C-MOUNT MEGAPIXEL

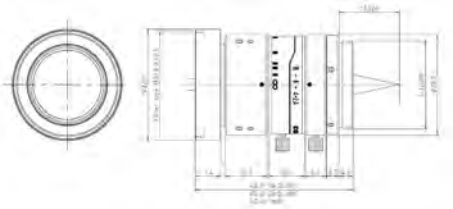
5 MEGAPIXEL ULTRA LOW DISTORTION LENSES

FACTORY AUTOMATION LENS

- Ultra low distortion (optical distortion 0.1% or less)
- Higher relative illumination rate
- Compact design
- Locking set screws for focus and iris

NEW

M0824-MPW2



Focal Length		8mm					
Max. Aperture Ratio		1:2.4					
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)					
Operation Range	Iris	F2.4 - F16.0					
	Focus	0.05m - Inf.					
Control	Iris	Manual					
	Focus	Manual					
Object Dimension at M.O.D.		5.4cm x 7.4cm 2/3"					
Angle of View	D	2/3"	69.32°	1/1.8"	56.90°	1/2"	53.23°
	H		57.80°		46.72°		43.74°
	V		44.36°		35.75°		33.23°
Operating Temperature		-10° C ~ +50° C					

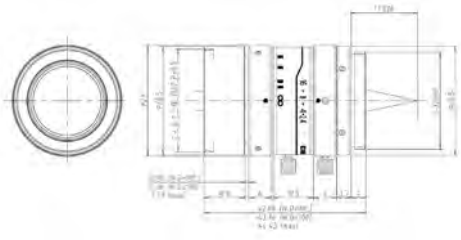
Distortion	2/3"	1.87%(y=5.5)	1/1.8"	-1.55%(y=4.32)	1/2"	-1.42%(y=4.0)
Back Focal Length	13.7mm(WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M32.0 P=0.5mm					
Dimensions	ϕ 32mm x 45.71mm					
Weight	80.0g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.009	-	1011.1	755.4	791.6	591.5	732.2	547.3
850	-0.009	-	956.0	714.2	748.5	559.3	692.3	517.4
800	-0.010	-	900.9	673.0	705.3	527.0	652.3	487.6
750	-0.011	-	845.8	631.8	662.1	494.7	612.4	457.7
700	-0.011	-	790.7	590.6	618.9	462.5	572.5	427.8
650	-0.012	-	735.6	549.4	575.8	430.2	532.5	398.0
600	-0.013	-	680.4	508.2	532.6	397.9	492.6	368.1
550	-0.014	-	625.3	467.0	489.4	365.6	452.6	338.3
500	-0.016	-	570.0	425.6	446.0	333.2	412.6	308.2
450	-0.017	-	515.0	384.4	403.0	301.0	372.6	278.4
400	-0.019	-	459.8	343.2	359.8	268.8	332.6	248.6
350	-0.022	-	404.6	302.0	316.6	236.4	292.8	218.8
300	-0.026	-	349.6	260.8	273.4	204.2	252.8	188.8
250	-0.030	-	294.4	219.6	230.2	171.8	212.8	159.0
200	-0.037	-	239.4	178.4	187.0	139.6	173.0	129.2
150	-0.049	-	184.2	137.2	143.8	107.4	133.0	99.2
100	-0.070	-	129.0	96.0	100.6	75.0	93.0	69.4
50	-0.127	-	71.4	52.9	55.5	41.3	51.3	38.2

Field of View = CCD Size / Optical Magnification

NEW

M1224-MPW2



Focal Length		12mm					
Max. Aperture Ratio		1:2.4					
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)					
Operation Range	Iris	F2.4 - F16.0					
	Focus	0.1m - Inf.					
Control	Iris	Manual					
	Focus	Manual					
Object Dimension at M.O.D.		6.4cm x 8.5cm 2/3"					
Angle of View	D	2/3"	48.6°	1/1.8"	39.1°	1/2"	36.5°
	H		39.8°		31.7°		29.5°
	V		30.4°		24.0°		22.3°
Operating Temperature		-10° C ~ +50° C					

