

1" 10MP Focal Lens



Products Features

- ▶ High resolution, compact.
- ▶ Multi-coated, high transmittance.
- ▶ The sensor size can match with 1" and 1.1" 10MP camera.

Parameter

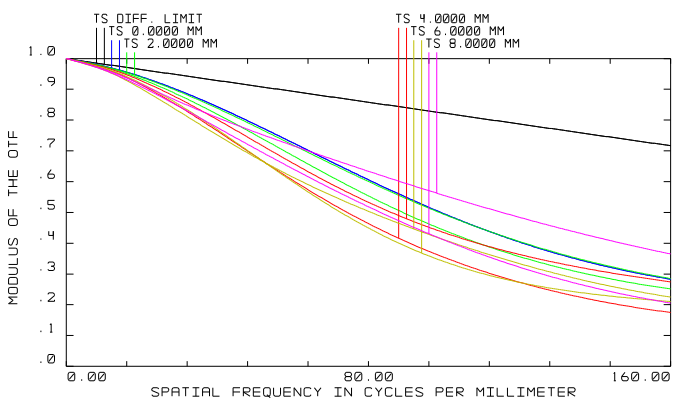
NO.	Item No.	Sensor size	Focal length (mm)	Iris (F#)	Resolution	Standard magnification	Mount	Relative illumination (%)	Filter screw size	WD (mm)
1	SBS-1220-10MP	1"	12	2.0-16	10MP	0.039	C	>65	M37.5*P0.5	150-∞
2	SBS-1620-10MP	1"	16	2.0-16	10MP	0.050	C	>65	M34*P0.5	100-∞
3	SBS-2520-10MP	1"	25	1.8-16	10MP	0.084	C	>70	M30.5*P0.5	150-∞
4	SBS-3520-10MP	1"	35	2.0-16	10MP	0.105	C	>70	M30.5*P0.5	200-∞
5	SBS-5020-10MP	1"	50	2.0-16	10MP	0.070	C	>70	M37*P0.5	250-∞

Model No.	Back focus (mm)	Distortion			Field of view								
					1"			1/2"			1/3"		
		1"	1/2"	1/3"	D	H	V	D	H	V	D	H	V
SBS-1220-10MP	10.5 in air	-0.80%@y=8.0mm	-0.6%@y=4.0mm	-0.4%@y=3.0mm	67.60°	56.70°	43.50°	36.17°	30.10°	23.13°	27.78°	23.14°	16.97°
SBS-1620-10MP	11.2 in air	-0.7%@y=8mm	-0.24%@y=4.0mm	-0.14%@y=3.0mm	53.94°	43.92°	33.45°	28.23°	22.62°	16.97°	21.24°	16.98°	12.94°
SBS-2520-10MP	12.6 in air	-0.49%@y=8mm	-0.12%@y=4.0mm	-0.06%@y=3.0mm	36.21°	29.08°	21.86°	18.45°	14.72°	11.08°	13.81°	11.08°	8.34°
SBS-3520-10MP	12.9 in air	0.28%@y=8.0mm	0.07%@y=4.0mm	0.04%@y=3.0mm	26.10°	20.83°	15.72°	13.28°	10.65°	7.94°	9.92°	7.92°	6.00°
SBS-5020-10MP	21.3 in air	-0.013%@y=8.0mm	0.010%@y=4.0mm	0.008%@y=3.0mm	18.38°	14.70°	10.98°	9.34°	7.42°	5.50°	6.96°	5.53°	4.16°

