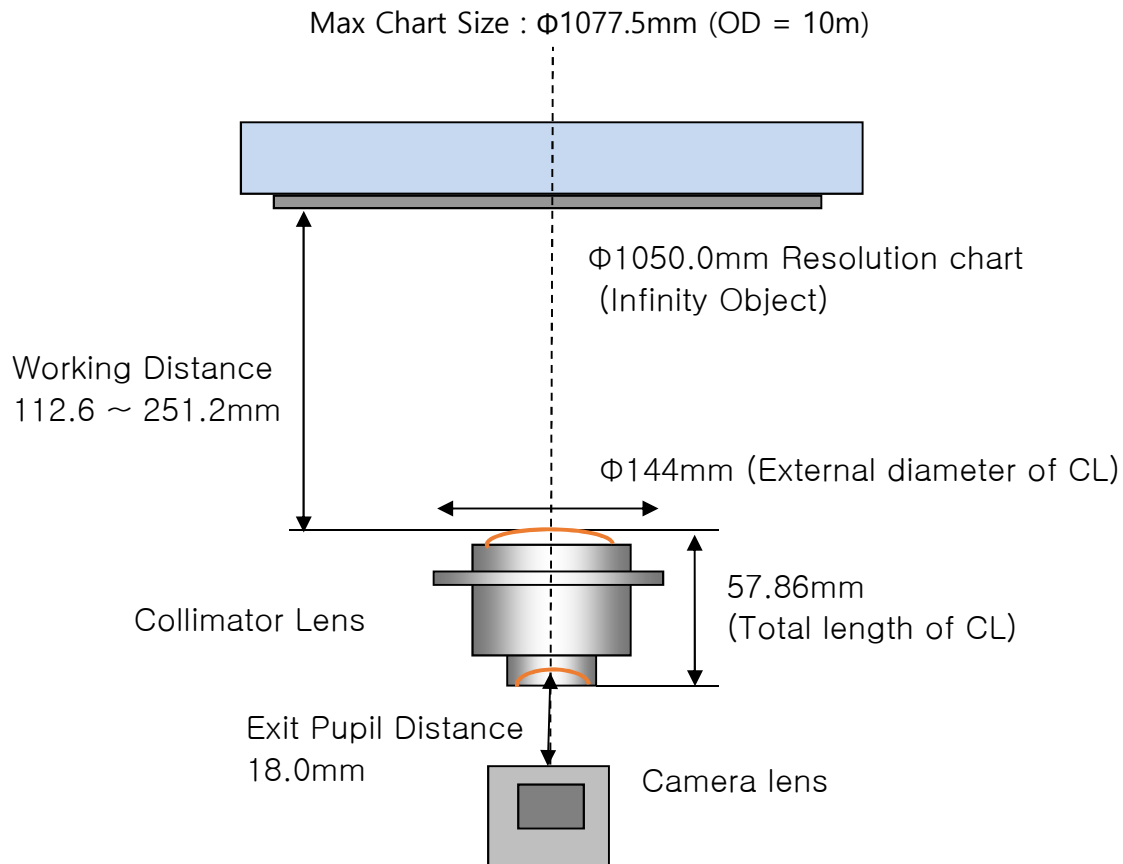


# CL-1218C Collimator Lens Spec.

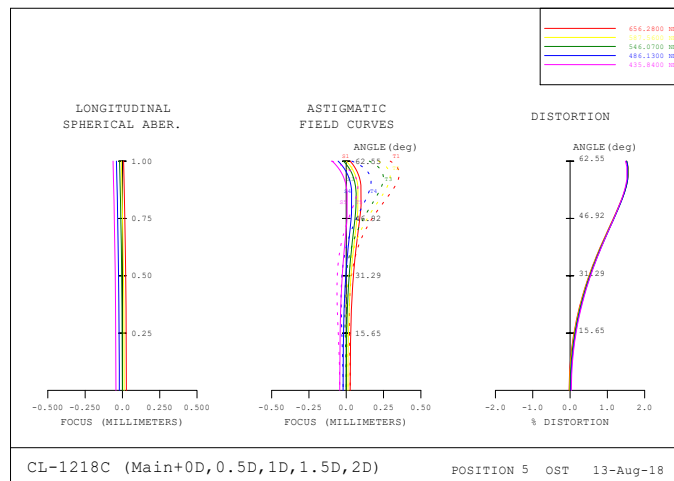
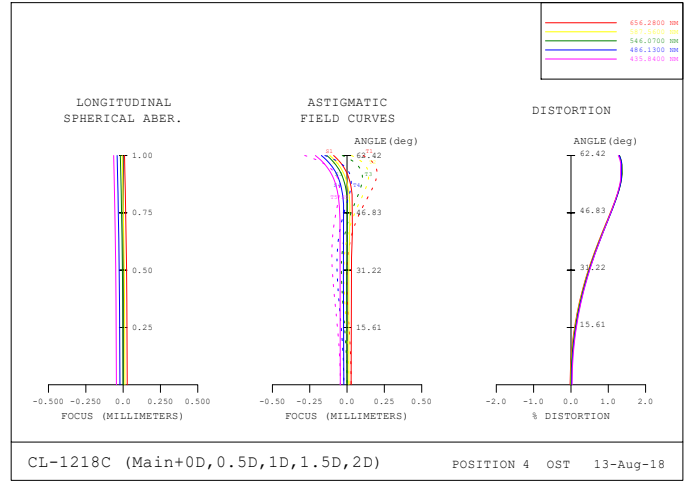
