

## BS-1080LCD Digital Monocular Zoom Microscope



BS-1080LCD1/2/3/4

### Introduction

BS-1080LCD Series LCD Digital Monocular Zoom microscopes adopt apochromatic parallel optical imaging system and provide high resolution and sharp stereoscopic images. The camera system comes with a HDMI, WIFI camera and 11.6" retina LCD screen. The camera can be controlled with mouse to take pictures, take videos and make measurement, it can work without PC. This series microscopes are designed for the applications in the fields of machine vision, industrial inspection and scientific research. Modularization product portfolio and excellent performance make them a better choice in these areas.

### Features

1. Adopt apochromatic parallel optical imaging system, use advanced multi-layer coating technology. Get high-resolution and high contrast images, naturally restore the true colors of observed objects.
2. Compact design, it is very suitable for the small installation space.
3. Zoom ratio 1:8.3, zoom range 0.6×-5×, standard working distance 88mm, can meet the requirement of circuit board, electronics, semi-conductor and other industrial inspections.
4. There are a variety of auxiliary lens and C-mount eyepiece adapter for option, make the system's total magnification range 1.65×-1050×, working distance 0.4mm-270mm, object field of view 0.12mm-72mm.
5. BAL-48A LED Ring light is standard, Polarizing illumination, Coaxial illumination system are optional, Coaxial illumination adopts single high brightness 3W LED, color temperature 5500K, uniform lighting, suitable for high reflectivity surface precision detection and limited exterior lighting occasions.
6. Adopt modular design, various additional accessories are optional to make the microscope a powerful device for your jobs.

7. The camera system comes with a HDMI, WIFI camera and 11.6" retina LCD screen, controlled by mouse.

## Application

BS-1080LCD series LCD Digital Monocular Zoom Microscope are widely used in educational demonstration, agriculture research, industrial material, semi-conductor, integrated circuit board inspection area and so on.

## Specification

Item	Specification	BS-1080 LCD1	BS-1080 LCD2	BS-1080 LCD3	BS-1080 LCD3
Optical System	Infinite apochromatic parallel optical system	●	●	●	●
Zoom Lens	Optical zoom magnification: 0.6-5.0×	●	●	●	●
Zoom ratio	1:8.3	●	●	●	●
Mounting Size	Φ40mm	●	●	●	●
LCD Digital Camera	BLC-520 digital camera with HDMI and WIFI output, can capture 2.0MP pictures, videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920*1080	●			
	BLC-520AF Auto focus digital camera with HDMI and WIFI output, can capture 2.0MP pictures, videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920*1080		●		
	BLC-550 digital camera with HDMI and WIFI output, can capture 5.0MP pictures, videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920*1080.			●	
	BLC-550AF Auto focus digital camera with HDMI and WIFI output, can capture 5.0MP pictures, videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920*1080				●
C-mount Adapter	0.3× C-mount adapter	○	○	○	○
	0.4× C-mount adapter	○	○	○	○
	0.5× C-mount adapter	●	●	●	●
	0.67× C-mount adapter	○	○	○	○
	1× C-mount adapter	○	○	○	○
	1.5× C-mount adapter	○	○	○	○
	2× C-mount adapter	○	○	○	○
Auxiliary Lens	0.3× /WD: 270mm	○	○	○	○
	0.5× / WD: 160mm	○	○	○	○
	0.6× / WD: 130mm	○	○	○	○
	1× / WD: 88mm	●	●	●	●
	1.5× / WD: 52mm	○	○	○	○
	2× / WD: 39mm	○	○	○	○
Infinite LWD Plan Achromatic	5×, NA: 0.12, WD: 26.1mm	○	○	○	○
	10×, NA: 0.25, WD: 20.2mm	○	○	○	○

