

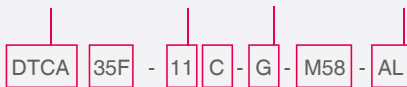
# DTCA Series

## Ultra Resolution Bi-Telecentric Lenses



### Naming Rule

Ultra-high performance industrial lens series products      The Diagonal Of FOV 11mm      Adjustable Iris      Back Focal Length is Adjustable



Up to 35mm Full Sensor

Built-in Coaxial Lighting

Mount

### Features

- The DTCA series is specially designed for high-resolution especially large-target imaging systems
- Support the latest 24k line scan and 150 MegaPixels area scan cameras in the industry
- Large NA value, extraordinary aberration correction
- Optionally equipped with adjustable aperture and built-in coaxial lighting
- Large aperture, high telecentricity, ultra-low distortion, and large depth of field

# DTCA Series

Adjustable Iris,

with Coaxial Light



Lens Model	FOV (Φmm)	Mag. β(x)	WD (mm)	Sensor Size (Φmm)	F/#	MTF30 (lp/mm)	DOF (mm)	Distortion (% Max)	Telecentricity (° Max)	NA	Length (mm)	Mount	Iris	Coaxial Light
DTCA230-22L	22	0.5	65±1	11.0(2/3")	5.0	>160	±0.8@F5.0	<0.1	<0.1	0.05	106.7	C	NO	NO
DTCA230-22C	22	0.5	65±1	11.0(2/3")	5.0	>160	±0.8@F5.0	<0.1	<0.1	0.05	106.7	C	NO	YES
DTCA230-27.5	27.5	0.4	85±2	11.0(2/3")	4.5	>205	±1.1@F4.5	<0.03	<0.1	0.044	142.4	C	NO	NO
DTCA230-27.5C	27.5	0.4	85±2	11.0(2/3")	4.5	>205	±1.1@F4.5	<0.03	<0.1	0.044	142.4	C	NO	YES
DTCA230-37	37	0.3	110±2	11.0(2/3")	3.75	>220	±1.7@F3.75	<0.1	<0.1	0.04	145.5	C	YES	NO
DTCA230-37C	37	0.3	110±2	11.0(2/3")	3.75	>220	±1.7@F3.75	<0.1	<0.1	0.04	145.5	C	YES	YES
DTCA230-66	66	0.166	173±3	11.0(2/3")	3.3	>260	±4.8@F3.3	<0.1	<0.1	0.025	146.5	C	YES	NO
DTCA110-215-AL	215	0.075	220±3	16.0(1")	4.35	>195	±30.9@F4.35	<0.05	<0.1	0.008	322.2	C	NO	NO
DTCA121-5	5	4.0	45±1	20(1.2")	11.7	>73	±0.03@F11.7	<0.08	<0.1	0.17	180.5	C	NO	NO
DTCA121-5-G	5	4.0	45±1	20(1.2")	11.7-32	72-31	±0.03@F11.7	<0.08	<0.1	0.17-0.0623	180.5	C	YES	NO
DTCA121-5CL	5	4.0	45±1	20(1.2")	11.7	>73	±0.03@F11.7	<0.08	<0.1	0.17	180.5	C	NO	YES
DTCA121-6.6	6.6	3.025	61±1	20(1.2")	9.4	>96	±0.05@F6.6	0.06	0.005	0.16	206.2	C	NO	NO
DTCA121-6.6CL	6.6	3.025	61±1	20(1.2")	9.4	>96	±0.05@F6.6	0.06	0.005	0.16	206.2	C	NO	YES
DTCA121-7.3	7.3	2.74	63±1	20(1.2")	8.5	>105	±0.05@F7.3	0.02	0.03	0.16	188.3	C	NO	NO
DTCA121-7.3CL	7.3	2.74	63±1	20(1.2")	8.5	>105	±0.05@F7.3	0.02	0.03	0.16	188.3	C	NO	YES
DTCA121-10	10	2.0	63±1	20(1.2")	6.6	>142	±0.07@F6.6	<0.2	<0.1	0.15	179	C	NO	NO
DTCA121-10CL	10	2.0	63±1	20(1.2")	6.6	>142	±0.07@F6.6	<0.2	<0.1	0.15	179	C	NO	YES

DTCA230 Series

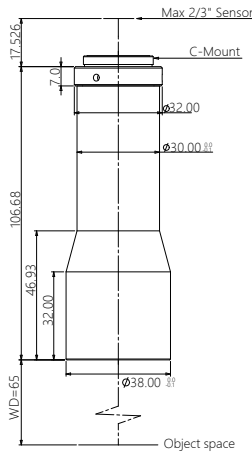
DTCA110 Series

DTCA121 Series

DTCA175 Series

DTCA185 Series

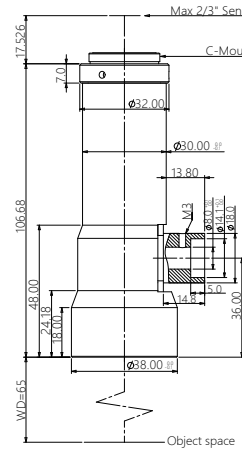
### DTCA230-22L



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@F5.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.05
Length(mm)	106.7
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	14.4x10.8
1/1.7" IMX226 (7.5x5.6)	15.0x11.2
2/3" IMX250/264 (8.45x7.1)	16.9x14.2

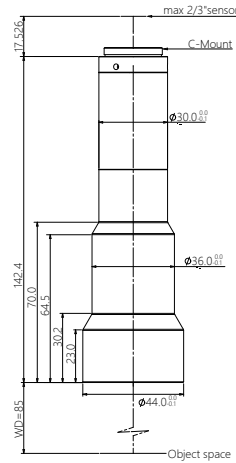
### DTCA230-22C



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@F5.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.05
Length(mm)	106.7
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	14.4x10.8
1/1.7" IMX226 (7.5x5.6)	15.0x11.2
2/3" IMX250/264 (8.45x7.1)	16.9x14.2

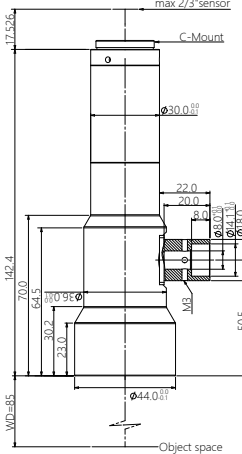
### DTCA230-27.5



FOV(Φmm)	27.5
Mag.(x)	0.400
WD(mm)	85±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	4.5
MTF30(lp/mm)	>205
DOF(mm)	±1.1@F4.5
Distortion(% max)	<0.3
Telecentricity(° max)	<0.1
NA	0.04439
Length(mm)	142.4
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	18.0x13.5
1/1.7" IMX226 (7.5x5.6)	18.8x14.0
2/3" IMX250/264 (8.45x7.1)	21.1x17.8

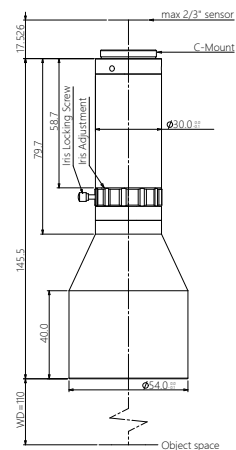
### DTCA230-27.5C



FOV(Φmm)	27.5
Mag.(x)	0.400
WD(mm)	85±2
Max Sensor Size(Φmm)	11.0(2/3")
F/#	4.5
MTF30(lp/mm)	>205
DOF(mm)	±1.1@F4.5
Distortion(% max)	<0.3
Telecentricity(° max)	<0.1
NA	0.04439
Length(mm)	142.4
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	18.0x13.5
1/1.7" IMX226 (7.5x5.6)	18.8x14.0
2/3" IMX250/264 (8.45x7.1)	21.1x17.8

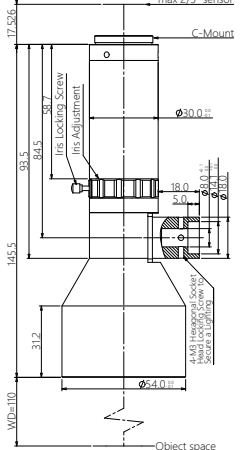
### DTCA230-37



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)	±1.7@F3.75
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.04
Length(mm)	145.5
Mount	C
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	24.0x18.0
1/1.7" IMX226 (7.5x5.6)	25.0x18.7
2/3" IMX250/264 (8.45x7.1)	28.2x23.7

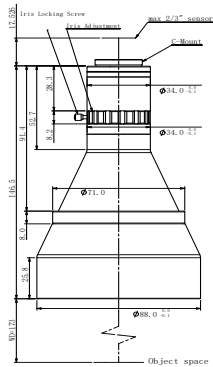
### DTCA230-37C



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)	±1.7@F3.75
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.04
Length(mm)	145.5
Mount	C
Iris	YES
Coaxial Light	YES

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	24.0x18.0
1/1.7" IMX226 (7.5x5.6)	25.0x18.7
2/3" IMX250/264 (8.45x7.1)	28.2x23.7

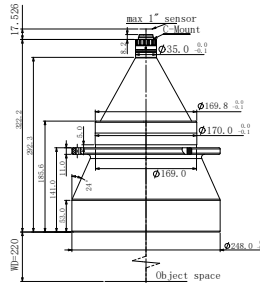
## DTCA230-66



FOV(Φmm)	66
Mag.(x)	0.166
WD(mm)	173±3
Max Sensor Size(Φmm)	11.0(2/3")
F/#	3.3
MTF30(lp/mm)	>260
DOF(mm)	±4.8@F3.3
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.025
Length(mm)	146.5
Mount	C
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
1/1.8" EV76C570 (7.2x5.4)	43.4x32.5
1/1.7" IMX226 (7.5x5.6)	45.2x33.7
2/3" IMX250/264 (8.45x7.1)	50.9x42.8

