

**BS-4050RF Semiconductor FPD Inspection Microscope**

BS-4050RF

**Introduction**

Equipped with varisized wafer holders (including 6/8 inches), BS-4050 is professionally applied for wafer and flat panel display detection. More comfortable, flexible and quicker operation is available with upgraded ergonomics design.

**Feature****1. Multi optional splitting ratio**

With broad beam image system, maximum field of view of BS-4050 reaches to 26.5mm. Trinocular head with two optional splitting ratios of 100:0 or 0:100, 100% image outputs from eyepieces or camera. Trinocular head with three optional splitting ratios of 100:0 or 20:80 or 0:100, double-way image output of 20% from eyepieces and 80% from camera is achievable. The erect gemel trinocular head, same direction and same moving direction for objective and image, easy to view and operate.

**2. Stable frame**

All metal frame with the characteristics of low center, high rigidity and stability for professional industrial inspection, ensures to present a stable and clear image.

### 3. High-performance nosepiece

High-performance nosepiece with precision bearing, is available for light and handy operation, precision resetting, controllable concentricity.

### 4. Large travel mechanical stage



8 inches three-layer mechanical stage, size: 525mm\*330mm, moving range: 210mm\*210mm, is professionally applied for industrial inspection of wafer, FPD, circuit package, PCB, materials, casting metal ceramic part, abrasive tools and so on.



6 inches stage for option, size: 445mm\*240mm, moving range: 158mm×158mm.

## Specification

Item	Specification	BS-4050RF	BS-4050RF (LED)	
Optical System	Infinity Color Corrected Optical System	●	●	
Viewing Head	30° inclined infinity trinocular head, erect image, interpupillary distance: 50-76mm, splitting ratio:100:0 or 0:100	●	●	
	30° inclined infinity trinocular head, inverted image, interpupillary distance: 50-76mm, splitting ratio:100:0, 20:80 or 0:100	○	○	
	5-35° adjustable, inverted image, tilting trinocular head, interpupillary distance: 50-76mm, splitting ratio:50:50, 100:0 or 0:100	○	○	
Eyepiece	High eye point wide field plan eyepiece PL10X/25mm, with adjustable diopter	●	●	
	High eye point wide field plan eyepiece PL10X/25mm, with reticle and adjustable diopter	○	○	
Objectives	BD Semi-Apochromatic Metallurgical Objectives	5X/NA=0.15, WD=13.5mm	●	●
		10X/NA=0.3, WD=9mm	●	●
		20X/NA=0.5, WD=2.5mm	○	○
		50X/NA=0.8, WD=1mm	○	○
		100X/NA=0.9, WD=1mm	○	○
	Ultra-Long Working Distance BD Semi-Apochromatic Metallurgical Objectives	20X/NA=0.4, WD=8.5mm	●	●

	Infinity Long Working Distance BD Semi-Apochromatic Metallurgical Objectives	50X/NA=0.55, WD=7.5mm	●	●
		100X/NA=0.8, WD=2.1mm	○	○
		100X/NA=0.8, WD=3.5mm	○	○
	Bright Field Semi-Apochromatic Metallurgical Objectives	5X/NA=0.15, WD=19.5mm	○	○
		10X/NA=0.3, WD=10.9mm	○	○
		20X/NA=0.5, WD=3.2mm	○	○
		50X/NA=0.8, WD=1.2mm	○	○
	Nosepiece	Sextuple BD nosepiece, with DIC slot		●
Quintuple BD nosepiece, with DIC slot		○	○	
Sextuple bright field nosepiece, with DIC slot		○	○	
Septuple bright field nosepiece, with DIC slot		○	○	
Frame	Reflected frame, for halogen lamp as reflected illumination, with low position coaxial focusing mechanism, coarse range: 33mm, fine precision: 0.001mm, with upper limit and tension adjustment. Built-in 100-240V wide voltage system, with brightness setting button and reset button.		●	
	Transmitted & reflected frame, for halogen lamp as reflected illumination, with low position coaxial focusing mechanism, coarse range: 33mm, fine precision: 0.001mm, with upper limit and tension adjustment. Built-in 100-240V wide voltage system, 5W cool color LED transmission illumination system (warm color for option), the upper and lower light can be independently controlled.		○	
	Reflected frame, for LED lamp as reflected illumination, with low position coaxial focusing mechanism, coarse range: 33mm, fine precision: 0.001mm, with upper limit and tension adjustment. Built-in 100-240V wide voltage system, with brightness setting button and reset button.			●
	Transmitted & reflected frame, for LED lamp as reflected illumination, with low position coaxial focusing mechanism, coarse range: 33mm, fine precision: 0.001mm, with upper limit and tension adjustment. Built-in 100-240V wide voltage system, 5W cool color LED transmission illumination system (warm color for option), the upper and lower light can be independently controlled.			○
Height Increasing Pad	4 cross arm pads (increased by 20mm), equipped with M5*20 hexagon socket head screws		○	○
	4 cross arm pads (increased by 60mm), equipped with M5*20 hexagon socket head screws		○	○
	4 cross arm pads (increased by 80mm), equipped with M5*20 hexagon socket head screws		○	○
Stage	8 inches three-layer mechanical stage with low position coaxial adjustment, size: 525mm*330mm, moving range: 210mm*210mm, with clutch handle for quick movement. Glass plate for reflected use.		●	●
	6 inches three-layer mechanical stage with low position coaxial adjustment, size: 445mm*240mm, moving range for reflected: 158mm*158mm, moving range for transmitted: 100*100mm, with clutch handle for quick movement. Glass plate for transmitted and reflected use.		○	○

