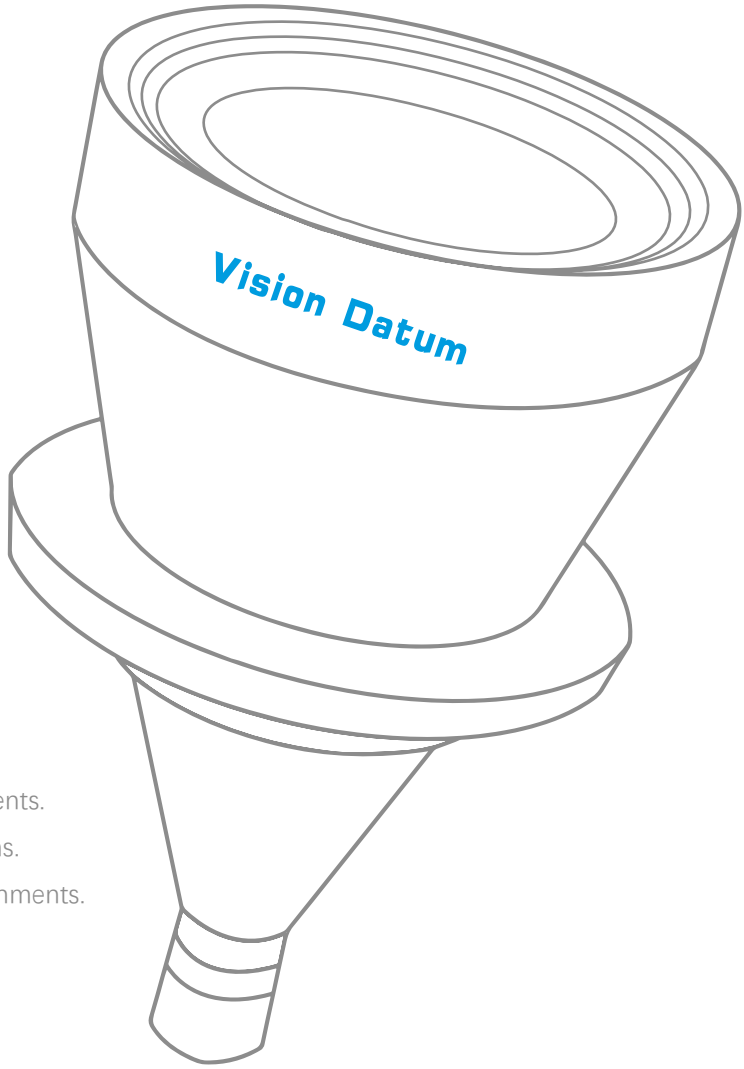
TELECENTRIC LENSES
CLW2-MP SERIES

WD 110mm



MAIN FEATURES

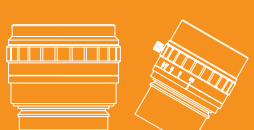
- **High telecentricity** for thick object imaging.
- **Nearly zero distortion** for accurate measurements.
- **Excellent resolution** for high resolution cameras.
- **Simple and robust design** for industrial environments.

ABOUT US

Hangzhou Vision Datum Technology Co.,Ltd. is China top leading professional machine vision products manufacturer and supplier, who have been specializing in design, development and producing machine vision products, software and systems.

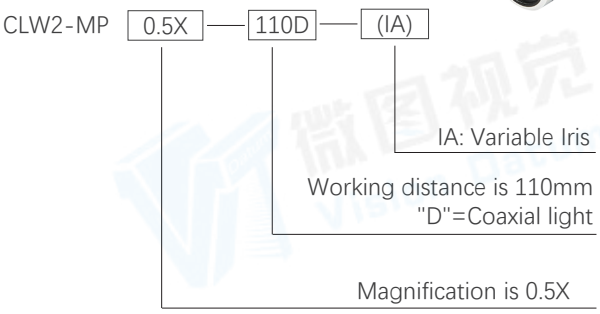
With advanced technology and creative power of image acquisition and processing, Vision Datum major products have included industrial camera, scientific standard camera, industrial FA lens, telecentric lens, machine vision lights and image processing software. All products comply with international quality standards and we have more than 20 years industry experience in the fields of machine vision image acquisition and processing, optical imaging and automation.