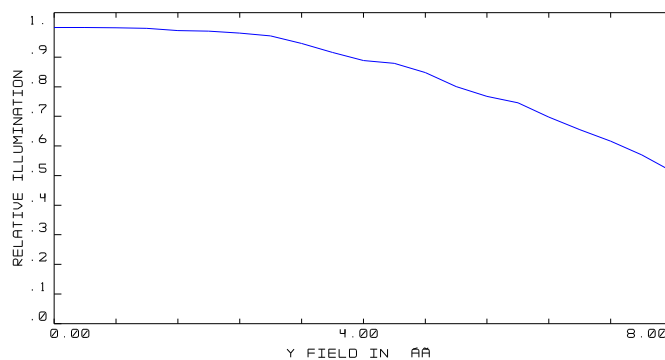
WD VS FOV

Working distance (mm)	Optical magnification (x)	1" Field of view		2/3" Field of view		1/2" Field of view	
		H(mm)	V(mm)	H(mm)	V(mm)	H(mm)	V(mm)
		12.8	9.6	8.8	6.6	6.4	4.8
1000	0.012	1081.864	811.398	746.878	560.158	541.418	406.063
700	0.017	765.236	573.927	528.086	396.064	382.764	287.073
650	0.018	712.464	534.348	491.620	368.715	356.321	267.241
600	0.020	659.693	494.769	455.155	341.366	329.879	247.409
550	0.021	606.921	455.191	418.690	314.017	303.437	227.578
500	0.023	554.150	415.612	382.224	286.668	276.994	207.746
450	0.026	501.378	376.034	345.759	259.319	250.552	187.914
400	0.029	448.607	336.455	309.294	231.970	224.110	168.082
350	0.032	395.835	296.877	272.828	204.621	197.667	148.250
300	0.037	343.064	257.298	236.363	177.272	171.225	128.419
250	0.044	290.293	217.719	199.898	149.923	144.783	108.587
200	0.054	237.521	178.141	163.432	122.574	118.340	88.755
150	0.071	184.750	138.562	126.967	95.225	91.898	68.923

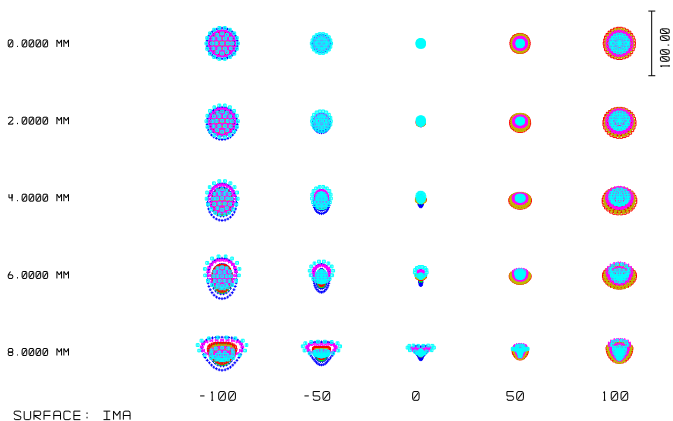
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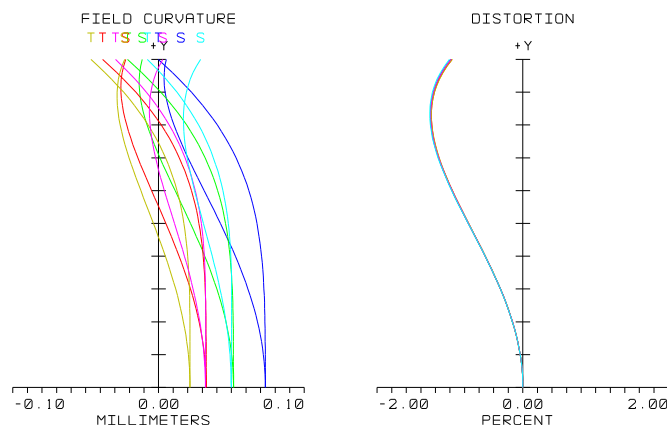
RI



