

CLA-3560/CLA-3560P Specification

2020-10-30
OneStone

Model name	CLA-3560 (Designed by OneStone)
Characteristic of CLA-3560	Collimating Lens for Camera Module
Construction of CL (Default)	Main Lens Only
(Option)	Sub Prism
EFL	263.4mm
Inspectable FOV of CCM	35°
Ass'y Size (Main)	Φ66.0mm X L44.0mm, 0.27kg
(with Sub)	Φ66.0mm X L85.9mm (with prism), 0.48kg
Exit Pupil Size	Φ5.0mm
Exit Pupil Position	57.0mm (from main barrel bottom of CL) 26.35mm (from sub barrel bottom of CL)
The range of OD (Object Distance)	0.8m ~ Infinity
The range of WD (Working Distance)	152.3 ~ 220.0mm (from the 1st lens R2 surface of CL to Chart)
The range of CS (Chart Size)	Φ128.9 ~ Φ165.2mm (Diameter)

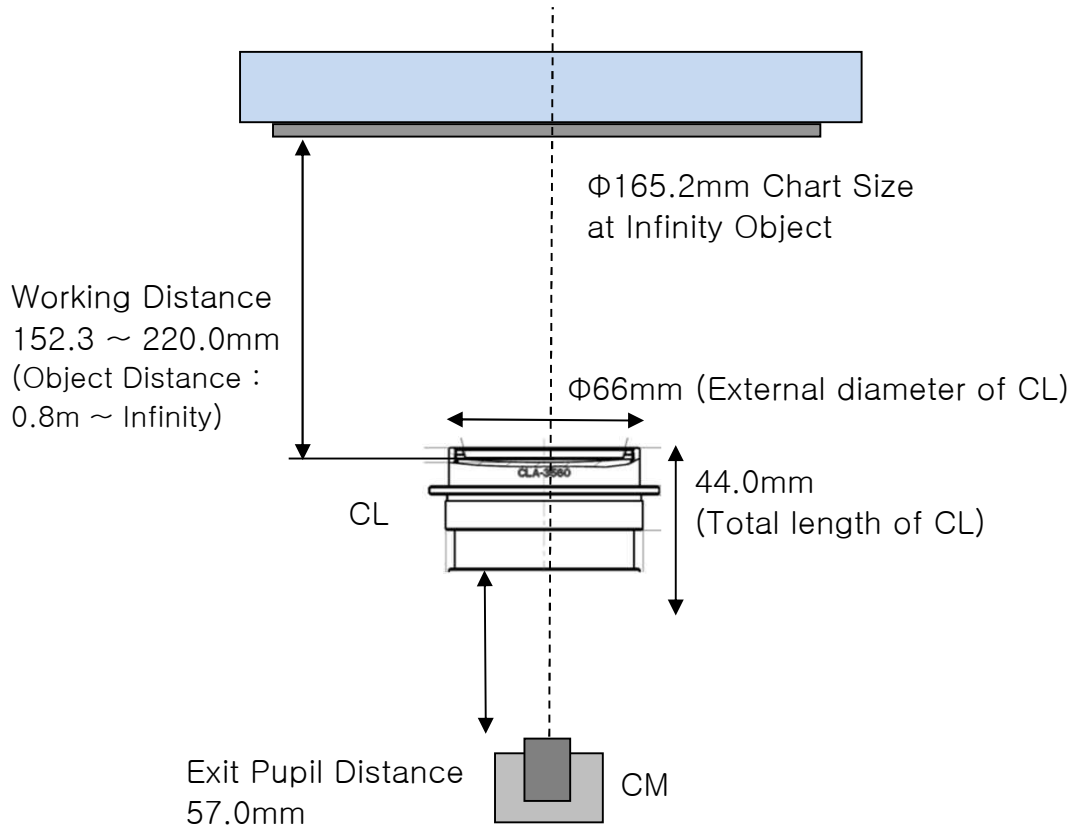


CLA-3560(Main)

