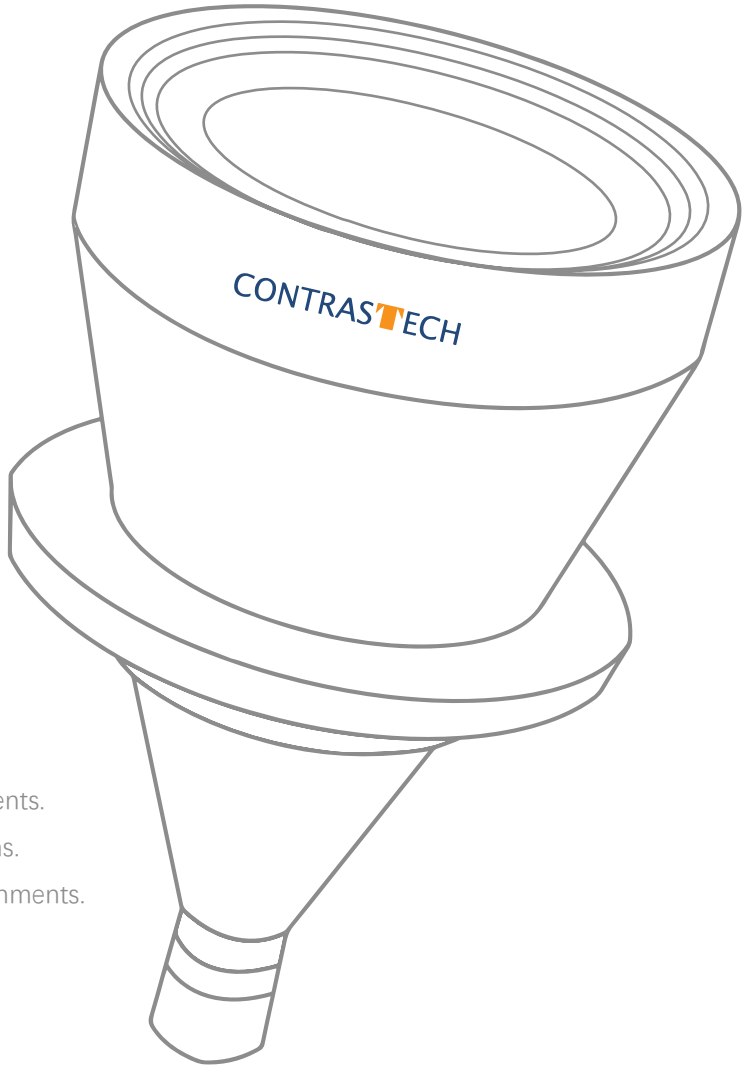
CONTRASTECH

TELECENTRIC LENSES
BTL-118 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 Contrastech 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, Contrastech 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.

Contrastech 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-118 SERIES

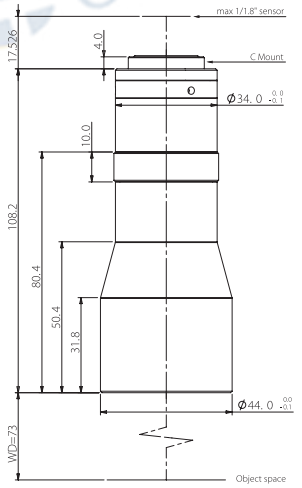
1/1.8"

