

CL-720 Collimating Lens Spec.

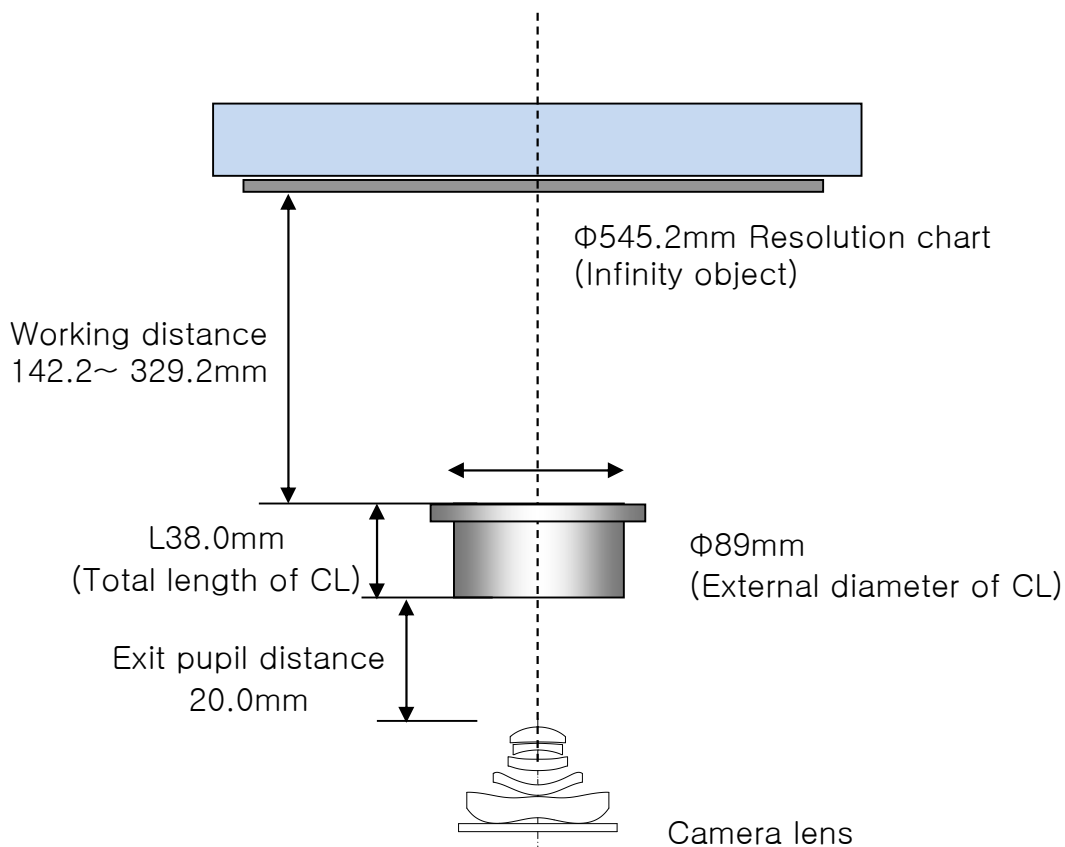
2021-08-31
OneStone

Model name CL-720 (Designed by OneStone)
Characteristic of CL-720 Suitable for testing the camera lens

EFL 388.3mm
Inspectable FOV of CCM 70°
Ass'y Size $\Phi 89.0\text{mm}$ X L38.0mm, 0.24kg

