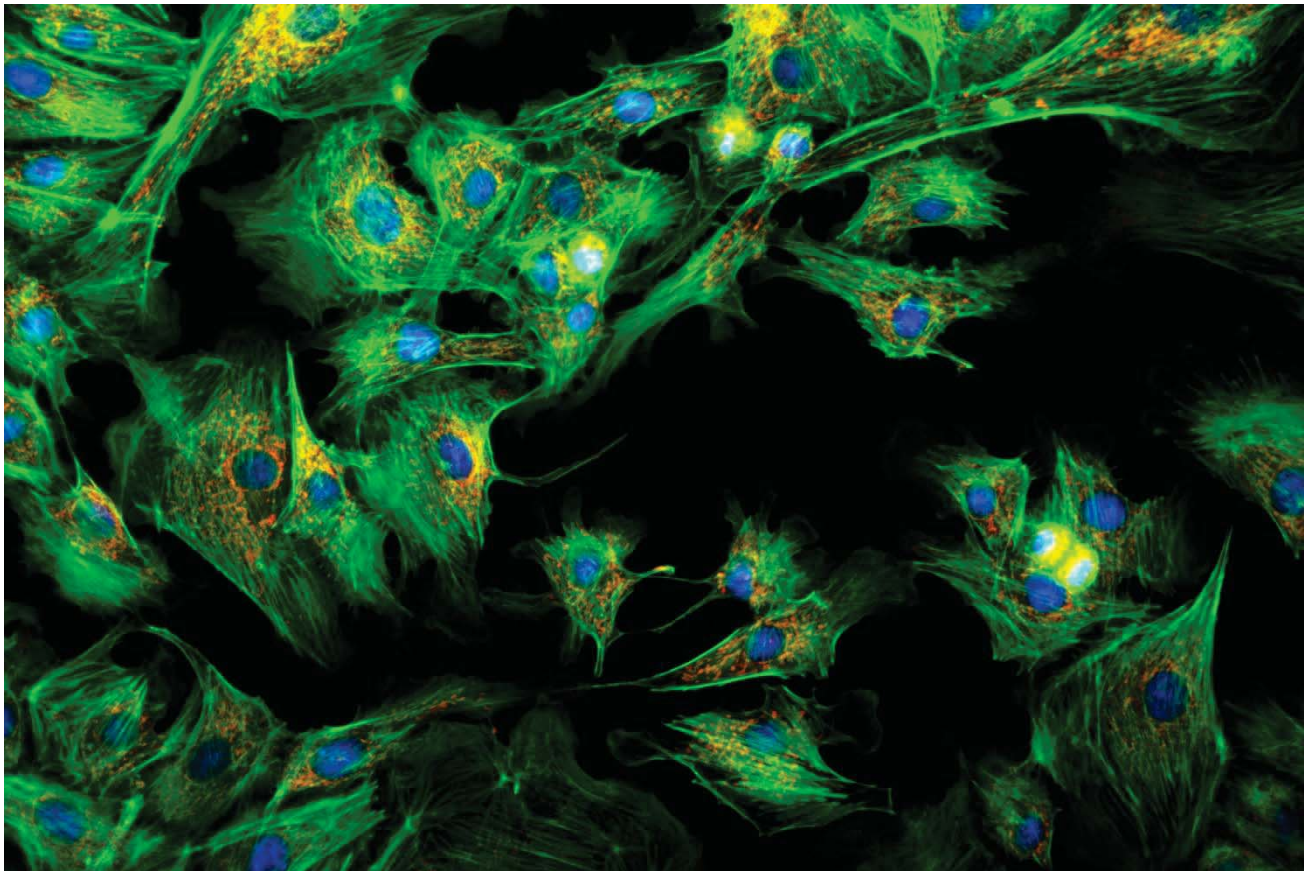
Item	Specification		BS-2190A	BS-2190AF
Optical System	Infinite Optical System, Tube Length 180mm, Parfocal Distance 45mm		●	●
Viewing Head	45° inclined Seidentopf trinocular head, diopter adjustment on left eyepiece tube, inter-pupillary range: 50-76mm, eyepiece: trinocular=80:20,100:0, Eyepiece Tube Diameter 30mm		●	●
	45° inclined Seidentopf binocular head, diopter adjustment on left eyepiece tube, inter-pupillary range: 50-76mm, Eyepiece Tube Diameter 30mm		○	○
Eyepiece	High eye-point wide field plan eyepiece PL10×/22mm		●	●
	High eye-point wide field plan eyepiece PL10×/22mm with eyepiece micrometer		○	○
	High eye-point wide field plan eyepiece PL15×/16mm		○	○
Objective (Parfocal distance 45mm, RMS (20.32x 0.706mm))	Infinite LWD Plan Achromatic Objective	4× /0.13, WD=10.75mm	○	○
		10×/0.25, WD=7.45mm	○	○
		20×/0.40, WD=6.92mm	○	○
		40×/0.65, WD=2.74mm	○	○
		60×/0.70, WD=1.28mm	○	○
	Infinite LWD Plan Phase Contrast Achromatic Objective	PH4×/0.13, WD=10.75mm	●	○
		PH10×/0.25, WD=7.45mm	●	●
		PH20×/0.40, WD=6.92mm	●	○
		PH40×/0.65, WD=2.74mm	●	○
	Infinite LWD Plan Fluorescence Objective	Fluor 4×/0.13, WD=18.95mm	○	●
		Fluor 10×/0.30, WD=7.27mm	○	●
		Fluor 20×/0.45, WD=6.03mm	○	○
		Fluor 40×/0.65, WD=1.79mm	○	○
		Fluor 60×/0.75, WD=1.28mm	○	○
	Infinite LWD Semi-APO Plan Phase Contrast and Fluorescence Objective	FL PH20×/0.45, WD=6.12mm	○	●
		FL PH40×/0.65, WD=1.79mm	○	●
	Centering Objective	Fluorescence centering objective	○	●
Nosepiece	Inward Quintuple Nosepiece		●	●
	Inward Quadruple Nosepiece		○	○
Condenser	N.A. 0.3 LWD Condenser, Working Distance 72mm, detachable		●	●
Telescope	Centering Telescope(Φ30mm): used to adjust the center of phase annulus		●	●
Phase Annulus	4×, 10×-20×, 40× Phase Annulus Plate (center adjustable)		●	●
Stage	Stage 160 (X)×250(Y) mm fixed stage with glass insert plate (Φ110mm)		●	●
	Attachable Mechanical Stage, X-Y Coaxial Control, Moving Rang: 120(X)×80(Y) mm		○	●
	Extension stage, used to extend the stage		○	●

