



Products Features

- ▶ 4K line scan lens is a good choice for package inspection.
- ▶ Choice is flexible from different magnification.
- ▶ Excellent optical performance, the image result is very uniform from center to side.
- ▶ It is suitable for 2K/4K line scan camera.
- ▶ Transmission from 400nm to 700nm.

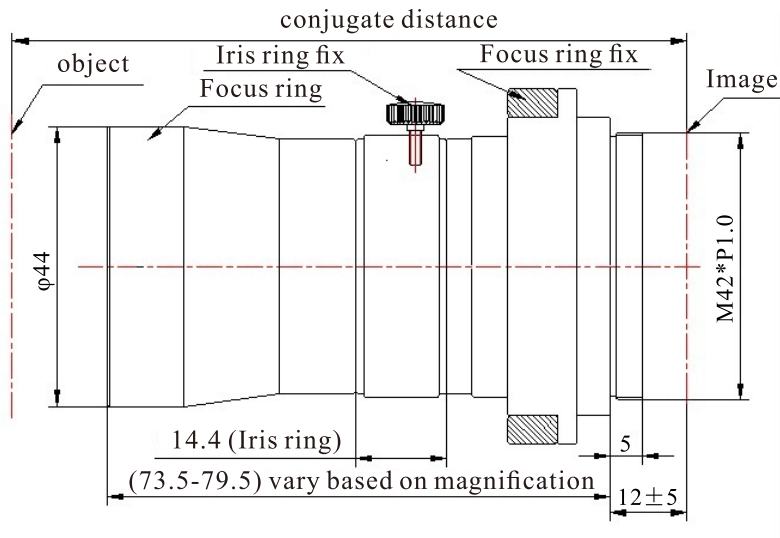
Parameter

NO.	Item No.	Image size (mm)	Iris (F#)	Resolution	Mag. range	WD (mm)	Focal length (mm)	Distortion (%)	Relative illumination (%)	Conjugate distance (mm)	Mount
1	SBS-XS254K-003X	φ30	4-22	4K 7um	0.015x-0.05x	520-1740	25	<0.5	>60	607.3-1826.4	M42*P1.0
2	SBS-XS254K-008X	φ30	4-22	4K 7um	0.05x-0.125x	200-520	25	<0.5	>60	284.9-602.9	M42*P1.0
3	SBS-XS254K-015X	φ30	4-22	4K 7um	0.125x-0.175x	130-187	25	<0.5	>60	223.4-279.2	M42*P1.0
4	SBS-XS254K-024X	φ30	4-22	4K 7um	0.175x-0.3x	74-135	25	<0.5	>60	171.7-229.5	M42*P1.0
5	SBS-XS354K-025X	φ30	4-16	4K 7um	0.01x-0.5x	83-3513	35	<0.05	>75	152- INF.	M42*P1.0
6	SBS-XS404K-018X	φ43	3.2-16	4K 7um	0.04x-0.33x	132-1044	40	<0.5	>25	220.53-1120.59	M42/M48/M58 /M72/M50/F

Parameter

Magnification (β)	Conjugate distance (I/O) (mm)	Working distance (mm)	Lens length (mm)	Field of view (mm)		
				$\phi 23$	$\phi 28$	$\phi 30$
0.015x	1826.40	1740	74.40	1533	1867	2000
0.018x	1536.50	1450	74.50	1278	1556	1667
0.021x	1326.55	1240	74.55	1095	1333	1429
0.024x	1166.60	1080	74.60	958	1167	1250
0.026x	1086.70	1000	74.70	885	1077	1154
0.030x	946.80	860	74.80	767	933	1000
0.035x	826.90	740	74.90	657	800	857
0.040x	732.00	645	75.00	575	700	750
0.045x	660.20	573	75.20	511	622	667
0.050x	607.30	520	75.30	460	560	600

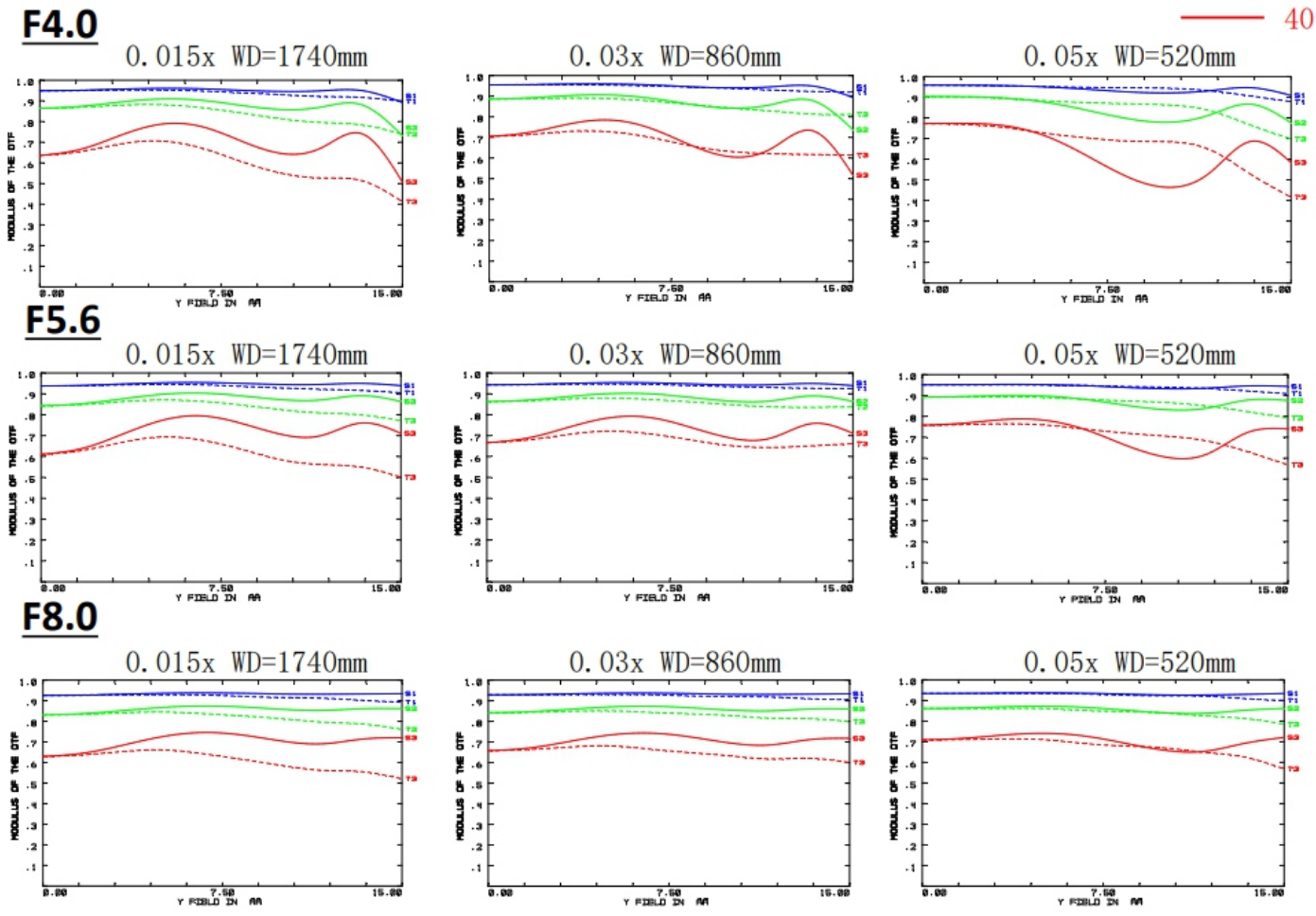
Dimensions(mm)



