SPACECOM
CCTV LENSES

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2021 Ver.1

Best Good Partner SPACE

SPACE inc. develops and proposes suitable products for market needs like machine vision lenses for image processing field and motorized zoom lenses which has been penetrating into various public fields such as borders, harbor, waterways, forests monitoring, railroad and airport.With taking advantage of integrated production,unique technology of coating or polishing and adaptability. SPACE inc. is able to produce a custom-made lens. SPACE inc. will provide a valuable lens to our customers.

Mitaka Head Office

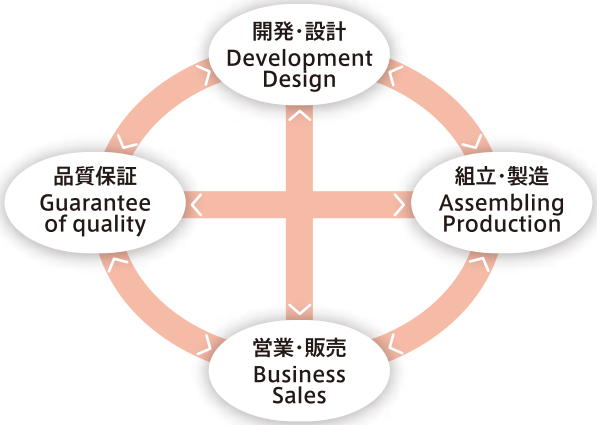
Otawara Factory

Grinding

Assembling

Centering

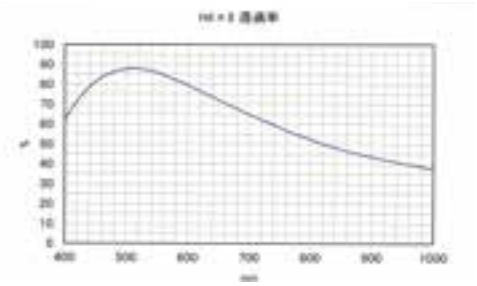
Molding



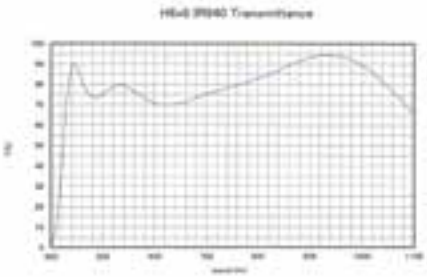
SPACE inc.manages the entire process of lens development, design, manufacturing, sales, and quality assurance in-house.

Coating Technology

Lenses are made up of multiple glasses, each of which is coated to improve transmittance.
Generally speaking, there are two types of coatings: single-layer coating and multi-layer coating.
SPACE inc. is able to offer AR wideband coating that extends the transmitssion to near-infrared region.
In addition, SPACE inc. provides coatings for specific wavelengths by customer's request.
In combination with a bandpass filter, the transmittance can be improved in the required wavelength range.
We can also apply bandpass coating to lenses as a special order. Please contact us for further details.

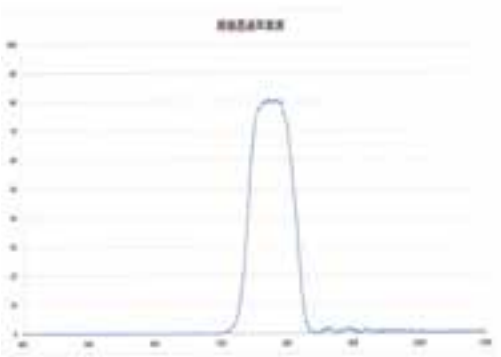


Transmittance of Single-layer coating



Multi-layer coating(940nm peak)

Vacuum Vapor Deposition Machine



center of wavelength 780nm, half windtight 90±10nm Transmittance of bandpass coat

Ordinary Lens

Bandpass coating lens

Customized Lens

SPACE inc. can offer customized lenses to meet your needs.
For example, Motorization of Fixed focal lens or Vari-focal lens and semi-customized like change shape of mount or full customized for specialization for traffic or robotics market.
Please feel free to contact sales window or through inquiry form of our website. https;//spacecom.co.jp/en/

Cases

Motorization of megapixel Vari-focal lens

Developed for ITS market to make more compact size, high image and low cost.

Motorization of Fixed focal lens

To operate focus and iris incorporated in device by remote control.
This is request from biotechnology field.

Small Built-In-Lens

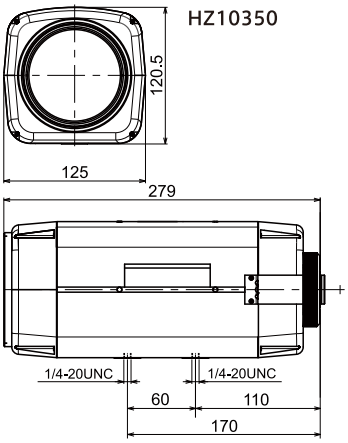
Designed compact, light and vibration-resistance to take the image of F1 driver's sight through the lens mounted on driver's helmet.

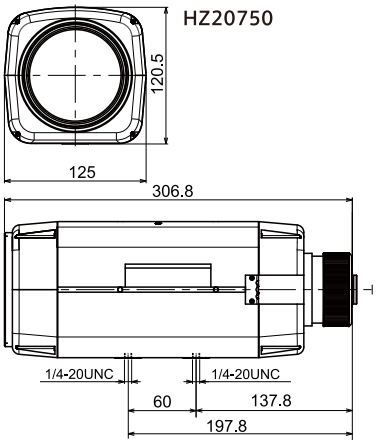
35 times motorized zoom lens compatible with Megapixel camera

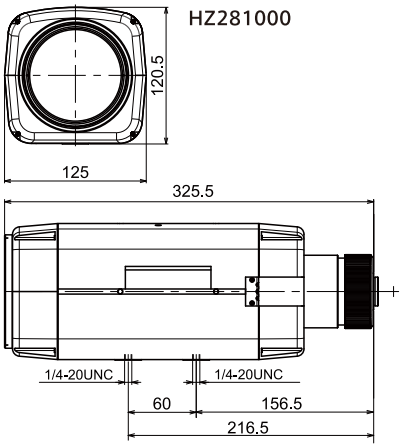
BETELGEUSE

- Compatible with Megapixel camera
- IR corrected designed
- Visible Light Cut Filter for haze removal image [Option]
- Optical Axis Adjustment [Option]

Image size		1/2"	1/1.8"	1/1.8"
Focal Length		10~350mm	20~750mm	28.5~1000mm
F Number		F1.6	F3.6	F5.9
Mount		C Mount		
Minimum Object Distance		4m		
Angle of View		35.2×26.5°~1.1×0.8°	18.9×14.2°~0.6×0.4°	13.6×10.2°~0.4×0.3°
Filter Size		95mm P1		
Model	Motorized Iris	HZ10350R IR-MP	HZ20750R IR-MP	HZ281000R IR-MP
	With Potentiometer	HZ10350R IR-MP PZFI	HZ20750R IR-MP PZFI	HZ281000R IR-MP PZFI
	PC control with TSZC-06	HZ10350R IR-MP PZFI(TSZC)	HZ20750R IR-MP PZFI(TSZC)	HZ281000R IR-MP PZFI(TSZC)
	DC Auto iris	HZ10350RDC IR-MP	HZ20750RDC IR-MP	HZ281000RDC IR-MP
	With Potentiometer	HZ10350RDC IR-MP PZF	HZ20750RDC IR-MP PZF	HZ281000RDC IR-MP PZF
	P Iris	HZ10350RP IR-MP	HZ20750RP IR-MP	HZ281000RP IR-MP







● Visible Light Cut Filter for haze removal image [Option]

This filter blocks visible light that makes poor image caused by fog or haze and have images under near infrared light.
Recommendable filter for monitoring at forest, river and port where fog and haze are likely to occur.