	Terasaki Holder: used for Φ35mm Petri Dish Holder and Φ65mm petri dishes (Φ65mm and 56×81.5mm)	○	●
	Glass Slide Holder and Petri Dish Holder (Φ54mm and 26.5×76.5mm)	○	●
	Petri Dish Holder Φ35mm	●	●
	Metal plate Φ12mm (water drop type)	○	○
	Metal plate Φ25mm (water drop type)	●	○
	Metal plate (kidney type)	○	●
Focusing	Coaxial Coarse and Fine Adjustment, tension adjustment knob, Fine Division 0.002mm, Fine stroke 0.2mm per rotation, Coarse stroke 37.5mm per rotation. Moving Range: 9mm, focal plane up 6.5mm, down 2.5mm	●	●
Transmitted Illumination	6V/30W long working life halogen lamp(Philips), Pre-centered, Brightness Adjustable	●	●
EPI-Fluorescence Attachment	EPI fluorescence attachment, 3-position for fluorescence filters, 1-position for bright field	○	●
	Lamp house for mercury lamp, center adjustable	○	●
	Power supply box for mercury lamp, input voltage 100-240V AC	○	●
	100W mercury (ORSAM)	○	●
	Eyes Protective Plate, used to prevent harm from fluorescence light	○	●
	B1 fluorescence filter (band-pass type)	○	●
	G1 fluorescence filter (band-pass type)	○	●
	UV1 fluorescence filter (band-pass type)	○	●
	V1 fluorescence filter (band-pass type)	○	○
Filters for Transmitted Illumination	Green filter (Φ45mm)	●	●
	Blue filter (Φ45mm), only used for halogen illumination	●	●
	IR filter (Φ45mm)	○	○
ND Filter	ND25 filter (25% light transmittance)	○	●
	ND50 filter (50% light transmittance)	○	○
C-mount Adapter	0.35× C-mount Adapter (focus adjustable, could not work with fluorescence microscope)	○	
	0.5× C-mount Adapter (focus adjustable)	○	○
	0.65× C-mount Adapter (focus adjustable)	○	○
	1× C-mount Adapter (focus adjustable)	○	○
Trinocular Tube	Trinocular Tube Φ23.2mm, used to connect camera	○	○
Other Accessories	Allen wrench, M3 and M4, 1pc each	●	●
	Fuse, T250V500mA	●	●
	Dust cover	●	●
Packing	1 cartons/set, Packing Size: 80cm×57cm×31cm, Gross Weight: 13kgs, Net Weight: 9kgs	●	
	1 cartons/set, Packing Size: 80cm×57cm×60cm, Gross Weight: 26kgs, Net Weight: 20kgs		●

