9. BS-1085 4K Apochromatic Monocular Zoom Microscope

BS-1085A Monocular Zoom microscope lens

BS-1085A with L-type coaxial illuminator   BS-1085A with straight type coaxial illuminator

Introduction

BS-1085 series 0.3-3.0X ultra high resolution 4K apochromatic monocular zoom microscope Lenses have adopted apochromatic optical system. Work with 4K or higher solution cameras, they can capture ultra HD 4K images and videos. They can greatly improve the analysis and automated intelligent computing inspections.

BS-1085A comes with standard 0.3-3.0X zoom body, support Max. sensor size of camera is 2/3 inch.

BS-1085 zoom body with 1.67X or above C-mount lenses can support 1inch or bigger sensor cameras.

BS-1085 series microscopes can be used in the fields of machine vision, industrial inspection and scientific research.

They can be widely used in food, silicon chips, wafer, chips, electronic components, biology and other fields of inspection and research.

Features

1. BS-1085 series monocular microscopes lenses have improved FOV more 1.5X than the traditional zoom lenses at the same magnification.

2. Modular design. It can be equipped with functional components such as coaxial lighting, APO objective and objective nosepiece etc.

3. Using the principle of apochromatic system, the image is perfectly clear without refocusing in different wavelength lighting situations.

4. 1:10 zoom ratio. 0.3X-3.0X standard zoom body. User can choose different magnification C-mount and objective lens.

5. BS-1085A has 2 types of mounting method, one is traditional mounting, another one has 2 holders for clamping, which is more stable.

BS-1085A with BA3 stand (Install dia.φ50mm)   BS-1085A with double holding structure

Specification

Item	Specification	BS-1085A	BS-1085B
Optical System	Infinite ultra-high resolution 4K apochromatic parallel optical system	●	●
Zoom Lens	Optical zoom magnification: 0.3×-3.0× (without click stop)	●	●
	Optical zoom magnification: 0.3×-3.0× (with click stop)	○	○
Zoom ratio	1:10	●	●
Mounting Size	Φ50mm	●	●
LCD Digital Camera	BLC-580A digital camera with HDMI and USB2.0 output, Sony IMX334 sensor, can capture 8.3MP pictures, 4K videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920 × 1080	○	○
	BLC-580B digital camera with HDMI and USB2.0 output, Sony IMX485 sensor, can capture 8.3MP pictures, 4K videos and do measurement, control with mouse; 11.6 inch LCD screen, resolution 1920 × 1080	○	○

	BLC-590A digital camera with HDMI, NETWORK, WIFI and USB2.0 output, Sony IMX334 sensor, can capture 8.3MP pictures, 4K videos and do measurement, control with mouse; 13.3inch UHD LCD screen, resolution 3840 × 2160	○	○
	BLC-590B digital camera with HDMI, NETWORK, WIFI and USB2.0 output, Sony IMX485 sensor, can capture 8.3MP pictures, 4K videos and do measurement, control with mouse; 13.3 inch UHD LCD screen, resolution 3840 × 2160	○	○
C-mount Adapter	1× C-mount adapter	●	○
	1.33× C-mount adapter	○	○
	1.67× C-mount adapter	○	●
	2× C-mount adapter	○	○
	2.33× C-mount adapter	○	○
	2.67× C-mount adapter	○	○
	3× C-mount adapter	○	○
	3.33× C-mount adapter	○	○
Optical Magnification	0.3×-3.0× (with 1× C-mount adapter)	●	○
	0.4×-4.0× (with 1.33× C-mount adapter)	○	○
	0.5×-5.0× (with 1.67× C-mount adapter)	○	●
	0.6×-6.0× (with 2× C-mount adapter)	○	○
	0.7×-7.0× (with 2.33× C-mount adapter)	○	○
	0.8×-8.0× (with 2.67× C-mount adapter)	○	○
	0.9×-9.0× (with 3× C-mount adapter)	○	○
	1.0×-10.0× (with 3.33× C-mount adapter)	○	○
Auxiliary Lens	0.5× / WD: 180mm	○	○
	1× / WD: 100mm	●	●
	2× / WD: 38mm	○	○
Infinite LWD Plan Achromatic Metallurgical Objective Lens	5×, NA: 0.12, WD: 26.1mm	○	○
	10×, NA: 0.25, WD: 20.2mm	○	○
	20×, NA: 0.40, WD: 8.8mm	○	○
	40×, NA: 0.6, WD: 3.98mm	○	○
	50×, NA: 0.70, WD: 3.68mm	○	○
	60×, NA: 0.75, WD: 1.22mm	○	○
	80×, NA: 0.80, WD: 1.25mm	○	○
	100×, NA: 0.85, WD: 0.4mm	○	○
Infinite LWD Plan Apochromatic Metallurgical Objective	5×, NA: 0.13, WD: 44.5mm	○	○
	10×, NA: 0.28, WD: 34mm	○	○
	20×, NA: 0.29, WD: 31mm	○	○
	50×, NA: 0.42, WD: 20.1mm	○	○
Coaxial light Device	Straight Type Coaxial Device, light input port Φ16mm (does not include light source, can be used for all the C-mount adapters)	○	○
	Coaxial point light source for Straight Type Coaxial Device: Φ16mm, 3W LED, 5500K,	○	○

