

BS-5064 Polarizing Microscope



BS-5064B



BS-5064T



BS-5064TRF



## Introduction

New designed BS-5064 improves the destressing imaging system, reflected illumination system and lamp house, resulting in higher polarization and more vivid image. Green manufacture in full operation based on HSF environmental policy. Based on ergonomic designs, the operation is more convenient and comfortable.

## Feature

### 1. Intermediate device for professional conosopic observation



Intermediate device for professional conosopic observation, with internal Bertrand lens with analyzer slot,  $\lambda$  &  $\lambda/4$  & quartz wedge attachable. The center of Bertrand lens is adjustable, with rotating switch, cyclic focusing, making it easier to observe interference image. Pluggable analyzer,  $360^\circ$  rotatable,  $2^\circ$  increment,  $6'$  precision.

### 2. Reflected illuminator

Reflected illuminator with polarizer and beam splitter, field and aperture diaphragms adjustable. Pluggable polarizer is removable for natural light observation and easy to be replaced. Removable beam splitter is designed for ensuring that all imaging light can enter the observation tube during transmission observation, improving the image quality under interference and orthogonal polarization.

### 3. Polarizer bayonet



For polarizing observation, the vibrating axis of the polarizer and analyzer in microscope should be orthogonal. In another word, the east-west vibrating axis and the south-north axis should be in line with the vertical and horizontal scale line of reticle in the eyepiece. Therefore, it is necessary to have a bayonet for fixing the eyepiece with reticle.

### 4. Large stage

Large circle metal stage, 160mm diameter,  $360^\circ$  rotatable, can be positioned with lock screw at any angle. The stage is anti-corrosive and anti-friction as it is coated with graphite. The scale lines printed by special material can avoid fading or wear-out after long-term operation.

## 5. Achromatic condenser

N.A 1.2 swing-out achromatic condenser, center adjustable, horizontally insert, vertically adjustable up and down. Adjustable aperture diaphragm with scale remedies the disadvantage of fixed condenser, provides ample uniform light and clear image for different magnification observations.

## 6. Focusing mechanism

Low position focusing knob for comfortable operation. It is equipped with a coarse and fine adjustment device for elasticity, a coarse and fine adjustment maximum limit device, and a random limit device. The random limit device can be used for quick replacement of slices, protection of slices and objective lenses.

## 7. Stable frame

Y-shaped frame adopts the design principle of roof. As the main load bearing part, solid column structure eliminates most impact force to ensure stable operation. New designed lamp-house inserts into the concave part on the back as a tail fin, imaginative and beautiful. Surface uses special spray powder, protective, decorative, wear and solvent resistant.

## 8. Illumination system

New designed reflected and transmitted lamp-house with 12V/50W halogen bulb, the center of the filament is preset. Optimized and upgraded light source spotlight system improve light source efficiency. 100-240V wide voltage system with stable output voltage lengthens the life time of bulbs. The main switch of the electrical system decreases consume in standby.

## Specification

### BS-5064B, BS-5064T

Item	Specification	BS-5064B	BS-5064T
Optical System	Infinite Color Corrected Optical System	●	●
Viewing Head	30° inclined gemel binocular head, 360° rotatable, interpupillary distance 54-75mm, visual adjustment: ±5 diopter	●	○
	30° inclined gemel trinocular head, 360° rotatable, interpupillary distance 54-75mm, visual adjustment: ±5 diopter, splitting ratio binocular: trinocular=100:0 or 50:50	○	●
	30°-60° tilting binocular head	○	○
Eyepiece	High eye point wide field plan eyepiece PL10X/22mm	●	●
	High eye point wide field plan eyepiece PL10X/22mm, with micrometer	●	●
	High eye point wide field plan eyepiece PL10X/22mm, with reticle	○	○
	High eye point wide field plan eyepiece PL10X/22mm, with gird board	○	○
	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter	○	○
	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter and micrometer	○	○
	High eye point wide field plan eyepiece PL15X/16mm	○	○
Objective	Long Working Distance	5X/NA=0.15, WD=10.8mm	○
	Plan Destressing	10X/NA=0.3, WD=12.2mm	○
	Objectives	20X/NA=0.45, WD=4.0mm	○

