

HF-12M series, 2/3"-1" *3, 2.1μm, 12MP

Maximum sensor size: 8mm/12mm=2/3", 16mm/25mm=1/1.2", 35mm=1"

4D
High
Resolution

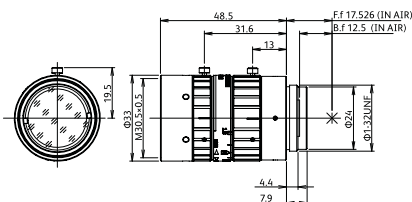
Anti
Shock &
Vibration

- Low distortion
- Compact design

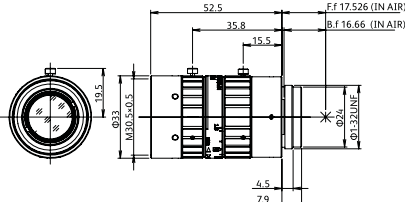


	Anti Shock & Vibration HF818-12M	Anti Shock & Vibration HF1218-12M	Anti Shock & Vibration HF1618-12M	Anti Shock & Vibration HF2518-12M	Anti Shock & Vibration HF3520-12M
Focal length [mm]	8	12	16	25	35
Iris range [F. no]	F1.8-F22	F1.8-F22	F1.8-F22	F1.8-F22	F2.0-F22
Angle of view : 2/3"	56.9°×43.9°	39.3°×30.0°	30.8°×23.3°	20.0°×15.1°	14.7°×11.0°
Working Distance*1 [mm]	∞-100	∞-100	∞-100	∞-100	∞-200
Operation of focus	Manual	Manual	Manual	Manual	Manual
Operation of iris	Manual	Manual	Manual	Manual	Manual
Filter thread [mm]	M30.5×0.5	M30.5×0.5	M30.5×0.5	M30.5×0.5	M30.5×0.5
Mount	C-mount	C-mount	C-mount	C-mount	C-mount
Weight (approx.) [g]	95	85	90	85	85
Sensor size (std.)*2	2/3"(2.1μm)	2/3"(2.1μm)	2/3"(2.1μm)	2/3"(2.1μm)	2/3"(2.1μm)
Sensor size (max.)*3	2/3"(2.1μm)	1/1.2"(4.5μm)	1/1.2"(4.5μm)	1/1.2"(4.5μm)	1"(4.5μm)
TV distortion [%]	-1.03	0.18	-0.03	0.02	0.01
Dimension [mm]	ø33×48.5	ø33×52.5	ø33×52.5	ø33×53.1	ø33×53.1

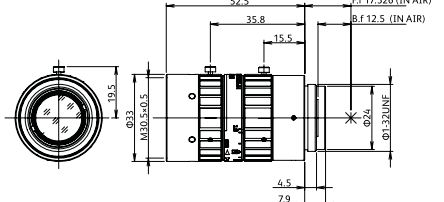
HF818-12M



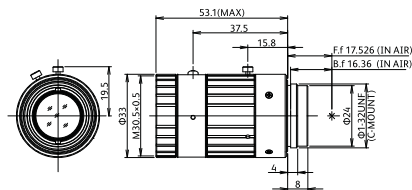
HF1218-12M



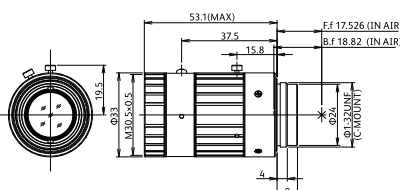
HF1618-12M



HF2518-12M



HF3520-12M



*1 From front of lens barrel. *2 Sensor size(std.): Ideal size to maximize the target resolution.

*3 Sensor size(max.): Adaptable sensor size varies depending on the model. Please check the amount of light and resolution on the edges pertaining to your particular application.