Metallurgical Objective Lens	20x, NA: 0.40, WD: 8.8mm	○	○	○	○
	40x, NA: 0.6, WD: 3.98mm	○	○	○	○
	50x, NA: 0.70, WD: 3.68mm	○	○	○	○
	60x, NA: 0.75, WD: 1.22mm	○	○	○	○
	80x, NA: 0.80, WD: 1.25mm	○	○	○	○
	100x, NA: 0.85, WD: 0.4mm	○	○	○	○
Infinite LWD Plan Apochromatic Metallurgical Objective	5x, NA: 0.13, WD: 44.5mm	○	○	○	○
	10x, NA: 0.28, WD: 34mm	○	○	○	○
	20x, NA: 0.29, WD: 31mm	○	○	○	○
	50x, NA: 0.42, WD: 20.1mm	○	○	○	○
Coaxial light Device	Coaxial Device, light input port $\Phi$ 11mm (does not include light source)	○	○	○	○
	Coaxial point light source: 3W LED, 5500K, brightness adjustable	○	○	○	○
	Polarized Coaxial Device, light input port $\Phi$ 11mm (does not include light source)	○	○	○	○
Ring Light	BAL-48A LED Ring light, brightness adjustable	●	●	●	●
	Polarized LED Ring light, brightness adjustable	○	○	○	○
Other Accessories	Metallurgical objective adapter (used to connect metallurgical objectives onto the zoom body)	○	○	○	○
	Triple Nosepiece for metallurgical objectives	○	○	○	○
	BSL-3B LED light source with dual goose neck light guide, 6.5W	○	○	○	○
	BMS-302 X-Y moving stage	○	○	○	○
Stand and focus arm	BA1 Pillar type column plain stand with coarse focus arm, base size 330x300x10mm	●	●	●	●
	BA2 Pillar type column plain stand with coarse and fine focus arm, base size 330x300x10mm	○	○	○	○
	BA3 Square type column plain stand with coarse and fine focus arm, base size 330x300x10mm	○	○	○	○
	BA4 Square type column plain stand with coarse and fine focus arm, transmitted 10W LED illumination, base size 330x300x10mm	○	○	○	○

Note: ●Standard Outfit, ○Optional

## Optical Parameter

Auxiliary Objectives	CCD C-mount Adapter								
		0.3x	0.4x	0.5x	0.67x	1.0x	1.5x	2.0x	3.0x
Standard 1.0x/ WD:86mm	Total Mag.	0.18x-1.5x	0.24x-2.0x	0.3x-2.5x	0.4x-3.35x	0.6-5.0x	0.9x-7.5x	1.2x-10.0x	1.8x-15x
	FOV (mm)	26x20-3x2.0	20x15-2x1.8	16x12-1.9x1.4	12x9-1.43x1.07	8x6-0.9x0.7	5x4-0.6x0.5	4x3-0.5x0.36	2.6x2-0.3x0.2
0.3x/ WD:270mm	Total Mag.	0.05x-0.45x	0.07x-0.6x	0.09x-0.75x	0.12x-1.0x	0.18x-1.5x	0.27x-2.25x	0.36x-3x	0.54x-4.5x

	FOV (mm)	96×72-10.6×8	68×51-8×6	53×40-6.4×4.8	40×30-4.8×3.6	26×20-3.2×2.4	18×13-2×1.6	13×10-1.6×1.2	9×6.6-1.1×0.8
0.5× /WD:160mm	Total Mag.	0.09×-0.75×	0.12×-1×	0.15×-1.25×	0.201×-1.68×	0.3×-2.5×	0.45×-3.75×	0.6×-5×	0.9×-7.5×
	FOV (mm)	53×40-6.4×4.8	40×30-4.8×3.6	32×24-3.8×2.8	23.88×17.9-2.85×2.14	16×12-1.9×1.4	11×8-1.3×0.9	8×6-0.9×0.7	5×4-0.6×0.5
0.6×/ WD:130mm	Total Mag.	0.22×-0.9×	0.144×-1.2×	0.18×-1.5×	0.24×-2.0×	0.36×-3×	0.54×-4.5×	0.72×-6×	1.08×-9×
	FOV (mm)	22×16-3×4	33×25-4×3	26×20-3×2	20×15-2.4×1.8	13×10-1.6×1.2	9×6.6-1.1×0.8	6.6×5.1-0.8×0.6	4.4×3-0.5×0.4
1.5×/ WD:50mm	Total Mag.	0.27×-2.25×	0.36×-3×	0.45×-3.75×	0.6×-5.0×	0.9×-7.5×	1.35×-11.25×	1.8×-15×	2.7×-22.5×
	FOV (mm)	18×13-2×1.6	13×10-1.6×1.2	11×8-1.3×0.9	8×6-0.9×0.7	5×4-0.6×0.5	3.5×2.6-0.4×0.3	2.6×2-0.3×0.24	1.7×1.3-0.2×0.1
2.0×/ WD:39mm	Total Mag.	0.36×-3×	0.48×-4×	0.6×-5.0×	0.8×-6.7×	1.2×-10×	1.8×-15×	2.4×-20×	3.6×-30×
	FOV (mm)	13×10-1.6×1.2	10×7.5-1.2×0.9	8×6-0.9×0.7	6×4.5-0.7×0.54	4×3-0.5×0.36	2.6×2-0.3×0.2	2×1.5-0.2×0.18	1.3×1-0.16×0.12

