

VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



NEW

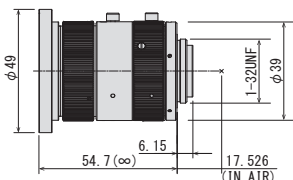
VISWIR HYPER APO

VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

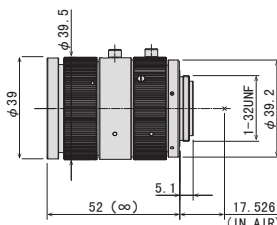
- Dedicated design for next generation Visible+SWIR InGaAs image sensor (IMX990/IMX991/IMX992/IMX993)
- Hyper-Apochromat design with fully correct focus shift between 400-1700nm
- Floating-focus mechanism realizes axial chromatic aberration and chromatic aberration of magnification at all WD and wavelengths
- High transmittance at entire wavelength of 400nm-1700nm by adopting hyper wideband AR coat
- The NIR-absorbent coating prevents light scattering and provides clear image quality

Model No.	Format	Focal Length	F-No.	Working Distance	Weight
M0818-APVSW2	1/1.4"	8mm	F1.8	0.1m - Inf.	163g
M1218-APVSW2		12mm		0.1m - Inf.	163g
M1618-APVSW2		16mm		0.1m - Inf.	136g
M2518-APVSW2		25mm		0.1m - Inf.	140g
M3518-APVSW		35mm		0.15m - Inf.	199g
M5018-APVSW		50mm		0.2m - Inf.	174g

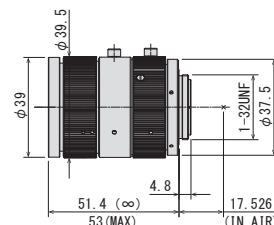
M0818-APVSW2



M1218-APVSW2



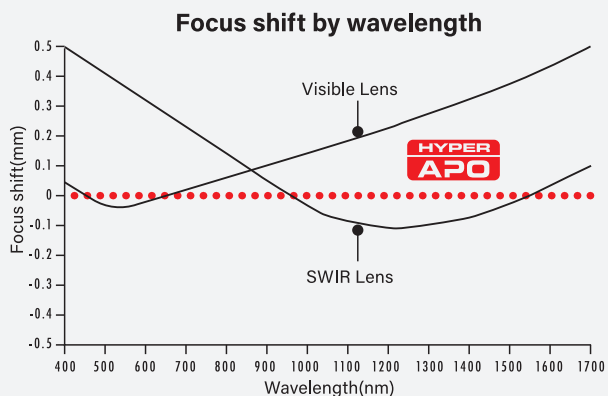
M1618-APVSW2



Focal Length	8mm				12mm				16mm				
Max. Aperture Ratio	1:1.8				1:1.8				1:1.8				
Max. Image Format	φ 11.4mm				φ 11.4mm				φ 11.4mm				
Wavelength Range	400nm - 1700nm				400nm - 1700nm				400nm - 1700nm				
Operation Range	Iris F1.8 - F16.0				Iris F1.8 - F16.0				Iris F1.8 - F16.0				
	Focus 0.1m - Inf.				Focus 0.1m - Inf.				Focus 0.1m - Inf.				
Control	Iris Manual				Iris Manual				Iris Manual				
	Focus Manual				Focus Manual				Focus Manual				
Angle of View	D	68.7°	56.6°	53.2°	28.1°	50.4°	40.5°	37.9°	19.5°	38.9°	31.0°	28.8°	14.6°
	H	1/1.4" 56.6°	1/1.8" 46.7°	1/2" 42.7°	1/4" 22.1°	1/1.4" 40.5°	1/1.8" 32.9°	1/2" 30.0°	1/4" 15.2°	1/1.4" 31.0°	1/1.8" 25.0°	1/2" 22.7°	1/4" 11.4°
	V	46.7°	35.8°	34.7°	17.7°	32.9°	25.0°	24.2°	12.2°	25.0°	18.9°	18.2°	9.2°
Operating Temperature	-10° C ~ +50° C				-10° C ~ +50° C				-10° C ~ +50° C				

