

Telecentric Lens

DTTL-X Series Telecentric Lens

Model No:

Aperture telecentric lens



DTTL-X Series

Aperture telecentric lens



Professional customization of multiples and depth of field

Dual telecentric design High definition Standard C interface

Can be equipped with a dedicated parallel light

For high-precision detection and measurement

Lens Model	Mag	WD	DOF	Telecen	Optical	Aperture	Mtf>0.3	Mount	2/3"CCD	1"CCD	1.1"CCD
			mm	-tricity	distortion	aperture	(lp/mm)		(8.8*6.6)mm	(12.8*9.6)mm	(14.10.3)mm
DTTL110-6X20G	6.0X	110	Adjustabe	<0.1	<0.1	Yes	28	C	1.4*1.1	2.1*1.6	2.3*1.7
DTTL110-4X20G	4.0X	110	Adjustabe	<0.1	<0.1	Yes	50	C	2.2*1.6	3.2*2.4	3.5*2.5
DTTL110-3X20G	3.0X	110	Adjustabe	<0.1	<0.1	Yes	50	C	2.9*2.2	4.2*3.2	4.6*3.4
DTTL98-25X20G	2.5X	98	Adjustabe	<0.1	<0.1	Yes	38	C	3.5*2.6	5.1*3.8	5.6*4.1
DTTL100-2X20G	2.0X	100	Adjustabe	<0.1	<0.1	Yes	50	C	4.4*3.3	6.4*4.8	7*5.1
DTTL110-15X20G	1.5X	110	Adjustabe	<0.1	<0.1	Yes	90	C	5.8*4.4	8.5*6.4	9.3*6.8
DTTL110-13X20G	1.3X	110	Adjustabe	<0.1	<0.1	Yes	90	C	6.8*5.1	9.8*7.4	10.8*7.9
DTTL110-1X20G	1.0X	110	Adjustabe	<0.1	<0.1	Yes	105	C	8.8*6.6	12.8*9.6	14*10.3
DTTL180-1X20G	1.0X	180	Adjustabe	<0.1	<0.1	Yes	80	C	8.8*6.6	12.8*9.6	14*10.3
DTTL130-09X20G	0.9X	130	Adjustabe	<0.1	<0.1	Yes	80	C	9.8*7.3	14.2*10.7	15.6*11.4
DTTL110-08G40	0.8X	110	Adjustabe	<0.1	<0.1	Yes	176	C	11*8.2	NA	NA
DTTL110-08X20G	0.8X	110	Adjustabe	<0.1	<0.1	Yes	80	C	11*8.2	16*12	17.5*12.8
DTTL130-08X20G	0.8X	130	Adjustabe	<0.1	<0.1	Yes	103	C	11*8.2	16*12	17.5*12.8
DTTL180-08X20G	0.8X	180	Adjustabe	<0.1	<0.1	Yes	90	C	11*8.2	16*12	17.5*12.8
DTTL125-07*20G	0.7X	125	Adjustabe	<0.1	<0.1	Yes	126	C	12.6*9.4	18.2*13.7	20*14.7
DTTL185-07X20G	0.7X	185	Adjustabe	<0.1	<0.1	Yes	60	C	12.6*9.4	18.2*13.7	20*14.7
DTTL130-064X20G	0.64X	130	Adjustabe	<0.1	<0.1	Yes	110	C	13.8*10.3	20*15	21.9*16.1
DTTL110-05X23G	0.5X	110	Adjustabe	<0.1	<0.1	Yes	140	C	17.6*13.2	NA	NA
DTTL110-05X20G	0.5X	110	Adjustabe	<0.1	<0.1	Yes	135	C	17.6*13.2	25.6*19.2	28*20.6
DTTL150-05X20G	0.5X	150	Adjustabe	<0.1	<0.1	Yes	100	C	17.6*13.2	25.6*19.2	28*20.6
DTTL253-05X20G	0.5X	253	Adjustabe	<0.1	<0.1	Yes	115	C	17.6*13.2	25.6*19.2	28*20.6
DTTL120-044X10G	0.44X	120	Adjustabe	<0.1	<0.1	Yes	100	C	20*15	29*21.8	NA
DTTL85-041*23G	0.41X	85	Adjustabe	<0.1	<0.1	Yes	165	C	21.5*16.1	NA	NA
DTTL95-04X23GHR	0.4X	95	Adjustabe	<0.1	<0.1	Yes	125	C	22*16.5	NA	NA
DTTL110-04X23G	0.4X	110	Adjustabe	<0.1	<0.1	Yes	120	C	22*16.6	NA	NA
DTTL110-04X20G	0.4X	110	Adjustabe	<0.1	<0.1	Yes	110	C	22*16.5	32*24	35*25.8