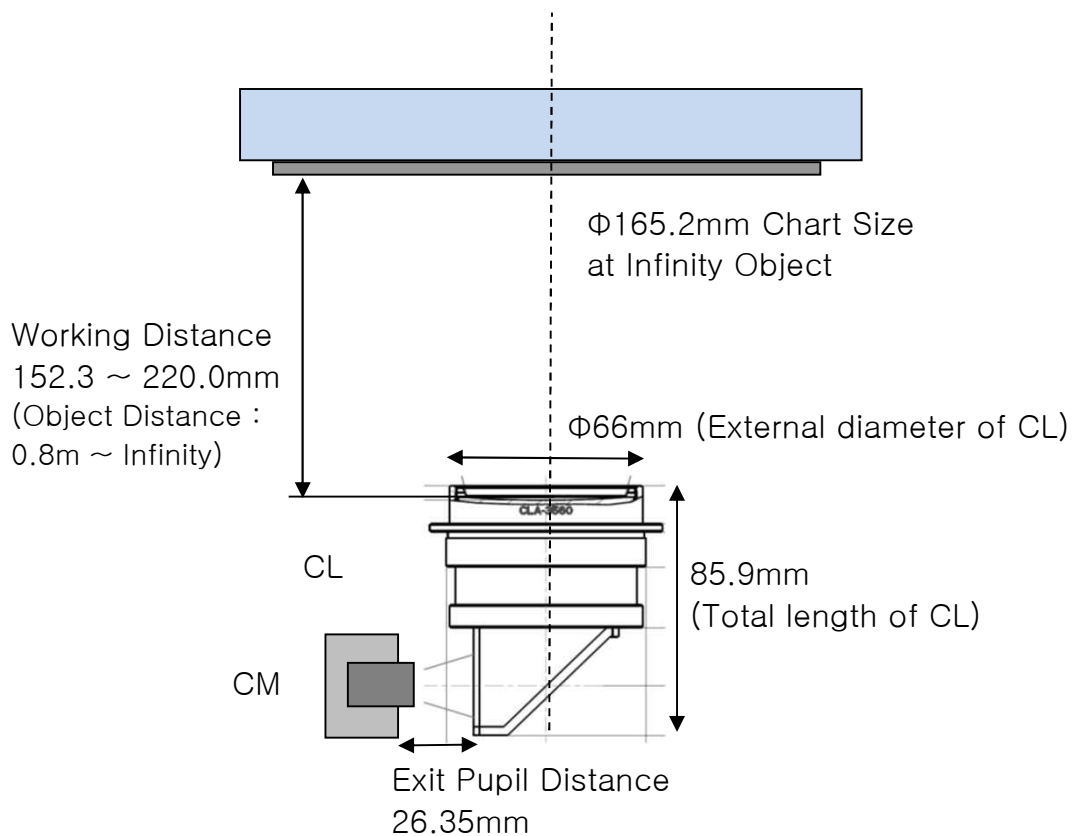


CLA-3560(Main+Prism)

The layout of only main system : CLA-3560(Main)

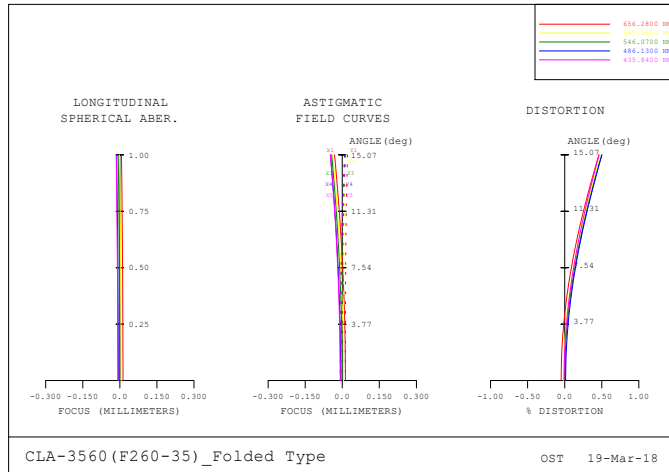


The layout of main+prism system : CLA-3560(Main+Prism)