Spot Diagram



Distortion



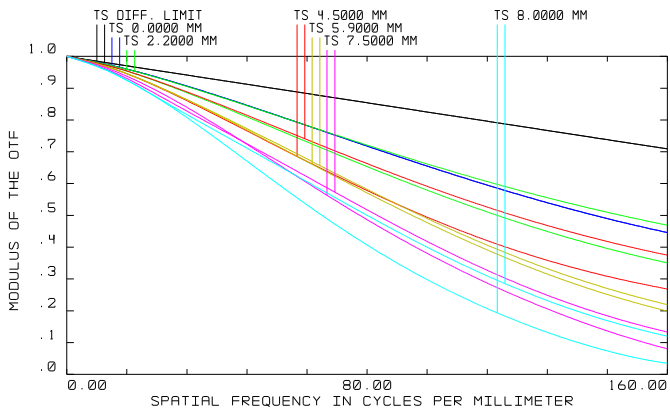


vision solution SBS-1620-10MP

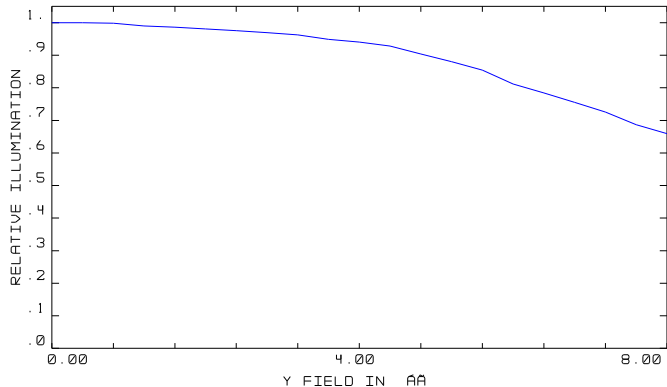
WD VS FOV

Working distance (mm)	Optical magnification (x)	1" Field of view		2/3" Field of view		1/2" Field of view	
		H(mm)	V(mm)	H(mm)	V(mm)	H(mm)	V(mm)
		12.8	9.6	8.8	6.6	6.4	4.8
1000	-0.016	824.381	618.286	566.762	425.071	412.190	309.143
750	-0.021	620.570	465.427	426.642	319.981	310.285	232.714
600	-0.026	498.285	373.714	342.571	256.928	249.142	186.857
550	-0.029	457.520	343.140	314.545	235.909	228.760	171.570
500	-0.032	416.760	312.570	286.523	214.892	208.380	156.285
450	-0.035	376.000	282.000	258.500	193.875	188.000	141.000
400	-0.039	335.237	251.428	230.475	172.856	167.618	125.714
350	-0.045	294.474	220.855	202.451	151.838	147.237	110.428
300	-0.052	253.712	190.284	174.427	130.820	126.856	95.142
250	-0.062	212.944	159.708	146.399	109.799	106.472	79.854
200	-0.077	172.187	129.140	118.379	88.784	86.094	64.570
150	-0.101	131.426	98.569	90.355	67.766	65.713	49.285
100	-0.147	90.656	67.992	62.326	46.745	45.328	33.996

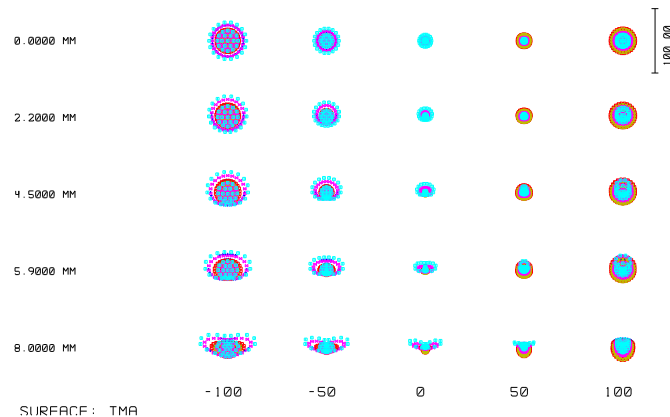
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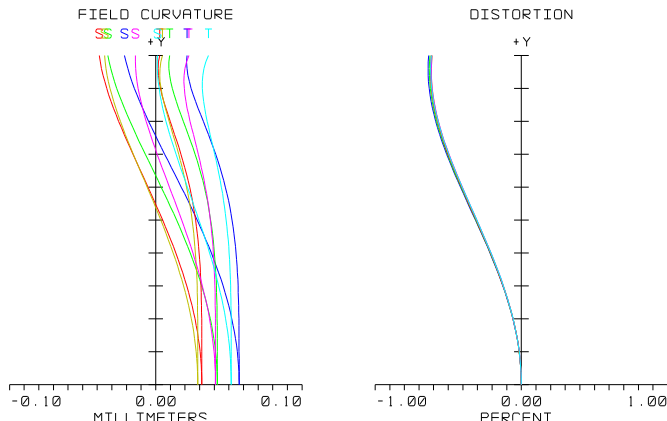
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Spot Diagram



