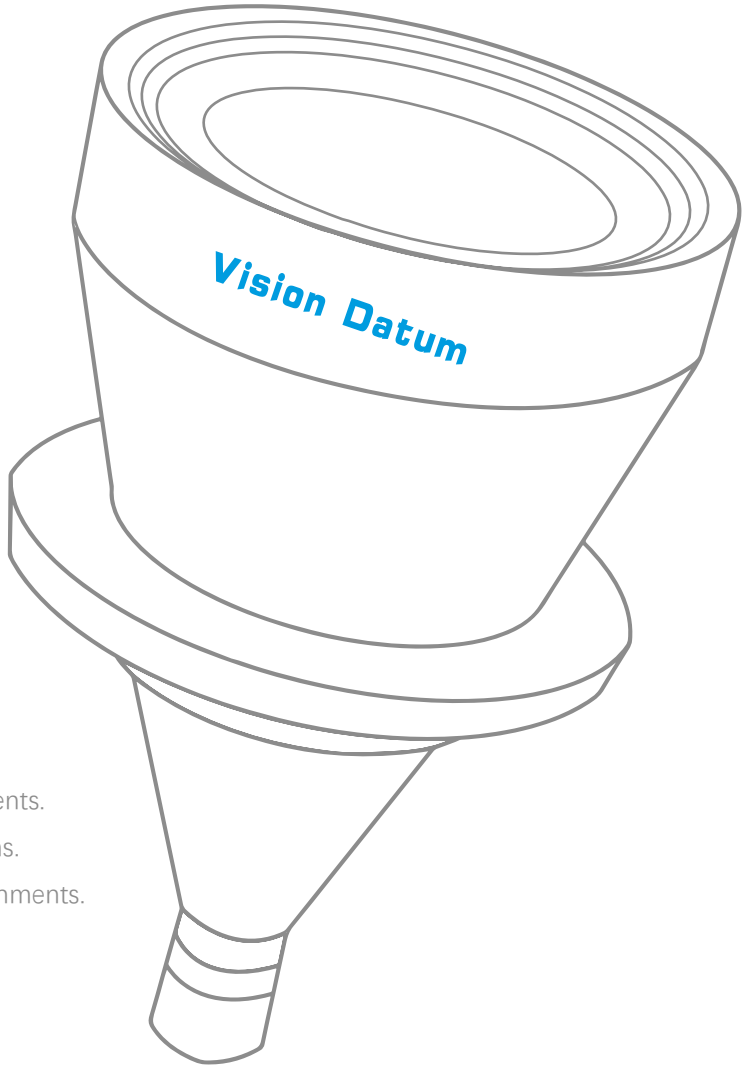
TELECENTRIC LENSES
BTL-H1.1 SERIES



MAIN FEATURES

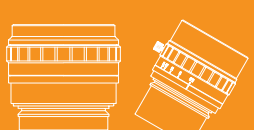
- **High telecentricity** for thick object imaging.
- **Nearly zero distortion** for accurate measurements.
- **Excellent resolution** for high resolution cameras.
- **Simple and robust design** for industrial environments.

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-H1.1 SERIES

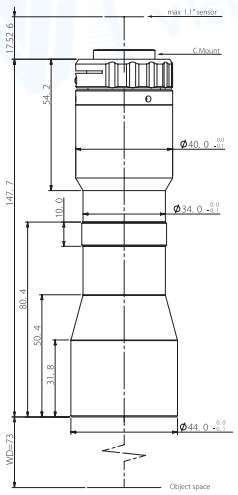
1.1"

