

BTL SERIES

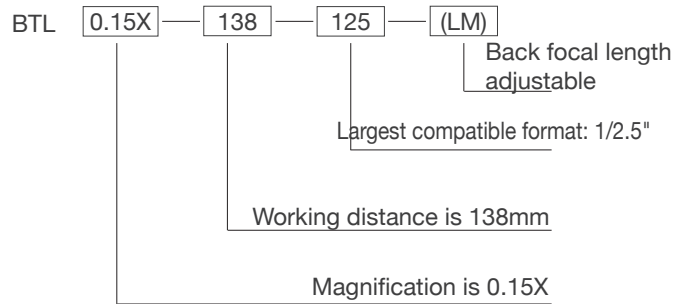
NEW



PRODUCT FEATURES

1. Optimized for 1/2.5"~1.1" C-Mount cameras;
2. Largest FOV from 26mm upto 300mm;
3. Excellent resolution for high pixel cameras;
4. Low distortion, good telecentricity, big aperture and big depth of field for high end application.

NAMING RULES



OVERVIEW

BTL Series Magnification Crosstab

Sensor Size FOV (mm) Mag X	1/2.5" BTL-125	1/2" BTL-12	1/1.8" BTL-118	2/3" BTL-23	1" BTL-H1	1.1" BTL-H1.1	4/3" BTL-H2	1.75" BTL-175	2" BTL-21	39mm BTL-71M	44mm BTL-FF	59mm BTL-16K	WD(mm)
26	0.277	0.308	0.346	0.438	0.638	0.708	0.923	1.115	/	/	/	/	73
36	0.2	0.222	0.25	0.317	0.46	0.511	0.67	0.806	0.917	1.083	/	/	110
42	0.171	0.19	0.214	0.271	0.395	0.438	0.571	0.69	0.786	0.929	1.048	/	118
48	0.15	0.167	0.188	0.238	0.346	0.383	0.5	0.604	0.688	0.813	0.92	/	128
56	0.129	0.143	0.161	0.204	0.296	0.329	0.429	0.518	0.589	0.696	0.785	/	138
64	0.113	0.125	0.14	0.178	0.258	0.287	0.375	0.453	0.516	0.609	0.688	/	189
72	0.1	0.111	0.125	0.158	0.231	0.256	0.333	0.403	0.458	0.542	0.611	/	178
80	0.09	0.1	0.113	0.142	0.206	0.23	0.3	0.363	0.41	0.488	0.55	/	228
90	0.08	0.089	0.1	0.127	0.184	0.204	0.267	0.322	0.367	0.433	0.489	0.656	208
100	0.072	0.08	0.09	0.114	0.166	0.184	0.24	0.29	0.33	0.39	0.44	/	258
120	0.06	0.067	0.075	0.095	0.138	0.153	0.2	0.242	0.275	0.325	0.367	/	280
150	0.048	0.053	0.06	0.076	0.11	0.123	0.16	0.193	0.22	0.26	0.293	0.393	300
190	0.038	0.042	0.047	0.06	0.087	0.097	0.126	0.153	0.174	0.205	0.23	0.311	330
240	0.03	0.033	0.038	0.048	0.069	0.077	0.1	0.121	0.138	0.163	0.183	0.246	410
300	0.024	0.027	0.03	0.038	0.055	0.061	0.08	0.097	0.11	0.13	0.147	0.197	465
Mount	C	C	C	C	C	C	C/F	F	F	F	F	M72	

BTL-16K SERIES

59mm



Model No. ¹	Optical specs										Mechanical specs		
	FOV (Φmm)	Mag. (x)	WD (mm) ²	Max. Sensor Size (Φmm)	F/#	MTF30 (lp/mm)	DOF (mm) ³	Distortion (% max) ⁴	Telecentricity (° max) ⁵	I/O (mm) ⁶	Length (mm)	Mount	Weight (kg)
BTL-0.656X-208-16K(LM)	90	0.656	208±3	59	15.4	>50	±1.3@F20	<0.1	<0.1	595±3	375.0	M72	3.1
BTL-0.393X-300-16K(LM)	150	0.393	300±5	59	19.8	>45	±5.1@F20	<0.1	<0.1	794±5	482.0	M72	7.1
BTL-0.311X-330-16K(LM)	190	0.311	330±5	59	13.9	>65	±8.2@F20	<0.1	<0.1	913±5	571.2	M72	12.5
BTL-0.246X-410-16K(LM)	240	0.246	410±6	59	11.6	>75	±13.2@F20	<0.1	<0.1	1144±6	722.3	M72	27.0
BTL-0.197X-465-16K(LM)	300	0.197	465±6	59	9	>95	±20.6@F20	<0.1	<0.1	1268±6	791.0	M72	48.0

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

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.

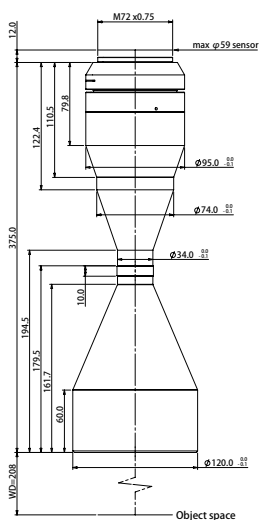
3. At the borders of the field depth the image can be still used for measurement.