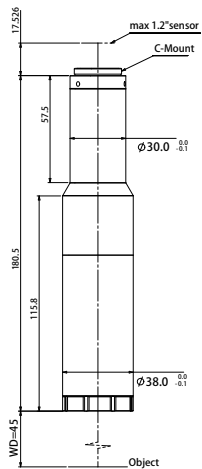
## DTCA110-215-AL



FOV(Φmm)	215
Mag.(x)	0.075
WD(mm)	220±3
Max Sensor Size(Φmm)	16.0(1")
F/#	4.35
MTF30(lp/mm)	>195
DOF(mm)	±30.9@F4.35
Distortion(% max)	<0.05
Telecentricity(° max)	<0.1
NA	0.00857
Length(mm)	322.2
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1" PYTHON 5000 (12.43x9.83)	165.7x131.1
1" IMX255 (14.19x7.51)	189.2x100.1
1" IMX183 (13.13x8.76)	175.1x116.8

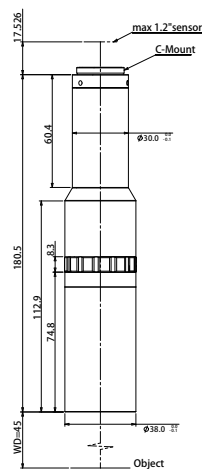
## DTCA121-5



FOV(Φmm)	5
Mag.(x)	4.000
WD(mm)	45±1
Max Sensor Size(Φmm)	20(1.2")
F/#	11.7
MTF30(lp/mm)	>73
DOF(mm)	±0.03@F11.7
Distortion(% max)	<0.08
Telecentricity(° max)	<0.1
NA	0.17
Length(mm)	180.5
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	3.65x3.15

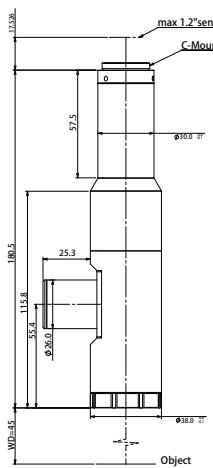
## DTCA121-5-G



FOV(Φmm)	5
Mag.(x)	4.000
WD(mm)	45±1
Max Sensor Size(Φmm)	20(1.2")
F/#	11.7-Close
MTF30(lp/mm)	>73
DOF(mm)	±0.03@F11.7
Distortion(% max)	<0.08
Telecentricity(° max)	<0.1
NA	0.17-0.06237
Length(mm)	180.5
Mount	C
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	3.65x3.15

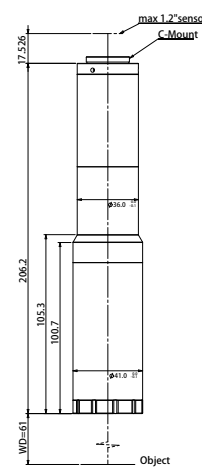
## DTCA121-5CL



FOV(Φmm)	5
Mag.(x)	4.000
WD(mm)	45±1
Max Sensor Size(Φmm)	20(1.2")
F/#	11.7
MTF30(lp/mm)	>73
DOF(mm)	±0.03@F11.7
Distortion(% max)	<0.08
Telecentricity(° max)	<0.1
NA	0.17
Length(mm)	180.5
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	3.65x3.15

## DTCA121-6.6



FOV(Φmm)	6.6
Mag.(x)	3.025
WD(mm)	61±1
Max Sensor Size(Φmm)	20(1.2")
F/#	9.4
MTF30(lp/mm)	>96
DOF(mm)	±0.05@F6.6
Distortion(% max)	0.06
Telecentricity(° max)	0.005
NA	0.16
Length(mm)	206.2
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540 (14.6x12.6)	4.8x4.2

DTCA230 Series

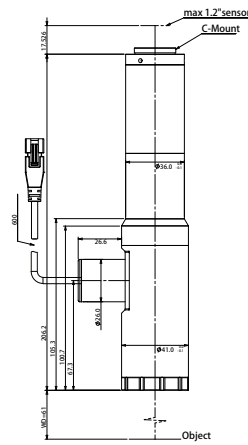
DTCA110 Series

DTCA121 Series

DTCA175 Series

DTCA185 Series

### DTCA121-6.6CL

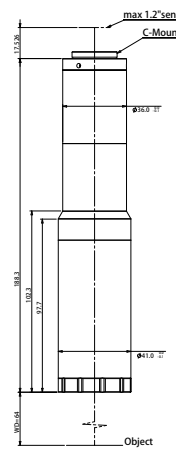


FOV(Φmm)	6.6
Mag.(x)	3.025
WD(mm)	61±1
Max Sensor Size(Φmm)	20(1.2")
F/#	9.4
MTF30(lp/mm)	>96
DOF(mm)	±0.05@F6.6
Distortion(% max)	0.06
Telecentricity(° max)	0.005
NA	0.16
Length(mm)	206.2
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1.2" IMX530/540 (14.6x12.6)	4.8x4.2

### DTCA121-7.3

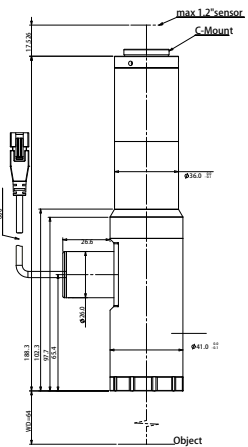


FOV(Φmm)	7.3
Mag.(x)	2.74
WD(mm)	64±1
Max Sensor Size(Φmm)	20(1.2")
F/#	8.5
MTF30(lp/mm)	>105
DOF(mm)	±0.05@F7.3
Distortion(% max)	0.02
Telecentricity(° max)	0.03
NA	0.16
Length(mm)	188.3
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540 (14.6x12.6)	5.3x4.6

### DTCA121-7.3CL

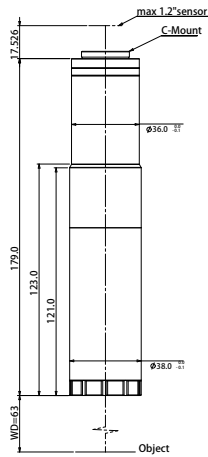


FOV(Φmm)	7.3
Mag.(x)	2.74
WD(mm)	64±1
Max Sensor Size(Φmm)	20(1.2")
F/#	8.5
MTF30(lp/mm)	>105
DOF(mm)	±0.05@F7.3
Distortion(% max)	0.02
Telecentricity(° max)	0.03
NA	0.16
Length(mm)	188.3
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	5.3x4.6

### DTCA121-10

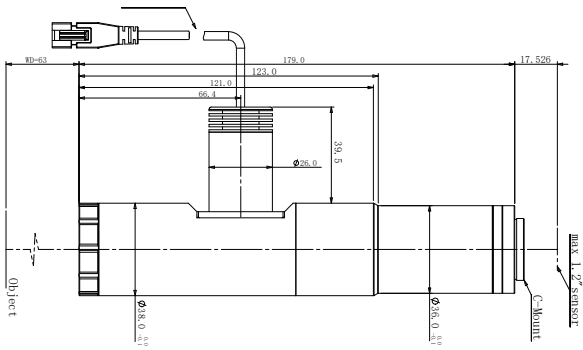


FOV(Φmm)	10
Mag.(x)	2.000
WD(mm)	63±1
Max Sensor Size(Φmm)	20(1.2")
F/#	6.6
MTF30(lp/mm)	>142
DOF(mm)	±0.07@F6.6
Distortion(% max)	<0.2
Telecentricity(° max)	<0.1
NA	0.15
Length(mm)	179.0
Mount	C
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	7.3x6.3

### DTCA121-10CL



FOV(Φmm)	10
Mag.(x)	2.000
WD(mm)	63±1
Max Sensor Size(Φmm)	20(1.2")
F/#	6.6
MTF30(lp/mm)	>142
DOF(mm)	±0.07@F6.6
Distortion(% max)	<0.2
Telecentricity(° max)	<0.1
NA	0.15
Length(mm)	179.0
Mount	C
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1.2" IMX530/540 (14.6X12.6)	7.3x6.3

