

"*pro*"fessional solution

for 24-hour surveillance



Advanced Developers Laboratory

ADL, Inc

● Tokyo Headquarters

Tamura Building 8th Floor, 3-2-4, Kandajinbocho,
Chiyoda-ku, Tokyo, 101-0051, Japan
Phone: +81-3-5275-2111 / Fax: +81-3-5275-2112

● China office

25A, HaiYing DaSha, Cai Hong Xindu, No.3002,
Caitian Nan Road, FuTian District, ShenZhen, 518000, China
Phone: +86-755-2348-7843 / Fax: +86-755-2348-5691

● Korea office

10F, Geumgang-Building, 336 Anyang-ro, Manan-gu,
Anyang-si, Gyeonggi-do, Korea
Phone: +82-10-5156-5286 / Fax: +82-31-444-6100

● Senko ADL USA office

450 Donald Lynch Blvd. -D Marlborough, MA 01752
Phone: +1 508-804-0250 (Order) / +1 720-767-8052 (Sales)



ISO9001:2015 認証取得



See the full HD world through the new ADL 3 Mega Pixel IR Varifocal Lens

- 3 Mega Pixel Resolution
- Aspherical + IR
- Compact Size



MSV7X7515D

- 1/2.7" Format
- 7.5-50mm F1.5 IR
- DC Auto IRIS (P-IRIS available)
- Day & Night application

MTV3X2812D

- 1/3" Format
- 2.8-9mm F1.2 IR
- DC Auto IRIS (P-IRIS available)
- Day & Night application

MSV3X3113D

- 1/2.7" Format
- 3.1-9mm F1.3 IR
- DC Auto IRIS (P-IRIS available)
- Day & Night application

5 Mega Pixel CS-mount Varifocal Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	Glass ASP	IR
						(4:3)	(16:9)					
1/2.5"	MFV7X7515D	7.5 - 50mm	F1.5 - T360	DC Auto	CS	41° - 6.7°	44.6° - 7.2°	0.5	Φ52 x 72.9	174	○	○
1/2.5"	MFV7X7516S	7.5 - 50mm	F1.6 - Close	P-Iris	CS	41° - 6.7°	44.6° - 7.2°	0.5	Φ52 x 72.9	174	○	○

3 Mega Pixel C/CS-mount Varifocal Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	Glass ASP	IR
						(4:3)	(16:9)					
1/3"	MTV3X2812D	2.8 - 9mm	F1.2 - T360	DC Auto	CS	97.7° - 31.7°	107.4° - 34.5°	0.5	Φ36.5 x 48.7	55	○	○
1/3"	MTV3X2812S	2.8 - 9mm	F1.2 - Close	P-Iris	CS	97.7° - 31.7°	107.4° - 34.5°	0.5	Φ36.5 x 48.7	55	○	○
1/2.7"	MSV3X3113D	3.1 - 9mm	F1.3 - T360	DC Auto	CS	99.4° - 34.8°	111.4° - 38.6°	0.5	Φ36.5 x 48.7	55	○	○
1/2.7"	MSV3X3113S	3.1 - 9mm	F1.3 - Close	P-Iris	CS	99.4° - 34.8°	111.4° - 38.6°	0.5	Φ36.5 x 48.7	55	○	○
1/2.7"	MSV7X7515D	7.5 - 50mm	F1.5 - T360	DC Auto	CS	38° - 6.2°	42.2° - 6.8°	0.5	Φ46.3 x 68.4	162	○	○
1/2.7"	MSV7X7516S	7.5 - 50mm	F1.6 - Close	P-Iris	CS	38° - 6.2°	42.2° - 6.8°	0.5	Φ46.3 x 68.4	162	○	○
						(1/1.8")	(1/3")					
1/1.8"	MHV5X1020D	10 - 50mm	F2.0 - T360	DC Auto	C	40.5° - 8.4°	26.8° - 5.6°	0.3	50 x 57 x 87.5	240		○