Note: ● Standard Outfit, ○ Optional

Sample Images





13. BS-2190B Inverted Biological Microscope

BS-2190B

BS-2190BF

Introduction

BS-2190B series Inverted Biological Microscopes are specially designed for observation of cell tissues culture and can be used to observe cell growth processes, tissue contours and internal structures. Optional professional fluorescence attachment can be used to observe autofluorescence phenomena in cells, fluorescence transfection, protein transfer and other fluorescence phenomena of biological cells.

With innovative infinite optical system and ergonomic design, the microscopes have excellent optical performance and easy to operate features. The microscopes have smooth and comfortable operation, they could be used for medical and health units, universities, research institutes to observe cultured living cells and tissues.

Feature

1. Color corrected infinite optical system, excellent optical performance and great images.
2. Application of high-contrast and low chromatic phase contrast observation, access to detailed examination of internal structure of the cells.
3. Supply long working distance and high N.A. objectives to get the flat and clear images.
4. Koehler Illuminator.
   (1) With iris diaphragm, adjusted by rack and pinion, convenient to adjust and remove the condenser.
   (2) The condenser bracket can be rotated, facilitate the replacement of the dish, and suitable for a variety of sample containers.
   (3) With precise orientation and locking device.
5. Well-designed body structure, steady and reliable and better anti-vibration performance.
6. Low position coaxial coarse and fine adjustment, ergonomic design.
7. Professional vertical fluorescence technology, to get clear and bright fluorescence images.
8. Long working distance infinite plan achromatic objective, phase contrast objective and fluorescence objectives are available.

Long working distance infinite plan and phase contrast achromatic objective

Long working distance fluorescence infinite plan and semi-APO phase contrast objective

Application

BS-2190B series inverted microscopes can be used by medical and health units, universities, research institutes for observations of micro-organisms, cells, bacteria and tissue cultivation. They can be used for continuous

observation of process of cells, bacteria grow and divide in the culture medium. Videos and images can be taken during the process. These microscopes are widely used in cytology, parasitology, oncology, immunology, genetic engineering, industrial microbiology, botany and other fields.