		50X/NA=0.55, WD=7.9mm	○	○
	Plan Destressing Objectives	4X/NA=0.1, WD=15.0mm, CG=0.17mm	●	●
		10X/NA=0.25, WD=10.8mm, CG=0.17mm	●	●
		20X/NA=0.4, WD=1.5mm, CG=0.17mm	○	○
		40X/NA=0.65, WD=0.8mm, CG=0.17mm	●	●
		60X/NA=0.85, WD=0.3mm, CG=0.17mm	●	●
Nosepiece	Center adjustable quadruple nosepiece		●	●
	Center adjustable quintuple nosepiece		○	○
Intermediate Device	Intermediate device with removable internal Bertrand lens, analyzer and compensators. Built in Brewster lens, turntable switching mechanism (center and focal length adjustable).		●	●
	Gyps 1λ (Φ18mm, optical path difference 551nm)		●	●
	Mical 1/4λ (Φ18mm, optical path difference 147.3nm)		●	●
	Quartz Wedge ( I -IV)		●	●
Microscope Body	Transmitted frame with low position coaxial focusing mechanism, coarse range: 30mm, fine precision 0.002mm, with upper limited and tension adjustment.		●	●
Illumination	Wide-range voltage 100V-240V, 12V/50W halogen lamp house for transmitted, center presetting,		●	●
	Halogen light, 12V/50W		●	●
Stage	Circular metal stage, graphite coating, anti-corrosive and anti-friction, diameter 160mm, 360° rotatable, 1° increment, precision 6', with locking device		●	●
	2 clips		○	○
	Mechanical stage, moving range: 30mmX40mm		○	○
Condenser	Swing-out achromatic condenser (N.A 0.9)		●	●
Polarizer & Analyzer	Polarizer and analyzer for transmitted. Pluggable analyzer, 360° rotatable, grid value: 2°, accuracy 6', with locking device. Polarizer, 360° rotatable, with four scales of 0, 90, 180 and 270.		●	●
Filters	Yellow color filter (Φ45)		○	○
	IF55 filter (Φ45)		○	○
	LBD filter (Φ45), only for halogen lamps		●	●
	neutral filter (Φ45)		○	○
C-mount Adapter	0.35× C-mount adapter, adjustable		○	○
	0.5× C-mount adapter, adjustable		○	○
	0.65× C-mount adapter, adjustable		○	○
	1× C-mount adapter, adjustable		○	○
Other Accessories	Electronic eyepiece connector		●	●
	High precision micrometer, 0.01mm increment		○	○
	Spanner for objective center adjustment		●	●
	Internal hexagonal Spanner M3		●	●

