

5MP Fixed Focal Length Lenses

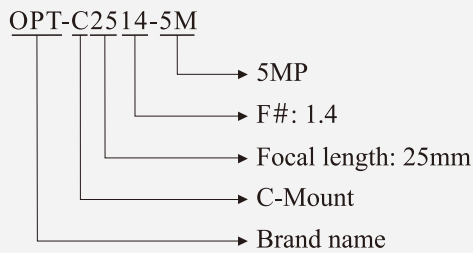


Product Features

- **High resolution**
 Compatible with 5MP industrial cameras^[1] which pixel $\geq 3.45\mu\text{m}$ and max. 2/3" sensor; resolution up to 140lp/mm in full FOV
- **Low distortion**
 Total distortion $< 0.7\%$, min. distortion as low as 0.02% ^[2]

[1] OPT-C0420-5M and OPT-C0620-5M: Compatible with 3MP cameras of max. 1/2" sensor
 [2] OPT-C0420-5M and OPT-C0620-5M are not included.

Selection Guide



Resolution Comparison

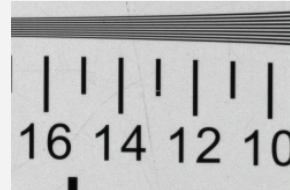


Image taken by OPT 5MP Lens

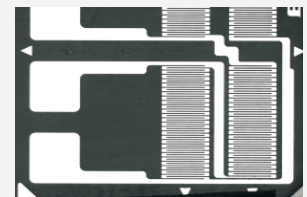


Image taken by other lens

Application Cases



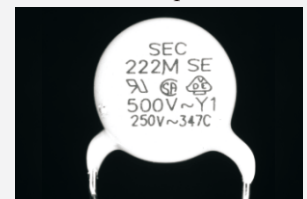
Magnet defect detection



Circuit inspection



Lens surface inspection



Capacitor OCR

Model Table

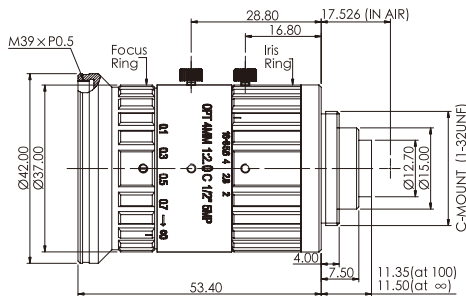
No.	Model	Focal length (mm)	Aperture range	WD (mm)	Filter thread (mm)	Distortion	Back focal length (mm)	Weight (kg)	Sensor format	FOV angle (H×V×D)		
1	OPT-C0420-5M	4	F2.0-F16	100-∞	M39*P0.5	<1.7%	6.46	0.13	1/3"	62.5°	48.6°	74.2°
									1/2.5"	71.4°	56.0°	83.6°
									1/2"	76.0°	60.8°	90.0°
2	OPT-C0620-5M	6	F2.0-F16	80-∞	M30.5*P0.5	<1.05%	7.44	0.11	1/3"	43.8°	32.9°	53.0°
									1/2.5"	51.2°	39.6°	61.8°
									1/2"	56.8°	44.0°	68.2°
3	OPT-C0828-5M	8	F2.8-F16	30-∞	M30.5*P0.5	<0.81%	13.06	0.12	1/3"	32.5°	25.4°	40.4°
									1/2.5"	39.2°	29.8°	48.0°
									1/1.8"	48.2°	37.3°	58.5°
									2/3"	57.6°	49.3°	71.2°

