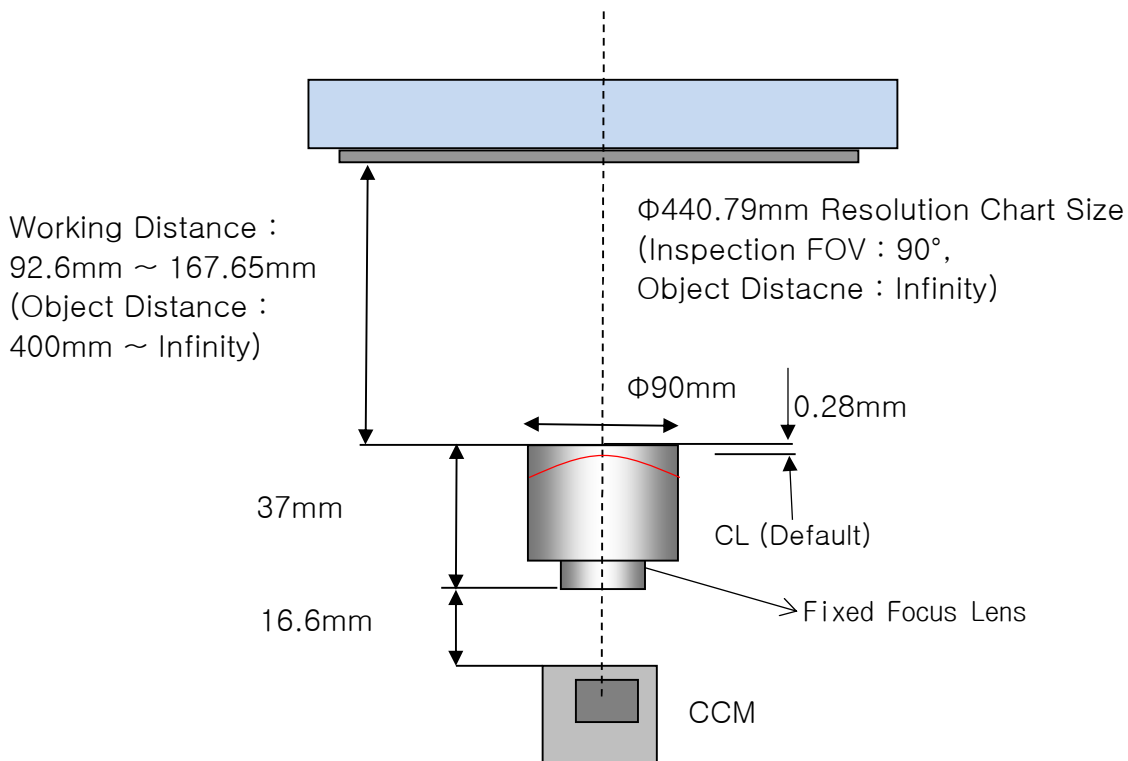


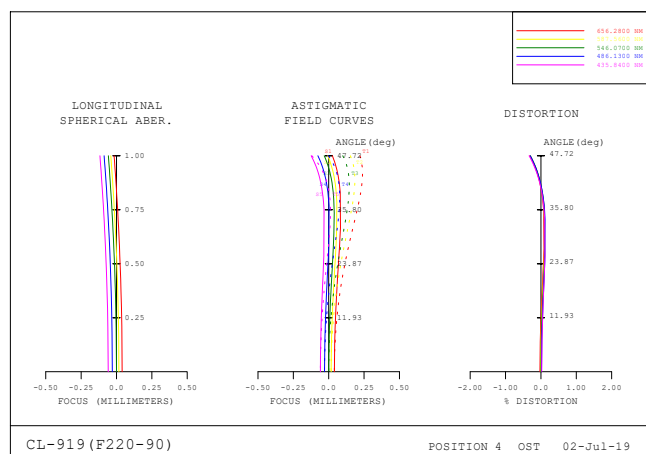
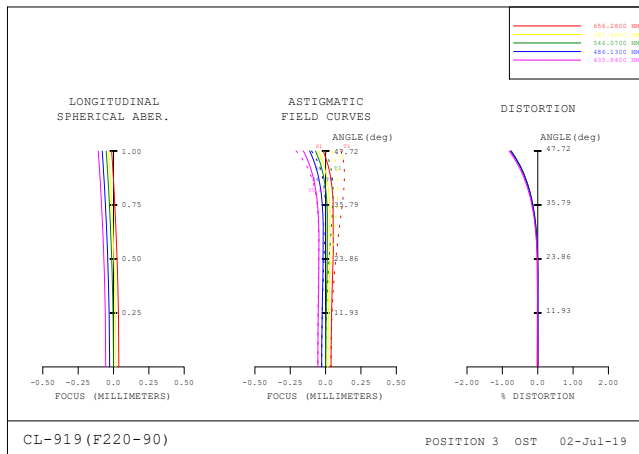
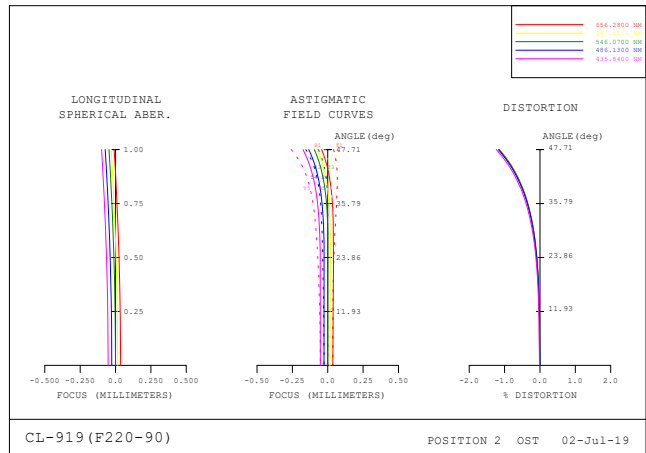
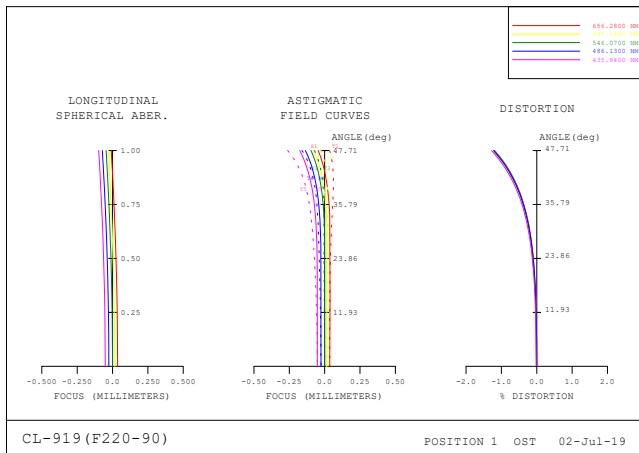
# CL-919(F220-90) Collimating Lens Spec.