# DTCA Series

High Resolution, With Coaxial Light,

For 3D AOI Applications



Lens Model	FOV (Φmm)	Mag. β(x)	WD (mm)	Sensor Size (Φmm)	F/#	MTF30 (lp/mm)	DOF (mm)	Distortion (% Max)	Telecentricity (° Max)	NA	Length (mm)	Mount	Iris	Coaxial Light
DTCA121-80-G-AL	80	0.25	240±3	20(1.2")	6.0	>150	±3.84@F6	0.05	0.1	0.020	190.7	C	YES	NO
DTCA121-80C-G-AL	80	0.25	240±3	20(1.2")	6.0	>150	±3.84@F6	0.05	0.1	0.020	190.7	C	YES	YES
DTCA175-28.2-128-M58-AL	28.2	1.0	128±2	28.2(1.75")	11	>76	±0.45@F8	0.01	0.09	0.045	315.5	M58	NO	NO
DTCA175-28.2C-128-M58-AL	28.2	1.0	128±2	28.2(1.75")	11	>76	±0.45@F8	0.01	0.09	0.045	317.9	M58	NO	YES
DTCA175-51-G-M58-AL	51	0.55	220±3	28.2(1.75")	8.0	>106	±1.05@F8	0.05	0.09	0.034	192.7	M58	YES	NO
DTCA175-51C-G-M58-AL	51	0.55	220±3	28.2(1.75")	8.0	>106	±1.05@F8	0.05	0.09	0.034	197.9	M58	YES	YES
DTCA175-61.4-G-M42-AL	61.4	0.46	250±3	28.2(1.75")	8.0	>120	±1.5@F8	0.03	0.21	0.028	184.9	M42	YES	NO
DTCA175-61.4C-G-M42-AL	61.4	0.46	250±3	28.2(1.75")	8.0	>120	±1.5@F8	0.03	0.21	0.028	190.1	M42	YES	YES
DTCA175-15.7-M42-AL	15.7	1.846	71±1	29(1.75")	20.0	>45	±2.5@F20	<0.1	<0.1	0.0461	311.9	M42	NO	NO
DTCA185-81-G-M58-AL	81.1	0.37	250±3	30(1.85")	8.0	>114	±2.35@F8	0.08	0.05	0.023	200	M58	YES	NO
DTCA185-81C-G-M58-AL	81.1	0.37	250±3	30(1.85")	8.0	>114	±2.35@F8	0.08	0.05	0.023	200	M58	YES	YES
DTCA210-11.8-M58	11.8	2.8	90±1	33(2")	11	>90	±0.05@F11	<0.02	<0.05	0.142	300.9	M58	NO	NO

DTCA230 Series

DTCA110 Series

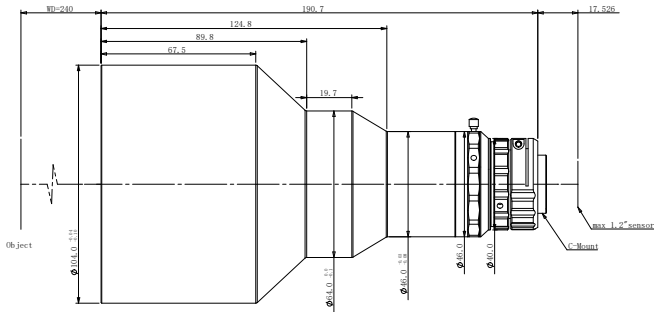
DTCA121 Series

DTCA175 Series

DTCA185 Series

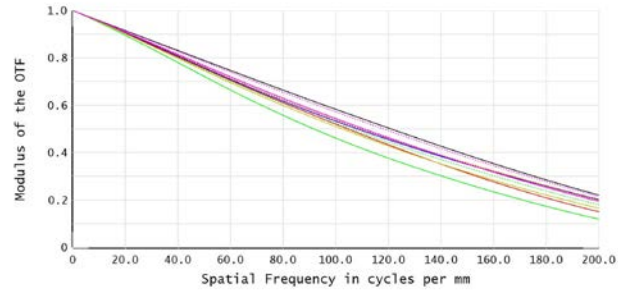
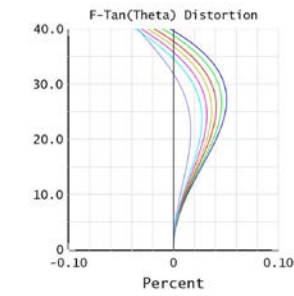
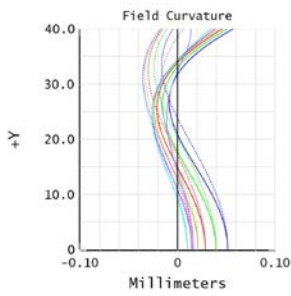
Lens Model	FOV ( $\Phi$ mm)	Mag. $\beta(x)$	WD (mm)	Sensor Size ( $\Phi$ mm)	F/#	MTF30 (lp/mm)	DOF (mm)	Distortion (% Max)	Telecentricity ( $^{\circ}$ Max)	NA	Length (mm)	Mount	Iris	Coaxial Light
DTCA210-11.8C-M58	11.8	2.8	90 $\pm$ 1	33(2")	11	>90	$\pm$ 0.05@F11	<0.02	<0.05	0.142	300.9	M58	NO	YES
DTCA210-44.8-M58-AL	44.8	0.7	90 $\pm$ 1	33(2")	7.8	>90	$\pm$ 0.05@F7.8	0.1	NA	0.046	194.2	M58	NO	NO
DTCA210-215-M42-AL	215	0.1536	220 $\pm$ 3	33(2")	10.0	>90	$\pm$ 13.6@F8	<0.1	<0.1	0.009	369	M42	NO	NO
DTCA35F-44-G-M58-AL	44	1.0	102	35F(44mm)	6.1-32	150-33	0.49-2.56	0.04	0.04	0.083-0.015	297.3	M58	YES	NO
DTCA35F-44C-G-M58-AL	44	1.0	102	35F(44mm)	6.1-32	150-33	0.49-2.56	0.04	0.04	0.083-0.015	297.3	M58	YES	YES
DTCA35F-22-G-M58-AL	22	2.0	102	35F(44mm)	8-32	118-32	0.16-0.64	0.045	0.008	0.125-0.031	282.5	M58	YES	NO
DTCA35F-22C-G-M58-AL	22	2.0	102	35F(44mm)	8-32	118-32	0.16-0.64	0.045	0.008	0.125-0.031	282.5	M58	YES	YES
DTCA35F-14.6-G-M58-AL	14.6	3.0	60	35F(44mm)	8.8-32	106-33	0.08-0.28	0.045	0.006	0.17-0.04693	359.4	M58	YES	NO
DTCA35F-14.6C-G-M58-AL	14.6	3.0	60	35F(44mm)	8.8-32	106-33	0.08-0.28	0.045	0.006	0.17-0.04693	359.4	M58	YES	YES
DTCA35F-11-G-M58-AL	11	4.0	60	35F(44mm)	11-32	90-32	0.06-0.16	0.02	0.02	0.18-0.062	353.2	M58	YES	NO
DTCA35F-11C-G-M58-ALV3	11	4.0	60	35F(44mm)	11-32	90-32	0.06-0.16	0.02	0.02	0.18-0.062	365.4	M58	YES	YES
DTCA35F-8.8-G-M58-AL	8.80	5.0	60	35F(44mm)	13-32	74-31	0.04-0.1	0.02	0.01	0.19-0.077	387	M58	YES	NO
DTCA35F-8.8C-G-M58-AL	8.80	5.0	60	35F(44mm)	13-32	74-31	0.04-0.1	0.02	0.01	0.19-0.077	387	M58	YES	YES
DTCA35F-94-M58-AL	94	0.462	378 $\pm$ 4	43.4	8.0	>115	$\pm$ 1.5@F8.0	<0.1	<0.1	0.028	456.9	M58	NO	NO
DTCA35F-94C-M58-AL	94	0.462	378 $\pm$ 4	43.4	8.0	>115	$\pm$ 1.5@F8.0	<0.1	<0.1	0.028	456.9	M58	NO	YES
DTCA35F-82-M58-AL	82	0.530	338 $\pm$ 5	43.4	10.0	>92	$\pm$ 1.4@F10	<0.1	<0.1	0.026	464.4	M58	NO	NO
DTCA35F-82C-M58-AL	82	0.530	338 $\pm$ 5	43.4	10.0	>92	$\pm$ 1.4@F10	<0.1	<0.1	0.026	464.4	M58	NO	YES

### DTCA121-80-G-AL

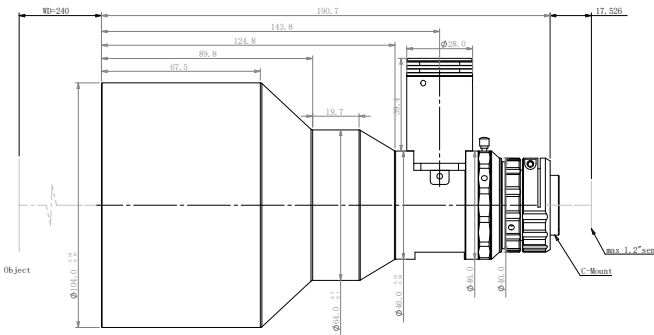


FOV(Φmm)	80
Mag.(x)	0.25
WD(mm)	240±3
Max Sensor Size(Φmm)	20(1.2")
F/#	6.0
MTF30(lp/mm)	>150
DOF(mm)	±3.84@F6
Distortion(% max)	0.05
Telecentricity(° max)	0.1
NA	0.02091
Length(mm)	190.7
Mount	C
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
1.2" IMX530/540(14.6X12.6)	58.4x50.4

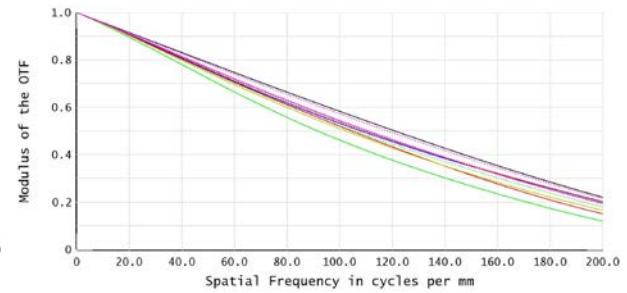
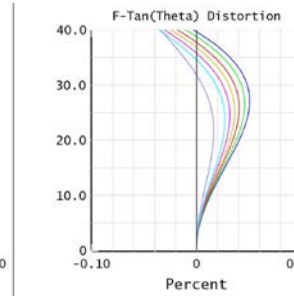
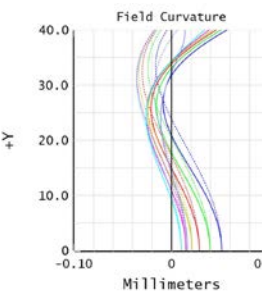