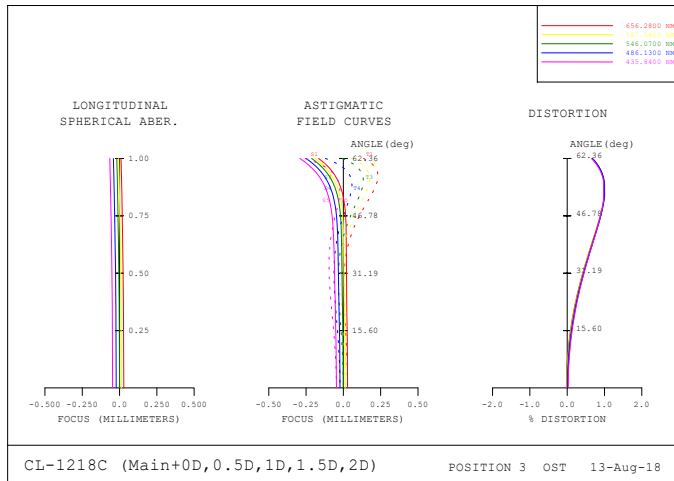
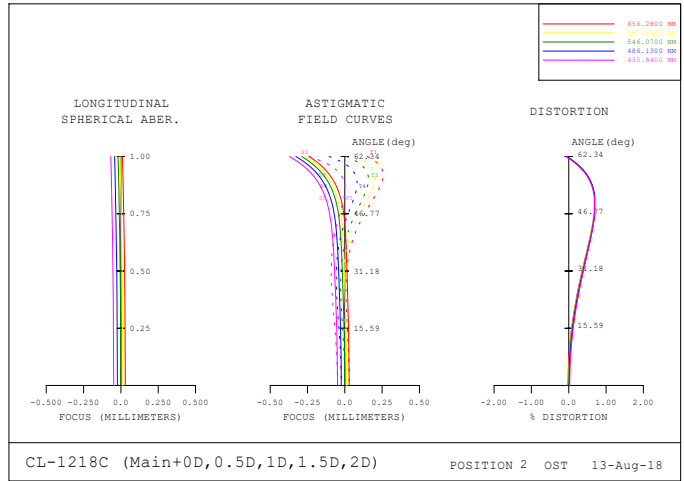
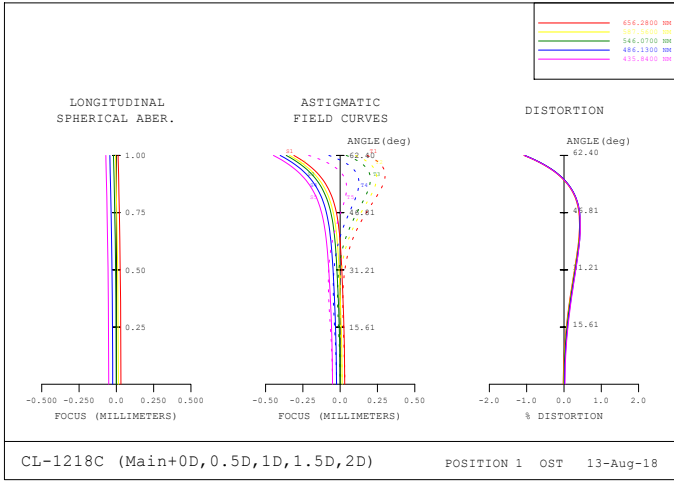
2018-08-27  
OneStone