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	重量 (kg)
BTL-0.346X-73-118	26	0.346	73±1	9.0(1/1.8")	4.6	>170	±3.7@F11	<0.1	<0.1	199±1	108.2	C Mount	0.3
BTL-0.25X-110-118	36	0.250	110±2	9.0(1/1.8")	4.6	>180	±7.0@F11	<0.1	<0.1	256±2	128.3	C Mount	0.4
BTL-0.214X-118-118	42	0.214	118±3	9.0(1/1.8")	4.6	>195	±9.6@F11	<0.1	<0.1	249±3	113.8	C Mount	0.4
BTL-0.188X-128-118	48	0.188	128±3	9.0(1/1.8")	4.6	>190	±12.4@F11	<0.1	<0.1	273±3	127.3	C Mount	0.4
BTL-0.188X-138-118(LM)	48	0.188	138±3	9.0(1/1.8")	4.6	>190	±12.4@F11	<0.1	<0.1	268±3	112.4	C Mount	0.4
BTL-0.161X-138-118(LM)	56	0.161	138±3	9.0(1/1.8")	4.6	>190	±17.0@F11	<0.1	<0.1	306±3	149.9	C Mount	0.7
BTL-0.141X-158-118(LM)	64	0.141	158±3	9.0(1/1.8")	4.6	>195	±22.3@F11	<0.1	<0.1	338±3	162.4	C Mount	0.8
BTL-0.125X-178-118(LM)	72	0.125	178±3	9.0(1/1.8")	4.6	>195	±28.1@F11	<0.1	<0.1	378±3	182.4	C Mount	1
BTL-0.113XH-228-118(LM)	80	0.113	228±4	9.0(1/1.8")	4.6	>195	±34.8@F11	<0.1	<0.1	418±4	172.4	C Mount	1.9
BTL-0.1X-208-118(LM)	90	0.100	208±3	9.0(1/1.8")	4.6	>195	±44@F11	<0.1	<0.1	433±3	207.4	C Mount	1.7
BTL-0.09X-258-118(LM)	100	0.090	258±4	9.0(1/1.8")	4.6	>200	±54@F11	<0.1	<0.1	506±4	230.8	C Mount	3.1
BTL-0.082X-263-118(LM)	110	0.082	263±4	9.0(1/1.8")	4.6	>200	±65.4@F11	<0.1	<0.1	541±4	260.0	C Mount	2.7
BTL-0.075X-273-118(LM)	120	0.075	273±5	9.0(1/1.8")	4.5	>200	±78.2@F11	<0.1	<0.1	562±5	271.1	C Mount	4.2
BTL-0.066X-288-118(LM)	136	0.066	288±5	9.0(1/1.8")	4.6	>200	±101@F11	<0.1	<0.1	651±5	345.0	C Mount	4.2
BTL-0.06X-300-118(LM)	150	0.060	300±5	9.0(1/1.8")	4.6	>195	±122@F11	<0.1	<0.1	632±5	314.4	C Mount	5.7
BTL-0.053X-318-118(LM)	170	0.053	318±5	9.0(1/1.8")	4.6	>200	±157@F11	<0.1	<0.1	712±5	376.3	C Mount	6.5
BTL-0.047X-330-118(LM)	190	0.047	330±5	9.0(1/1.8")	4.6	>200	±199@F11	<0.1	<0.1	751±5	403.6	C Mount	9.6
BTL-0.042X-372-118(LM)	216	0.042	372±5	9.0(1/1.8")	4.6	>200	±249@F11	<0.1	<0.1	889±5	499.1	C Mount	13.7
BTL-0.038XH-410-118(LM)	240	0.038	410±6	9.0(1/1.8")	4.6	>200	±313@F11	<0.1	<0.1	972±6	554.9	C Mount	19.1
BTL-0.035X-338-118(LM)	258	0.035	338±5	9.0(1/1.8")	4.6	>200	±362@F11	<0.1	<0.1	776±5	420.3	C Mount	-
BTL-0.03XH-465-118(LM)	300	0.030	465±6	9.0(1/1.8")	4.6	>190	±488@F11	<0.1	<0.1	1106±6	623.4	C Mount	46.6

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

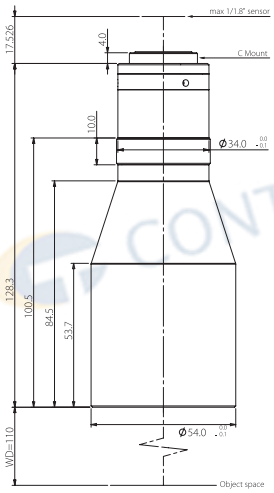
2. Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.346X-73-118



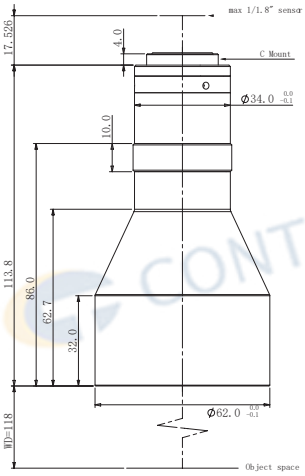
FOV(Φmm)	26
Mag.(x)	0.346
WD(mm)	73±1
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>170
DoF(mm)	±3.7@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	199±1
Length(mm)	108.2
Mount	C-Mount
Weight(kg)	0.3
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	20.7x15.7
1/1.8" EV76C570(7.2x5.4)	20.8x15.6