Vision Datum provides free of charge consultation for imaging solution. With excellent pre-sales, quality control and after-sales service team, we are able to respond rapidly in 24 hours and ensure to create best value for customers. Vision Datum will innovate constantly and shall make more brilliant achievements together with our customers in the era of Industry 4.0.



CLW2-MP SERIES
▪ WD 110mm

NAMING RULES



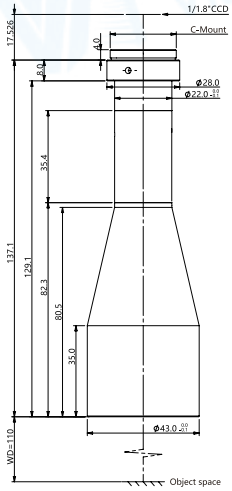
1. Compact design with coaxial illumination options;
2. Perfect image and supports all kinds of Mega camera;
3. High contrast, low distortion, high resolution;
4. Optional adjustable Iris for resolution and DOF control.

Model No.	Optical specs										Mechanical specs	
	Variable Iris	Coaxial	Mag. (x)	WD (mm)	Max. Sesnor Size (Φmm)	F/#	DOF (mm)	Distortion (% max)	Telecentricity (° max)	NA	Length (mm)	Mount
CLW2-MP-0.3X-110	No	No	0.3	110±2	9.0(1/1.8")	9	<0.1	<0.1	0.0167	8.0	137.1	C Mount
CLW2-MP-0.3X-110D	No	Yes	0.3	110±2	9.0(1/1.8")	9	<0.1	<0.1	0.0167	8.0	137.1	C Mount
CLW2-MP-0.5X-110	No	No	0.5	110±2	11.0(2/3")	9.6	<0.1	<0.1	0.0260	3.1	135.2	C Mount
CLW2-MP-0.5X-110(IA)	Yes	No	0.5	110±2	11.0(2/3")	9.6	<0.1	<0.1	0.0260	3.1	135.2	C Mount
CLW2-MP-0.5X-110D	No	Yes	0.5	110±2	11.0(2/3")	9.6	<0.1	<0.1	0.0260	3.1	135.2	C Mount
CLW2-MP-0.5X-110D(IA)	Yes	Yes	0.5	110±2	11.0(2/3")	9.6	<0.1	<0.1	0.0260	3.1	135.2	C Mount
CLW2-MP-0.8X-110	No	No	0.8	110±2	11.0(2/3")	7.9	<0.1	<0.1	0.05028	1.0	122.7	C Mount
CLW2-MP-0.8X-110D	No	Yes	0.8	110±2	11.0(2/3")	7.9	<0.1	<0.1	0.05028	1.0	122.7	C Mount
CLW2-MP-1.0XH-110	No	No	1.0	110±2	11.0(2/3")	7	<0.1	<0.1	0.07158	0.6	133.3	C Mount
CLW2-MP-1.0X-110(IA)	Yes	No	1.0	110±2	11.0(2/3")	10.7	<0.1	<0.1	0.0470	0.9	133.9	C Mount
CLW2-MP-1.0XH-110D	No	Yes	1.0	110±2	11.0(2/3")	7	<0.1	<0.1	0.07158	0.6	133.3	C Mount
CLW2-MP-1.0X-110D(IA)	Yes	Yes	1.0	110±2	11.0(2/3")	10.7	<0.1	<0.1	0.0470	0.9	138.2	C Mount
CLW2-MP-1.5X-110	No	No	1.5	110±2	11.0(2/3")	10	<0.1	<0.1	0.07488	0.4	128.9	C Mount
CLW2-MP-1.5X-110D	No	Yes	1.5	110±2	11.0(2/3")	10	<0.1	<0.1	0.07488	0.4	128.9	C Mount
CLW2-MP-2.0XH-110	No	No	2.0	110±2	11.0(2/3")	12.2	<0.1	<0.1	0.0815	0.2	133.5	C Mount
CLW2-MP-2.0X-110(IA)	Yes	No	2.0	110±2	11.0(2/3")	18.2	<0.1	<0.1	0.0536	0.4	147.4	C Mount
CLW2-MP-2.0XH-110D	No	Yes	2.0	110±2	11.0(2/3")	12.2	<0.1	<0.1	0.0815	0.2	133.5	C Mount
CLW2-MP-2.0X-110D(IA)	Yes	Yes	2.0	110±2	11.0(2/3")	18.2	<0.1	<0.1	0.0536	0.4	151.7	C Mount
CLW2-MP-3.0X-110	No	No	3.0	110±2	11.0(2/3")	18.3	<0.1	<0.1	0.08255	0.2	165.7	C Mount
CLW2-MP-3.0X-110D	No	Yes	3.0	110±2	11.0(2/3")	18.3	<0.1	<0.1	0.08255	0.2	165.7	C Mount
CLW2-MP-4.0X-110	No	No	4.0	110±2	11.0(2/3")	25.6	<0.1	<0.1	0.0750	0.1	128.8	C Mount
CLW2-MP-4.0X-110D	No	Yes	4.0	110±2	11.0(2/3")	25.6	<0.1	<0.1	0.0750	0.1	133.1	C Mount
CLW2-MP-6.0X-110	No	No	6.0	110±2	11.0(2/3")	38.9	<0.1	<0.1	0.0750	0.1	152.7	C Mount
CLW2-MP-6.0X-110D	No	Yes	6.0	110±2	11.0(2/3")	38.9	<0.1	<0.1	0.0750	0.1	157.0	C Mount