<b>Model name</b>	CL-1218C (Designed by OneStone)
<b>Characteristic of CL-1218C</b>	Camera Lens of FOV 120 degree is adaptive.
<b>Main Lens</b>	CL-1218C (Main)
<b>Sub Lens Sets</b>	CL-1218C (Sub 0.0D), CL-1218C (Sub 0.5D) CL-1218C (Sub 1.0D), CL-1218C (Sub 1.5D) CL-1218C (Sub 2.0D)
<b>Main plus each Sub set</b>	ex) CL-1218C (Main+Sub 0.0D)
<b>EFL</b>	300.0 ~ 380.0mm
<b>Inspectable FOV of CCM</b>	120°
<b>Ass'y Size</b>	Φ144mm X L57.86mm, 1.36 kg
<b>Exit Pupil Size</b>	Φ4.0mm
<b>Exit Pupil Position</b>	18.0mm
<b>Exit Pupil Position (Mecha)</b>	14.04mm (from the bottom of CL barrel to the exit pupil)
<b>Working Distance (from CL 1st Lens R1 surface to chart)</b>	233.49mm at Object Distance Infinity



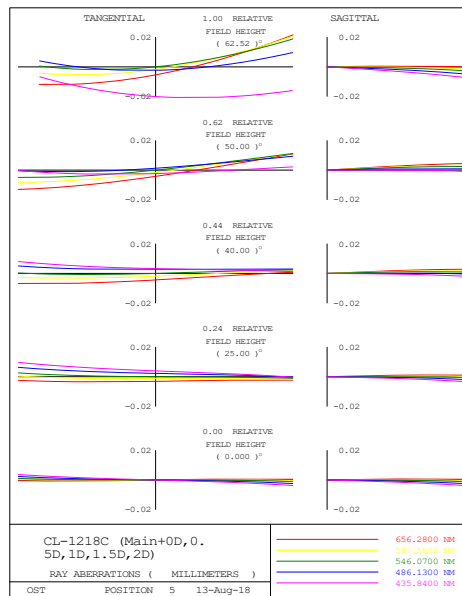
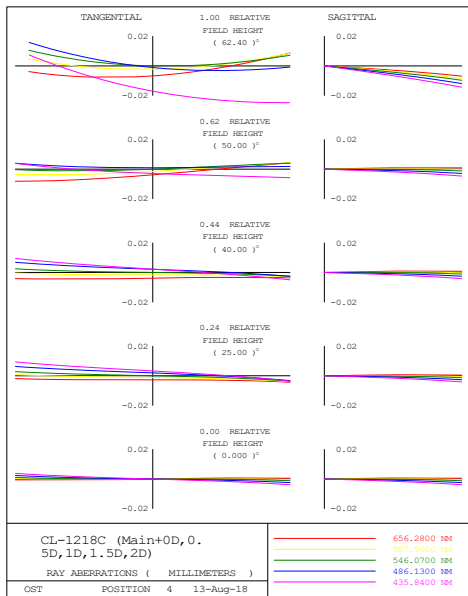
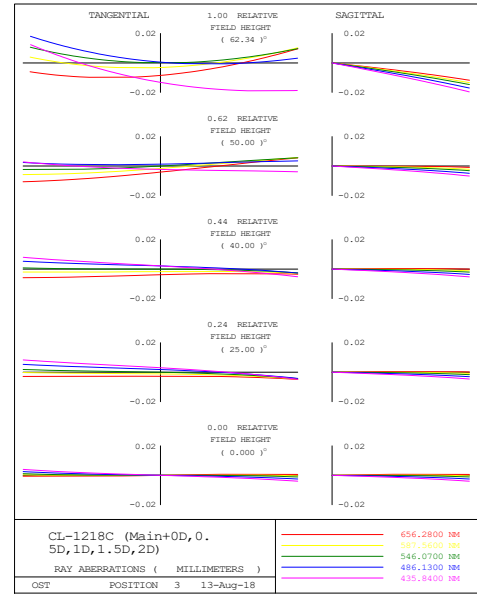
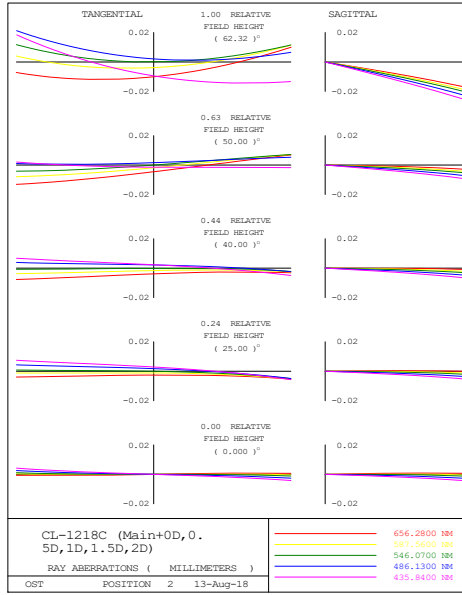
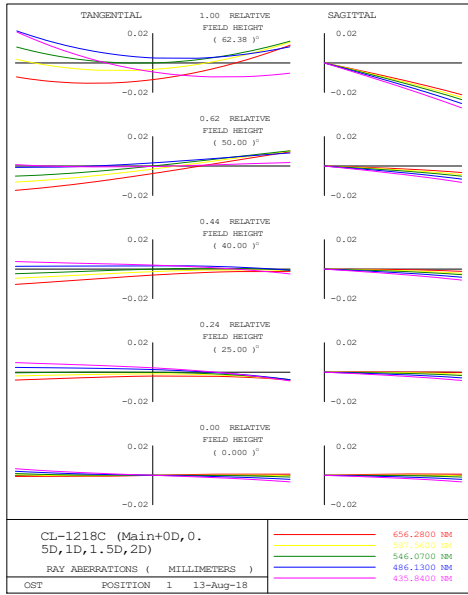
# Optical performance of CL-1218C Lens (Infinity, 2m, 1m, 0.7m, 0.5m at 120°)