BTL-0.25X-110-118



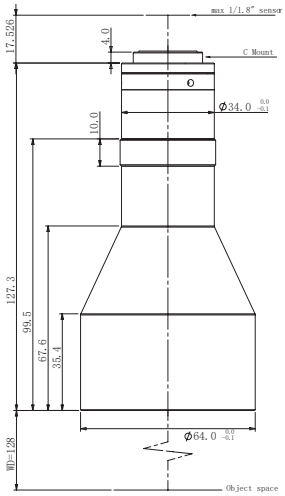
FOV(Φmm)	36
Mag.(x)	0.250
WD(mm)	110±2
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>180
DoF(mm)	±7.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	256±2
Length(mm)	128.3
Mount	C-Mount
Weight(kg)	0.4
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	28.6x21.8
1/1.8" EV76C570(7.2x5.4)	28.8x21.6

BTL-0.214X-118-118



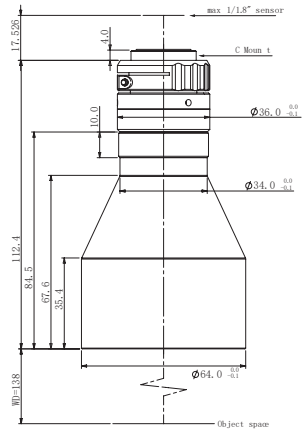
FOV(Φmm)	42
Mag.(x)	0.214
WD(mm)	118±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±9.6@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	249±3
Length(mm)	113.8
Mount	C-Mount
Weight(kg)	0.4
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	33.5x25.4
1/1.8" EV76C570(7.2x5.4)	33.6x25.2

BTL-0.188X-128-118



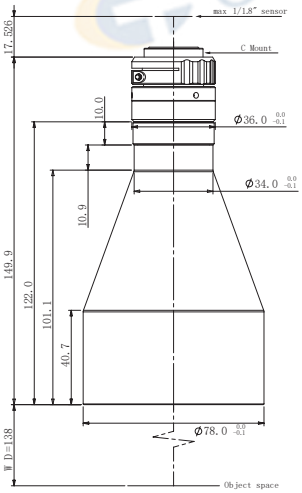
FOV(Φmm)	48
Mag.(x)	0.188
WD(mm)	128±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>190
DoF(mm)	±12.4@F11
Distortion(% max)	<0.15
Telecentricity(° max)	<0.1
I/O(mm)	273±3
Length(mm)	127.3
Mount	C-Mount
Weight(kg)	0.4
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	38.1x29.0
1/1.8" EV76C570(7.2x5.4)	38.3x28.7

BTL-0.188X-138-118(LM)



FOV(Φmm)	48
Mag.(x)	0.188
WD(mm)	138±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>165
DoF(mm)	±12.4@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	268±3
Length(mm)	112.4
Mount	C-Mount
Weight(kg)	0.4
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	38.1x29.0
1/1.8" EV76C570(7.2x5.4)	38.3x28.7

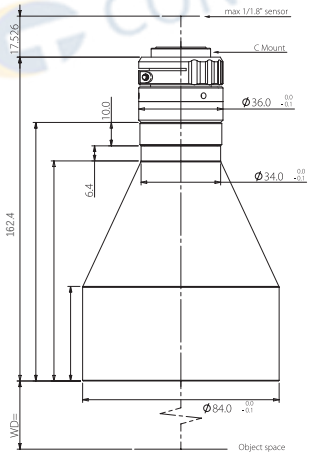
BTL-0.161X-138-118(LM)



FOV(Φmm)	56
Mag.(x)	0.161
WD(mm)	138±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>190
DoF(mm)	±17.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	306±3
Length(mm)	149.9
Mount	C-Mount
Weight(kg)	0.7
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	44.5x33.8
1/1.8" EV76C570(7.2x5.4)	44.7x33.5

