

CLW2-MP SERIES

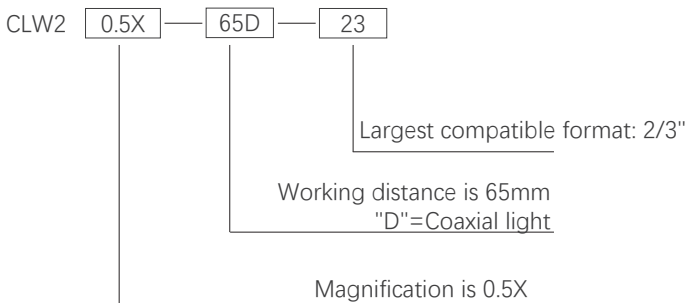
- LARGE FOV
- WD 65mm
- WD 110mm
- WD 130/145mm
- Long WD 330-510mm

▪ LARGE FOV

PRODUCT FEATURES

1. Optimized for AOI application;
2. Large FOV with low magnification;
3. Long working distance easy for illuminations and object allocation design;
4. High accuracy, low distortion, high telecentricity, support up to 1.1" 12M class high-speed camera.

NAMING RULES



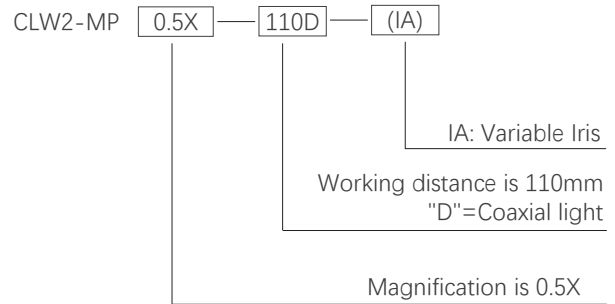
CLW2-MP SERIES

■ WD 110mm

1. Compact design with coaxial illumination options;
2. Perfect image and supports all kinds of Mega camera;
3. High contrast, low distortion, high resolution;
4. Optional adjustable Iris for resolution and DOF control.



NAMING RULES

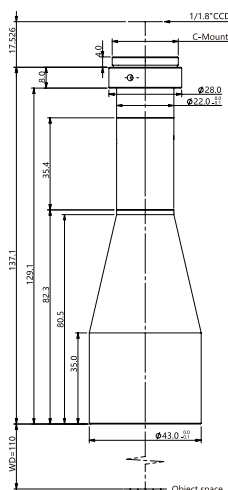


Model No. ¹	Optical specs										Mechanical specs	
	Variable Iris	Coaxial	Mag. (x)	WD (mm) ²	Max. Sensor Size (Φmm)	F/#	DOF (mm) ³	Distortion (% max) ⁴	Telecentricity (° max) ⁵	NA	Length (mm)	Mount
CLW2-MP-0.3X-110	No	No	0.3	110	9.0(1/1.8")	9	8.0	<0.1	<0.1	0.0167	137.1	C-Mount
CLW2-MP-0.3X-110D	No	Yes	0.3	110	9.0(1/1.8")	9	8.0	<0.1	<0.1	0.0167	137.1	C-Mount
CLW2-MP-0.5X-110	No	No	0.5	110	11.0(2/3")	9.6	3.1	<1.0	<0.1	0.0260	135.2	C-Mount
CLW2-MP-0.5X-110(IA)	Yes	No	0.5	110	11.0(2/3")	9.6	3.1	<1.0	<0.1	0.0260	135.2	C-Mount
CLW2-MP-0.5X-110D	No	Yes	0.5	110	11.0(2/3")	9.6	3.1	<1.0	<0.1	0.0260	135.2	C-Mount
CLW2-MP-0.5X-110D(IA)	Yes	Yes	0.5	110	11.0(2/3")	9.6	3.1	<1.0	<0.1	0.0260	135.2	C-Mount
CLW2-MP-1.0X-110	No	No	1.0	110	11.0(2/3")	10.7	0.9	<0.25	<0.1	0.0470	133.9	C-Mount
CLW2-MP-1.0X-110(IA)	Yes	No	1.0	110	11.0(2/3")	10.7	0.9	<0.25	<0.1	0.0470	133.9	C-Mount
CLW2-MP-1.0X-110D	No	Yes	1.0	110	11.0(2/3")	10.7	0.9	<0.25	<0.1	0.0470	138.2	C-Mount
CLW2-MP-1.0X-110D(IA)	Yes	Yes	1.0	110	11.0(2/3")	10.7	0.9	<0.25	<0.1	0.0470	138.2	C-Mount
CLW2-MP-2.0X-110	No	No	2.0	110	11.0(2/3")	18.2	0.4	<2.0	<0.1	0.0536	147.4	C-Mount
CLW2-MP-2.0X-110(IA)	Yes	No	2.0	110	11.0(2/3")	18.2	0.4	<2.0	<0.1	0.0536	147.4	C-Mount
CLW2-MP-2.0X-110D	No	Yes	2.0	110	11.0(2/3")	18.2	0.4	<2.0	<0.1	0.0536	151.7	C-Mount
CLW2-MP-2.0X-110D(IA)	Yes	Yes	2.0	110	11.0(2/3")	18.2	0.4	<2.0	<0.1	0.0536	151.7	C-Mount
CLW2-MP-4.0X-110	No	No	4.0	110	11.0(2/3")	25.6	0.1	<0.1	<0.1	0.0750	128.8	C-Mount
CLW2-MP-4.0X-110D	No	Yes	4.0	110	11.0(2/3")	25.6	0.1	<0.1	<0.1	0.0750	133.1	C-Mount