Optical Distortion	1/1.4"	0.6%	1/1.8"	-0.3%	1/1.4"	0.1%	1/1.8"	-0.2%	1/1.4"	0.1%	1/1.8"	-0.3%
Back Focal Length	11.5mm				12.5mm				14.2mm			
Flange Back Length	17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount			
Filter Size	M46 P=0.75mm				M37.5 P=0.5mm				M37.5 P=0.5mm			
Dimensions	φ49mm×54.7mm				φ39.5mm×52.0mm				φ39.5mm×51.4mm			
Weight	171g				163g				170g			

VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



Ultra-high resolution from 400 nm visible light to 1700 nm near infrared with no focus shift.

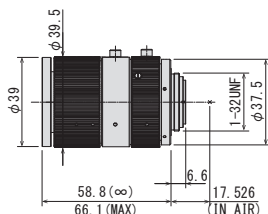
2/3" (1/1.4") 5MP Visible + SWIR MANUAL Apochromat FIX FLOATING



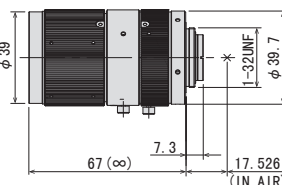
inspect award 2022 winner

1. Category Vision

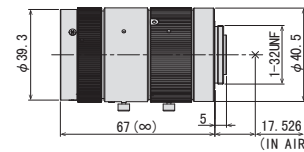
M2518-APVSW2



M3518-APVSW



M5018-APVSW



Focal Length		25mm							35mm							50mm						
Max. Aperture Ratio		1:1.8							1:1.8							1:1.8						
Max. Image Format		φ 11.4mm							φ 11.4mm							φ 11.4mm						
Wavelength Range		400nm - 1700nm							400nm - 1700nm							400nm - 1700nm						
Operation Range	Iris	F1.8 - F16.0							F1.8 - F16.0							F1.8 - F16.0						
	Focus	0.1m - Inf.							0.15m - Inf.							0.2m - Inf.						
Control	Iris	Manual							Manual							Manual						
	Focus	Manual							Manual							Manual						
Angle of View	D	25.5°	20.0°	18.6°	9.4°	18.4°	14.4°	13.4°	6.8°	12.8°	10.1°	9.5°	4.7°									
	H	1/1.4"	1/1.8"	1/2"	1/4"	1/1.4"	1/1.8"	1/2"	1/4"	1/1.4"	1/1.8"	1/2"	1/4"									
	V	16.1°	12.1°	11.7°	5.9°	11.6°	8.7°	8.4°	4.2°	8.2°	6.1°	5.9°	3.0°									
Operating Temperature		-10° C - +50° C							-10° C - +50° C							-10° C - +50° C						
Optical Distortion	1/1.4"	0.0%	1/1.8"	-0.1%	1/1.4"	0.0%	1/1.8"	0.0%	1/1.4"	0.2%	1/1.8"	0.2%										
Back Focal Length	11.9mm							12.6mm							13.4mm							
Flange Back Length	17.526mm							17.526mm							17.526mm							
Mount	C-Mount							C-Mount							C-Mount							
Filter Size	M37.5 P=0.5mm							M37.5 P=0.5mm							M37.5 P=0.5mm							
Dimensions	φ39.5mm×58.8mm							φ41mm×67.0mm							φ41mm×67.0mm							
Weight	140g							199g							174g							