**BS-5064RF, BS-5064TRF**

Item	Specification	BS-5064RF	BS-5064TRF	
Optical System	Infinite Color Corrected Optical System	●	●	
Viewing Head	30° inclined gemel binocular head, 360° rotatable, interpupillary distance 54-75mm, visual adjustment: ±5 diopter	○	○	
	30° inclined gemel trinocular head, 360° rotatable, interpupillary distance 54-75mm, visual adjustment: ±5 diopter, splitting ratio binocular: trinocular=100:0 or 50:50	●	●	
	30°-60° tilting binocular head	○	○	
Eyepiece	High eye point wide field plan eyepiece PL10X/22mm	●	●	
	High eye point wide field plan eyepiece PL10X/22mm, with micrometer	●	●	
	High eye point wide field plan eyepiece PL10X/22mm, with reticle	○	○	
	High eye point wide field plan eyepiece PL10X/22mm, with gird board	○	○	
	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter	○	○	
	High eye point wide field plan eyepiece PL10X/22mm, with adjustable diopter and micrometer	○	○	
	High eye point wide field plan eyepiece PL15X/16mm	○	○	
Objective	Long Working Distance Plan Destressing Objectives	5X/NA=0.15, WD=10.8mm	●	●
		10X/NA=0.3, WD=12.2mm	●	●
		20X/NA=0.45, WD=4.0mm	●	●
		50X/NA=0.55, WD=7.9mm	●	●
	Plan Destressing Objectives	4X/NA=0.1, WD=15.0mm, CG=0.17mm	○	○
		10X/NA=0.25, WD=10.8mm, CG=0.17mm	○	○
		20X/NA=0.4, WD=1.5mm, CG=0.17mm	○	○
		40X/NA=0.65, WD=0.8mm, CG=0.17mm	○	○
		60X/NA=0.85, WD=0.3mm, CG=0.17mm	○	○
Nosepiece	Center adjustable quadruple nosepiece	●	●	
	Center adjustable quintuple nosepiece	○	○	
Intermediate Device	Intermediate device with removable internal Bertrand lens, analyzer and compensators. Built in Brewster lens, turntable switching mechanism (center and focal length adjustable).	●	●	
	Gyps 1λ (Φ18mm, optical path difference 551nm)	●	●	
	Mical 1/4λ (Φ18mm, optical path difference 147.3nm)	●	●	
	Quartz Wedge ( I -IV )	●	●	
Microscope Body	Transmitted & Reflected frame with low position coaxial focusing mechanism, coarse range: 30mm, fine precision 0.002mm, with upper limited and tension adjustment.		●	
	Reflected frame with low position coaxial focusing mechanism, coarse range: 30mm, fine precision 0.002mm, with upper limited and tension adjustment.	●		
Illumination	Wide-range voltage 100V-240V, 12V/50W halogen lamp house for reflected, center presetting,	●	●	
	Wide-range voltage 100V-240V, 12V/50W halogen lamp house for transmitted, center presetting,		●	

	Reflected illuminator with LBD filter, field diaphragm and aperture diaphragm adjustable	●	●
	Halogen light, 12V/50W	●	●
Stage	Circular metal stage, graphite coating, anti-corrosive and anti-friction, diameter 160mm, 360° rotatable, 1° increment, precision 6', with locking device	●	●
	2 clips	●	●
	Mechanical stage, moving range: 30mmX40mm	○	○
Condenser	Swing-out achromatic condenser (N.A 0.9)		●
Polarizer & Analyzer	Polarizer and analyzer for transmitted and reflected. Pluggable analyzer, 360° rotatable, grid value: 2°, accuracy 6', with locking device. Polarizer, 360° rotatable, with four scales of 0, 90, 180 and 270.		●
	Polarizer and analyzer for reflected. Pluggable analyzer, 360° rotatable, grid value: 2°, accuracy 6', with locking device. Polarizer plate.	●	
Filters	Yellow color filter (Φ45)	○	○
	IF55 filter (Φ45)	○	○
	LBD filter (Φ45), only for halogen lamps	○	●
	neutral filter (Φ45)	○	○
C-mount Adapter	0.35× C-mount adapter, adjustable	○	○
	0.5× C-mount adapter, adjustable	○	○
	0.65× C-mount adapter, adjustable	○	○
	1× C-mount adapter, adjustable	○	○
Other Accessories	Electronic eyepiece connector	●	●
	High precision micrometer, 0.01mm increment	●	●
	Spanner for objective center adjustment	●	●
	Internal hexagonal Spanner M3	●	●