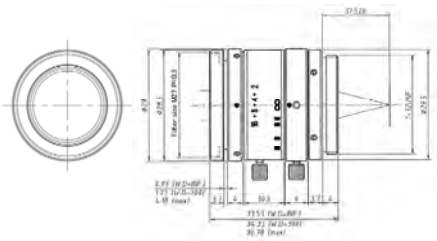
Distortion	2/3"	-0.05%(y=5.5)	1/1.8"	-0.34%(y=4.32)	1/2"	-0.35%(y=4.0)
Back Focal Length	14.4mm(WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M27.0 P=0.5mm					
Dimensions	ϕ 29mm x 42.68mm					
Weight	72.0g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.0131	-	671.2	503.7	527.5	395.5	488.4	366.1
850	-0.0138	-	634.6	476.2	498.7	373.9	461.8	346.1
800	-0.0147	-	598.0	448.7	469.9	352.3	435.1	326.1
750	-0.0157	-	561.4	421.2	441.1	330.7	408.4	306.1
700	-0.016	-	524.7	393.7	412.3	309.1	381.8	286.1
650	-0.018	-	488.1	366.2	383.5	287.5	355.1	266.1
600	-0.019	-	451.5	338.7	354.7	265.9	328.4	246.1
550	-0.021	-	414.8	311.2	325.9	244.3	301.7	226.1
500	-0.022	-	378.2	283.7	297.2	222.7	275.1	206.2
450	-0.026	-	341.6	256.2	268.4	201.1	248.4	186.2
400	-0.029	-	305.0	228.7	239.6	179.5	221.8	166.2
350	-0.033	-	268.3	201.2	210.8	157.9	195.1	146.2
300	-0.038	-	231.7	173.7	182.0	136.3	168.4	126.2
250	-0.045	-	195.1	146.2	153.2	114.7	141.8	106.2
200	-0.056	-	158.5	118.7	124.4	93.1	115.1	86.2
150	-0.073	-	121.8	91.2	95.6	71.5	88.4	66.2
100	-0.104	-	85.2	63.7	66.8	50.0	61.8	46.2

Field of View = CCD Size / Optical Magnification

C-MOUNT
MEGAPIXEL

M1620-MPW2



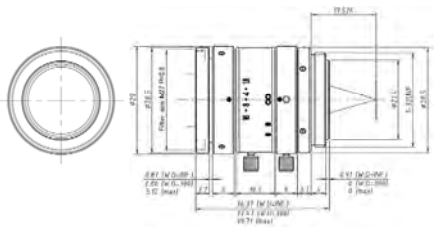
Focal Length		16mm						
Max. Aperture Ratio		1:2.0						
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)						
Operation Range	Iris	F2.0 - F16.0						
	Focus	0.2m - Inf.						
Control	Iris	Manual						
	Focus	Manual						
Object Dimension at M.O.D.		8.8cm x 11.74cm 2/3"						
Angle of View	D	2/3"	37.7°	1/1.8"	30.1°	1/2"	28.0°	
	H		30.7°		24.3°		22.6°	
	V		23.3°		18.5°		17.1°	
Operating Temperature		-10° C ~ +50° C						

Distortion	2/3"	0.09%(y=5.5)	1/1.8"	-0.06%(y=4.32)	1/2"	-0.07%(y=4.0)
Back Focal Length	14.7mm (WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M27.0 P=0.5mm					
Dimensions	ϕ 29mm x 33.53mm					
Weight	53g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.018	-	501.2	376.4	393.5	296.7	365.0	273.9
850	-0.019	-	473.8	355.8	372.0	280.5	345.1	258.9
800	-0.020	-	446.4	335.2	350.4	264.2	325.1	243.9
750	-0.021	-	418.9	314.6	328.9	248.0	305.1	228.9
700	-0.022	-	391.5	294.0	307.4	231.7	285.1	213.9
650	-0.024	-	364.1	273.4	285.8	215.5	265.2	198.9
600	-0.026	-	336.7	252.8	264.3	199.3	245.2	183.9
550	-0.028	-	309.3	232.2	242.8	183.0	225.2	168.9
500	-0.031	-	281.9	211.6	221.2	166.8	205.2	153.9
450	-0.035	-	254.5	191.0	199.7	150.5	185.2	138.9
400	-0.039	-	227.1	170.4	178.2	134.3	165.3	124.0
350	-0.044	-	199.7	149.8	156.6	118.0	145.3	109.0
300	-0.0511	-	172.2	129.2	135.1	101.8	125.3	94.0
250	-0.061	-	144.8	108.6	113.6	85.6	105.1	79.2
200	-0.075	-	117.4	88.0	92.0	69.3	85.3	64.0
150	-0.098	0.5	90.0	67.4	70.5	53.1	65.3	49.0
100	-0.142	0.5	62.5	46.8	48.9	36.8	45.4	34.0