Aberration Scale :  $\pm 0.5 \pm 0.5 \pm 2.0\%$



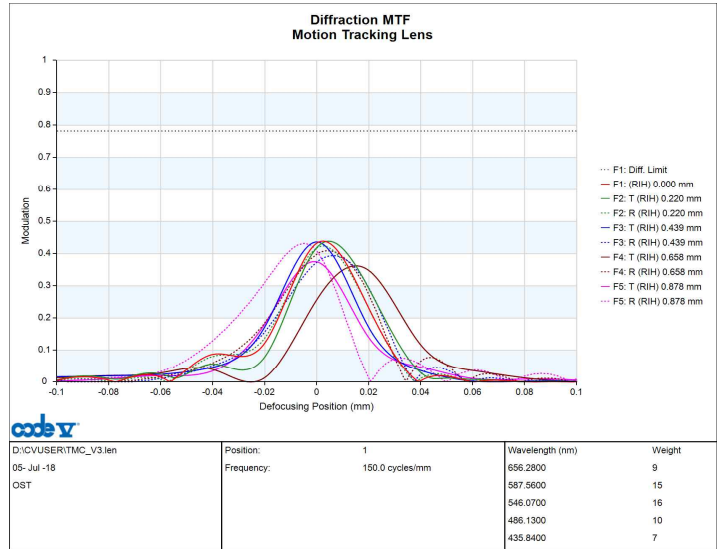
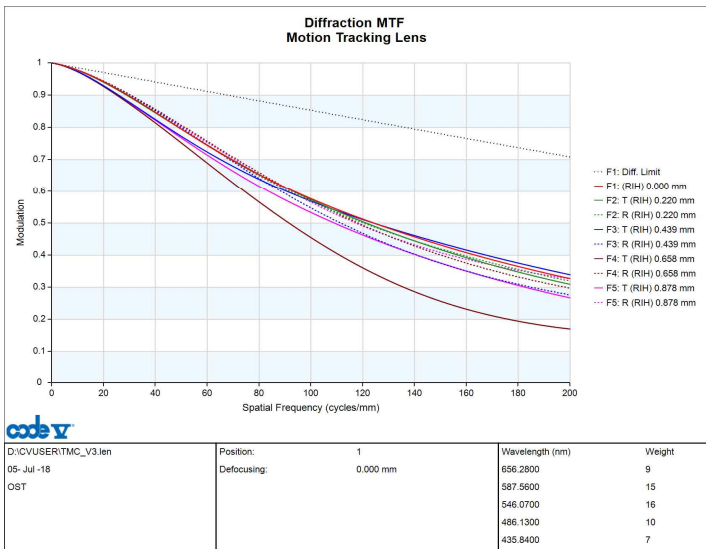