2020-03-26  
OneStone

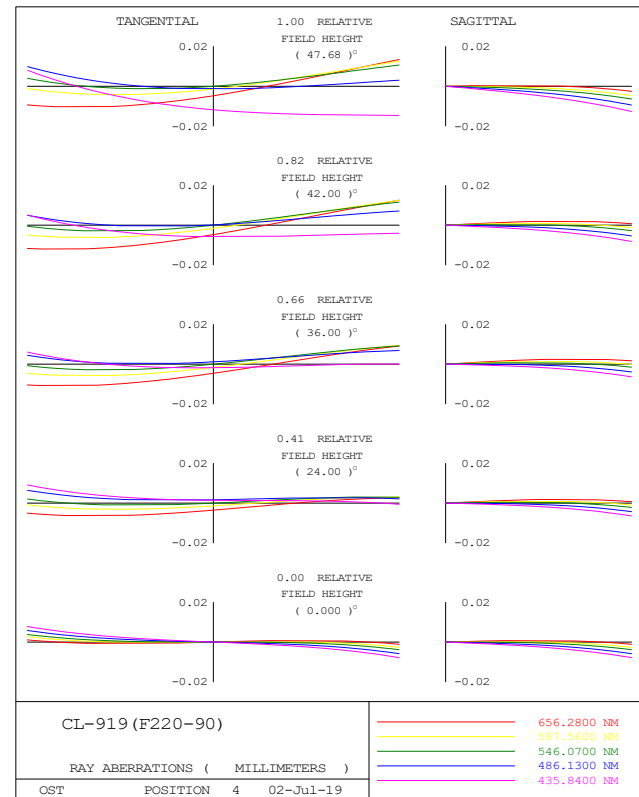
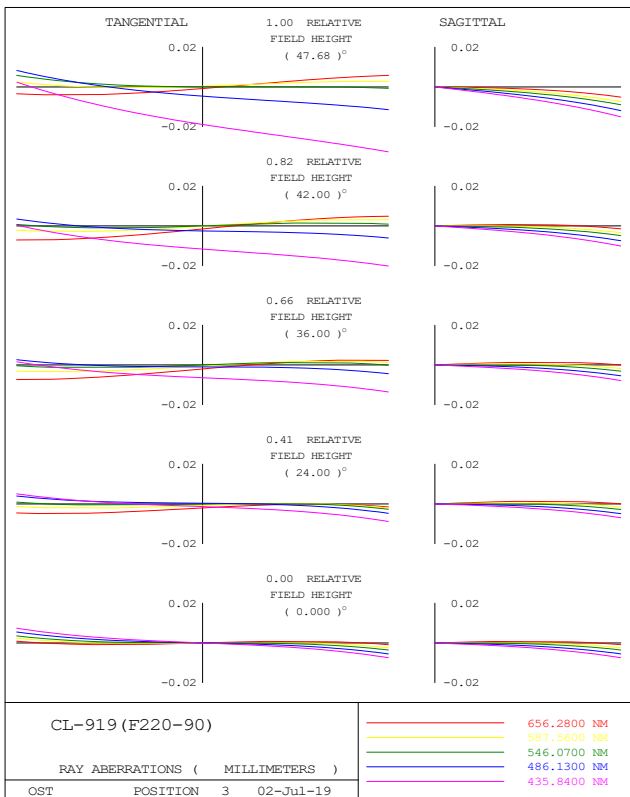
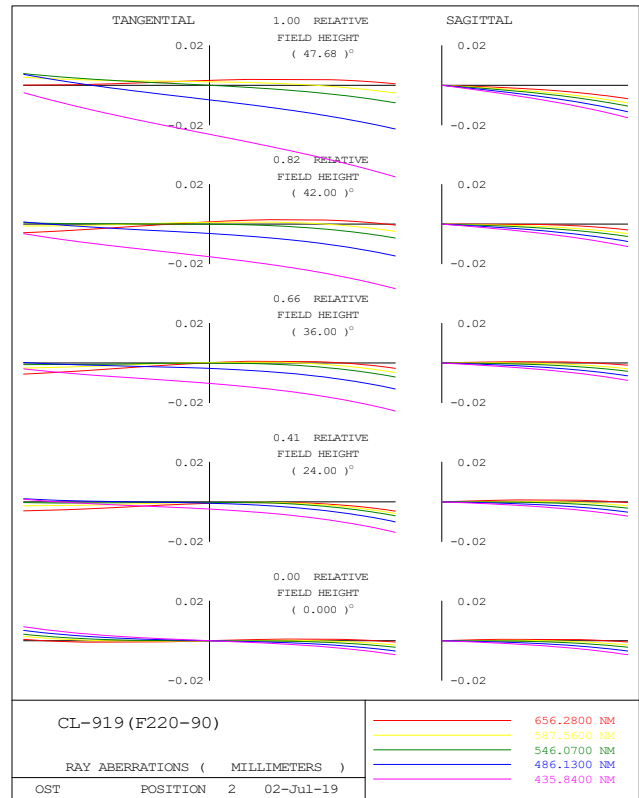
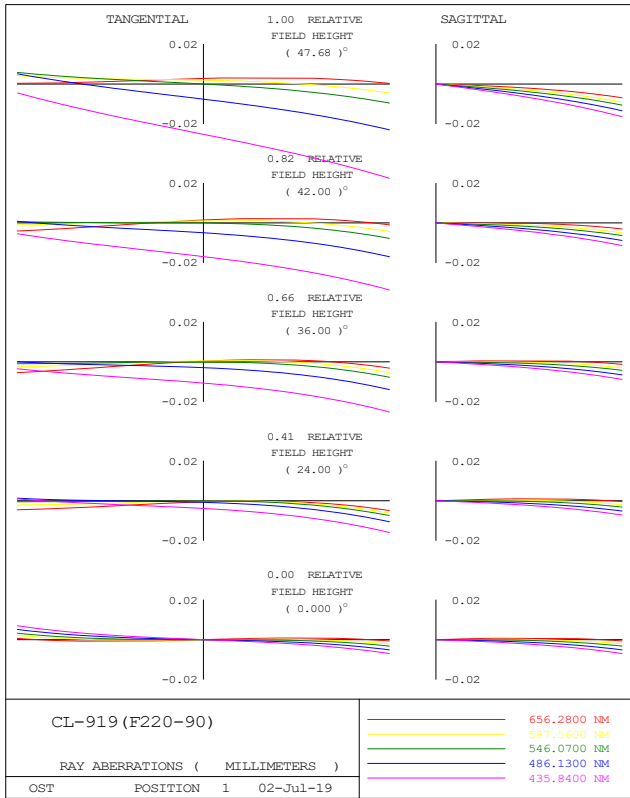
<b>Model name</b>	CL-919 (Designed by OneStone)	
<b>Characteristic of CL-919</b>	Fixed Focus Lens A Convenient Lens	
<b>EFL</b>	217.7mm	
<b>Inspectable FOV of CCM</b>	90°	
<b>Ass'y Size</b>	Φ90mm X L37mm, 0.38kg	
<b>Exit Pupil Size</b>	Φ4.5mm	
<b>Exit Pupil Position</b>	19.0mm (from Vertex of CL's last lens to CCM)	
<b>Working Distace</b>		
(from CL 1st Lens R1 surface to Chart)	167.65mm	at Object Distance Infinity
	92.60mm	at Object Distance 0.40m