HF-12M series

HF818-12M

Working Distance [mm]	Optical Magnification	Extension Tube [mm]	Field of View [mm]					
			2/3"		1/2"		1/3"	
			H	V	H	V	H	V
1000	0.008x	-	1099.9	818.7	793.5	593.5	593.5	444.5
950	0.009x	-	1045.7	778.3	754.4	564.2	564.2	422.6
900	0.009x	-	991.5	738.0	715.3	535.0	535.0	400.7
850	0.009x	-	937.3	697.7	676.2	505.7	505.7	378.8
800	0.010x	-	883.2	657.3	637.1	476.5	476.5	356.9
750	0.011x	-	829.0	617.0	598.0	447.3	447.3	335.0
700	0.011x	-	774.8	576.7	558.9	418.0	418.0	313.1
650	0.012x	-	720.6	536.3	519.8	388.8	388.8	291.2
600	0.013x	-	666.4	496.0	480.7	359.5	359.5	269.3
550	0.015x	-	612.3	455.6	441.6	330.3	330.3	247.4
500	0.016x	-	558.1	415.3	402.5	301.0	301.0	225.5
450	0.018x	-	503.9	375.0	363.4	271.8	271.8	203.5
400	0.020x	-	449.7	334.6	324.4	242.5	242.5	181.6
350	0.023x	-	395.5	294.3	285.3	213.3	213.3	159.7
300	0.026x	-	341.4	254.0	246.2	184.1	184.1	137.8
250	0.031x	-	287.2	213.6	207.1	154.8	154.8	115.9
200	0.038x	-	233.0	173.3	168.0	125.6	125.6	94.0
150	0.050x	-	178.8	133.0	128.9	96.3	96.3	72.1
100	0.072x	-	124.6	92.6	89.8	67.1	67.1	50.2

HF1218-12M

Working Distance [mm]	Optical Magnification	Extension Tube [mm]	Field of View [mm]					
			1/1.2"		2/3"		1/2"	
			H	V	H	V	H	V
1000	0.012x	-	884.6	664.8	727.3	546.0	529.5	397.3
950	0.013x	-	841.2	632.2	691.6	519.2	503.5	377.8
900	0.013x	-	797.8	599.6	655.9	492.4	477.5	358.3
850	0.014x	-	754.5	567.0	620.3	465.6	451.6	338.8
800	0.015x	-	711.1	534.3	584.6	438.9	425.6	319.3
750	0.016x	-	667.7	501.7	548.9	412.1	399.6	299.8
700	0.017x	-	624.3	469.1	513.2	385.3	373.6	280.3
650	0.018x	-	581.0	436.5	477.6	358.5	347.6	260.8
600	0.020x	-	537.6	403.9	441.9	331.7	321.6	241.3
550	0.022x	-	494.2	371.3	406.2	304.9	295.7	221.8
500	0.024x	-	450.8	338.7	370.5	278.1	269.7	202.3
450	0.026x	-	407.5	306.0	334.9	251.3	243.7	182.8
400	0.029x	-	364.1	273.4	299.2	224.5	217.7	163.3
350	0.033x	-	320.7	240.8	263.5	197.7	191.7	143.8
300	0.039x	-	277.3	208.2	227.8	170.9	165.7	124.3
250	0.046x	-	233.9	175.6	192.2	144.1	139.8	104.8
200	0.056x	-	190.6	143.0	156.5	117.3	113.8	85.3
150	0.073x	-	147.2	110.3	120.8	90.5	87.8	65.8
100	0.104x	-	103.8	77.7	85.1	63.7	61.8	46.3

HF1618-12M

Working Distance [mm]	Optical Magnification	Extension Tube [mm]	Field of View [mm]					
			1/1.2"		2/3"		1/2"	
			H	V	H	V	H	V
1000	0.016x	-	683.0	512.1	560.6	420.2	407.5	305.5
950	0.017x	-	649.5	487.0	533.1	399.6	387.5	290.5
900	0.017x	-	616.0	461.9	505.6	379.0	367.5	275.5
850	0.018x	-	582.5	436.7	478.1	358.4	347.5	260.5
800	0.020x	-	549.0	411.6	450.6	337.7	327.5	245.5
750	0.021x	-	515.5	386.5	423.1	317.1	307.5	230.5
700	0.022x	-	482.0	361.4	395.6	296.5	287.5	215.5
650	0.024x	-	448.5	336.2	368.1	275.9	267.5	200.5
600	0.026x	-	415.0	311.1	340.6	255.3	247.5	185.5
550	0.028x	-	381.5	286.0	313.1	234.6	227.5	170.5
500	0.031x	-	347.9	260.8	285.6	214.0	207.5	155.6
450	0.034x	-	314.4	235.7	258.0	193.4	187.5	140.6
400	0.038x	-	280.9	210.6	230.5	172.8	167.5	125.6
350	0.043x	-	247.4	185.5	203.0	152.2	147.5	110.6
300	0.050x	-	213.9	160.3	175.5	131.5	127.5	95.6
250	0.060x	-	180.4	135.2	148.0	110.9	107.5	80.6
200	0.073x	-	146.9	110.1	120.5	90.3	87.5	65.6
150	0.095x	-	113.4	84.9	93.0	69.7	67.6	50.6
100	0.135x	-	79.8	59.8	65.5	49.0	47.6	35.6

