

Telecentric Lens

DTTL Series Telecentric Lens

Model No:

1.2 Chip Support



DTTL Series

1.2 Chip Support

Target camera



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	1"CCD	1.1"IMX253	1.2"IMX540
			mm	-tricity	distortion	F/#	(lp/mm)		(12.4*9.8)mm	(14.17*10.3)mm	(14.6*12.6)mm
DTTL55-086X12	0.86X	55	0.8	<0.1	<0.1	8	130	C	14.4*11.4	16.5*12	17*14.7
DTTL60-07X12	0.7X	60	1.0	<0.1	<0.1	6	130	C	17.7*14	20.3*14.7	20.9*18
DTTL63-06X12	0.6X	63	1.4	<0.1	<0.1	6	130	C	20.7*16.3	23.7*17.2	24.3*21
DTTL120-06X12	0.6X	120	2.5	<0.1	<0.1	11	90	C	20.7*16.3	23.7*17.2	24.3*21
DTTL130-05X12	0.5X	130	2.0	<0.1	<0.1	6	162	C	24.8*19.6	28.4*20.6	29.2*25.2
DTTL145-0484X12	0.484X	145	2.6	<0.1	<0.1	8	130	C	25.6*20.2	29.3*21.3	30.2*26
DTTL150-0387X12	0.387X	150	3.0	<0.1	<0.1	6	144	C	32*25.3	36.7*26.6	37.7*32.6
DTTL160-035X12	0.35X	160	3.6	<0.1	<0.1	5	180	C	35.4*28	40.5*29.4	41.7*36
DTTL210-03X12	0.3X	210	5.4	<0.1	<0.1	6	150	C	41.3*32.7	47.3*34.3	48.7*42
DTTL130-029X12	0.29X	130	5.5	<0.1	<0.1	6	162	C	42.8*33.8	48.9*35.5	50.3*43.4
DTTL210-028X12	0.28X	210	5.6	<0.1	<0.1	5	200	C	44.3*35	50.7*36.8	52.1*45
DTTL180-027X12	0.27X	180	7.5	<0.1	<0.1	7	130	C	45.9*36.3	52.6*38.1	54.1*46.7
DTTL195-026X12	0.26X	195	6.7	<0.1	<0.1	6	162	C	47.7*37.7	54.6*39.6	56.2*48.5
DTTL215-024X12	0.24X	215	7.6	<0.1	<0.1	5	144	C	51.7*40.8	59.1*42.9	60.8*52.5
DTTL280-021X12	0.21X	280	9.9	<0.1	<0.1	5	144	C	59*46.7	67.6*49	69.5*60
DTTL290-02X12	0.2X	290	14.4	<0.1	<0.1	7	130	C	62*49	71*51.5	73*63
DTTL305-018X12	0.18X	305	13.5	<0.1	<0.1	5	162	C	68.9*54.4	78.8*57.2	81.1*70
DTTL365-0138X12	0.138X	365	9.5	<0.1	<0.1	5	200	C	89.9*71	102.8*74.6	105.8*91.3
DTTL390-012X12	0.12X	390	28.6	<0.1	<0.1	5	200	C	103.3*81.7	118.3*85.8	121.7*105
DTTL550-0083X12	0.083X	550	22.0	<0.1	<0.1	5	200	C	149.4*118.1	171*124.1	175.9*151.8
DTTL615-0074X12	0.074X	615	55.5	<0.1	<0.1	7	130	C	167.6*132.4	191.8*139.2	197.3*170.3
DTTL530-0062X12	0.062X	530	66.0	<0.1	<0.1	6	130	C	200*158.1	228.9*166.1	235.5*203.2

DTTL55-086X12



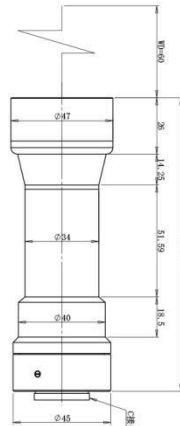
Main parameters

Mag	0.86X
WD	55
DOF(mm)	0.8
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	8
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1" CCD(12.4*9.8)mm	14.4*11.4
1.1" IMX253(14.19*10.3)mm	16.5*12
1.2" IMX540(14.6*12.6)mm	17*14.7