Optical Performance of CLA-3560 Lens (Infinity at 35°)

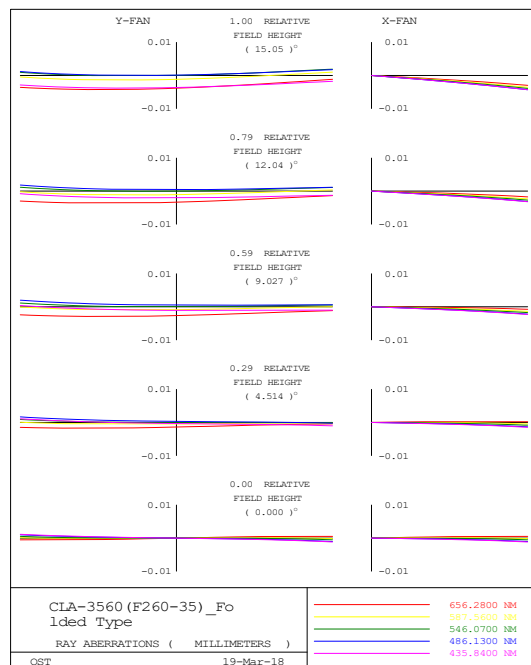
Aberration Scale : $\pm 0.3 \pm 0.3 \pm 1.0\%$



Astigmatism : less than 0.028D
 Field Curvature : less than 0.015D
 Distortion : less than 0.50%

Optical Performance of CLA-3560 Lens (Infinity at 35°)