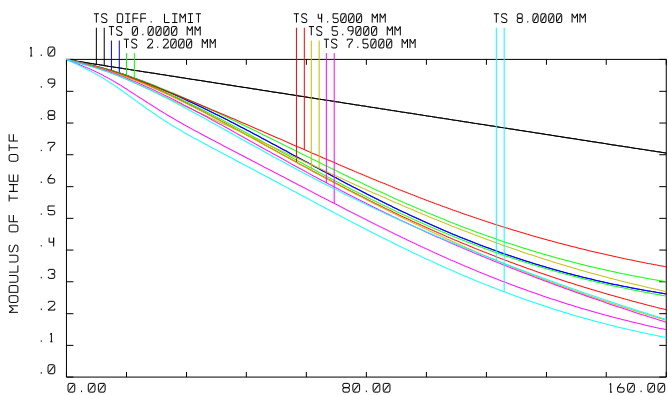
Distortion



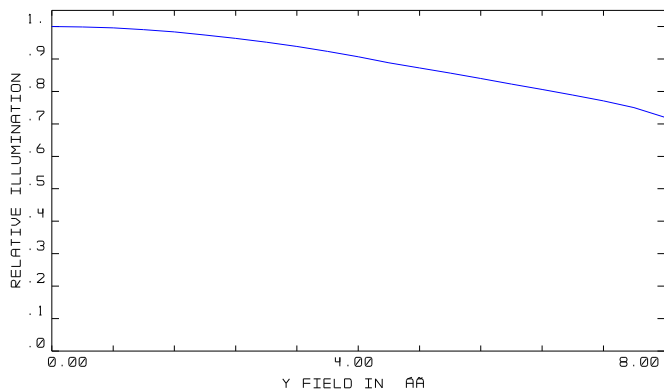
WD VS FOV

Working distance (mm)	Optical magnification (x)	1" Field of view		2/3" Field of view		1/2" Field of view	
		H(mm)	V(mm)	H(mm)	V(mm)	H(mm)	V(mm)
		12.8	9.6	8.8	6.6	6.4	4.8
1000	-0.025	515.834	386.875	354.636	265.977	257.917	193.438
750	-0.034	385.838	289.379	265.264	198.948	192.919	144.689
600	-0.042	307.835	230.876	211.637	158.728	153.918	115.438
550	-0.046	281.832	211.374	193.760	145.320	140.916	105.687
500	-0.051	255.894	191.921	175.927	131.946	127.947	95.960
450	-0.057	229.824	172.368	158.004	118.503	114.912	86.184
400	-0.064	203.818	152.863	140.125	105.093	101.909	76.432
350	-0.073	177.808	133.356	122.243	91.682	88.904	66.678
300	-0.086	151.794	113.845	104.358	78.269	75.897	56.923
250	-0.104	125.776	94.332	86.471	64.853	62.888	47.166
200	-0.131	99.747	74.810	68.576	51.432	49.874	37.405
150	-0.177	73.701	55.276	50.669	38.002	36.850	27.638

