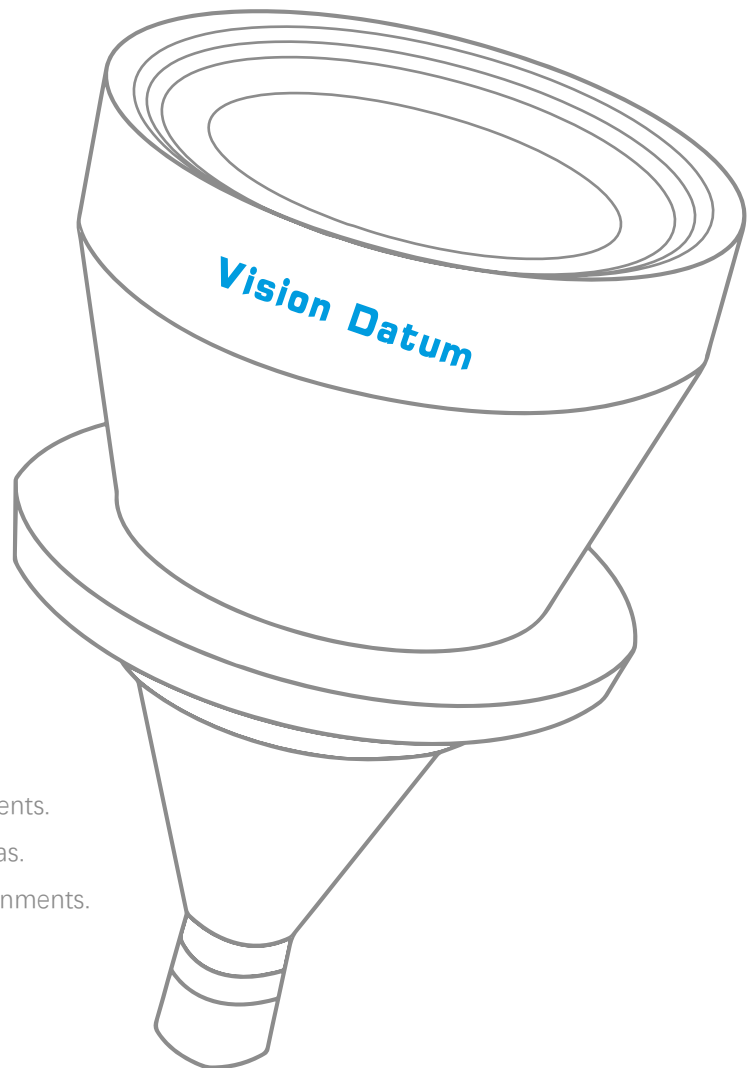




TELECENTRIC LENSES

BTL-12 SERIES



MAIN FEATURES

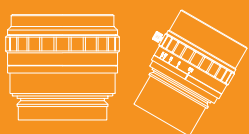
- ◆ **High telecentricity** for thick object imaging.
- ◆ **Nearly zero distortion** for accurate measurements.
- ◆ **Excellent resolution** for high resolution cameras.
- ◆ **Simple and robust design** for industrial environments.

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.



BTL-12 SERIES

1/2"