Aberration Scale : ± 0.01



Longitudinal Chromatic Aberration : less than 0.019D

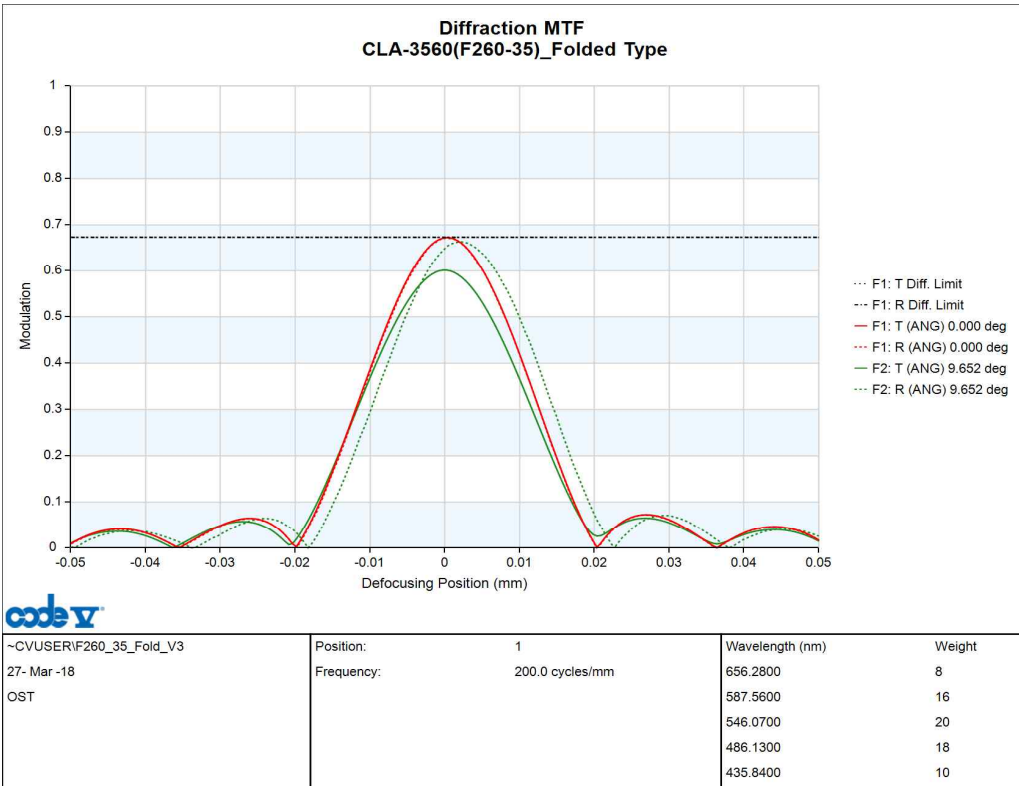
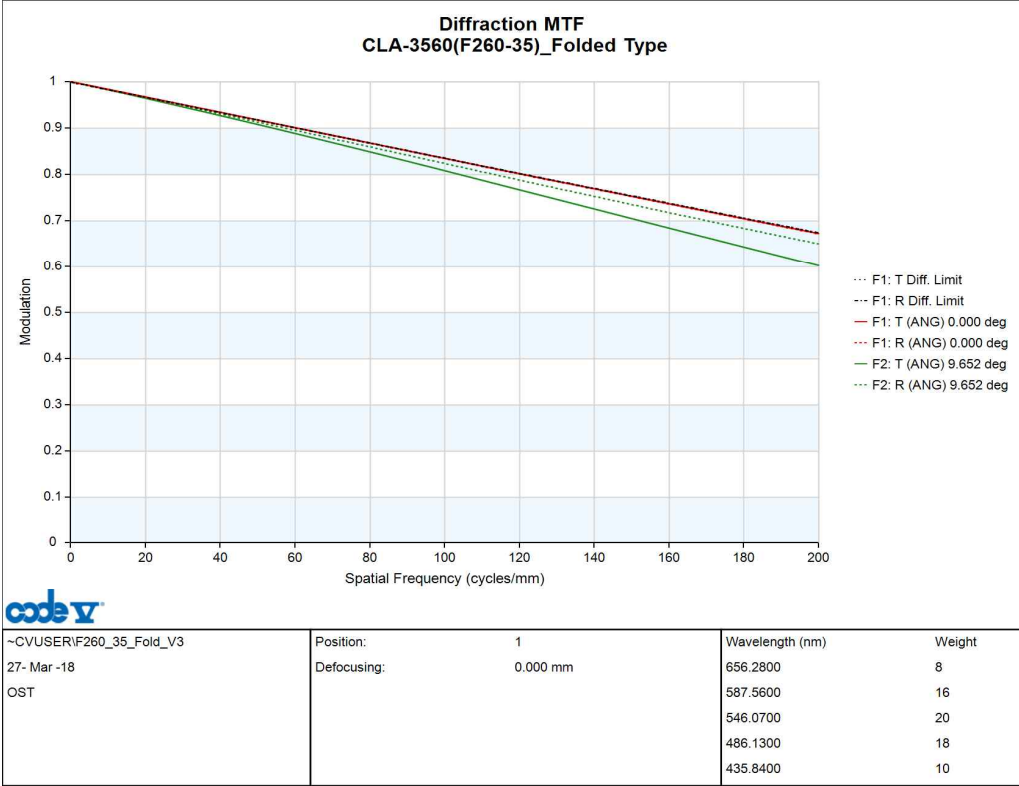
Lateral Chromatic Aberration : less than 0.005D