FIELD OF VIEW

ViSWIR Hyper APO Series

M0818-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.008	1112.2	882.6	795.4	635.4	396.2	316.8
900	0.009	1003.0	795.8	717.3	573.0	357.3	285.7
800	0.010	894.0	709.2	639.2	510.6	318.4	254.5
700	0.012	784.8	622.6	561.1	448.2	279.4	223.4
600	0.013	675.8	535.9	483.0	385.8	240.5	192.3
500	0.016	566.7	449.3	404.9	323.4	201.5	161.1
450	0.018	512.2	406.0	365.9	292.1	182.1	145.5
400	0.020	457.7	362.7	326.8	260.9	162.6	130.0
350	0.022	403.1	319.3	287.8	229.7	143.1	114.4
300	0.026	348.6	276.0	248.7	198.5	123.7	98.8
250	0.031	294.1	232.7	209.6	167.3	104.2	83.3
200	0.038	239.5	189.3	170.6	136.1	84.7	67.7
190	0.040	228.6	180.7	162.8	129.8	80.8	64.6
180	0.042	217.7	172.0	155.0	123.6	76.9	61.5
170	0.044	206.8	163.3	147.1	117.3	73.0	58.4
160	0.046	195.8	154.7	139.3	111.1	69.1	55.2
150	0.049	184.9	146.0	131.5	104.8	65.2	52.1
140	0.052	174.0	137.3	123.7	98.6	61.3	49.0
130	0.056	163.1	128.6	115.9	92.3	57.4	45.9
120	0.060	152.1	120.0	108.1	86.1	53.5	42.8
110	0.065	141.2	111.3	100.2	79.9	49.6	39.7
100	0.070	130.3	102.6	92.3	73.5	45.7	36.5

M1218-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.012	764.4	605.9	545.7	436.3	272.4	217.8
900	0.013	689.6	546.5	492.4	393.6	245.7	196.5
800	0.015	614.8	487.2	439.0	350.9	219.0	175.2
700	0.017	540.0	427.9	385.7	308.2	192.4	153.9
600	0.019	465.1	368.5	332.2	265.5	165.7	132.5
500	0.023	390.2	309.1	278.7	222.7	139.0	111.1
450	0.026	352.7	279.5	252.0	201.3	125.6	100.5
400	0.029	315.2	249.8	225.2	179.9	112.3	89.8
350	0.032	277.8	220.1	198.4	158.5	98.9	79.1
300	0.038	240.3	190.3	171.6	137.1	85.5	68.4
250	0.044	202.9	160.7	144.8	115.7	72.2	57.7
200	0.055	165.5	131.0	118.0	94.3	58.8	47.0
190	0.057	158.0	125.0	112.7	90.0	56.1	44.9
180	0.060	150.5	119.1	107.3	85.7	53.5	42.8
170	0.063	143.0	113.2	102.0	81.4	50.8	40.6
160	0.067	135.5	107.2	96.6	77.1	48.1	38.5
150	0.071	128.0	101.3	91.2	72.9	45.4	36.3
140	0.075	120.4	95.3	85.9	68.6	42.8	34.2
130	0.080	112.9	89.3	80.5	64.3	40.1	32.0
120	0.086	105.4	83.4	75.1	60.0	37.4	29.9
110	0.092	97.9	77.4	69.8	55.7	34.7	27.8
100	0.100	90.4	71.5	64.4	51.4	32.0	25.6

M1618-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.016	573.5	454.3	410.2	327.7	204.5	163.5
900	0.017	517.4	409.8	369.7	295.4	184.3	147.4
800	0.020	461.4	365.4	329.3	263.1	164.1	131.2
700	0.022	405.4	321.0	289.2	231.1	144.2	115.3
600	0.026	349.3	276.5	249.2	199.1	124.2	99.3
500	0.031	293.3	232.1	209.1	167.0	104.2	83.3
450	0.034	265.2	209.8	189.1	151.0	94.2	75.3
400	0.038	237.2	187.6	169.0	135.0	84.2	67.3
350	0.043	209.2	165.4	148.9	118.9	74.1	59.3
300	0.050	181.1	143.1	129.1	103.1	64.3	51.4
250	0.059	153.1	120.9	109.5	87.4	54.5	43.6
200	0.072	125.0	98.7	89.2	71.1	44.3	35.4
190	0.076	119.4	94.2	85.1	67.9	42.3	33.8
180	0.080	113.9	89.8	81.1	64.7	40.3	32.2
170	0.084	108.3	85.4	77.1	61.5	38.3	30.6
160	0.089	102.7	81.0	73.0	58.3	36.3	29.0
150	0.094	97.1	76.5	69.0	55.0	34.3	27.4
140	0.100	91.5	72.1	65.0	51.8	32.3	25.8
130	0.106	85.9	67.7	61.0	48.6	30.2	24.2
120	0.114	80.4	63.3	56.9	45.4	28.2	22.6
110	0.122	74.8	58.8	52.9	42.2	26.2	21.0
100	0.133	69.2	54.4	48.9	39.0	24.2	19.4