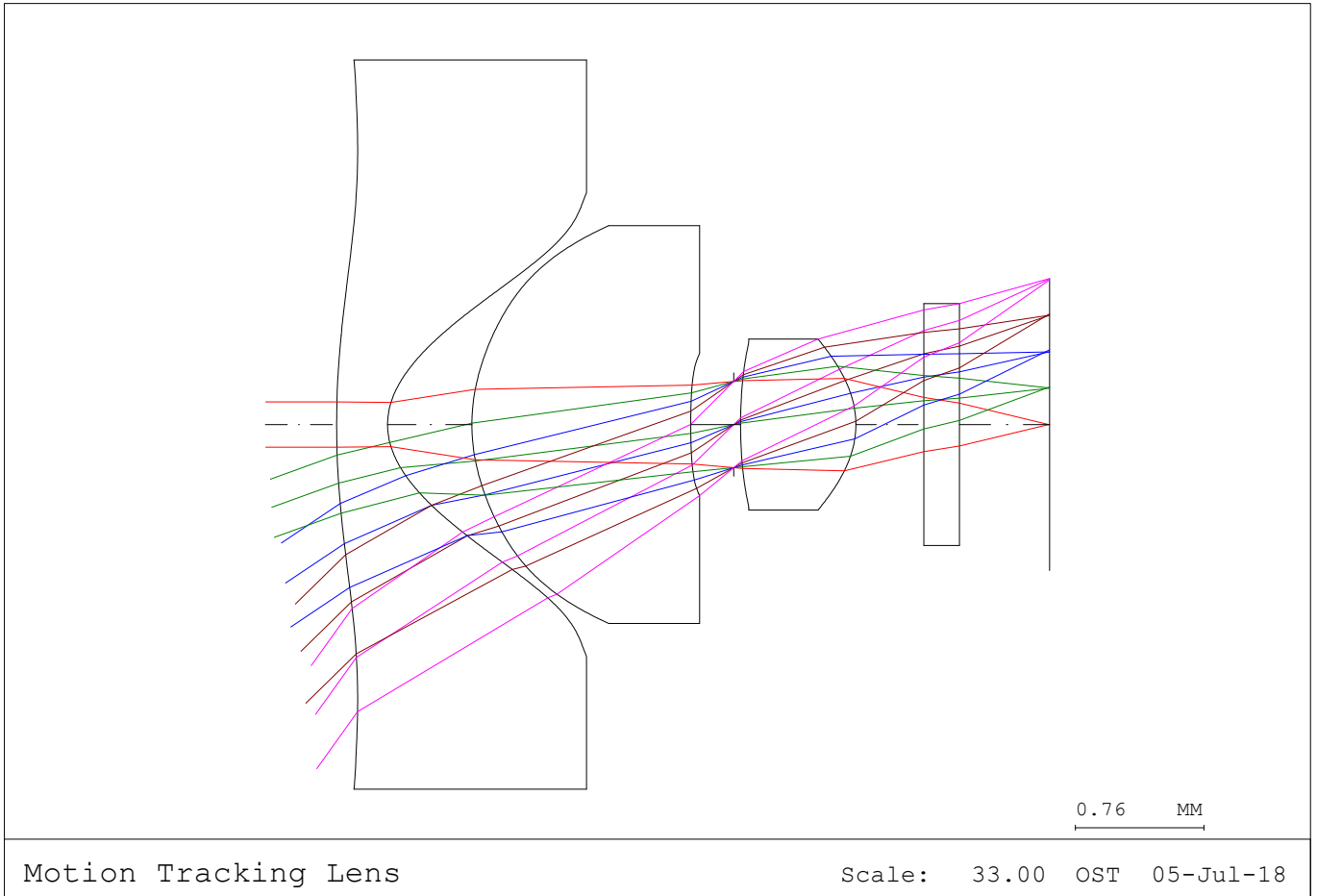
# Optical performance of CL-1218C Lens (Infinity, 2m, 1m, 0.7m, 0.5m at 120°)

