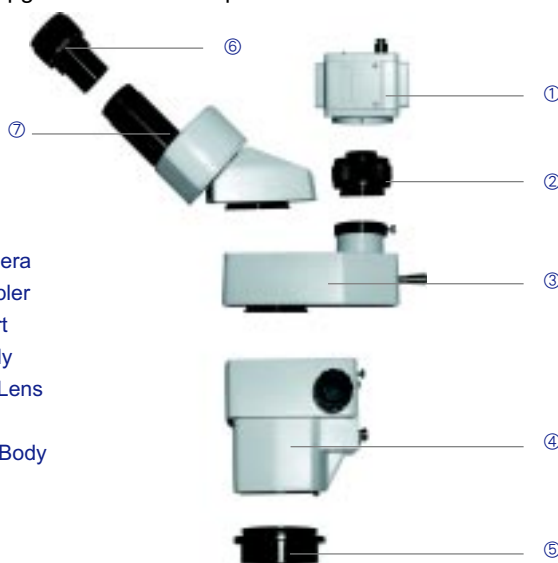


PZ parallel zoom microscope

- Adopting parallel optical path design with the visual field in focus in gamut that comfortable for long time working without eyestrain.
- Provided with humanization design with the angle of binocular tube adjustable that avoiding spondylopathy fatigue and trauma from long time use.
- All the components adopting with module design which can be combined flexibly according to the requirement of user.
- Its fittings are unchangeable with most of other type of microscope's that reducing the use-cost and is convenient for user to upgrade the microscope.



PZ2000 Binocular with Track Stand



- ① CCD Camera
- ② CCD Coupler
- ③ Image Port
- ④ Zoom Body
- ⑤ Objective Lens
- ⑥ Eyepiece
- ⑦ Binocular Body

PZ System Diagram - A Modular Scope

Performance features:

Modular construction: The function parts, such as photograph, CCD camera shot, coaxial illuminator, iris diaphragm can be easily and quickly mounted in the main optical path. Common use objective, eyepieces, illuminating system and supporting system is configured seriatly that can be easily and conveniently replaced.

Parallel optical system: The left and right optical paths are parallel in this system. The common use objective adopting with non-coaxial imaging technology with the surface of optical

Specification:

Max. Magnification	4.5x ~ 1428.75x (using 1/3" CCD camera and 15" monitor)
Max. Optic Magnification	2.04x ~ 281.25x
Zoom Range of Zoom Body	0.68x ~ 4.5x
Zoom Mode	Horizontal axis (X axis) zoom successively
Zoom Rate	1 : 6.6
Eyepieces with Adjustment	10x \ 12.5x \ 16x \ 20x \ 25x \ 30x
Optional Object lens	0.3x \ 0.5x \ 0.75x \ 1x \ 1x plan \ 1.5x \ 2x \ 2.5x
Field of Diameter of Object	0.8~118mm
Field of View	Ø 4.8mm~ Ø 33mm
Working Distance	22.5mm~333mm
Max. Field of Diameter of Image	Ø 24mm
Interpupillary Adjustment	45mm~80mm
Eyepiece Dioptic Correction	± 6 Diopter
Binocular Angle of View	45° (optional 0~30°tilting binocular)
Video System	Optional 100% switch or 2/8 spectrum synchronization imaging, 0.35x large FOV video coupler for standard, the other magnification is optional.
Iris Diaphragm	Built in image port
Coaxial Illuminator	For Fiber Optic Illumination



For Industry

PZT3003 Tilttable Binocular on Boom Stand with Fiber Optic Illuminator and Ring Light

media coated with broad band anti-reflection coating. Therefore has following features:

1. Elimination of "non-vertical-axis-imaging plane phenomenon" and making the definition of the visual field margin approach that in the center.
2. Wide field range: the angle of the objective is $2\omega(\max)=20^\circ$
3. Large stereo angle of view with perfect stereoscopic vision. It will locate exactly in the operative space under the objective.
4. The arrangement of image is clear and color is vividly restored.
5. Parallel optical path design prolongs the focusing point of eyes that eyes feel comfortable with long time observing and not easy to occur visual fatigue.

- Control mechanism: The design of shape and control mechanism based on Human Engineering principles and parameters with the zooming and focusing system adopting with rolling friction apparatus and rational rack construction, that makes operation smooth and sensitive and location reliable as well.

- Optional variable angle observatory binocular can reduce the tiredness from operation and observation.

- Eyepieces are configured with moderate adjustable mechanism. When reticle and pointer are equipped in eyepieces tube, adjust it to the suitable position and fix it, they

will not move.

- Image separating system equipped with iris diaphragm that operator can control the depth of field by adjusting the aperture to obtain high quality image.

- Video camera system supplied with 100% switch or 2/8 spectrum synchronization imaging for your choice. Standard C-mount can be connected with various CCD video camera and camera. Photography and coupler completes with full series.

- Optional stand: Track stand or E-arm can be used to connect with boom stand to ensure horizontal, vertical rotation with flexible 3-D operation; the microscope can be used in various kind of operation environment, particularly suitable to observe samples with larger dimensions.

- Light source series: Supply with standard transmitted light and illumination accessories meanwhile fiber optic illuminator can be used. The infrared ray filtrating technique prevents the sample affecting from the light source heat. Safety performance is up to the international standard.



Digital Camera

For Research

PZ2003T Trinocular on Track Stand, with Fiber Optic Illuminator and Ring Light Guide, MA261101 Manual Stage, GP020101 Color CCD camera.