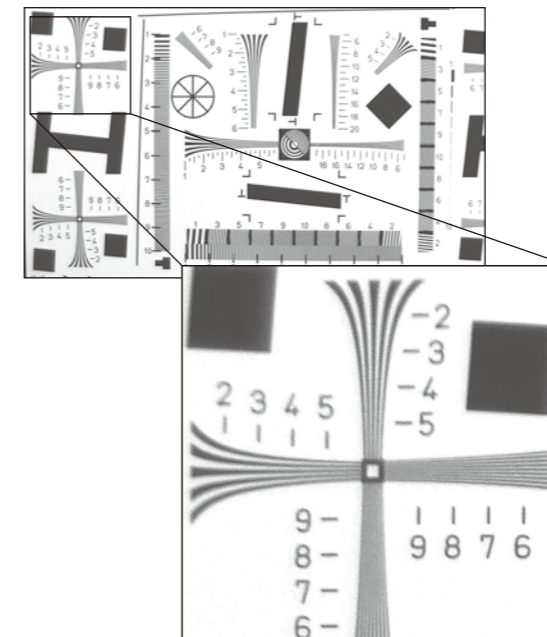
2 Mega Pixel CS-mount Varifocal Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	Glass ASP	IR
						(1/2.7")	(1/3")					
1/2.7"	MSV7X0716D	7 - 50mm	F1.6 - T360	DC Auto	CS	41.3° - 6.0°	37.8° - 5.5°	1	42 x 47 x 64	125		○

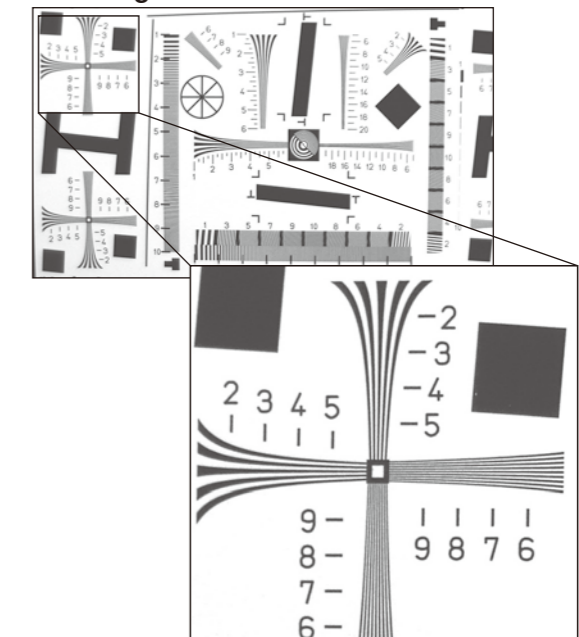
"pro" Series Day & Night CS-mount Varifocal Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	Glass ASP	IR
						(1/3")	(1/4")					
1/3"	TV3X0310D	3 - 8.5mm	F1.0 - T360	DC Auto	CS	90.5° - 33.6°	67.2° - 25.2°	0.2	35 x 47.4 x 46	54	○	○
1/3"	TV7X7513D	7.5 - 50mm	F1.3 - T360	DC Auto	CS	36.6° - 5.64°	27.4° - 4.26°	0.4	38 x 51.2 x 55.2	68	○	○

Standard Resolution Lens



ADL Mega Pixel Lens



ADL Mega Pixel Lens provides high resolution & high contrast image quality. ADL Mega Pixel Lens allows you to see details at image edges, screen corners, and maintains a crisp enlarge picture while digital zooming.

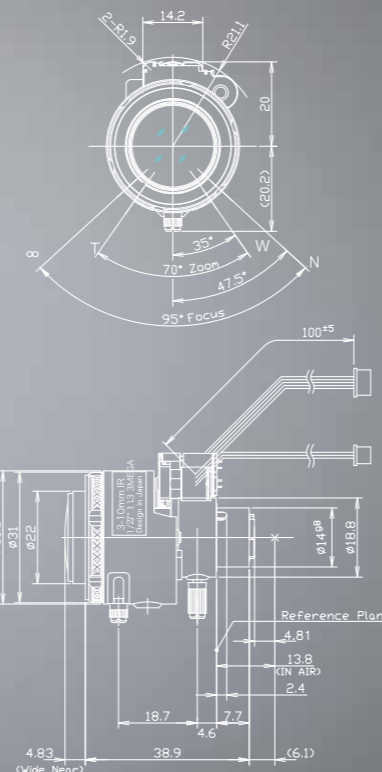
Full HD (1080p) resolution up towards the corners