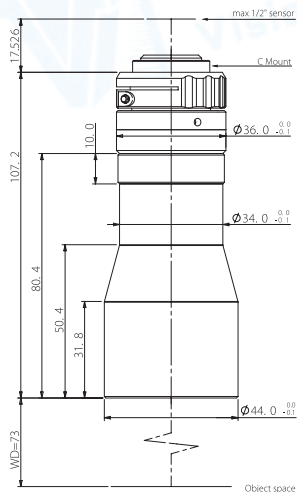


Model No.	Optical specs										Mechanical specs		
	FOV (Φmm)	Mag. (x)	WD (mm)	Max. Sesnor Size (Φmm)	F/#	MTF30 (lp/mm)	DOF (mm)	Distortion (% max)	Telecentricity (° max)	I/O (mm)	Length (mm)	Mount	Weight (kg)
BTL-0.308X-73-12(LM)	26	0.308	73±1	8.0(1/2")	4.2	>175	±4.6@F11	<0.1	<0.1	198±1	107.2	C Mount	0.3
BTL-0.222X-110-12(LM)	36	0.222	110±2	8.0(1/2")	4.2	>190	±8.9@F11	<0.1	<0.1	255±2	127.2	C Mount	0.4
BTL-0.19X-118-12(LM)	42	0.190	118±3	8.0(1/2")	4.2	>210	±12.1@F11	<0.1	<0.1	248±3	112.7	C Mount	0.4
BTL-0.167X-128-12(LM)	48	0.167	128±3	8.0(1/2")	4.2	>200	±15.7@F11	<0.1	<0.1	272±3	126.2	C Mount	0.4
BTL-0.167X-138-12(LM)	48	0.167	138±3	8.0(1/2")	4.7	>190	±15.7@F11	<0.1	<0.1	267±3	111.2	C Mount	0.4
BTL-0.143X-138-12(LM)	56	0.143	138±3	8.0(1/2")	4.2	>210	±21.5@F11	<0.1	<0.1	304±3	148.7	C Mount	0.6
BTL-0.125X-158-12(LM)	64	0.125	158±3	8.0(1/2")	4.2	>220	±28.2@F11	<0.1	<0.1	337±3	161.2	C Mount	0.8
BTL-0.111X-178-12(LM)	72	0.111	178±3	8.0(1/2")	4.2	>215	±35.7@F11	<0.1	<0.1	377±3	181.2	C Mount	1
BTL-0.1X-228-12(LM)	80	0.100	228±4	8.0(1/2")	4.2	>210	±44@F11	<0.1	<0.1	417±4	171.1	C Mount	1.8
BTL-0.089X-208-12(LM)	90	0.089	208±3	8.0(1/2")	4.2	>210	±55.5@F11	<0.1	<0.1	432±3	206.2	C Mount	1.6
BTL-0.08X-258-12(LM)	100	0.080	258±4	8.0(1/2")	4.2	>210	±68.8@F11	<0.1	<0.1	505±4	229.6	C Mount	3
BTL-0.073X-263-12(LM)	110	0.073	263±4	8.0(1/2")	4.2	>210	±82.6@F11	<0.1	<0.1	539±4	258.8	C Mount	2.6
BTL-0.067X-273-12(LM)	120	0.067	273±5	8.0(1/2")	4.2	>210	±99@F11	<0.1	<0.1	561±5	270.6	C Mount	4.1
BTL-0.059X-258-12(LM)	136	0.059	288±5	8.0(1/2")	4.2	>215	±126@F11	<0.1	<0.1	649±5	343.8	C Mount	4.2
BTL-0.053X-300-12(LM)	150	0.053	300±5	8.0(1/2")	4.2	>210	±156@F11	<0.1	<0.1	631±5	313.2	C Mount	5.6
BTL-0.047X-318-12(LM)	170	0.047	318±5	8.0(1/2")	4.2	>210	±199@F11	<0.1	<0.1	711±5	375.1	C Mount	6.4
BTL-0.042X-330-12(LM)	190	0.042	330±5	8.0(1/2")	4.2	>210	±248@F11	<0.1	<0.1	750±5	402.5	C Mount	9.6
BTL-0.037X-372-12(LM)	216	0.037	372±5	8.0(1/2")	4.2	>210	±321@F11	<0.1	<0.1	887±5	497.9	C Mount	13.7
BTL-0.033XH-410-12(LM)	240	0.033	410±6	8.0(1/2")	4.2	>210	±397@F11	<0.1	<0.1	971±6	543.8	C Mount	19.0
BTL-0.031X-338-12(LM)	258	0.031	338±5	8.0(1/2")	4.2	>210	±458@F11	<0.1	<0.1	775±5	419.2	C Mount	-
BTL-0.027X-465-12(LM)	300	0.027	465±6	8.0(1/2")	4.2	>205	±603@F11	<0.1	<0.1	1105±6	622.2	C Mount	46.5

1. The back focal length of model with (LM) is adjustable.

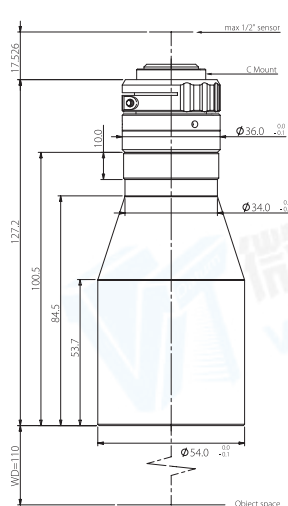
2. **Warm tips:** The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.308X-73-12(LM)