1. Models with letter "D" support coaxial lights. Models with IA support Variable Iris.
2. Working distance: distance between the front end of the mechanics and the object.
Set this distance within the nominal value for maximum resolution and minimum distortion.
3. At the borders of the field depth the image can be still used for measurement.

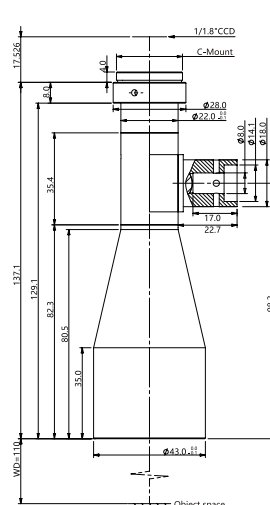
4. Percent deviation of the real image compared to an ideal, undistorted image: maximum (guaranteed) values are listed.
5. Maximum slope of chief rays inside the lens: when converted to milliradians, it gives the maximum measurement error for any millimeter of object displacement. Maximum (guaranteed) values are listed.

CLW2-MP-0.3X-110



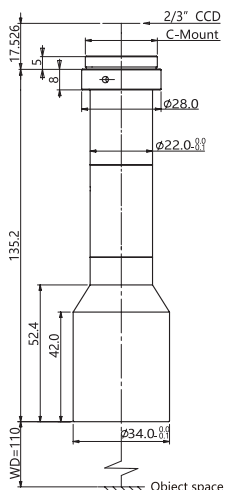
Mag.(x)	0.3
WD(mm)	110±2
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	100
NA	0.0167
Resolution(μm)	20.1
DoF(mm)	8.0
Length(mm)	137.1
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mm xmm)	
1/3" (4.8x3.6)	16.0x12.0
1/2" (6.4x4.8)	21.3x16.0
1/1.8" (7.13x5.37)	23.8x17.9

CLW2-MP-0.3X-110D



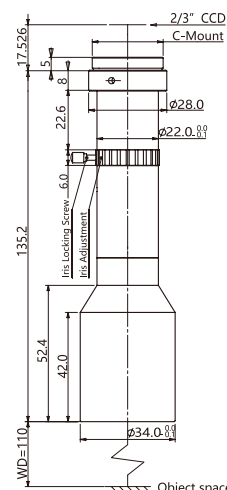
Mag.(x)	0.3
WD(mm)	110±2
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	100
NA	0.0167
Resolution(μm)	20.1
DoF(mm)	8.0
Length(mm)	137.1
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mm xmm)	
1/3" (4.8x3.6)	16.0x12.0
1/2" (6.4x4.8)	21.3x16.0
1/1.8" (7.13x5.37)	23.8x17.9

CLW2-MP-0.5X-110



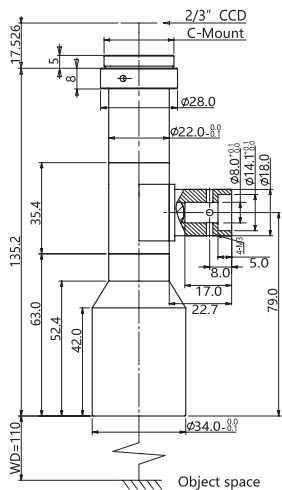
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mm xmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)	14.3x10.7
2/3" (8.8x6.6)	17.6x13.2