# Optical Performance of CL-919(F220-90) Lens (Infinity, 10m, 1m, 0.5m at 90°)



# Optical Performance of CL-919(F220-90) Lens (Infinity, 10m, 1m, 0.5m at 90°)

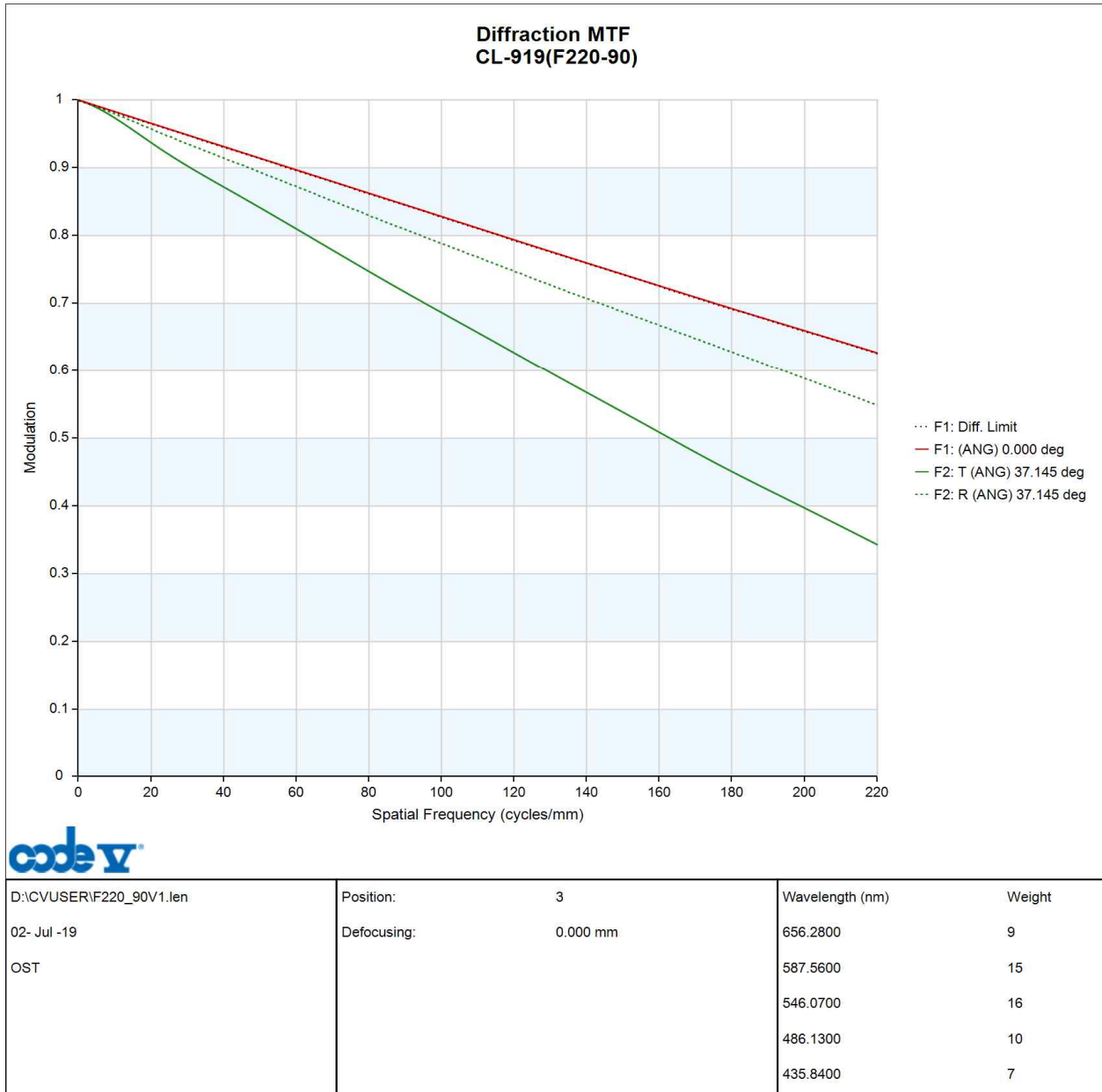


### MTF Analysis for FOV 89.5° Lens of A-Company

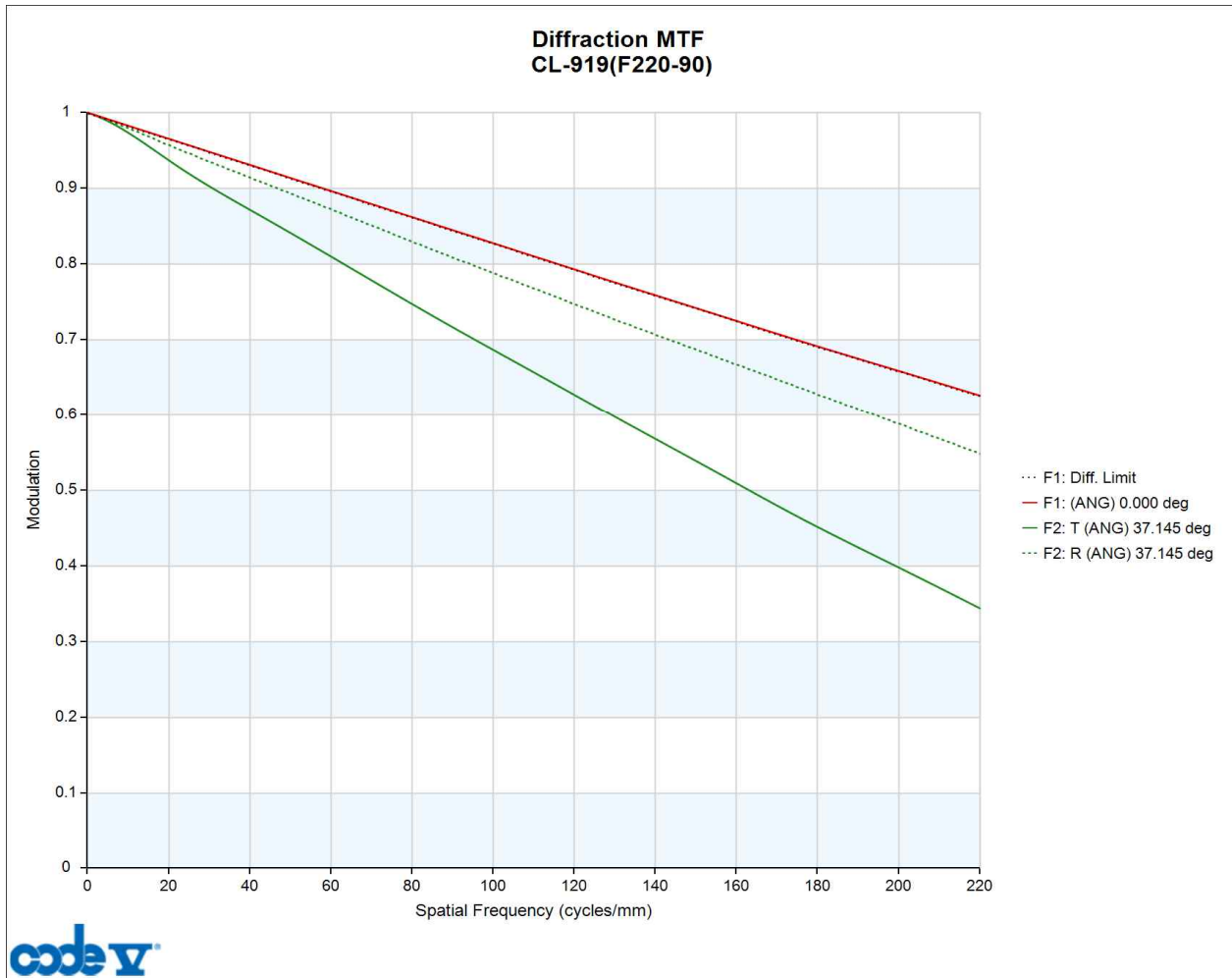
e<sub>fl</sub> = 1.22mm      F<sub>no</sub> = 2.45