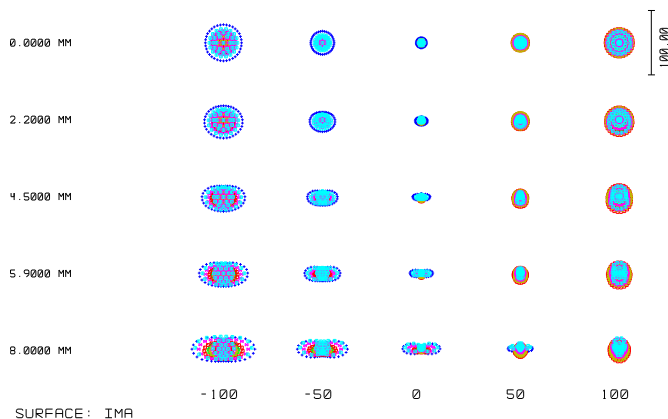
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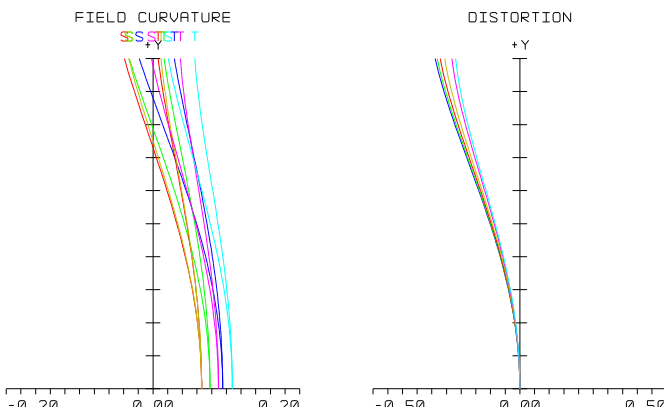
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Spot Diagram



Distortion



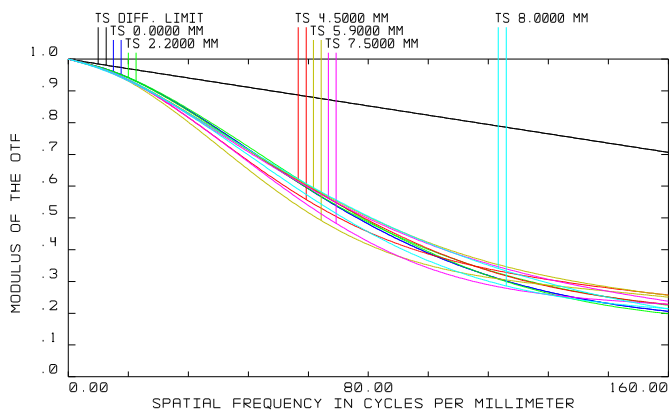


vision solution SBS-3520-10MP

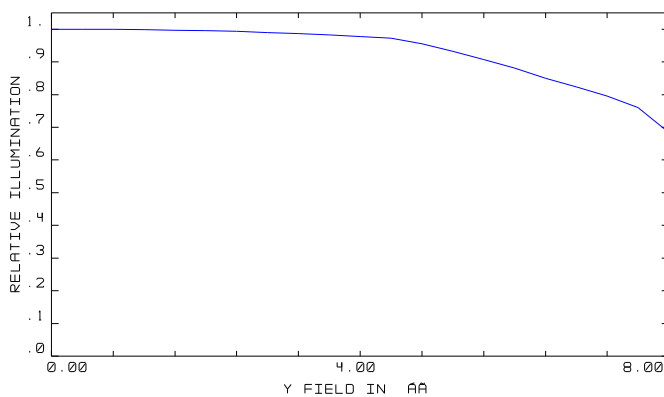
WD VS FOV

Working distance (mm)	Optical magnification (x)	1" Field of view		2/3" Field of view		1/2" Field of view	
		H(mm)	V(mm)	H(mm)	V(mm)	H(mm)	V(mm)
		12.8	9.6	8.8	6.6	6.4	4.8
1000	-0.036	359.202	269.401	246.951	185.213	179.601	134.701
750	-0.048	267.270	200.453	183.748	137.811	133.635	100.226
650	-0.056	230.494	172.871	158.465	118.849	115.247	86.435
600	-0.061	212.106	159.079	145.823	109.367	106.053	79.540
550	-0.066	193.715	145.286	133.179	99.884	96.858	72.643
500	-0.073	175.445	131.584	120.618	90.464	87.722	65.792
450	-0.082	156.931	117.698	107.890	80.918	78.466	58.849
400	-0.093	138.538	103.903	95.245	71.433	69.269	51.952
350	-0.107	120.141	90.106	82.597	61.948	60.070	45.053
300	-0.126	101.739	76.304	69.946	52.459	50.870	38.152
250	-0.154	83.333	62.500	57.291	42.968	41.666	31.250
200	-0.198	64.949	48.712	44.652	33.489	32.474	24.356