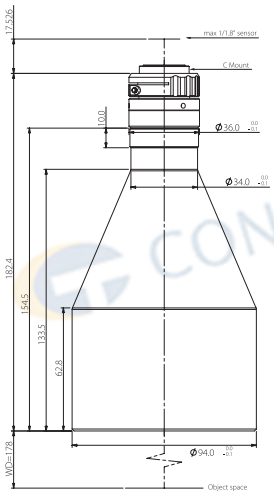
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.141X-158-118(LM)



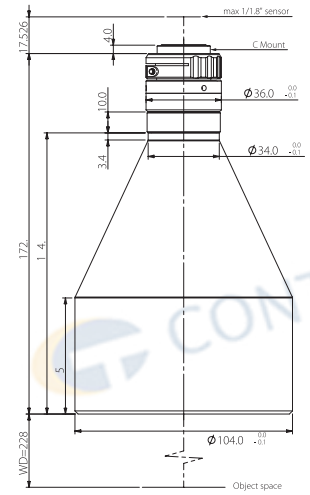
FOV(Φmm)	64
Mag.(x)	0.141
WD(mm)	158±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±22.3@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	338±3
Length(mm)	162.4
Mount	C-Mount
Weight(kg)	0.8
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	52.7x34.8
1/1.8" IMX252/265 (7.1x5.3)	50.4x37.6

BTL-0.125X-178-118(LM)



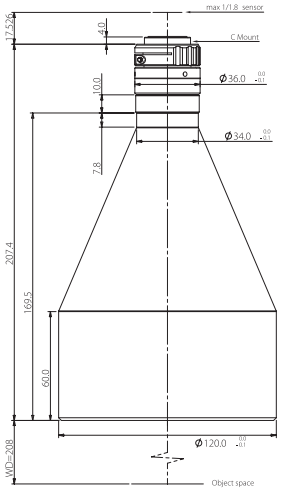
FOV(Φmm)	72
Mag.(x)	0.125
WD(mm)	178±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±28.1@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	378±3
Length(mm)	182.4
Mount	C-Mount
Weight(kg)	1.0
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	59.4x39.2
1/1.8" IMX252/265 (7.1x5.3)	56.8x42.4

BTL-0.113XH-228-118(LM)



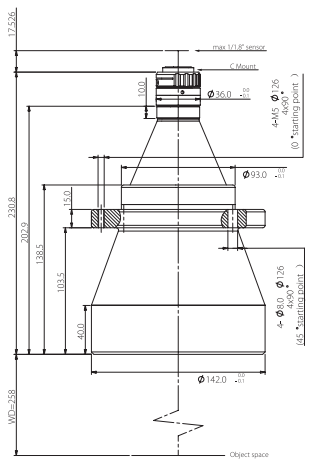
FOV(Φmm)	80
Mag.(x)	0.113
WD(mm)	228±4
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±34.8@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	418±4
Length(mm)	172.4
Mount	C-Mount
Weight(kg)	1.9
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	65.8x43.4
1/1.8" IMX252/265 (7.1x5.3)	62.8x46.9

BTL-0.1X-208-118(LM)



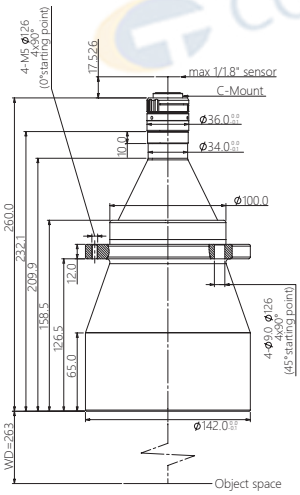
FOV(Φmm)	90
Mag.(x)	0.100
WD(mm)	208±3
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±44.0@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	433±3
Length(mm)	207.4
Mount	C-Mount
Weight(kg)	1.7
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	74.3x49.0
1/1.8" IMX252/265 (7.1x5.3)	71.0x53.0

BTL-0.09X-258-118(LM)



FOV(Φmm)	100
Mag.(x)	0.090
WD(mm)	258±4
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±54@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	506±4
Length(mm)	230.8
Mount	C-Mount
Weight(kg)	3.1
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	82.6x54.4
1/1.8" IMX252/265 (7.1x5.3)	78.9x58.9