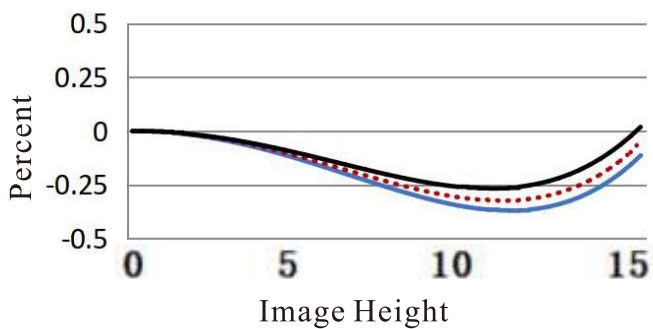
MTF based on the image height of visible spectrum

Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (lp/mm)	10	20	40		
Image size	$\phi 30$				

— 10
— 20
— 40

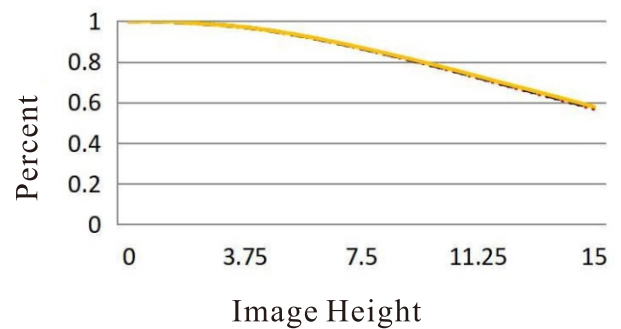


Distortion



Relative Illumination

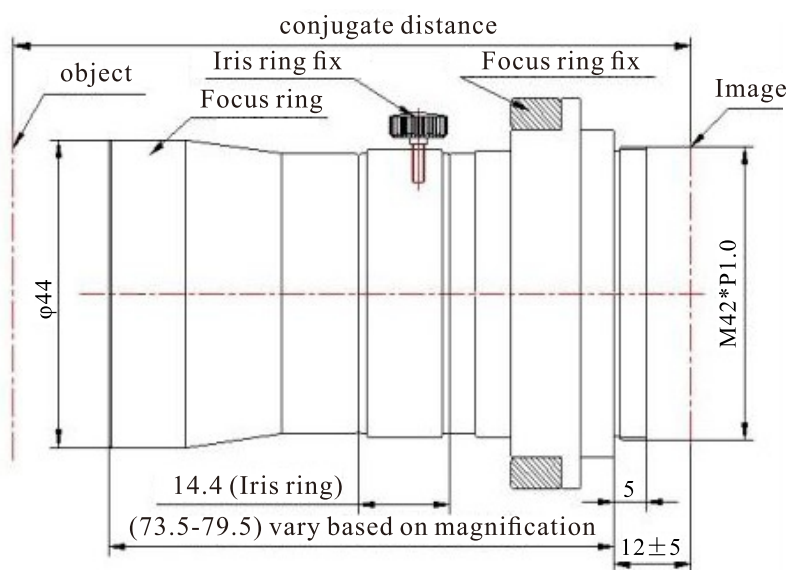
..... 0.015x
- - - 0.03x
— 0.05x



Parameter

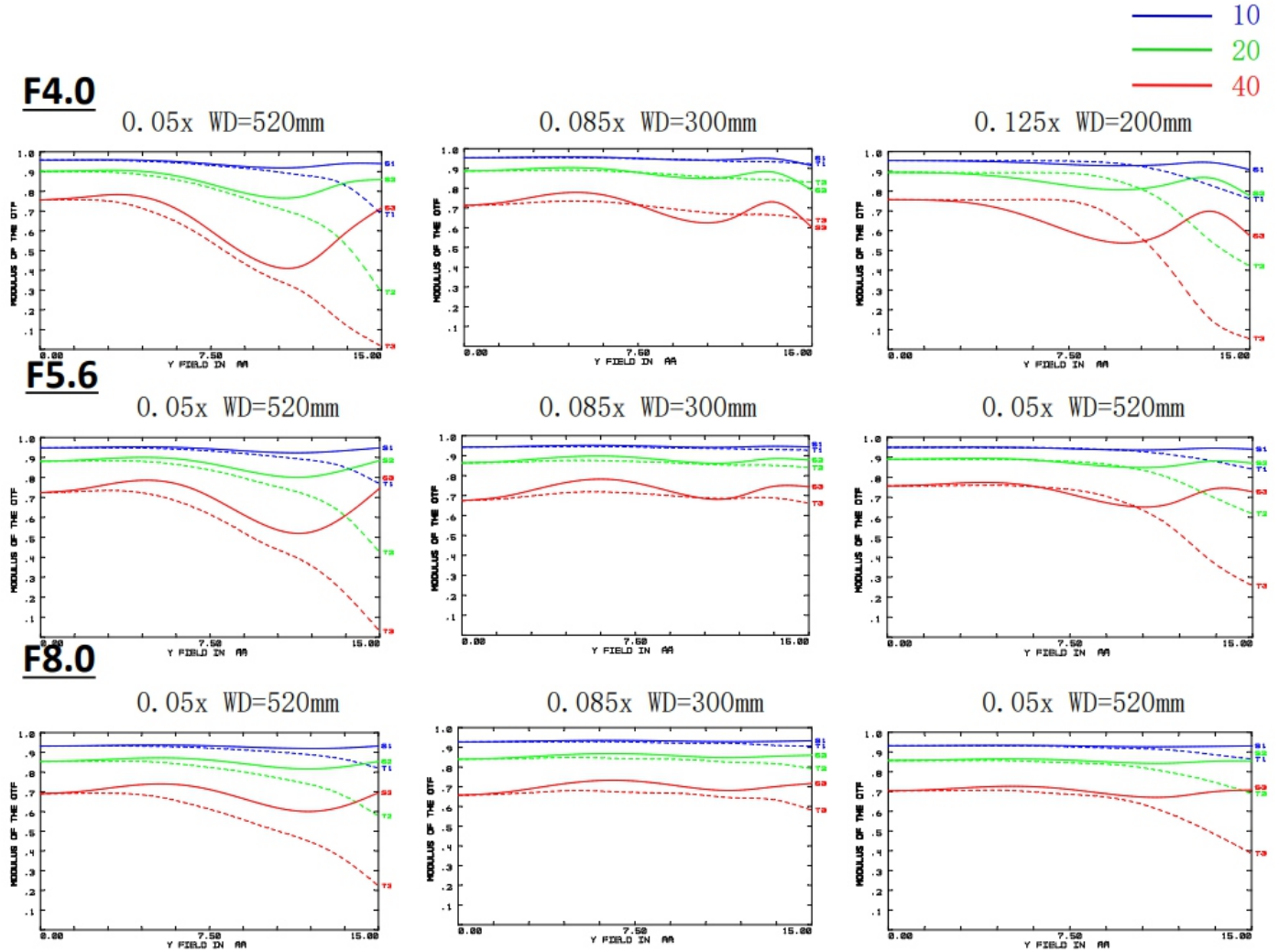
Magnification (β)	Conjugate distance (I/O) (mm)	Working distance (mm)	Lens length (mm)	Field of view (mm)		
				$\phi 23$	$\phi 28$	$\phi 30$
0.050x	602.90	520	70.90	460	560	600
0.060x	513.10	430	71.10	383	467	500
0.070x	448.40	365	71.40	329	400	428
0.080x	403.70	320	71.70	287	350	375
0.085x	383.80	300	71.80	271	329	353
0.090x	368.90	285	71.90	256	311	333
0.100x	334.30	250	72.30	230	280	300
0.110x	314.50	230	72.50	209	254	273
0.120x	296.70	212	72.70	192	233	250
0.125x	284.90	200	72.90	184	224	240