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.

6. I/O: distance between the sensor(image) and the object.

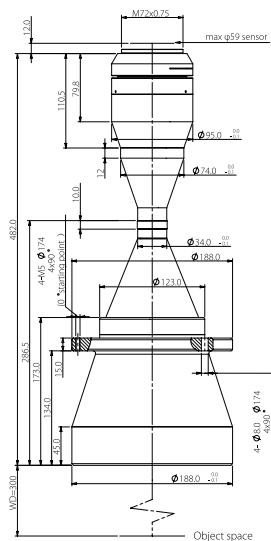
BTL-0.656X-208-16K(LM)



FOV(Φmm)	90
Mag.(x)	0.656
WD(mm)	208±3
Max Sensor Size(Φmm)	59
F/#	15.4
MTF30(lp/mm)	>50
DoF(mm)	±1.3@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	595±3
Length(mm)	375.0
Mount	M72
Weight(kg)	3.1

Field of View(mm x mm)	
KAI-47051(48.7x29.0)	74.2x44.2
16Kx3.5/3.53um(57.4mm)	87.5mm
8Kx7um/7.04um(57.4mm)	87.5mm

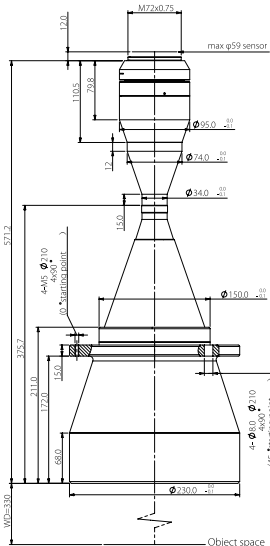
BTL-0.393X-300-16K(LM)



FOV(Φmm)	150
Mag.(x)	0.393
WD(mm)	300±5
Max Sensor Size(Φmm)	59
F/#	19.8
MTF30(lp/mm)	>45
DoF(mm)	±5.1@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	794±5
Length(mm)	482.0
Mount	M72
Weight(kg)	7.1

Field of View(mm x mm)	
KAI-47051(48.7x29.0)	123.9x73.8
16Kx3.5/3.53um(57.4mm)	146.1mm
8Kx7um/7.04um(57.4mm)	146.1mm

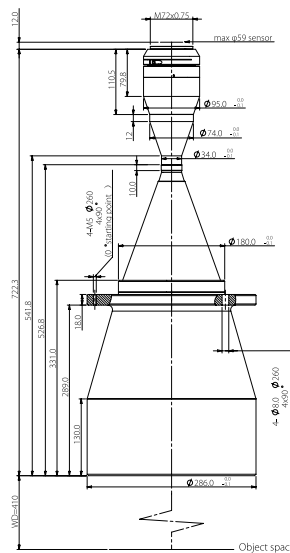
BTL-0.311X-330-16K(LM)



FOV(Φmm)	190
Mag.(x)	0.311
WD(mm)	330±5
Max Sensor Size(Φmm)	59
F/#	13.9
MTF30(lp/mm)	>65
DoF(mm)	±8.2@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	913±5
Length(mm)	571.2
Mount	M72
Weight(kg)	12.5

Field of View(mm x mm)	
KAI-47051(48.7x29.0)	156.6x93.3
16Kx3.5/3.53um(57.4mm)	184.6mm
8Kx7um/7.04um(57.4mm)	184.6mm

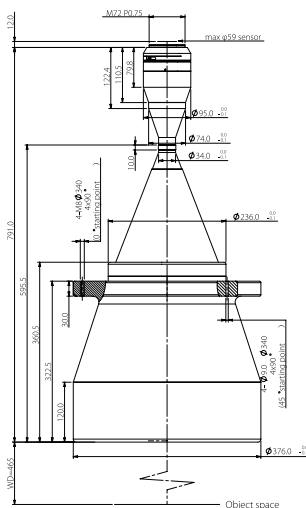
BTL-0.246X-410-16K(LM)



FOV(Φmm)	240
Mag.(x)	0.246
WD(mm)	410±6
Max Sensor Size(Φmm)	59
F/#	11.6
MTF30(lp/mm)	>75
DoF(mm)	±13.2@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	722.3
Length(mm)	549.9
Mount	M72
Weight(kg)	27.0

Field of View(mm x mm)	
KAI-47051(48.7x29.0)	198.0x117.9
16Kx3.5/3.53um(57.4mm)	233.3mm
8Kx7um/7.04um(57.4mm)	233.3mm

BTL-0.197X-465-16K(LM)



FOV(Φmm)	300
Mag.(x)	0.197
WD(mm)	465±6
Max Sensor Size(Φmm)	59
F/#	9
MTF30(lp/mm)	>95
DoF(mm)	±20.6@F20
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	1268±6
Length(mm)	791.0
Mount	M72
Weight(kg)	48.0

Field of View(mm x mm)	
KAI-47051(48.7x29.0)	247.2x147.2
16Kx3.5/3.53um(57.4mm)	291.4mm
8Kx7um/7.04um(57.4mm)	291.4mm