Illumination	Bright field/ dark field reflected illuminator, with variable aperture and field diaphragm, center adjustable; with switch device for bright field and dark field; with filter slot and polarizing slot.	●	●
	Halogen light box, 12V/100W, with center set, for transmitted and reflected use	●	●
	Halogen light, 12V/100W	●	
	LED lamp box, 12V/10W, cool color (color temperature 4750-5500K)		●
Polarizer and Analyzer	Polarizer and fixed analyzer	○	○
	Polarizer and 360° rotatable analyzer	●	●
Rotating Workbench	Rotating workbench. 8-inch wafer plate, for 6, 8 inches wafer	○	○
Interference Filter	Blue interference filter for reflected use: <=480nm	○	○
	Green interference filter for reflected use: 520nm-570nm	○	○
	Red interference filter for reflected use: 630nm-750nm	○	○
	Interference filter for reflected use, color balance plate (white light), suitable for halogen lamps	●	●
DIC	DIC kit	○	○
Adapter	0.35X C-mount adapter, focus adjustable	○	○
	0.5X C-mount adapter, focus adjustable	○	○
	0.65X C-mount adapter, focus adjustable	○	○
	1X C-mount adapter	○	○
Others	High precision micrometer	○	○
	Internal hexagonal Spanner M4	●	●
	Internal hexagonal Spanner M5	●	●

Note: ● Standard Outfit, ○ Optional

## Accessories

### 1. Internationally advanced eyepiece with large field of view



10X/25mm eyepiece is plan and clear even at the edge of FOV, helpful to present more complete image of the sample.

### 2. Long working distance objectives



A whole set of professional semi-APO metallurgical objectives, adopt the lenses with high transmission and advanced coating technology.

Long working distance objectives for option, is efficient to prevent sample damage.

### 3. Nomarski differential interference contrast system



Using high-performance DIC attachment, the impalpable height difference under bright field can be transformed to high contrast light difference as 3D relief. It is widely applied for detection of LCD conducting particle and surface scratch of precision disk.