Dimensions(mm)

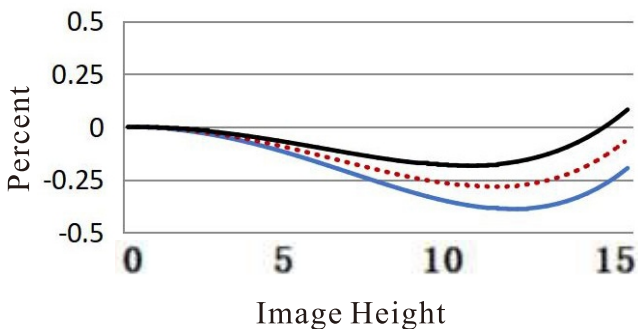


MTF based on the image height of visible spectrum

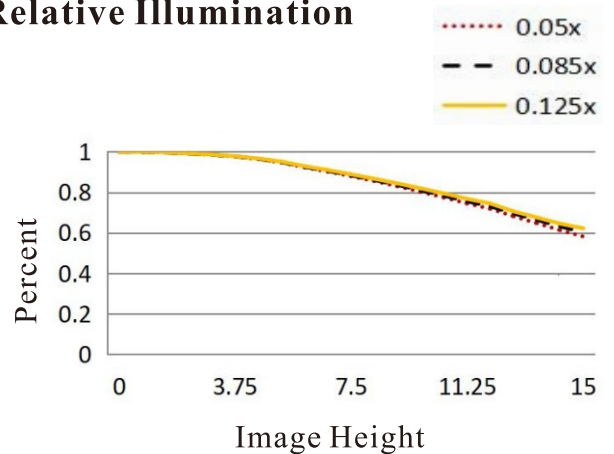
Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (lp/mm)	10	20	40		
Image size	$\phi 30$				



Distortion



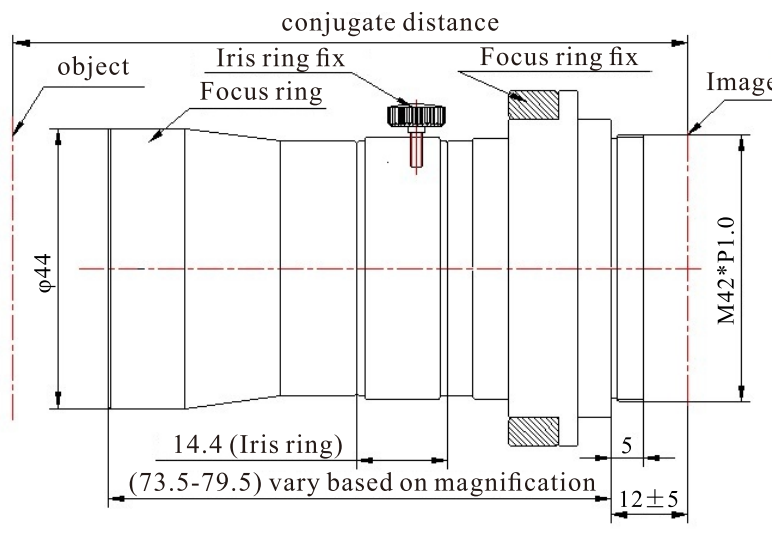
Relative Illumination



Parameter

Magnification (β)	Conjugate distance (I/O) (mm)	Working distance (mm)	Lens length (mm)	Field of view (mm)		
				$\phi 23$	$\phi 28$	$\phi 30$
0.125x	279.20	187	80.20	184	224	240
0.130x	271.30	179	80.30	177	215	231
0.135x	264.90	172.5	80.40	170	207	222
0.140x	258.50	166	80.50	164	200	214
0.145x	252.70	160	80.70	159	193	207
0.150x	246.80	154	80.80	153	187	200
0.155x	241.40	148.5	80.90	148	181	194
0.160x	237.00	144	81.00	144	175	188
0.170x	228.00	135	81.30	135	165	176
0.175x	223.40	130	81.40	131	160	171

Dimensions(mm)