3 Mega Pixel IR Board Lens Series



Lens specification



4 Mega Pixel Aspherical + IR Board Lens

Format	Model Number	Factory Code	Focal Length	F-Stop	Horizontal Angle of View		Mount (mm)	Dimensions (mm)
					(4:3)	(16:9)		
1/2.7"	MSVF3.3X0315IR	SP365	3-10mm	F1.5	106° - 32.2°	118.4° - 35.2°	Φ14	Φ29 x 39.1

3 Mega Pixel Aspherical + IR Board Lens

Format	Model Number	Factory Code	Focal Length	F-Stop	Horizontal Angle of View		Mount (mm)	Dimensions (mm)
					(4:3)	(16:9)		
1/2.7"	MSVF3.3X0313IR	SP209	3-10mm	F1.3	103.2° - 32.3°	114.5° - 35.3°	Φ14	Φ31 x 38.9
1/2.7"	MSVF3X3313IR3	PD22	3.3-10mm	F1.3	93.9° - 31.9°	104.8° - 34.8°	Φ14	Φ29 x 37.9
1/2.7"	MSVF2.4X0915IR	PD13	9-22mm	F1.5	33.8° - 14.1°	37.1° - 15.4°	Φ14	Φ29 x 40.2

2 Mega Pixel Aspherical + IR Board Lens

Format	Model Number	Factory Code	Focal Length	F-Stop	Horizontal Angle of View		Mount (mm)	Dimensions (mm)
					(4:3)	(16:9)		
1/2.7"	MSVF3X3313IR	PD11NK	3.3-10mm	F1.3	93.9° - 31.8°	104.3° - 34.7°	Φ14	Φ29 x 37.9
1/3"	MTVF3.3X0313IR	PD11N	3-10mm	F1.3	94.8° - 28.9°	105.2° - 31.5°	Φ14	Φ29 x 37.9

1.3 Mega Pixel Aspherical + IR Board Lens

Format	Model Number	Factory Code	Focal Length	F-Stop	Horizontal Angle of View		Mount (mm)	Dimensions (mm)
					(4:3)	(16:9)		
1/2.7"	MSVF3X3315IR	PD07NK65	3.3-10mm	F1.5	93.3° - 31.8°	103.4° - 34.7°	Φ14	Φ29 x 37.9
1/3"	MTVF3.6X2814IR	PD07N65	2.8-10mm	F1.4	94° - 28.9°	104.2° - 31.5°	Φ14	Φ29 x 37.9

VGAD/D1 Aspherical + IR Board Lens

Format	Model Number	Factory Code	Focal Length	F-Stop	Horizontal Angle of View		Mount (mm)	Dimensions (mm)
					(4:3)	(16:9)		
1/2.7"	SVF3X3313IR	PD07NK	3.3-10mm	F1.3	93.3° - 31.8°	103.4° - 34.7°	Φ14	Φ29 x 37.9
1/3"	TVF3.6X2812IR	PD07N	2.8-10mm	F1.2	94° - 28.9°	104.2° - 31.5°	Φ14	Φ29 x 37.9

Extension Code for Iris / ICR / Motorized options

Ext.Code	Options			
	DC AI	P-Iris	ICR	Motor Z&F
-BCD	<input type="checkbox"/>			
-BCDN	<input type="checkbox"/>		<input type="checkbox"/>	
-BCD-MD	<input type="checkbox"/>			<input type="checkbox"/>
-BCDN-MD	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
-BCP		<input type="checkbox"/>		
-BCPN		<input type="checkbox"/>	<input type="checkbox"/>	
-BCP-MD		<input type="checkbox"/>		<input type="checkbox"/>
-BCPN-MD		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MSVF2.4X0915IR

- 1/2.7" Format
- 9-22mm F1.5
- Aspherical
- ED (Extra Ordinary low Dispersion Glass)

MSVF3X3313IR3

- 1/2.7" Format
- 3.3-10mm F1.3
- Aspherical
- ED (Extra Ordinary low Dispersion Glass)

