

VIDEO MICROSCOPE SYSTEMS

Zoom Monocular Video Micro Series



MZDH0850 Series
MZDH0670 Series
MZDV0640 Series

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Zoom Monocular Video Micro Series List



Model	MZDH0850 Series	MZDH0670 Series	MZDV0640 Series
Standard Mag.	0.75X~5.0X	0.58X~7.0X	0.6X~4.0X
Standard WD	82mm	82mm	82mm
Illumination	LED coaxial illumination or LED ring illumination		
Mounting holder dimension	Ø45mm	Ø45mm	Ø35mm
Mount	Standard CS-mount		
CCD adapters (Standard: 1X)	0.3X, 0.4X, 0.5X, 0.67, 1X, 1.5X, 2X	0.4X, 0.5X, 0.67X, 1X, 1.5X, 2X	0.5X, 1X, 1.5X, 2X
Objective (Standard: 1X)	0.3X, 0.5X, 0.75X, 1X, 1.5X, 2X		
Features	Infinity optical system, high-resolution and high definition, Parfocal in zoom course, various optional accessories, can pre-set stops with detents	Infinity optical system, Large zoom ratio 12:1, Parfocal in zoom course, various optional accessories, can pre-set stops with detents	Infinity Optical system design, short and beautiful, large depth of field, enriched accessories, can be with detent.
Applications	Wildly used on electric equipment, semiconductor, LCD, LED and etc. for digital image observation, inspection and measurement	Especially used on electric equipment, LCD, LED and etc. for digital image observation, inspection and measurement	Widely applied in Semiconductor equipment, especially in two-dimensional, three-dimensional measurement systems
Others	Can matched with Nikon, Olympus, Mitutoyo standard thread infinite farness metallographic lens		



MZDH0850 Series

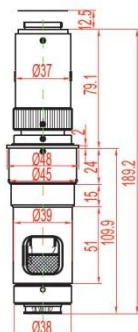
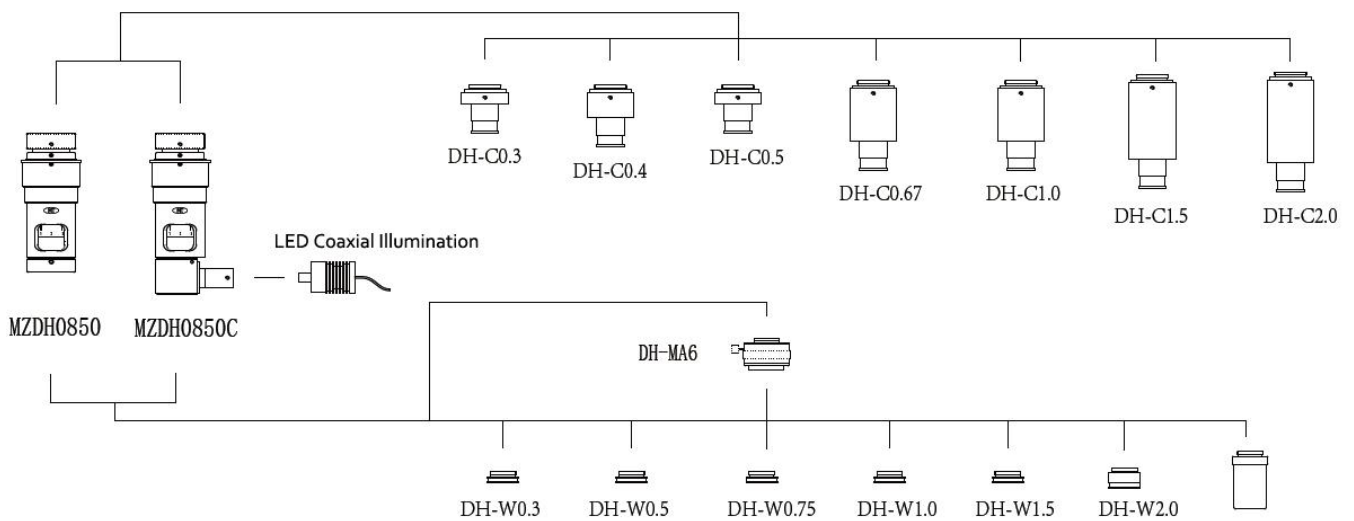
High-Resolution Zoom Monocular Video Micro Series