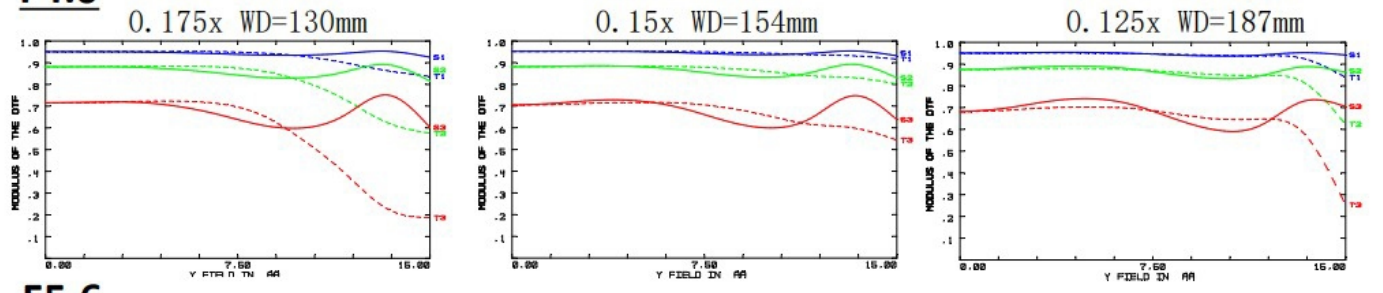


MTF based on the image height of visible spectrum

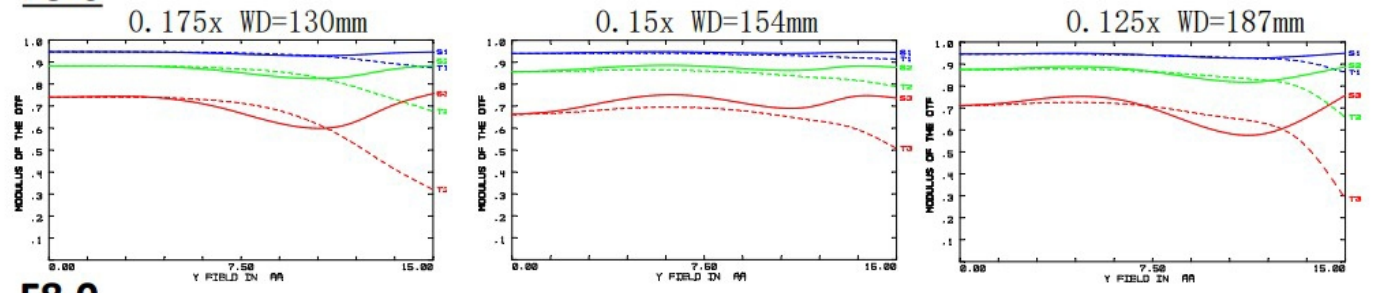
Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (lp/mm)	10	20	40		
Image size	$\phi 30$				

— 10
— 20
— 40

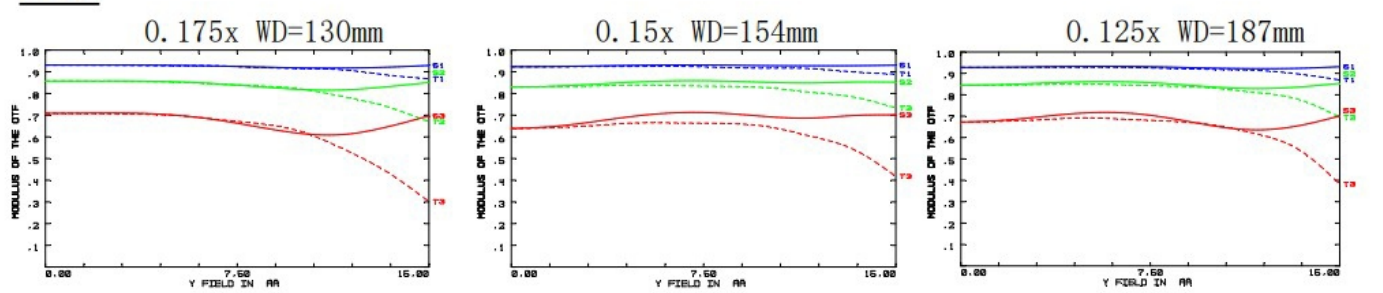
F4.0



F5.6

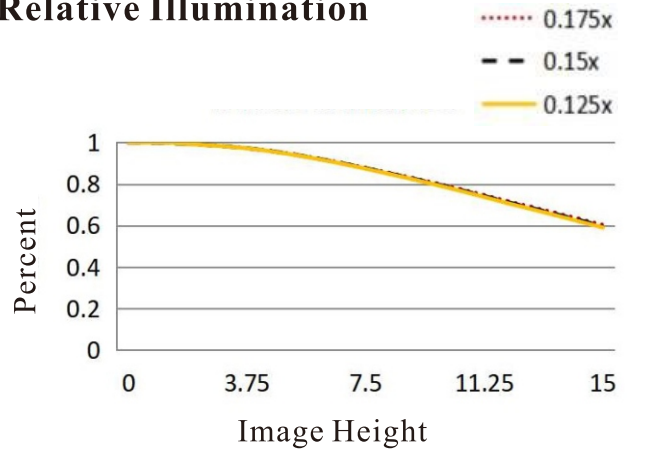
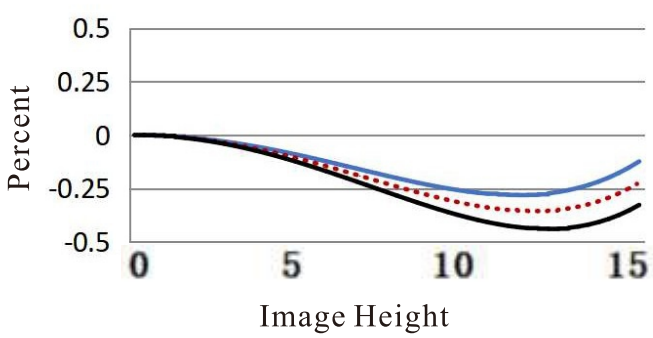


F8.0



Distortion

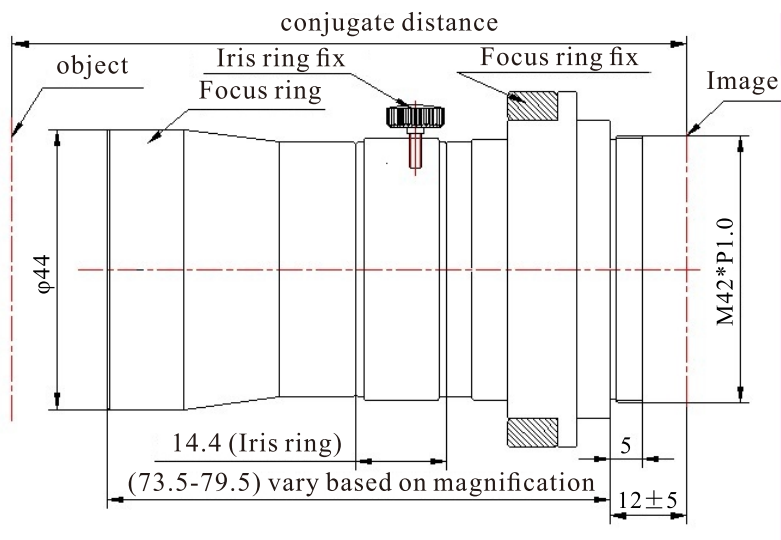
Relative Illumination



Parameter

Magnification (β)	Conjugate distance (I/O) (mm)	Working distance (mm)	Lens length (mm)	Field of view (mm)		
				$\phi 23$	$\phi 28$	$\phi 30$
0.175x	229.50	135	94.50	131	163	171
0.190x	217.90	123	94.90	121	147	158
0.200x	211.10	116	95.10	115	140	150
0.210x	205.40	110	95.40	110	133	143
0.220x	200.60	105	95.60	105	127	136
0.230x	195.90	100	95.90	100	122	130
0.240x	191.20	95	96.20	96	117	125
0.250x	187.40	91	96.40	92	112	120
0.260x	183.70	87	96.70	88	108	115
0.270x	180.00	83	97.00	85	104	111
0.280x	177.20	80	97.20	82	100	107
0.290x	174.00	76.5	97.50	79	97	103
0.300x	171.70	74	97.70	77	93	100

Dimensions(mm)