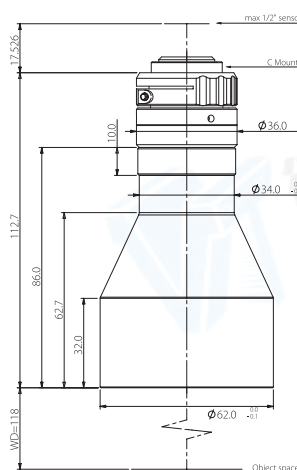
FOV(Φmm)	26
Mag.(x)	0.308
WD(mm)	73±1
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>175
DoF(mm)	±4.6@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	198±1
Length(mm)	107.2
Mount	C-Mount
Weight(kg)	0.3
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	20.9x15.0
1/2.5" 9P001/31 (5.7x4.28)	18.5x13.9

BTL-0.222X-110-12(LM)



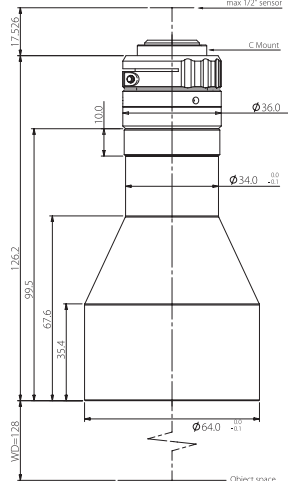
FOV(Φmm)	36
Mag.(x)	0.200
WD(mm)	110±2
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>190
DoF(mm)	±8.9@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	255±2
Length(mm)	127.2
Mount	C-Mount
Weight(kg)	0.4
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	29.0x20.8
1/2.5" 9P001/31 (5.7x4.28)	25.7x19.3

BTL-0.19X-118-12(LM)



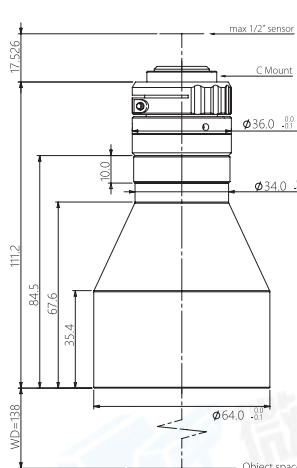
FOV(Φmm)	42
Mag.(x)	0.190
WD(mm)	118±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±12.1@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	248±3
Length(mm)	112.7
Mount	C-Mount
Weight(kg)	0.4
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	33.9x24.3
1/2.5" 9P001/31 (5.7x4.28)	30.0x22.5

BTL-0.167X-128-12(LM)



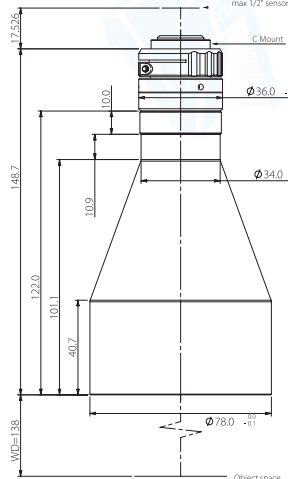
FOV(Φmm)	48
Mag.(x)	0.167
WD(mm)	128±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>200
DoF(mm)	±15.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	272±3
Length(mm)	126.2
Mount	C-Mount
Weight(kg)	0.4
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	38.6x27.7
1/2.5" 9P001/31 (5.7x4.28)	34.1x25.6

BTL-0.167X-138-12(LM)



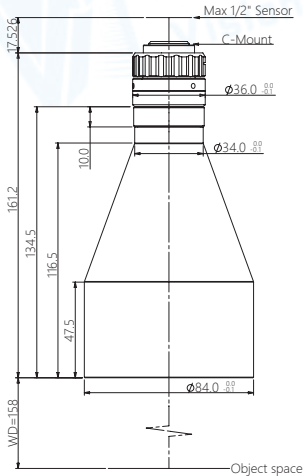
FOV(Φmm)	48
Mag.(x)	0.167
WD(mm)	138±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.7
MTF30(lp/mm)	>190
DoF(mm)	±15.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	267±3
Length(mm)	111.2
Mount	C-Mount
Weight(kg)	0.4
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	38.6x27.7