● Optical Axis Adjustment Unit (Dedicated HZ20750: Optionally available)

This unit can adjust the optical axis of a camera and the lens to use.
As for the central axis of the sensor of the camera and the optical axis of the lens occasionally shifts from that position when zooming due to individual difference with the position of camera's sensor and optical axis of lens. To prevent such a phenomenon, it is necessary to align the optical axis of camera and lens by using optical axix adjustment unit when installation.

Please contact us for details of options and model names.

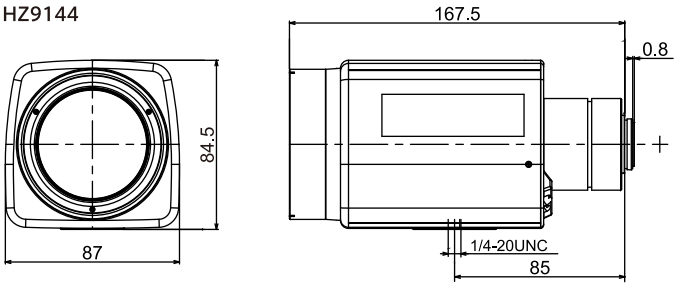
16 times motorized zoom lens compatible with Megapixel camera

LIBRA

■ Compatible with FHD Megapixel camera
■ IR corrected designed

Image size		1/1.8"
Focal Length		9～144mm
F Number		F1.6
Mount		C Mount
Minimum Object Distance		2.5m
Angle of View		43.2×32.9°～2.9×2.2°
Filter Size		72mm P0.75
Model	Motorized Iris	–
	With Potentiometer	–
	PC control with TSZC-06	–
	DC Auto iris	HZ9144RDC IR-MP
	With Potentiometer	HZ9144RDC IR-MP PZF
	P Iris	HZ9144RP IR-MP

HZ9144

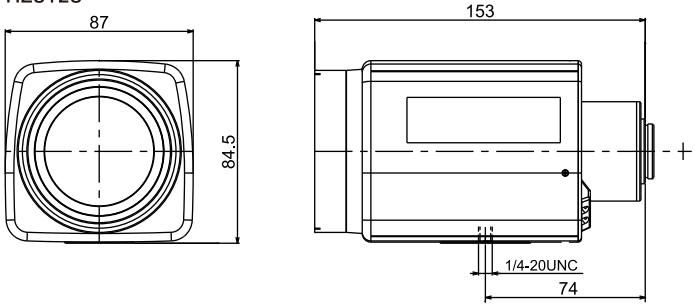


LIBRA Ⅱ

■ Compatible with FHD Megapixel camera

Image size		1/2"
Focal Length		8～128mm
F Number		F1.6
Mount		C Mount
Minimum Object Distance		1.5m
Angle of View		42.7×32.6°～2.9×2.2°
Filter Size		72mm P0.75
Model	Motorized Iris	HZ8128R-MP
	With Potentiometer	HZ8128R-MP PZFI
	PC control with TSZC-06	HZ8128R-MP PZFI(TSZC)
	DC Auto iris	–
	With Potentiometer	–
	P Iris	–

HZ8128



25 times motorized zoom lens compatible with Megapixel camera

ALDEBARAN

■ Compatible with FHD Megapixel camera

HZ10250

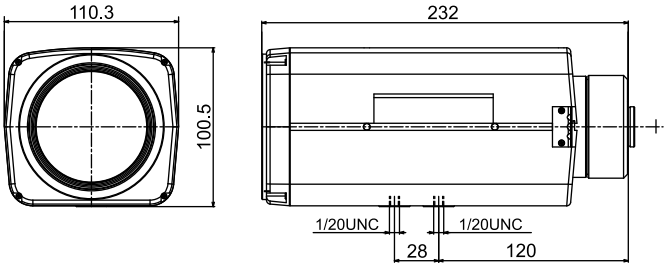


Image size		1/1.8"
Focal Length		10～250mm
F Number		F1.6
Mount		C Mount
Minimum Object Distance		2.5m
Angle of View		39.9×30.4°～1.6×1.2°
Filter Size		82mm P0.75
Model	Motorized Iris	–
	With Potentiometer	–
	PC control with TSZC-06	–
	DC Auto iris	HZ10250RDC IR-MP
	With Potentiometer	HZ10250RDC IR-MP PZF
	P Iris	HZ10250RP IR-MP

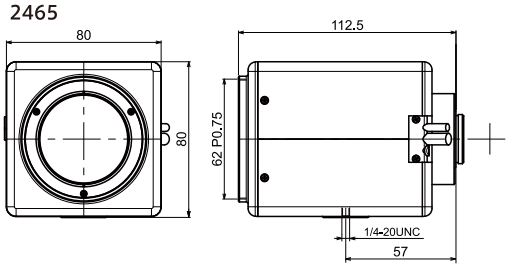
2.7 times motorized zoom lens compatible with Megapixel camera

MERCURY

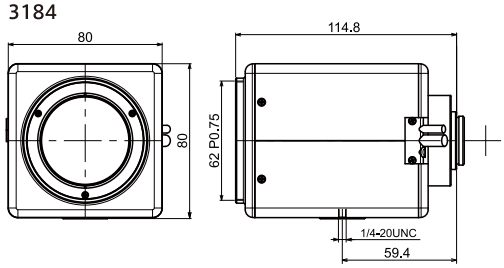
- Applicable with 1" (Maximum Φ16.8mm)sensor without vignetting
- Resolution power of Center: 3.45um (Corner: 5.5um)
- Improved transmittance under near infrared wavelength region at night (850nm peak)
- Flange Back adjustment → Flange back is adjustable with used camera
- Non F drop → No change of F Number from wide to Telephoto

Image size		1"(ϕ16.8mm)	1"(ϕ16.8mm)
Focal Length		24~65mm	31~84mm
F Number		F2.0	F2.6
Mount		C Mount	
Minimum Object Distance		7m	
Angle of view		30.5×22.9°~11.2×8.4°	23.6×17.7°~8.7×6.5°
Filter size		62mm P0.75	
Model	Motorized iris	VZ2465R IR-MP	VZ3184R IR-MP
	With Potentiometer	VZ2465R IR-MP PZFI	VZ3184R IR-MP PZFI
	PC control with TSZC-06	VZ2465R IR-MP PZFI(TSZC)	VZ3184R IR-MP PZFI(TSZC)
	DC auto iris	VZ2465RDC IR-MP	VZ3184RDC IR-MP
	With Potentiometer	VZ2465RDC IR-MP PZF	VZ3184RDC IR-MP PZF
	P iris	VZ2465RP IR-MP	VZ3184RP IR-MP