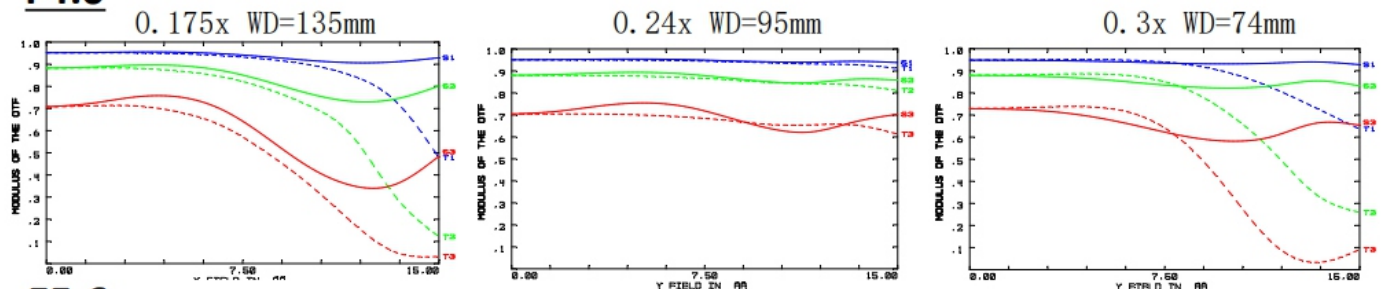


MTF based on the image height of visible spectrum

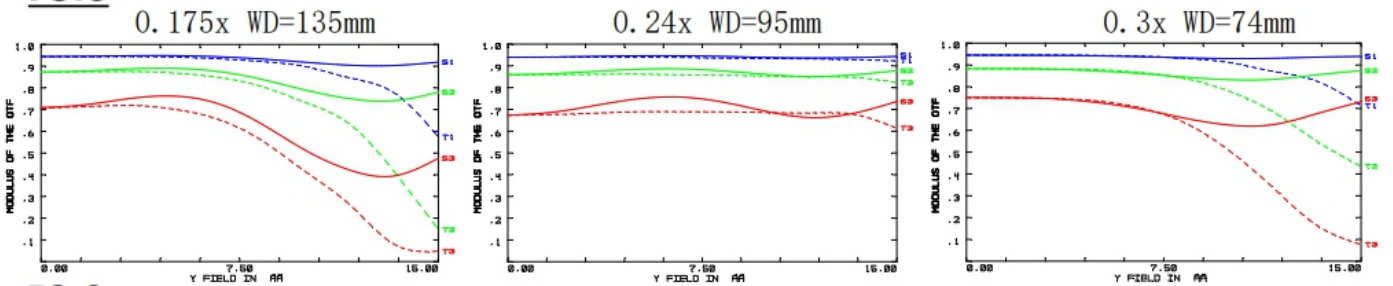
Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (lp/mm)	10	20	40		
Image size	$\phi 30$				

— 10
— 20
— 40

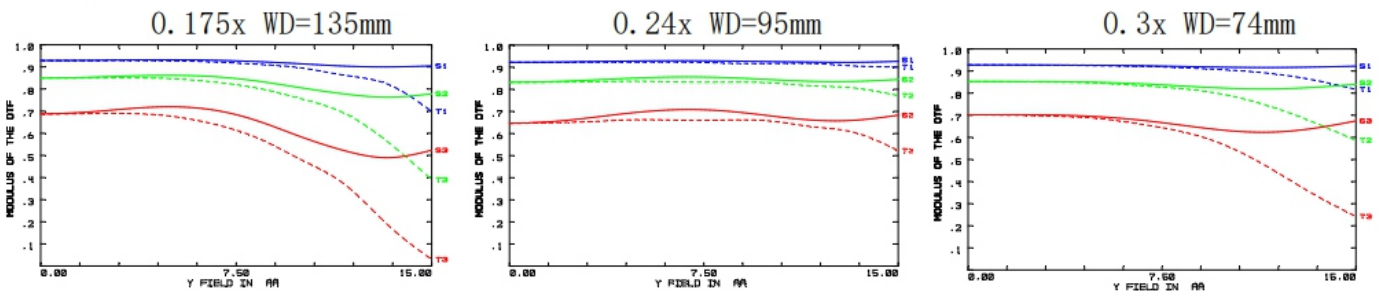
F4.0



F5.6



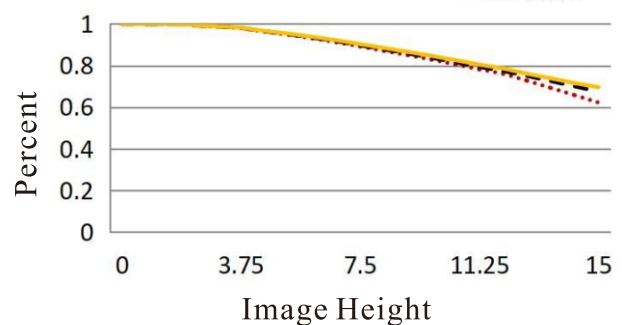
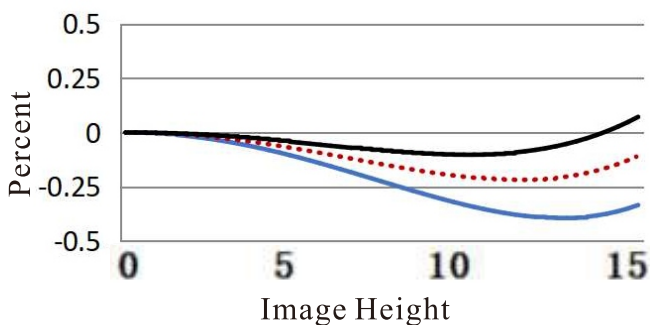
F8.0