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-0.708X-73-H1.1(LM)	26	0.708	73±1	18.4(1.1")	9.6	>75	±1.6@F20	<0.1	<0.1	238±1	147.7	C Mount	0.4
BTL-0.511X-110-H1.1(LM)	36	0.511	110±2	18.4(1.1")	8.7	>85	±3.0@F20	<0.1	<0.1	295±2	167.7	C Mount	0.6
BTL-0.438X-118-H1.1(LM)	42	0.438	118±3	18.4(1.1")	7.2	>115	±3.3@F16	<0.1	<0.1	289±3	153.2	C Mount	0.5
BTL-0.383X-128-H1.1(LM)	48	0.383	128±3	18.4(1.1")	7.2	>115	±4.3@F16	<0.1	<0.1	312±3	166.7	C Mount	0.6
BTL-0.383X-138-H1.1(LM)	48	0.383	138±3	18.4(1.1")	10.8	>80	±4.3@F16	<0.1	<0.1	307±3	151.7	C Mount	0.6
BTL-0.329X-138-H1.1(LM)	56	0.329	138±3	18.4(1.1")	6.2	>145	±4.0@F11	<0.1	<0.1	345±3	189.2	C Mount	0.8
BTL-0.288X-158-H1.1(LM)	64	0.288	158±3	18.4(1.1")	6.2	>150	±7.8@F16	<0.1	<0.1	377±3	201.7	C Mount	0.9
BTL-0.256X-178-H1.1(LM)	72	0.256	178±3	18.4(1.1")	6.2	>145	±6.7@F11	<0.1	<0.1	417±3	221.7	C Mount	1.2
BTL-0.23XH-228-H1.1(LM)	80	0.230	228±4	18.4(1.1")	6.2	>145	±12.1@F16	<0.1	<0.1	457±4	211.7	C Mount	2.0
BTL-0.204X-208-H1.1(LM)	90	0.204	208±3	18.4(1.1")	6.2	>145	±10.5@F11	<0.1	<0.1	472±3	246.7	C Mount	1.8
BTL-0.184X-258-H1.1(LM)	100	0.184	258±4	18.4(1.1")	6.2	>150	±13.0@F11	<0.1	<0.1	546±4	270.1	C Mount	3.2
BTL-0.167X-263-H1.1(LM)	110	0.167	263±4	18.4(1.1")	6.2	>150	±15.8@F11	<0.1	<0.1	580±4	299.3	C Mount	2.8
BTL-0.153X-273-H1.1(LM)	120	0.153	273±5	18.4(1.1")	6.2	>150	±18.7@F11	<0.1	<0.1	602±5	311.0	C Mount	4.3
BTL-0.135X-288-H1.1(LM)	136	0.135	288±5	18.4(1.1")	6.2	>150	±24.1@F11	<0.1	<0.1	690±5	384.3	C Mount	4.3
BTL-0.123X-300-H1.1(LM)	150	0.123	300±5	18.4(1.1")	6.2	>145	±29@F11	<0.1	<0.1	671±5	353.7	C Mount	5.8
BTL-0.108X-318-H1.1(LM)	170	0.108	318±5	18.4(1.1")	6.2	>150	±37.7@F11	<0.1	<0.1	751±5	415.6	C Mount	6.6
BTL-0.097X-330-H1.1(LM)	190	0.097	330±5	18.4(1.1")	6.2	>150	±46.7@F11	<0.1	<0.1	791±5	443	C Mount	9.7
BTL-0.085X-372-H1.1(LM)	216	0.085	372±5	18.4(1.1")	6.2	>150	±60.9@F11	<0.1	<0.1	928±5	538.4	C Mount	13.9
BTL-0.077XH-410-H1.1(LM)	240	0.077	410±6	18.4(1.1")	6.2	>150	±109@F16	<0.1	<0.1	1012±6	584.2	C Mount	19.2
BTL-0.071X-340-H1.1(LM)	258	0.071	340±5	18.4(1.1")	6.2	>150	±86.5@F11	<0.1	<0.1	817±5	459.7	C Mount	-
BTL-0.061X-465-H1.1(LM)	300	0.061	465±6	18.4(1.1")	6.2	>145	±118@F11	<0.1	<0.1	1145±6	662	C Mount	46.7