M2518-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.025	361.9	286.9	258.5	206.7	129.1	103.3
900	0.028	326.1	258.5	232.7	186.1	116.3	93.0
800	0.031	290.3	230.1	207.1	165.6	103.5	82.8
700	0.035	254.5	201.7	181.3	145.0	90.6	72.5
600	0.041	218.6	173.3	155.7	124.5	77.8	62.2
500	0.049	182.8	144.9	130.1	104.0	65.0	52.0
450	0.055	164.9	130.7	117.3	93.8	58.6	46.9
400	0.061	147.0	116.5	104.5	83.6	52.2	41.8
350	0.070	128.6	102.0	91.8	73.4	45.8	36.7
300	0.081	110.8	87.8	79.0	63.2	39.5	31.6
250	0.097	92.9	73.6	66.3	53.0	33.1	26.5
200	0.120	75.1	59.5	53.6	42.8	26.8	21.4
190	0.126	71.5	56.7	51.1	40.8	25.5	20.4
180	0.132	68.0	53.9	48.5	38.8	24.2	19.4
170	0.140	64.4	51.0	46.0	36.7	22.9	18.3
160	0.148	60.9	48.2	43.4	34.7	21.7	17.3
150	0.157	57.3	45.4	40.9	32.7	20.4	16.3
140	0.168	53.8	42.6	38.4	30.6	19.1	15.3
130	0.179	50.2	39.8	35.8	28.6	17.9	14.3
120	0.193	46.7	37.0	33.3	26.6	16.6	13.3
110	0.209	43.2	34.2	30.8	24.6	15.3	12.3
100	0.228	39.6	31.4	28.2	22.6	14.1	11.3

M3518-APVSW

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.036	260.0	206.2	181.1	144.2	91.7	72.7
900	0.040	220.3	174.7	162.5	129.4	82.3	65.2
800	0.045	204.7	162.4	144.0	114.7	72.9	57.8
700	0.052	168.8	133.9	125.4	99.9	63.5	50.4
600	0.061	151.2	120.0	107.0	85.2	54.2	42.9
500	0.073	120.1	95.2	88.4	70.4	44.8	35.5
450	0.082	111.0	88.0	79.2	63.1	40.1	31.8
400	0.093	96.4	76.5	70.0	55.7	35.4	28.1
350	0.107	82.9	65.7	60.8	48.4	30.8	24.4
300	0.126	71.0	56.3	51.6	41.1	26.1	20.7
250	0.153	58.5	46.4	42.4	33.8	21.5	17.0
200	0.195	46.1	36.5	33.3	26.5	16.9	13.4
190	0.206	43.5	34.5	31.5	25.1	16.0	12.7
180	0.219	41.1	32.6	29.7	23.7	15.1	11.9
170	0.233	38.6	30.6	27.9	22.2	14.1	11.2
160	0.249	35.9	28.5	26.1	20.8	13.2	10.5
150	0.268	33.6	26.7	24.3	19.4	12.3	9.8

M5018-APVSW

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.051	176.0	139.7	126.0	100.9	63.1	50.5
900	0.057	158.1	125.4	113.1	90.5	56.6	45.3
800	0.064	140.0	111.1	100.4	80.3	50.2	40.2
700	0.073	121.9	96.7	87.4	70.0	43.8	35.0
600	0.086	103.9	82.5	74.5	59.6	37.3	29.8
500	0.104	85.8	68.1	61.5	49.2	30.8	24.6
450	0.116	76.8	61.0	55.1	44.1	27.6	22.0
400	0.132	67.8	53.8	48.6	38.9	24.3	19.5
350	0.152	58.7	46.6	42.1	33.7	21.1	16.9
300	0.180	49.7	39.5	35.6	28.5	17.8	14.3
250	0.220	40.7	32.3	29.2	23.4	14.6	11.7
200	0.282	31.7	25.2	22.7	18.2	11.4	9.1