	brightness adjustable		
	L-Type Coaxial Device with iris diaphragm, light input port Φ11mm (does not include light source, used for 1.67× C-mount adapters and above)	○	○
	Coaxial point light source for L-Type Coaxial Device: Φ11mm, 3W LED, 5500K, brightness adjustable	○	○
Ring Light	BAL-48A LED Ring light, brightness adjustable	○	○
	BAL-144A Four-zone lighting control separately big area LED ring light, brightness adjustable	○	○
Cold Light Source	BSL-3B LED light source with dual goose neck light guide, 6.5W	○	○
	BBL-5A LED bar light, which can be attached to the pole stand	○	○
	BSL-15A-2 Cold LED light source with Dual Light Guide, 15W LED lamp	○	○
	BSL2-150A-2 Cold light source with Dual Light Guide, 21V/150W Halogen lamp	○	○
Stage	BMS-302 X-Y moving stage	○	○
	BMS-303 X-Y moving stage	○	○
	BMS-311 X-Y measuring stage	○	○
Other Accessories	Metallurgical objective adapter (used to connect metallurgical objectives onto the zoom body)	○	○
	Quadruple Nosepiece for metallurgical objectives (RMS: 20.32mm x 0.706mm)	○	○
	Quadruple Nosepiece for APO metallurgical objectives (M26*0.705mm)	○	○
	Double holding bracket	○	○
Stand and focusing arm	BA1 Pillar type column plain stand with coarse focus arm (base size: 300x330x10mm)	○	○
	BA1S Pillar type column plain stand with coarse focus arm (with small base, base size: 200x260x10mm)	○	○
	BA2 Pillar type column plain stand with coarse and fine focus arm (base size: 300x330x10mm)	○	○
	BA2S Pillar type column plain stand with coarse and fine focus arm (with small base, base size: 200x260x10mm)	○	○
	BA3 Square type column plain stand with coarse and fine focus arm (base size: 300x330x10mm)	○	○
	BA4 Square type column plain stand with coarse and fine focus arm, transmitted 10W LED illumination (base size: 300x330x10mm)	○	○
	BA5 multi-angle column plain stand with coarse focus arm (base size: 300x330x10mm)	○	○
	BA6 multi-angle column plain stand with coarse and fine focus arm (base size: 300x330x10mm)	○	○
	BA7 universal boom stand with coarse focus arm (base size: 300x330x10mm)	○	○
	BA8 universal boom stand with coarse and fine focus arm (base size: 300x330x10mm)	○	○
	BA9 Square type column plain stand with coarse focus arm (base size: 300x330x10mm)	○	○

Note: ●Standard Outfit, ○Optional

Optical Parameter

BS-1085A 0.3-3.0X Ultra Resolution 4K Zoom Lens (with 1× C-mount adapter)