Distortion

Relative Illumination

..... 0.175x
- - - 0.24x
— 0.3x

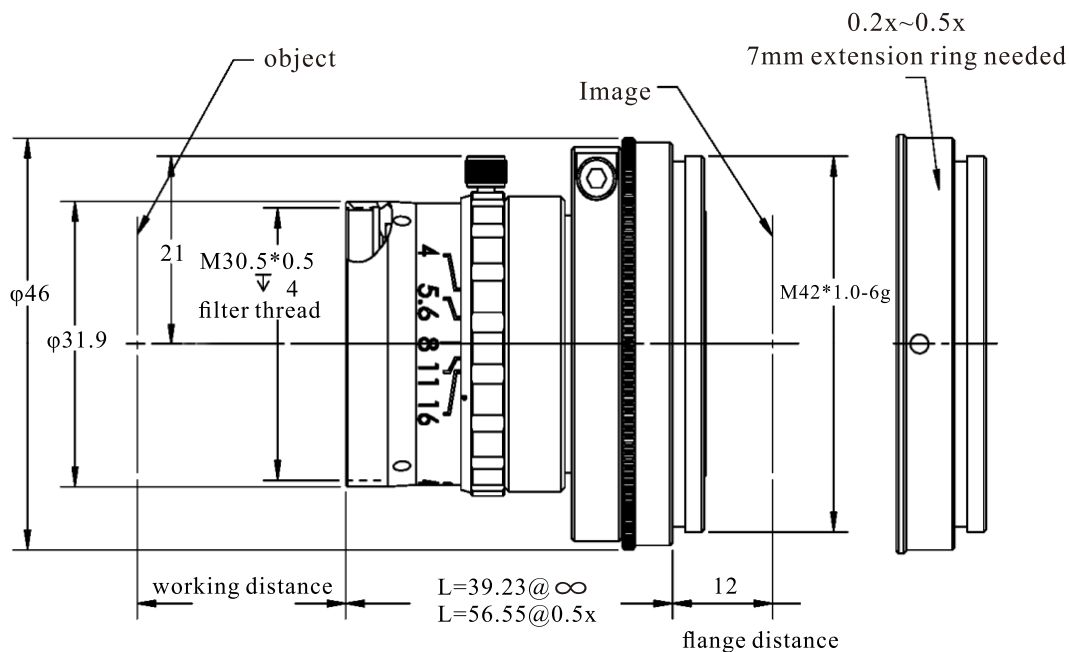


Parameter

4K 7um Sensor			
Magnification (β)	Working distance (mm)	Field of view (mm)	Lens length (mm) (Flange distance =12mm)
0.50x	83.60	57.3	56.55
0.40x	101.00	71.7	53.10
0.30x	130.70	95.6	49.65
0.20x	188.30	143.4	46.19
0.10x	363.30	286.7	42.72
0.08x	448.30	358.4	42.02
0.05x	714.00	573.4	40.98
0.02x	1760.80	1433.6	39.93
0.01x	3512.80	2867.2	39.58

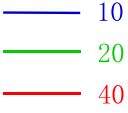
2K 7um Sensor			
Magnification (β)	Working distance (mm)	Field of view (mm)	Lens length (mm) (Flange distance =12mm)
0.50x	83.60	28.7	56.55
0.40x	101.00	35.8	53.10
0.30x	130.70	47.8	49.65
0.20x	188.30	71.7	46.19
0.10x	363.30	143.4	42.72
0.08x	448.30	179.2	42.02
0.05x	714.00	286.7	40.98
0.02x	1760.80	716.8	39.93
0.01x	3512.80	1433.6	39.58

Dimensions(mm)

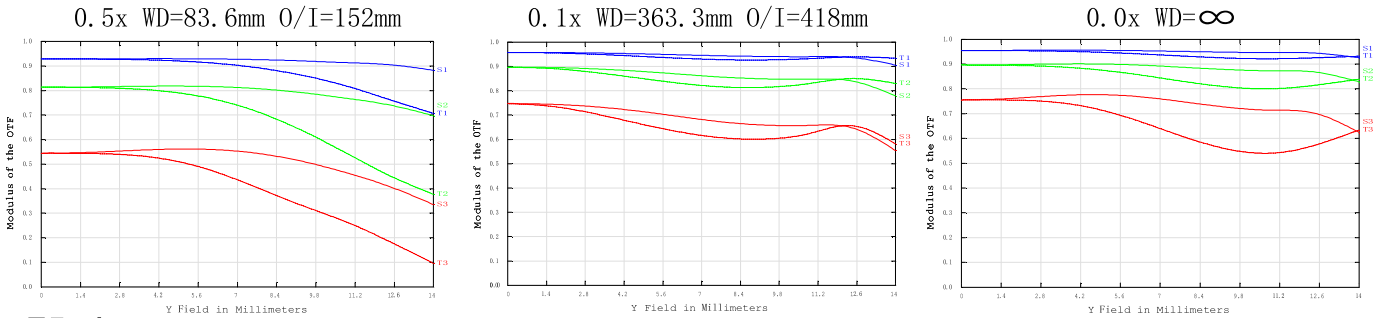


MTF based on the image height of visible spectrum

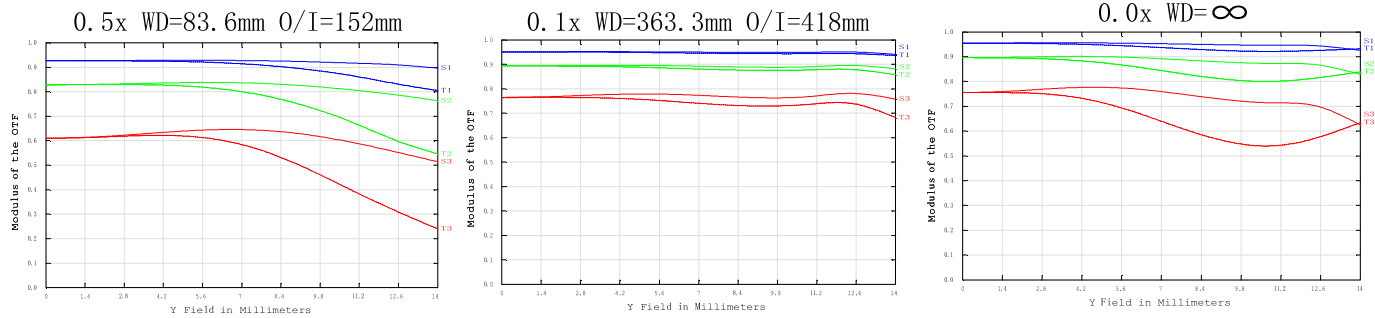
Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (1/p/mm)	10	20	40		
Image size	$\phi 30$				