MSVF3.3X0313IR

- 1/2.7" Format
- 3-10mm F1.3
- Aspherical
- ED (Extra Ordinary low Dispersion Glass)

Factory Automation & Machine Vision



■ 1/1.8" & 2/3" 3 Mega Pixel Machine Vision Lens Series



- High Resolution, High Performance, Low Distortion
- Compact Size(All model)
- Locking Screw for Focus & IRIS on All model

10 Mega Pixel Factory Automation & Machine Vision Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(4:3)	-				
4/3"	VFA2520-10M	25mm	F2 - F22	Manual	C	40.6°	-	0.15	Φ48 x 82.7	250	10
4/3"	VFA3520-10M	35mm	F2 - F22	Manual	C	29.6°	-	0.2	Φ44.6 x 54.9	173	10
4/3"	VFA5020-10M	50mm	F2 - F22	Manual	C	20.9°	-	0.3	Φ44.6 x 53.7	170	10

5 Mega Pixel Factory Automation & Machine Vision Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(16:9)	-				
1"	VFA1214-5M	12mm	F1.4 - F16	Manual	C	53.0°	-	0.3	Φ50 x 64.9	180	5
1"	VFA1614-5M	16mm	F1.4 - Close	Manual	C	42.0°	-	0.2	Φ41.5 x 55.6	180	5
1"	VFA2514-5M	25mm	F1.4 - Close	Manual	C	28.0°	-	0.4	Φ39 x 38.42	120	5
1"	VFA3520-5M	35mm	F2 - Close	Manual	C	20.0°	-	0.5	Φ37 x 40	120	5
1"	VFA5020-5M	50mm	F2 - F16	Manual	C	14.4°	-	0.5	Φ45 x 60	200	5

3 Mega Pixel Factory Automation & Machine Vision Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(1/1.8")	(1/2")				
1/1.8"	HFA1214-3M	12mm	F1.4 - F22	Manual	C	32.38°	28.95°	0.2	Φ29.5 x 35.7	57	3
						(2/3")	(1/2")				
2/3"	MFA1614-3M	16mm	F1.4 - F16	Manual	C	30.99°	22.73°	0.25	Φ29.5 x 37.2	64	3
2/3"	MFA2514-3M	25mm	F1.4 - F16	Manual	C	19.98°	14.58°	0.25	Φ29.5 x 38.9	56	3
2/3"	MFA3516-3M	35mm	F1.6 - F16	Manual	C	14.74°	10.75°	0.35	Φ29.5 x 40.8	65	3
2/3"	MFA5028-3M	50mm	F2.8 - F22	Manual	C	10.03°	7.31°	0.8	Φ29.5 x 38	55	3

Factory Automation & Machine Vision Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(1/2")	(1/3")				
1/2"	HFA0614	6mm	F1.4 - F16	Manual	C	57.4°	44.5°	0.2	Φ32 x 37.5	65	1.3
						(2/3")	(1/2")				
2/3"	MFA1614	16mm	F1.4 - F16	Manual	C	30.7°	22.8°	0.25	Φ29 x 29.5	42	1
2/3"	MFA2514	25mm	F1.4 - F16	Manual	C	20.1°	14.6°	0.25	Φ29 x 31.5	45	2
2/3"	MFA3520	35mm	F2 - F22	Manual	C	14.3°	10.4°	0.25	Φ29 x 38.5	55	3
2/3"	MFA5028	50mm	F2.8 - F22	Manual	C	9.9°	7.3°	0.5	Φ29 x 38.5	55	3
2/3"	MFA1795H	17mm	F0.95 - F16	Manual	C	30.3°	21.3°	0.5	Φ42 x 66.5	162	VGA
1"	VFA2595H	25mm	F0.95 - F16	Manual	C	28.7°	20.0°	0.5	Φ41.8 x 45.2	165	1.3
						(1")	(2/3")				
1"	VFA5095H	50mm	F0.95 - F16	Manual	C	14.6°	10.1°	0.6	Φ65 x 74.1	470	1.3