Model	BS-1085A with 1× C-mount adapter				
Magnification	0.3X	0.5X	1.0X	2.0X	3.0X
Focus distance(mm)	27	45	90	180	270
Working distance(mm)	100	100	100	100	100
Depth of field (mm)	5.80	2.16	0.63	0.22	0.12
NA(mm)	0.023	0.037	0.063	0.090	0.107
Resolution(mm)	0.015	0.009	0.005	0.004	0.003
F/#	6.5	6.8	7.9	11.1	14.0
Dist%	3.90%	1.90%	0.55%	-0.04%	-0.23%
CCD	2/3"	2/3"	2/3"	2/3"	2/3"
Mount	C	C	C	C	C
Reversal F/#	21.7	13.5	7.9	5.6	4.7

BS-1085B 0.5-5.0X Ultra Resolution 4K Zoom Lens (with 1.67× C-mount adapter)

| Model	BS-1085A with 1.67× C-mount adapter					
Magnification	0.5X	1.0X	2.0X	3.0X	4.0X	5.0X
Focus distance(mm)	45	90	180	270	360	450
Working distance(mm)	100	100	100	100	100	100
Depth of field (mm)	3.48	0.93	0.29	0.16	0.10	0.07
NA(mm)	0.023	0.043	0.070	0.085	0.097	0.107
Resolution(mm)	0.015	0.008	0.005	0.004	0.003	0.003
F/#	10.9	11.6	14.3	17.6	20.6	23.4
Dist%	2.97%	1.10%	0.20%	-0.03%	0.13%	0.20%
CCD	1"	1"	1"	1"	1"	1"
Mount	C	C	C	C	C	C
Reversal F/#	21.7	11.6	7.1	5.9	5.2	4.7

Product pictures

BS-1085A with 1X C-mount adapter

BS-1085A with 1.67X C-mount adapter
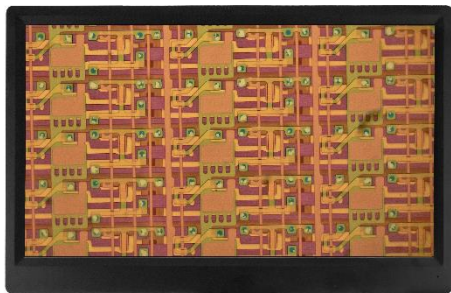
LCD digital camera(front)

LCD digital camera(back)

0.5X/1X/2X Objective

4 holes nosepiece M20.3 thread size

4 holes nosepiece M26 thread size

Infinity Plan semi-APO achromatic objective

95mm plan APO objective

BS-1085A with L-type coaxial illuminator

BS-1085A with straight type coaxial illuminator

L-type coaxial illuminator

Straight type coaxial illuminator

BS-1085A with L-type coaxial illuminator

BS-1085A with straight type coaxial illuminator
and APO objective lens and APO objective lens

BAL-48A LED Ring Light

BAL-144A Four-zone LED Ring Light

BSL-3B LED Light Source

LED bar light

BSL-15A

BSL2-150A

Single Rigid Fiber

Double Rigid Fiber

Ring Flexible Fiber

BMS-302

BMS-303

BMS-311

BS-1085A with coaxial illuminator and nosepiece

Double holding bracket

BA1S Stand(right side)

BA1S Stand(left side)

BA1 Stand

BA2 Stand

BA3 Stand
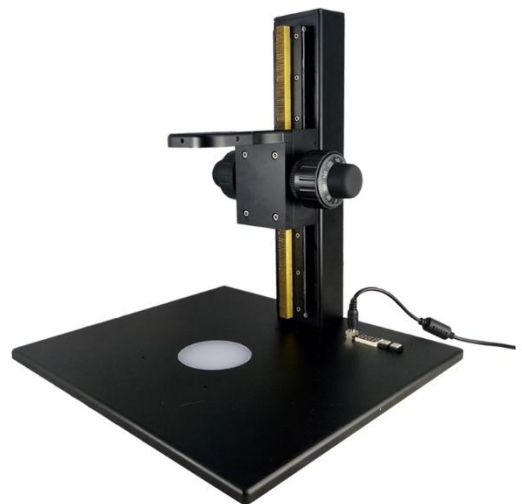
BA4 Stand

BA5 Stand(left)