High Resolution	High Definition	Coaxial Illumination
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- Infinite farness and coaxial illuminate optical systems
- High-resolution and high definition
- Available to observe different objects by using LED coaxial illumination or fiber optic illumination.
- Wildly used in electric equipment, semi-conductor, LCD, LED and etc. for digital image observation, inspection and measurement



Main Body Diagram



MZDH0850

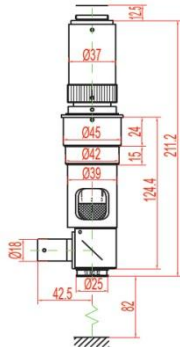
- Zoom Range :0.75X~5.0X<WD82mm>
- FOV : 6X4.5~ 1.0X0.7
- 1X objective and 1X CCD adaptor with C mount



MZDH0850 Series

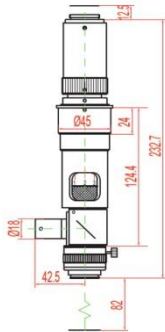
High-Resolution Zoom Monocular Video Micro Series

High Resolution	High Definition	Coaxial Illumination
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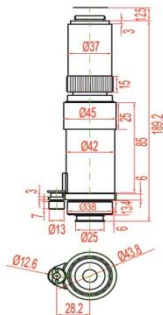
MZDH0850C

- C: Coaxial illumination
- Excellent coaxial illumination, especially suitable for manufacture, inspection of LCD and observation of reflective objects.



MZDH0850C-MA

- MA: With fine-adjustable device
- Attached with fine-adjustable device to focus finely rapidly at different focal plane.



MZDH0850-AZ

- AZ: Automatic magnification
- Equipped with serve motor and drive electro circuit (Need to be prepared on client side) , for automatic magnification.

Zoom Range	0.75X~5.0X extend total magnification: 0.07X ~ 50X (use auxiliary objectives and kinds of magnification CCD adapters)
Zoom Ratio	6.7:1
F.O.V (mm)	6X4.5~ 1.0X0.7
Working Distance(WD)	82mm(1X Objective)
Holder Size	Ø45mm
Illumination	Adjustable high brightness(1W/3W), long life LED Coaxial illumination, ring illuminator
Mount	Standard C-Mount



MZDH0850 Series

High-Resolution Zoom Monocular Video Micro Series

High Resolution	High Definition	Coaxial Illumination
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Optical Specifications

Mag.	NA	DOF	Resolution	Distortion on TV
0.75X	0.03	1.8mm	11.2μm	0.26%
2.0X	0.067	0.30mm	5.0μm	0.31%
5.0X	0.097	0.08mm	3.5μm	0.12%