1. Models with letter "D" support coaxial lights. Models with "IA" support Variable Iris.

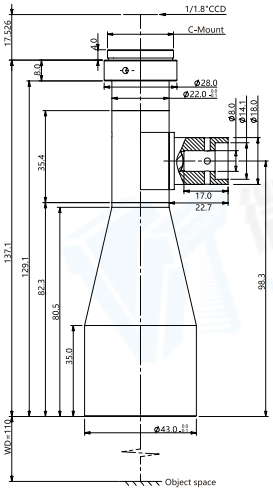
2. Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

CLW2-MP-0.3X-110



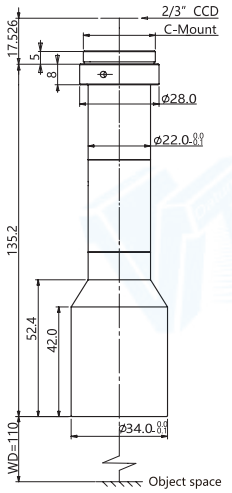
Mag.(x)	0.3
WD(mm)	110±2
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	100
NA	0.0167
Resolution(μm)	20.1
DoF(mm)	8.0
Length(mm)	137.1
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/3" (4.8x3.6)	16.0x12.0
1/2" (6.4x4.8)	21.3x16.0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

CLW2-MP-0.3X-110D



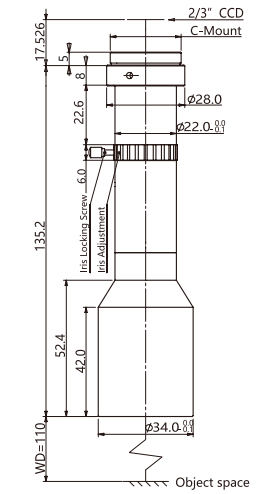
Mag.(x)	0.3
WD(mm)	110±2
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	100
NA	0.0167
Resolution(μm)	20.1
DoF(mm)	8.0
Length(mm)	137.1
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
1/3" (4.8x3.6)	16.0x12.0
1/2" (6.4x4.8)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

CLW2-MP-0.5X-110



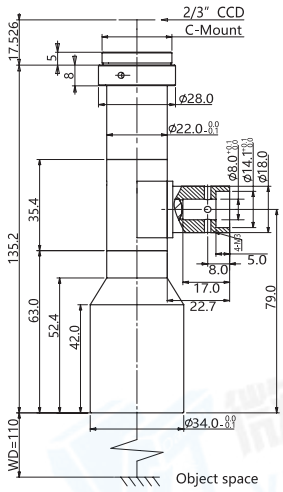
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)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

CLW2-MP-0.5X-110(IA)



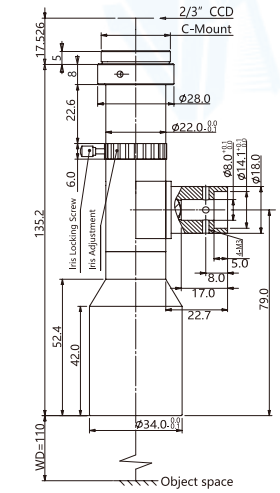
Mag.(x)	0.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	9.6
Telecentricity(° max)	<0.1
Distortion(% max)	<1.0
MTF30(lp/mm)	80
NA	0.026
Resolution(μm)	12.9
DoF(mm)	3.1
Length(mm)	135.2
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mmxmm)	
1/2" (6.4x4.8)	12.8x9.6
1/1.8" (7.13x5.37)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

