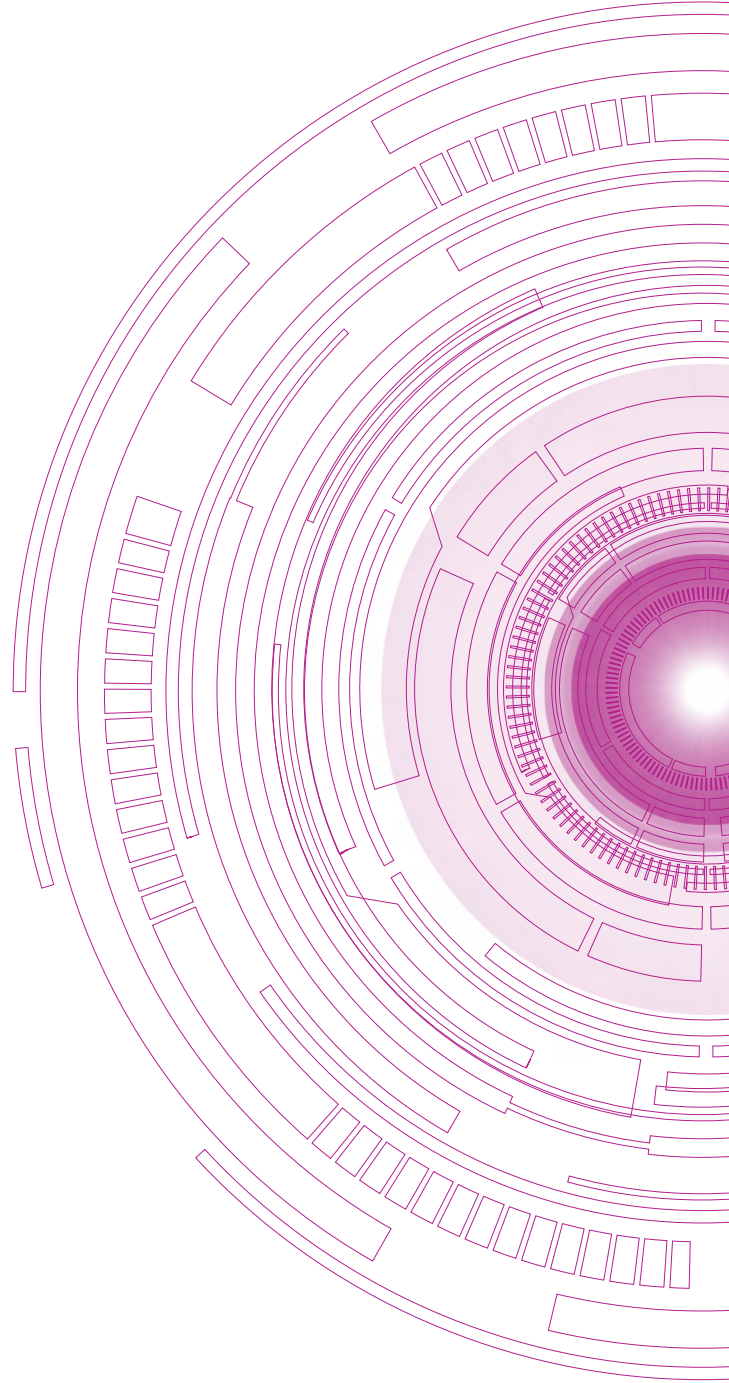


# Industrial Imaging Lens

PRODUCT GUIDE  
2024-2025





## BRAND PROMISE

As a Catalyst of Optics, Computar brings together diverse ideas and cutting-edge technology from multiple fields, developing innovations beyond any country's or industry's limitations.

## Brand Story

As a Pioneer of Optics, Computar has set the standard. We excel by uniting our comprehensive production abilities, knowledge, interdisciplinary perspectives, and diverse specialties. We do this by discovering our evolving global society's constant and unexplored demands.

Our corporate origins date back one hundred years, with the last forty in optics. We have developed a sustained ability to understand imaging applications and to engineer unique and innovative products. This ingenuity is the backbone of Computar's growth.