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

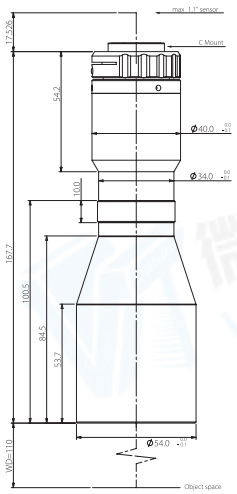
2. Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.708X-73-H1.1(LM)



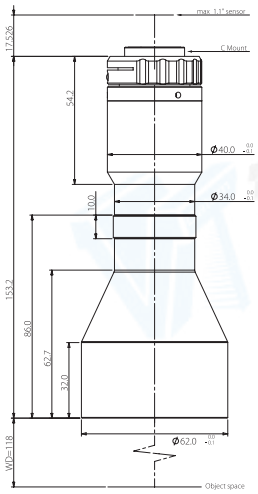
FOV(Φmm)	26
Mag.(x)	0.708
WD(mm)	73±1
Max Sensor Size(Φmm)	18.4(1.1")
F/#	9.6
MTF30(lp/mm)	>75
DoF(mm)	±1.6@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	238±1
Length(mm)	147.7
Mount	C-Mount
Weight(kg)	0.4
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	20.0x14.7

BTL-0.511X-110-H1.1(LM)



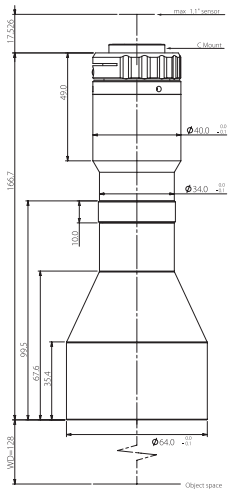
FOV(Φmm)	36
Mag.(x)	0.511
WD(mm)	110±2
Max Sensor Size(Φmm)	18.4(1.1")
F/#	8.7
MTF30(lp/mm)	>85
DoF(mm)	±3.0@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	295±2
Length(mm)	167.7
Mount	C-Mount
Weight(kg)	0.6
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	27.8x20.3

BTL-0.438X-118-H1.1(LM)



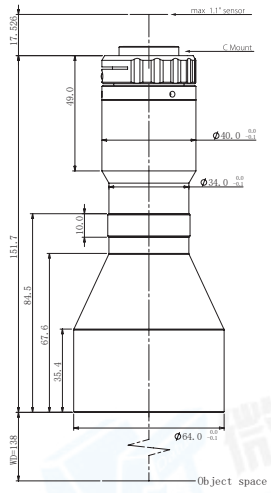
FOV(Φmm)	42
Mag.(x)	0.438
WD(mm)	118±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	7.2
MTF30(lp/mm)	>115
DoF(mm)	±3.3@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	289±3
Length(mm)	153.2
Mount	C-Mount
Weight(kg)	0.5
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	32.4x23.7

BTL-0.383X-128-H1.1(LM)



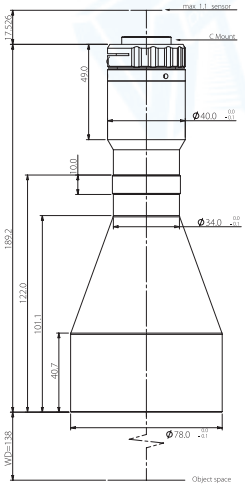
FOV(Φmm)	48
Mag.(x)	0.383
WD(mm)	128±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	7.2
MTF30(lp/mm)	>115
DoF(mm)	±4.3@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	312±3
Length(mm)	166.7
Mount	C-Mount
Weight(kg)	0.6
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	37.1x27.1

BTL-0.383X-138-H1.1(LM)



FOV(Φmm)	48
Mag.(x)	0.383
WD(mm)	138±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	10.8
MTF30(lp/mm)	>80
DoF(mm)	±4.3@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	307±3
Length(mm)	151.7
Mount	C-Mount
Weight(kg)	0.6
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	37.1x27.1