**Remark:** Total magnification of lens = Magnification of zoom body × CCD adapter magnification × Objective magnification, The range of Field of View is based on 1/3" CCD Camera (Sensor Width 4.8mm, Height 3.6mm), FOV= the size of camera sensor / total Optical Magnification.

## Accessories



CCD C-mount adapter



BS-1080A with coaxial device



Auxiliary Objective



BAL-48A LED ring light



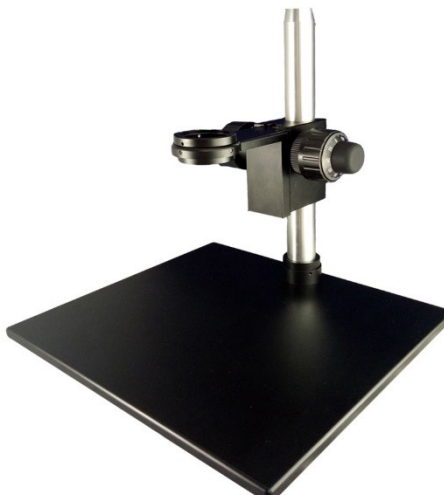
LED point light for Coaxial Device



BMS-302 X-Y stage



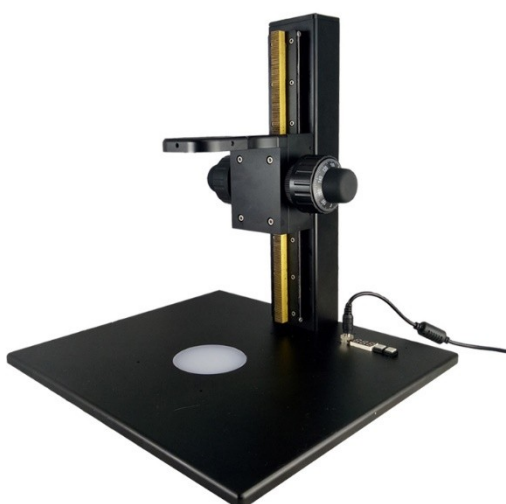
BA1 Stand



BA2 Stand

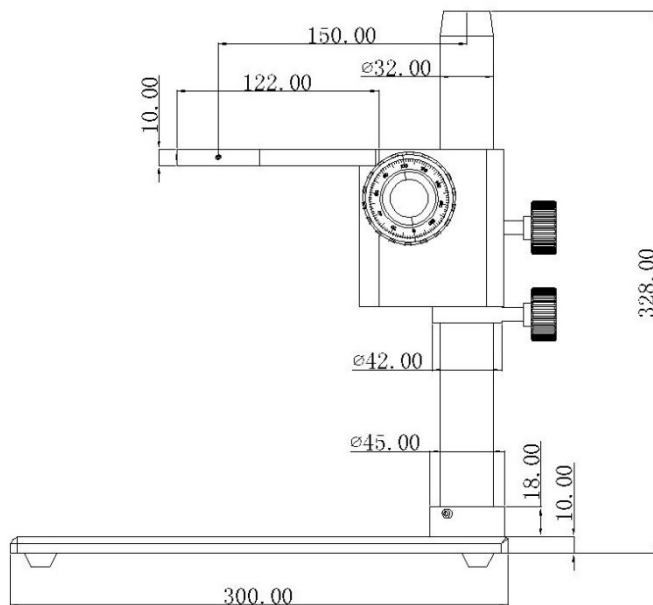
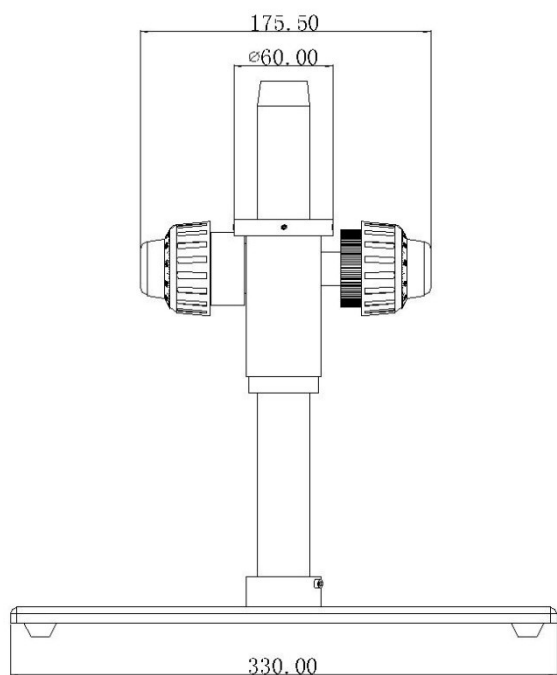