Computar has set the pace for developing intelligent, value-added, high-performance industrial lenses with a solid foundation based on Japanese engineering. We have established enduring business partnerships and customer relationships in optics globally.

Computar's pioneering innovations result from the advancement of optics in analog and digital, security, and machine vision. Our hands-on knowledge, multiple collaborations, insight, and creativity make us who we are today.

Our optical science expertise in the advanced fields of 5G, IoT, and robotics enables us to respond to our customers' evolving demands globally. In addition, we actively promote technical liaisons beyond the borders of individual industries to deliver innovations based on a core of optical knowledge.

### LensConnect Series

- New motorized lenses, enable power supply & control through USB (Available for I2C ver.)
- Floating focus design achieves ultra-high resolution from near to far
- Stepper motors realizes precise focus control and high repeatability
- Easy-to-install by free control software
- 1" 20MP, Suitable for large format sensor (IMX183)



### MPX Series

- Anti-vibration and shock resistance design to adapt to harsh inspection environments
- High-resolution lens 2 $\mu$ m or less pixel size supported
- Floating mechanism enables high performance from close-up to long distance
- Precise focus adjustment with a focus rotation angle 3 times greater than usual lenses
- Adoption of click-type iris mechanism
- Wide lineup of f=8mm/12mm/16mm/25mm/35mm/50mm/75mm



### MPT Series

- Dedicated design for 1.2"~1.4" new large format sensors (IMX530/IMX540/IMX492)
- Floating design achieves ultra-high resolution from near to far
- World's smallest size for large format megapixel sensors for industrial use
- Highly versatile C mount
- Wide range of lineup, 12mm/16mm/25mm/35mm/50mm



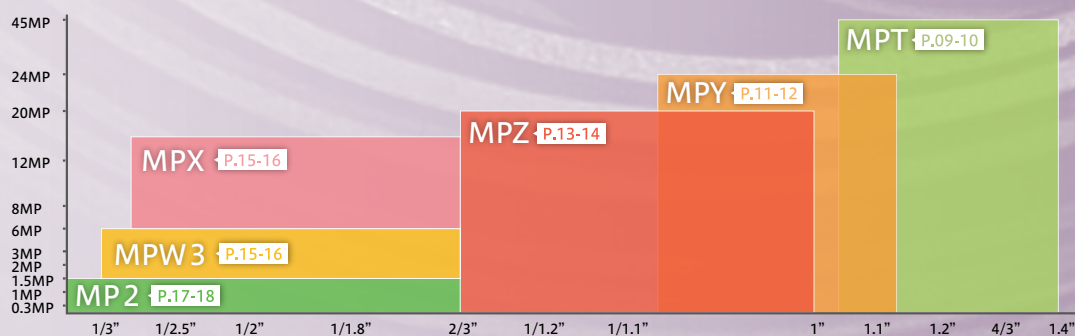
### ViSWIR Series

- Dedicated design for next generation Visible+SWIR image sensor (IMX990/IMX991)
- Hyper Apochromat design, Fully corrected focus-shift between 400-1700nm
- Floating-focus mechanism realizes axial chromatic aberration and chromatic aberration of magnification at all WD and wavelength
- High transmittance at whole wavelength of 400nm-1700nm by adopting hyper wideband AR coat
- Minimize light scattering and clear images by adopting NIR absorbing coat



# INDEX

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Lens **Connect** VL-MPZ Series
- NEW** 05-06 | REMOTE CONTROL MACHINE VISION LENS  
Lens **Connect** DL-MPY Series
- NEW** 07-08 | REMOTE CONTROL MACHINE VISION LENS  
Lens **Connect** Vari focal Series
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- 28-30 | **2/3"** MEGAPIXEL TELECENTRIC LENS (TEC-M Series)
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**NEW** Lens  **connect**