Objective		CCD adapter						
		0.3X	0.4X	0.5X	0.67X	1X	1.5X	2X
0.3X	Optical magnification	0.07X ~ 0.45X	0.09X ~ 0.6X	0.11X ~ 0.75X	0.15X ~ 1X	0.225X ~ 1.5X	0.34X ~ 2.25X	0.45X ~ 3X
	Field of video(mm)	51.4X68.6 ~ 8X10.67	40X53.33 ~ 6X8	32.7X43.6 ~ 4.8X6.4	24X32 ~ 3.6X4.8	16X21.3 ~ 2.4X3.2	10.6X14.12 ~ 1.6X2.13	8X10.67 ~ 1.2X1.6
	Working distance	293 mm						
0.5X	Optical magnification	0.11X ~ 0.75X	0.15X ~ 1X	0.19X ~ 1.25X	0.25X ~ 1.675X	0.375X ~ 2.5X	0.56X ~ 3.75X	0.75X ~ 5X
	Field of video(mm)	32.7X43.6 ~ 4.8X6.4	24X32 ~ 3.6X4.8	18.9X25.3 ~ 2.88X3.84	14.4X19.2 ~ 2.15X2.9	9.6X12.8 ~ 1.44X1.92	6.4X8.6 ~ 0.96X1.28	4.8X6.4 ~ 0.72X0.96
	Working distance	175 mm						
0.75 X	Optical magnification	0.17X ~ 1.125X	0.225X ~ 1.5X	0.28X ~ 1.875X	0.4X ~ 2.5X	0.56X ~ 3.75X	0.84X ~ 5.625X	1.125X ~ 7.5X
	Field of video(mm)	21.2X28.2 ~ 3.2X4.27	16X21.33 ~ 2.4X3.2	12.9X17.1 ~ 1.92 X2.56	9X12 ~ 1.44 X1.92	6.4X8.6 ~ 0.96X1.28	4.3X5.7 ~ 0.64X0.85	3.2X4.27 ~ 0.48X0.64
	Working distance	117 mm						
1X	Optical magnification	0.225X ~ 1.5X	0.3X ~ 2X	0.375X ~ 2.5X	0.5X ~ 3.35X	0.75X ~ 5X	1.125X ~ 7.5X	1.5X ~ 10X
	Field of video(mm)	16X21.3 ~ 2.4X3.2	12X16 ~ 1.8X2.4	9.6X12.8 ~ 1.44X1.92	7.2X9.6 ~ 1.07X1.4	4.8X6.4 ~ 0.72X0.96	3.2X4.27 ~ 0.48X0.64	2.4X3.2 ~ 0.36X0.48
	Working distance	82 mm						
1.5X	Optical magnification	0.34X ~ 2.25X	0.45X ~ 3X	0.5625X ~ 3.75X	0.75X ~ 5X	1.125X ~ 7.5X	1.6875X ~ 11.25X	2.25X ~ 15X
	Field of video(mm)	10.6X14.1 ~ 1.6X2.13	8X10.67 ~ 1.2X1.6	6.4X8.53 ~ 0.96X1.28	4.8X6.4 ~ 0.72X0.96	3.2X4.27 ~ 0.48X0.64	2.13X2.84 ~ 0.32X0.43	1.6X2.13 ~ 0.24X0.32
	Working distance	54 mm						
2X	Optical magnification	0.45X ~ 3X	0.6X ~ 4X	0.75X ~ 5X	1X ~ 6.7X	1.5X ~ 10X	2.25X ~ 15X	3X ~ 20X
	Field of video(mm)	8X10.7 ~ 1.2X1.6	6X8 ~ 0.9X1.2	4.8X6.4 ~ 0.72X0.96	3.6X4.8 ~ 0.54X0.72	2.4X3.2 ~ 0.36X0.48	1.6X2.1 ~ 0.24X0.32	1.2X1.6 ~ 0.18X0.24
	Working distance	35 mm						
5X	Optical magnification	1.125X ~ 7.5X	1.5X ~ 10X	1.875X ~ 12.5X	2.5X ~ 16.75X	3.75X ~ 25X	5.625X ~ 37.5X	7.5X ~ 50X
	Field of video(mm)	3.2X4.27 ~ 0.48X0.64	2.4X3.2 ~ 0.36X0.48	1.92X2.56 ~ 0.288X0.384	1.44X1.92 ~ 0.21X0.3	0.96X1.28 ~ 0.144X0.192	0.64X0.85 ~ 0.096X0.128	0.48X0.64 ~ 0.072X0.096
	Working distance	10.1 mm						
Magnification range of zoom body 0.75X ~ 5X								
Note: Optical magnification and the field of video are based on 1/3" CCD camera and 14" monitor.								