Aberration Scale :  $\pm 0.02$



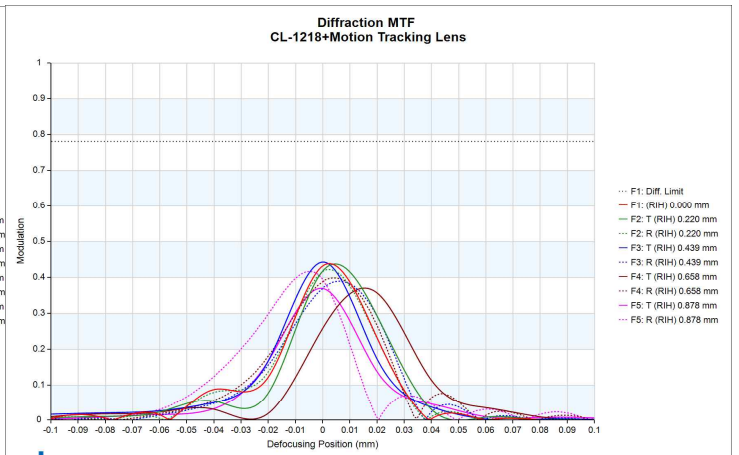
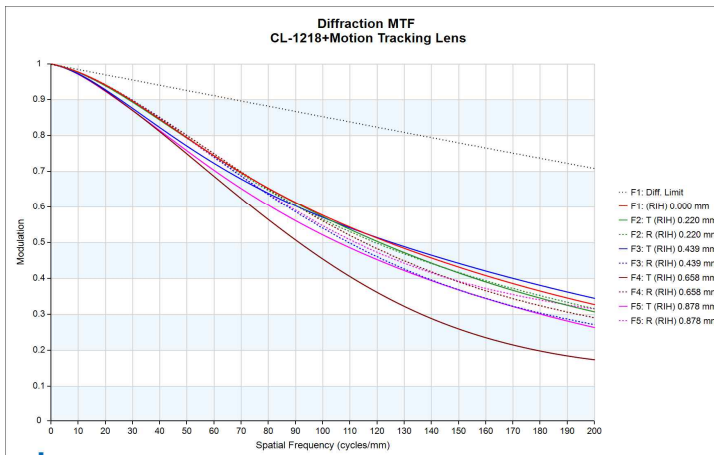
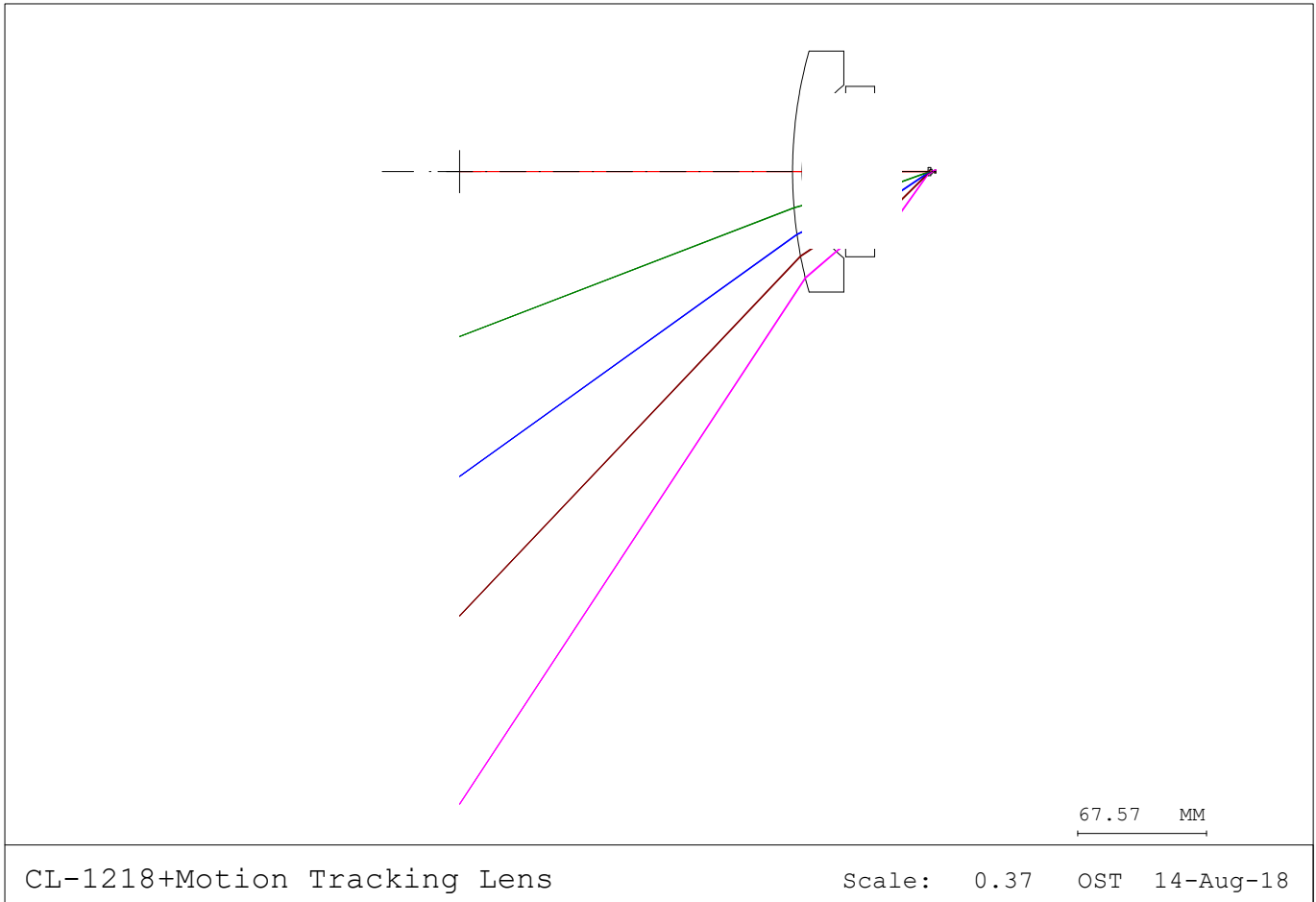
# Motion Tracking Lens (designed by OST)