5 Mega 1/2.3" Vertical Fisheye Lens

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(Φ4.6mm)	-				
1/2.3"	HFE1414C	1.4mm	F1.4	Fix	C	185°	-	0.3	Φ43 x 53.1	116	5

2 Mega Pixel for ITS application

Format	Model Number	Focal Length	F-Stop	Iris Drive	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(4:3)	(16:9)				
2/3"	MMF11040M	110mm	F4 - F32	Manual	C	4.7°	5.2°	1.3	Φ34 x 59.7	105	2

Long Distance Surveillance Mega Pixel

- Optical 35X Zoom Ratio 2/3" f=14.5-500mm / F2.8
- 3 Mega Pixel Optical IR correction
- Long Zoom Range Motorized Zoom Lens



- 3Mega Pixel under 14.5-500mm whole range
- Optical IR correction (Day&Night)
- Fog free function by visible cut filter Switching
- Adjustable Optical Boresight
- Adjustable Optical Back Focus (as option)

Motorized Zoom Lens

Format	ZoomRatio	Model Number	Focal Length	F-Stop	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(1/3")	(1/4")				
1/3"	8X	TZ8X0612	6 - 48mm	F1.2 - T360	CS	44.3° - 5.8°	33.3° - 4.4°	1	72 x 64 x 91.8	390	VGA
1/3"	10X	TZ10X0614	6 - 60mm	F1.4 - T360	CS	43.4° - 4.6°	33.0° - 3.51°	1	68 x 65 x 108.5	450	VGA
						(1/2")	(1/3")				
1/2"	8X	HZ8X0816	8 - 64mm	F1.6 - T360	C	44° - 5.8°	33.2° - 4.4°	1	72 x 64 x 91.8	365	VGA
1/2"	10X	HZ10X0816	8 - 80mm	F1.6 - T360	C	43.4° - 4.6°	32.9° - 3.51°	1	68 x 65 x 103.5	450	VGA
1/2"	21X	HZ21X1015	10 - 210mm	F1.5 - T1000	C	35.6° - 1.78°	26.8° - 1.35°	2	94.5 x 84 x 169	1100	VGA
1/2"	31X	HZ31X1015	10 - 310mm	F1.5 - T1000	C	35.3° - 1.27°	26.7° - 0.9°	2.8	112 x 100 x 238.5	1850	VGA
1/2"	35X	HZ35X1015	10 - 350mm	F1.5 - T1000	C	35.3° - 1.05°	26.7° - 0.79°	2.5	112 x 100 x 238.5	1830	2

Long Zoom Range Motorized Zoom IR Lens (Auto Focus, Temperature Focusing Control available as optional)

Format	ZoomRatio	Model Number	Focal Length	F-Stop	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(2/3")	(1/1.8")				
2/3"	35X	MZ35X1428	14.5 - 500mm	F2.8 - Close	C	34° - 1.0°	28.0° - 0.82°	5	128.6 x 125.6 x 278.3	4400	3
2/3"	35X	MZ35X2142	21 - 750mm	F4.2 - Close	C	23° - 0.67°	18.9° - 0.55°	5	128.6 x 125.6 x 330.5	4900	3
2/3"	40X	MZ40X2751	27 - 1,070mm	F5.1 - Close	C	17.3° - 0.5°	14.2° - 0.41°	5	128.6 x 125.6 x 347.1	5100	3

Long Zoom Range Motorized Zoom IR Lens (Auto Focus available as optional)

Format	ZoomRatio	Model Number	Focal Length	F-Stop	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(1/1.8")	(1/2")				
1/1.8"	50X	HZ50X1046	10 - 500mm	F4.6 - T360	C	35.1° - 0.8°	32.7° - 0.74°	10	90 x 90 x 175.5	1400	2

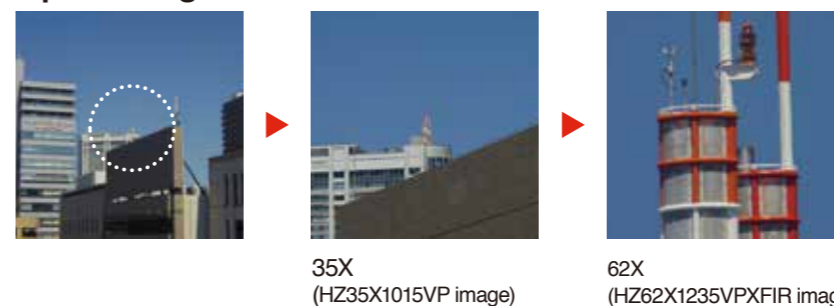
Long Zoom Range Motorized Zoom Lens (IR correction available as optional)