MZDH0670 Series

Large Magnification Ratio Zoom Monocular Video Micro Series

Large-scale Zoom Ratio	High Definition	Coaxial Illumination
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MZDH0670



MZDH0670C

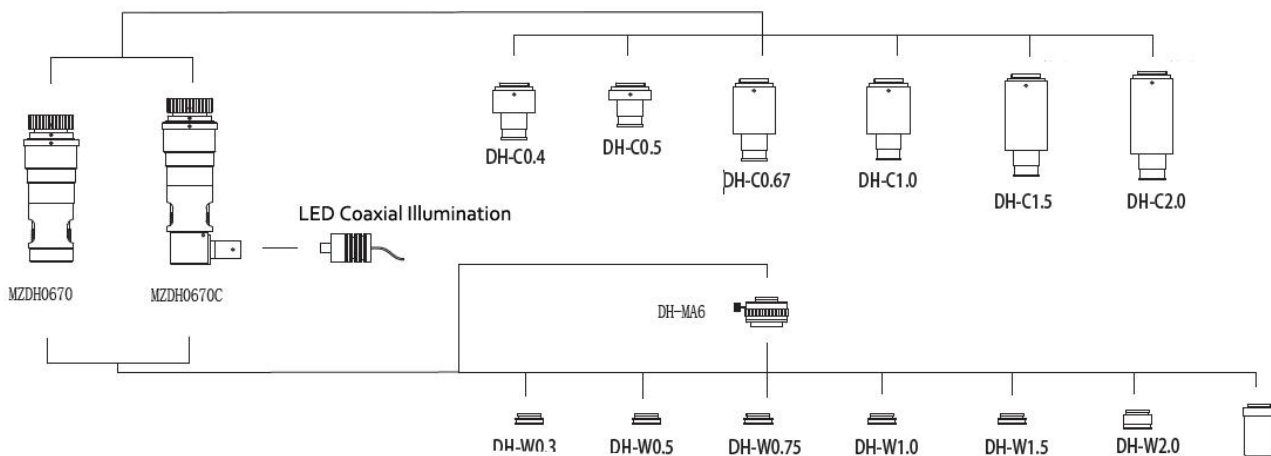


MZDH0670C-MA



- Large zoom ratio 12:1, infinity optical system design.
- Various CCD adapters, magnification objectives, coaxial illumination, ring illumination are available.
- MZDH0670, MZDH0670C, MZDH0670C-MA
- Especially suitable in electric equipments, LCD , LED and etc. for digital image observation, inspection and measurement

Main Body Diagram



Zoom Range	0.58X~7.0X extend total magnification: 0.07X ~ 70X (use auxiliary objectives and kinds of magnification CCD adapters)
Zoom Ratio	12:1
F.O.V (mm)	8X6~ 0.7X0.5
Working Distance (WD)	82mm(1X Objective)
Holder Size	Φ45mm
Illumination	Adjustable high brightness(1W/3W), long life LED Coaxial illumination, ring illuminator
Mount	Standard C-Mount



MZDH0670 Series

Large Magnification Ratio Zoom Monocular Video Micro Series

Large-scale Zoom Ratio

High Definition

Coaxial Illumination

Optical Specifications

Mag.	NA	DOF	Resolution	Distortion on TV
0.58X	0.021	3.3mm	16.0μm	0.32%
2.0X	0.067	0.30mm	5.0μm	0.22%
4.0X	0.093	0.11mm	3.6μm	0.19%
7.0X	0.097	0.06mm	3.5μm	0.16%