HF2518-12M

Working Distance [mm]	Optical Magnification	Extension Tube [mm]	Field of View [mm]					
			1/1.2"		2/3"		1/2"	
			H	V	H	V	H	V
1000	0.024x	-	440.7	330.4	361.7	271.2	262.9	197.2
950	0.026x	-	419.2	314.3	344.0	257.9	250.1	187.5
900	0.027x	-	397.7	298.2	326.4	244.7	237.3	177.9
850	0.029x	-	376.2	282.0	308.7	231.5	224.4	168.3
800	0.030x	-	354.7	265.9	291.1	218.2	211.6	158.6
750	0.032x	-	333.2	249.8	273.4	205.0	198.7	149.0
700	0.034x	-	311.7	233.6	255.8	191.7	185.9	139.4
650	0.037x	-	290.2	217.5	238.1	178.5	173.1	129.7
600	0.040x	-	268.7	201.4	220.4	165.2	160.2	120.1
550	0.043x	-	247.1	185.2	202.8	152.0	147.4	110.5
500	0.048x	-	225.6	169.1	185.1	138.7	134.5	100.8
450	0.053x	-	204.1	152.9	167.4	125.5	121.6	91.2
400	0.059x	-	182.5	136.7	149.7	112.2	108.8	81.5
350	0.067x	-	161.0	120.6	132.0	98.9	95.9	71.9
300	0.077x	-	139.4	104.4	114.3	85.6	83.0	62.2
250	0.091x	-	117.8	88.2	96.5	72.3	70.1	52.5
200	0.112x	-	96.1	71.9	78.7	59.0	57.2	42.8
150	0.145x	-	74.3	55.5	60.8	45.5	44.1	33.1
100	0.207x	-	52.2	39.0	42.7	31.9	31.0	23.2

HF3520-12M

Working Distance [mm]	Optical Magnification	Extension Tube [mm]	Field of View [mm]					
			1"		2/3"		1/2"	
			H	V	H	V	H	V
1000	0.034x	-	380.5	285.3	261.5	196.1	190.1	142.6
950	0.035x	-	361.8	271.2	248.6	186.4	180.8	135.6
900	0.037x	-	343.1	257.2	235.7	176.8	171.4	128.5
850	0.040x	-	324.4	243.1	222.9	167.1	162.0	121.5
800	0.042x	-	305.6	229.1	210.0	157.5	152.7	114.5
750	0.045x	-	286.9	215.0	197.1	147.8	143.3	107.5
700	0.048x	-	268.2	201.0	184.2	138.1	133.9	100.4
650	0.051x	-	249.4	186.9	171.3	128.5	124.6	93.4
600	0.056x	-	230.7	172.9	158.4	118.8	115.2	86.4
550	0.061x	-	211.9	158.8	145.5	109.1	105.8	79.3
500	0.066x	-	193.1	144.7	132.6	99.4	96.4	72.3
450	0.074x	-	174.3	130.6	119.7	89.7	87.0	65.2
400	0.083x	-	155.5	116.5	106.8	80.0	77.6	58.2
350	0.094x	-	136.7	102.4	93.8	70.3	68.2	51.1
300	0.109x	-	117.8	88.2	80.8	60.6	58.8	44.1
250	0.130x	-	98.9	74.0	67.8	50.8	49.3	36.9
200	0.161x	-	79.8	59.7	54.7	41.0	39.8	29.8
150	0.213x	2	60.5	45.2	41.5	31.1	30.1	22.6
100	0.318x	10	40.6	30.3	27.8	20.8	20.2	15.1

Distribution in the UK & Ireland



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**Characterisation,
 Measurement &
 Analysis**

* This data shows simulation value.
 * When attached with an extension tube, the optical performance of the lenses is not covered under warranty.
 * The extension tubes of 5mm to 9mm cannot be attached to the HF-12M series.

<Sensor size>

1.1"	14.1X10.6
1"	12.8X9.6
1/1.2"	10.7X8.0
2/3"	8.8X6.6
1/2"	6.4X4.8
1/3"	4.8X3.6

[mm]