Format	ZoomRatio	Model Number	Focal Length	F-Stop	Mount	Horizontal Angle of View		M.O.D. (m)	Dimensions (mm)	Weight (g)	MEGA
						(1/2")	(1/3")				
1/2"	62X	HZ62X1235	12.5 - 775mm	F3.5 - Close	C	28.77° - 0.47°	21.78° - 0.35°	5	135 x 150 x 367.5	5250	3
1/2"	62X	HZ62X1235(EX)	12.5 - 1,550mm	F3.5 - Close	C	28.77° - 0.24°	21.78° - 0.18°	5	135 x 150 x 367.5	5500	3
						(2/3")	(1/2")				
2/3"	62X	MZ62X2570	25 - 1,550mm	F7.0 - Close	C	19.96° - 0.32°	14.61° - 0.24°	5	135 x 150 x 367.5	5250	1
						(1/1.8")	(1/3")				
1/1.8"	64X	HZ64X1338	13.5 - 864mm	F3.8 - Close	C	28.46° - 0.47°	19.3° - 0.32°	5	135 x 150 x 367.5	5250	3
1/1.8"	64X	HZ64X1338(EX)	13.5 - 1,600mm	F3.8 - Close	C	28.46° - 0.23°	19.3° - 0.17°	5	135 x 150 x 367.5	5950	3
						(2/3")	(1/2")				
2/3"	64X	MZ64X2570	25 - 1,600mm	F7.0 - Close	C	19.96° - 0.31°	14.61° - 0.23°	5	135 x 150 x 367.5	5300	1
						(1/1.8")	(1/3")				
1/1.8"	64X	HZ64X1635	16.5 - 1,060mm	F3.5 - Close	C	23.9° - 0.38°	16.3° - 0.26°	5	135 x 150 x 367.5	5350	3

Extension Code for option

Ext. Code	Options					
	DC AI	Video AI	Preset Z&F	2X Extender	Fog Free & Auto BF	IR correction
-D	<input type="radio"/>					
-DIR	<input type="radio"/>					<input type="radio"/>
-DP	<input type="radio"/>		<input type="radio"/>			
-DPIR	<input type="radio"/>		<input type="radio"/>			<input type="radio"/>
-DPX	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>		
-DPPFIR	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	<input type="radio"/>
-DPXFIR	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Optical Magnification



2X Front TeleConverter

Adaptable for ALL Camera module whose front lens diameter is less than 33mm.

- 3G - 5E (3Group - 5Element, All glass)
- Full HD (2Mega) resolution
- Keep original F-Stop (No degradation)
- Double the focal length

Note: Vignetting appears towards wide side.



(Reference : Product with AF module)



(Reference : Product)

AOC USB 3.0 Cable

Optical Fiber + Power Connection

- Extend cable length up to 20m
- Transmission speed up to 5 Gbps
- High flex: > 5 million cycle times
- Support USB 3.0 Vision Standard
- Providing 900mA/5V to device
- Micro-B connection w/lock screws
- Hot-plugging & no driver necessary
- Minimize signal noise interference