BA5 Stand(horizontal)

BA5 Stand(right)

BA6 Stand(left)

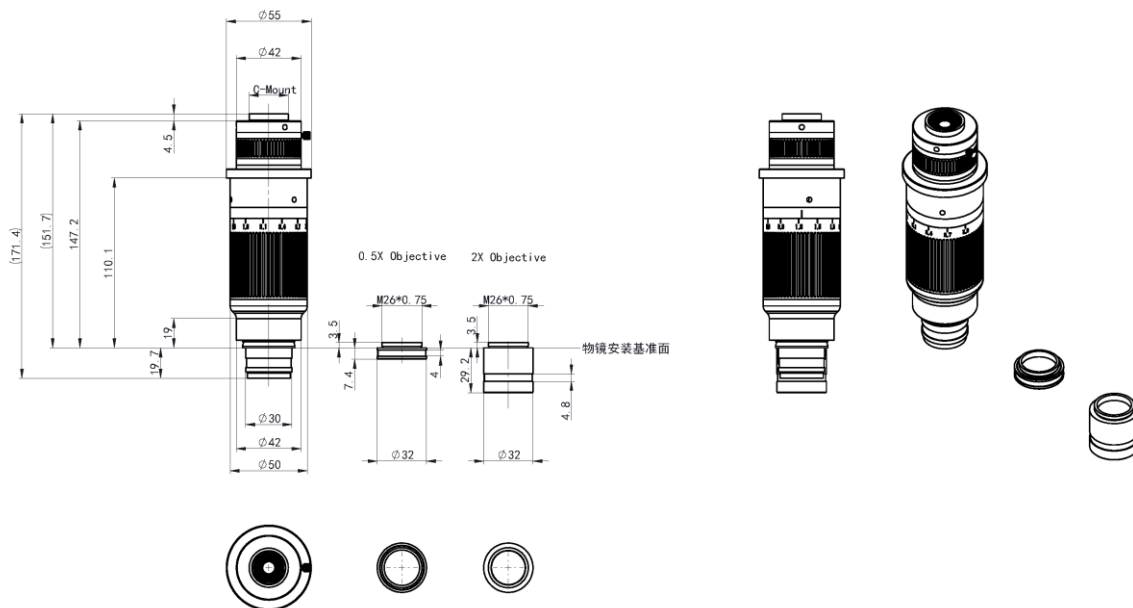BA6 Stand

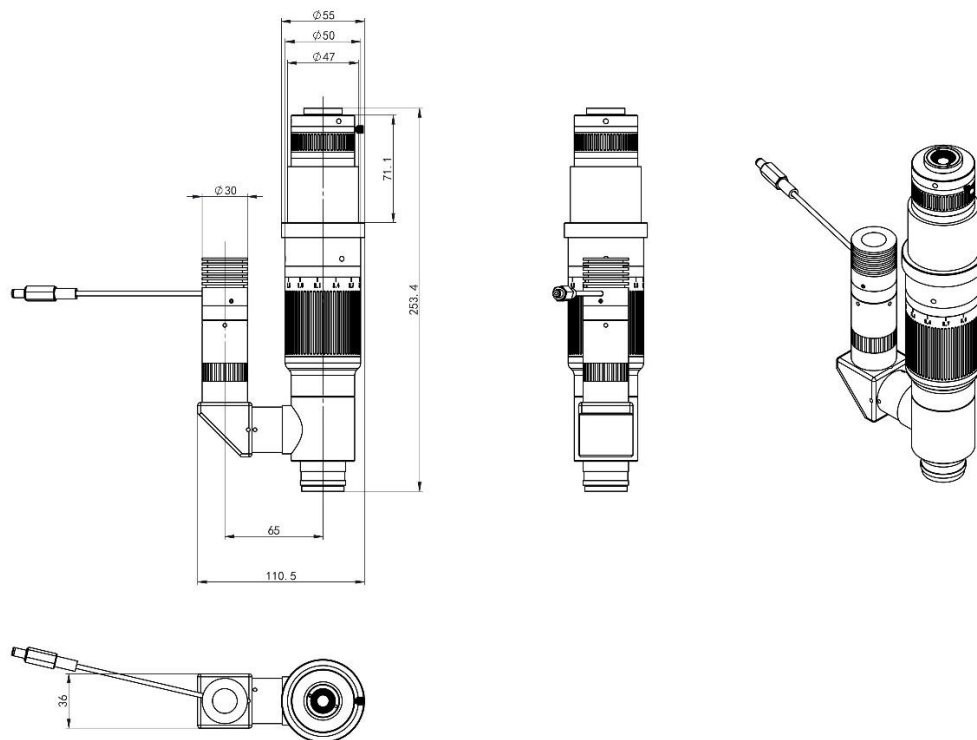BA6 Stand(right)