EPD = 0.498mm ( = e<sub>fl</sub>/F<sub>no</sub>)

Object Distance : 1m (Center, 0.7F)

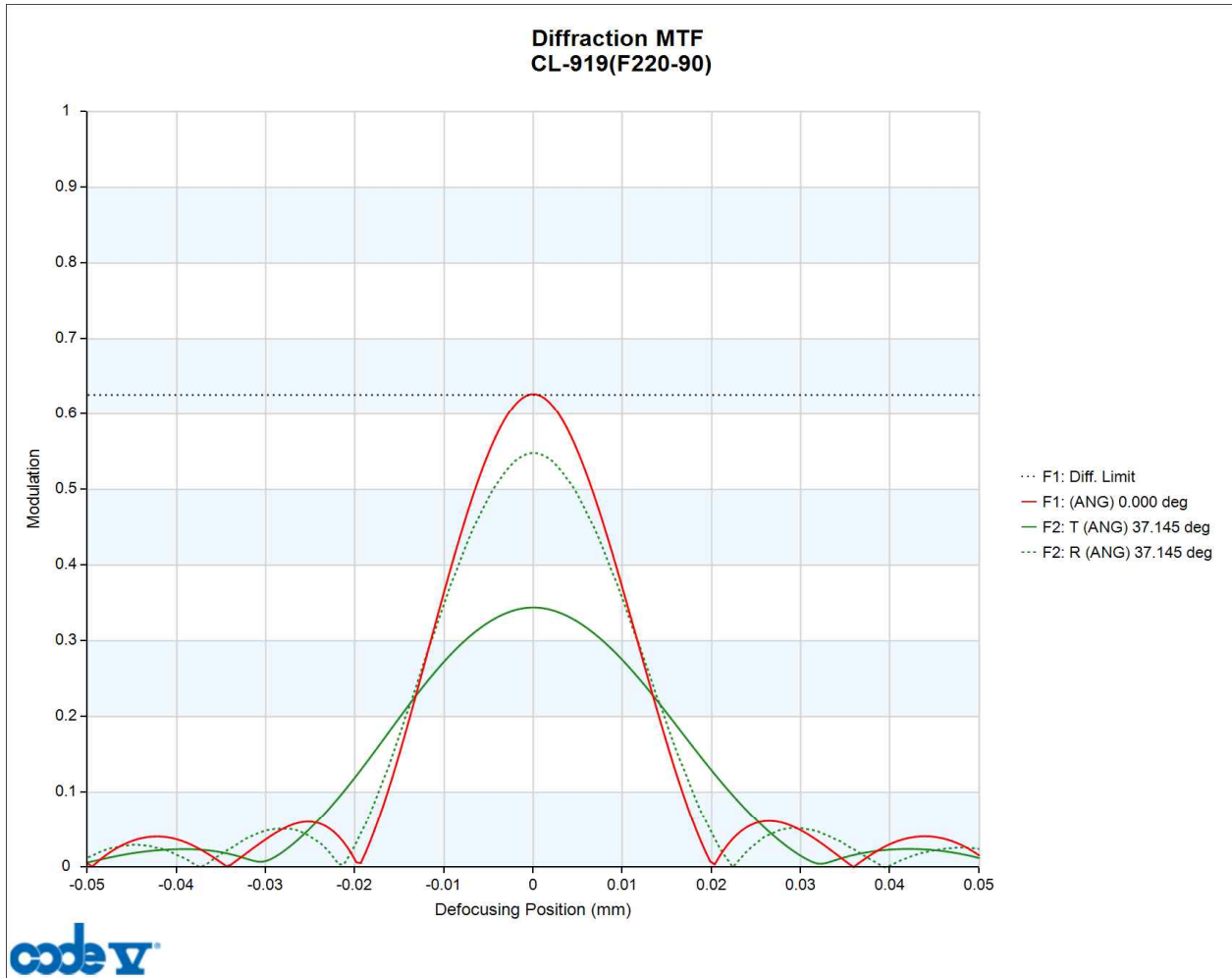


Object Distance : 0.5m (Center, 0.7F)