PZ PARALLEL ZOOM MICROSCOPE



Optical Specification

Objective lens		0.3x Achromatism	0.5x Achromatism	0.75x Achromatism	1.0x Achromatism	1.0x Plan Achromatism	1.5x Achromatism	2.0x Achromatism	2.5x Achromatism
Working distance(mm)		328.93	197.19	148	93.87	84.92	46.69	34.04	22.53
Stereo angle of view		2°	6° 52'	4° 36'	13° 14'	14° 50'	20° 24'	26° 59'	28°
10x	Mag.	2.04x-13.5x	3.40x-22.5x	5.1x-33.8x	6.8x-45x	6.8x-54x	102x-67.5x	13.9x-90x	17x-112.5x
	Field diameter of object	112.75-17	67.65-10.23	45-6.8	33.8-5.12	33.8-5.12	22.55-3.41	16.92-2.56	13.53-2.05
12.5x	Mag.	2.55x-16.88x	4.25x-28.13x	7.9x-42.2x	8.5x-56.25x	8.5x-56.25x	12.75x84.38x	17x-112.5x	21.25x-140.63x
	Field diameter of object	91.67-13.85	55-8.31	36.67-5.54	27.5-4.16	27.5-4.16	18.3-2.77	13.75-208	11-1.66
16x	Mag.	3.2x-21.6x	5.44x-36x	8.2x-54x	10.88 x -72x	10.88 x -72x	16.32x-108x	21.76x-144x	27.2-180
	Field diameter of object	77.94-11.78	46.76-7.07	31.18-4.72	23.38-3.53	23.38-3.53	15.59-2.36	11.69-1.77	9.35-1.44
20x	Mag.	4.08x-27x	6.8x-45x	10.2x-67.5x	13.6x-90x	13.6x-90x	20.4x-1.35x	27.2x-180x	34x-225x
	Field diameter of object	61.27-9.26	36.67-5.56	23.53-3.56	18.38-2.78	18.38-2.78	12.25-1.85	9.19-1.39	7.35-1.11
25x	Mag.	5.1x-33.75x	8.5x-56.25x	12.75x-84.4x	17x-112.5x	17x-112.5x	25.5x-168.75x	34x-225x	42.5-281.25
	Field diameter of object	44.12-6.67	26.47-4.0	17.65-2.67	13.24-2.0	13.24-2.0	8.28-1.33	6.62-1.0	5.29-0.8



PZ Tilttable Binocular Tube



PZ Adjustable Eyepiece



PZ Objective Lens

P/N	DESCRIPTION
PZ101101	0.67-4.5X Zoom Body for Parallel Stereo Microscope
PZ102101	45° Binocular for Parallel Stereo Microscope
PZ102201	0~30° Tilting Tube Binocular for Parallel Stereo Microscope
PZ103101	10X Adjustable Eyepiece (pair)
PZ103104	15X Adjustable Eyepiece (pair)
PZ103106	20X Adjustable Eyepiece (pair)
PZ103107	25X Adjustable Eyepiece (pair)
PZ103108	30X Adjustable Eyepiece (pair)
PZ104101	0,3X Achromatic Objective Lens
PZ104102	0,5X Achromatic Objective Lens
PZ104103	0,75X Achromatic Objective Lens
PZ104104	1,0X Achromatic Objective Lens
PZ104105	1,5X Achromatic Objective Lens
PZ104106	2,0X Achromatic Objective Lens
PZ104107	2,5X Achromatic Objective Lens
PZ104201	1,0X Plan Achromatic Objective Lens
PZ105101	Image Port
PZ105102	Thu-Trinocular Image Port
PZ106101	Standard 0,35X Coupler
PZ107101	Coaxial Illuminator

All of the Adjustable Eyepiece outside Dia. 30mm
All of the Auxiliary Lens outside Dia. 58mm

MZ Video Zoom Microscope



MZ Zoom Lens
(0.5x Coupler and 1x Objective Lens for standard)

- Adopting parallel optical path optic system design with the visual field margin definition and smoothness approaching to the center that suits to high precision measurement industry.
- Coaxial illumination system, polarizing system, iris and cross hair reticle system can be mounted in the microscope.
- The "full field view" design can enhance the ocular observation system.
- "Infinite and long working distance" biology and metallurgical phase objective lens can be connected in order to achieve optics magnification over 400X.
- Completes with matching objective lens, photograph and camera system.
- Compact structure can satisfy the user's different selection requirement.
- The different stand and illumination source may be selected so that reducing the use-cost of the user, which is widely used in micro-electronics and industry.
- Design based on Galilean (Parallel) Optical System, a Coaxial Illumination, Polarization System, Iris or Reticle can be attached.



MZ System Diagram



MZ4003 Zoom Lens on Dual Arm Boom Stand with fiber optic illuminator, ring light and GP020101 Color CCD camera

Specifications

Zoom Body

4 constituents of mechanical compensation structure are used to maximally ensure the quality of image. Zoom mode including: Manual Zoom, Manual Zoom with Detents, DC Motorized Zoom, or Stepper Motorized

Zoom, etc.

In which, the main manual zoom position unit is needed for magnification calibration, with the magnification as 0.68X, 1X, 2X, 3X, 4X, 4.5X.