2465



3184



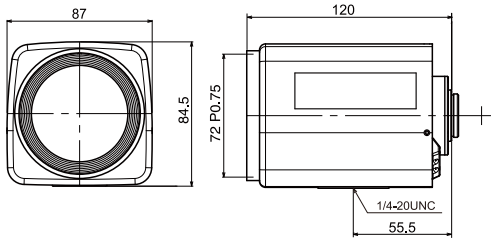
6 times motorized zoom lens compatible with Megapixel camera

CAPELLA

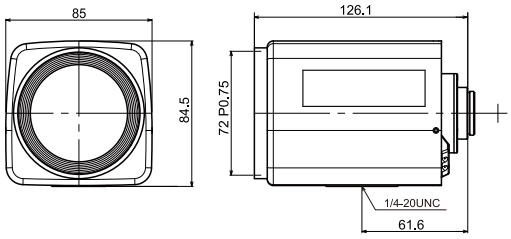
- Applicable with 1" (Maximum Φ16.8mm)sensor without vignetting
- Resolution power of Center: 3.45um
- Best optical performance with distance 15-30m
- Improved transmittance from visible light to near infrared light region with AR multiple coating
- Non F drop → No change of F Number from wide to Telephoto
- HD1375 is applicable with Day & Night Camera

Image size		2/3"	2/3"
Focal Length		11~66mm	13~75mm
F Number		F1.8	F2.2
Mount		C Mount	
Minimum Object Distance		1.4m	
Angle of view		43.3×33.0°~7.7×5.8°	37.3×28.4°~6.7×5.0°
Filter size		72mm P0.75	
Model	Motorized iris	HD1166R	HD1375R IR
	With Potentiometer	HD1166R PZFI	HD1375R IR PZFI
	PC control with TSZC-06	HD1166R PZFI(TSZC)	HD1375R IR PZFI(TSZC)
	DC auto iris	HD1166RDC	—
	With Potentiometer	HD1166RDC PZF	—
	P iris	HD1166RP	—

1166



1375



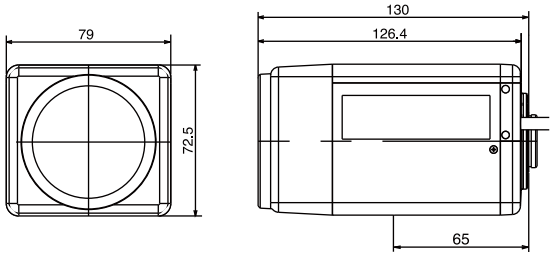
Motorized Zoom Lens compatible with HD Megapixel Camera

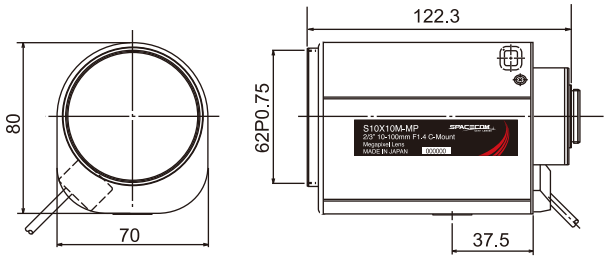
- Compatible with 1/2" HD Megapixel camera
- 17 times motorized zoom lens

- Compatible with 2/3" HD Megapixel camera 10 times motorized zoom lens

Image size		1/2"
Focal Length		8~136mm
F Number		F1.6
Mount		C Mount
Minimum Object Distance		1.8m
Angle of view		43.6×33.4°~2.7×2.2°
Filter size		58mm P0.75
Model	Motorized iris	HZ8136R-MP2
	With Potentiometer	HZ8136R-MP2 PZFI
	PC control with TSZC-06	HZ8136R-MP2 PZFI(TSZC)
	DC auto iris	HZ8136RDC-MP2
	With Potentiometer	HZ8136RDC-MP2 PZF
	P iris	–

Image size		2/3"
Focal Length		10~100mm
F Number		F1.4
Mount		C Mount
Minimum Object Distance		1.2m
Angle of view		47.5×36.5°~5.0×3.8°
Filter size		62mm P0.75
Model	Motorized iris	JZ10100R-MP
	With Potentiometer	JZ10100R-MP PZFI
	PC control with TSZC-06	JZ10100R-MP(TSZC)
	DC auto iris	–
	With Potentiometer	–
	P iris	–





EZ motorized zoom lens

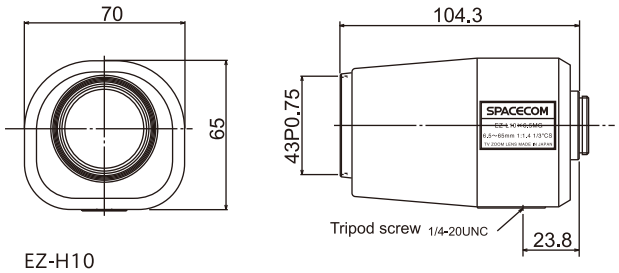
Mechanical parts of this product are all made of engineering plastic. Compared with our conventional metal parts, approximately 50%(cost ratio with our conventional product) of cost is reduced.

This product is reduced inmass by 60.8% compared to our conventional product. Replacement of metal with engineering plastic in mechanical parts results in a significant reduction in weight and leads to very competitive price.

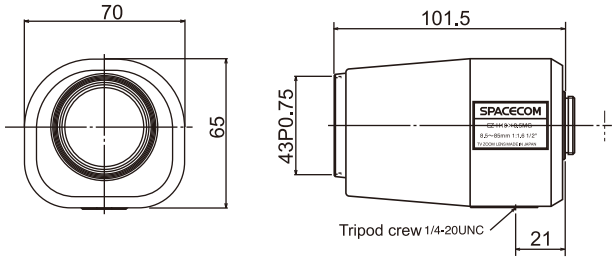
Innovation of our molding technologies enables forming a part of complicated shape with engineering platic. We are proud of the fact that the engineering plastic part maintains high accuracy of dimention.