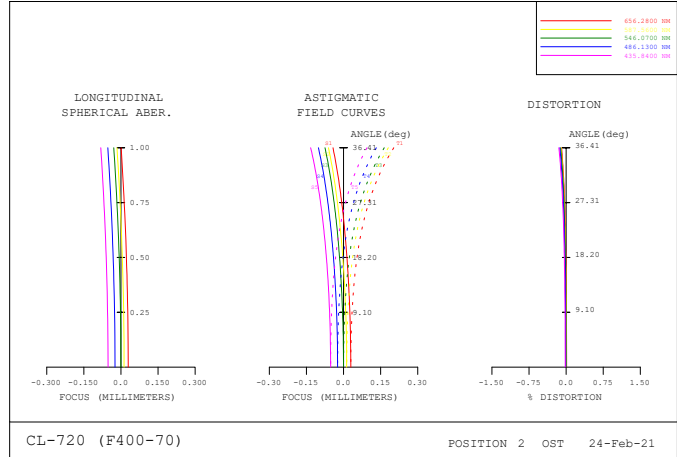
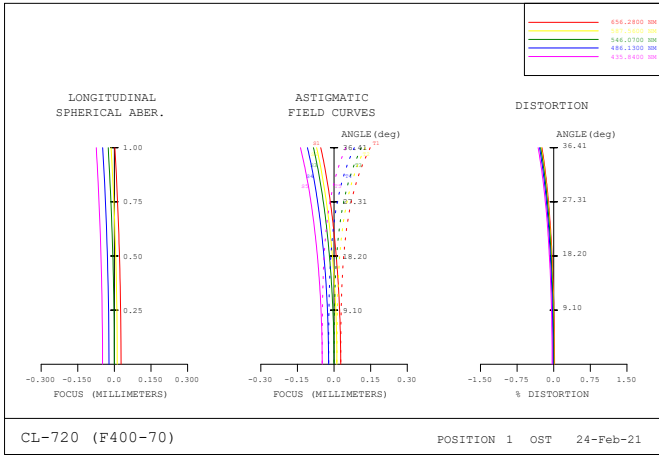
Exit Pupil Size $\Phi 4.0\text{mm}$
Exit Pupil Position 20.0mm (Distance from camera lens to CL)

Working Distance 329.2mm at Object Distance Infinity
(from CL 1st Lens R1 surface to chart) Chart Size : $\Phi 545.2\text{mm}$

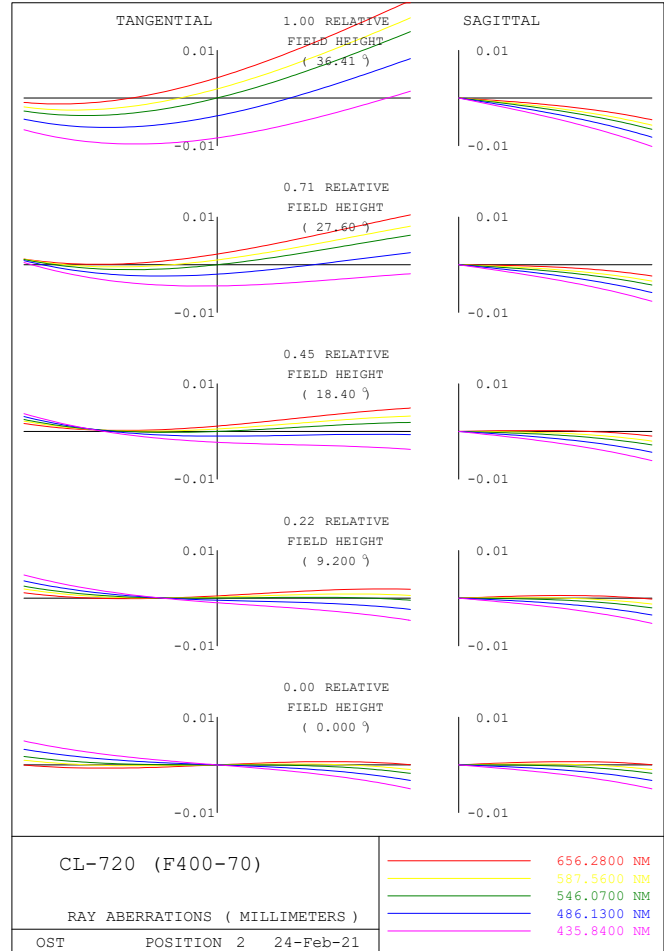
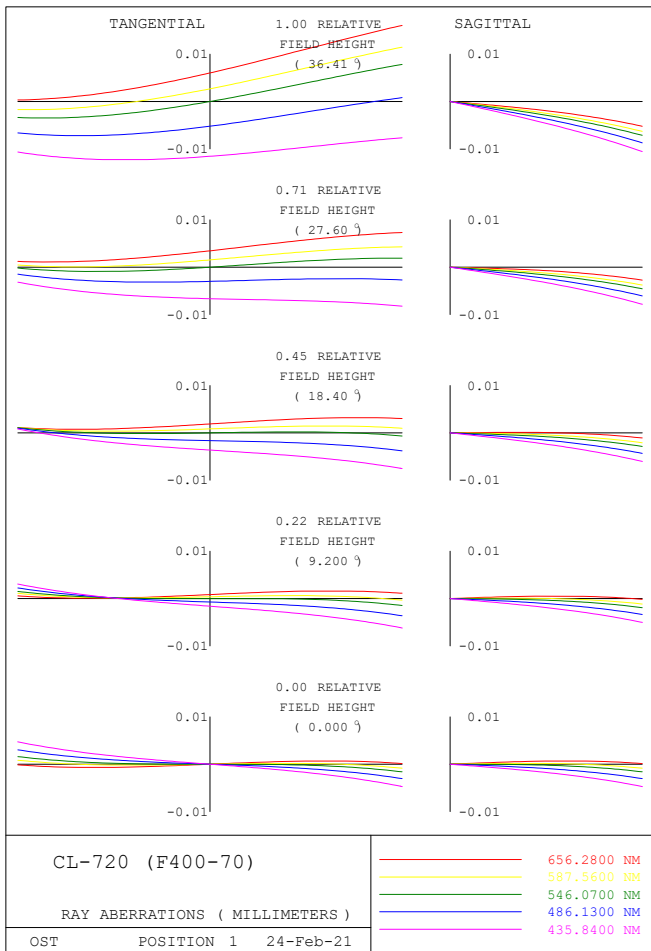