EFL = 0.5698, Fno = 2.08, FOV = 110, Object Distance 1m, MTF 150lp/mm, 200lp/mm



# CL-1218C + Motion Tracking Lens

EFL = 0.5698, Fno = 2.08, FOV = 110, Object Distance 1m, MTF 150lp/mm, 200lp/mm



CL1218_V1_TMCV3.len	Position:	1	Wavelength (nm)	Weight
14-Aug-18	Defocusing:	0.000 mm	656.2800	9
OST			587.5600	15
			546.0700	16
			486.1300	10
			435.8400	7

CL1218_V1_TMCV3.len	Position:	1	Wavelength (nm)	Weight
14-Aug-18	Frequency:	150.0 cycles/mm	656.2800	9
OST			587.5600	15
			546.0700	16
			486.1300	10
			435.8400	7

## The chart size of CL-1218C

2018-08-12

OneStone

Object Distance : Real shooting distance with Camera.

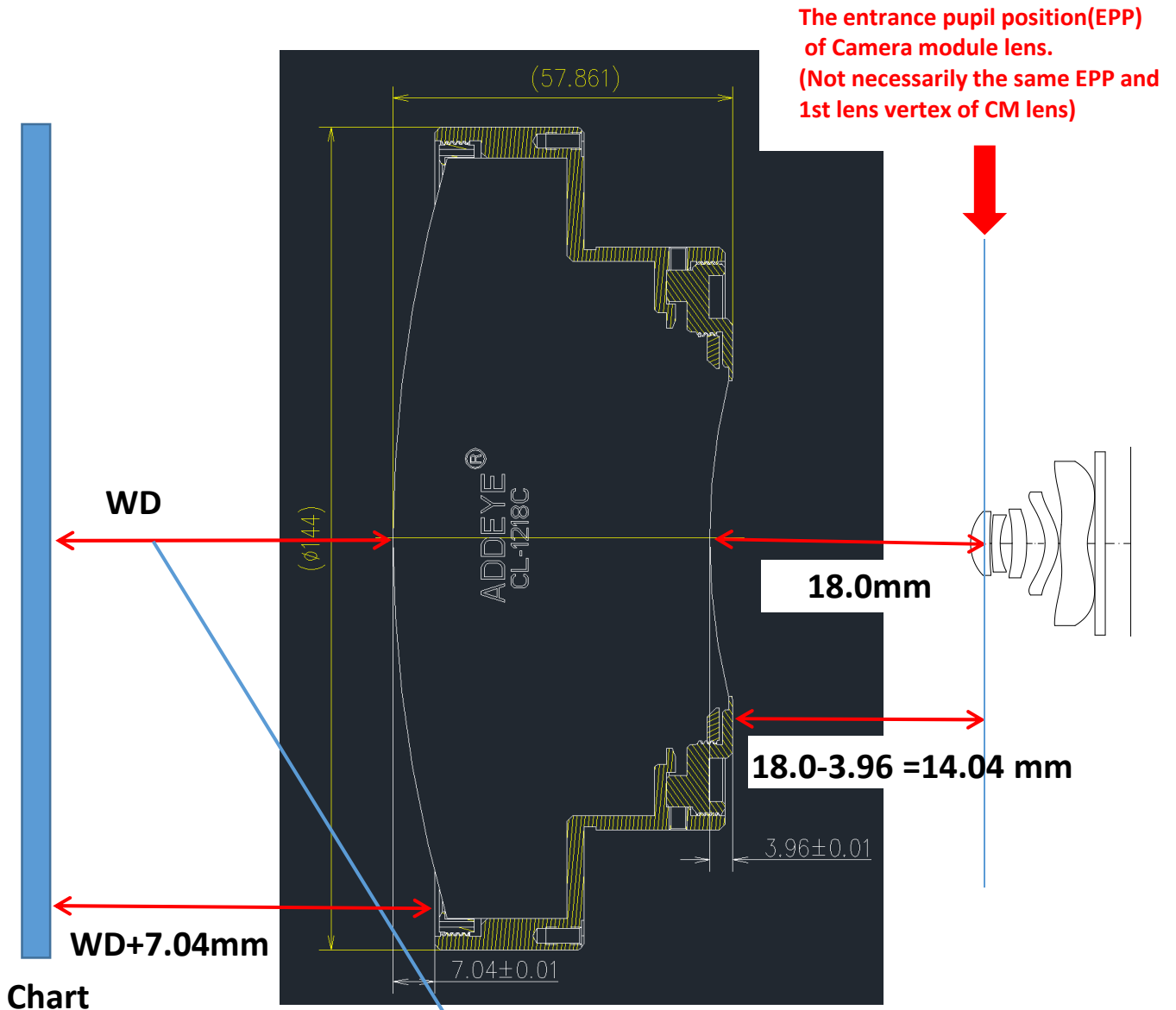
Working Distance : Distance from 1st Lens R1 vertex of CL to chart.

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

Camera Lens	
FOV	120
Half FOV	60

Object Distance (Object ~ PCM)	Sub Lens (recomanded)	Working Distance (Chart ~ CL vertex)	Chart Size (Φ, mm)
1.00E+100	0D	233.49	1050.0
100000	0D	232.59	1046.5
50000	0D	231.70	1043.1
20000	0D	229.06	1033.0
15000	0D	227.62	1027.5
10000	0.5D	241.27	1077.5
8000	0.5D	238.89	1068.5
5000	0.5D	231.99	1042.2