Model Table

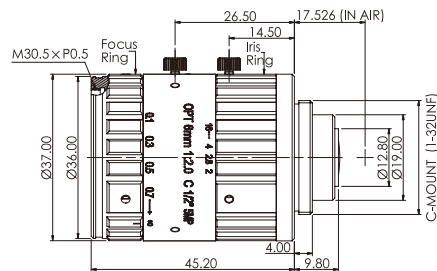
No.	Model	Focal length (mm)	Aperture range	WD (mm)	Filter thread (mm)	Distortion	Back focal length (mm)	Weight (kg)	Sensor format	FOV angle (H×V×D)			
4	OPT-C1218-5M	12	F1.8~F16	100-∞	M30.5*P0.5	<0.25%	13.39	0.13	1/3"	23.0°	17.3°	28.6°	
									1/2.5"	27.4°	20.7°	33.9°	
									1/1.8"	34.1°	25.8°	41.8°	
									2/3"	40.1°	33.9°	50.9°	
5	OPT-C1618-5M	16	F1.8~F16	150-∞	M30.5*P0.5	<0.2%	13.58	0.14	1/3"	18.0°	13.5°	22.4°	
									1/2.5"	21.2°	16.1°	26.4°	
									1/1.8"	26.7°	20.3°	33.1°	
									2/3"	31.4°	26.3°	40.2°	
6	OPT-C2514-5M	25	F1.4~F16	200-∞	M30.5*P0.5	<0.3%	11.54	0.08	1/3"	10.9°	8.3°	13.6°	
									1/2.5"	13.1°	9.9°	16.4°	
									1/1.8"	16.4°	12.4°	20.4°	
									2/3"	19.4°	16.2°	25.1°	
7	OPT-C3514-5M	35	F1.4~F16	390-∞	M30.5*P0.5	<0.1%	12.75	0.13	1/3"	7.7°	5.9°	9.7°	
									1/2.5"	9.3°	7.0°	11.8°	
									1/1.8"	11.6°	8.9°	14.5°	
									2/3"	13.7°	11.4°	17.8°	
8	OPT-C5025-5M	50	F2.5~F22	600-∞	M30.5*P0.5	<0.05%	13.19	0.11	1/3"	5.3°	3.9°	6.6°	
									1/2.5"	6.2°	4.6°	7.7°	
									1/1.8"	7.9°	5.9°	9.8°	
									2/3"	9.1°	7.7°	12.0°	
9	OPT-C7528-5M	75	F2.8~F32	600-∞	M30.5*P0.5	<0.02%	31.38	0.22	1/3"	3.4°	2.6°	4.3°	
									1/2.5"	4.0°	3.0°	5.0°	
									1/1.8"	5.1°	3.9°	6.4°	
									2/3"	6.0°	5.0°	7.8°	

Dimensions (mm)

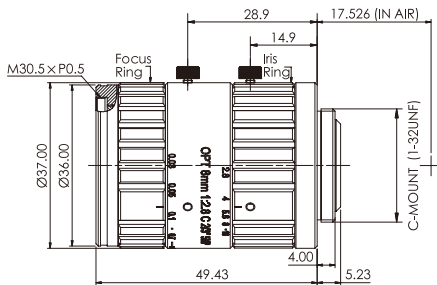
1.OPT-C0420-5M



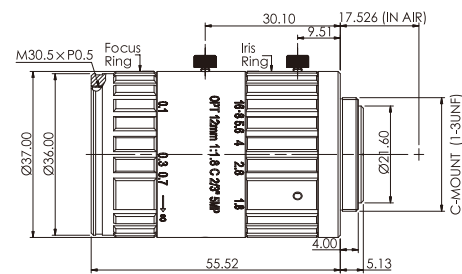
2.OPT-C0620-5M



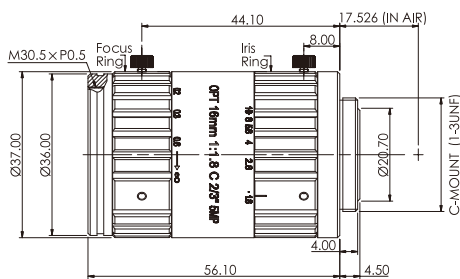
3.OPT-C0828-5M



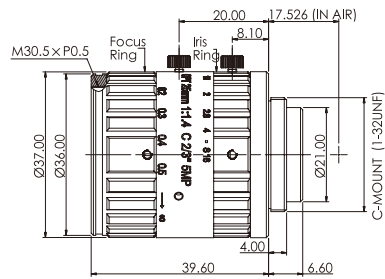
4.OPT-C1218-5M



5.OPT-C1618-5M

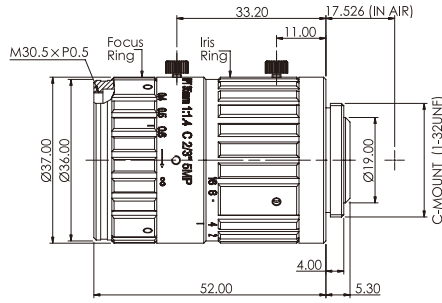


6.OPT-C2514-5M

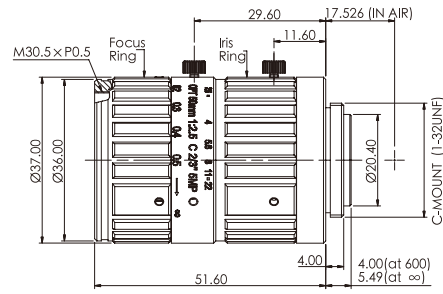


Dimensions (mm)