### DTCA121-80C-G-AL



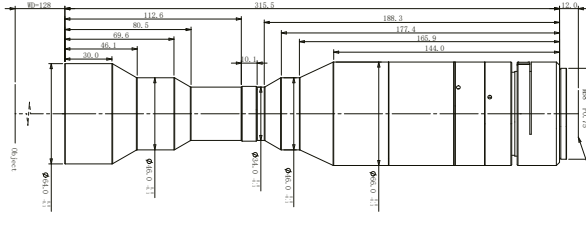
FOV(Φmm)	80
Mag.(x)	0.25
WD(mm)	240±3
Max Sensor Size(Φmm)	20(1.2")
F/#	6.0
MTF30(lp/mm)	>150
DOF(mm)	±3.84@F6
Distortion(% max)	0.05
Telecentricity(° max)	0.1
NA	0.02091
Length(mm)	190.7
Mount	C
Iris	YES
Coaxial Light	YES

Field of View (mmxmm)	
1.2" IMX530/540(14.6X12.6)	58.4x50.4



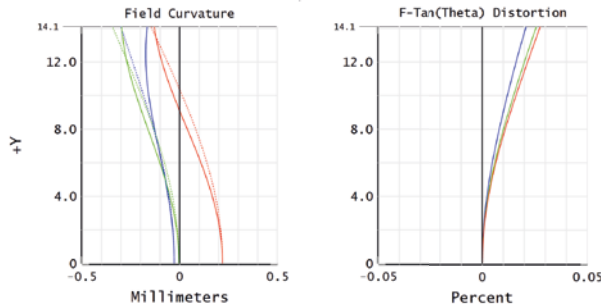
Product Selection  
Quick Reference Table

### DTCA175-28.2-128-M58-AL



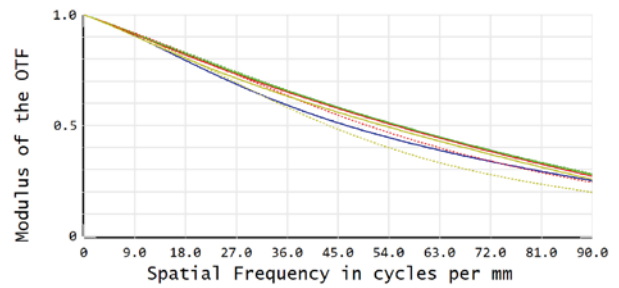
FOV(Φmm)	28.2
Mag.(x)	1.0
WD(mm)	128±2
Max Sensor Size(Φmm)	28.2(1.75")
F/#	11
MTF30(lp/mm)	>76
DOF(mm)	±0.45@F8
Distortion(% max)	0.01
Telecentricity(° max)	0.09
NA	0.04538
Length(mm)	315.5
Mount	M58
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
1.75" IMX342 (22.3x16.7)	22.3x16.7



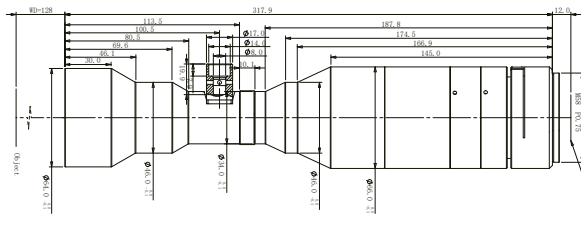
■ -0.4861-Tangential ■ -0.4861-Sagittal ■ -0.5876-Tangential  
■ -0.5876-Sagittal ■ -0.6563-Tangential ■ -0.6563-Sagittal

■ -0.4861 ■ -0.5876 ■ -0.6563



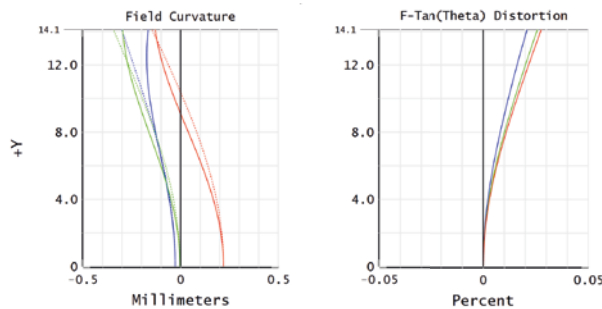
■ -0.00 mm-Tangential ■ -0.00 mm-Sagittal ■ -8.00 mm-Tangential ■ -8.00 mm-Sagittal  
■ -12.00 mm-Tangential ■ -12.00 mm-Sagittal ■ -14.10 mm-Tangential ■ -14.10 mm-Sagittal

### DTCA175-28.2C-128-M58-AL



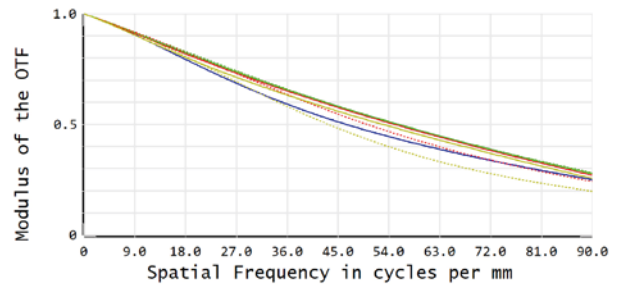
FOV(Φmm)	28.2
Mag.(x)	1.0
WD(mm)	128±2
Max Sensor Size(Φmm)	28.2(1.75")
F/#	11
MTF30(lp/mm)	>76
DOF(mm)	±0.45@F8
Distortion(% max)	0.01
Telecentricity(° max)	0.09
NA	0.04538
Length(mm)	315.5
Mount	M58
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
1.75" IMX342 (22.3x16.7)	22.3x16.7



■ -0.4861-Tangential ■ -0.4861-Sagittal ■ -0.5876-Tangential  
■ -0.5876-Sagittal ■ -0.6563-Tangential ■ -0.6563-Sagittal

■ -0.4861 ■ -0.5876 ■ -0.6563



■ -0.00 mm-Tangential ■ -0.00 mm-Sagittal ■ -8.00 mm-Tangential ■ -8.00 mm-Sagittal  
■ -12.00 mm-Tangential ■ -12.00 mm-Sagittal ■ -14.10 mm-Tangential ■ -14.10 mm-Sagittal

DTCM Series  
Matrix Bi-Telecentric  
Lenses

DTCA Series  
Ultra Resolution  
Bi-Telecentric Lenses

WWK Series  
C-Mount High Resolution  
Telecentric Lenses

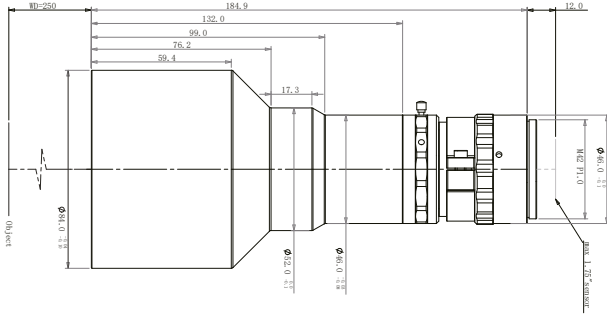
DTCL Series  
Telecentric Illuminators

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360° View Lenses

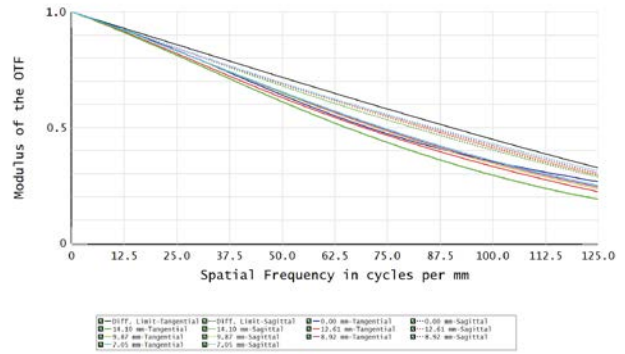
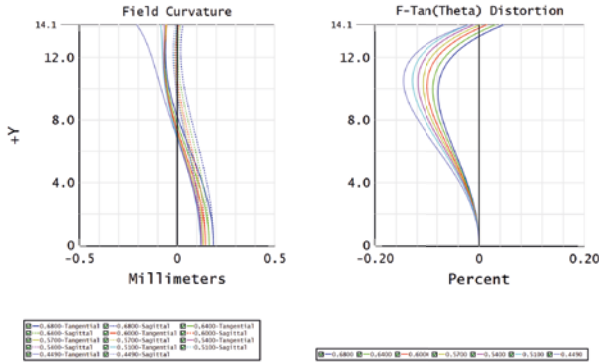


### DTCA175-61.4-G-M42-AL

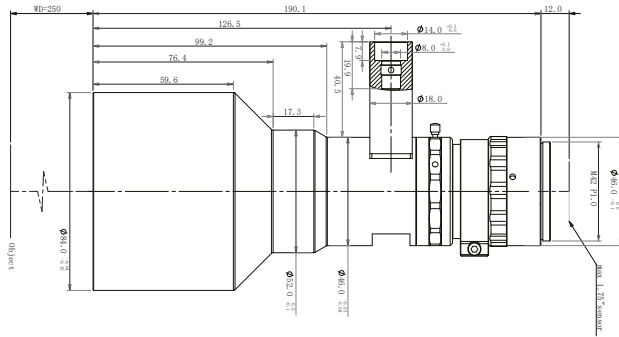


FOV( $\Phi$ mm)	61.4
Mag.(x)	0.46
WD(mm)	250 $\pm$ 3
Max Sensor Size( $\Phi$ mm)	28.2(1.75")
F/#	8.0
MTF30(lp/mm)	>120
DOF(mm)	$\pm$ 1.5@F8
Distortion(% max)	0.03
Telecentricity( $^{\circ}$ max)	0.21
NA	0.0288
Length(mm)	184.9
Mount	M42
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
1.75" IMX342 (22.3x16.7)	48.5x36.3