MTF Analysis for FOV 32.0° Lens of A-Company

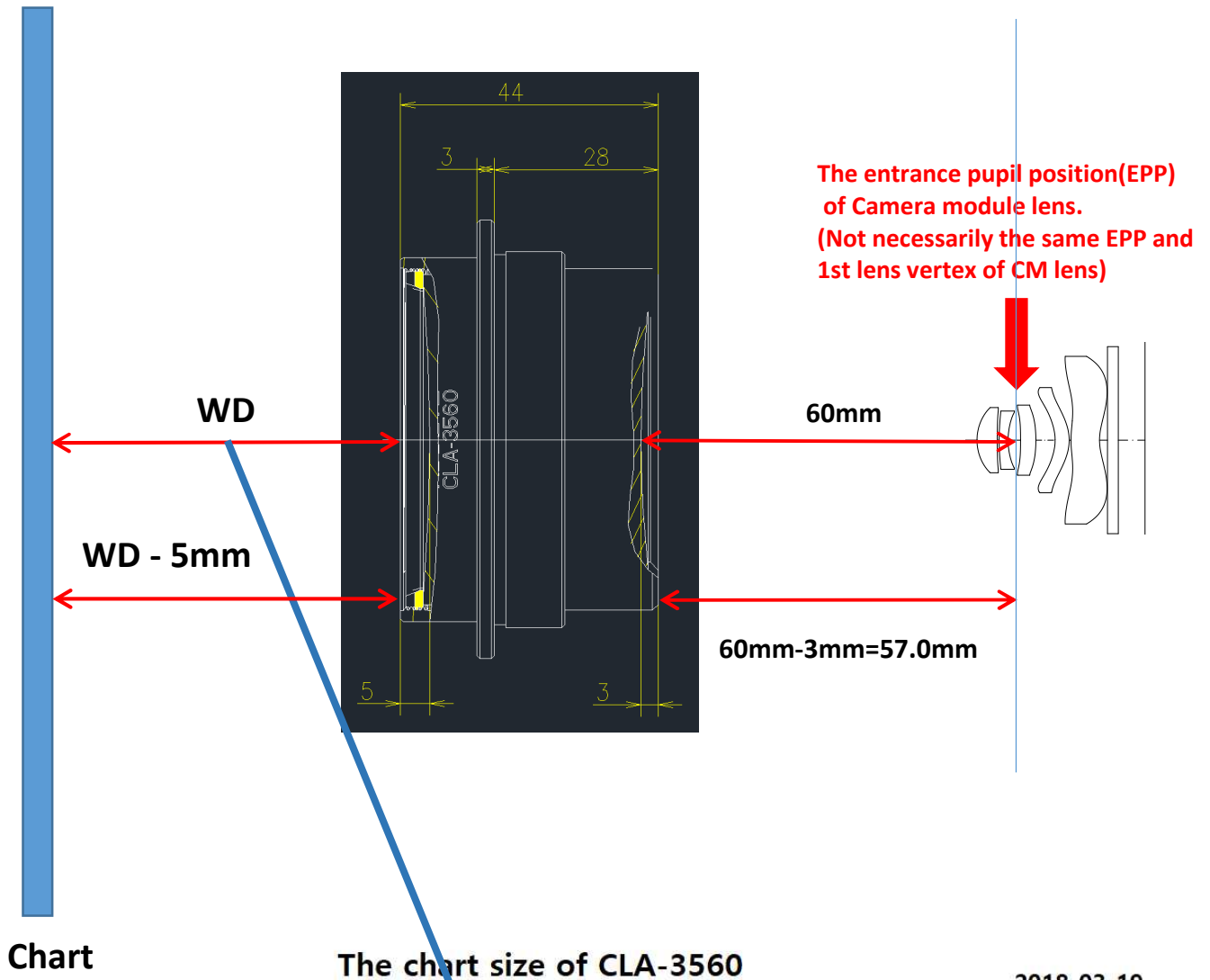
e_{fl} = 10.5mm F_{no} = 2.4

EPD = 4.375mm (= e_{fl}/F_{no})

Object Distance : Infinity (Center, 0.7F)



How to set Collimator Lens : CLA-3560(Main)



Chart

The chart size of CLA-3560

2018-03-19
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Object Distance : Real shooting distance with Camera.