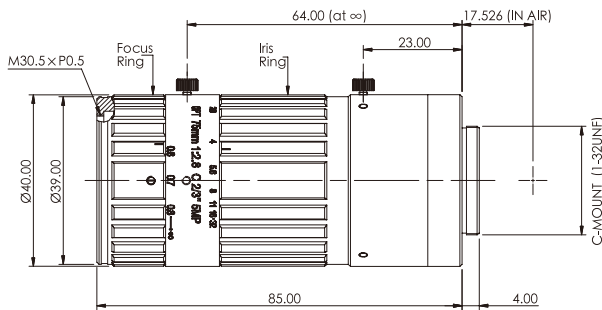
7.OPT-C3514-5M



8.OPT-C5025-5M



9.OPT-C7528-5M



Selection Guide of Extension Tube for 5MP Lenses Object size (mm×mm)

Extension tube	Model	OPT-C0420-5M		OPT-C0620-5M		OPT-C0828-5M		OPT-C1218-5M		OPT-C1618-5M	
		WD of lens		0.1m-∞		0.08m-∞		0.03m-∞		0.1m-∞	
0mm	WD(mm)	100		80		30		100		150	
	1/3"	129.3×97.0		72.9×54.7		35.8×26.9		49.5×37.1		47.8×35.9	
	1/2.5"	155.2×115.6		87.5×65.1		43.0×32.0		59.8×44.3		57.4×42.7	
	1/1.8"	-		-		53.6×39.7		66.0×49.5		71.5×53.0	
	2/3"	-		-		65.7×49.3		90.7×68.0		87.6×65.7	
	Mag.	0.0371X		0.0658X		0.1340X		0.0970X		0.1004X	
0.5mm	WD(mm)	7	20	23	37	19	152	64	296	105	122
	1/3"	24.0×18.0	38.5×28.8	27.5×20.6	38.6×29.0	20.2×15.1	97.0×72.7	34.7×26.0	123.7×92.8	36.5×27.3	41.4×31.0
	1/2.5"	28.8×21.4	46.2×34.4	33.0×24.6	46.4×34.5	24.2×18.0	116.4×86.7	42.0×31.1	149.5×110.8	43.8×32.6	49.6×37.0
	1/1.8"	-	-	-	-	30.2×22.3	145.0×107.5	46.3×34.7	164.9×123.7	54.5×40.4	61.8×45.8
	2/3"	-	-	-	-	37.0×27.7	177.8×133.3	63.7×47.8	226.8×170.1	66.8×50.1	75.8×56.9
	Mag.	0.1996X	0.1246X	0.1741X	0.1241X	0.2380X	0.0495X	0.1382X	0.0388X	0.1317X	0.1160X
1mm	WD(mm)	-	-	12	17	12	68	45	137	82	92
	1/3"	-	-	18.6×13.9	23.1×17.3	17.2×12.9	47.5×35.6	26.7×20.0	61.5×46.1	29.5×22.1	32.6×24.4
	1/2.5"	-	-	22.3×16.6	27.7×20.6	20.7×15.4	57.0×42.4	32.3×23.9	74.3×55.1	35.4×26.3	39.1×29.1
	1/1.8"	-	-	-	-	25.7×19.1	71.0×52.6	35.6×26.7	81.9×61.5	44.1×32.7	48.7×36.1
	2/3"	-	-	-	-	31.6×23.7	87.0×65.3	48.9×36.7	112.7×84.5	54.0×40.5	59.8×44.8
	Mag.	-	-	0.2575X	0.2075X	0.2787X	0.1011X	0.1798X	0.0781X	0.1629X	0.1473X
1.5mm	WD(mm)	-	-	-	-	-	-	32	84	66	73
	1/3"	-	-	-	-	-	-	21.6×16.2	40.7×30.6	24.7×18.5	26.9×20.2
	1/2.5"	-	-	-	-	-	-	26.1×19.4	49.2×36.5	29.7×22.1	32.3×24.0
	1/1.8"	-	-	-	-	-	-	28.8×21.6	54.3×40.7	37.0×27.4	40.2×29.8
	2/3"	-	-	-	-	-	-	39.7×29.7	74.7×56.0	45.3×34.0	49.3×37.0
	Mag.	-	-	-	-	-	-	0.2219X	0.1178X	0.1942X	0.1785X
2mm	WD(mm)	-	-	-	-	-	-	-	-	55	60
	1/3"	-	-	-	-	-	-	-	-	21.3×16.0	22.9×17.2
	1/2.5"	-	-	-	-	-	-	-	-	25.6×19.0	27.5×20.5
	1/1.8"	-	-	-	-	-	-	-	-	31.8×23.6	34.2×25.4
	2/3"	-	-	-	-	-	-	-	-	39.0×29.3	41.9×31.5
	Mag.	-	-	-	-	-	-	-	-	0.2254X	0.2098X