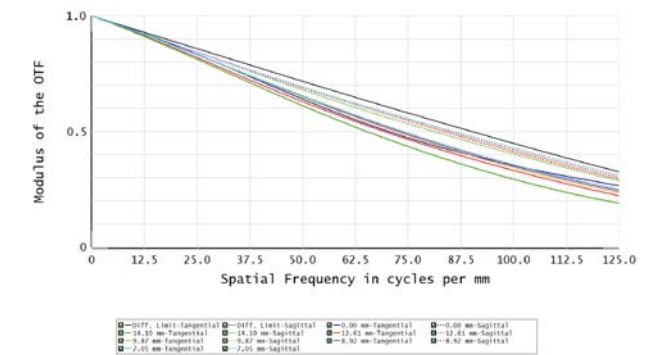
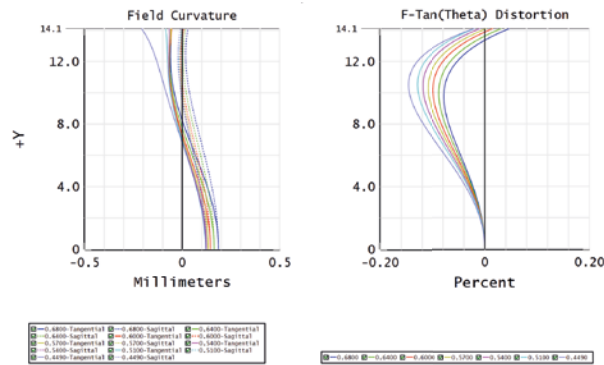


### DTCA175-61.4C-G-M42-AL



FOV( $\Phi$ mm)	61.4
Mag.(x)	0.46
WD(mm)	250 $\pm$ 3
Max Sensor Size( $\Phi$ mm)	28.2(1.75")
F/#	8.0
MTF30(lp/mm)	>120
DOF(mm)	$\pm$ 1.5@F8
Distortion(% max)	0.03
Telecentricity( $^{\circ}$ max)	0.21
NA	0.0288
Length(mm)	190.1
Mount	M42
Iris	YES
Coaxial Light	YES

Field of View (mmxmm)	
1.75" IMX342 (22.3x16.7)	48.5x36.3



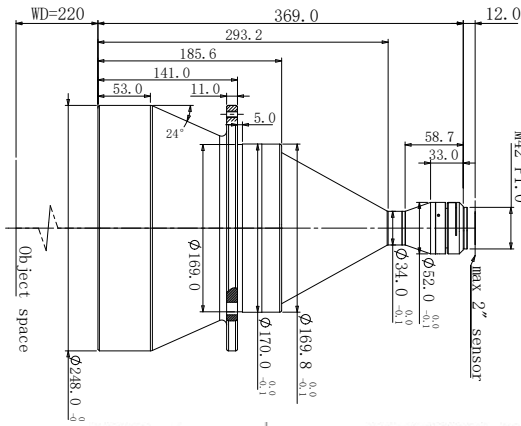






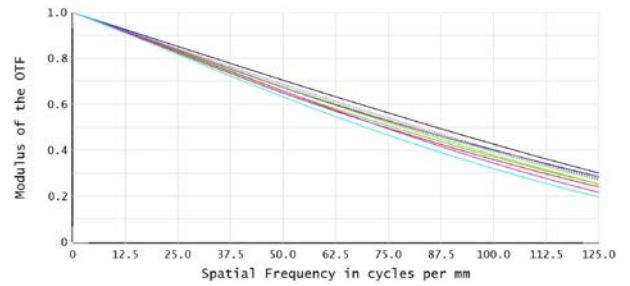
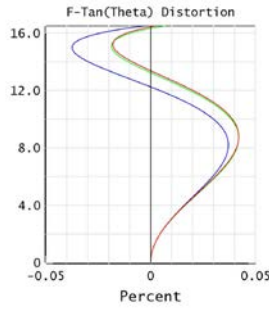
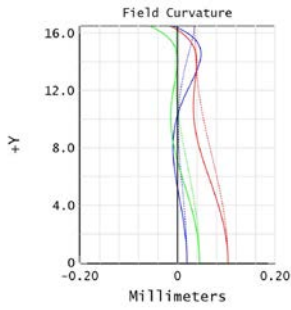
Product Selection  
Quick Reference Table

### DTCA210-215-M42-AL



FOV(Φmm)	215
Mag.(x)	0.1536
WD(mm)	220±3
Max Sensor Size(Φmm)	33(2")
F/#	10.0
MTF30(lp/mm)	>90
DOF(mm)	±13.6@F8
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.0096
Length(mm)	369
Mount	M42
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
2" DALSA 12M (24.58x18.43)	160.0x120.0
2" PYTHON 25K (23.04x23.04)	150.0x150.0

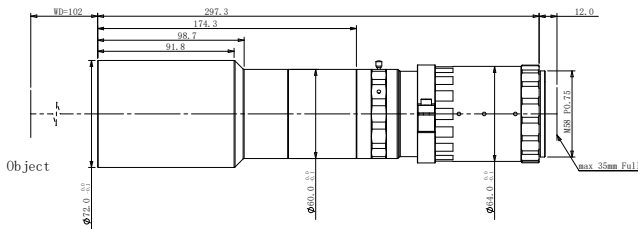


Legend: -0.4861-Tangential, -0.4861-Sagittal, -0.5876-Tangential, -0.5876-Sagittal, -0.6563-Tangential, -0.6563-Sagittal

Legend: -0.4861, -0.5876, -0.6563

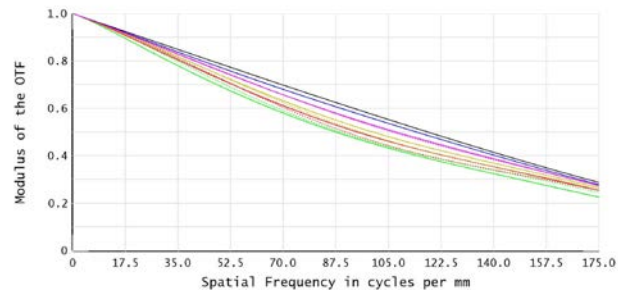
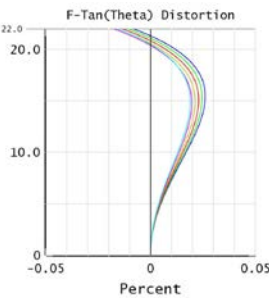
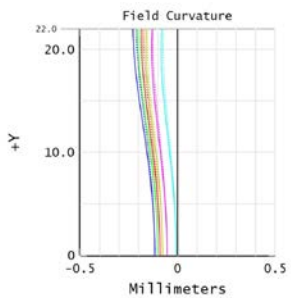
Legend: -0.4861-Tangential, -0.4861-Sagittal, -0.5876-Tangential, -0.5876-Sagittal, -0.6563-Tangential, -0.6563-Sagittal

### DTCA35F-44-G-M58-AL



FOV(Φmm)	44
Mag.(x)	1.0
WD(mm)	102
Max Sensor Size(Φmm)	35F(44mm)
F/#	6.1-32
MTF30(lp/mm)	150-33
DOF(mm)	0.49-2.56
Distortion(% max)	0.04
Telecentricity(° max)	0.04
NA	0.083-0.01568
Length(mm)	297.3
Mount	M58
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
CMV50000 (36.43x27.62)	29.9x22.4



Legend: -0.4250-Tangential, -0.4250-Sagittal, -0.4250-Tangential, -0.4250-Sagittal, -0.4250-Tangential, -0.4250-Sagittal

Legend: -0.4250, -0.4250, -0.3750, -0.3750, -0.4250, -0.4250

Legend: -0.4250-Tangential, -0.4250-Sagittal, -0.3750-Tangential, -0.3750-Sagittal, -0.4250-Tangential, -0.4250-Sagittal

DTCA Series  
Ultra Resolution  
Bi-Telecentric Lenses

WWK Series  
C-Mount High Resolution  
Telecentric Lenses

DTCL Series  
Telecentric Illuminators

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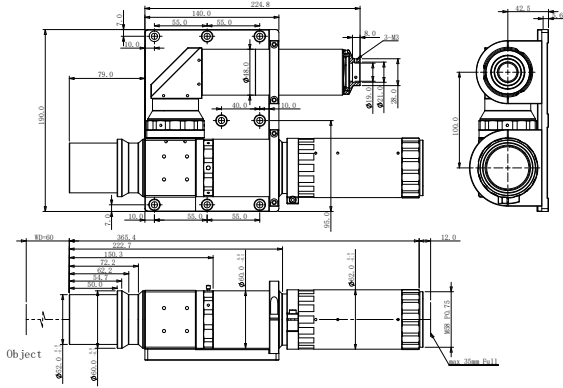
360° View Lenses