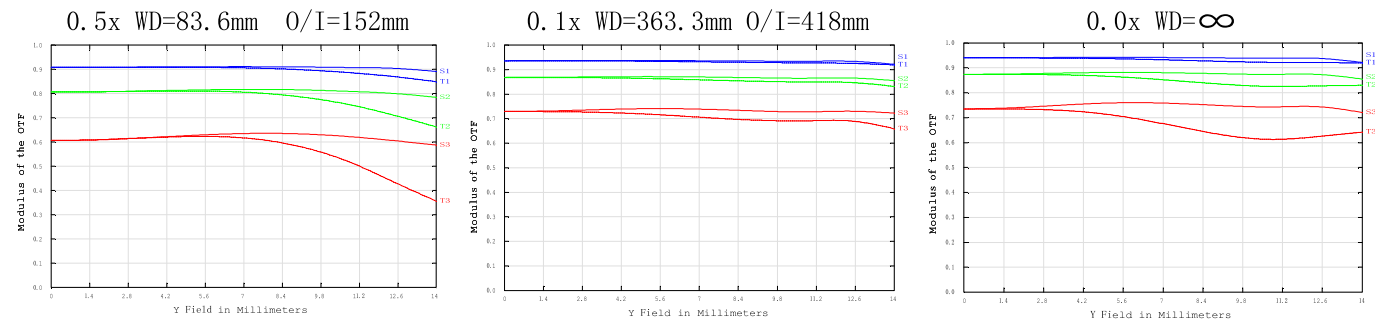
F4.0



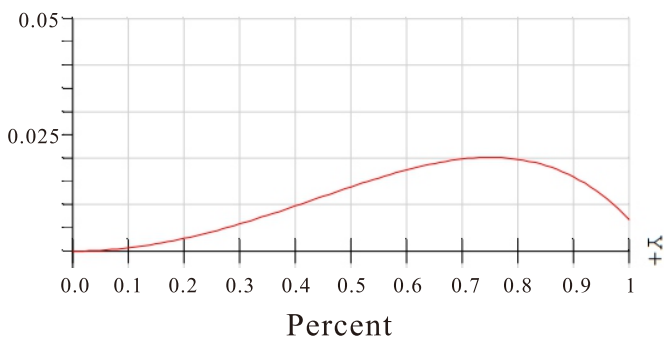
F5.6



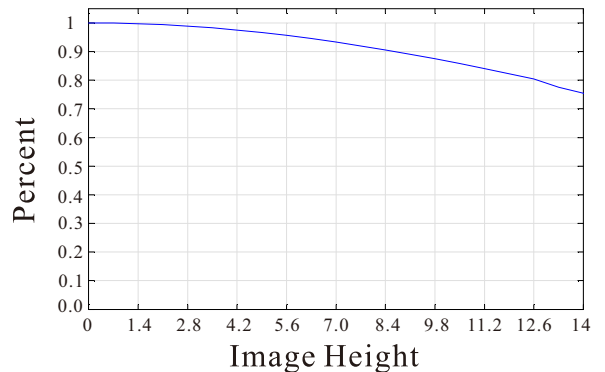
F8.0



Distortion



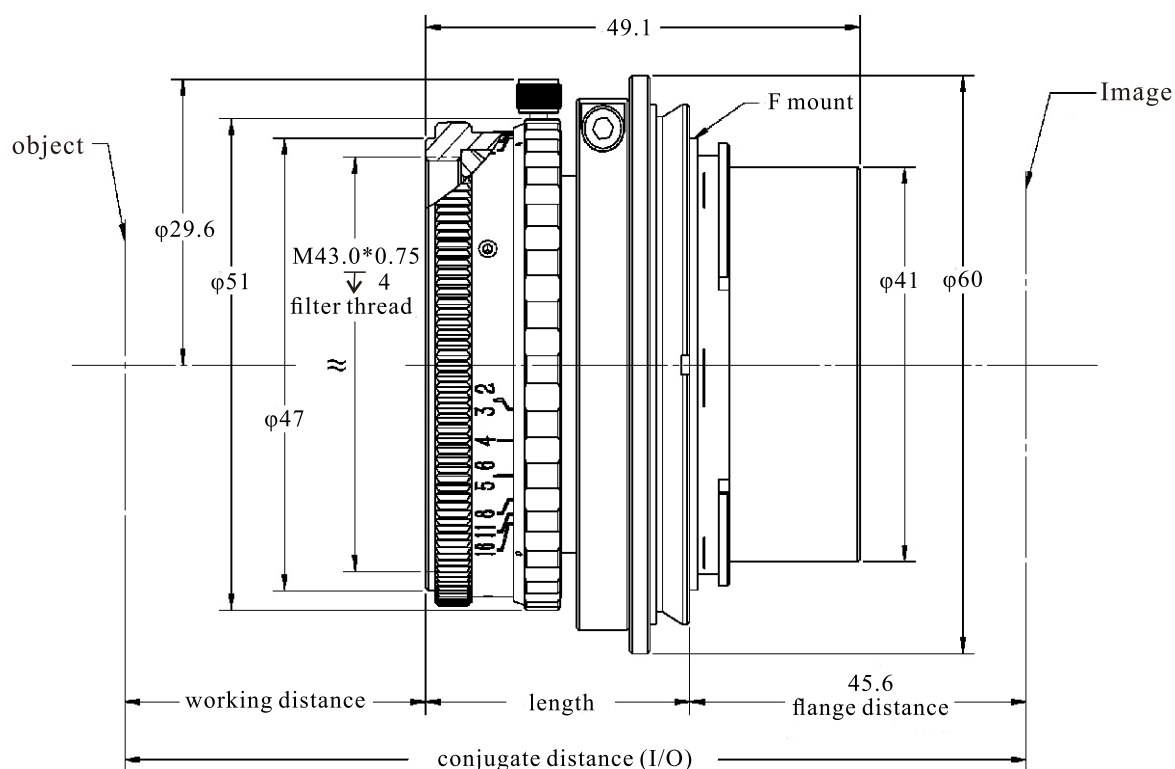
Relative Illumination



Parameter

Magnification (β)	Conjugate distance (I/O) (mm)	Working distance (mm)	Lens length (mm)	Field of view φ43 (mm)
0.04x	1120.59	1044.09	65	1075.00
0.06x	775.49	698.17	65	716.70
0.08x	603.35	525.20	66	537.50
0.10x	500.39	421.42	67	430.00
0.12x	432.02	352.23	68	358.30
0.14x	383.43	302.81	69	307.10
0.16x	347.18	265.75	69	268.80
0.18x	319.18	236.92	70	238.90
0.20x	296.94	213.85	71	215.00
0.24x	263.99	179.26	73	179.20
0.28x	240.93	154.55	74	153.60
0.33x	220.53	132.08	76	130.30

Dimensions(mm)