Field of View = CCD Size / Optical Magnification

M2518-MPW2



Focal Length		25mm						
Max. Aperture Ratio		1:1.8						
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)						
Operation Range	Iris	F1.8 - F16.0						
	Focus	0.2m - Inf.						
Control	Iris	Manual						
	Focus	Manual						
Object Dimension at M.O.D.		5.48cm x 7.31cm 2/3"						
Angle of View	D	2/3"	24.6°	1/1.8"	19.5°	1/2"	18.1°	
	H		19.9°		15.7°		14.5°	
	V		15.0°		11.8°		10.9°	
Operating Temperature		-10° C ~ +50° C						

Distortion	2/3"	0.03%(y=5.5)	1/1.8"	-0.02%(y=4.32)	1/2"	-0.02%(y=4.0)
Back Focal Length	13.8mm (WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M27.0 P=0.5mm					
Dimensions	ϕ 29mm x 36.37mm					
Weight	60g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.028	-	318.2	238.9	249.8	188.4	231.7	173.9
850	-0.029	-	300.7	225.8	236.0	178.0	219.0	164.3
800	-0.031	-	283.2	212.6	222.3	167.6	206.2	154.7
750	-0.033	-	265.7	199.5	208.5	157.2	193.5	145.2
700	-0.035	-	248.2	186.3	194.8	146.9	180.7	135.6
650	-0.038	-	230.7	173.2	181.0	136.5	168.0	126.0
600	-0.041	-	213.2	160.0	167.3	126.1	155.2	116.4
550	-0.045	-	195.7	146.9	153.6	115.8	142.5	106.9
500	-0.049	-	178.2	133.7	139.8	105.4	129.7	97.3
450	-0.055	-	160.7	120.6	126.1	95.0	116.9	87.7
400	-0.061	-	143.2	107.4	112.3	84.7	104.2	78.1
350	-0.070	-	125.7	94.3	98.6	74.3	91.4	68.6
300	-0.081	-	108.2	81.1	84.8	63.9	78.7	59.0
250	-0.097	-	90.7	68.0	71.1	53.5	65.9	49.4
200	-0.121	-	73.1	54.8	57.3	43.2	53.1	39.8
150	-0.159	-	55.6	41.6	43.5	32.8	40.4	30.3
100	-0.233	5	38.0	28.5	29.8	22.4	27.6	20.7

Field of View = CCD Size / Optical Magnification

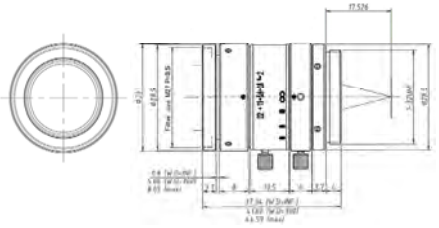
C-MOUNT MEGAPIXEL

5 MEGAPIXEL ULTRA LOW DISTORTION LENSES

FACTORY AUTOMATION LENS

- Ultra low distortion (optical distortion 0.1% or less)
- Higher relative illumination rate
- Compact design
- Locking set screws for focus and iris

M3520-MPW2



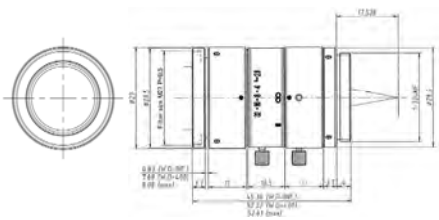
Focal Length		35mm					
Max. Aperture Ratio		1:2.0					
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)					
Operation Range	Iris	F2.0 - F22.0					
	Focus	0.2m - Inf.					
Control	Iris	Manual					
	Focus	Manual					
Object Dimension at M.O.D.		3.48cm x 4.63cm 2/3"					
Angle of View	D	2/3"	17.8°	1/1.8"	14.0°	1/2"	13.0°
	H		14.3°		11.2°		10.4°
	V		10.7°		8.5°		7.8°
Operating Temperature		-10° C ~ +50° C					