Zoom Range	0.68X~4.5X
Zoom Ratio	6.6
The Maximum FOV angle of the Objective	$2\omega = 19.5^\circ$
The FOV Angle of the Image side	$2\omega = 7.6^\circ$

Objective Lens

Semi-plan achromatic design is used, which also can be used with infinite distance metallurgical phase or Biological Microscope objective to form image.

A Zooming Objective Lens may be configured according to the user's need (the working distance and magnification is adjustable in the given range).



MZ Objective Lens

Objective Lens	0.3X	0.5X	0.75X	1.0X	1.5X	2.0X
Focus Distance	333mm	200mm	133mm	100mm	67mm	50mm
Working Distance	331mm	198mm	131mm	96mm	63mm	46mm
The FOV Angle of the Objective 2ω	19.5°	19.5°	19.5°	19.5°	19.5°	19.5°



MZ Couplers

CCD Couplers

Standard C-MOUNT design is suitable to 1/3" CCD Camera, in which, three magnification, i.e. 1.0X, 1.5X, 2.0X adopting with "far-take" optics structure that greatly shortened the length of the system.

Coupler	0.38X	0.5X	0.75X	1.0X	1.5X	2.0X
Focus Distance	67mm	90mm	135mm	180mm	270mm	360mm
Optical Length Approx.	76mm	97mm	103mm	130mm	189mm	252mm
The FOV Angle of the Objective 2ω	7.6°	7.6°	7.6°	7.6°	7.6°	7.6°
The FOV Diameter of the Image side \geq	6.1 mm	6.1 mm	6.1 mm	6.1 mm	6.1 mm	6.1 mm

Iris Diaphragm

To control the depth of focus through adjusting variable aperture diaphragm in order to obtain a high quality of image.



Open



Close

MZ104101
Iris Diaphragm

Coaxial Illuminator

The illumination optic axis is parallel with image optic axis, which is especially suitable for the observation of metallic phase, object with glister and deep hole and also the device has a polarized light system.

Cross Hair Reticle

Can be set up in the microscope, which is the simplest way of shadow image measurement.

Trinocular or Binocular Tube

Trinocular or binocular tube for compound microscope can be connected after installed with "field lens " in order to form a zoom tool maker microscope.



MZ2011 Zoom Lens on Track Stand and
MA342101 LED Ring Light

Coupler	0.38x		0.5x		0.75x		1.0x		1.5x		2.0x		W. D. mm
	Auxiliary Lens	Mag.	FOV mm	Mag.	FOV mm	Mag.	FOV mm	Mag.	FOV mm	Mag.	FOV mm	Mag.	
0.3x	4.65x-31x	77-12	6x-41x	59-9	9x-61x	39-6	12x-81x	29-4	18x-121x	19.6-3	24x-162x	14.7-2	331
0.5x	7.8x-51x	46-7	10x-68x	35-5	15x-101x	23.5-4	20x-135x	17.6-3	31x-203x	11.8-2	41x-270x	8.8-1.3	198
0.75x	11.6x-77x	31-4.7	15x-101x	23.5-3.6	23x-152x	15.7-2.4	30.6x-202x	12-1.8	46x-304x	7.8-1.2	61x-405x	6-0.9	131
1.0x	15.5x-102x	23-3	20x-135x	17.6-2.7	30.6x-202x	12-1.8	41x-270x	9-1	61x-405x	6-0.9	81.6x-540x	4-0.7	96
1.5x	23x-154x	15-2.3	31x-203x	11.8-1.8	46x-304x	7.8-1.2	61x-405x	6-0.9	92x-607x	4-0.6	122x-810x	3-0.4	63
2.0x	31x-205x	11.6-1.7	41x-270x	8.8-1.3	61x-405x	6-0.9	81.6x-540x	4-0.7	122x-810x	3-0.4	163x-1080x	2-0.3	46

P/N	DESCRIPTION
MZ101101	0.7-4.5X Zoom Body
MZ101102	0.7-4.5X Zoom Body with Detents
MZ102101	0.38X Coupler
MZ102102	0.5X Coupler
MZ102103	0.75X Coupler
MZ102104	1.0X Coupler
MZ102105	1.5X Coupler
MZ102106	2.0X Coupler
MZ103101	0.3X Objective Lens
MZ103102	0.5X Objective Lens
MZ103103	0.75X Objective Lens
MZ103104	1.0X Objective Lens
MZ103105	1.5X Objective Lens
MZ103106	2.0X Objective Lens
MZ104101	Iris Diaphragm
MZ105101	Coaxial Illuminator
MZ106101	Cross Hair Reticle

SZ Stereo Zoom Microscope



SZ301101 & SZ301201 0.67-4.5X Stereo Zoom Binocular and Trinocular (The P/N not including the Eyepiece)

- Vivid image, big depth of focus, wide visual field, distinct stereo vision, compact structure and economical and practical.
- Continuous zoom by lateral axis with zoom rate 1:6.5.
- Main body with separate optical axis structure that the emergent light axis of the ocular and the optical axis of the objective form a 30 degree included

angle, which is suitable to micro-electronics industry equipment and can effectively reduce labor intensity of the operator, raising work efficiency and product quality.

- The photography and video coupler system can be used with CCD camera, digital camera, single inverse camera to sample and store the microscopic image.
- Its fittings are unchangeable with most of other type of microscope's that reducing the use-cost and is convenient for user to upgrade and renew the microscope.
- Can be widely used in teaching, scientific research, electronic test and assembly industry.