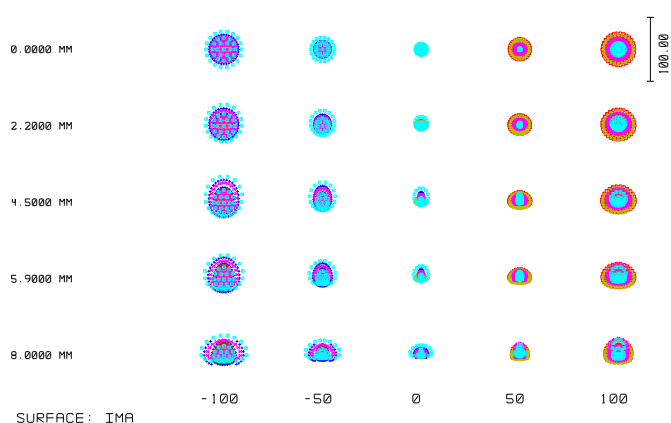
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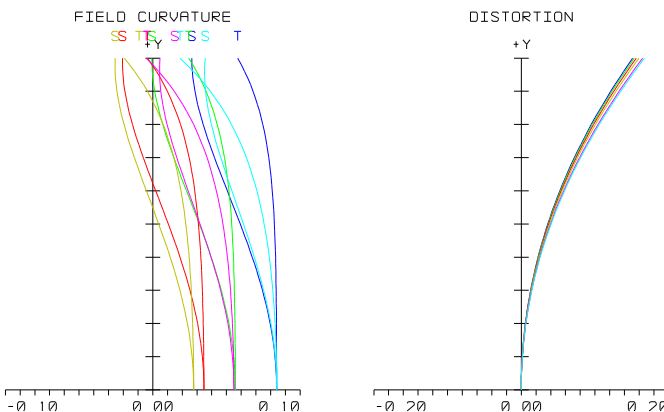
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Spot Diagram