DTTL60-07X12



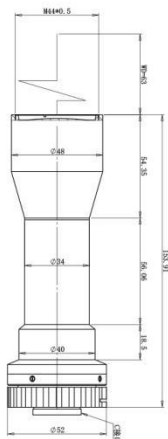
Main parameters

Mag	0.7X
WD	60
DOF(mm)	1.0
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1" CCD(12.4*9.8)mm	17.7*14
1.1" IMX253(14.19*10.3)mm	20.3*14.7
1.2" IMX540(14.6*12.6)mm	20.9*18

DTTL63-06X12



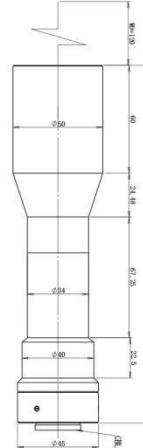
Main parameters

Mag	0.6X
WD	63
DOF(mm)	1.4
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1" CCD(12.4*9.8)mm	20.7*16.3
1.1" IMX253(14.19*10.3)mm	23.7*17.2
1.2" IMX540(14.6*12.6)mm	24.3*21

DTTL120-06X12



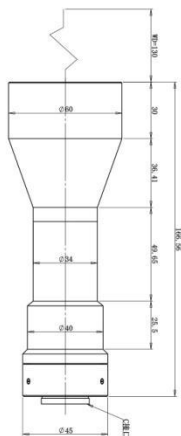
Main parameters

Mag	0.6X
WD	120
DOF(mm)	2.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	11
MTF>0.3(lp/mm)	90
Mount	C

Field of view

1" CCD(12.4*9.8)mm	20.7*16.3
1.1" IMX253(14.19*10.3)mm	23.7*17.2
1.2" IMX540(14.6*12.6)mm	24.3*21

DTTL130-05X12



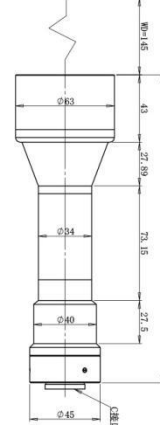
Main parameters

Mag	0.5X
WD	130
DOF(mm)	2.0
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	162
Mount	C

Field of view

1" CCD(12.4*9.8)mm	24.8*19.6
1.1" IMX253(14.19*10.3)mm	28.4*20.6
1.2" IMX540(14.6*12.6)mm	29.2*25.2

DTTL145-0484X12



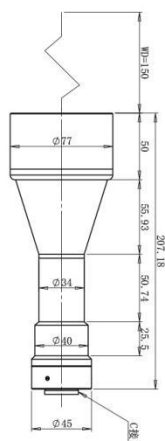
Main parameters

Mag	0.484X
WD	145
DOF(mm)	2.6
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	8
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1" CCD(12.4*9.8)mm	25.6*20.2
1.1" IMX253(14.19*10.3)mm	29.3*21.3
1.2" IMX540(14.6*12.6)mm	30.2*26

DTTL150-0387X12



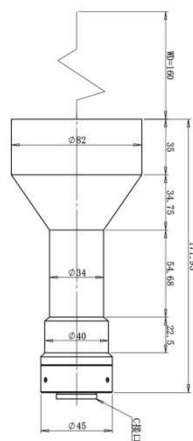
Main parameters

Mag	0.387X
WD	150
DOF(mm)	3.0
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	144
Mount	C

Field of view

1" CCD(12.4*9.8)mm	32°*25.3
1.1" IMX253(14.19*10.3)mm	36.7°*26.6
1.2" IMX540(14.6*12.6)mm	37.7°*32.6

DTTL160-035X12



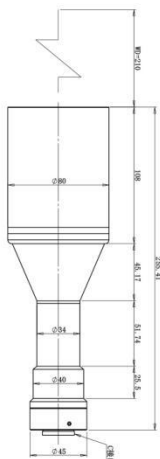
Main parameters

Mag	0.35X
WD	160
DOF(mm)	3.6
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	180
Mount	C

Field of view

1" CCD(12.4*9.8)mm	35.4°*28
1.1" IMX253(14.19*10.3)mm	40.5°*29.4
1.2" IMX540(14.6*12.6)mm	41.7°*36