SZ Auxiliary Lens

Optical Specification

Objective	0.3X	0.4X	0.5X	0.75X	1X	1.5X	2.0X	
Working Distance (mm)	287mm	217mm	177mm	117mm	100mm	47mm	26mm	
10X	Mag.	2.0x-13.5x	2.7x-18.0x	3.4x-22.5x	5.0x-33.8x	6.7x-45.0x	10.1x-67.5x	13.4x-90.0x
	FOV	109.5-16.3	82.1-12.2	65.7-9.8	43.8-6.5	32.8-4.9	21.9-3.3	16.4-2.4
15X	Mag.	3.0x-20.3x	4.0x-27.0x	5.0x-33.8x	7.5x-50.6x	10.1x-67.5x	15.1x-101.3x	20.1x-135x
	FOV	79.6-11.9	59.7-8.9	47.8-7.1	31.8-4.7	23.9-3.6	15.9-2.4	11.9-1.8
20X	Mag.	4.0x-27.0x	5.4x-36.0x	6.7x-45.0x	10.1x-67.5x	13.4x-90.0x	20.1x-135.0x	26.8x-180x
	FOV	59.7-8.9	44.8-6.7	35.8-5.3	23.9-3.6	17.9-2.7	11.9-1.8	9-1.3
25X	Mag.	5.0x-33.8x	6.7x-45.0x	8.4x-56.3x	12.6x-84.4x	16.8-112.5x	25.1x-168.8x	33.5x-225x
	FOV	44.8-6.7	33.6-5.0	26.9-4.0	17.9-2.7	13.4-2.0	9.0-1.3	6.7-1.0
30X	Mag.	6x-40.5x	8x-54x	10x-67.5x	15x-101x	20x-135x	30x-202x	40x-270x
	FOV	34.8-5.1	26.1-3.87	20.9-3.1	13.9-2.1	10.4-1.55	6.9-1	5.2-7.5



SZ4003T Trinocular on Dual Arm Boom Stand with Fiber Optic Illuminator and Ring Light

Specification

Zoom Range of Zoom Body	0.67x ~ 4.5x
Zoom Rate	1 : 6,5
Eyeiece	10x\ 15x\ 20x\ 25x\ 30x
Objective Lens	0,3x\ 0,5x\ 0,75x\1,5x\ 2x
Field of View	31mm~4.9mm
Working Distance	100mm
Interpupillary Adjustment	55mm~75mm
Eyeiece Dioptric Correction	±5 Diopter
Binocular Angle of View	45°
Video system	The Trinocular Provides 0.5X CCD coupler for standard



SZ1002 Binocular on Post Stand with Fiber Optic Illuminator and Dual Pipe Light Guide

P/N	DESCRIPTION
SZ301101	0,67-4,5X Stereo Zoom Binocular
SZ301201	0,67-4,5X Stereo Zoom Trinocular
SZ302101	10X Eyeiece (pair)
SZ302103	15X Eyeiece (pair)
SZ302104	20X Eyeiece (pair)
SZ302105	25X Eyeiece (pair)
SZ302106	30X Eyeiece (pair)
SZ303101	0,3X Auxiliary lens
SZ303102	0,5X Auxiliary lens
SZ303103	0,75X Auxiliary lens
SZ303104	1,5X Auxiliary lens
SZ303105	2,0X Auxiliary lens
SZ303201	Ring Light Adapter
SZ303203	Ring Light Adapter with Cover Glass

Microscope Accessories

MA231101 Boom Stand

Weight: 39.57lbs, 17.95kg

Size of base: 11.22x10.236x0.709" (285x260x18mm)

Maximal size from vertical post to the front of base: 9.38" (238.25mm)

Horizontal bar: 19" (483mm), Diameter: 1.465" (37.2mm)

Vertical post: 15.1" (384mm), Diameter: 1.465" (37.2mm). The size can be up to 25" (634mm) if the extension post is attached.

Diameter of mounting holes in the front of horizontal bar: 5/8", (15.875mm)

Maximal bearing load on the front of horizontal bar: 21lbs, 9.526kg



MA231101 Boom Stand



MA231102 Clamp Stand

MA231105 Big Base Stand

Size of Base: 15.512x14.961x0.472" (394x380x12 mm)

Weight: 40.67lbs, 18.45kg

Other specifications are consistent with standard Boom Stand.

MA231102 Clamp Stand

Maximal open size of clamp: 1.575" (40mm)

Weight: 22.49lbs, 10.2kg

Other specifications are consistent with standard Boom Stand.

MA231104 U-Type Base Stand

Base Dimension(L x W x H): 450x360x30mm

Weight: 23.37lbs, 10.6kg

Other specifications are consistent with standard Boom Stand.



MA231104 U-Type Base Stand



MA232101 Dual Arm Boom Stand

MA232101 Dual Arm Boom Stand

MA232105 Dual Arm Big Base Stand

MA232102 Dual Arm Clamp Stand

MA232104 Dual Arm U-Type Base Stand

Weight: 38.25lbs, 17.35kg

Size of base: 11.22x10.236x0.709" (285x260x18mm)

Maximal size from vertical post to the front of base: 9.38" (238.25mm)

Horizontal bar: 20.866" (530mm), Diameter: 0.787" (20mm)

Vertical post: 15.1" (384mm), Diameter 1.465" (37.2mm), the size can be up to 25" (634mm) if the extension post is attached.