Optical performance of CL-720 Lens (Inf, 1m at 70°)

Aberration Scale : $\pm 0.3 \pm 0.3 \pm 1.5\%$



Aberration Scale : ± 0.01



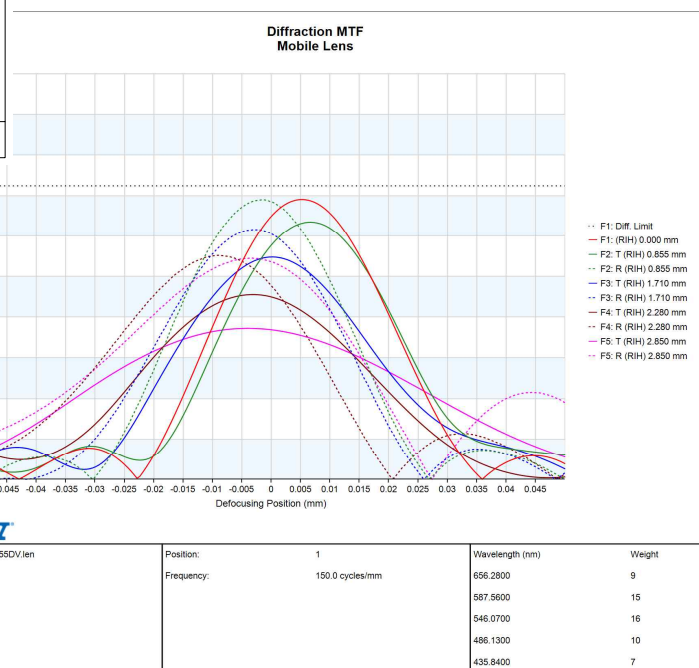
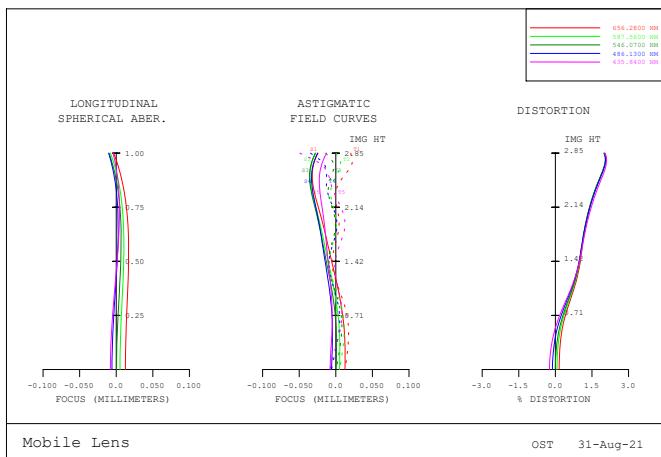
MTF Analysis for FOV 69° Lens of A company

e_{fl} = 4.06mm

F_{no} = 2.64

Object Distance : Infinity, Through Focus MTF(150lp/mm)