Extension tube	Model	OPT-C2514-5M		OPT-C3514-5M		OPT-C5025-5M		OPT-C7528-5M	
		0.2m-∞		0.39m-∞		0.57m-∞		0.6m-∞	
0mm	WD(mm)	200		390		570		600	
	1/3"	38.1×28.6		54.3×40.7		54.7×41		36.4×27.3	
	1/2.5"	45.8×34.1		65.2×48.5		65.6×48.9		43.7×32.5	
	1/1.8"	57×42.3		81.2×60.2		81.8×60.6		54.4×40.3	
	2/3"	70×52.5		99.6×74.7		100.3×75.2		66.8×50.1	
	Mag.	0.1257X		0.0883X		0.0877X		0.1317X	
0.5mm	WD(mm)	166	180	318	347	527	558	573	586
	1/3"	31.6×23.7	34.3×25.7	44.9×33.6	48.8×36.6	47.6×35.7	50.6×38	34.7×26	35.5×26.6
	1/2.5"	37.9×28.2	41.2×30.7	53.8×40.1	58.5×43.6	57.1×42.6	57.1×42.6	41.6×31	42.6×31.7
	1/1.8"	47.3×35	51.3×38	67.1×49.7	73×54.1	71.2×52.8	71.2×52.8	51.9×38.4	53×39.3
	2/3"	58×43.5	62.9×47.2	82.3×61.7	89×67.1	87.3×65.5	87.3×65.5	63.6×47.7	65×48.8
	Mag.	0.1517X	0.1397X	0.1069X	0.0983X	0.1007X	0.0947X	0.1382X	0.1352X
1mm	WD(mm)	147	158	280	302	482	508	555	566
	1/3"	27.9×20.9	30×22.5	39.6×29.7	42.6×31.9	43.3×32.5	45.8×34.3	33.5×25.1	34.2×25.6
	1/2.5"	33.5×24.9	36×26.8	47.5×35.4	51.1×38.1	52×38.7	55×40.9	40.2×29.9	41×30.5
	1/1.8"	41.7×30.9	44.9×33.3	59.2×43.9	63.7×47.2	64.8×48	68.5×50.8	50.1×37.1	51.1×37.9
	2/3"	51.2×38.4	55.1×41.3	72.6×54.4	78.1×58.6	79.4×59.6	84×63	61.4×46	62.7×47
	Mag.	0.1717X	0.1597X	0.1212X	0.1126X	0.1107X	0.1047X	0.1432X	0.1402X
1.5mm	WD(mm)	132	141	249	267	445	466	537	547
	1/3"	25×18.7	26.7×20	35.4×26.5	37.8×28.3	39.7×29.8	41.8×31.3	32.3×24.2	33×24.7
	1/2.5"	30×22.3	32×23.8	42.5×31.6	45.4×33.8	47.7×35.5	50.2×37.4	38.8×28.9	39.6×29.5
	1/1.8"	37.4×27.7	39.9×29.5	52.9×39.2	56.5×41.9	59.4×44	62.5×46.3	48.4×35.8	49.4×36.6
	2/3"	45.9×34.4	48.9×36.7	64.9×48.7	69.3×52	72.9×54.6	76.7×57.5	59.3×44.5	60.6×45.4
	Mag.	0.1917X	0.1797X	0.1354X	0.1269X	0.1207X	0.1147X	0.1482X	0.1452X
2mm	WD(mm)	119	127	225	239	413	431	520	530
	1/3"	22.6×17	24×18	32×24	34×25.5	36.7×27.5	38.4×28.8	31.3×23.4	31.9×23.9
	1/2.5"	27.2×20.2	28.8×21.4	38.4×28.6	40.8×30.3	44×32.8	46.1×34.4	37.5×28	38.3×28.5