Lens Model	Mag	WD	DOF	Telecen	Optical	Aperture	Mtf>0.3	Mount	2/3"CCD	1"CCD	1.1"CCD
			mm	-tricity	distortion	aperture	(lp/mm)		(8.8*6.6)mm	(12.8*9.6)mm	(14.10.3)mm
DTTL110-03X23G	0.3X	110	Adjustabe	<0.1	<0.1	Yes	110	C	29*22	NA	NA
DTTL110-03X20G	0.3X	110	Adjustabe	<0.1	<0.1	Yes	120	C	29*22	42*32	46*34
DTTL200-025X10G	0.25X	200	Adjustabe	<0.1	<0.1	Yes	110	C	35.2*26.4	51.2*38.4	NA
DTTL140-0165X23G	0.165X	140	Adjustabe	0.1	<0.1	Yes	165	C	53.3*40	NA	NA

DTTL110-6X20G

Main parameters

Mag	6.0X
WD	110
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	28
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	1.4*1.1
1" CCD(12.8*9.6)mm	2.1*1.6
1.1" CCD(14*10.3)mm	2.3*1.7

DTTL110-4X20G

Main parameters

Mag	4.0X
WD	110
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	50
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	2.2*1.6
1" CCD(12.8*9.6)mm	3.2*2.4
1.1" CCD(14*10.3)mm	3.5*2.5

DTTL110-3X20G

Main parameters

Mag	3.0X
WD	110
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	50
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	2.9*2.2
1" CCD(12.8*9.6)mm	4.2*3.2
1.1" CCD(14*10.3)mm	4.6*3.4

DTTL98-25X20G

Main parameters

Mag	2.5X
WD	98
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	38
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	3.5*2.6
1" CCD(12.8*9.6)mm	5.1*3.8
1.1" CCD(14*10.3)mm	5.6*4.1

DTTL100-2X20G

Main parameters

Mag	2.0X
WD	100
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	50
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	4.4*3.3
1" CCD(12.8*9.6)mm	6.4*4.8
1.1" CCD(14*10.3)mm	7*5.1

DTTL110-15X20G

Main parameters

Mag	1.5X
WD	110
DOF(mm)	Adjustabe
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	90
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	5.8*4.4
1" CCD(12.8*9.6)mm	8.5*6.4
1.1" CCD(14*10.3)mm	9.3*6.8

Technical drawing of a mechanical part, likely a piston rod, showing dimensions and a cross-section. The drawing includes a side view and a cross-sectional view. Dimensions include: total length 180, top section length 30, top section diameter $\varnothing 26$, middle section length 24.6, middle section diameter $\varnothing 28$, bottom section length 6, bottom section diameter $\varnothing 31$, and a small section length 0.8. A note indicates "材料" (Material) and "C45".

Mag	1.3X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	90
Mount	C

2/3" CCD(8.8*6.6)mm	6.8*5.1
1" CCD(12.8*9.6)mm	9.8*7.4
1.1" CCD(14*10.3)mm	10.8*7.9

Mag	1.0X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	105
Mount	C

2/3" CCD(8.8*6.6)mm	88*66
1" CCD(12.8*9.6)mm	128*96
1.1" CCD(14*10.3)mm	14*10.3

Mag	1.0X
WD	180
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	80
Mount	C

2/3" CCD(8.8*6.6)mm	88*66
1" CCD(12.8*9.6)mm	128*96
1.1" CCD(14*10.3)mm	14*10.3

Mag	0.9X
WD	130
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	80
Mount	C

2/3" CCD(8.8*6.6)mm	9.8*7.3
1" CCD(12.8*9.6)mm	14.2*10.7
1.1" CCD(14*10.3)mm	15.6*11.4

Technical drawing of a vertical assembly. The drawing shows a cross-section of a cylindrical component with a central hole. The central hole has a diameter of $\varnothing 10$. The outer diameter of the component is $\varnothing 31$. The total height of the component is 51.27. The height of the upper section is 43.5. The height of the lower section is 10.6. The width of the upper section is 110. The drawing also shows a detail of the lower section with a diameter of $\varnothing 5$ and a height of 10.6. A label 'C. 100' is present near the bottom right.