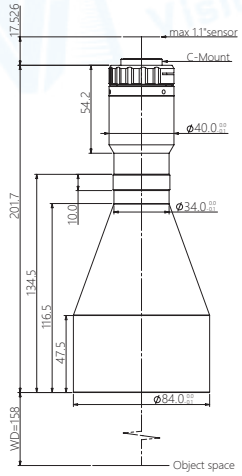
BTL-0.329X-138-H1.1(LM)



FOV(Φmm)	56
Mag.(x)	0.329
WD(mm)	138±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±4.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	345±3
Length(mm)	189.2
Mount	C-Mount
Weight(kg)	0.8
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	43.1x31.6

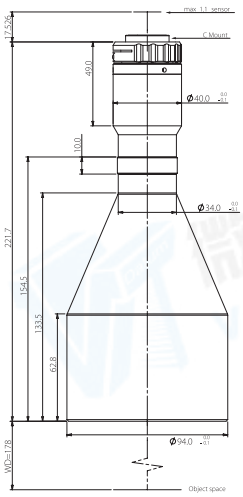
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.288X-158-H1.1(LM)



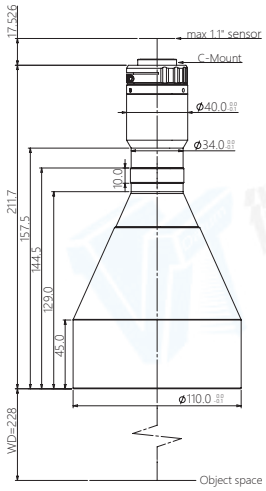
FOV(Φmm)	64
Mag.(x)	0.288
WD(mm)	158±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±7.8@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	377±3
Length(mm)	201.7
Mount	C-Mount
Weight(kg)	0.9
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	49.4x36.2

BTL-0.256X-178-H1.1(LM)



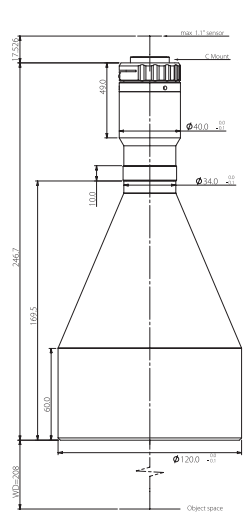
FOV(Φmm)	72
Mag.(x)	0.256
WD(mm)	178±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±6.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	417±3
Length(mm)	221.7
Mount	C-Mount
Weight(kg)	1.2
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	55.4x40.6

BTL-0.23XH-228-H1.1(LM)



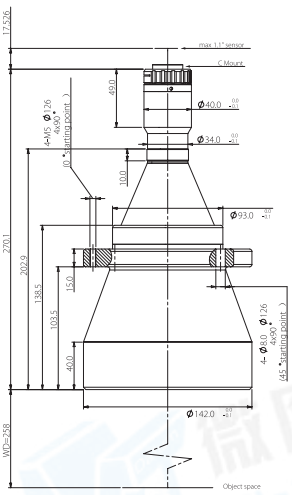
FOV(Φmm)	80
Mag.(x)	0.230
WD(mm)	228±4
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±12.1@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	457±4
Length(mm)	211.7
Mount	C-Mount
Weight(kg)	2.0
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	61.7x45.1

BTL-0.204X-208-H1.1(LM)



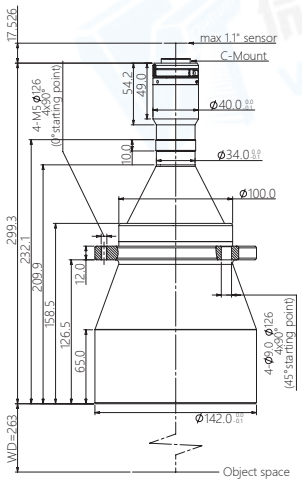
FOV(Φmm)	90
Mag.(x)	0.204
WD(mm)	208±3
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±10.5@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	472±3
Length(mm)	246.7
Mount	C-Mount
Weight(kg)	1.8
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	69.6x50.9