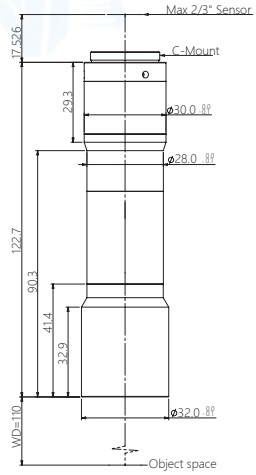
CLW2-MP-0.5X-110D(IA)



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(mmxmm)	
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

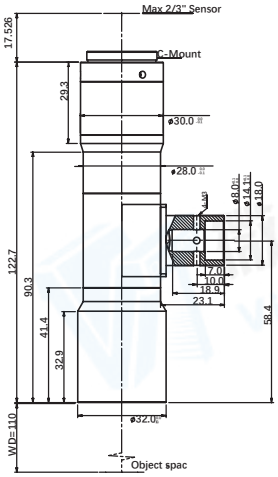
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

CLW2-MP-0.8X-110



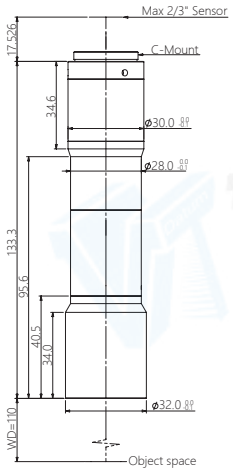
Mag.(x)	0.8
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	7.9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.05028
Resolution(μm)	6.7
DoF(mm)	1.0
Length(mm)	122.7
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	8.0x6.0
1/1.8" (7.13x5.37)	8.9x6.7
2/3" (8.8x6.6)	11.0x8.3

CLW2-MP-0.8X-110D



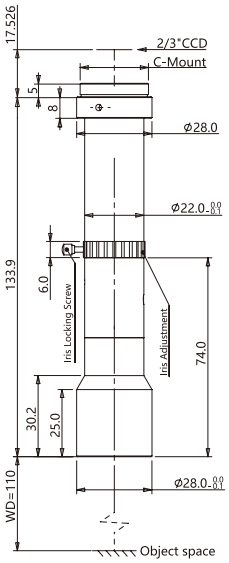
Mag.(x)	0.8
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	7.9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.05028
Resolution(μm)	6.7
DoF(mm)	1.0
Length(mm)	122.7
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mmxmm)	
1/2" (6.4x4.8)	8.0x6.0
1/1.8" (7.13x5.37)	8.9x6.7
2/3" (8.8x6.6)	11.0x8.3

CLW2-MP-1.0XH-110



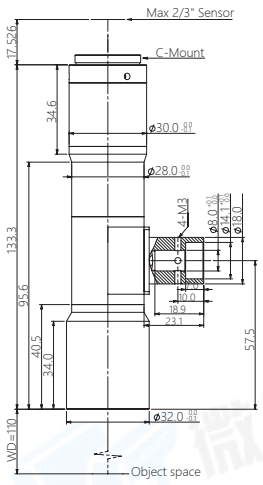
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	70
NA	0.07158
Resolution(μm)	7.1
DoF(mm)	0.6
Length(mm)	133.3
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)	7.13x5.37
2/3" (8.8x6.6)	8.8x6.6

CLW2-MP-1.0X-110(IA)



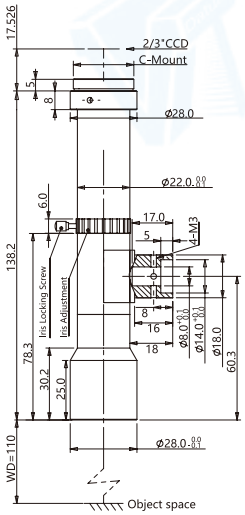
Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.25
MTF30(lp/mm)	70
NA	0.047
Resolution(μm)	7.1
DoF(mm)	0.9
Length(mm)	133.9
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mmxmm)	
1/2" (6.4x4.8)	6.4x4.8
1/1.8" (7.13x5.37)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

CLW2-MP-1.0XH-110D



Mag.(x)	1.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	7
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	70
NA	0.07158
Resolution(μm)	4.7
DoF(mm)	0.9
Length(mm)	133.3
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
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

