

HF8XA-1F

Working Distance [mm]	Optical Magnification	Extension Ring	Field of View [mm]															
			1.1"		1"		1/1.2"		2/3"		1/1.8"		1/2"		1/2.5"		1/3"	
			H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V
1000	0.008x	-	-	-	-	-	-	-	1130.2	830.3	899.9	664.9	803.8	595.3	711.7	529.0	595.3	443.2
950	0.009x	-	-	-	-	-	-	-	1074.4	789.3	855.5	632.1	764.1	565.9	676.6	502.9	565.9	421.3
900	0.009x	-	-	-	-	-	-	-	1018.5	748.3	811.0	599.2	724.3	536.5	641.4	476.7	536.5	399.4
850	0.010x	-	-	-	-	-	-	-	962.7	707.2	766.5	566.4	684.6	507.1	606.2	450.6	507.1	377.5
800	0.010x	-	-	-	-	-	-	-	906.8	666.2	722.1	533.5	644.9	477.7	571.1	424.5	477.7	355.6
750	0.011x	-	-	-	-	-	-	-	851.0	625.2	677.6	500.6	605.2	448.3	535.9	398.3	448.3	333.7
700	0.012x	-	-	-	-	-	-	-	795.1	584.2	633.1	467.8	565.5	418.8	500.7	372.2	418.8	311.8
650	0.013x	-	-	-	-	-	-	-	739.3	543.1	588.7	434.9	525.8	389.4	465.5	346.0	389.4	289.9
600	0.014x	-	-	-	-	-	-	-	683.5	502.1	544.2	402.1	486.0	360.0	430.4	319.9	360.0	268.0
550	0.015x	-	-	-	-	-	-	-	627.6	461.1	499.7	369.2	446.3	330.6	395.2	293.8	330.6	246.1
500	0.016x	-	-	-	-	-	-	-	571.8	420.0	455.3	336.4	406.6	301.2	360.0	267.6	301.2	224.2
450	0.018x	-	-	-	-	-	-	-	515.9	379.0	410.8	303.5	366.9	271.7	324.9	241.5	271.7	202.3
400	0.020x	-	-	-	-	-	-	-	460.1	338.0	366.3	270.6	327.2	242.3	289.7	215.3	242.3	180.4
350	0.023x	-	-	-	-	-	-	-	404.3	297.0	321.9	237.8	287.5	212.9	254.5	189.2	212.9	158.5
300	0.027x	-	-	-	-	-	-	-	348.4	255.9	277.4	204.9	247.7	183.5	219.4	163.1	183.5	136.6
250	0.032x	-	-	-	-	-	-	-	292.6	214.9	232.9	172.1	208.0	154.1	184.2	136.9	154.1	114.7
200	0.039x	-	-	-	-	-	-	-	236.7	173.9	189.5	139.2	168.3	124.7	149.0	110.8	124.7	92.8
150	0.051x	-	-	-	-	-	-	-	180.9	132.8	144.0	106.4	128.6	95.2	113.9	84.6	95.2	70.9
100	0.074x	-	-	-	-	-	-	-	125.0	91.8	99.5	73.5	88.9	65.8	78.7	58.5	65.8	49.0