DTTL210-03X12



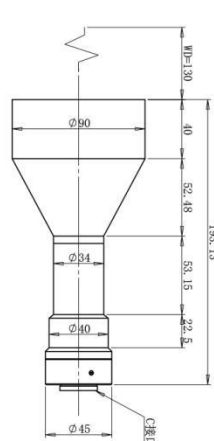
Main parameters

Mag	0.3X
WD	210
DOF(mm)	5.4
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	150
Mount	C

Field of view

1" CCD(12.4*9.8)mm	41.3°*32.7
1.1" IMX253(14.19*10.3)mm	47.3°*34.3
1.2" IMX540(14.6*12.6)mm	48.7°*42

DTTL130-029X12



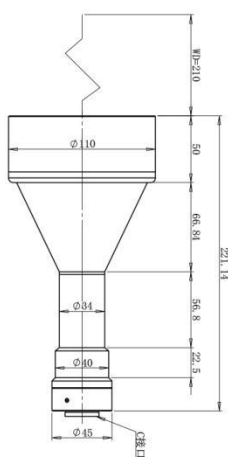
Main parameters

Mag	0.29X
WD	130
DOF(mm)	5.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	162
Mount	C

Field of view

1" CCD(12.4*9.8)mm	42.8°*33.8
1.1" IMX253(14.19*10.3)mm	48.9°*35.5
1.2" IMX540(14.6*12.6)mm	50.3°*43.4

DTTL210-028X12



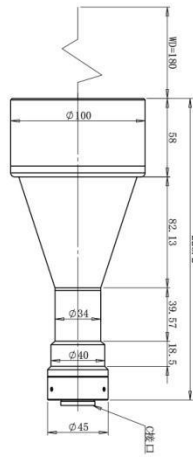
Main parameters

Mag	0.28X
WD	210
DOF(mm)	5.6
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	200
Mount	C

Field of view

1" CCD(12.4*9.8)mm	44.3°*35
1.1" IMX253(14.19*10.3)mm	50.7°*36.8
1.2" IMX540(14.6*12.6)mm	52.1°*45

DTTL180-027X12



Main parameters

Mag	0.27X
WD	180
DOF(mm)	7.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	7
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1" CCD(12.4*9.8)mm	45.9°*36.3
1.1" IMX253(14.19*10.3)mm	52.6°*38.1
1.2" IMX540(14.6*12.6)mm	54.1°*46.7

Technical drawing of a vertical mechanical assembly with dimensions in mm. The drawing shows a cross-section of a device with a top flange, a central shaft, and a base. Dimensions are given in millimeters. Key dimensions include: total height 244.27, top flange diameter 105, top flange thickness 60, top flange outer diameter 105, top flange inner diameter 96, top flange to shaft distance 55, shaft diameter 50, shaft length 8.26, shaft to base distance 87, base diameter 44.9, base to bottom flange distance 27.3, bottom flange diameter 40, bottom flange thickness 45, and bottom flange outer diameter 45. A label '排出口' (Outlet) points to the bottom flange.

Mag	0.26X
WD	195
DOF(mm)	6.7
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	162
Mount	C

1" CCD(12.4*9.8)mm	47.7*37.7
1.1" IMX253(14.19*10.3)mm	54.6*39.6
1.2" IMX540(14.6*12.6)mm	56.2*48.5

Technical drawing of the probe assembly showing dimensions in mm:

- Total length: 470 ± 0.15
- Top section diameter: $\varnothing 30$
- Section 1 length: 60
- Section 2 length: 87.96
- Section 3 diameter: $\varnothing 42$
- Section 4 length: 30.71
- Section 5 diameter: $\varnothing 34$
- Section 6 length: 85.95
- Section 7 diameter: $\varnothing 40$
- Section 8 length: 32.5
- Section 9 diameter: $\varnothing 45$
- Bottom section diameter: $\varnothing 42$

Mag	0.24X
WD	215
DOF(mm)	7.6
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	144
Mount	C

1" CCD(12.4*9.8)mm	51.7*40.8
1.1" IMX253(14.19*10.3)mm	59.1*42.9
1.2" IMX540(14.6*12.6)mm	60.8*52.5