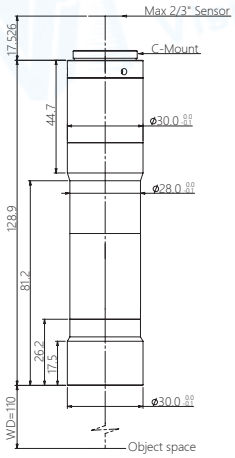
CLW2-MP-1.0X-110D(IA)



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(mmxmm)	
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

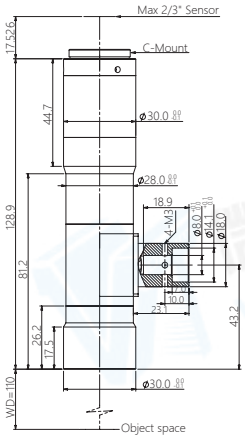
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

CLW2-MP-1.5X-110



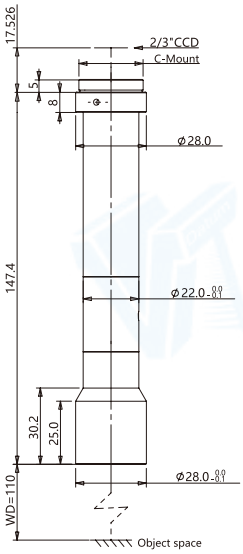
Mag.(x)	1.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.07488
Resolution(μm)	4.5
DoF(mm)	0.4
Length(mm)	128.9
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	4.3x3.2
1/1.8" (7.13x5.37)	4.8x3.6
2/3" (8.8x6.6)	5.9x4.4

CLW2-MP-1.5X-110D



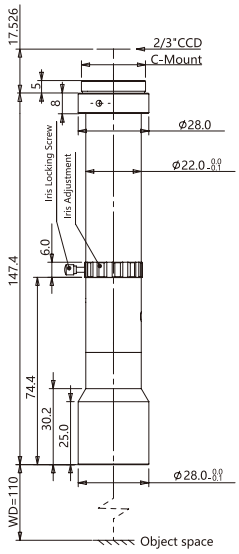
Mag.(x)	1.5
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.07488
Resolution(μm)	4.5
DoF(mm)	0.4
Length(mm)	128.9
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	4.3x3.2
1/1.8" (7.13x5.37)	4.8x3.6
2/3" (8.8x6.6)	5.9x4.4

CLW2-MP-2.0XH-110



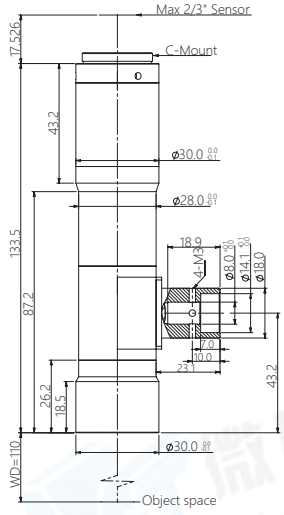
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	12.2
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	45
NA	0.0815
Resolution(μm)	6.3
DoF(mm)	0.2
Length(mm)	133.5
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	3.6x2.7
2/3" (8.8x6.6)	4.4x3.3

CLW2-MP-2.0X-110(IA)



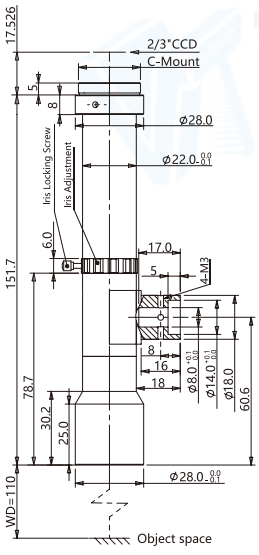
Mag.(x)	2.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.2
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	45
NA	0.0536
Resolution(μm)	6.3
DoF(mm)	0.4
Length(mm)	147.4
Mount	C-Mount
Coaxial Light	No
Variable Iris	Yes
Field of View(mmxmm)	
1/2" (6.4x4.8)	3.2x2.4
1/1.8" (7.13x5.37)	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/#	12.2
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	45
NA	0.0815
Resolution(μm)	6.3
DoF(mm)	0.2
Length(mm)	133.5
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
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