### 4. C-mount adapter



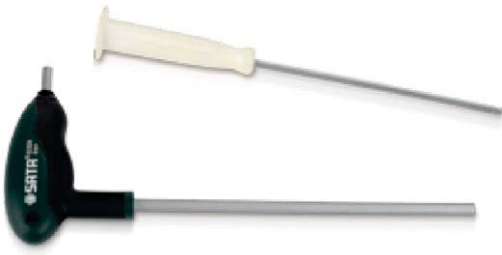
### 5. Interference filters



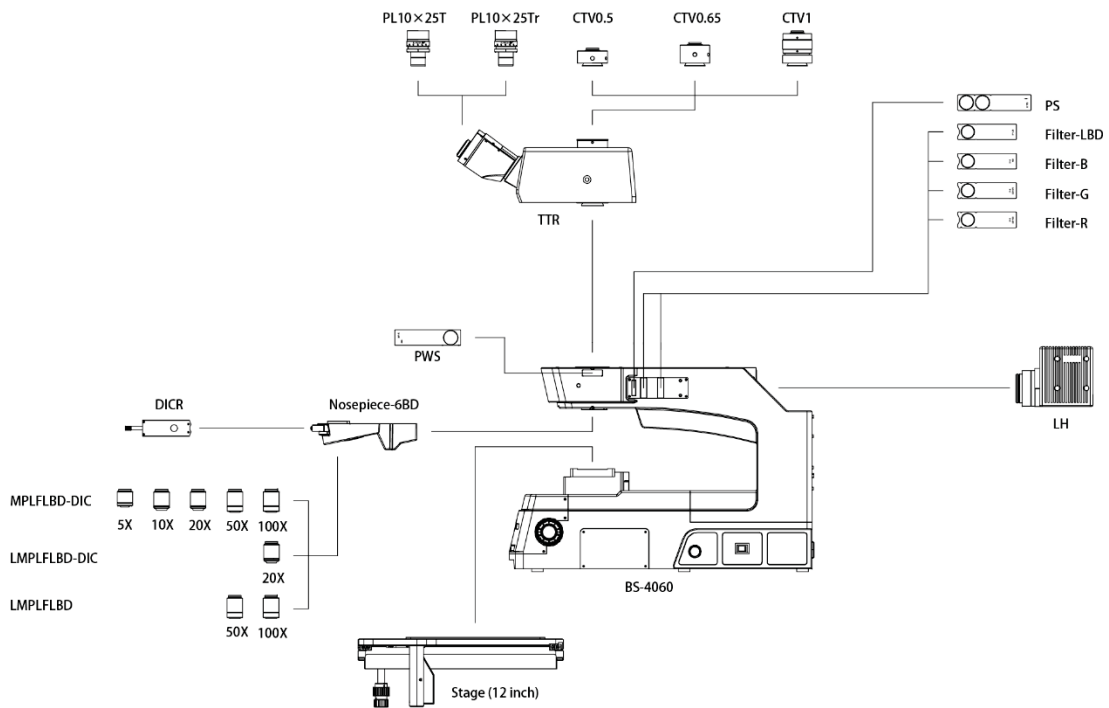
### 6. Polarizer and analyzer



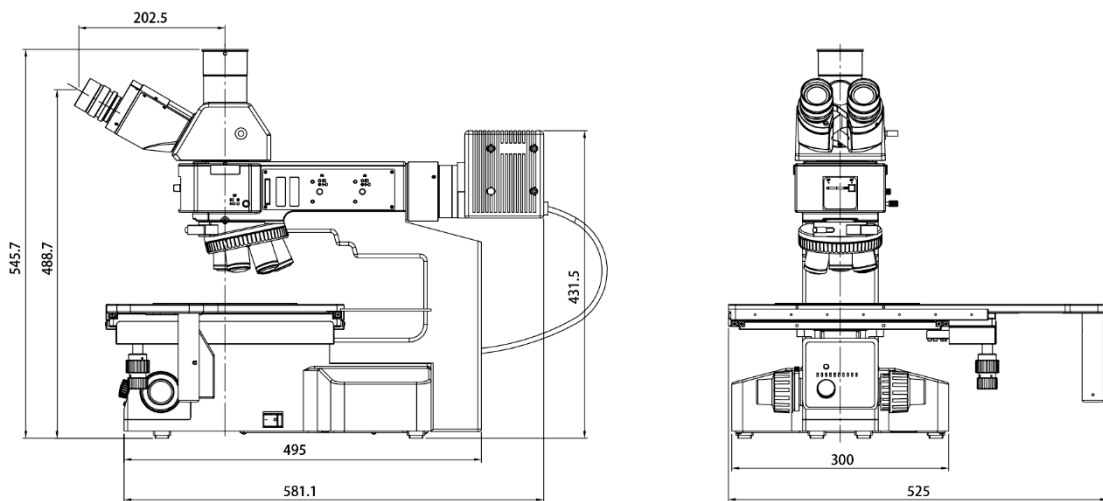
## 7. Other Accessories



## System Diagram



## Dimension



Unit:mm