Diameter of mounting holes in the front of horizontal bar: 5/8", 15.875(mm)

Maximal bearing load on the front of horizontal bar: 20lbs, 9.072kg

MA241102 76mm Hydraulic arm with clamp



MA241102 76mm Hydraulic arm with clamp

MA241501 76mm Hydraulic arm with LCD Monitor Adapter

Weight 13.86lbs, 6.3kg

Size of clamp stand: 5.52x5.12" (140x130mm)

Maximal open size of clamp: 9.38" (238.25mm)

Length of horizontal arm: 9.85" (250mm)

Length of gradient arm: 14.96" (380mm)

360° free revolution in horizontal direction Maximal radius: 14.96" (380mm)

Minimal radius: 10.83" (275mm)

Rise and fall range in vertical direction: 21.46" (545mm)

Maximal opening angle in vertical direction: 6.7" (170mm)

Diameter of mounting hole in the front of horizontal bar: 3" (76mm)

Maximal bearing load on the front of horizontal bar: 11.82lbs, 26kg

MA242101 Flexible Arm

Weight: 12.78lbs, 5.8kg

Size of clamp stand: 3.94x2.95x4.53" (100x75x115mm)

Maximal open size of clamp: 1.575" (40mm)

Length of horizontal arm: 13" (330mm); length of gradient arm: 17.72" (450mm); Length of front cracked arm: 6.7" (170mm)

360° free revolution in horizontal direction, Maximal radius: 31.89" (810 mm), Minimal radius: 13" (330 mm)

Rise and fall range in vertical direction: 19.685" (500mm), Maximal opening angle in vertical direction: 19.7" (500mm)

Diameter of mounting hole in the front of horizontal bar: 5/8", (15.875mm)

Diameter of the mounting hole in the end of the base: 0.87"(22.2mm)

Maximal bearing load on the front of horizontal bar: 21lbs, 9.526kg



MA242101 Flexible Arm



MA255101 Heavy Base with 38.4/22.2mm Double Holes Adapter

MA255101 Heavy Base with 38.4/22.2mm Double Holes Adapter

Designed for Flexible Arm

Weight: 88.18lbs, 40kg

Size of base: 13x13x1.5" (330x330x38mm)

Vertical post: 15.12" (384mm), Diameter: 1.465" (37.2mm). The size can be up to 25" (634mm) if the extension post attached.

The Hole to fit the Arm's adapter: 22.2mm

MA211101 76mm Post Stand

MA212111 76mm HF Dual Illuminated Post Stand

Weight: 6.6lbs, 3kg

Size of base: 12.6x12.01x0.63" (320x305x16mm)

Microscope Holder: 76mm

Maximal size from vertical post to the front of base: 10.75" (273mm)

Vertical post: Diameter 1.26" (32mm), Height 12.01" (305mm)



MA211101 76mm Post Stand
MA211103 39mm Post Stand



MA212111
HF Dual Illuminated Post Stand



MA221101 76mm Track Stand
MA221103 39mm Track Stand



MA222111
76mm HF Dual Illuminated Track Stand

MA221201
76mm Track Stand with
Fine Focus

MA221101

76mm Track Stand

Weight: 6.6lbs, 3kg

Travel Distance: 250mm

Vertical Length: 325mm

Remark: All of the Dual Illuminated Stand input power: 85-265V 50/60Hz



MA211102 PZ Post Stand
MA221102 PZ Track Stand



MA212112 76mm LED Dual
Illuminated Post Stand

MA251101 76mm E-Arm

End adapter: 5/8" (15.875mm)
 Diameter of the hole for fitting microscope body: 76mm
 Distance between central line of annular hole and central line of microscope body: 5.512" (140mm)
 Focusing distance in vertical direction: 0.98" (25mm)

- MA251102 76mm E-Arm with Fine Focus
- MA251201 39mm E-Arm
- MA251301 83mm E-Arm
- MA251401 85mm E-Arm
- MA251501 PZ E-Arm
- MA251601 B&L E-Arm



MA251101 76mm E-Arm MA251201 39mm E-Arm



MA251601 B&L E-Arm MA251501 PZ E-Arm

MA253101 32mm Arbor

End adapter: 5/8", (15.875mm), with revolution lock mechanism in lengthways direction that can be adjusted arbitrarily and fixed at the required angle.

Diameter of arbor: 1.26" (32mm), Length of arbor: 9.65" (245mm)



MA253101 32mm Arbor
 MA253102 25mm Arbor

MA254101 CCD Mounting Plate

End adapter: 5/8", with revolution lock mechanism in lengthways direction that can be adjusted arbitrarily and fixed at the required angle.

Size of mounting plate: 3.858" (98mm), 2.126" (54mm), 0.59" (15mm)

Standard screw: 1/4-20", hole diameter: 2-6.5mm

MA252101 76/32mm through hole Focus Rack

End hole adapter: 1.26" (32mm)

Diameter of annular hole for connecting microscope body: 76mm

Distance between central line of annular hole and central line of microscope body: 5.512" (140mm)

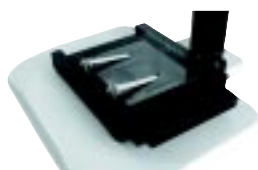
Focusing distance in vertical direction: 0.98" (25mm)



MA252101
 76/32mm Through Hole Focus Rack



MA254101 CCD Mounting Plate MA254201 CCD Mounting Plate with Focus



MA261101 Manual Stage

XY Travel Distance: 75x56mm
 Stage Dimension (L x W x H): 180x155x27mm
 The Glass Size: 116x96mm, The Active area: \varnothing 37.6mm
 The adapter to fit the Stand Base: \varnothing 95mm