BTL-0.143X-138-12(LM)

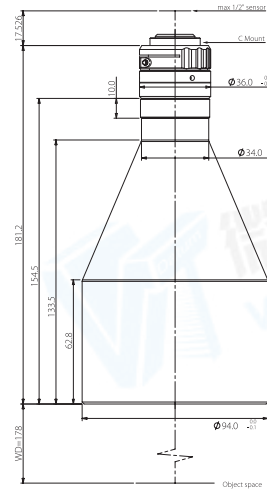


FOV(Φmm)	56
Mag.(x)	0.143
WD(mm)	138±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±21.5@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	304±3
Length(mm)	148.7
Mount	C-Mount
Weight(kg)	0.6
Field of View(mm x mm)	
1/2.3" 9J003 (6.44x4.62)	45.0x32.3
1/2.5" 9P001/31 (5.7x4.28)	39.9x29.9

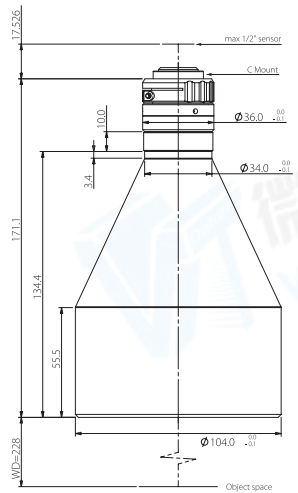
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.125X-158-12(LM)

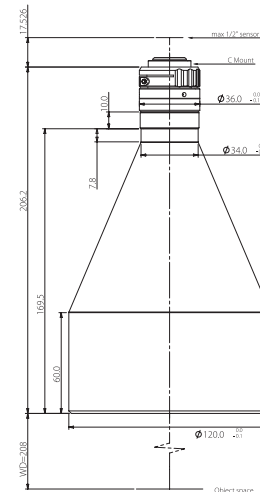
FOV(Φmm)	64
Mag.(x)	0.125
WD(mm)	158±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>220
DoF(mm)	±28.2@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	337±3
Length(mm)	161.2
Mount	C-Mount
Weight(kg)	0.8
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	51.5x37.0
1/2.5" 9P001/31 (5.7x4.28)	45.6x34.2

BTL-0.111X-178-12(LM)

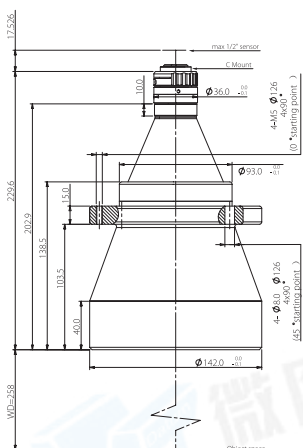
FOV(Φmm)	72
Mag.(x)	0.111
WD(mm)	178±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>215
DoF(mm)	±35.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	377±3
Length(mm)	181.2
Mount	C-Mount
Weight(kg)	1.0
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	58.0x41.6
1/2.5" 9P001/31 (5.7x4.28)	51.4x38.6

BTL-0.1X-228-12(LM)

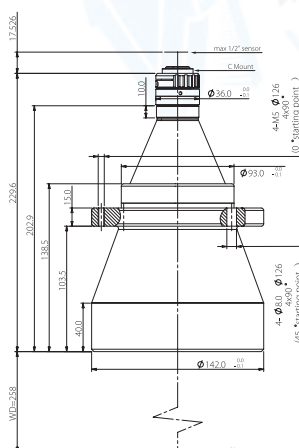
FOV(Φmm)	80
Mag.(x)	0.100
WD(mm)	228±4
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±44@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	417±4
Length(mm)	171.1
Mount	C-Mount
Weight(kg)	1.8
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	64.4x46.2
1/2.5" 9P001/31 (5.7x4.28)	57.0x42.8

BTL-0.089X-208-12(LM)