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

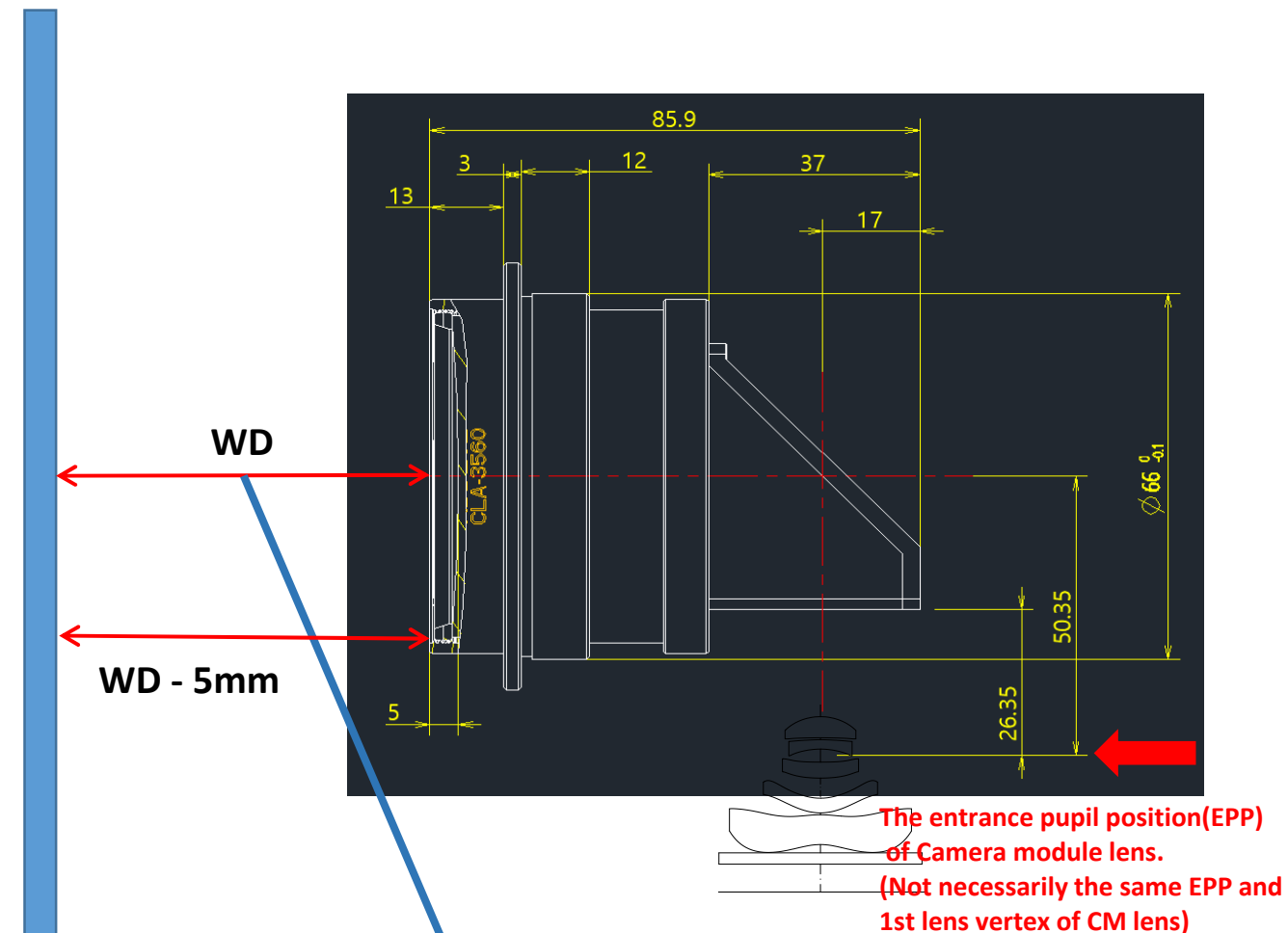
※ This table is based on the FOV of camera lens.