Fiber Optic Illuminator



MA311101 Fiber Optic Illuminator
(A Daylight filter included)



MA311310 Filter Kit
(Red, Blue and Green. For MA311101 Only)

MA311311 Daylight Correction Filter (Standard unit)



GP090201
21V 150W Halogen Bulb



MA312101
Fiber Optic Illuminator

Item	MA312101	MA311101
Rated Power Output	15-150W	15-150W
Input Current	1.5A	1.5A
Output Current	1.5-7.5A	1.5-7.5A
Input Voltage	AC120V (or AC240V for optional)	120V±5% (or AC240V for optional)
Input Frequency	50/60HZ	50/60HZ
Hold-up Time, normal AC input, full load	500ms	2s
Efficiency, normal AC line, full power	65%	85-95%
Temperature Range Operating	0℃—40℃	0℃—45℃
Temperature Range Storage	-25℃-85℃	-25℃-85℃
Relative Humidity, non-condensing	85%	85%
Illumination	≥100000Lux	≥100000Lux
Color Temperature	3000K	3000K
Spectrum Range	450-700nm	450-700nm
Dimension	190mm 180mm x 160mm	208mm x 105mm x 124mm
Weight	4.25kg	3kg
Fuse	2A 5 x 20mm	2A 3x20mm
Lamp Type	21V 150W Halogen Bulb	21V 150W Halogen Bulb
Life of Lamp	200 Hour	200 Hour
Safety	<ol style="list-style-type: none"> Housing earthing; Testing to high voltage resistance: 1500V leakage current<2mA; Insulance to earth>500MΩ (2500V megameter); Double-pole double-throw switch with the neutral line and live wire break simultaneously; 2A fast burning fuse; Blower equipped with protective casing avoiding flabellum hurting person. 	<ol style="list-style-type: none"> Housing earthing; Testing to high voltage resistance: 1500V leakage current<2mA; Insulance to earth>500MΩ (2500V megameter); 2A fast burning fuse; Temperature protection at 85℃(automatically lower the power when the temperature in lamp house is up to 85℃); Blower equipped with protective casing avoiding flabellum hurting person.

LED Ring Light

MA343101 PZ LED Ring Light: The Ring of the Inside Dia. 54mm. Outside Dia. 104mm. Height 26mm, including 78 LED bulbs, Designed for PZ Series Microscope

MA342101 MZ LED Ring Light: The Ring of the Inside Dia. 34mm. Outside Dia. 85mm. Height 25mm, including 60 LED bulbs, designed for MZ Series Microscope

MA341101 SZ LED Ring Light: The Ring of the Inside Dia. 54mm. Outside Dia. 104mm. Height 26mm, including 78 LED bulbs, designed for SZ Series Microscope



LED Specification

Input	90V~240V 50-60Hz
Input Current	Less than 0.2A
Output Voltage	DC 18-24V
Output Current	Max. 0.5A
Power Supply Capacity	12w
LED Power Consumption	Max. 6w

MA344101 LED Back Lights

Dimension: 86x52x16mm, Active Area: 2x2"

Remark: All of the LED bulb is white color; also we provide the Red color, and white/red switch color.



Fiber Optic Cable

Fiber Optics Cables

MA322101 Double Pipe Light Guides, with Focusing Lens. Fiber Dia. 7.1mm Length: 18"

MA321101 Annular Ring Light Guide, Fiber Dia. 10mm, Length 1m, The Ring's ID 58mm, PVC cable cover

MA321301 MZ Annular Ring Light Guide, Fiber Dia. 8mm, Length 1m, the Ring's ID 34mm, PVC cable cover

MA324102 2x2" back light Guide, Dimension: 86x52x16mm, Fiber Dia. 6.5mm, Active Area: 2x2"

MA323201 Single Pipe Light Guide for PZ Coaxial illuminator. Length 1m, the adapter 9mm (OD) x 10mm (L)

MA322201 Double Pipe Light Guide for MZ Coaxial illuminator. Length 1m, the adapter 9mm (OD) x 10mm (L)

Remark: All of the End Adapter of the fiber Optics Cable Dia is 5/8" standard, the other requirement is optional.

Fiber Optics Specification:

Optical Fibers Material	Glass optical fiber
Transmission Spectrum Range	380nm~1300nm
Light Transmission Rate	T≥50%/m
Flexural Property	Min bending radius≥30D (D diameter of bushing)
High temperature property	①-40℃~150℃; ②Special high temperature resistance≥250℃, instant high temperature resistance 400℃.
Pressure Proof Property	①≥0.1MPa; ②Special≥0.3 MPa
Diameter of Optical Fiber	MZ series: 8mm; SZ series:10mm; Single pipe: 6.0mm; Double pipe: 7.1mm; Back light: 6.4mm
Aperture in Numerical Value	≥0.60
Attenuation of Fiber	300~600dB/km
Intensity of Optical Fiber	>150kg/ mm
Spectrum Transmission Range	380~1300nm
Bushing Material	SS, PVC (black)

MA331101 Fluorescent Ring Light

The Bulb inside Dia: 53.3mm

Input Power: 110V (or 220V for Optional)

Output power: 12W

Luminous efficiency: $\geq 48\text{Lm/W}$

Color temperature of lamp: $5600\text{K}\pm 100\text{K}$

Life Time: ≥ 2000 hour



MA331101
Fluorescent Ring Light



GP090101
Fluorescent Ring Light Bulb



Replacement Bulb

P/N	Specification	Illuminator
GP090201	21V 150W Halogen Bulb	MA312101 & MA311101 Fiber Optic Illuminator
GP090202	12V 15W Halogen Bulb	HF Dual Illuminated Stand Top Light
GP090301	5W Fluorescent Bulb	HF Dual Illuminated Stand Bottom Light
GP090101	12W Fluorescent Ring Light Bulb	MA331101 Fluorescent Ring Light



GP020102 Color CCD Camera
GP020101 Color CCD Camera

CCD Color Camera

GP020101 Color CCD Camera

1/3" Color CCD camera, with 470 TV lens, BNC video connection.

