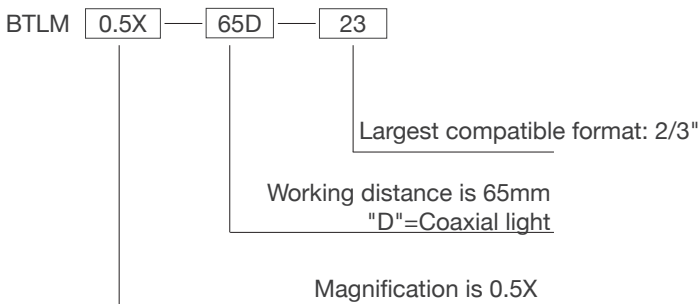




Variable Iris Bi-telecentric Lenses

BTLM series bitelecentric lens are designed and optimized for high accuracy measurement application. These lenses feature variable iris for Depth of Field and resolution adjustment, big F/# for high pixel camera and one style design which is easy for industrial manufacture.

NAMING RULES



PRODUCT FEATURES

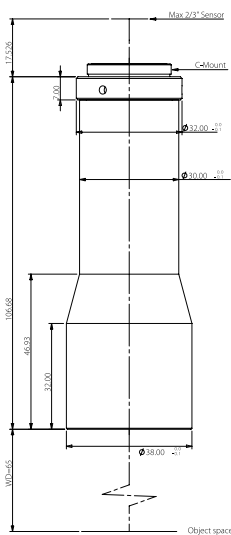
1. Support up to 8M Pixel cameras;
2. Zero perspective error over the entire Field of View;
3. Big depth of field and constant magnification over defined depth of field;
4. Customization available with best performance/cost rate;
5. Equipped with a Manual Iris for adjusting the Depth of Field.

Model No. ¹	Optical specs											Mechanical specs			
	Variable Iris	Coaxial	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)
BTLM-0.5X-65-23	No	No	22	0.500	65±1	11.0(2/3")	5.0	>160	±0.8@F5	<0.1	<0.1	189±1	106.7	C	0.2
BTLM-0.5X-65D-23	No	Yes	22	0.500	65±1	11.0(2/3")	5.0	>160	±0.8@F5	<0.1	<0.1	189±1	106.7	C	0.2
BTLM-0.4X-96-23	No	No	28	0.400	96±2	11.0(2/3")	10.7	>80	±2.6@F10.7	<0.1	<0.1	252±2	111.9	C	0.2
BTLM-0.4X-96IR-23	Yes	No	28	0.400	96±2	11.0(2/3")	5.0	>80	±1.2@F5	<0.1	<0.1	230±2	116.6	C	0.2
BTLM-0.3X-110-23	Yes	No	37	0.300	110±2	11.0(2/3")	3.75	>220	±1.6@F3.75	<0.1	<0.1	273±2	145.5	C	0.4
BTLM-0.3X-110D-23	Yes	Yes	37	0.300	110±2	11.0(2/3")	3.75	>220	±1.6@F3.75	<0.1	<0.1	273±2	145.5	C	0.4
BTLM-0.166X-166-23	Yes	No	66	0.166	166±3	11.0(2/3")	3.3	>260	±4.7@F3.3	<0.1	<0.1	329±3	146.5	C	0.6

- Models with letter "D" support coaxial lights.
- 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.
- At the borders of the field depth the image can be still used for measurement.
- Percent deviation of the real image compared to an ideal, undistorted image: maximum (guaranteed) values are listed.

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

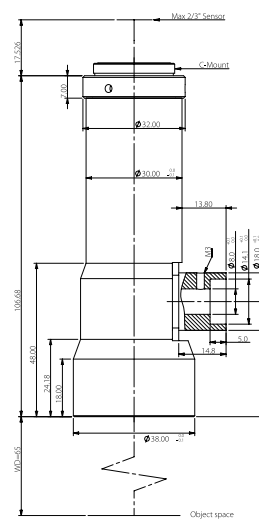
BTLM-0.5X-65-23



FOV(Φmm)	22
Mag.(x)	0.500
WD(mm)	65±1
Max Sensor Size(Φmm)	11.0(2/3")
F/#	5.0
MTF30(lp/mm)	>160
DoF(mm)	±0.8@F5
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	189±1
Length(mm)	106.7
Mount	C-Mount
Weight(kg)	0.2
Coaxial Light	No
Variable Iris	No