Field of View List based on Image Sensor

Sensor	Model Number		Vari-Focal Board Lens								
			SP365		SP209		PD22		PD13		
			MSVF3.3X0315IR	Wide	Tele	MSVF3.3X0313IR	Wide	Tele	MSVF3X3313IR3	Wide	Tele
SONY	4.977X2.8 (IMX326) (3072X1728)16:9 5M D=5.71	D	117.3°	34.9°	113.0°	35.2°	103.6°	34.5°	36.7°	15.3°	
		H	98.6°	30.4°	96.2°	30.7°	87.5°	30.1°	31.8°	13.3°	
		V	52.3°	17.1°	51.7°	17.3°	46.9°	16.9°	17.6°	7.5°	
	1/2.9" 5.376X3.024 (IMX136,IMX140,IMX322) (FLHD 1920X1080)16:9 2M D=6.17	D	130.6°	37.6°	124.2°	38.0°	115.1°	37.3°	39.9°	16.5°	
		H	108.5°	32.8°	105.2°	33.1°	96.0°	32.5°	34.4°	14.4°	
		V	56.7°	18.5°	56.1°	18.6°	50.8°	18.3°	19.0°	8.1°	
	1/2.8" 5.376X3.36 (IMX122,IMX136) (IMX140,IMX222) (WUXGA 1920X1200)8:5 2.3M D=6.34	D	136.1°	38.7°	128.6°	39.1°	120.0°	38.3°	41.1°	17.0°	
		H	108.5°	32.8°	105.2°	33.1°	96.0°	32.5°	34.4°	14.4°	
		V	63.4°	20.6°	62.6°	20.7°	56.8°	20.3°	21.2°	9.0°	
	1/2.8" 5.568X3.132 (IMX290 IMX291) (FLHD1920X1080) 16:9 2M D=6.39	D	137.8°	39.0°	129.9°	39.4°	121.5°	38.6°	41.4°	17.1°	
		H	113.5°	34.0°	109.6°	34.3°	100.3°	33.7°	35.8°	14.9°	
		V	58.8°	19.2°	58.2°	19.3°	52.7°	19.0°	19.7°	8.4°	
	1/2.8" 5.12X3.84 (IMX123,124) (QXGA,2048X1536) 4:3 3M D=6.4	D	138.1°	39.1°	130.2°	39.4°	121.8°	38.7°	41.5°	17.1°	
		H	102.1°	31.3°	99.4°	31.5°	90.5°	31.0°	32.7°	13.7°	
		V	73.3°	23.5°	72.2°	23.7°	65.5°	23.2°	24.3°	10.3°	
	1/3.2" 4.8X2.7 (IMX123,124) (FLHD 1920X1080) 16:9 2M D=5.51	D	111.9°	33.6°	108.2°	33.9°	98.9°	33.3°	35.3°	14.7°	
		H	94.5°	29.3°	92.3°	29.6°	83.9°	29.0°	30.6°	12.8°	
		V	50.3°	16.5°	49.8°	16.6°	45.2°	16.3°	16.9°	7.2°	
OmniVision	1/2.7"(5.76X3.24) D=6.6 OV2715 AR0230 1080P	D	144.8°	40.2°	136.0°	40.4°	128.2°	39.9°	42.9°	17.7°	
		H	118.4°	35.2°	114.5°	35.3°	104.8°	34.8°	37.1°	15.4°	
		V	61.0°	19.8°	60.4°	19.9°	54.7°	19.6°	20.4°	8.7°	
Aptina	4.51X3.38 D=5.636 (AR0331,AR0330) (1/3"4:3 still mode)	D	115.3°	34.4°	111.2°	34.7°	101.8°	34.1°	36.2°	15.1°	
		H	87.8°	27.6°	86.1°	27.8°	78.2°	27.3°	28.7°	12.1°	
		V	63.8°	20.7°	63.0°	20.8°	57.1°	20.5°	21.3°	9.0°	
	5.07X2.85 D=5.82 (AR0330 1/3"16:9) (sHD mode)	D	120.2°	35.5°	115.5°	35.8°	106.1°	35.2°	37.5°	15.6°	
		H	100.9°	31.0°	98.2°	31.2°	89.4°	30.7°	32.4°	13.6°	
		V	53.3°	17.4°	52.7°	17.6°	47.8°	17.3°	17.9°	7.6°	
Panasonic	5.28X2.97 D=6.058 Panasonic MN34229PL MN34220PL MN34041PL 1080p(1920X1080)	D	127.4°	37.0°	121.4°	37.3°	112.2°	36.6°	39.1°	16.2°	
		H	106.0°	32.3°	103.0°	32.5°	93.9°	31.9°	33.8°	14.1°	
		V	55.6°	18.2°	55.0°	18.3°	49.9°	18.0°	18.7°	7.9°	