BA7 Stand

BA7 Stand with BS-1080A
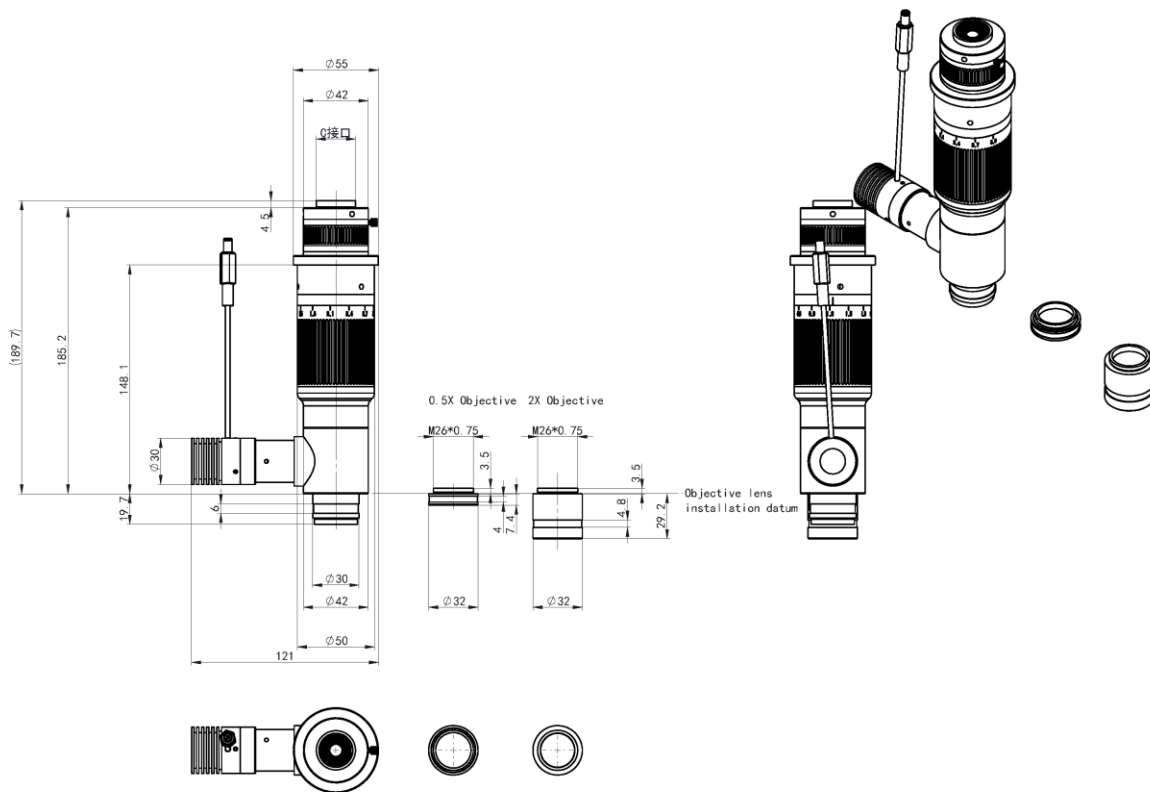
BA7 Stand

BA9 Stand

Dimension

BS-1085A and objective

BS-1085A with 1.67X C-mount adapter and L-type coaxial illuminator

BS-1085A with 1X C-mount adapter and straight type coaxial illuminator

Sample Images