Distortion	2/3"	0.011%(y=5.5)	1/1.8"	0.010%(y=4.32)	1/2"	0.009%(y=4.0)
Back Focal Length	18.0mm (WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M27.0 P=0.5mm					
Dimensions	ϕ 29mm x 37.34mm					
Weight	59g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.040	-	221.8	166.4	174.0	131.2	161.4	121.1
850	-0.042	-	209.3	157.0	164.2	123.8	152.3	114.2
800	-0.045	-	196.7	147.6	154.3	116.3	143.2	107.4
750	-0.048	-	184.2	138.2	144.5	108.9	134.0	100.6
700	-0.051	-	171.7	128.8	134.7	101.5	124.9	93.7
650	-0.055	-	159.2	119.4	124.8	94.1	115.8	86.9
600	-0.060	-	146.6	110.0	115.0	98.7	106.7	80.0
550	-0.066	-	134.1	100.6	105.2	79.3	97.6	73.2
500	-0.072	-	121.6	91.2	95.3	71.9	88.4	66.3
450	-0.081	-	109.0	81.8	85.5	64.5	79.3	59.5
400	-0.091	-	96.5	72.4	75.7	57.0	70.2	52.7
350	-0.105	-	84.0	63.0	65.8	49.6	61.1	45.8
300	-0.123	-	71.4	53.6	56.0	42.2	52.0	39.0
250	-0.150	-	58.9	44.2	46.2	34.8	42.8	32.1
200	-0.190	-	46.3	34.8	36.3	27.4	33.7	25.3
150	-0.261	5	33.8	25.3	26.5	20.0	24.6	18.4
100	-0.417	10	21.2	15.9	16.6	12.5	15.4	11.5

Field of View = CCD Size / Optical Magnification

M5028-MPW2



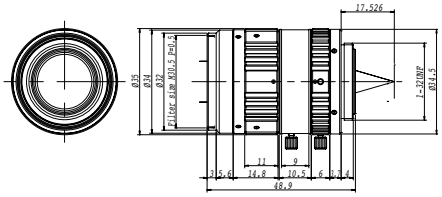
Focal Length		50mm					
Max. Aperture Ratio		1:2.8					
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)					
Operation Range	Iris	F2.8 - F32.0					
	Focus	0.4m - Inf.					
Control	Iris	Manual					
	Focus	Manual					
Object Dimension at M.O.D.		4.78cm x 6.38cm 2/3"					
Angle of View	D	2/3"	12.5°	1/1.8"	9.9°	1/2"	9.1°
	H		10.0°		7.9°		7.3°
	V		7.5°		5.9°		5.5°
Operating Temperature		-10° C ~ +50° C					

Distortion	2/3"	0.027%(y=5.5)	1/1.8"	0.017%(y=4.32)	1/2"	0.015%(y=4.0)
Back Focal Length	27.7mm (WD=400mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M27.0 P=0.5mm					
Dimensions	ϕ 29mm x 45.36mm					
Weight	69g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.058	-	151.7	113.8	118.9	89.6	110.3	82.7
850	-0.062	-	142.9	107.2	112.0	84.4	103.9	77.9
800	-0.066	-	134.1	100.6	105.1	79.2	97.5	73.1
750	-0.070	-	125.3	94.0	98.2	74.0	91.1	68.3
700	-0.075	-	116.5	87.4	91.3	68.9	84.7	63.6
650	-0.082	-	107.7	80.8	84.5	63.7	78.3	58.8
600	-0.089	-	98.9	74.2	77.6	58.5	71.9	54.0
550	-0.098	-	90.1	67.6	70.7	53.3	65.6	49.2
500	-0.108	-	81.3	61.0	63.8	48.1	59.2	44.4
450	-0.121	-	72.6	54.4	56.9	42.9	52.8	39.6
400	-0.138	-	63.8	47.8	50.0	37.7	46.4	34.8
350	-0.160	1	55.0	41.2	43.1	32.5	40.0	30.0
300	-0.191	5	46.2	34.6	36.2	27.3	33.6	25.2
250	-0.235	5	37.4	28.1	29.3	22.1	27.2	20.4
200	-0.308	10	28.6	21.5	22.4	16.9	20.8	15.6
150	-0.445	20	19.8	14.9	15.5	11.7	14.4	10.8
100	-0.801	40	11.0	8.2	8.6	6.5	8.0	6.0