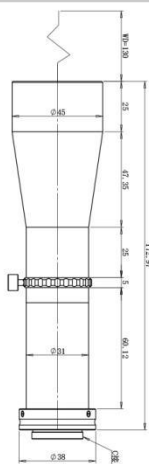
Mag	0.8X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	176
Mount	C

2/3" CCD(8.8*6.6)mm	11*8.2
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

Mag	0.8X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	80
Mount	C

2/3" CCD(8.8*6.6)mm	11*82
1" CCD(12.8*9.6)mm	16*12
1.1" CCD(14*10.3)mm	17.5*128

DTTL130-08X20G



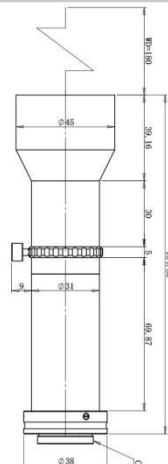
Main parameters

Mag	0.8X
WD	130
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	103
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	11*8.2
1" CCD(12.8*9.6)mm	16*12
1.1" CCD(14*10.3)mm	17.5*12.8

DTTL180-08X20G



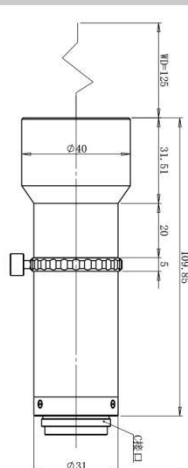
Main parameters

Mag	0.8X
WD	180
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	90
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	11*8.2
1" CCD(12.8*9.6)mm	16*12
1.1" CCD(14*10.3)mm	17.5*12.8

DTTL125-07X20G



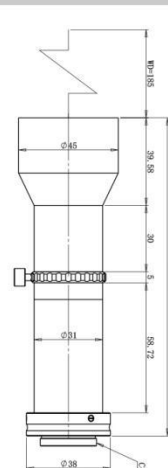
Main parameters

Mag	0.7X
WD	125
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	126
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	12.6*9.4
1" CCD(12.8*9.6)mm	18.2*13.7
1.1" CCD(14*10.3)mm	20*14.7

DTTL185-07X20G



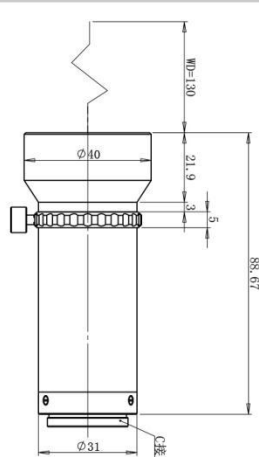
Main parameters

Mag	0.7X
WD	185
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	60
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	12.6*9.4
1" CCD(12.8*9.6)mm	18.2*13.7
1.1" CCD(14*10.3)mm	20*14.7

DTTL130-064X20G



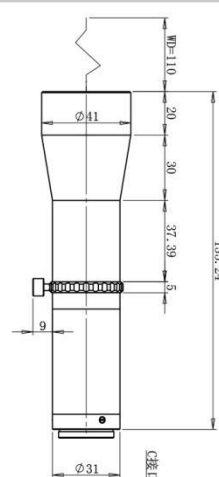
Main parameters

Mag	0.64X
WD	130
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	110
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	13.8*10.3
1" CCD(12.8*9.6)mm	20*15
1.1" CCD(14*10.3)mm	21.9*16.1

DTTL110-05X23G



Main parameters

Mag	0.5X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	140
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	17.6*13.2
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

Mag	0.5X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	135
Mount	C

2/3" CCD(8.8*6.6)mm	17.6*13.2
1" CCD(12.8*9.6)mm	25.6*19.2
1.1" CCD(14*10.3)mm	28*20.6

Mag	0.5X
WD	150
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	100
Mount	C

2/3" CCD(8.8*6.6)mm	17.6*13.2
1" CCD(12.8*9.6)mm	25.6*19.2
1.1" CCD(14*10.3)mm	28*20.6

Technical drawing of a mechanical part, showing a side view and a cross-section. The side view shows a cylindrical body with a flange at the top and a threaded section at the bottom. The cross-section shows the internal structure, including a central bore and a valve seat. Dimensions are given in millimeters (mm). Key dimensions include: total length 214.47, flange diameter 54, body diameter 54, internal bore diameter 31, and thread diameter 42. A note indicates a material specification: Q235.