Objective		CCD adapter					
		0.4X	0.5X	0.67X	1X	1.5X	2X
0.3X	Optical magnification	0.07X ~ 0.84X	0.09X ~ 1.05X	0.12X ~ 1.4X	0.17X ~ 2.1X	0.26X ~ 3.15X	0.35X ~ 4.2X
	Field of video (mm)	50X66.67 ~ 4.3X5.7	40X53.33 ~ 3.43X4.57	30X40 ~ 2.57X3.43	21.1X28.2 ~ 1.71X2.29	13.85X18.46 ~ 1.14X1.52	10.3X13.71 ~ 0.86X1.14
	Working distance	293 mm					
0.5X	Optical magnification	0.12X ~ 1.4X	0.15X ~ 1.75X	0.2X ~ 2.34X	0.29X ~ 3.5X	0.44X ~ 5.25X	0.58X ~ 7X
	Field of video (mm)	30X40 ~ 2.57X3.43	24X32 ~ 2.06X2.74	18X24 ~ 1.5X2	12.4X16.5 ~ 1.03X1.37	8.2X10.91 ~ 0.69X0.91	6.2X8.3 ~ 0.51X0.69
	Working distance	175 mm					
0.75X	Optical magnification	0.18X ~ 2.1X	0.225X ~ 2.625X	0.3X ~ 3.5X	0.44X ~ 5.25X	0.65X ~ 7.875X	0.87X ~ 10.5X
	Field of video (mm)	20X26.67 ~ 1.7X2.3	16X21.33 ~ 1.37 X1.83	12X16 ~ 1.03 X1.37	8.2X10.9 ~ 0.69X0.91	5.53X7.38 ~ 0.46X0.61	4.1X5.52 ~ 0.34X0.46
	Working distance	117 mm					
1X	Optical magnification	0.24X ~ 2.8X	0.3X ~ 3.5X	0.4X ~ 4.69X	0.58X ~ 7X	0.87X ~ 10.5X	1.16X ~ 14X
	Field of video (mm)	15X20 ~ 1.3X1.7	12X16 ~ 1.03X1.37	9X12 ~ 0.77X1	6.2X8.3 ~ 0.51X0.69	4.1X5.52 ~ 0.34X0.46	3.1X4.1 ~ 0.26X0.34
	Working distance	82 mm					
1.5X	Optical magnification	0.36X ~ 4.2X	0.45X ~ 5.25X	0.6X ~ 7X	0.87X ~ 10.5X	1.3X ~ 15.75X	1.7X ~ 21X
	Field of video (mm)	10X13.33 ~ 0.86X1.14	8X10.67 ~ 0.69X0.91	6X8 ~ 0.5X0.7	4.13X5.52 ~ 0.34X0.46	2.77X3.69 ~ 0.23X0.3	2.1X2.82 ~ 0.17X0.23
	Working distance	54 mm					
2X	Optical magnification	0.48X ~ 5.6X	0.6X ~ 7X	0.8X ~ 9.38X	1.16X ~ 14X	1.7X ~ 21X	2.3X ~ 28X
	Field of video (mm)	7.5X10 ~ 0.64X0.86	6X8 ~ 0.51X0.69	4.5X6 ~ 0.38X0.51	3.1X4.1 ~ 0.26X0.34	2.1X2.82 ~ 0.17X0.23	1.57X2.09 ~ 0.13X0.17
	Working distance	35 mm					
5X	Optical magnification	1.2X ~ 14X	1.5X ~ 17.5X	2.0X ~ 23.4X	2.9X ~ 35X	4.4X ~ 52.5X	5.8X ~ 70X
	Field of video (mm)	3X4 ~ 0.26X0.345	2.4X3.2 ~ 0.21X0.27	1.8X2.4 ~ 0.15X0.2	1.24X1.66 ~ 0.1X0.14	0.82X1.09 ~ 0.07X0.15	0.62X0.83 ~ 0.05X0.07
	Working distance	10.1 mm					
Magnification range of zoom body 0.58X ~ 7X							



MZDV0640 Series

Mini Zoom Monocular Video Micro Series

Minitype	Large Depth Of Field	Coaxial Illumination
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MZDV0640