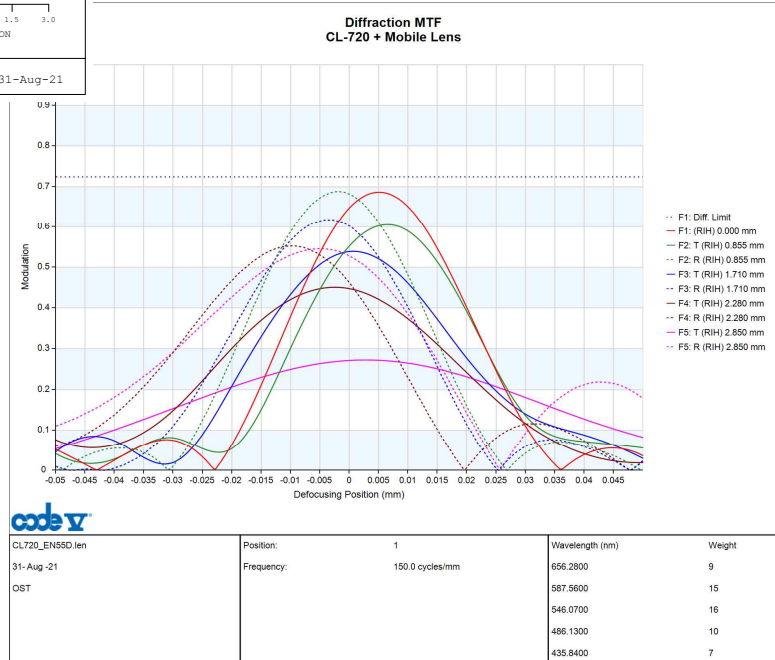
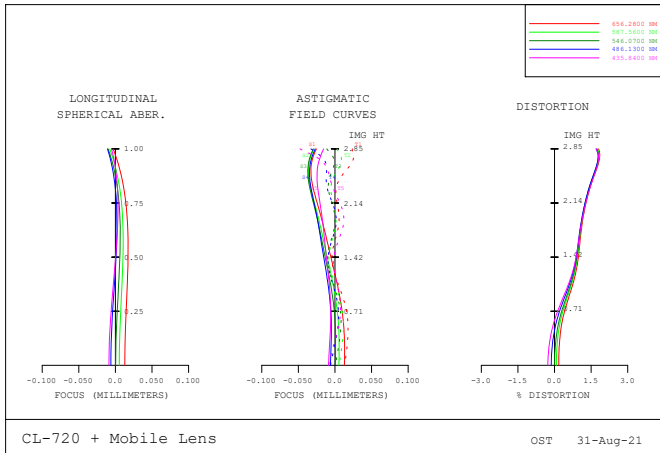
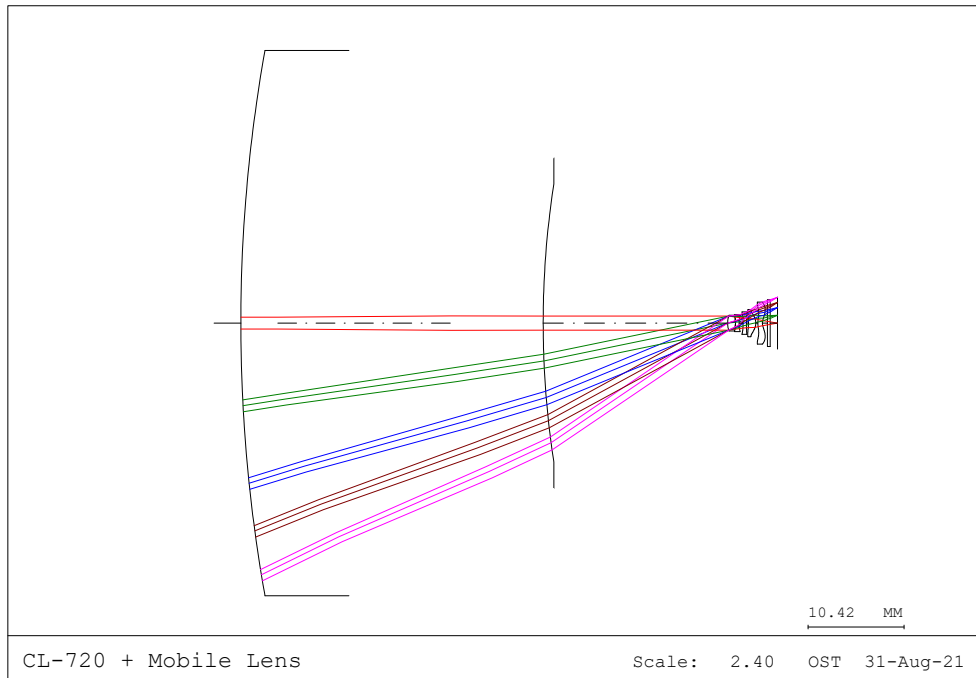
Fields = 0.0F, 0.3F, 0.6F, 0.8F, 1.0F