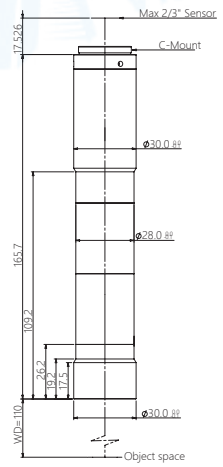
CLW2-MP-2.0XH-110D(IA)



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)	<0.1
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(mmxmm)	
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

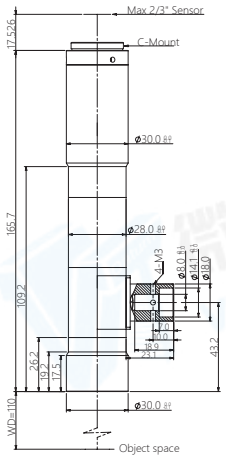
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

CLW2-MP-3.0X-110



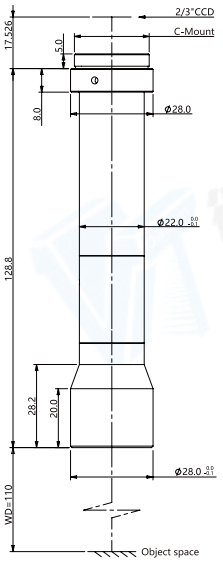
Mag.(x)	3 .0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.3
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	-
NA	0.08255
Resolution(μm)	4.1
DoF(mm)	0.2
Length(mm)	165.7
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	2.1x1.6
1/1.8" (7.13x5.37)	2.4x1.8
2/3" (8.8x6.6)	2.9x2.2

CLW2-MP-3.0X-110D



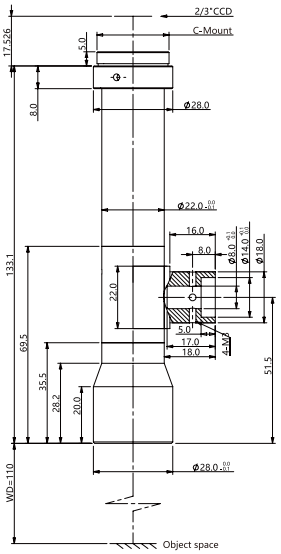
Mag.(x)	3 .0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	18.3
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	-
NA	0.08255
Resolution(μm)	4.1
DoF(mm)	0.2
Length(mm)	165.7
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	2.1x1.6
1/1.8" (7.13x5.37)	2.4x1.8
2/3" (8.8x6.6)	2.9x2.2

CLW2-MP-4.0X-110



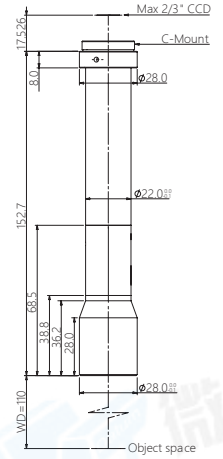
Mag.(x)	4.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	25.6
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	35
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	128.8
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	1.6x1.2
1/1.8" (7.13x5.37)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

CLW2-MP-4.0X-110



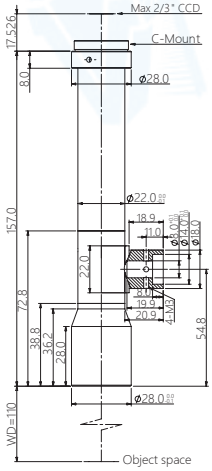
Mag.(x)	4.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	25.6
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
MTF30(lp/mm)	35
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	133.1
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	1.6x1.2
1/1.8" (7.13x5.37)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

CLW2-MP-6.0X-110



Mag.(x)	6.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	38.9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	152.7
Mount	C-Mount
Coaxial Light	No
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	1.1x0.8
1/1.8" (7.13x5.37)	1.2x0.9
2/3" (8.8x6.6)	1.5x1.1

CLW2-MP-6.0X-110D



Mag.(x)	6.0
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	38.9
Telecentricity(° max)	<0.1
Distortion(% max)	<0.1
NA	0.075
Resolution(μm)	4.5
DoF(mm)	0.1
Length(mm)	152.7
Mount	C-Mount
Coaxial Light	Yes
Variable Iris	No
Field of View(mmxmm)	
1/2" (6.4x4.8)	1.1x0.8
1/1.8" (7.13x5.37)	1.2x0.9
2/3" (8.8x6.6)	1.5x1.1

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