MZDV0640C



- Infinity Optical system design, short and beautiful, large depth of field, can be with detent.
- Enriched accessories, various CCD adapters, magnification objectives, coaxial illumination are available.
- MZDV0640, MZDV0640C
- Widely applied in semiconductor equipment, especially suitable in two-dimensional, three-dimensional measurement systems

Zoom Range	0.6X~4.0X extend total magnification: 0.09X ~ 16X(use auxiliary objectives and kinds of magnification CCD adapters)
Zoom Ratio	6.7: 1
F.O.V (mm)	6.9X5.1~1.1X0.8
Working Distance (WD)	82mm(1X Objective)
Holder and Main body matched dimension	Φ35mm
Illumination	Adjustable high brightness(1W/3W), long life LED Coaxial illumination, ring illuminator
Mount	Standard C-Mount



MZDV0640 Series

Mini Zoom Monocular Video Micro Series

Minitype	Large Depth Of Field	Coaxial Illumination
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Optical Specifications

Mag.	NA	DOF	Resolution	Distortion on TV	
				1X CCD Adapter	1X CCD Plane Adapter
0.6X	0.021	3.2mm	16.0μm	0.5%	0.05%
2.0X	0.068	0.29mm	4.9μm	0.4%	0.07%
4.0X	0.097	0.10mm	3.5μm	0.3%	0.04%

※ The depth of field is the value of parsing images if you use 1/2" CCD camera and monitor of level 320 line. (Imaging surface concessional confusion circumference: 40μm)

※ Resolution is the theory resolution of wavelength in 550nm.

Objective	Items	CCD adapter			
		0.5X	1X	1.5X	2X
0.3X WD:293mm	Total Mag.	0.09X ~ 0.6X	0.18X ~ 1.2X	0.27X ~ 1.8X	0.36X ~ 2.4X
	FOV(mm)	40X53.33 ~ 6X8	20X26.67 ~ 3X4	13.33X17.78 ~ 2X2.67	10X13.33 ~ 1.5X2
0.5X WD:175mm	Total Mag.	0.15X ~ 1X	0.3X ~ 2X	0.45X ~ 3X	0.6X ~ 4X
	FOV(mm)	24X32 ~ 3.6X4.8	12X16 ~ 1.8X2.4	8X10.67 ~ 1.2X1.6	6X8 ~ 0.9X1.2
0.75X WD:117mm	Total Mag.	0.225X ~ 1.5X	0.45X ~ 3X	0.675X ~ 4.5X	0.9X ~ 6X
	FOV(mm)	16X21.33 ~ 2.4 X3.2	8X10.67 ~ 1.2X1.6	5.33X7.11 ~ 0.8X1.07	4X5.33 ~ 0.6X0.8
1X WD:82mm	Total Mag.	0.3X ~ 2X	0.6X ~ 4X	0.9X ~ 6X	1.2X ~ 8X
	FOV(mm)	12X16 ~ 1.8X2.4	6X8 ~ 0.9X1.2	4X5.33 ~ 0.6X0.8	3X4 ~ 0.45X0.6
1.5X WD:54mm	Total Mag.	0.45X ~ 3X	0.9X ~ 6X	1.35X ~ 9X	1.8X ~ 12X
	FOV(mm)	8X10.67 ~ 1.2X1.6	4X5.33 ~ 0.6X0.8	2.67X3.56 ~ 0.4X0.53	2X2.67 ~ 0.3X0.4
2X WD:35mm	Total Mag.	0.6X ~ 4X	1.2X ~ 8X	1.8X ~ 12X	2.4X ~ 16X
	FOV(mm)	6X8 ~ 0.9X1.2	3X4 ~ 0.45X0.6	2X2.67 ~ 0.3X0.4	1.5X2 ~ 0.23X0.3
Zoom body magnification range: 0.6X ~ 4.0X					

Note: Optical magnification and the field of video are based on 1/3" CCD camera and 14" monitor.