MTF Analysis for (CL-720 + FOV 69° Lens of A company)

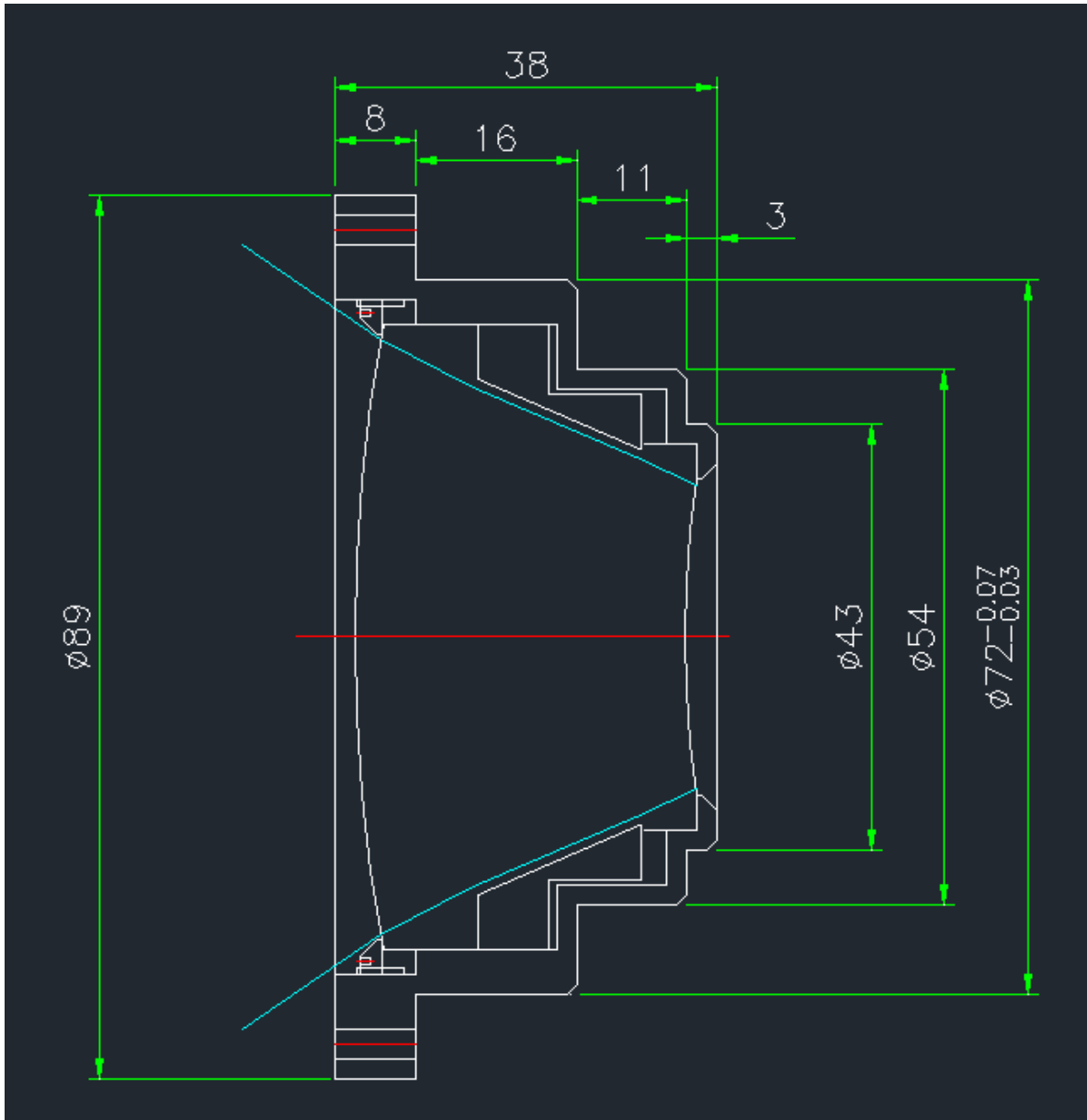
Object Distance : Infinity, Through Focus MTF(150lp/mm)