BTL-0.184X-258-H1.1(LM)



FOV(Φmm)	100
Mag.(x)	0.072
WD(mm)	0.184
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±13.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	546±4
Length(mm)	270.1
Mount	C-Mount
Weight(kg)	3.2
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	77.1x56.4

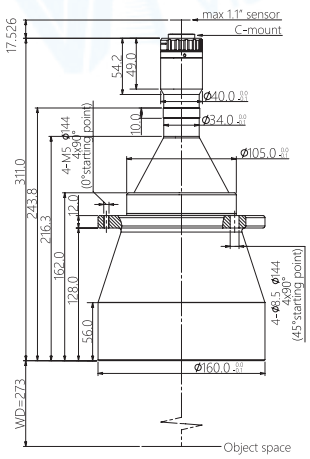
BTL-0.167X-263-H1.1(LM)



FOV(Φmm)	110
Mag.(x)	0.167
WD(mm)	263±4
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±15.8@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	580±4
Length(mm)	299.3
Mount	C-Mount
Weight(kg)	2.8
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	85.0x62.2

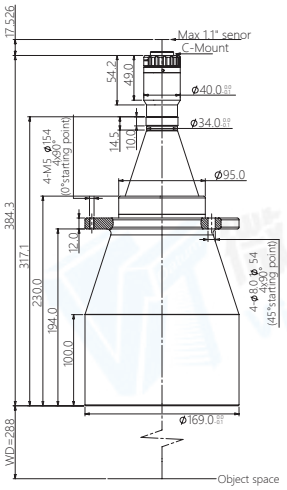
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.153X-273-H1.1(LM)



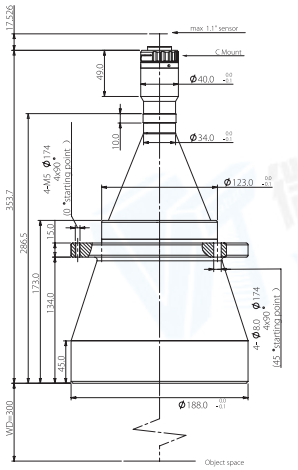
FOV(Φmm)	120
Mag.(x)	0.153
WD(mm)	273±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±18.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	602±5
Length(mm)	311
Mount	C-Mount
Weight(kg)	4.3
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	92.7x67.8

BTL-0.135X-288-H1.1(LM)



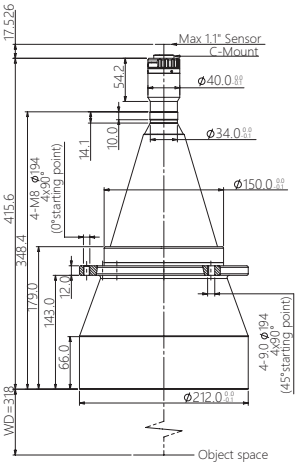
FOV(Φmm)	136
Mag.(x)	0.135
WD(mm)	288±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±24.1@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	690±5
Length(mm)	384.3
Mount	C-Mount
Weight(kg)	4.3
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	105.1x76.9

BTL-0.123X-300-H1.1(LM)



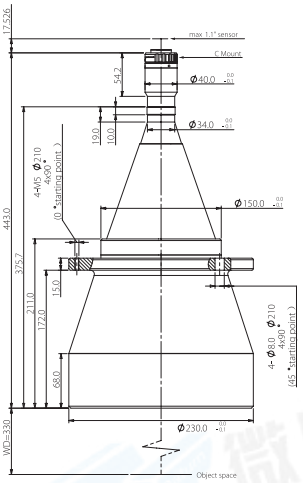
FOV(Φmm)	150
Mag.(x)	0.123
WD(mm)	300±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±29.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	671±5
Length(mm)	353.7
Mount	C-Mount
Weight(kg)	5.8
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	115.4x84.4