Image size		1/3"	1/2"
Focal Length		6.5~65mm	8.5~85mm
F Number		F1.4	F1.6
Mount		C Mount	C Mount
Minimum Object Distance		1.2m	
Angle of view		40.5×31.0°~4.2×3.2°	41.3×31.5°~4.3×3.2°
Model	Motorized iris	TEZ6565R	HEZ8585R
	With Potentiometer	TEZ6565R PZFI	HEZ8585R PZFI
	PC control with TSZC-06	TEZ6565R PZFI(TSZC)	HEZ8585R PZFI(TSZC)
	DC auto iris	TEZ6565RDC	HEZ8585RDC
	With Potentiometer	TEZ6565RDC PZF	HEZ8585RDC PZF
	P iris	–	–

EZ-L10



EZ-H10



Other Motorized Zoom Lenses

■ Manual Zoom Lenses

Model	Image size	Mount	Focal Length	F No.	Angle of View	M.O.D	Focus	Zoom	Iris	Size(mm)	Weight(g)
HZ848M	1/2"	C	8~48mm	F1.0-Close	43.6×33.4~7.7×5.7°	0.3m	Manual	Manual	Manual	ϕ58×91.7	360
HZ848M(Metal)	1/2"	C	8~48mm	F1.0-Close	43.6×33.4~7.7×5.7°	0.5m	Manual	Manual	Manual	ϕ58×102.4	395
HZ848DC	1/2"	C	8~48mm	F1.0-360	43.6×33.4~7.7×5.7°	0.5m	Manual	Manual	DC	66.5×59×92	400
JZ1169M	2/3"	C	11.5~69mm	F1.4-Close	41.9×32.0~7.3×5.5°	0.3m	Manual	Manual	Manual	ϕ58×97.5	380
JZ1169M(Metal)	2/3"	C	11.5~69mm	F1.4-Close	41.9×32.0~7.3×5.5°	0.5m	Manual	Manual	Manual	ϕ58×107.8	410
JZ1169DC	2/3"	C	11.5~69mm	F1.4-360	41.9×32.0~7.3×5.5°	0.5m	Manual	Manual	DC	66×59×97.5	415

■ Motorized Zoom Lenses

Model	Image size	Mount	Focal Length	F No.	Angle of View	M.O.D	Focus	Zoom	Iris	Size(mm)	Weight(g)
HZ848R	11/2"	C	8~48mm	F1.0-Close	43.6×33.4~7.7×5.7°	1.0m	Remote	Remote	Remote	70×60×97.1	500
HZ880R	1/2"	C	8~80mm	F1.2-Close	43.6×33.4~4.6×3.4°	1.2m	Remote	Remote	Remote	80×70×126.6	700
HZ65104R	1/2"	C	6.5~104mm	F1.4-Close	52.4×40.5~3.5×2.6°	1.5m	Remote	Remote	Remote	120.5×100×158.3	1500
JZ1169R	2/3"	C	11.5~69mm	F1.4-Close	41.9×32.0~7.3×5.5°	1.0m	Remote	Remote	Remote	70×60×102.5	500
JZ95152R	2/3"	C	9.5~152mm	F1.8-Close	49.7×38.3~3.3×2.5°	1.5m	Remote	Remote	Remote	120.5×100×171.6	1500
VZ16160R	1"	C	16~160mm	F2.2-Close	43.6×33.4~4.6×3.4°	1.5m	Remote	Remote	Remote	100×120×176	1400

Possible to mount potentiometer to Zoom, Focus and Iris. Add PZFI to the end of the model name. Example:HZ848R PZF

The potentiometer mounted lenses can be controlled by PC through TSZC-06 controller.

Please note that the lens controlled by TSZC-06 has exclusive wiring. TSZC is added to the model name. Example:HZ848 R PZFI(TSZC)

Controller for Motorized Zoom Lenses

Model	
CB-3	This is a remote controlling box for SPACECOM motorized zoom lenses, enabling zoom, focus and iris to be remotely controlled.
TSZC-06	This is a controller that allows controlling the position of zoom lenses with potentiometer by PC. Memorizes the value of the meter in the lens, divides the movable range and controls the position. Communication is done via serial communication such as USB or RS-232C. The lens of (TSZC) type is necessary to used with TSZC-06 For the details, please visit □ https://tesbit.co.jp/?page_id=430

The cable length of lens is approx. 50cm. Please inquire when extension cable is needed.

■ Close-up lens

Simply attach the close-up lens used in SLR cameras to front of the zoom lens for macro photography. This allows you to get even closer than the minimum objective distance of the lens. Please note that the focus adjustment range is limited. Please refer to the material on the next page (Page 9)

■ Reference date for imaging range when Close up lens is mounted

HXV(Unit:mm)

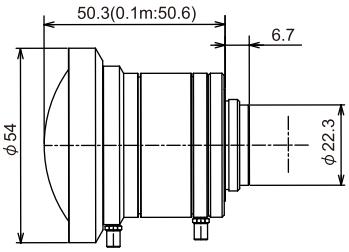
Model	Supposed Censor	Close up Lens	Wide ~ Tele	M.O.D	Wide ~Tele
VZ2465R IR-MP	IMX267, IMX255	1000	588.8x310.5~217.4x114.7	875	509.3x268.6~188.1x99.2
		500	294.4x155.3~108.7x57.3	466.7	271.6x143.2~100.3x52.9
		330	194.3x102.5~71.7x37.8	315.1	183.4x96.7~67.7x35.7
		250	147.2x77.6~54.4x28.7	241.4	140.5x74.1~51.9x27.4
VZ3184R IR-MP	IMX267, IMX255	1000	455.9x240.4~168.2x88.7	875	394.3x207.9~145.5x76.7
		500	227.9x120.2~84.1x44.4	466.7	210.3x110.9~77.6x40.9
		330	150.4x79.3~55.5x29.3	315.1	142.0x74.9~52.4x27.6
		250	114.0x60.1~42.1x22.2	241.4	108.8x57.4~40.1x21.2
HD1166R	IMX264, IMX250	1000	767.8x642.3~128.0x107.1	583.3	422.3x353.3~70.4x58.9
		500	383.9x321.2~64.0x53.5	368.4	266.7x223.1~44.5x37.2
		330	253.4x212.0~42.2x35.3	267.1	193.3x161.7~32.2x27.0
		250	192.0x160.6~32.0x26.8	212.1	153.6x128.5~25.6x21.4
VZ16160R	IMX267, IMX255	1000	883.2x465.8~88.3x46.6	523.8	429.0x226.2~42.9x22.6
		500	441.6x232.9~44.2x23.3	343.8	281.5x148.5~28.2x14.9
		330	291.5x153.7~29.2x15.4	253.9	207.9x109.6~20.8x11.0
		250	220.8x116.4~22.1x11.6	203.7	166.8x88.0~16.7x8.8
JZ10100R-MP	IMX264, IMX250	1000	844.6x706.6~84.5x70.7	545.5	430.0x359.7~43.0x36.0
		500	422.3x353.3~42.2x35.3	352.9	278.2x232.8~27.8x23.3
		330	278.7x233.2~27.9x23.3	258.8	204.0x170.7~20.4x17.1
		250	211.1x176.6~21.1x17.7	206.9	163.1x136.4~16.3x13.6
JZ1169R	IMX264, IMX250	1000	734.4x614.4~122.4x102.4	500	337.8x282.6~56.3x47.1
		500	367.2x307.2~61.2x51.2	333.3	225.2x188.4~37.5x31.4
		330	242.4x202.8~40.4x33.8	248.1	167.6x140.3~27.9x23.4
		250	183.6x153.6~30.6x25.6	200	135.1x113.1~22.5x18.8
		200	153.6x128.5~24.5x20.5	166.7	117.7x98.5~18.8x15.7
		100	73.4x61.4~12.2x10.2	90.9	61.4x51.4~10.2x8.6
HZ8136R-MP2	PYTHON 1300	1000	768.0x614.4~45.2x36.1	642.9	471.8x377.4~27.8x22.2
		500	384.0x307.2~22.6x18.1	391.3	287.2x229.7~16.9x13.5
		330	253.4x202.8~14.9x11.9	278.9	204.7x163.7~12.0x9.6
		250	192.0x153.6~11.3x9.0	219.5	161.1x128.9~9.5x7.6
		200	153.6x122.9~9.0x7.2	180	132.1x105.7~7.8x6.2
		100	76.8x61.4~4.5x3.6	94.7	69.5x55.6~4.1x3.3
HEZ8585R	PYTHON 1300	1000	722.8x578.3~72.3x57.8	545.5	368.0x294.4~36.8x29.4
		500	361.4x289.1~36.1x28.9	352.9	238.1x190.5~23.8x19.1
		330	238.5x190.8~23.9x19.1	258.8	174.6x139.7~17.5x14.0
		250	180.7x144.6~18.1x14.5	206.9	139.6x111.7~14.0x11.2
		200	144.6x115.7~14.5x11.6	171.4	115.7x92.5~11.6x9.3
		100	72.3x57.8~7.2x5.8	92.3	62.3x49.8~6.2x5.0
HZ880R	PYTHON 1300	1000	768.0x614.4~76.8x61.4	545.5	391.0x312.8~39.1x31.3
		500	384.0x307.2~38.4x30.7	352.9	253.0x202.4~25.3x20.2
		330	253.4x202.7~25.3x20.3	258.8	185.5x148.4~18.6x14.8
		250	192.0x153.6~19.2x15.4	207	148.3x118.6~14.8x11.9
HZ848R	PYTHON 1300P	1000	768.0x614.4~128.0x102.4	500	353.3x282.6~58.9x47.1
		500	384.0x307.2~64.0x51.2	333.3	235.5x188.4~39.3x31.4
		330	253.4x202.8~42.2x33.8	248.1	175.3x140.3~29.2x23.4
		250	192.0x153.6~32.0x25.6	200	141.3x113.1~23.6x18.8
		200	153.6x122.9~25.6x20.5	166.7	117.8x94.2~19.6x15.7
		100	76.8x61.4~12.8x10.2	90.9	64.2x51.4~10.7x8.6