Fields = 0.0F, 0.3F, 0.6F, 0.8F, 1.0F

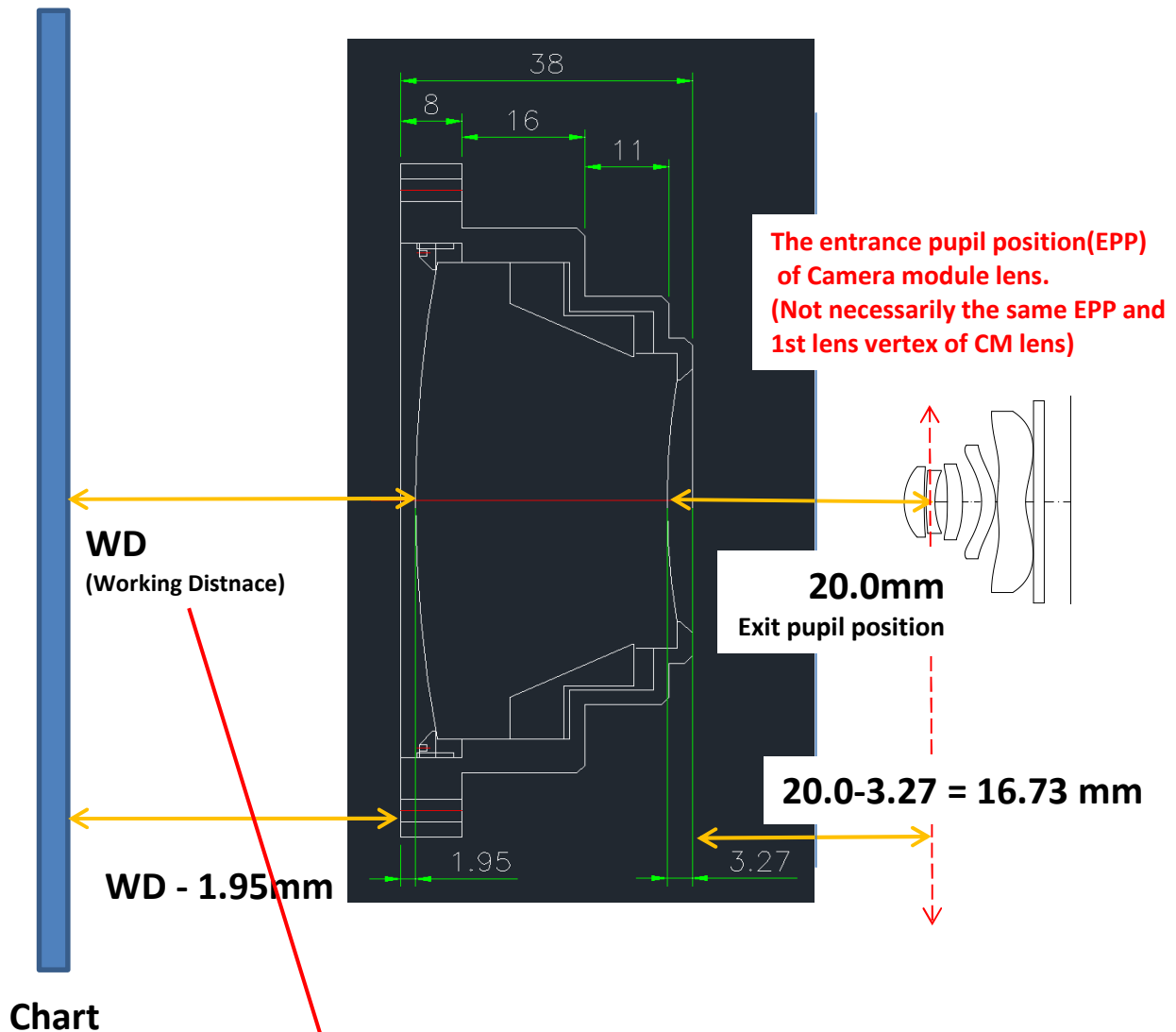


CL Drawings

Φ89mm X L38.0mm, 0.24kg



How to set Collimator Lens



The chart size of CL-720 (Whole Sub Lens is available)

31-Aug-2021

OneStone

Object Distance (mm) : Real shooting distance with camera.