BTL-0.108X-318-H1.1(LM)



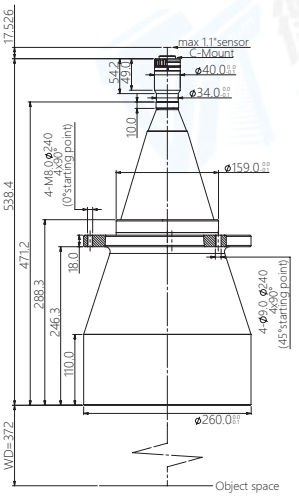
FOV(Φmm)	170
Mag.(x)	0.108
WD(mm)	318±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±37.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	751±5
Length(mm)	415.6
Mount	C-Mount
Weight(kg)	6.6
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	131.4x96.1

BTL-0.097X-330-H1.1(LM)



FOV(Φmm)	190
Mag.(x)	0.097
WD(mm)	330±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±46.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	791±5
Length(mm)	443.0
Mount	C-Mount
Weight(kg)	9.7
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	146.3x107.0

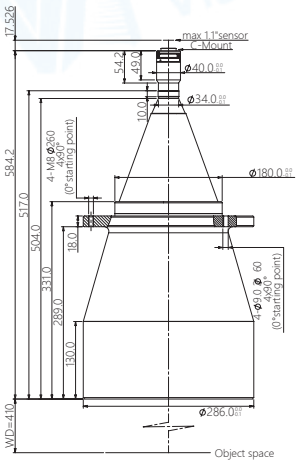
BTL-0.085X-372-H1.1(LM)



FOV(Φmm)	216
Mag.(x)	0.085
WD(mm)	372±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±60.9@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	928±5
Length(mm)	538.4
Mount	C-Mount
Weight(kg)	13.9
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	166.9x122.1

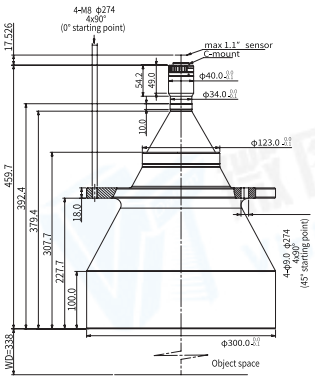
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.077XH-410-H1.1(LM)



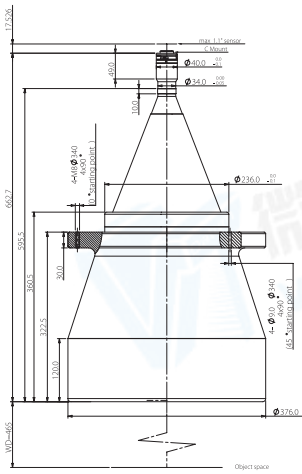
FOV(Φmm)	240
Mag.(x)	0.077
WD(mm)	410±6
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±109@F16
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	1012±6
Length(mm)	584.2
Mount	C-Mount
Weight(kg)	19.2
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	184.3x134.8

BTL-0.071X-340-H1.1(LM)



FOV(Φmm)	258
Mag.(x)	0.071
WD(mm)	340±5
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>150
DoF(mm)	±86.5@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	817±5
Length(mm)	459.7
Mount	C-Mount
Weight(kg)	-
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	199.9x146.2

BTL-0.061X-465-H1.1(LM)



FOV(Φmm)	300
Mag.(x)	0.061
WD(mm)	465±6
Max Sensor Size(Φmm)	18.4(1.1")
F/#	6.2
MTF30(lp/mm)	>145
DoF(mm)	±118@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	1145±6
Length(mm)	662.7
Mount	C-Mount
Weight(kg)	46.7
Field of View(mmxmm)	
1.1" IMX253(14.19x10.38)	232.6x170.2

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.

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