Field of View = CCD Size / Optical Magnification

M2518-MPW



Focal Length		25mm						
Max. Aperture Ratio		1:1.8						
Max. Image Format		8.8mm x 6.6mm (ϕ 11mm)						
Operation Range	Iris	F1.8 - F16.0						
	Focus	0.15m - Inf.						
Control	Iris	Manual						
	Focus	Manual						
Object Dimension at M.O.D.		4.10cm x 5.48cm 2/3"						
Angle of View	D	2/3"	25.4°	1/1.8"	20.1°	1/2"	18.6°	
	H		20.5°		16.1°		15.0°	
	V		15.4°		12.2°		11.3°	
Operating Temperature		-10° C ~ +50° C						

Distortion	2/3"	0.03%(y=5.5)	1/1.8"	-0.02%(y=4.32)	1/2"	-0.02%(y=4.0)
Back Focal Length	14.0mm (WD=300mm)					
Flange Back Length	17.526mm					
Mount	C-Mount					
Filter Size	M30.5 P=0.5mm					
Dimensions	ϕ 35mm x 48.90mm					
Weight	102g					

Working Distance	Optical Magnification	Extension Ring	Field of View(mm)					
			2/3"		1/1.8"		1/2"	
(mm)		(mm)	H	V	H	V	H	V
900	-0.027	-	325.4	243.4	254.5	191.9	236.1	177.1
850	-0.029	-	306.2	229.9	240.3	181.2	222.9	167.3
800	-0.030	-	288.2	216.3	226.1	170.5	209.8	157.4
750	-0.033	-	270.2	202.8	212.0	159.8	196.7	147.5
700	-0.035	-	252.1	189.3	197.8	149.2	183.5	137.7
650	-0.038	-	234.1	175.7	183.7	138.5	170.4	127.8
600	-0.041	-	216.1	162.2	169.5	127.8	157.3	118.0
550	-0.044	-	198.1	148.7	155.4	117.1	144.2	108.1
500	-0.049	-	180.1	135.1	141.3	106.5	131.0	98.3
450	-0.054	-	162.1	121.6	127.1	95.8	117.9	88.5
400	-0.061	-	144.1	108.1	113.0	85.2	104.8	78.6
350	-0.070	-	126.1	94.6	98.9	74.5	91.7	68.8
300	-0.081	-	108.2	81.1	84.8	63.9	78.7	59.0
250	-0.098	-	90.3	67.7	70.8	53.3	65.6	49.2
200	-0.122	-	72.4	54.3	56.8	42.8	52.6	39.5
150	-0.161	-	54.8	41.0	42.9	32.3	39.8	29.8
100	-0.236	-	37.5	28.1	29.4	22.1	27.2	20.4

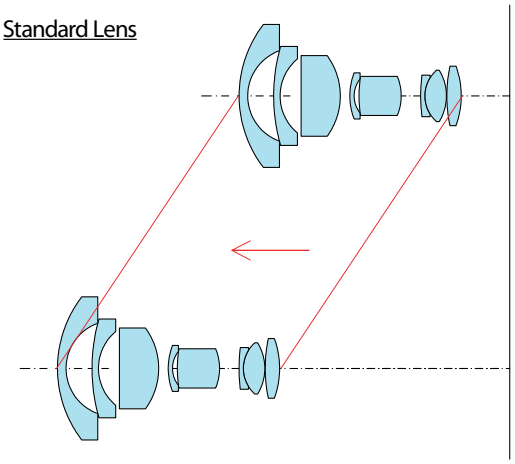
Field of View = CCD Size / Optical Magnification

FLOATING

Basically, lens is designed to show the best performance at a certain working distance. Due to this design, a curvature of field* is caused at other working distances, and the picture deteriorates at the corners. This curvature of field is able to be modified by a method called Floating, which makes several lens element groups move differently and controls aberration. It can provide stable picture quality from short object distances to infinity.

*Curvature of field: Phenomenon caused by the gap of the focal point between center and corner

Standard Lens



Floating Lens