GP020102 Color CCD Camera

With the monitor manual control, with 470 TV lens, BNC video connection.

GP070101 Power Supply. For Color CCD Camera, 85-240V input, 12V 500mA out put.

GP080101 BNC-BNC Video Cable. Length 2m.

The Other Equipment

Frame Grabber, Monitor, Please call for detail



Frame Grabber



95mm Infinity Corrected Objectives

Infinity Corrected Objectives

P/N	Item	N.A.	W.D (mm)	Focal Length (mm)	Resolution (μ m)	±Depth or Focus (μ m)	Field of View (φ 24 Eyepiece)
MA121101	M Plan Achromatic HL 5X	0.13	44,5	40	2	14	φ 4,8
MA121103	M Plan Achromatic HL 20X	0.29	31	10	1	3,5	φ 1,2
MA121104	M Plan Achromatic HL 50X	0,42	20,5	4	0,7	1,6	φ 0,48
MA121202	M Plan Achromatic L 10X	0,28	34	21	1	3,5	φ 2,4

1. The magnifications are based on a tube lens focal length of 200mm.
2. Parfocal Distance 95mm.
3. Standard thread M26 × 1/36° (55°), or according the customer required.
4. The HL means Higher Length working distance.

MA411101 10X Digital Camera Adapter



The Standard Kit including

MA414101	Photo Eyepiece Body	Optical Magnification 10x, 28mm thread for fit the camera
MA412201	23.2/30mm Adapter	To fit the 30mm microscope eyepiece tube
MA412101	28/23.2mm Adapter	For attach the Coupler and Photo Eyepiece Body
MA413101	Clamp	For Hold and Adjust the Eyepiece position
MA415101	28/37mm Camera Adapter	Fit the Ø37mm Digital camera
MA415102	28/43mm Camera Adapter	Fit the Ø43mm Digital camera

Also we can provide different adapters to fit your camera.

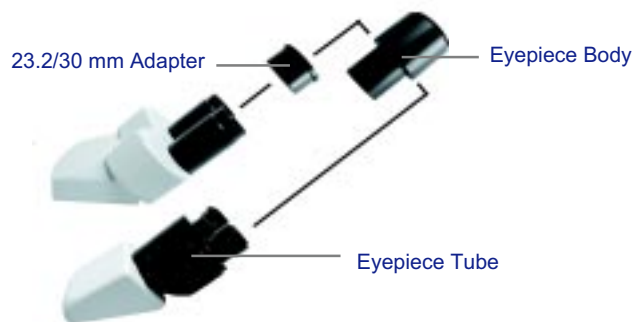


Diagram-1 To the Eyepiece Tube

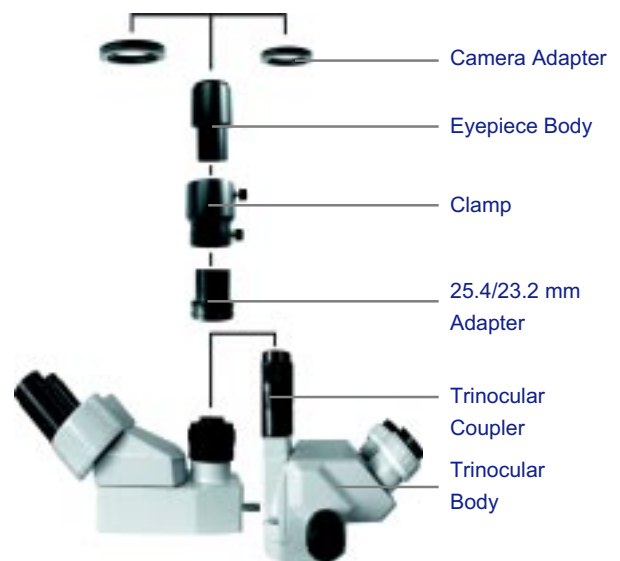


Diagram-2 To the Trinocular Coupler



Standard CCD Couplers

Standard CCD Couplers

MA511101	0,38x Coupler	
MA511102	0,5x Coupler	
MA511103	0,75x Coupler	
MA511104	1x Coupler	
MA511105	1,5x Coupler	
MA511106	2x Coupler	
MA412201	23,2/30mm Adapter	To fit the 30mm microscope eyepiece tube
MA521103	Trinocular Adapter for PZ Series	
MA521102	Trinocular Adapter for SZ Series	

We also provide different Adapters to fit the different microscope.