Working Distance (mm) : Distance from 1st lens R1 vertex of CL to chart.

** This table is based on the FOV of camera lens.

The FOV of camera lens : 70.00

Object Distance (Object~PCM)	Sub Lens (recomanded)	Working Distance Chart CL vertex	Chart Size (Dia)
1.00e+100	0.00D	329.20	545.2
4.00e+04	0.00D	325.46	539.7
2.05e+04	0.00D	321.99	534.5
2.00e+04	0.00D	321.81	534.3

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1.00e+100	0.00D	329.20	545.2
4.00e+04	0.00D	325.46	539.7
2.05e+04	0.00D	321.99	534.5
2.00e+04	0.00D	321.81	534.3
1.00e+04	0.00D	314.71	523.8
9.50e+03	0.00D	313.98	522.7
9.00e+03	0.00D	313.17	521.5
8.50e+03	0.00D	312.27	520.2
8.00e+03	0.00D	311.26	518.7
7.50e+03	0.00D	310.13	517.1
7.00e+03	0.00D	308.84	515.2
6.50e+03	0.00D	307.37	513.0
6.00e+03	0.00D	305.67	510.5
5.50e+03	0.00D	303.67	507.5
5.00e+03	0.00D	301.31	504.0
4.50e+03	0.00D	298.47	499.9
4.00e+03	0.00D	294.98	494.7
3.50e+03	0.00D	290.61	488.3
3.00e+03	0.00D	284.94	479.9
2.50e+03	0.00D	277.33	468.7
2.00e+03	0.00D	266.55	452.8
1.90e+03	0.00D	263.83	448.8
1.80e+03	0.00D	260.87	444.4
1.70e+03	0.00D	257.63	439.6
1.60e+03	0.00D	254.06	434.3
1.50e+03	0.00D	250.12	428.5
1.40e+03	0.00D	245.74	422.1
1.30e+03	0.00D	240.85	414.9
1.20e+03	0.00D	235.35	406.8
1.10e+03	0.00D	229.12	397.6
1.00e+03	0.00D	222.00	387.1
9.50e+02	0.00D	218.05	381.2
9.00e+02	0.00D	213.80	375.0
8.50e+02	0.00D	209.21	368.2
8.00e+02	0.00D	204.23	360.8
7.50e+02	0.00D	198.83	352.9
7.00e+02	0.00D	192.94	344.2
6.50e+02	0.00D	186.49	334.7
6.00e+02	0.00D	179.40	324.2
5.50e+02	0.00D	171.56	312.7
5.00e+02	0.00D	162.87	299.8
4.50e+02	0.00D	153.15	285.5
4.00e+02	0.00D	142.24	269.4

The chart size of CL-720(F400-70) : No Sub Lens

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Object Distance(mm) : 1.00e+03
Distance from Chart to CL(mm) : 222.00
Distance from Chart to Exit-Pupil(mm) : 274.79
The Type of Sub Lens : 0.00D

** This table is based on the Object Distance of camera lens.

F0V of Camera Lens (degrees)	Chart Size(Diameter) (mm)
30.00	147.97
31.00	153.15
32.00	158.35
33.00	163.58
34.00	168.84
35.00	174.12
36.00	179.44
37.00	184.79
38.00	190.16
39.00	195.57
40.00	201.02
41.00	206.49
42.00	212.01
43.00	217.56
44.00	223.15
45.00	228.78
46.00	234.45
47.00	240.17
48.00	245.93
49.00	251.73
50.00	257.58
51.00	263.48
52.00	269.43
53.00	275.43
54.00	281.48
55.00	287.59
56.00	293.75
57.00	299.97
58.00	306.25
59.00	312.60
60.00	319.01
61.00	325.48
62.00	332.02
63.00	338.63
64.00	345.31
65.00	352.07
66.00	358.91
67.00	365.82
68.00	372.82
69.00	379.90
70.00	387.06

Lens Pictures