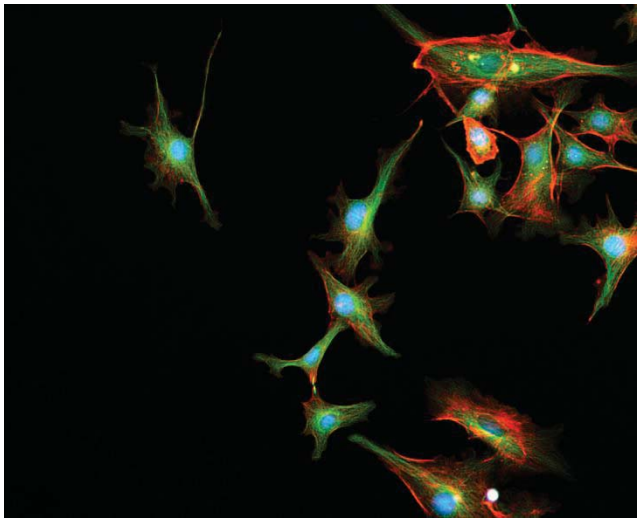
Specification

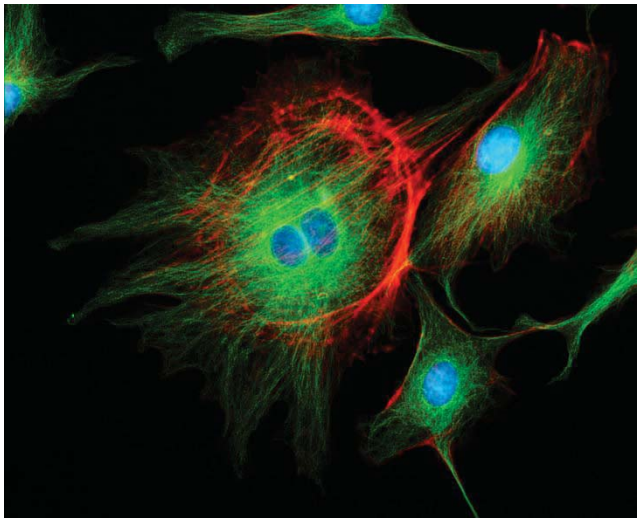
Item	Specification		BS-2190B	BS-2190BF
Optical System	Infinite Optical System, Tube Length 180mm, Parfocal Distance 45mm		●	●
Viewing Head	45° inclined Seidentopf trinocular head, diopter adjustment on left eyepiece tube, inter-pupillary range: 50-76mm, eyepiece: trinocular=80:20,100:0, Eyepiece Tube Diameter 30mm		●	●
	45° inclined Seidentopf binocular head, diopter adjustment on left eyepiece tube, inter-pupillary range: 50-76mm, Eyepiece Tube Diameter 30mm		○	○
Eyepiece	High eye-point wide field plan eyepiece PL10×/22mm		●	●
	High eye-point wide field plan eyepiece PL10×/22mm with eyepiece micrometer		○	○
	High eye-point wide field plan eyepiece PL15×/16mm		○	○
Objective (Parfocal distance 45mm, RMS (20.32x 0.706mm))	Infinite LWD Plan Achromatic Objective	4× /0.13, WD=10.75mm	○	○
		10×/0.25, WD=7.45mm	○	○
		20×/0.40, WD=6.92mm	○	○
		40×/0.65, WD=2.74mm	○	○
		60×/0.70, WD=1.28mm	○	○
	Infinite LWD Plan Phase Contrast Achromatic Objective	PH4×/0.13, WD=10.75mm	●	○
		PH10×/0.25, WD=7.45mm	●	●
		PH20×/0.40, WD=6.92mm	●	○
		PH40×/0.65, WD=2.74mm	●	○
	Infinite LWD Plan Fluorescence Objective	Fluor 4×/0.13, WD=18.95mm	○	●
		Fluor 10×/0.30, WD=7.27mm	○	●
		Fluor 20×/0.45, WD=6.03mm	○	○
		Fluor 40×/0.65, WD=1.79mm	○	○
		Fluor 60×/0.75, WD=1.28mm	○	○
	Infinite LWD Semi-APO Plan Phase Contrast and Fluorescence Objective	FL PH20×/0.45, WD=6.12mm	○	●
		FL PH40×/0.65, WD=1.79mm	○	●
	Centering Objective	Fluorescence centering objective	○	●
Nosepiece	Inward Quintuple Nosepiece		●	●
	Inward Quadruple Nosepiece		○	○
Condenser	N.A. 0.3 LWD Condenser, Working Distance 72mm, detachable		●	●
Telescope	Centering Telescope(Φ30mm): used to adjust the center of phase annulus		●	●
Phase Annulus	4×, 10×-20×, 40× Phase Annulus Plate (center adjustable)		●	●
Stage	Stage 160 (X)×250(Y) mm fixed stage with glass insert plate (Φ110mm)		●	●
	Attachable Mechanical Stage, X-Y Coaxial Control, Moving Rang: 120(X)×80(Y) mm		○	●
	Extension stage, used to extend the stage		○	●