HF16XA-1F

Working Distance [mm]	Optical Magnification	Extension Ring	Field of View [mm]															
			1.1"		1"		1/1.2"		2/3"		1/1.8"		1/2"		1/2.5"		1/3"	
			H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V
1000	0.016x	-	-	-	-	-	-	-	701.7	522.0	572.6	426.9	461.1	344.4	413.7	309.3	367.9	275.5
950	0.016x	-	-	-	-	-	-	-	667.3	496.4	544.5	405.9	438.5	327.5	393.4	294.1	349.8	262.0
900	0.017x	-	-	-	-	-	-	-	632.9	470.7	516.4	385.0	415.8	310.6	373.1	278.9	331.8	248.4
850	0.018x	-	-	-	-	-	-	-	598.4	445.1	488.3	364.0	393.2	293.7	352.8	263.7	313.7	234.9
800	0.019x	-	-	-	-	-	-	-	564.0	419.5	460.2	343.0	370.6	276.8	332.5	248.5	295.6	221.4
750	0.021x	-	-	-	-	-	-	-	529.6	393.9	432.1	322.1	347.9	259.8	312.2	233.3	277.6	207.9
700	0.022x	-	-	-	-	-	-	-	495.2	368.2	404.0	301.1	325.3	242.9	291.9	218.1	259.5	194.3
650	0.024x	-	-	-	-	-	-	-	460.7	342.6	375.9	280.2	302.6	226.0	271.5	202.9	241.4	180.8
600	0.026x	-	-	-	-	-	-	-	426.3	317.0	347.8	259.2	280.0	209.1	251.2	187.8	223.4	167.3
550	0.028x	-	-	-	-	-	-	-	391.9	291.4	319.7	238.2	257.4	192.2	230.9	172.6	205.3	153.7
500	0.031x	-	-	-	-	-	-	-	357.5	265.8	291.6	217.3	234.7	175.3	210.6	157.4	187.3	140.2
450	0.034x	-	-	-	-	-	-	-	323.0	240.1	263.5	196.3	212.1	158.4	190.3	142.2	169.2	126.7
400	0.038x	-	-	-	-	-	-	-	288.6	214.5	235.4	175.4	189.5	141.5	170.0	127.0	151.0	113.1
350	0.043x	-	-	-	-	-	-	-	254.2	188.9	207.2	154.4	166.8	124.6	149.7	111.8	133.1	99.6
300	0.050x	-	-	-	-	-	-	-	219.8	163.3	179.1	133.5	144.2	107.6	129.3	96.6	115.0	86.1
250	0.059x	-	-	-	-	-	-	-	185.3	137.6	151.0	112.5	121.5	90.7	109.0	81.5	96.9	72.6
200	0.073x	-	-	-	-	-	-	-	150.9	112.0	122.9	91.5	98.9	73.8	88.7	66.3	78.9	59.0
150	0.094x	-	-	-	-	-	-	-	116.5	86.4	94.8	70.6	76.3	56.9	68.4	51.1	60.8	45.5
100	0.135x	-	-	-	-	-	-	-	82.0	60.8	66.7	49.6	53.6	40.0	48.1	35.9	42.7	32.0

HF35XA-1F

Working Distance [mm]	Optical Magnification	Extension Ring	Field of View [mm]															
			1.1"		1"		1/1.2"		2/3"		1/1.8"		1/2"		1/2.5"		1/3"	
			H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V
1000	0.035x	-	-	-	-	-	-	-	307.4	230.7	252.5	189.5	204.4	153.3	183.7	137.8	163.6	122.9
950	0.037x	-	-	-	-	-	-	-	292.2	219.3	240.0	180.1	194.2	145.7	174.6	131.0	155.5	116.8
900	0.039x	-	-	-	-	-	-	-	277.0	207.9	227.5	170.7	184.1	138.1	165.5	124.2	147.4	110.7
850	0.041x	-	-	-	-	-	-	-	261.8	196.5	215.0	161.3	174.0	130.5	156.4	117.3	139.3	104.6
800	0.044x	-	-	-	-	-	-	-	246.6	185.1	202.5	151.9	163.9	122.9	147.3	110.5	131.2	98.6
750	0.047x	-	-	-	-	-	-	-	231.4	173.6	190.0	142.6	153.8	115.4	138.2	103.7	123.1	92.5
700	0.050x	-	-	-	-	-	-	-	216.2	162.2	177.5	133.2	143.7	107.8	129.1	96.9	115.0	86.4
650	0.054x	-	-	-	-	-	-	-	201.0	150.8	165.0	123.8	133.6	100.2	120.1	90.1	106.9	80.3
600	0.059x	-	-	-	-	-	-	-	185.8	139.4	152.5	114.4	123.4	92.6	111.0	83.2	98.8	74.2
550	0.064x	-	-	-	-	-	-	-	170.6	128.0	140.0	105.0	113.3	85.0	101.9	76.4	90.7	68.1
500	0.070x	-	-	-	-	-	-	-	155.3	116.5	127.5	95.7	103.2	77.4	92.8	69.6	82.6	62.0
450	0.078x	-	-	-	-	-	-	-	140.1	105.1	115.1	86.3	93.1	69.8	83.7	62.8	74.5	56.0
400	0.088x	-	-	-	-	-	-	-	124.9	93.7	102.6	76.9	83.0	62.2	74.6	55.9	66.4	49.9
350	0.101x	-	-	-	-	-	-	-	109.7	82.3	90.1	67.5	72.9	54.6	65.5	49.1	58.3	43.8
300	0.117x	-	-	-	-	-	-	-	94.5	70.9	77.6	58.2	62.8	47.1	56.4	42.3	50.2	37.7
250	0.141x	0.5	-	-	-	-	-	-	79.2	59.3	65.0	48.7	52.5	39.4	47.2	35.4	42.1	31.6
200	0.176x	2	-	-	-	-	-	-	63.5	47.6	52.1	39.0	42.1	31.6	37.9	28.4	33.7	25.3
150	0.235x	5	-	-	-	-	-	-	47.4	35.5	38.8	29.1	31.4	23.5	28.2	21.2	25.1	18.9
100	0.354x	10	-	-	-	-	-	-	30.5	22.8	25.0	18.7	20.2	15.1	18.2	13.6	16.2	12.1