Note: ● Standard Outfit, ○ Optional

## Accessories

### 1. Long working distance plan destressing objectives

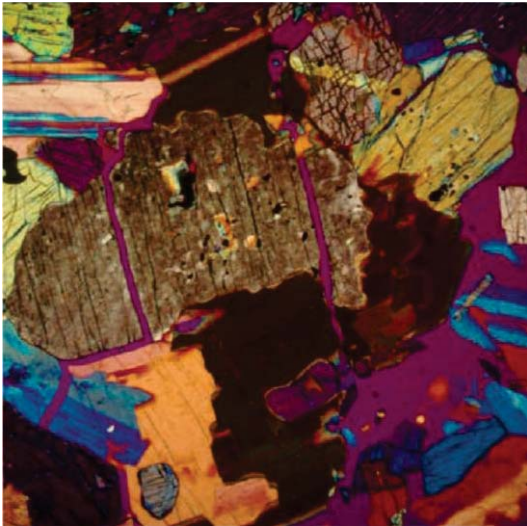
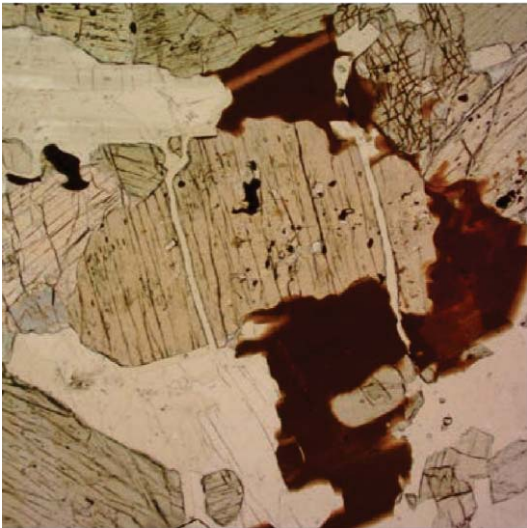
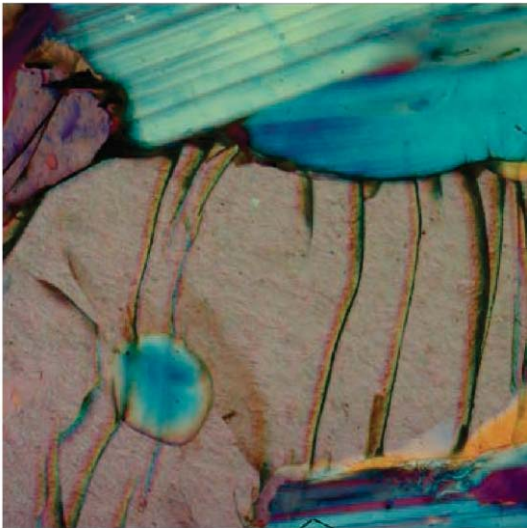


New producing and assembling technology of the objectives effectively eliminate the stress effects in heat treatment, gluing, assembly and calibration process. The background of field of view is almost black in orthogonal state, and the entire set of objectives has basically completely eliminated stress. It is especially well done for reflected observation.