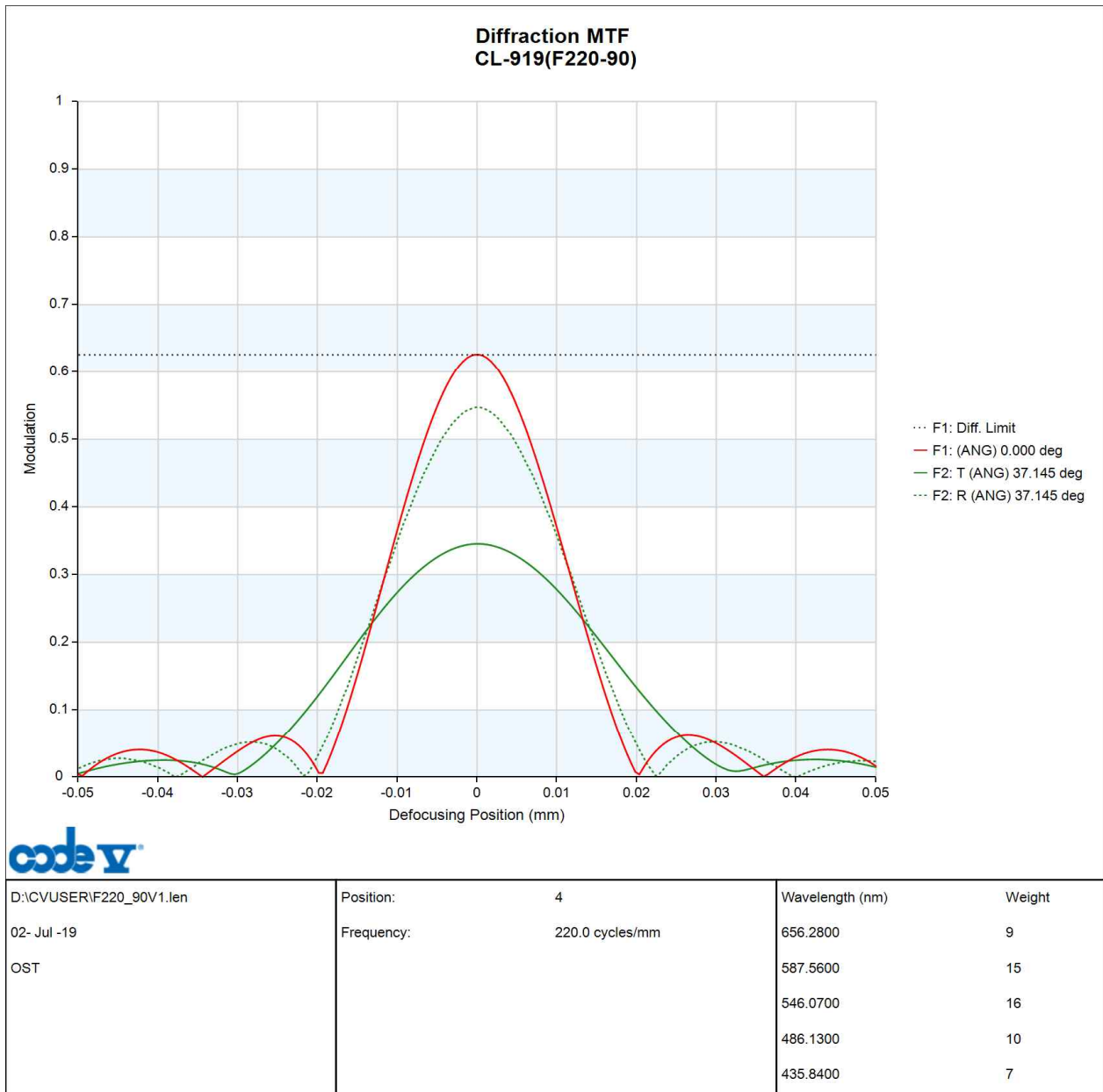
D:\CVUSER\F220_90V1.len	Position: 4	Wavelength (nm)	Weight
02-Jul-19	Defocusing: 0.000 mm	656.2800	9
OST		587.5600	15
		546.0700	16
		486.1300	10
		435.8400	7

Object Distance : 1m (Center, 0.7F)