3000	0.5D	220.51	998.4
2500	0.5D	215.10	977.8
2000	0.5D	207.39	948.4
1900	0.5D	205.44	940.9
1800	0.5D	203.30	932.8
1700	0.5D	200.95	923.8
1600	0.5D	198.36	914.0
1500	1.0D	206.34	945.3
1400	1.0D	202.82	931.9
1300	1.0D	198.88	916.8
1200	1.0D	194.43	899.9
1100	1.0D	189.38	880.6
1000	1.0D	183.58	858.4
900	1.0D	176.86	832.8
800	1.5D	176.37	832.9
700	1.5D	166.30	794.4
600	1.5D	154.19	748.1
550	2.0D	152.64	745.7
500	2.0D	144.35	713.8
400	2.0D	124.67	638.2

## How to set Collimator Lens



The chart size of CL-1218C (Whole Sub Lens is available)

2018-08-12  
OneStone

Object Distance : Real shooting distance with Camera.

Working Distance : Distance from 1st Lens R1 vertex of CL to chart.

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

Camera Lens	
FOV	120
Half FOV	60

CL1218C\_V1.len  
CL1218C\_A1.seq

Object Distance (Object ~ PCM)	Sub Lens (recomanded)	Working Distance (Chart ~ CL vertex)	Chart Size (Φ, mm)
1.00E+100	0D	233.49	1050.0
100000	0D	232.59	1046.5
50000	0D	231.70	1043.1
20000	0D	229.06	1033.0
15000	0D	227.62	1027.5
10000	0.5D	241.27	1077.5
8000	0.5D	238.89	1068.5
5000	0.5D	234.00	1040.0