	Terasaki Holder: used for Φ35mm Petri Dish Holder and Φ65mm petri dishes (Φ65mm and 56×81.5mm)	○	●
	Glass Slide Holder and Petri Dish Holder (Φ54mm and 26.5×76.5mm)	○	●
	Petri Dish Holder Φ35mm	●	●
	Metal plate Φ12mm (water drop type)	○	○
	Metal plate Φ25mm (water drop type)	●	○
	Metal plate (kidney type)	○	●
Focusing	Coaxial Coarse and Fine Adjustment, tension adjustment knob, Fine Division 0.002mm, Fine stroke 0.2mm per rotation, Coarse stroke 37.5mm per rotation. Moving Range: 9mm, focal plane up 6.5mm, down 2.5mm	●	●
Transmitted Illumination	Koehler illumination with 6V/30W long working life halogen lamp(Philips), The filament center and focal length are adjustable, Brightness Adjustable	●	●
EPI-Fluorescence Attachment	EPI fluorescence attachment, 3-position for fluorescence filters, 1-position for bright field	○	●
	Lamp house for mercury lamp, center adjustable	○	●
	Power supply box for mercury lamp, input voltage 100-240V AC	○	●
	100W mercury (ORSAM)	○	●
	Eyes Protective Plate, used to prevent harm from fluorescence light	○	●
	B1 fluorescence filter (band-pass type)	○	●
	G1 fluorescence filter (band-pass type)	○	●
	UV1 fluorescence filter (band-pass type)	○	●
	V1 fluorescence filter (band-pass type)	○	○
Filters for Transmitted Illumination	Green filter (Φ45mm)	●	●
	Blue filter (Φ45mm), only used for halogen illumination	●	●
	IR filter (Φ45mm)	○	○
ND Filter	ND25 filter (25% light transmittance)	○	●
	ND50 filter (50% light transmittance)	○	○
C-mount Adapter	0.35× C-mount Adapter (focus adjustable, could not work with fluorescence microscope)	○	
	0.5× C-mount Adapter (focus adjustable)	○	○
	0.65× C-mount Adapter (focus adjustable)	○	○
	1× C-mount Adapter (focus adjustable)	○	○
Trinocular Tube	Trinocular Tube Φ23.2mm, used to connect camera	○	○
Other Accessories	Allen wrench, M3 and M4, 1pc each	●	●
	Fuse, T250V500mA	●	●
	Dust cover	●	●
Packing	1 cartons/set, Packing Size: 80cm×57cm×31cm, Gross Weight: 13kgs, Net Weight: 9kgs	●	
	1 cartons/set, Packing Size: 80cm×57cm×60cm, Gross Weight: 26kgs, Net Weight: 20kgs		●

Note: ● Standard Outfit, ○ Optional

Sample Images





14. BS-7000B Inverted Fluorescence Biological Microscope

Introduction

BS-7000B Inverted Fluorescence Biological Microscope is specifically designed for the observation of cell culture. Infinite Optical System gives excellent Optical performance. Excellent high resolution fluorescence objectives are optional to generate high quality fluorescence images. This microscope can be your best assistant in laboratory research.

Feature

1. Excellent fluorescence image with high resolution fluorescence objectives.
2. Protect the light leak with advanced lamp housing.
3. Excellent Optical Performance with Infinite Optical System.
4. Innovative Stand structure, Sharp Image Display, Convenient and Special for Viewing Incubating Cell Tissue.
5. More stable power supply, digital display and timer.

Application

BS-7000B Inverted Fluorescence Biological Microscope is specifically designed for the observation of cell culture. It is widely used in disease examination, immune diagnosis and laboratory research.

Specification

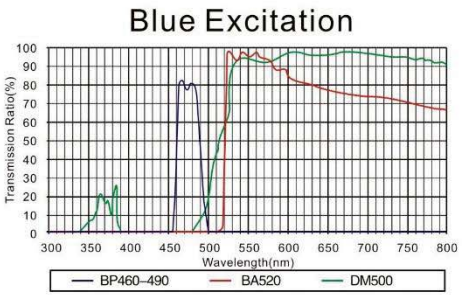
Item	Specification	BS-7000B
Optical System	Infinite Optical System	•
Viewing Head	Seidentopf Trinocular Head Inclined at 30°, Interpupillary 48-75mm	•