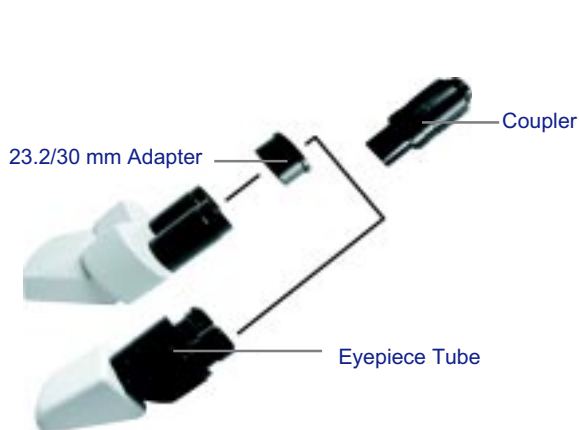


Diagram-3 To Eyepiece Tube

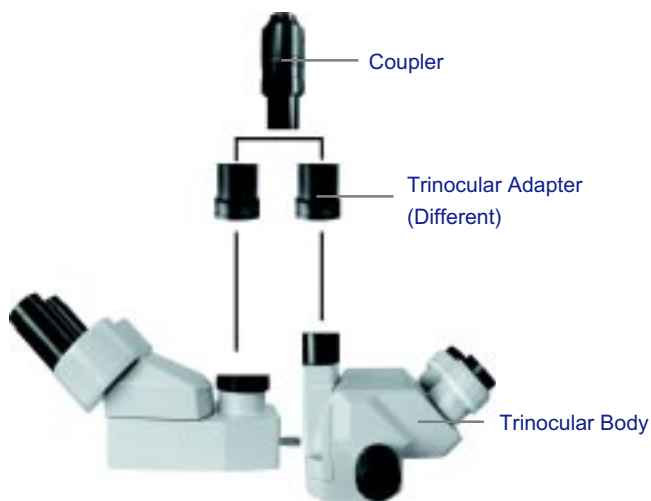


Diagram-4 To Trinocular

Warranty Information

All of our products, including microscopes, optic lens are warranted against manufacturer's defects in material and workmanship for five (5) years from the original date of purchase, all of other product, including light source, cameras, monitors and electronic part, for one (1) year warranty, the bulbs are not warranted.

Microscope Standard Package System Set Up

Step. 1. Find the **BLACK LETTER** for what's your want. Step 2. Confirm P/N with the **BLUE LETTER**. Step 3. Use the **RED LETTER** (may including one or two P/N) to instead the P/N, then you can get the Package System P/N, likes PZ1000T. PZT2003

Microscope Head	Stand and Arm	Lighting	Trinocular	
PZ PZ102101 (45 Binocular Tube) + PZ101101 (Zoom Body) + PZ104201 (1x PL Objective) + PZ103101 (10x Adjustable Eyepiece) PZT PZ102201 (Tiltable Binocular) + PZ101101 (Zoom Body) + PZ104201 (1x PL Objective) + PZ103101 (10x Adjustable Eyepiece)	30 MA251501 PZ E-Arm + MA231101 Boom Stand 31 MA251501 PZ E-Arm + MA231102 Clamp Stand 40 MA251501 PZ E-Arm + MA232101 Dual Arm Stand 51 MA251501 PZ E-Arm + MA242101 Flexible Arm 50 MA241401 PZ Hydraulic Arm 10 MA211102 PZ Post Stand 20 MA221102 PZ Track Stand	02 MA311101 FOI + MA322101 Double Pipe Light 03 MA311101 FOI + MA321101 Ring Light 04 MA343101 LED Ring Light	T : + PZ105101 Image Port + PZ106101 0.35x Coupler	
	1010 MA212121 PZ HF Post Stand 1020 MA212122 PZ LED Post Stand 2010 MA222121 PZ HF Track Stand 2011 MA222122 PZ LED Track Stand	/	/	
	30 MA251101 76mm E-Arm + MA231101 Boom Stand 31 MA251101 76mm E-Arm + MA231102 Clamp Stand 40 MA251101 76mm E-Arm + MA232101 Dual Arm Stand 51 MA251101 76mm E-Arm + MA242101 Flexible Arm 50 MA241102 76mm Hydraulic Arm 10 MA211101 76mm Post Stand 20 MA221101 76mm Track Stand	01 MA331101 Fluorescent Ring Light 02 MA311101 FOI + MA322101 Double Pipe Light 03 MA311101 FOI + MA321101 Ring Light 04 MA341101 LED Ring Light (For attached the Fluorescent Ring Light and Fiber Optic Ring Light, the SZ303201 Ring Adapter is required)	T : SZ301201 Trinocular Body + SZ304101 0.5x Coupler	
	1010 MA212111 76mm HF Post Stand 1011 MA212112 76mm LED Post Stand 2010 MA222111 76mm HF Track Stand 2011 MA222112 76mm LED Track Stand	/	/	
	30 MA251201 39mm E-Arm + MA231101 Boom Stand 31 MA251201 39mm E-Arm + MA231102 Clamp Stand 40 MA251201 39mm E-Arm + MA232101 Dual Arm Stand 10 MA211103 39mm Post Stand 20 MA221103 39mm Track Stand	02 MA311101 FOI + MA322101 Double Pipe Light 03 MA311101 FOI + MA321301 Ring Light 04 MA342101 LED Ring Light		
MZ MZ101101 MZ Zoom Body + MZ102102 0.5x Coupler + MZ103104 1x Objective	1010 MA212131 39mm HF Post Stand 1011 MA212132 39mm LED Post Stand 2010 MA222131 39mm HF Track Stand 2011 MA222132 39mm LED Track Stand	/	/	