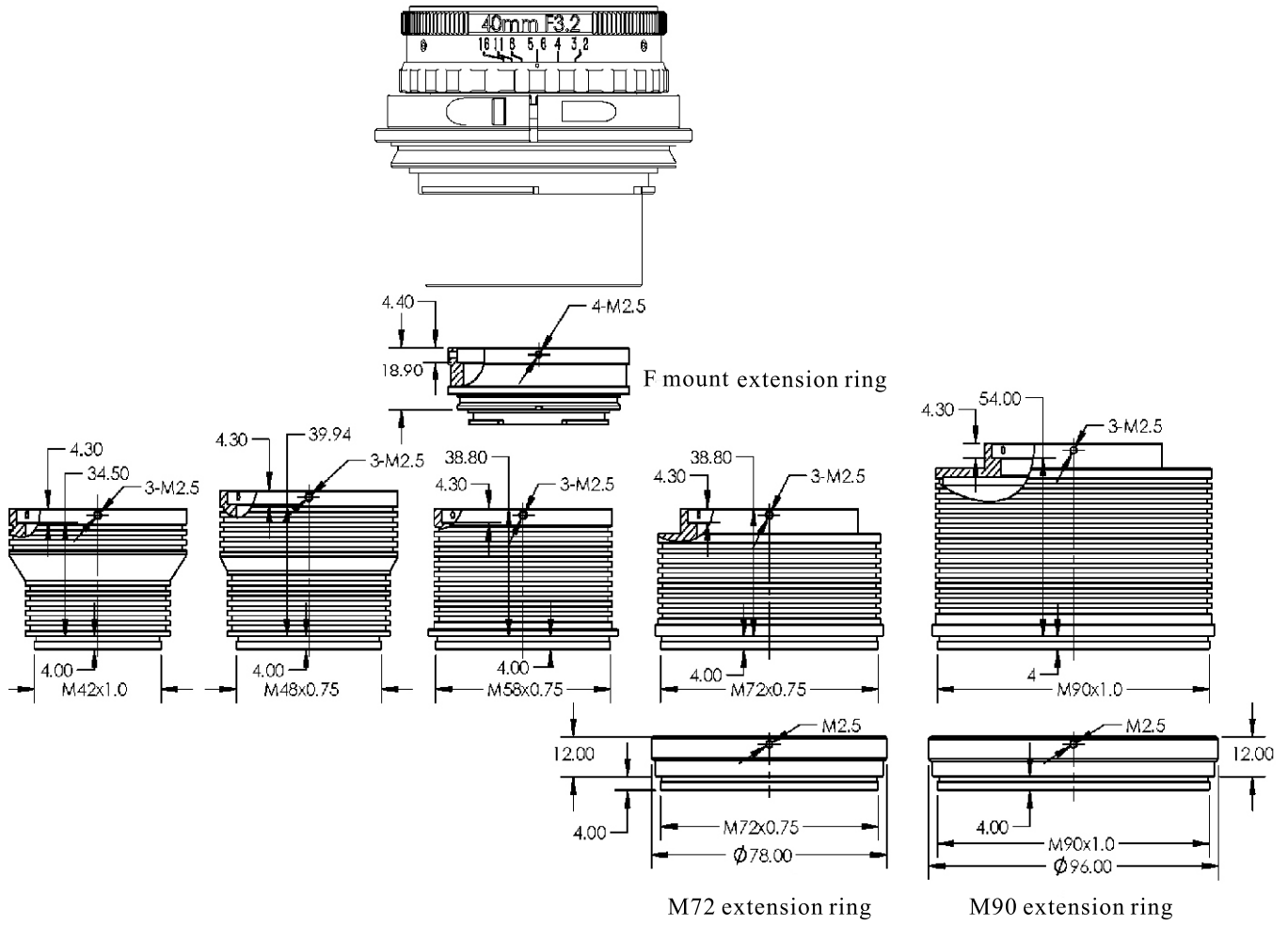




vision solution SBS-XS404K-018X

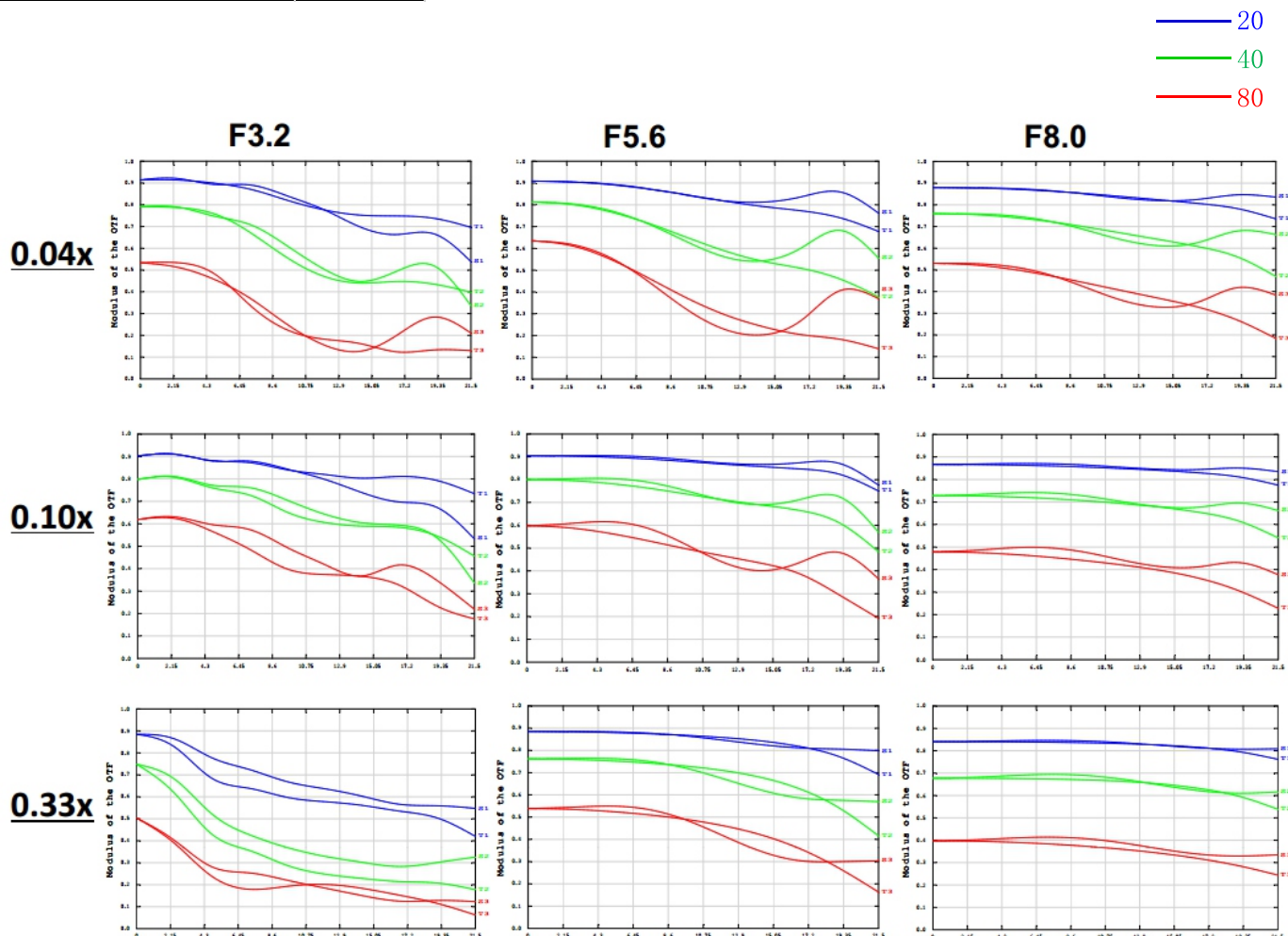
Dimensions(mm)

SBS-XS404K-018X extension ring

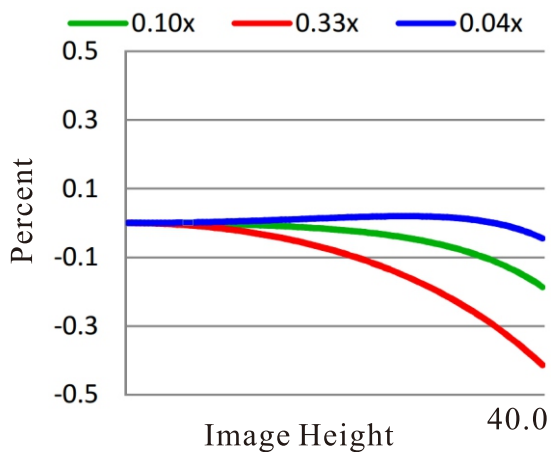


MTF based on the image height of visible spectrum

Wavelength λ (nm)	656	587	546	486	435
Spectral weighting (%)	15	20	30	25	10
Spatial frequency R (lp/mm)	20	40	80		
Image size	$\phi 43$				



Distortion



Relative Illumination