Camera Lens	
FOV	35
Half FOV	17.5

F260_35_Dummy_V2.len

Object Distance (Object ~ PCM)	Sub Lens (recomanded)	Working Distance (Chart ~ 1st vertex)	Chart Size (Φ, mm)
1.00E+100		220.00	165.2
50000		218.62	164.5
25000		217.25	163.8
10000		215.22	161.6
8000		211.57	160.7

How to set Collimator Lens : CLA-3560(Main+Prism)



Chart

The chart size of CLA-3560

2018-03-19
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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	35
Half FOV	17.5

F260_35_Dummy_V2.len

Object Distance (Object ~ PCM)	Sub Lens (recomanded)	Working Distance (Chart ~ G1 vertex)	Chart Size (Φ, mm)
1.00E+100		220.00	165.2
50000		218.62	164.5
25000		217.25	163.8
10000		213.22	161.6
8000		211.57	160.7

The chart size of CLA-3560

2018-03-19

OneStone

Object Distance : Real shooting distance with Camera.

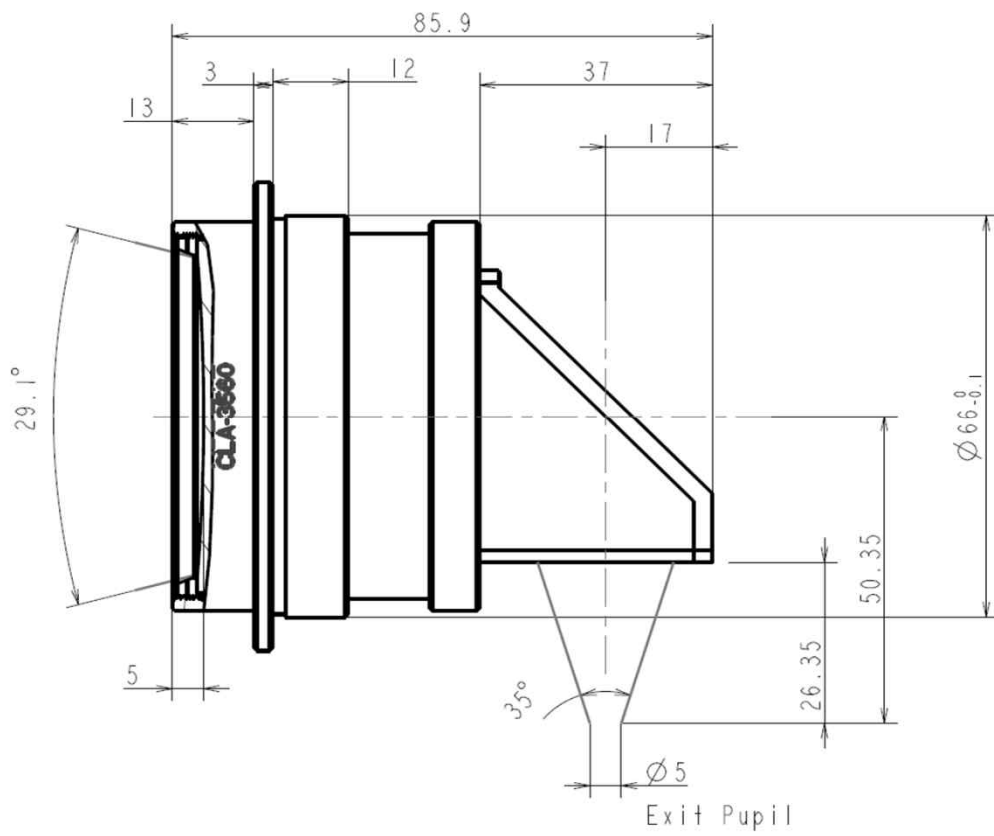