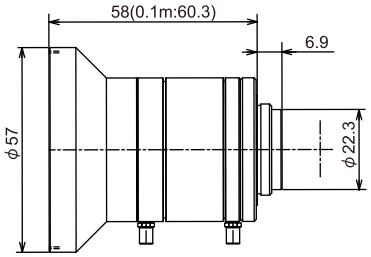
Fixed Focal Lens for 1" and 1.1" Megapixel Camera

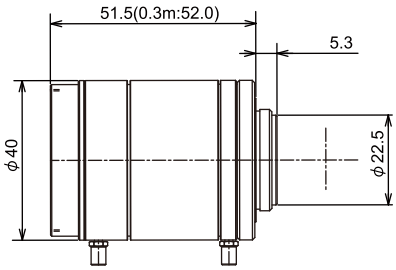
PLEIADES Ⅱ

- Fixed Focal Lens for 1" and 1.1" Megapixel Camera
- VHF25M-MP and VHF35M-MP is compatible with 1.1" megapixel camera
- Achieved high resolution (3.45um) from near to infinity by floating mechanism
- Sufficient transmission in near infrared region (Over 60% transmission at 850nm)
- Double Lock mechanism enhances vibration resistance

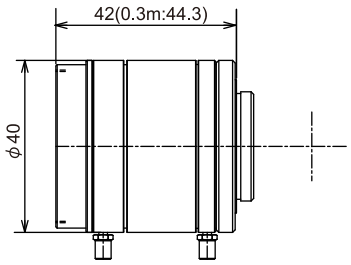
Model	VHF6M-MP			VHF8M-MP			VHF12.5M-MP		
Image size	1"			1"			1"		
Focal Length	6mm			8mm			12.5mm		
F No.	F1.8-22			F1.4-22			F1.4-22		
Angle of View (HXV)	1"	1/1.2"	2/3"	1"	1/1.2"	2/3"	1"	1/1.2"	2/3"
	95.1×78.7°	85.3×68.2°	73.5×57.4°	79.7×62.9°	69.2×53.7°	58.3×44.6°	55.7×42.7°	47.3×36.0°	39.3×29.7°
	1/1.8"	1/2"	1/3"	1/1.8"	1/2"	1/3"	1/1.8"	1/2"	1/3"
	62.1×47.8°	55.9×42.8°	42.8×32.4°	48.5×36.9°	43.4×32.9°	32.9×24.8°	32.4×24.4°	28.9×21.7°	21.7×16.4°
Filter Size	—			55mm P0.75			35.5mm P0.5		
Mount	C Mount								
M.O.D.	100mm			100mm			300mm		
Resolution	6.4μm			6.4μm			5.0μm		
TV Distortion	near2.4% far −0.4%			near−2.3% far −1.1%			near −1.5% far −1.4%		

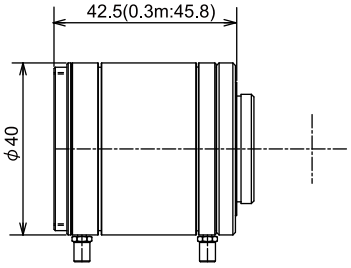


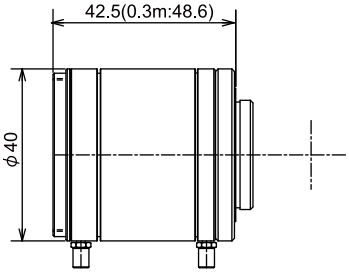




Model	VHF16M-MP			VHF25M-MP			VHF35M-MP		
Image size	1"			1.1"			1.1"		
Focal Length	16mm			25mm			35mm		
F No.	F1.4-22			F1.4-22			F1.4-22		
Angle of View (HXV)	1"	1/1.2"	2/3"	1.1"	1"	1/1.2"	1.1"	1"	1/1.2"
	44.5×33.8°	37.6×28.5°	31.1×23.5°	31.9×24.1°	29.0×21.9°	24.4×18.4°	22.9×17.2°	20.9×16.0°	17.5×13.1°
	1/1.8"	1/2"	1/3"	2/3"	1/1.8"	1/2"	2/3"	1/1.8"	1/2"
	25.6×19.2°	22.8×17.1°	17.1×12.9°	20.1×15.1°°	16.5×12.3°	14.6×11.0°	14.4×10.8°	11.8×8.8°	10.5×7.9°
Filter Size	35.5mm P0.5			35.5mm P0.5			35.5mm P0.5		
Mount	C Mount								
M.O.D.	300mm			300mm			300mm		
Resolution	5.0μm			3.5μm			3.5μm		
TV Distortion	near −0.9% far −0.8%			near −0.5% far −0.7%			near −0.4% far −0.3%		







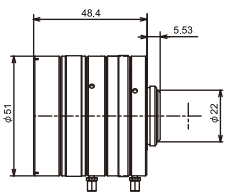
Fixed Focal Lens compatible with 2/3" 3 Megapixel Camera