FOV(Φmm)	90
Mag.(x)	0.089
WD(mm)	208±3
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±55.5@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	432±3
Length(mm)	206.2
Mount	C-Mount
Weight(kg)	1.6
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	72.4x51.9
1/2.5" 9P001/31 (5.7x4.28)	64.0x48.1

BTL-0.08X-258-12(LM)

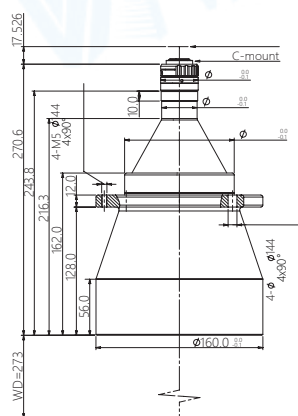
FOV(Φmm)	100
Mag.(x)	0.080
WD(mm)	258±4
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±68.8@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	505±4
Length(mm)	229.6
Mount	C-Mount
Weight(kg)	3.0
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	80.5x57.8
1/2.5" 9P001/31 (5.7x4.28)	71.3x53.5

BTL-0.073X-263-12(LM)

FOV(Φmm)	110
Mag.(x)	0.073
WD(mm)	263±4
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±82.6@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	539±4
Length(mm)	258.8
Mount	C-Mount
Weight(kg)	2.6
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	88.2x63.3
1/2.5" 9P001/31 (5.7x4.28)	78.1x58.6

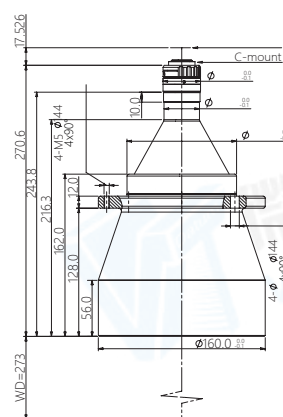
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.067X-273-12(LM)



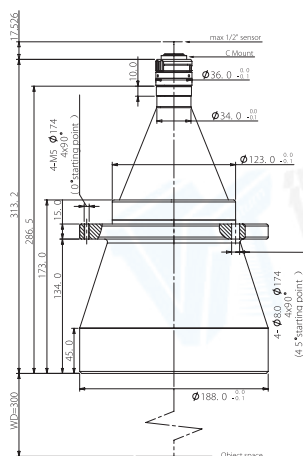
FOV(Φmm)	120
Mag.(x)	0.067
WD(mm)	273±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±99@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	561±5
Length(mm)	270.6
Mount	C-Mount
Weight(kg)	4.1
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	96.1x69.0
1/2.5" 9P001/31 (5.7x4.28)	96.1x69.0

BTL-0.059X-288-12(LM)



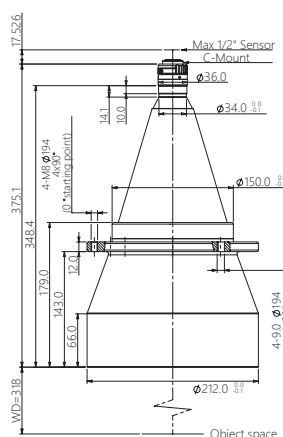
FOV(Φmm)	136
Mag.(x)	0.059
WD(mm)	288±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>215
DoF(mm)	±126@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	649±5
Length(mm)	343.8
Mount	C-Mount
Weight(kg)	4.2
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	109.2x78.3
1/2.5" 9P001/31 (5.7x4.28)	96.6x72.5

BTL-0.053X-300-12(LM)



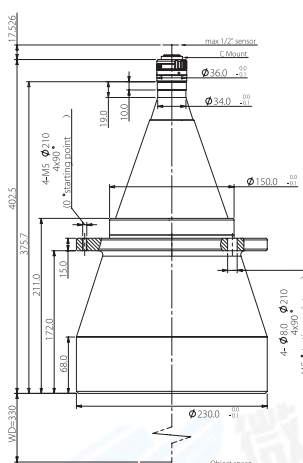
FOV(Φmm)	150
Mag.(x)	0.053
WD(mm)	300±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±156@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	631±5
Length(mm)	313.2
Mount	C-Mount
Weight(kg)	5.6
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	121.5x87.2
1/2.5" 9P001/31 (5.7x4.28)	107.5x80.8