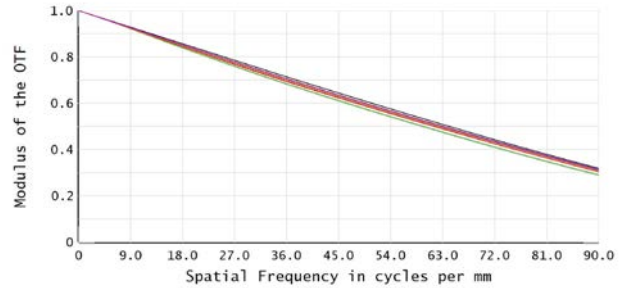
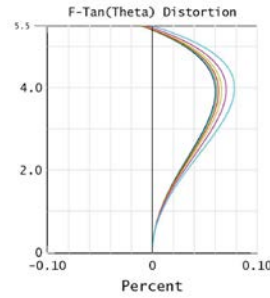
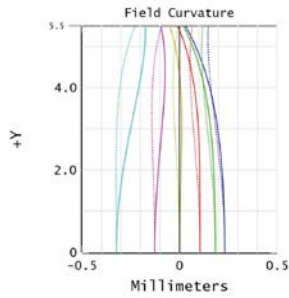


### DTCA35F-11C-G-M58-ALV3



FOV(Φmm)	11
Mag.(x)	4.0
WD(mm)	60±1
Max Sensor Size(Φmm)	44
F/#	11-32
MTF30(lp/mm)	90-32
DOF(mm)	0.06-0.16
Distortion(% max)	0.02
Telecentricity(° max)	0.02
NA	0.18- 0.0624
Length(mm)	365.4
Mount	M58
Iris	YES
Coaxial Light	YES

Field of View (mmxmm)	
37.4mm GMAX3265(29.9x22.4)	7.5x5.6

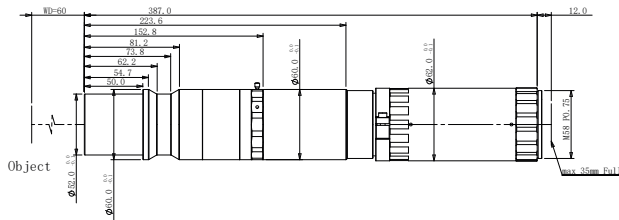


Legend for Field Curvature:  
 -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal

Legend for F-Tan(Theta) Distortion:  
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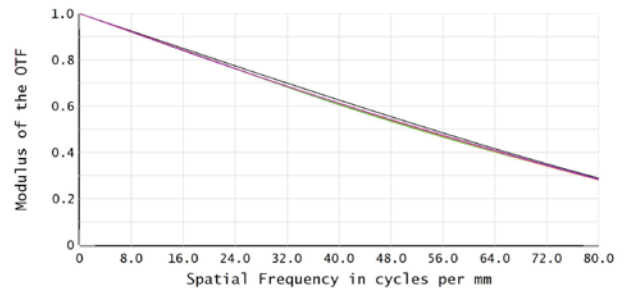
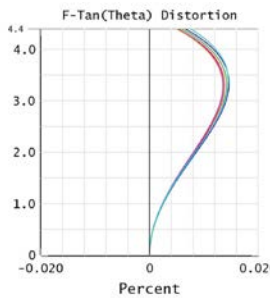
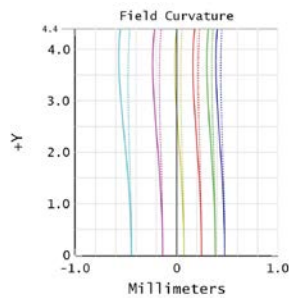
Legend for Modulus of the OTF:  
 -Diff. Limit-Tangential, -Diff. Limit-Sagittal, -0.0000 mm-Tangential, -0.0000 mm-Sagittal, -5.5000 mm-Tangential, -5.5000 mm-Sagittal, -4.1250 mm-Tangential, -4.1250 mm-Sagittal, -2.7500 mm-Tangential, -2.7500 mm-Sagittal, -1.3750 mm-Tangential, -1.3750 mm-Sagittal

### DTCA35F-8.8-G-M58-AL



FOV(Φmm)	8.8
Mag.(x)	5.0
WD(mm)	60
Max Sensor Size(Φmm)	35F(44mm)
F/#	13-32
MTF30(lp/mm)	74-31
DOF(mm)	0.04-0.1
Distortion(% max)	0.02
Telecentricity(° max)	0.01
NA	0.19-0.07792
Length(mm)	387
Mount	M58
Iris	YES
Coaxial Light	NO

Field of View (mmxmm)	
37.4mm GMAX3265(29.9x22.4)	6.0x4.5

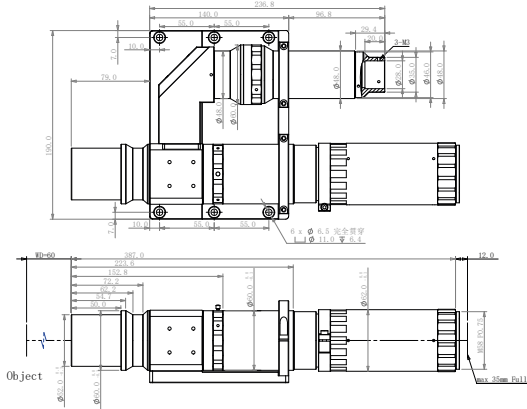


Legend for Field Curvature:  
 -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal, -0.4710 mm-Tangential, -0.4710 mm-Sagittal

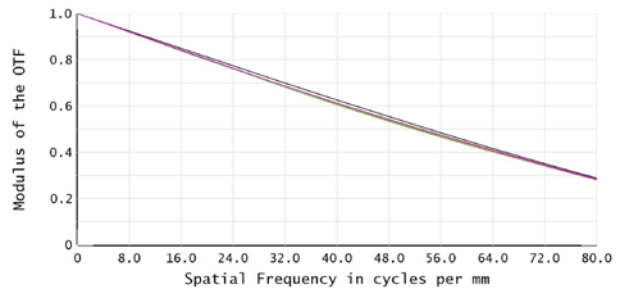
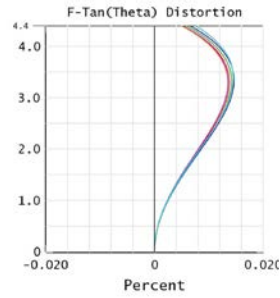
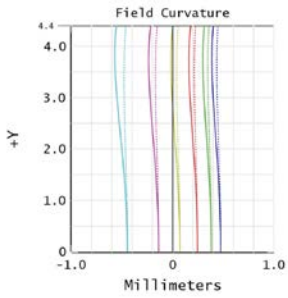
Legend for F-Tan(Theta) Distortion:  
 -0.4710, -0.4710, -0.4710, -0.4710, -0.4710, -0.4710, -0.4710, -0.4710

Legend for Modulus of the OTF:  
 -Diff. Limit-Tangential, -Diff. Limit-Sagittal, -0.0000 mm-Tangential, -0.0000 mm-Sagittal, -4.0000 mm-Tangential, -4.0000 mm-Sagittal, -3.8100 mm-Tangential, -3.8100 mm-Sagittal, -3.1110 mm-Tangential, -3.1110 mm-Sagittal, -2.2000 mm-Tangential, -2.2000 mm-Sagittal

**DTCA35F-8.8C-G-M58-AL**



FOV(Φmm)	8.8
Mag.(x)	5.0
WD(mm)	60
Max Sensor Size(Φmm)	35F(44mm)
F/#	13-32
MTF30(lp/mm)	74-31
DOF(mm)	0.04-0.1
Distortion(% max)	0.02
Telecentricity(° max)	0.01
NA	0.19-0.07792
Length(mm)	387
Mount	M58
Iris	YES
Coaxial Light	YES
Field of View (mmxmm)	
37.4mm GMAX3265(29.9x22.4)	6.0x4.5



Legend for Field Curvature and F-Tan(Theta) Distortion graphs:

- 0.4750 mm-Tangential, 0.4750 mm-Sagittal, 0.4750 mm-Tangential, 0.4750 mm-Sagittal, 0.4750 mm-Tangential, 0.4750 mm-Sagittal, 0.4750 mm-Tangential, 0.4750 mm-Sagittal

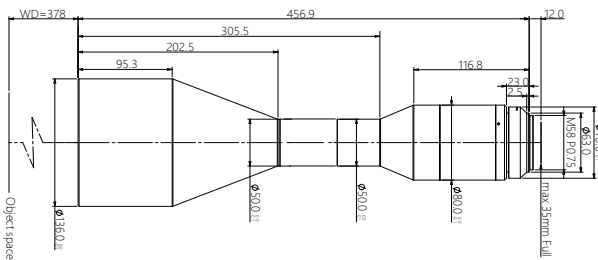
Legend for F-Tan(Theta) Distortion graph:

- 0.4750 mm-Tangential, 0.4750 mm-Sagittal, 0.4750 mm-Tangential, 0.4750 mm-Sagittal

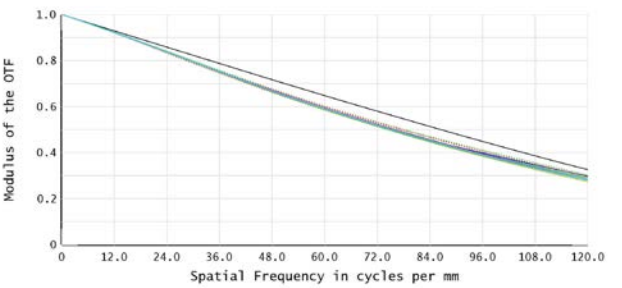
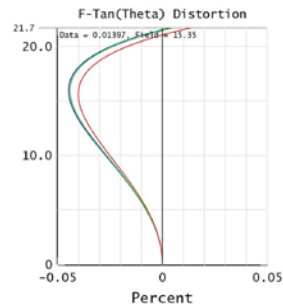
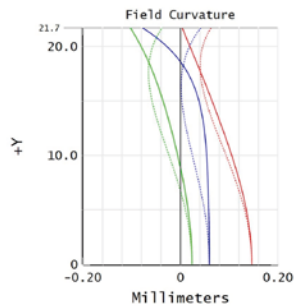
Legend for Modulus of the OTF graph:

- Diff. Limit-Tangential, Diff. Limit-Sagittal, 0.0000 mm-Tangential, 0.0000 mm-Sagittal, 4.0000 mm-Tangential, 4.0000 mm-Sagittal, 3.8100 mm-Tangential, 3.8100 mm-Sagittal, 3.1133 mm-Tangential, 3.1133 mm-Sagittal, 2.2000 mm-Tangential, 2.2000 mm-Sagittal

**DTCA35F-94-M58-AL**



FOV(Φmm)	94
Mag.(x)	0.462
WD(mm)	378±4
Max Sensor Size(Φmm)	43.4
F/#	8.0
MTF30(lp/mm)	>115
DOF(mm)	±1.5@F8.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.02889
Length(mm)	456.9
Mount	M58
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
CMV50000 (36.43x27.62)	78.9x59.8
KAI29050/2 (36.17x24.11)	78.3x52.2
KAI43142 (36.18x24.12)	78.3x52.2



Legend for Field Curvature and F-Tan(Theta) Distortion graphs:

- 0.4861 mm-Tangential, 0.4861 mm-Sagittal, 0.5876 mm-Tangential, 0.5876 mm-Sagittal, 0.6563 mm-Tangential, 0.6563 mm-Sagittal

Legend for F-Tan(Theta) Distortion graph:

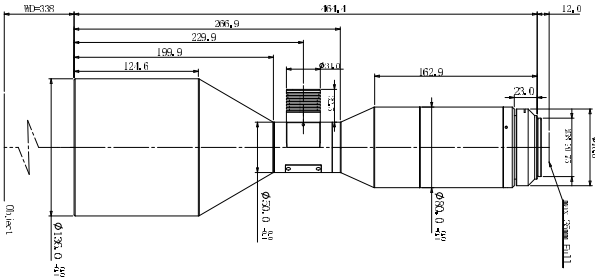
- 0.4861 mm-Tangential, 0.5876 mm-Sagittal

Legend for Modulus of the OTF graph:

- Diff. Limit-Tangential, Diff. Limit-Sagittal, 0.00 mm-Tangential, 0.00 mm-Sagittal, 7.50 mm-Tangential, 7.50 mm-Sagittal, 10.75 mm-Tangential, 10.75 mm-Sagittal, 14.50 mm-Tangential, 14.50 mm-Sagittal, 21.75 mm-Tangential, 21.75 mm-Sagittal

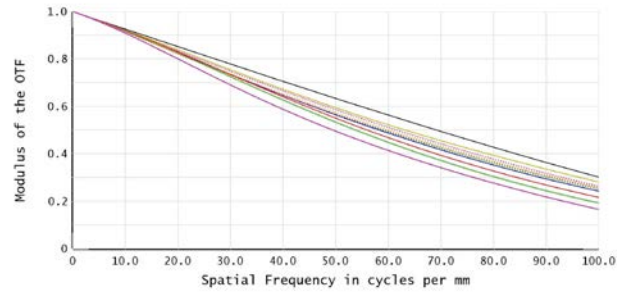
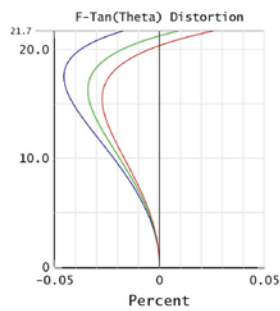
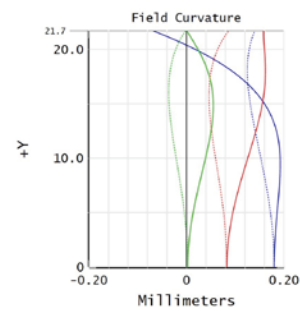


**DTCA35F-82C-M58-AL**



FOV(Φmm)	82
Mag.(x)	0.53
WD(mm)	338±5
Max Sensor Size(Φmm)	43.4
F/#	10.00
MTF30(lp/mm)	>92
DOF(mm)	±1.4@F10
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.02649
Length(mm)	464.4
Mount	M58
Iris	NO
Coaxial Light	YES

Field of View (mmxmm)	
CMV50000 (36.43x27.62)	68.7x52.1
KAI29050/2 (36.17x24.11)	68.2x45.5
KAI43142 (36.18x24.12)	68.3x45.5



■=0.4861-Tangential ■=0.4861-Sagittal ■=0.5876-Tangential  
■=0.5876-Sagittal ■=0.6563-Tangential ■=0.6563-Sagittal

■=0.4861 ■=0.5876 ■=0.6563

■=0-Diff. Line-Tangential ■=Diff. Line-Sagittal ■=0.00 mm-Tangential ■=0.00 mm-Sagittal  
■=10.75 mm-Tangential ■=10.75 mm-Sagittal ■=15.20 mm-Tangential ■=15.20 mm-Sagittal  
■=18.20 mm-Tangential ■=18.20 mm-Sagittal ■=21.70 mm-Tangential ■=21.70 mm-Sagittal

**360° Micro-polyview Imaging Device**

**Model:PFA Series**

**Main feature**

- Object side feature inspection with only one camera.
- Object outer and top side imaging at same time.
- Super high resolution, could inspect tiny imperfection.



Parameter		
Parameter	Wavelength coverage (nm)	400~680
	WD(mm)	3~40
	MTF30(lp/mm)	150
	F/#	2.8~16
Machinery Specification	For Max CCD	2/3"
	Max diameter(mm)	140.0
	Length(mm)	230.9
Electrical Specifications	Mount	C-Mount
	Lighting Voltage	24
	Lighting Power	18
Detection Range	Height ——20mm	Side inspection with maximum object diameter ——30mm
	Height ——5mm	Side inspection with maximum object diameter ——60mm
	Height ——10mm	The maximum object diameter when inspect side and top side at the same time——30mm

# DTCA 系列

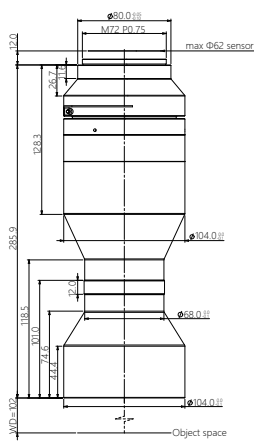
Support Up To 24K Linescan Camera,

150 Megapixel Camera



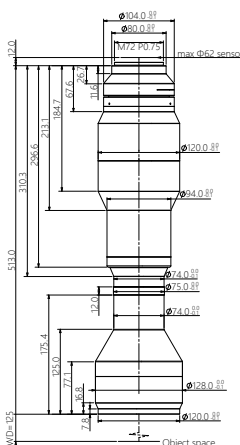
Lens Model	FOV (Φmm)	Mag. β(x)	WD (mm)	Sensor Size (Φmm)	F/#	MTF30 (lp/mm)	DOF (mm)	Distortion (% Max)	Telecentricity (° Max)	NA	Length (mm)	Mount	Iris	Coaxial Light
DTCA16K-62-M72-AL	62	1.0	102±2	62	7.0	>110	±0.3@F7.0	<0.1	<0.62	0.071	285.9	M72	NO	NO
DTCA16K-72.7-M72-AL	72.7	0.853	125±3	62	6.0	>135	±0.3@F6.0	<0.1	<0.3	0.071	513.0	M72	NO	NO
DTCA16K-88G-M72-AL	88	0.705	125±3	62	5.0	>162	±0.4@F5.0	<0.1	<0.3	0.071	464.4	M72	NO	NO
DTCA23K-63-M95-AL	63	1.3	145±3	82	7.5	>124	±0.18@F7.5	0.03	0.04	0.086	513.5	M95	NO	NO
DTCA23K-93.7-M95-AL	93.7	0.875	140±3	82	9.5	>97	±0.5@F9.5	0.03	0.08	0.046	468.1	M95	NO	NO
DTCA24K-44-M95-AL	44	2.0	120±3	88	4.8	>62	±0.05@F4.8	0.045	0.1	0.208	463.0	M95	NO	NO
DTCA24K-62-M95-AL	62	1.419	123±3	88	7.0	>115	±0.1@F7.0	<0.1	<0.1	0.100	466.3	M95	NO	NO
DTCA24K-75-M95-AL	75	1.173	152±3	88	7.0	>118	±0.2@F7.0	<0.01	<0.05	0.083	486.0	M95	NO	NO
DTCA24K-79-M95-AL	79.2	1.110	150±3	88	7.0	>100	±0.2@F7.0	<0.01	<0.2	0.079	478.5	M95	NO	NO
DTCA24K-88-M95-ALV2	88	1.0	162±3	88	8.0	>90	±0.3@F8.0	<0.1	<0.1	0.062	453.2	M95	NO	NO
DTCA24K-92-M95-AL	91.6	0.960	150±3	88	8.0	>90	±0.3@F8.0	<0.1	<0.1	0.062	458.5	M95	NO	NO