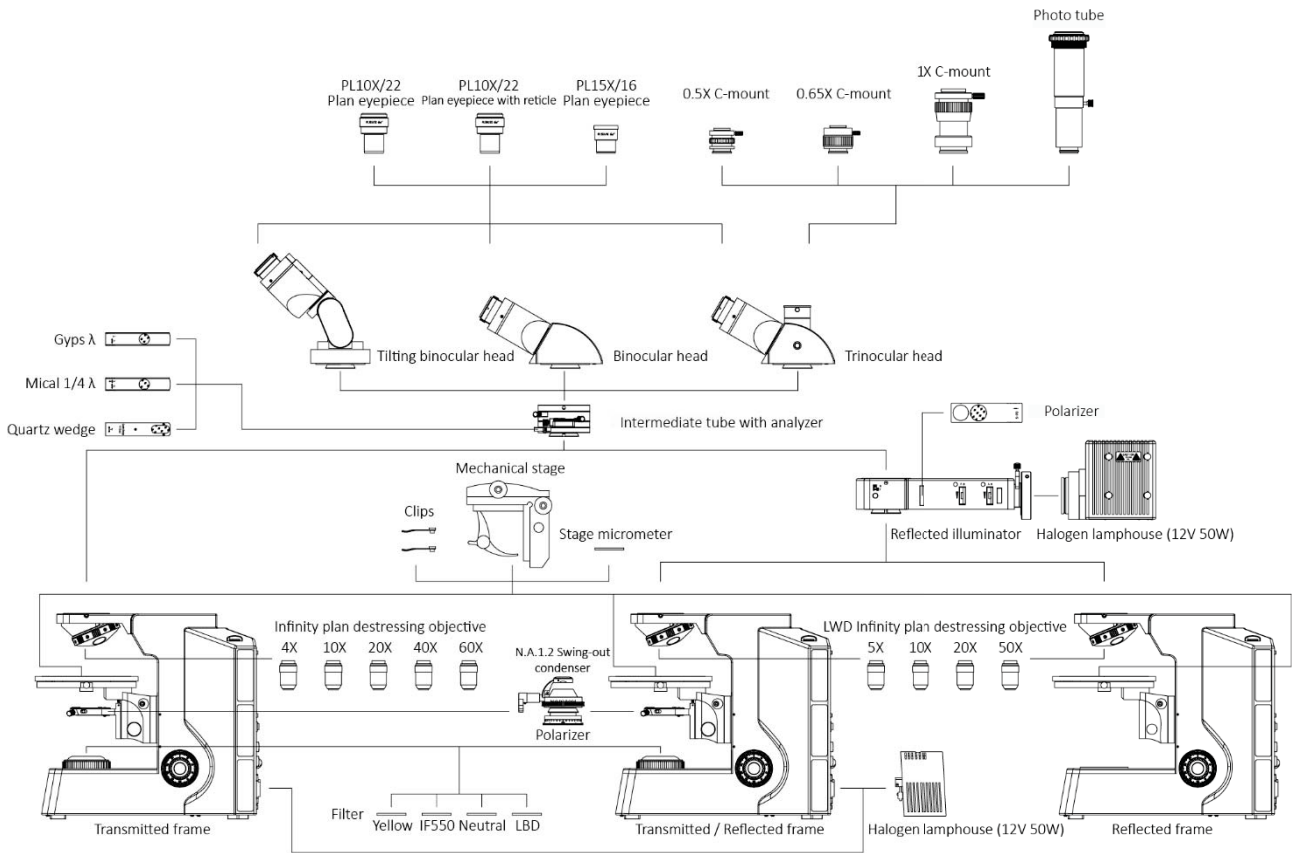
### 2. Professional measuring stage



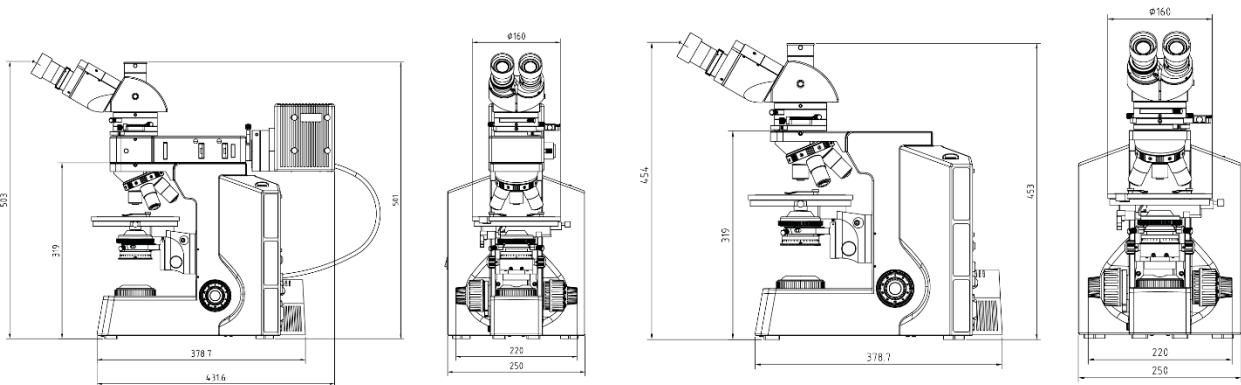
Sample Image



## System Diagram



## Dimension



Unit:mm