HF12XA-1F

Working Distance [mm]	Optical Magnification	Extension Ring	Field of View [mm]																	
			1.1"		1"		1/1.2"		2/3"		1/1.8"		1/2"		1/2.5"		1/3"			
			H	V	H	V	H	V	H	V	H	V	H	V	H	V	H	V		
1000	0.012x	-	-	-	-	-	912.7	673.4	740.3	548.7	593.5	441.6	531.6	396.1	472.0	352.6	396.1	296.0		
950	0.013x	-	-	-	-	-	867.7	640.2	703.8	521.7	564.2	419.8	505.4	376.6	448.8	335.2	376.6	281.4		
900	0.014x	-	-	-	-	-	822.7	607.0	667.3	494.6	535.0	398.0	479.2	357.1	425.5	317.8	357.1	266.8		
850	0.014x	-	-	-	-	-	777.7	573.8	630.8	467.6	505.7	376.3	453.0	337.5	402.2	300.5	337.5	252.2		
800	0.015x	-	-	-	-	-	732.8	540.6	594.3	440.5	476.5	354.5	428.8	318.0	379.0	283.1	318.0	237.8		
750	0.016x	-	-	-	-	-	687.8	507.4	557.8	413.5	447.2	332.7	400.6	298.5	355.7	265.7	298.5	223.0		
700	0.017x	-	-	-	-	-	642.8	474.2	521.3	386.4	417.9	311.0	374.4	279.0	332.4	248.3	279.0	205.5		
650	0.019x	-	-	-	-	-	597.8	441.1	484.9	359.4	388.7	289.2	348.2	259.4	309.2	230.9	259.4	193.9		
600	0.020x	-	-	-	-	-	552.8	407.9	448.4	332.4	359.4	267.4	322.0	239.9	285.9	213.8	239.9	179.3		
550	0.022x	-	-	-	-	-	507.8	374.7	411.9	305.3	330.2	245.7	295.8	220.4	262.6	196.2	220.4	164.7		
500	0.024x	-	-	-	-	-	462.9	341.5	375.4	278.3	300.9	223.9	269.6	200.9	239.4	178.8	200.9	150.1		
450	0.027x	-	-	-	-	-	417.9	308.3	338.9	251.2	271.7	202.1	243.4	181.3	216.1	161.4	181.3	135.5		
400	0.030x	-	-	-	-	-	372.9	275.1	302.4	224.2	242.4	180.4	217.2	161.8	192.8	144.0	161.8	120.9		
350	0.034x	-	-	-	-	-	327.9	241.9	265.9	197.1	213.2	158.6	191.0	142.3	169.6	126.7	142.3	106.3		
300	0.039x	-	-	-	-	-	282.9	208.7	229.4	170.1	183.9	136.9	164.8	122.8	146.3	109.3	122.8	91.7		
250	0.047x	-	-	-	-	-	237.9	175.5	192.9	143.0	154.7	115.1	138.6	103.2	123.0	91.9	103.2	77.1		
200	0.058x	-	-	-	-	-	193.0	142.3	156.5	116.0	125.4	93.3	112.3	83.7	99.8	74.5	83.7	62.6		
150	0.075x	-	-	-	-	-	148.0	109.1	120.0	88.9	96.2	71.6	86.1	64.2	76.5	57.1	64.2	48.0		
100	0.108x	-	-	-	-	-	103.0	75.9	83.5	61.9	66.9	49.8	59.9	44.7	53.2	39.8	44.7	33.4		