### DTCA16K-62-M72-AL



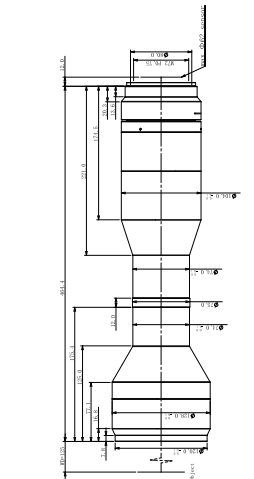
FOV(Φmm)	62
Mag.(x)	1.000
WD(mm)	102±2
Max Sensor Size(Φmm)	62
F/#	7.0
MTF30(lp/mm)	>110
DOF(mm)	±0.3@F7.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.62
NA	0.07125
Length(mm)	285.9
Mount	M72
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
KAI-47051 (48.7x29.0)	48.7x29.0
Linescan-12K 5um (61.44mm)	61.4mm
Linescan-16K 3.5/3.53um (57.4mm)	57.4mm

### DTCA16K-72.7-M72-AL



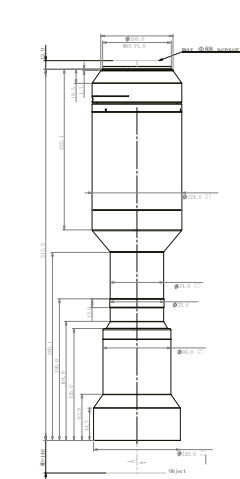
FOV(Φmm)	72.7
Mag.(x)	0.853
WD(mm)	125±3
Max Sensor Size(Φmm)	62
F/#	6.0
MTF30(lp/mm)	>135
DOF(mm)	±0.3@F6.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.3
NA	0.07112
Length(mm)	513.0
Mount	M72
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
KAI-47051 (48.7x29.0)	57.1x34.0
Linescan-12K 5um (61.44mm)	72.0
Linescan-16K 3.5/3.53um (57.4mm)	67.3

### DTCA16K-88G-M72-AL



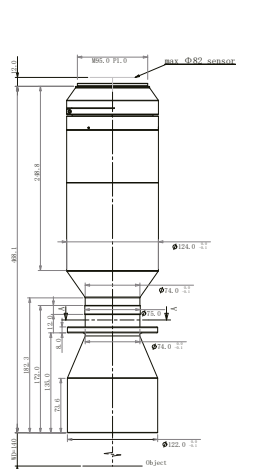
FOV(Φmm)	88
Mag.(x)	0.705
WD(mm)	125±3
Max Sensor Size(Φmm)	62
F/#	7.0
MTF30(lp/mm)	>165
DOF(mm)	±0.6@F7.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.3
NA	0.07112
Length(mm)	464.4
Mount	M72
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
KAI-47051 (48.7x29.0)	69.1x41.1
Linescan-12K 5um (61.44mm)	87.1
Linescan-16K 3.5/3.53um (57.4mm)	81.4

### DTCA23K-63-M95-AL



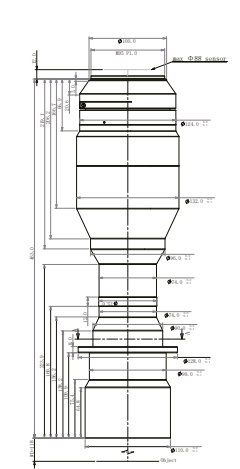
FOV(Φmm)	63
Mag.(x)	1.3
WD(mm)	146±3
Max Sensor Size(Φmm)	82
F/#	7.5
MTF30(lp/mm)	>124
DOF(mm)	±0.18@F7.5
Distortion(% max)	0.03
Telecentricity(° max)	0.04
NA	0.08685
Length(mm)	513.5
Mount	M95
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	49.5x37.2
Linescan-16K 5um (81.9mm)	63

### DTCA23K-93.7-M95-AL



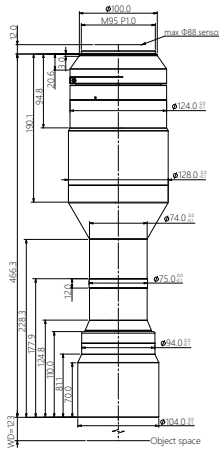
FOV(Φmm)	93.7
Mag.(x)	0.875
WD(mm)	140±3
Max Sensor Size(Φmm)	82
F/#	9.5
MTF30(lp/mm)	>97
DOF(mm)	±0.5@F9.5
Distortion(% max)	0.03
Telecentricity(° max)	0.08
NA	0.04601
Length(mm)	468.1
Mount	M95
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	73.5x55.3
Linescan-16K 5um (81.9mm)	93.6

### DTCA24K-44-M95-AL



FOV(Φmm)	44
Mag.(x)	2.0
WD(mm)	118±3
Max Sensor Size(Φmm)	88
F/#	4.8
MTF30(lp/mm)	>62
DOF(mm)	±0.05@F4.8
Distortion(% max)	0.045
Telecentricity(° max)	0.1
NA	0.208143
Length(mm)	463.0
Mount	M95
Iris	NO
Coaxial Light	NO
Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	32.2x24.2
Linescan-16K 5um (81.9mm)	40.1
Linescan-24K 3.5um (86.0mm)	43

### DTCA24K-62-M95-AL

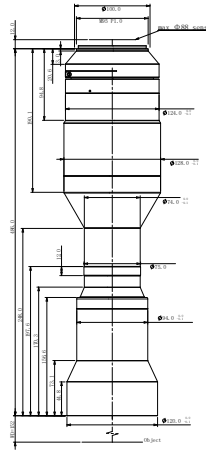


FOV(Φmm)	62
Mag.(x)	1.419
WD(mm)	123±3
Max Sensor Size(Φmm)	88
F/#	7.0
MTF30(lp/mm)	>115
DOF(mm)	±0.1@F7.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.10066
Length(mm)	466.3
Mount	M95
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	45.3x38.3
Linescan-16K 5um (81.9mm)	57.7
Linescan-24K 3.5um (86.0mm)	60.6

### DTCA24K-75-M95-AL

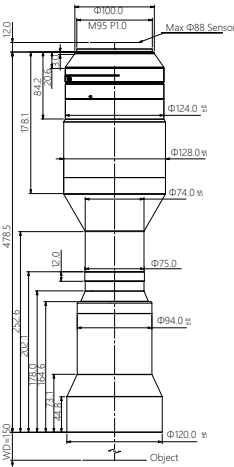


FOV(Φmm)	75
Mag.(x)	1.173
WD(mm)	152±3
Max Sensor Size(Φmm)	88
F/#	7.0
MTF30(lp/mm)	>118
DOF(mm)	±0.2@F7.0
Distortion(% max)	<0.01
Telecentricity(° max)	<0.05
NA	0.08334
Length(mm)	486.0
Mount	M95
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	54.8x46.4
Linescan-16K 5um (81.9mm)	69.8
Linescan-24K 3.5um (86.0mm)	73.3

### DTCA24K-79-M95-AL

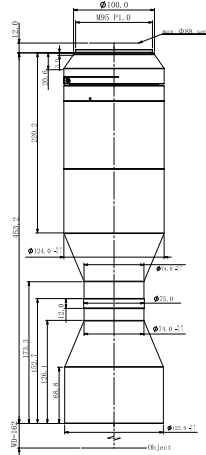


FOV(Φmm)	79.2
Mag.(x)	1.11
WD(mm)	150±3
Max Sensor Size(Φmm)	88
F/#	7.0
MTF30(lp/mm)	>100
DOF(mm)	±0.2@F7.0
Distortion(% max)	<0.01
Telecentricity(° max)	<0.2
NA	0.07904
Length(mm)	478.5
Mount	M95
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	57.9x43.6
Linescan-16K 5µm (81.9mm)	73.8
Linescan-24K 3.5µm (86.0mm)	77.5

### DTCA24K-88-M95-ALV2

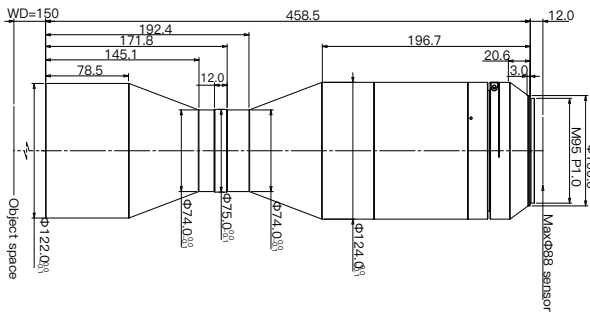


FOV(Φmm)	88
Mag.(x)	1.000
WD(mm)	162±3
Max Sensor Size(Φmm)	88
F/#	8.0
MTF30(lp/mm)	>90
DOF(mm)	±0.3@F8.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.06238
Length(mm)	453.2
Mount	M95
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	64.3x48.4
Linescan-16K 5um (81.9mm)	81.9
Linescan-24K 3.5um (86.0mm)	86

### DTCA24K-92-M95-AL



FOV(Φmm)	91.6
Mag.(x)	0.960
WD(mm)	150±3
Max Sensor Size(Φmm)	88
F/#	8.0
MTF30(lp/mm)	>90
DOF(mm)	±0.3@F8.0
Distortion(% max)	<0.1
Telecentricity(° max)	<0.1
NA	0.06238
Length(mm)	458.5
Mount	M95
Iris	NO
Coaxial Light	NO

Field of View (mmxmm)	
DALSA 86M (64.32x48.38)	67.0x50.4
Linescan-16K 5um (81.9mm)	85.3
Linescan-24K 3.5um (86.0mm)	89.6