Mag	0.21X
WD	286
DOF(mm)	9.9
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	144
Mount	C

1" CCD(12.4*9.8)mm	59°46.7
1.1" IMX253(14.19*10.3)mm	67.6°49
1.2" IMX540(14.6*12.6)mm	69.5°60

Mag	0.2X
WD	290
DOF(mm)	14.4
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	7
MTF>0.3(lp/mm)	130
Mount	C

1" CCD(12.4*9.8)mm	62°49'
1.1" IMX253(14.19*10.3)mm	71°51.5'
1.2" IMX540(14.6*12.6)mm	73°63'

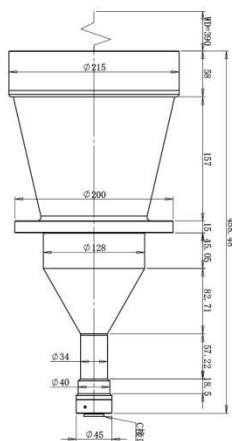
Mag	0.18X
WD	305
DOF(mm)	13.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	162
Mount	C

1" CCD(12.4*9.8)mm	68.9*54.4
1.1" IMX253(14.19*10.3)mm	78.8*57.2
1.2" IMX540(14.6*12.6)mm	81.1*70

Mag	0.138X
WD	365
DOF(mm)	19.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	200
Mount	C

1" CCD(12.4*9.8)mm	89.9*71
1.1" IMX253(14.19*10.3)mm	102.8*74.6
1.2" IMX540(14.6*12.6)mm	105.8*91.3

DTTL390-012X12



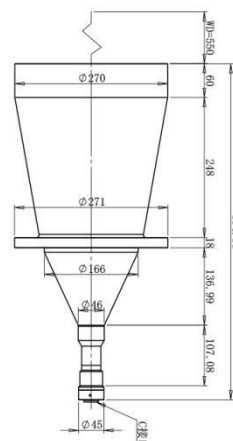
Main parameters

Mag	0.12X
WD	390
DOF(mm)	28.6
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	200
Mount	C

Field of view

1"CCD(12.4*9.8)mm	103.3*81.7
1.1"IMX253(14.19*10.3)mm	118.3*85.8
1.2"IMX540(14.6*12.6)mm	121.7*105

DTTL550-0083X12



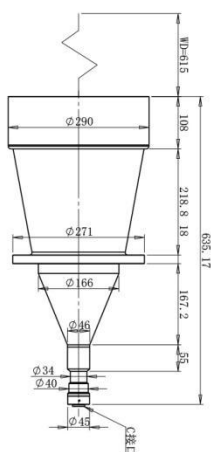
Main parameters

Mag	0.083X
WD	550
DOF(mm)	22.0
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	5
MTF>0.3(lp/mm)	200
Mount	C

Field of view

1"CCD(12.4*9.8)mm	149.4*118.1
1.1"IMX253(14.19*10.3)mm	171*124.1
1.2"IMX540(14.6*12.6)mm	175.9*151.8

DTTL615-0074X12



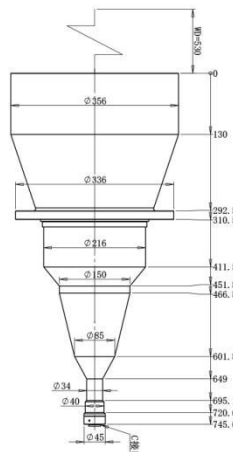
Main parameters

Mag	0.074X
WD	615
DOF(mm)	55.5
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	7
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1"CCD(12.4*9.8)mm	167.6*132.4
1.1"IMX253(14.19*10.3)mm	191.8*139.2
1.2"IMX540(14.6*12.6)mm	197.3*170.3

DTTL530-0062X12



Main parameters

Mag	0.062X
WD	530
DOF(mm)	66.0
Telecentricity	<0.1
Optical distortion	<0.1
Aperture(F/#)	6
MTF>0.3(lp/mm)	130
Mount	C

Field of view

1"CCD(12.4*9.8)mm	200*158.1
1.1"IMX253(14.19*10.3)mm	228.9*166.1
1.2"IMX540(14.6*12.6)mm	235.5*203.2