CLW2-MP-0.5X-110(IA)



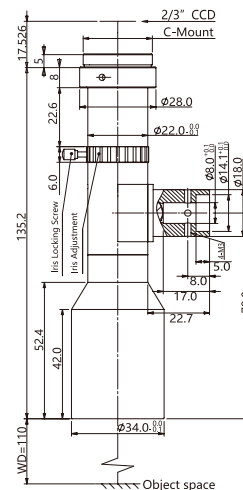
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mm xmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)	14.3x10.7
2/3" (8.8x6.6)	17.6x13.2

CLW2-MP-0.5X-110D



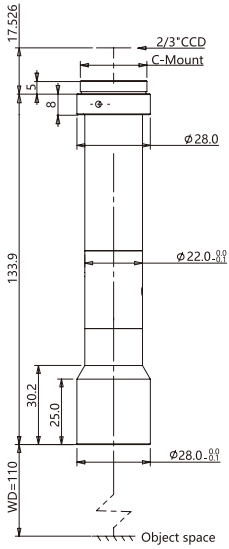
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mm xmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)	14.3x10.7
2/3" (8.8x6.6)	17.6x13.2

CLW2-MP-0.5X-110D(IA)



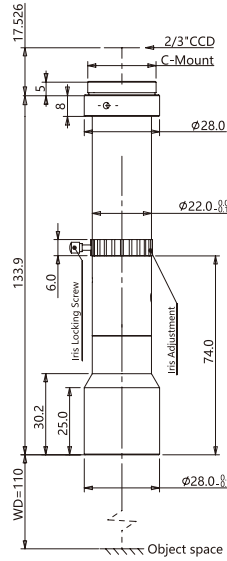
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	Yes
Field of View(mm xmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)	14.3x10.7
2/3" (8.8x6.6)	17.6x13.2

CLW2-MP-1.0X-110



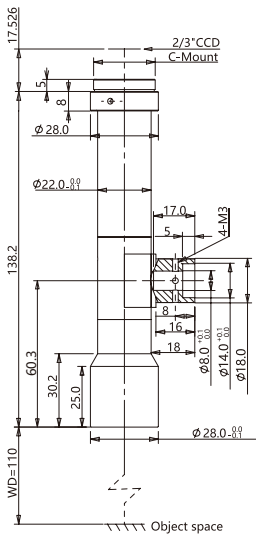
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.25
MTF30(lp/mm)	70
NA	0.047
Resolution(μm)	7.1
DoF(mm)	0.9
Length(mm)	133.9
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)	7.13x5.37
2/3" (8.8x6.6)	8.8x6.6

CLW2-MP-1.0X-110(IA)



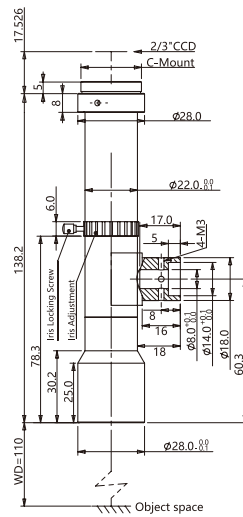
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.25
MTF30(lp/mm)	70
NA	0.047
Resolution(μm)	7.1
DoF(mm)	0.9
Length(mm)	133.9
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mm x mm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)	7.13x5.37
2/3" (8.8x6.6)	8.8x6.6

CLW2-MP-1.0X-110D



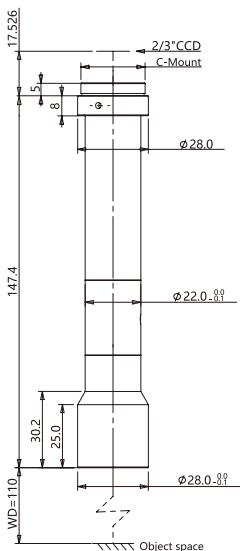
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.25
MTF30(lp/mm)	70
NA	0.047
Resolution(μm)	7.1
DoF(mm)	0.9
Length(mm)	138.2
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)	7.13x5.37
2/3" (8.8x6.6)	8.8x6.6

CLW2-MP-1.0X-110D(IA)