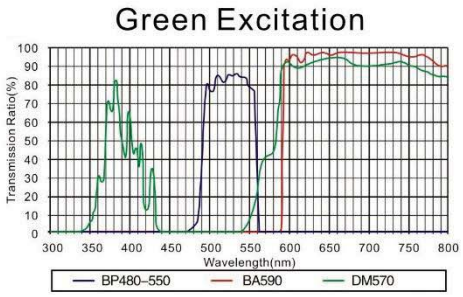
Eyepiece	High-point, Extra Wide Field Eyepiece EW10×/ 22				●
Nosepiece	Quintuple Nosepiece				●
Objective	LWD Infinite Plan Objective	4×/0.1, WD 17.3mm			●
		10×/0.25, WD 10mm			○
		20×/0.4, WD 5.1mm			○
		40×/0.6, WD 2.1mm			●
	Infinite Plan Phase Objective	PH 10×/0.25, WD 10mm			●
		PH 20×/0.4, WD 5.1mm			●
		PH 40×/0.6, WD 2.1mm			○
	Infinite Plan Fluorescence Objective	4×/0.13, WD 16.3mm			○
		10×/0.3, WD 12.4mm			○
		20×/0.4, WD 1.5mm			○
		40×/0.6, WD 2.2mm			○
Condenser	ELWD Condenser NA 0.3, LWD 72mm				●
Focusing	Coaxial Coarse and Fine Adjustment, Fine Division 0.002mm, Coarse Stroke 37.7mm per Rotation, Fine Stroke 0.2mm per Rotation, Moving Range up 8mm, down 3mm				●
Stage	Plain stage 160×250 mm				●
	Glass Insert				●
	Attachable Mechanical Stage, X- Y Coaxial Control, Moving Range 120×78 mm				○
	Auxiliary Stage 70×180mm				●
	Terasaki Holder				○
	ϕ35mm Petri Dish Holder				○
	ϕ54mm Slide Glass Holder				○
Illumination	Halogen Lamp 6V/ 30W				●
	3W LED				○
Filter	Blue/ Green and Frosted Glass Filter (Φ45mm)				●
Phase Annulus	10×-20×, 40× Phase Annulus Plate (Fixed)				●
Telescope	Centering Telescope(Φ30)				○
Photo Attachment	Photo Attachment for SLR Cameras				○
Video Adapter	Video Adapter with C Mount				○
Reflected Light Source		Excitation	Dichroic Mirror	Barrier Filter	
	Blue Excitation	BP460~490	DM500	BA520	●
	Blue Excitation(B1)	BP460~495	DM505	BA510-550	○
	Green Excitation	BP510~550	DM570	BA590	●
	Ultraviolet Excitation	BP330~385	DM400	BA420	○
	Violet Excitation	BP400~410	DM455	BA455	○
	Red Excitation	BP620~650	DM660	BA670-750	○
Lamp	100W HBO Ultra Hi-voltage Spherical Mercury Lamp				●
Protection barrier	Barrier to Resist the Ultraviolet Light				●
Power Supplier	Power Supplier NFP-1, 220V/ 110V interchangeable, Digital Display				●
Filter	Neutral ND25/ ND6 Filter				○
Centering Plate					●

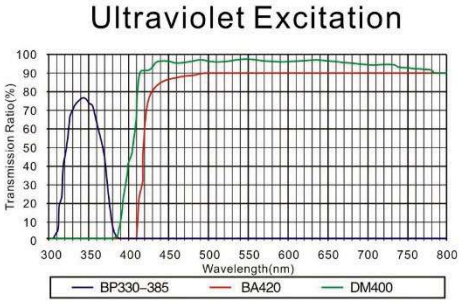
Note: ● Standard Outfit, ○ Optional

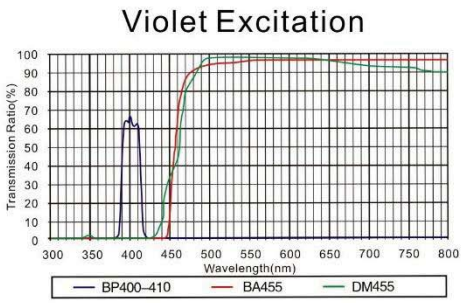
BS-7000B Inverted Fluorescence Attachments

Characteristics of Mirror Units Wavelength









Sample Images