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	16.9x14.2

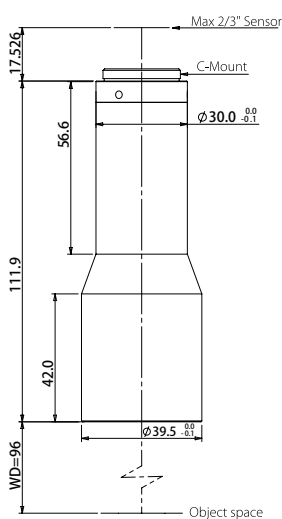
BTLM-0.5X-65D-23



FOV(Φmm)	22
Mag.(x)	0.500
WD(mm)	65±1
Max Sensor Size(Φmm)	11.0(2/3")
F/#	5.0
MTF30(lp/mm)	>160
DoF(mm)	±0.8@F5
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	189±1
Length(mm)	106.7
Mount	C-Mount
Weight(kg)	0.2
Coaxial Light	Yes
Variable Iris	No

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	16.9x14.2

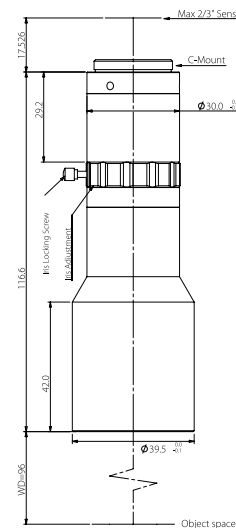
BTLM-0.4X-96-23



FOV(Φmm)	28
Mag.(x)	0.400
WD(mm)	96±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	10.7
MTF30(lp/mm)	>80
DoF(mm)	±2.6@F10.7
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	225±2
Length(mm)	111.9
Mount	C-Mount
Weight(kg)	0.2
Coaxial Light	No
Variable Iris	No

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	21.2x17.8

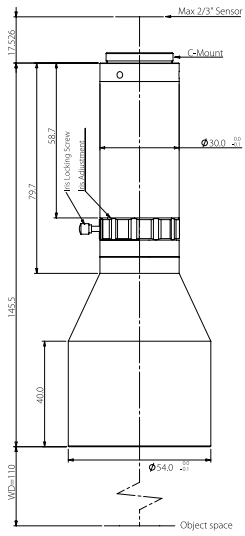
BTLM-0.4X-96-23



FOV(Φmm)	28
Mag.(x)	0.400
WD(mm)	96±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	5.0
MTF30(lp/mm)	>80
DoF(mm)	±1.2@F5
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	230±2
Length(mm)	116.6
Mount	C-Mount
Weight(kg)	0.2
Coaxial Light	No
Variable Iris	Yes

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	21.2x17.8

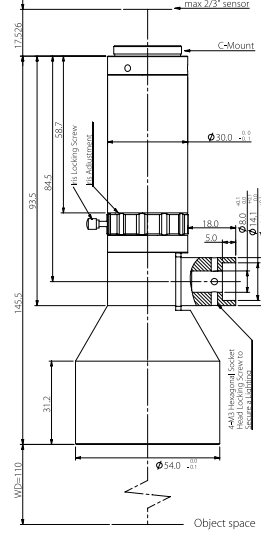
BTLM-0.3X-110-23



FOV(Φmm)	37
Mag.(x)	0.300
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	3.75
MTF30(lp/mm)	>220
DoF(mm)	±1.6@F3.75
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	273±2
Length(mm)	145.5
Mount	C-Mount
Weight(kg)	0.4
Coaxial Light	No
Variable Iris	Yes

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	28.2x23.7

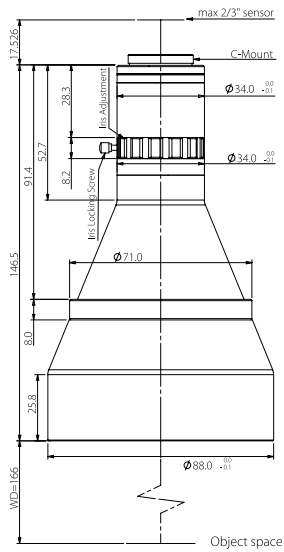
BTLM-0.3X-110D-23



FOV(Φmm)	37
Mag.(x)	0.300
WD(mm)	110±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	3.75
MTF30(lp/mm)	>220
DoF(mm)	±1.6@F3.75
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	273±2
Length(mm)	145.5
Mount	C-Mount
Weight(kg)	0.4
Coaxial Light	Yes
Variable Iris	Yes

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	28.2x23.7

BTLM-0.166X-166-23



FOV(Φmm)	66
Mag.(x)	0.166
WD(mm)	166±3
Max Sensor Size(Φmm)	11.0(2/3")
F/#	3.3
MTF30(lp/mm)	>260
DoF(mm)	±4.7@F3.3
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
I/O(mm)	329±3
Length(mm)	146.5
Mount	C-Mount
Weight(kg)	0.6
Coaxial Light	No
Variable Iris	Yes

Field of View(mm xmm)	
2/3" ICX625/655(8.47x7.1)	51.0x42.8