PYXIS

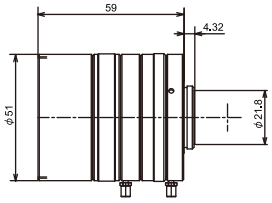
- Compatible with 2/3" megapixel Camera
- Low distortion, AR Multi layer coating
- Mount slip mechanism
- Iris click mechanism
- Double Lock mechanism enhances vibration resistance

Model	JHF8M-5MP	JHF12M-5MP	JHF16M-5MP	JHF25M-5MP	JHF35M-5MP
Image size	2/3"				
Focal Length	8mm	12mm	16mm	25mm	35mm
F No.	F2.8-22	F1.8-22	F1.4-22	F1.4-22	F1.4-22
Angle of View (HXV)	57.9 × 45.0°	40.3 × 30.8°	30.8 × 23.3°	20.0 × 15.0°	14.3 × 10.8°
Filter Size	49mm P0.75				
Mount	C Mount				
M.O.D.	100mm	150mm	200mm	200mm	250mm
Resolution	3.45μm				
TV Distortion	near −0.44% far 0.08%	near −0.22% far 0.10%	near −0.01% far 0.17%	near 0.02% far 0.11%	near −0.01% far 0.03%

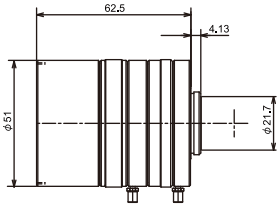
JHF8M-5MP



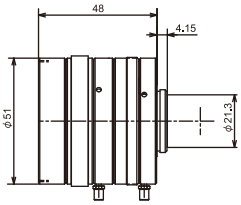
JHF12M-5MP



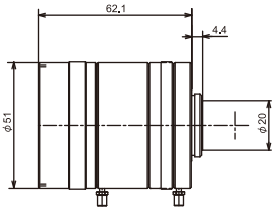
JHF16M-5MP



JHF25M-5MP



JHF35M-5MP



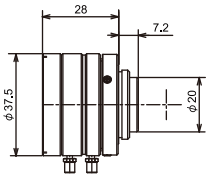
Fixed Focal Lens compatible with 2/3" 3 Megapixel Camera

VELA

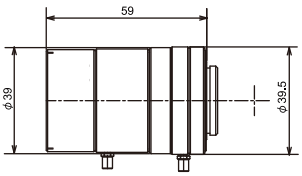
- Compatible with 2/3" megapixel Camera
- Low distortion
- Double Lock mechanism enhances vibration resistance

Model	JHF8M-MP	JHF12M-MP2	JHF16M-MP2	JHF25M-MP	JHF35M-MP2
Image size	2/3"				
Focal Length	8mm	12mm	16mm	25mm	35mm
F No.	F1.4-Close	F1.8-22	F1.4-22	F1.4-22	F1.4-22
Angle of View (HXV)	56.7× 43.8°	40.3 × 30.8°	30.8 × 23.3°	20.0 × 15.0°	14.3 × 10.8°
Filter Size	35.5mm P0.5				
Mount	C Mount				
M.O.D.	100mm	150mm	200mm	200mm	250mm
Resolution	4.5μm				
TV Distortion	near −1.24% far −0.48%	near −0.22% far 0.10%	near −0.01% far 0.17%	near 0.02% far 0.11%	near −0.01% far 0.03%

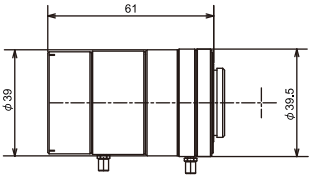
JHF8M-MP



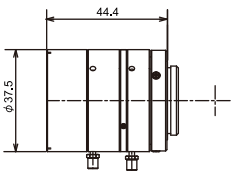
JHF12M-MP2



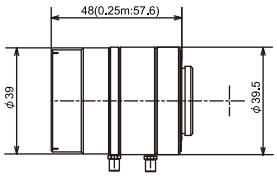
JHF16M-MP2



JHF25M-MP



JHF35M-MP2



The products in red are already discontinued. Any query or request, please kindly contact sales window directly.

SWIR (Short Wavelength Infrared)Megapixel Lens

- Correspondi ng to resolving power of IMX990/991 by using band pass filter and under SWIR (Excluding some products)
  Note) Half width is 25nm when using band pass filter
  Example) In case of 1100nm, 1087.5~1112.5nm with 1100nm peak
- Incorporating our coating technology, peak of transmission is over 95%

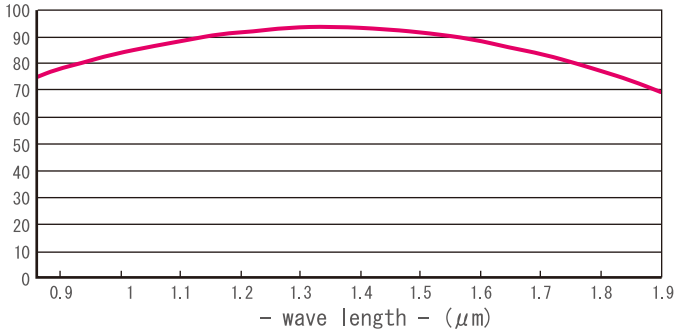


Image example

Double Lock System

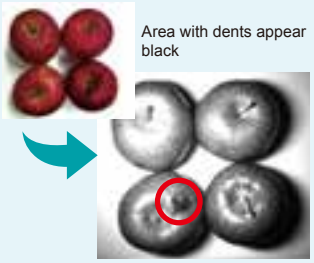
Image example: PLEIADES II SWIR series + InGaAs Camera + 1450nm LED Lightning

Plastic case

Inside of plastic case can be seen through

VHF25M-MP SWIR

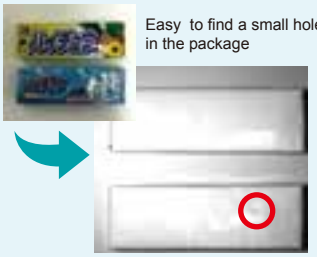
Dents of fruit



Area with dents appear black

VHF16M-MP SWIR

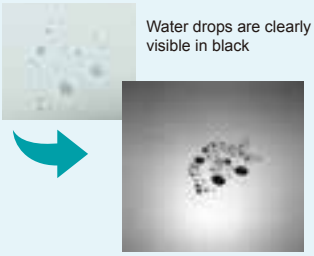
Package of snack



Easy to find a small hole in the package

VHF25M-MP SWIR

Visualization of water



Water drops are clearly visible in black

VHF35M-MP SWIR

Model	VHF6M-MP SWIR	VHF8M-MP SWIR	VHF12.5M-MP SWIR	VHF16M-MP SWIR	VHF25M-MP SWIR	VHF35M-MP SWIR
Image size	1"	1"	1"	1"	1.1"	1.1"
Focal Length	6mm	8mm	12.5mm	16mm	25mm	35mm
F Number	F1.8~22	F1.4~22	F1.4~22	F1.4~22	F1.4~22	F1.4~22
Filter Size	—	55mm P0.75	35mm P0.5	35mm P0.5	35mm P0.5	35mm P0.5
Mount	C Mount	C	C	C	C	C
Minimum Object Distance	1.0m	1.0m	3.0m	3.0m	3.0m	3.0m
IMX990/991	—	—	—	○	○	○