Mag	0.5X
WD	253
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	115
Mount	C

2/3" CCD(8.8*6.6)mm	17.6*13.2
1" CCD(12.8*9.6)mm	25.6*19.2
1.1" CCD(14*10.3)mm	28*20.6

Mag	0.44X
WD	120
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	100
Mount	C

2/3" CCD(8.8*6.6)mm	20*15
1" CCD(12.8*9.6)mm	29*21.8
1.1" CCD(14*10.3)mm	NA

Mag	0.41X
WD	85
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	165
Mount	C

2/3" CCD(8.8*6.6)mm	21.5*16.1
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

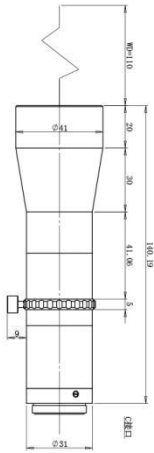
Technical drawing of a mechanical part showing dimensions:

- Total length: 70-95
- Top section diameter: $\varnothing 40$
- Section height: 50
- Section diameter: $\varnothing 38 \pm 0.5$
- Bottom section diameter: $\varnothing 30$
- Bottom section height: 27-62
- Internal hole diameter: $\varnothing 31$
- Feature label: 切口 (Cut)

Mag	0.4X
WD	95
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	125
Mount	C

2/3" CCD(8.8*6.6)mm	22*16.5
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

DTTL110-04X23G



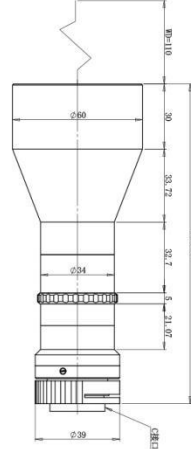
Main parameters

Mag	0.4X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	120
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	22°16.6
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

DTTL110-04X20G



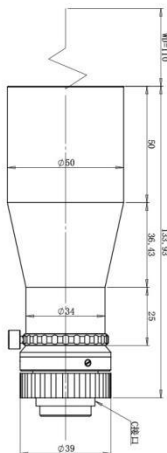
Main parameters

Mag	0.4X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	Yes
Adjustment aperture	110
MTF>0.3(lp/mm)	C
Mount	

Field of view

2/3" CCD(8.8*6.6)mm	22°16.5
1" CCD(12.8*9.6)mm	32°24
1.1" CCD(14*10.3)mm	35°25.8

DTTL110-03X23G



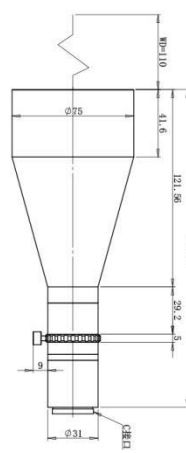
Main parameters

Mag	0.3X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	110
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	29°22
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

DTTL110-03X20G



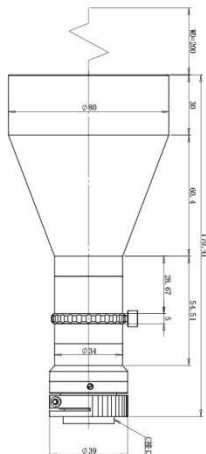
Main parameters

Mag	0.3X
WD	110
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	120
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	29°22
1" CCD(12.8*9.6)mm	42°32
1.1" CCD(14*10.3)mm	46°34

DTTL200-025X10G



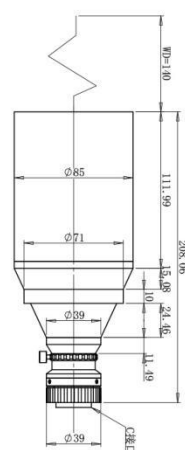
Main parameters

Mag	0.25X
WD	200
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	110
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	35.2°26.4
1" CCD(12.8*9.6)mm	51.2°38.4
1.1" CCD(14*10.3)mm	NA

DTTL140-0165X23G



Main parameters

Mag	0.165X
WD	140
DOF(mm)	Adjustable
Telecentricity	<0.1
Optical distortion	<0.1
Adjustment aperture	Yes
MTF>0.3(lp/mm)	165
Mount	C

Field of view

2/3" CCD(8.8*6.6)mm	53.3°40
1" CCD(12.8*9.6)mm	NA
1.1" CCD(14*10.3)mm	NA