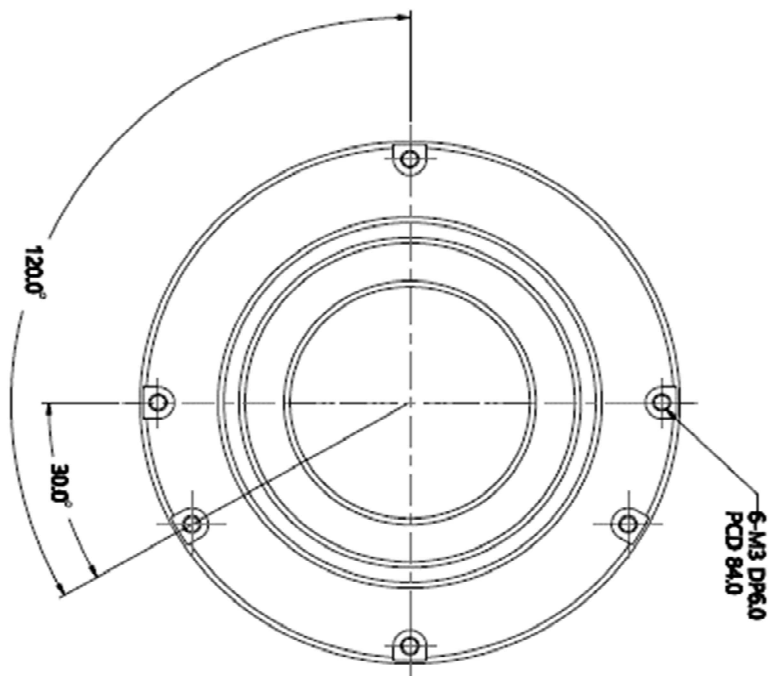
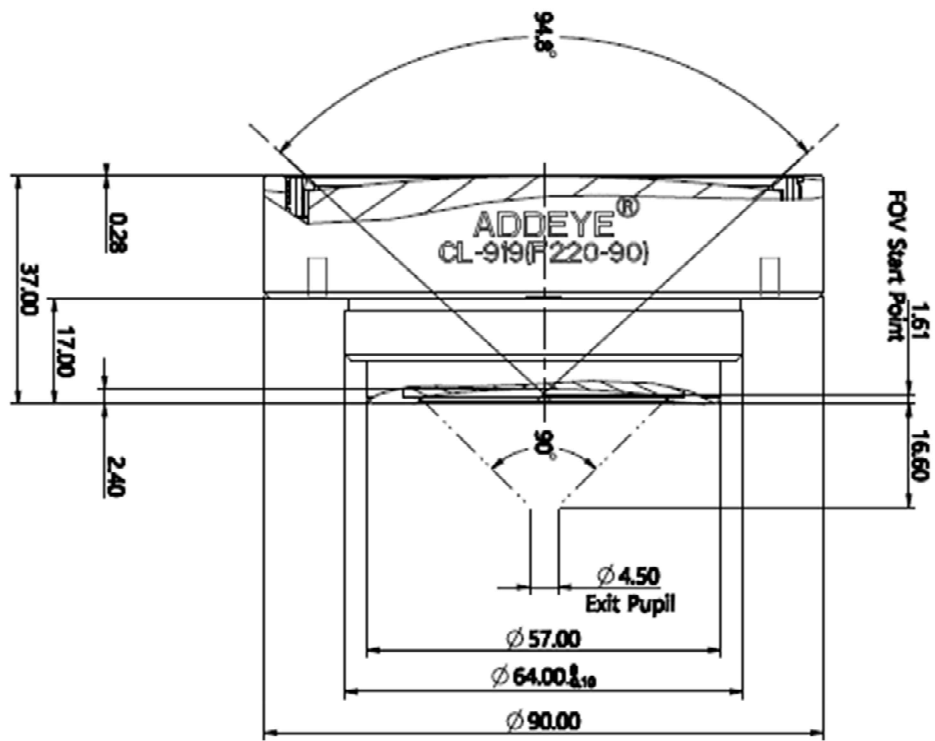


D:\CVUSER\F220_90V1.len	Position:	3	Wavelength (nm)	Weight
02- Jul -19	Frequency:	220.0 cycles/mm	656.2800	9
OST			587.5600	15
			546.0700	16
			486.1300	10
			435.8400	7

Object Distance : 0.5m (Center, 0.7F)