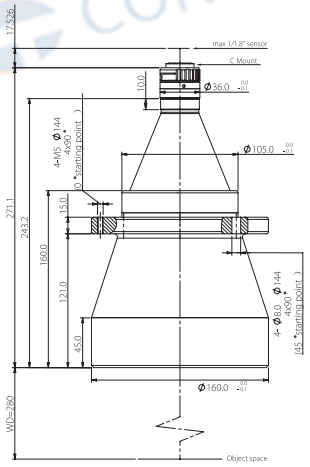
BTL-0.082X-263-118(LM)



FOV(Φmm)	110
Mag.(x)	0.082
WD(mm)	263±4
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±65.4@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	541±4
Length(mm)	260.0
Mount	C-Mount
Weight(kg)	2.7
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	90.6x59.8
1/1.8" IMX252/265 (7.1x5.3)	86.6x64.6

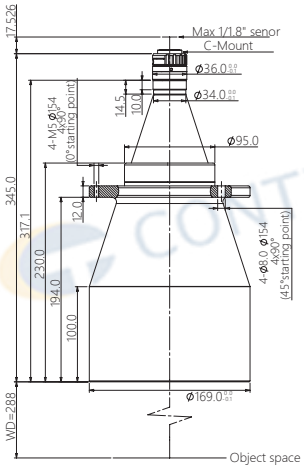
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.075X-273-118(LM)



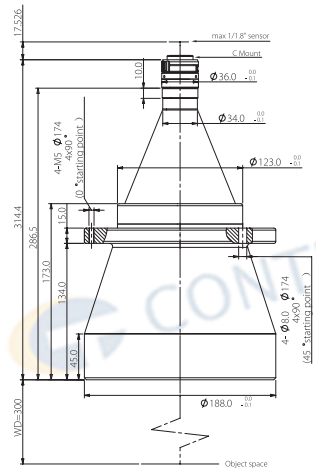
FOV(Φmm)	120
Mag.(x)	0.075
WD(mm)	273±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.5
MTF30(lp/mm)	>200
DoF(mm)	±78.2@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	562±5
Length(mm)	271.1
Mount	C-Mount
Weight(kg)	4.2
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	99.1x65.3
1/1.8" IMX252/265 (7.1x5.3)	94.7x70.7

BTL-0.066X-288-118(LM)



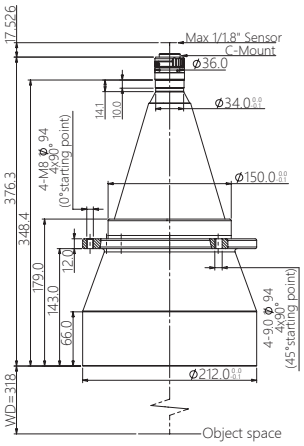
FOV(Φmm)	136
Mag.(x)	0.066
WD(mm)	288±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±101@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	651±5
Length(mm)	345.0
Mount	C-Mount
Weight(kg)	4.2
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	112.6x74.2
1/1.8" IMX252/265 (7.1x5.3)	107.6x80.3

BTL-0.06X-300-118(LM)



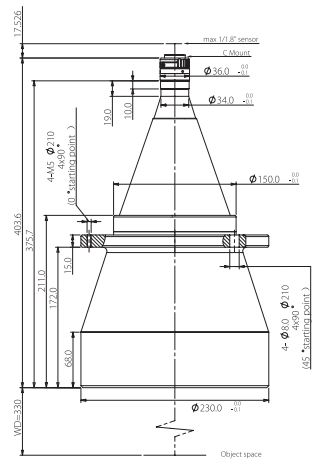
FOV(Φmm)	150
Mag.(x)	0.060
WD(mm)	300±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>195
DoF(mm)	±122@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	632±5
Length(mm)	314.4
Mount	C-Mount
Weight(kg)	5.7
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	123.8x81.7
1/1.8" IMX252/265 (7.1x5.3)	118.3x88.3

BTL-0.053X-318-118(LM)