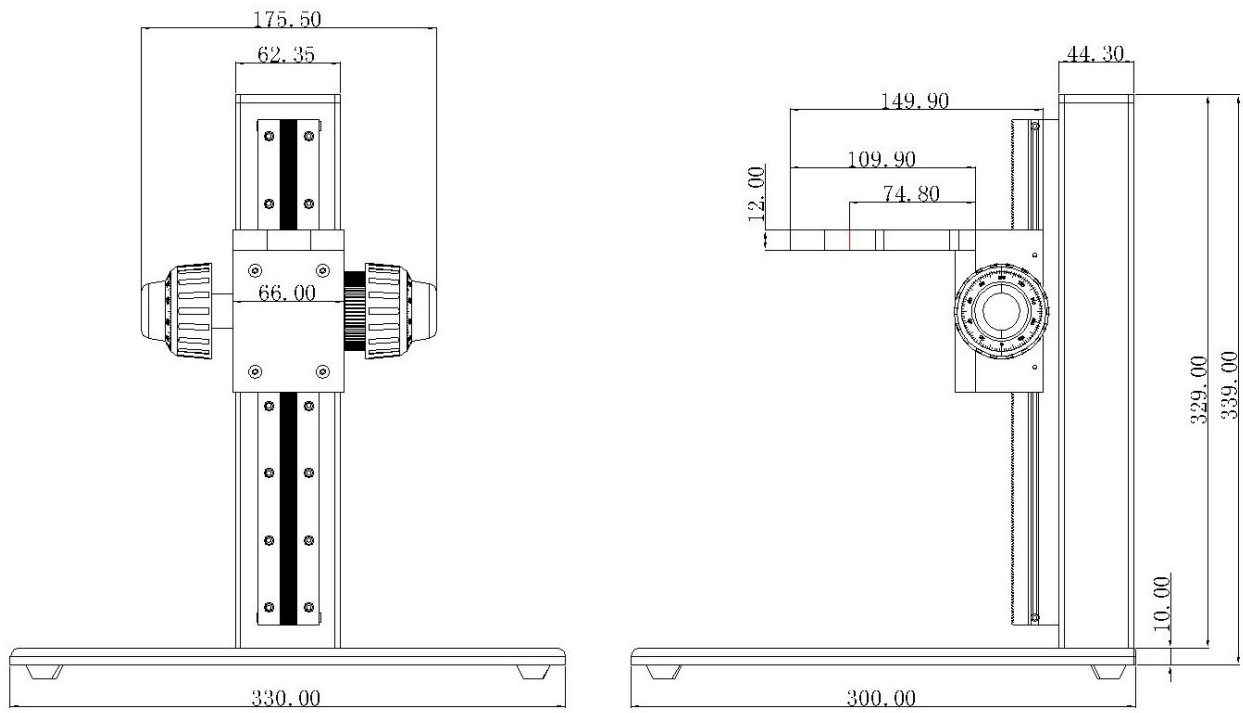
BA3 Stand



BA4 Stand

Dimension





Unit: mm