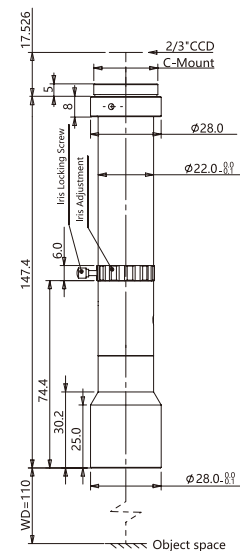
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.25
MTF30(lp/mm)	70
NA	0.047
Resolution(μm)	7.1
DoF(mm)	0.9
Length(mm)	138.2
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	Yes
Field of View(mm x mm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)	7.13x5.37
2/3" (8.8x6.6)	8.8x6.6

CLW2-MP-2.0X-110



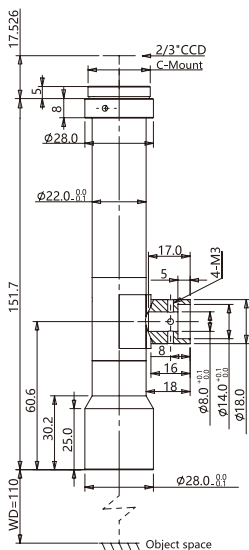
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.2
Telecentricity(° max)	<0.1
Distortion(% max)	<2.0
MTF30(lp/mm)	45
NA	0.0536
Resolution(μm)	6.3
DoF(mm)	0.4
Length(mm)	147.4
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	3.6x2.7
2/3" (8.8x6.6)	4.4x3.3

CLW2-MP-2.0X-110(IA)



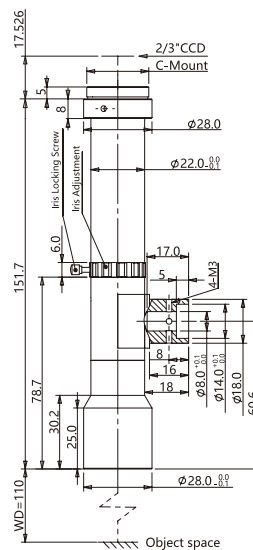
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.2
Telecentricity(° max)	<0.1
Distortion(% max)	<2.0
MTF30(lp/mm)	45
NA	0.0536
Resolution(μm)	6.3
DoF(mm)	0.4
Length(mm)	147.4
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mm x mm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	3.6x2.7
2/3" (8.8x6.6)	4.4x3.3

CLW2-MP-2.0X-110D



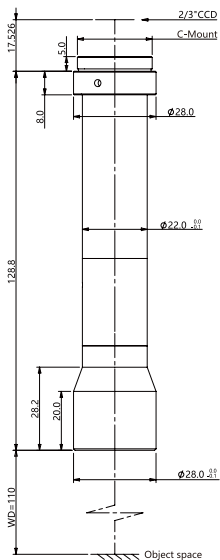
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.2
Telecentricity(° max)	<0.1
Distortion(% max)	<2.0
MTF30(lp/mm)	45
NA	0.0536
Resolution(μm)	6.3
DoF(mm)	0.4
Length(mm)	151.7
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	3.6x2.7
2/3" (8.8x6.6)	4.4x3.3

CLW2-MP-2.0X-110D(IA)



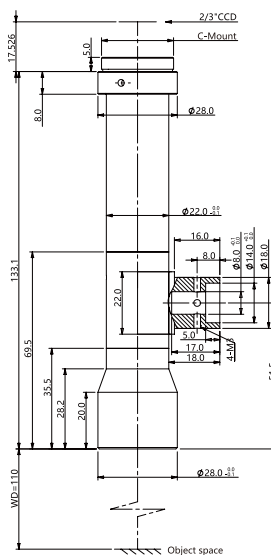
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.2
Telecentricity(° max)	<0.1
Distortion(% max)	<2.0
MTF30(lp/mm)	45
NA	0.0536
Resolution(μm)	6.3
DoF(mm)	0.4
Length(mm)	151.7
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	Yes
Field of View(mm x mm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	3.6x2.7
2/3" (8.8x6.6)	4.4x3.3

CLW2-MP-4.0X-110



Mag.(x)	4.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	25.6
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	35
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	128.8
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	1.6x1.2
1/1.8" (7.13x5.37)	1.8x1.3
2/3" (8.8x6.6)	2.2x1.7

CLW2-MP-4.0X-110



Mag.(x)	4.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	25.6
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	35
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	133.1
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mm x mm)	
1/2" (6.4x4.8)	1.6x1.2
1/1.8" (7.13x5.37)	1.8x1.3
2/3" (8.8x6.6)	2.2x1.7