Correspondence of resolving power : use band pass filter and half width is 25nm

Model	JHF8M-5MP SWIR	JHF12M-5MP SWIR	JHF16M-5MP SWIR	JHF25M-5MP SWIR	JHF35M-5MP SWIR
Image size	2/3"	2/3"	2/3"	2/3"	2/3"
Focal Length	8mm	12mm	16mm	25mm	35mm
F Number	F2.8~22	F1.8~22	F1.4~22	F1.4~22	F1.4~22
Filter Size	49mm P0.75	49mm P0.75	49mm P0.75	49mm P0.75	49mm P0.75
Mount	C	C	C	C	C
Minimum Object Distance	1.0m	1.5m	2.0m	2.0m	2.5m
IMX990/991	○	○	○	○	○

Correspondence of resolving power : use band pass filter and half width is 25nm

Please contact us if you need other lens with SWIR coating.

F 0.8 Lens compatible with 4/3" large format

F0.8 Large Format Lens

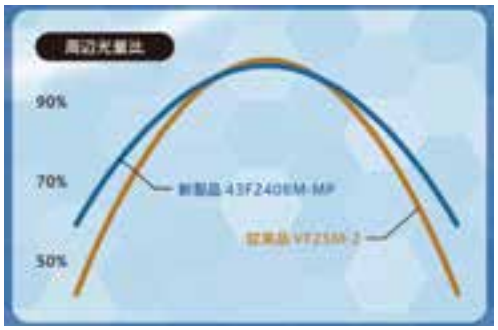
- Realize brightness F0.8
- Relative illumination 58.5%, entire screen is bright and light quantity difference is extremely low.
- Low distortion and high contrast
- Adopts a floating mechanism design to maintain high resolution even at minimum object distance.
- Close-Up photography up to 150mm is possible
- Custom made of motorized type is available

43F2409M-MP(F0.9)

VF25M-2(F1.4)

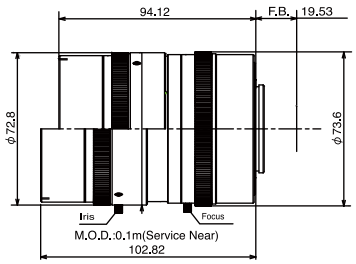
Camera: 1.5MP(2592x1944)

Relative illumination

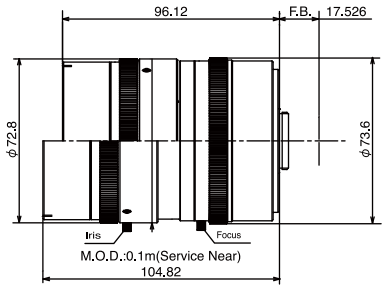


Model	43F2408M-MP	43F2409M-MP C
Image size	4/3"	
Focal Length	24mm	
F Number	F0.8-16	F0.9-16
Mount	M42 P1.0	C Mount
Minimum Object Distance	0.15m(S.N. 0.1m)	
Angle of View	17.3×13.5°	
Filter Size	67mm P0.75	
Resolution	12μm	
TV Distortion	near −1.24% far −0.48%	near −0.22% far 0.10%

2408



2409



■Φ29mm Fixed Focal Lenses compatible with Megapixel Camera

Model	Image size	Mount	Focal Length	F No.	Angle of View	M.O.D	Size(mm)	Weight(g)
HHF6M	1/2"	C	6mm	F1.4-16	57.4×44.3°	0.2m	ϕ32×37.5	66
EHF16M	1/1.8"	C	16mm	F1.4-16	24.0×18.0°	0.3m	ϕ29×31.5	45
JHF25M	2/3"	C	25mm	F1.4-22	20.1×15.1°	0.25m	ϕ29×31.5	45
JHF35M	2/3"	C	35mm	F2.0-22	14.3×10.5°	0.25m	ϕ29×38.5	55
JHF50M	2/3"	C	50mm	F2.8-22	10.0×7.5°	0.5m	ϕ29×38.5	55

■Standard Lens for FA use VGA (642x512 pixel)

Model	Image size	Mount	Focal Length	F No.	Angle of View	M.O.D	Size(mm)	Weight(g)
HF3.5M-2	1/2"	C	3.5mm	F1.6-Close	84.9×68.9°	0.1m	ϕ45×37.5	90
HF6M-2	1/2"	C	6mm	F1.4-Close	56.1×43.6°	0.2m	ϕ32×37	70
H35 1.2	1/2"	C	35mm	F1.2-Close	10.4×7.8°	1.0m	ϕ42×42.5	145
JF8M-2	2/3"	C	8mm	F1.4-Close	62.0×46.8°	0.2m	ϕ28×34.5	60
JF16M-2	2/3"	C	16mm	F1.4-Close	30.7×23.3°	0.4m	ϕ29.3×30	45
G75 1.8	1"	C	75mm	F1.8-Close	9.7×7.3°	0.8m	ϕ48×58.5	245

The model in red is discontinued already. Available while stocks last.

Varifocal Lens

HERCULES(FullHD)

Image size		1/3"	1/2.7"
Mount		CS	CS
Focal Length		2.8~12mm	8~50mm
F Number		F1.4	F1.6
M.O.D		0.3m	※0.3~0.9m
Angle of View		97.9×72.525.0×18.8°	38.7×28.6~6.4×4.8°
Model	Manual Iris	—	—
	DC Auto iris	TAV2812DCIR-MP	TAV850DCIR-MP
	P Iris	TAV2812PIR-MP	TAV850PIR-MP

※ 0.3m at wide end

REGRUS(HD) ALTAIR(HD) DRACO

Image size		1/3"	1/2"	1/3"	1/3"
Mount		CS	C	CS	CS
Focal Length		3.3~8mm	8~80mm	5~55mm	5~55mm
F Number		F1.4	F1.6	F1.4	F1.4
M.O.D		0.5m	※0.1~0.7m	※0.3~0.8m	※0.3~0.8m
Angle of View		87.9×64.5~35.0×26.2°	46.6×34.3~4.7×3.6°	53.1×40.0~4.8×3.6°	53.1×40.0~4.8×3.6°
Model	Manual Iris	—	HD880MIR	TV555MIR	TV555M
	DC Auto iris	HD338DCIR	HV880DCIR-MP	TV555DCIR	TV555DC
	P Iris	—	—	—	—

※ 0.1m at wide end ※ 0.3m at wide end ※ 0.3m at wide end

Vari-Zoom Lens

Image size		1/2"
Mount		C
Focal Length		8.5~85mm
F Number		F1.6
M.O.D		1.2m
Angle of View		41.3×31.5~4.3×3.2°
Model	Manual Iris	HZ8585M
	DC Auto iris	HZ8585DC
	P Iris	—