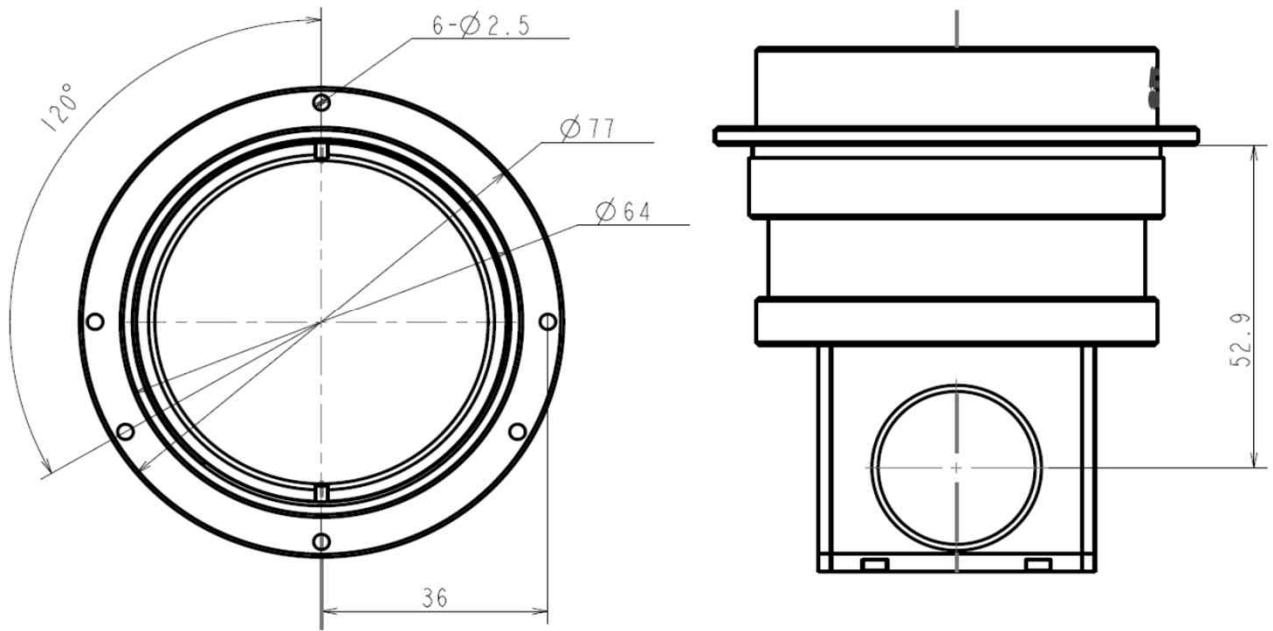
Working Distance : Distance from 1st Lens R1 vertex of CL to chart.

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

Camera Lens	
FOV	35
Half FOV	17.5

Object Distance (Object ~ PCM)	Sub Lens (recomanded)	Working Distance (Chart ~ CL vertex)	Chart Size (Φ, mm)
1.00E+100		220.00	165.2
50000		218.62	164.5
25000		217.25	163.8
10000		213.22	161.6
8000		211.57	160.7
5000		206.73	158.1
4500		205.32	157.3
4000		203.58	156.4
3500		201.38	155.2
3000		198.49	153.7
2500		194.54	151.6
2000		188.82	148.5
1900		187.35	147.7
1800		185.74	146.8
1700		183.95	145.9
1600		181.98	144.8
1500		179.77	143.6
1400		177.30	142.3
1300		174.49	140.8
1200		171.30	139.1
1100		167.62	137.1
1000		163.34	134.8

CLA-3560(Main+Prims) Outer Mechanical Drawings



Lens Pictures



CLA-3560(Main)



CLA-3560(Main+ Prism)



CLA-3560(Prism)