	1/1.8"	33.8×25.1	35.9×26.6	47.9×35.5	50.8×37.6	54.9×40.6	57.5×42.6	46.8×34.7	47.7×35.4
	2/3"	41.5×31.1	44×33	58.7×44	62.3×46.7	67.3×50.4	70.5×52.9	57.4×43	58.5×43.9
	Mag.	0.2117X	0.1997X	0.1497X	0.1412X	0.1307X	0.1247X	0.1532X	0.1502X
5mm	WD(mm)	77	80	140	145	293	301	440	447
	1/3"	14.4×10.8	15×11.2	20.3×15.2	21.1×15.8	25.1×18.8	25.9×19.4	26.2×19.6	26.6×19.9
	1/2.5"	17.3×12.9	18×13.4	24.4×18.2	25.3×18.9	30.2×22.4	31.1×23.2	31.4×23.4	31.9×23.8
	1/1.8"	21.6×16	22.4×16.6	30.4×22.5	31.6×23.4	37.6×27.8	38.8×28.7	39.1×29	39.8×29.5
	2/3"	26.5×19.8	27.5×20.6	37.3×28	38.7×29	46.1×34.6	47.6×35.7	48×36	48.8×36.6
	Mag.	0.3317X	0.3197X	0.2354X	0.2269X	0.1907X	0.1847X	0.1832X	0.1802X
10mm	WD(mm)	48	50	83	86	202	206	352	357
	1/3"	9×6.7	9.2×6.9	12.6×9.5	12.9×9.7	16.5×12.3	16.8×12.6	20.5×15.4	20.8×15.6
	1/2.5"	10.8×8	11×8.2	15.2×11.3	15.5×11.6	19.8×14.7	20.2×15	24.6×18.3	25×18.6
	1/1.8"	13.4×10	13.8×10.2	18.9×14	19.4×14.3	24.6×18.2	25.2×18.6	30.7×22.8	31.1×23.1
	2/3"	16.5×12.4	16.9×12.6	23.2×17.4	23.8×17.8	30.2×22.7	30.9×23.1	37.7×28.3	38.2×28.6
	Mag.	0.5317X	0.5197X	0.3783X	0.3697X	0.2907X	0.2847X	0.2332X	0.2302X
15mm	WD(mm)	-	-	-	-	158	160	296	298
	1/3"	-	-	-	-	12.2×9.2	12.4×9.3	16.9×12.7	17.1×12.8
	1/2.5"	-	-	-	-	14.7×10.9	14.9×11.1	20.3×15.1	20.5×15.3
	1/1.8"	-	-	-	-	18.3×13.6	18.6×13.8	25.3×18.7	25.6×18.9
	2/3"	-	-	-	-	22.5×16.8	22.8×17.1	31×23.3	31.4×23.5
	Mag.	-	-	-	-	0.3907X	0.3847X	0.2832X	0.2802X
20mm	WD(mm)	-	-	-	-	132	134	256	258
	1/3"	-	-	-	-	9.7×7.3	9.9×7.4	14.4×10.8	14.5×10.9
	1/2.5"	-	-	-	-	11.7×8.7	11.8×8.8	17.2×12.8	17.4×12.9
	1/1.8"	-	-	-	-	14.6×10.8	14.8×10.9	21.5×15.9	21.7×16.1
	2/3"	-	-	-	-	17.9×13.4	18.1×13.6	26.4×19.8	26.6×19.9
	Mag.	-	-	-	-	0.4907X	0.4847X	0.3332X	0.3302X
25mm	WD(mm)	-	-	-	-	115	116	227	228
	1/3"	-	-	-	-	8.1×6	8.2×6.1	12.5×9.3	12.6×9.4
	1/2.5"	-	-	-	-	9.7×7.2	9.8×7.3	15×11.1	15.1×11.2
	1/1.8"	-	-	-	-	12.1×9	12.2×9	18.7×13.8	18.8×13.9
	2/3"	-	-	-	-	14.8×11.1	15×11.2	22.9×17.2	23.1×17.3
	Mag.	-	-	-	-	0.5907X	0.5847X	0.3832X	0.3802X