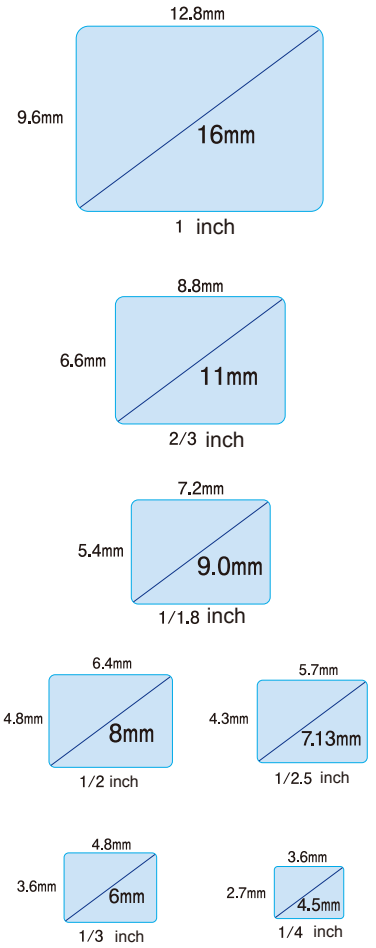
Pin-Hole Lens

Image size		1/3"	1/2"
Mount		CS	C
Focal Length		3.8mm	
F Number		F2.4	
M.O.D		1.0m	
Angle of View		64.6×50.7°	80.2×64.6°
Model	Manual Iris	L38PCS	H38P
	DC Auto iris	L38PGCS	—
	P Iris	—	—

SPACECOM Lens Technology

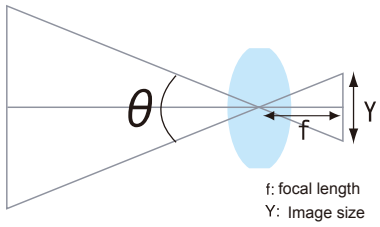
Image Size

Size of lens image. Please confirm of image sensor of camera.



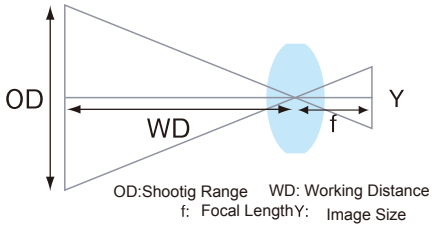
Angle of View

Angle of view represents a shooting range indegrees. The longer the focal length is , the narrower the angle of view is.The shorter the focal length is, the wider an angle of view is.



$$\theta = 2\tan^{-1}(Y/2f)$$

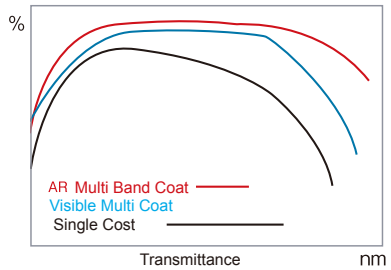
Shooting range/ Focal length calculation



$$OD = Y^*(WD/f)$$
$$f = Y^*(WD/OD)$$

Coating

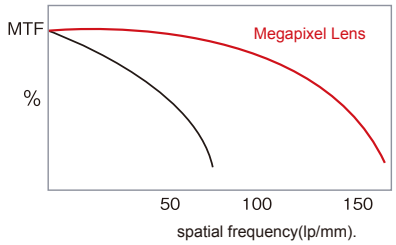
When light rays enter the lens, 4-10% of the light is reflected. The lens composed of more than one lens can experience large losses in light transmission. Further-more, reflected light can result in complex internal reflections from other lenses before reachingthe image. Leading to noise e.g. flare and ghosting, severely degrading image quality. Thus, it is necessary to apply an anti-reflective coating to the lens surface to prevent the generation of reflected light.



Spacecom Lenses applies an AR Wide band Coating to many of its products. The coating realize high transmis-sion over wide range from visible to infrared areas.

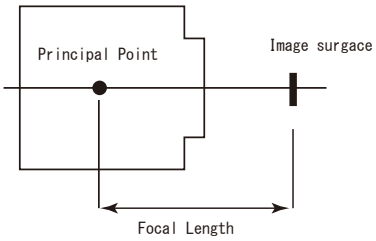
MTF

This value indicates how well resolved the black and white line pairs are and is given by contrast (%) as function of spatial frequency(lp/mm).



Focal Length

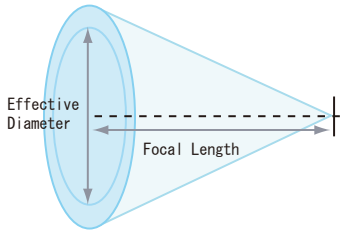
Focal length is distance from the principal point to the image plane. The larger this value is the more telephoto and the smaller it is, the wider the angle is. The focal length is linked to angle of view.



F No.

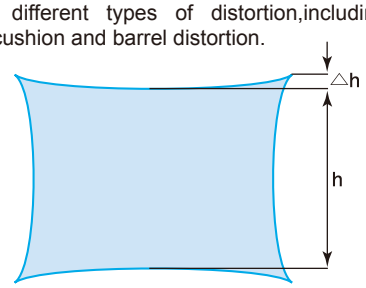
The F number represents the amount of light passes through a lens. The F-number is smaller, the quantity of light passes through the lens increases

F No.= Focal Length / Effective Diameter



Distortion

When the plane of the image formed is displaced from the ideal image point, and the similarity relation between object/image positions breaks down, the image becomes warped. This is known as distortion. There are different types of distortion,including pincushion and barrel distortion.



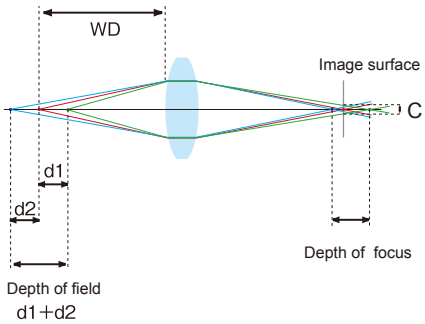
$$TV.\ Dist(\%) = \triangle h/h * 100$$

Resolution

The resolution is an indication of the image forming ability of a lens, and is given in terms of how any lines can be resolved in 1mm. The resolution is written asX lp/mm, counting one white and one black line as 1 line pair. It is important that a certain level of resolution is maintained all the way from the center of an image to its edge.

Dept of Field

Depth of field is the distance between the nearest and the farthest objects that are in acceptably focus. " Acceptably focus" is defined using a property called the cvircle of confusion. The depth of field is determined by focal length, working distance, acceptable circle of confusion size and aperture.



Working Distance	:	WD
Focal Length	:	f
F No.	:	F
Acceptable circle of confusion	:	C

$$d1 = (C \times F \times WD^2)/(f^2 + C \times F \times WD)$$

$$d2 = (C \times F \times WD^2)/(f^2 - C \times F \times WD)$$
$$= d1 + d2$$

SPACE
With Valuable Lenses

■ For safety use

- Please read the instruction manual before use and use product correctly.
- Please use product with the correct power supply and voltage.

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*Specification is subject to change without notice. 100.jun.2021_cb