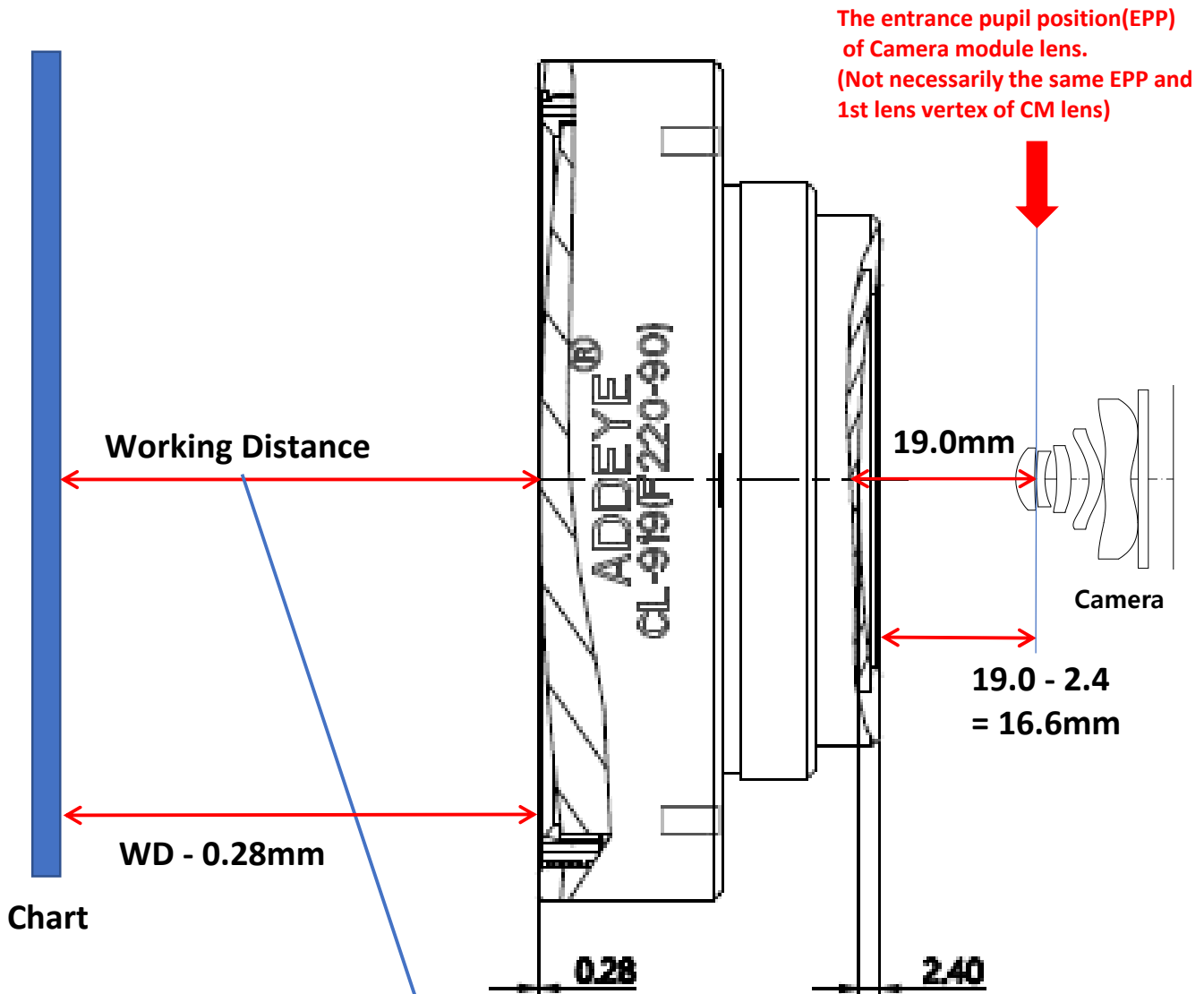


# CL919(F220-90) Outer Mechanical Drawings





## How to set Collimator Lens



The chart size of CL-919(F220-90) : No Sub Lens

25-Jul-2019  
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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 : 90.00

Object Distance (Object~PCM)	Sub Lens (recomanded)	Working Distance (Chart~ CL vertex)	Chart Size (Dia)
1.00e+100	0.00D	167.65	440.79
5.00e+004	0.00D	166.71	438.72
4.00e+004	0.00D	166.47	438.20
3.00e+004	0.00D	166.08	437.35
2.00e+004	0.00D	165.31	435.64

The chart size of CL-919(F220-90) : No Sub Lens

25-Jul-2019

OneStone

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1.00e+100	0.00D	167.65	440.79
5.00e+004	0.00D	166.71	438.72
4.00e+004	0.00D	166.47	438.20
3.00e+004	0.00D	166.08	437.35
2.00e+004	0.00D	165.31	435.64
1.00e+004	0.00D	163.02	430.61
9.00e+003	0.00D	162.52	429.51
8.00e+003	0.00D	161.89	428.14
7.00e+003	0.00D	161.10	426.39
6.00e+003	0.00D	160.04	424.08
5.00e+003	0.00D	158.59	420.88
4.00e+003	0.00D	156.45	416.18
3.00e+003	0.00D	152.98	408.56
2.00e+003	0.00D	146.41	394.12
1.90e+003	0.00D	145.41	391.93
1.80e+003	0.00D	144.32	389.53
1.70e+003	0.00D	143.11	386.88
1.60e+003	0.00D	141.77	383.93
1.50e+003	0.00D	140.27	380.65
1.40e+003	0.00D	138.60	376.96
1.30e+003	0.00D	136.70	372.80
1.20e+003	0.00D	134.54	368.05
1.10e+003	0.00D	132.05	362.59
1.00e+003	0.00D	129.16	356.24
9.50e+002	0.00D	127.53	352.66
9.00e+002	0.00D	125.76	348.77
8.50e+002	0.00D	123.82	344.51
8.00e+002	0.00D	121.70	339.85
7.50e+002	0.00D	119.36	334.71
7.00e+002	0.00D	116.77	329.01
6.50e+002	0.00D	113.88	322.67
6.00e+002	0.00D	110.65	315.57
5.50e+002	0.00D	107.00	307.56
5.00e+002	0.00D	102.86	298.46
4.50e+002	0.00D	98.11	288.02
4.00e+002	0.00D	92.60	275.93

## Lens Pictures