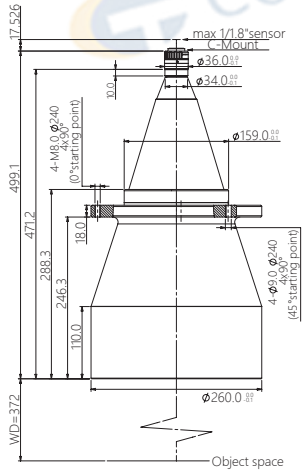
FOV(Φmm)	170
Mag.(x)	0.053
WD(mm)	318±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±157@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	712±5
Length(mm)	376.3
Mount	C-Mount
Weight(kg)	6.5
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	140.2x92.5
1/1.8" IMX252/265 (7.1x5.3)	134.0x100.0

BTL-0.047X-330-118(LM)



FOV(Φmm)	190
Mag.(x)	0.047
WD(mm)	330±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±199@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	751±5
Length(mm)	403.6
Mount	C-Mount
Weight(kg)	9.6
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	158.1x104.3
1/1.8" IMX252/265 (7.1x5.3)	151.1x112.8

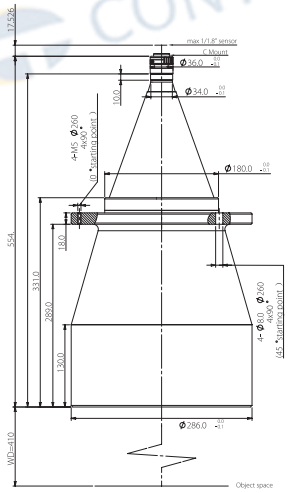
BTL-0.042X-372-118(LM)



FOV(Φmm)	216
Mag.(x)	0.042
WD(mm)	372±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±249@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	889±5
Length(mm)	499.1
Mount	C-Mount
Weight(kg)	13.7
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	176.9x116.7
1/1.8" IMX252/265 (7.1x5.3)	169.0x126.2

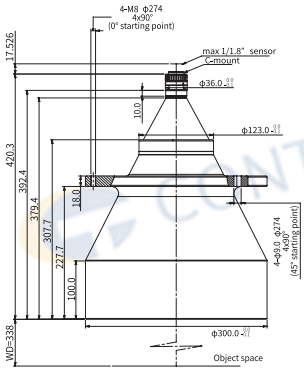
Warm tips: The above DOF is just theoretical value at the ideal aperture (eg. ±763@F11). Actual DOF or the DOF what you need, please check with our sales engineer before order cfm.

BTL-0.038XH-410-118(LM)



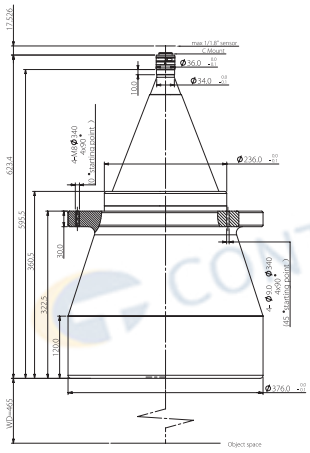
FOV(Φmm)	240
Mag.(x)	0.038
WD(mm)	410±6
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±313@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	972±6
Length(mm)	544.9
Mount	C-Mount
Weight(kg)	19.1
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	188.4x143.2
1/1.8" EV76C570(7.2x5.4)	189.5x142.1

BTL-0.035X-338-118(LM)



FOV(Φmm)	258
Mag.(x)	0.035
WD(mm)	338±5
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>200
DoF(mm)	±362@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	776±5
Length(mm)	420.3
Mount	C-Mount
Weight(kg)	-
Field of View(mmxmm)	
1/1.8" IMX178 (7.43x4.9)	212.3x140.0
1/1.8" IMX252/265 (7.1x5.3)	202.9x151.4

BTL-0.03X-465-118(LM)



FOV(Φmm)	300
Mag.(x)	0.030
WD(mm)	465±6
Max Sensor Size(Φmm)	9.0(1/1.8")
F/#	4.6
MTF30(lp/mm)	>190
DoF(mm)	±488@F11
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	1106±6
Length(mm)	623.4
Mount	C-Mount
Weight(kg)	46.6
Field of View(mmxmm)	
1/1.8" ICX274/687(7.16x5.44)	238.7x181.3
1/1.8" EV76C570(7.2x5.4)	240.0x180.0

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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