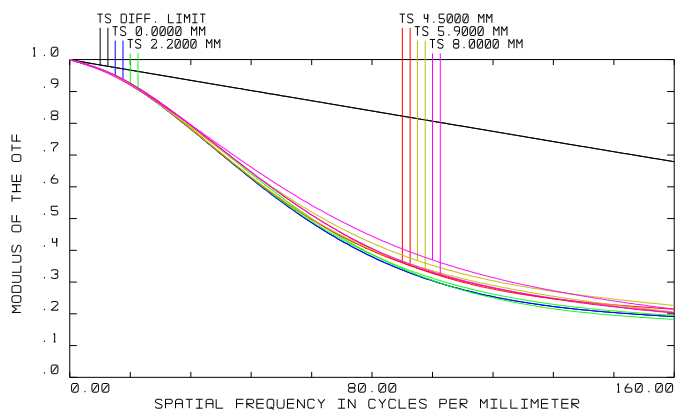
Distortion



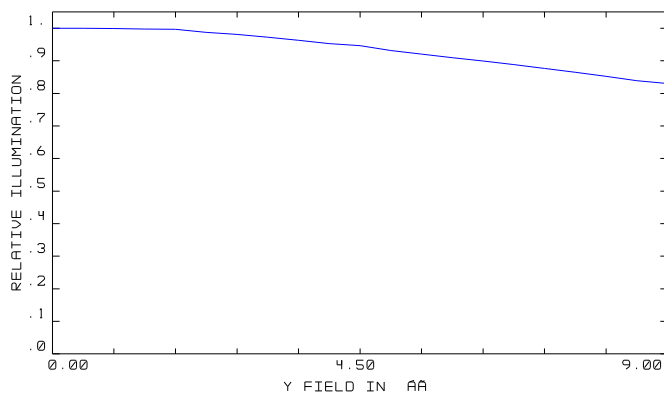
WD VS FOV

Working distance (mm)	Optical magnification (x)	1" Field of view		2/3" Field of view		1/2" Field of view	
		H(mm)	V(mm)	H(mm)	V(mm)	H(mm)	V(mm)
		12.8	9.6	8.8	6.6	6.4	4.8
1000	-0.051	250.587	187.940	172.279	129.209	125.294	93.970
700	-0.074	174.536	130.902	119.994	89.995	87.268	65.451
650	-0.080	160.451	120.338	110.310	82.733	80.226	60.169
600	-0.087	147.702	110.777	101.545	76.159	73.851	55.388
550	-0.095	135.008	101.256	92.818	69.614	67.504	50.628
500	-0.105	122.334	91.751	84.105	63.079	61.167	45.875
450	-0.117	109.578	82.183	75.335	56.501	54.789	41.092
400	-0.133	96.802	72.601	66.551	49.913	48.401	36.301
350	-0.153	83.974	62.981	57.732	43.299	41.987	31.490
300	-0.181	70.894	53.171	48.740	36.555	35.447	26.585
250	-0.222	57.814	43.361	39.747	29.811	28.907	21.680

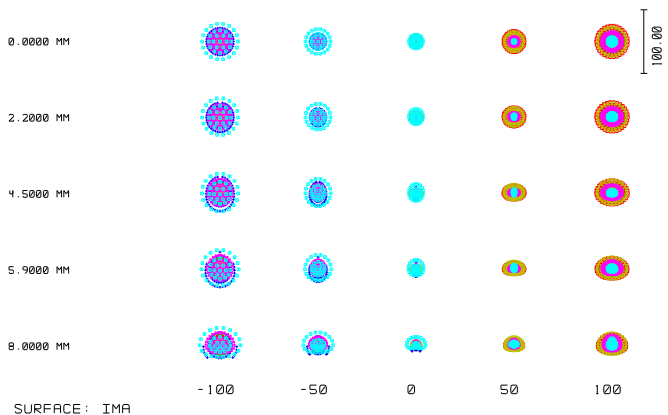
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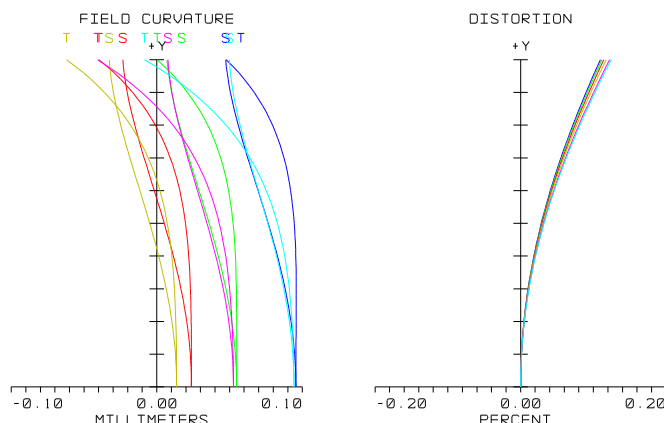
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Spot Diagram