Video Microscope Accessories



Stand



SD3J-D

Elevator(track) Type
Coarse-Fine 2 Step focus
Height: 212mm with holder
mounting size: 45mm



SD1J-D

Pole Type
Coarse-Fine 2 Step focus
Height: 250mm with holder SF10
mounting size: 45mm



SD10J-D

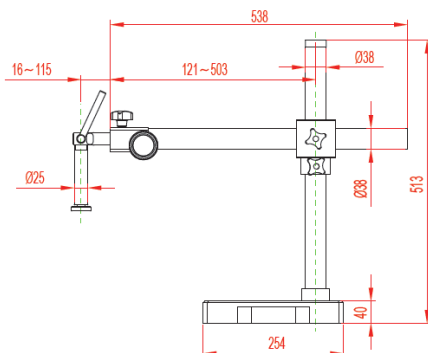
Pole Type
Large steel base: 400x300mm
Coarse-Fine 2 Step focus
Height: 250mm with holder
SF10 mounting size: 45mm



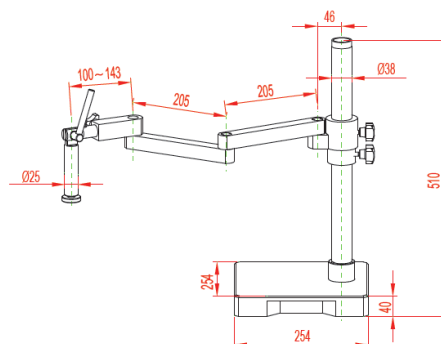
Universal Stand



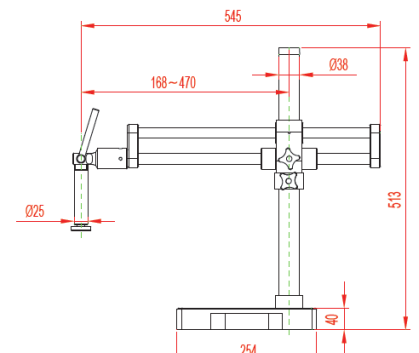
U1



U2



U3





Video Microscope Accessories

Illuminator



MLC1000

Adjustable, High Brightness LED Illuminator (1W)



MLC3000

Adjustable, High Brightness LED Illuminator (3W)
With adjustable diaphragm



MLR25

Adjustable LED Ring Illuminator

Objective

Objective		Description	W.D.(mm)
DH-W0.3		0.3X objectives, for MZDH & MZDV series lens	295mm
DH-W0.5		0.5X objectives, for MZDH & MZDV series lens	175mm
DH-W0.75		0.75X objectives, for MZDH & MZDV series lens	115mm
DH-W1.0		1.0X objectives, for MZDH & MZDV series lens	82mm
DH-W1.5		1.5X objectives, for MZDH & MZDV series lens	55mm
DH-W2.0		2.0X objectives, for MZDH & MZDV series lens	35mm
DH-W5.0		5.0X objectives, for MZDH & MZDV series lens	10.1mm

CCD Adapter

CCD Adapter	Description	CCD Adapter	Description	CCD Adapter	Description
DV-C0.5	0.5X CCD adaptor for MZDV series	DH-C0.3	0.3X CCD adaptor, for MZDH series lens only matches 1/3"CCD	DH-C1.0	1.0X CCD adaptor, for MZDH series lens
DV-C1.0	1.0X CCD adaptor for MZDV series	DH-C0.4	0.4X CCD adaptor, for MZDH series lens	DH-C1.5	1.5X CCD adaptor, for MZDH series lens
DV-C1.5	1.5X CCD adaptor for MZDV series	DH-C0.5	0.5X CCD adaptor, for MZDH series lens	DH-C2.0	2.0X CCD adaptor, for MZDH series lens
DV-C2.0	2.0X CCD adaptor for MZDV series	DH-C0.67	0.67X CCD adaptor, for MZDH series lens		