BTL-0.047X-318-12(LM)



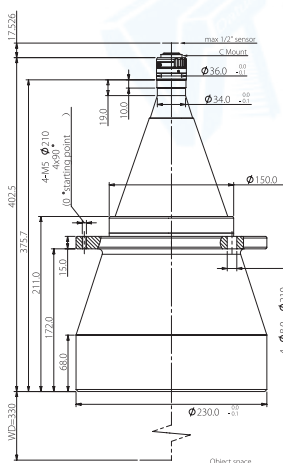
FOV(Φmm)	170
Mag.(x)	0.047
WD(mm)	318±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±199@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	711±5
Length(mm)	375.1
Mount	C-Mount
Weight(kg)	6.4
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	137.0x98.3
1/2.5" 9P001/31 (5.7x4.28)	121.3x91.1

BTL-0.042X-330-12(LM)



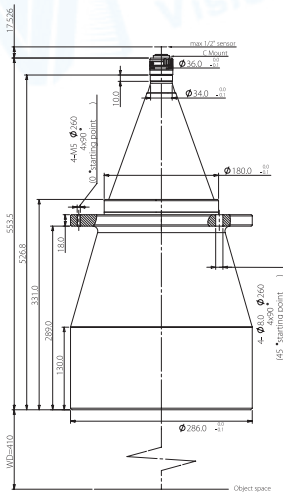
FOV(Φmm)	190
Mag.(x)	0.042
WD(mm)	330±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±248@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	750±5
Length(mm)	402.5
Mount	C-Mount
Weight(kg)	9.6
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	153.3x110.0
1/2.5" 9P001/31 (5.7x4.28)	135.7x101.9

BTL-0.037X-372-12(LM)

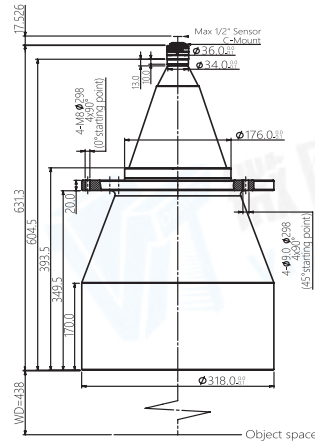


FOV(Φmm)	216
Mag.(x)	0.037
WD(mm)	372±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±321@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	887±5
Length(mm)	497.9
Mount	C-Mount
Weight(kg)	13.7
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	174.1x124.9
1/2.5" 9P001/31 (5.7x4.28)	154.1x115.7

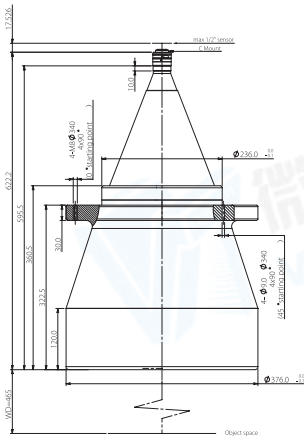
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.033XH-410-12(LM)

FOV(Φmm)	240
Mag.(x)	0.033
WD(mm)	410±6
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±397@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	971±6
Length(mm)	543.8
Mount	C-Mount
Weight(kg)	19.0
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	195.2x140.0
1/2.5" 9P001/31 (5.7x4.28)	183.9x138.1

BTL-0.031X-338-12(LM)

FOV(Φmm)	258
Mag.(x)	0.031
WD(mm)	338±5
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>210
DoF(mm)	±458@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	775±5
Length(mm)	419.2
Mount	C-Mount
Weight(kg)	-
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	195.2x140.0
1/2.5" 9P001/31 (5.7x4.28)	183.9x138.1

BTL-0.027X-465-12(LM)

FOV(Φmm)	300
Mag.(x)	0.027
WD(mm)	465±6
Max Sensor Size(Φmm)	8.0(1/2")
F/#	4.2
MTF30(lp/mm)	>205
DoF(mm)	±603@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	1105±6
Length(mm)	622.2
Mount	C-Mount
Weight(kg)	46.5
Field of View(mm xmm)	
1/2.3" 9J003 (6.44x4.62)	238.5x171.1
1/2.5" 9P001/31 (5.7x4.28)	211.1x158.5



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