Distortion

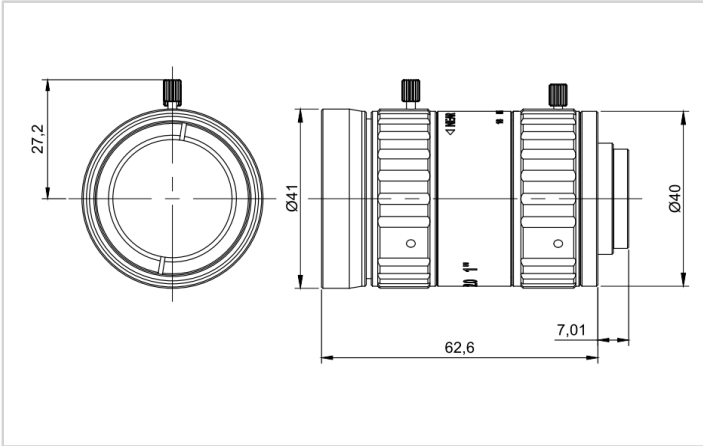




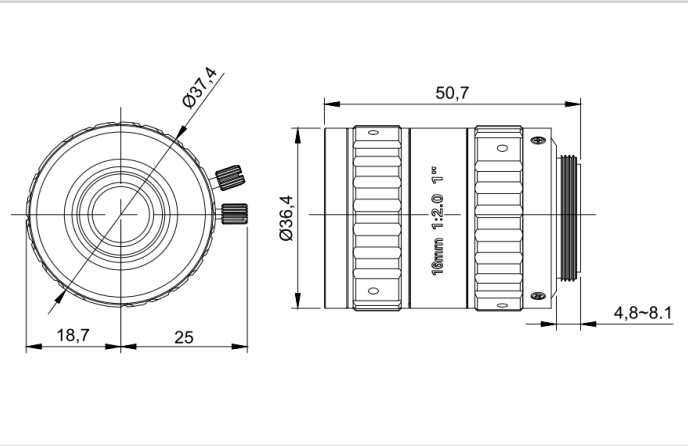
vision solution

Dimensions for 1" 10MP series Focal Lens

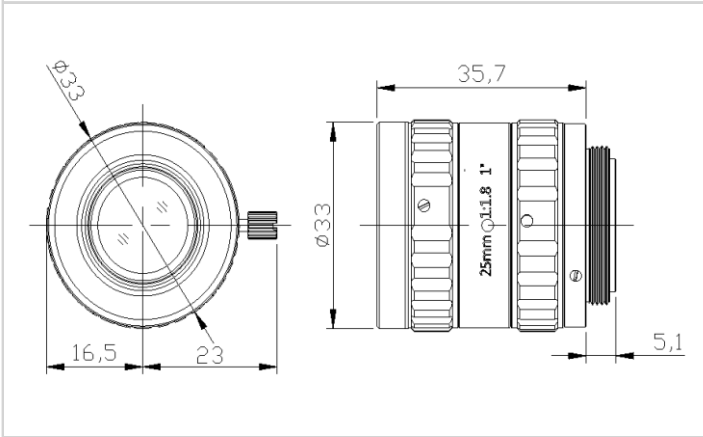
Dimensions (mm)



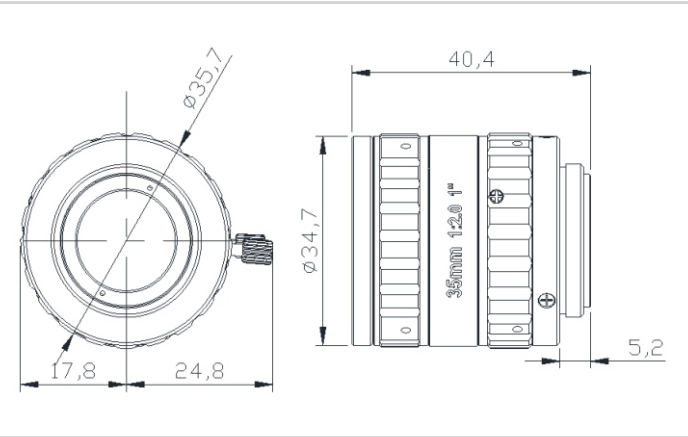
SBS-1220-10MP



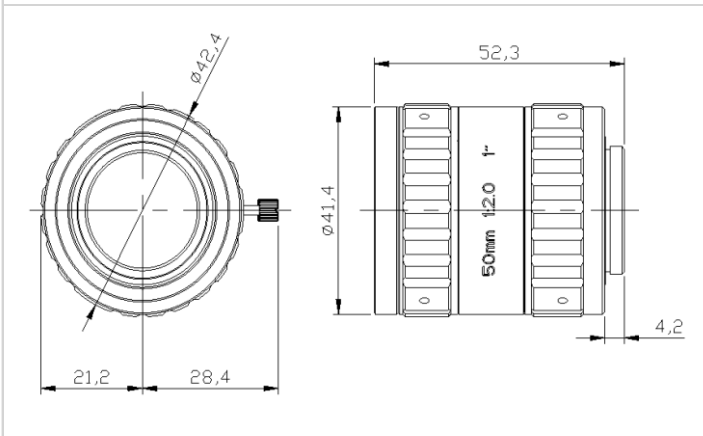
SBS-1620-10MP



SBS-2520-10MP



SBS-3520-10MP



SBS-5020-10MP