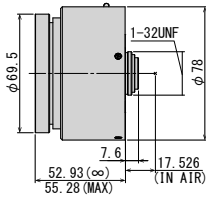
## VL-MPZ Series

1" 20 MEGA PIXEL FIXED FOCAL REMOTE CONTROL LENS

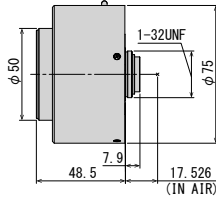


Model No.	Format	Focal Length	F No.	Working Distance	Weight
VL0826U-MPZ	1"	8mm	F2.6	0.1m-Inf.	334g
VL1226U-MPZ		12mm	F2.6	0.1m-Inf.	273g
VL1624U-MPZ		16mm	F2.4	0.1m-Inf.	280g
VL2520U-MPZ		25mm	F2.0	0.15m-Inf.	257g
VL3522U-MPZ		35mm	F2.2	0.2m-Inf.	313g
VL5024U-MPZ		50mm	F2.4	0.2m-Inf.	326g
VL7531U-MPZ		75mm	F3.1	0.25m-Inf.	415g

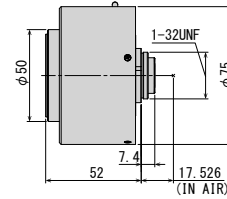
**VL0826U-MPZ**



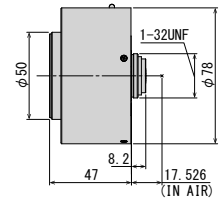
**VL1226U-MPZ**



**VL1624U-MPZ**



**VL2520U-MPZ**



Focal Length	8mm	12mm	16mm	25mm
Max. Aperture Ratio	1:2.6	1:2.6	1:2.4	1:2.0
Max. Image Format	12.8mm × 9.6mm (φ 16mm)	12.8mm × 9.6mm (φ 16mm)	12.8mm × 9.6mm (φ 16mm)	12.8mm × 9.6mm (φ 16mm)
Operation Range	Iris	F2.6 - F16.0	F2.6 - F16.0	F2.4 - F16.0
	Focus	0.1m - Inf.	0.1m - Inf.	0.1m - Inf.
Control	Iris	Motorized	Motorized	Motorized
	Focus	Motorized	Motorized	Motorized
Angle of View	D	88.8°	68.6°	58.2°
	H	1" 76.9°	2/3" 57.1°	1/1.8" 47.8°
	V	61.5°	44.2°	36.6°
Operating Temperature	-10° C ~ +50° C			-10° C ~ +50° C

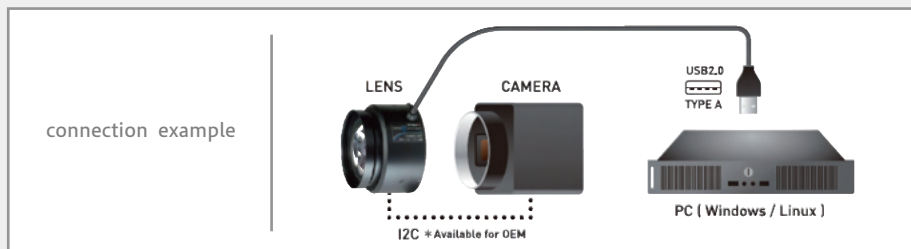
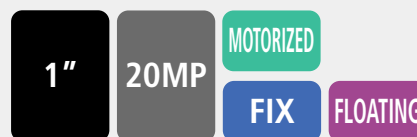
Optical Distortion	1" -0.8%	2/3" -2.1%	1/1.8" -1.9%	1" 0.0%	2/3" -1.1%	1/1.8" -1.0%	1" 0.0%	2/3" -0.4%	1/1.8" -0.4%	1" 0.0%	2/3" 0.0%	1/1.8" 0.0%
Back Focal Length	10.6mm (In Air)			10.6mm (In Air)			10.7mm (In Air)			9.1mm (In Air)		
Flange Back Length	17.526mm (In Air)			17.526mm (In Air)			17.526mm (In Air)			17.526mm (In Air)		
Mount	C-Mount			C-Mount			C-Mount			C-Mount		
Filter Size	M82 P=0.75mm (With ZM0810)*			M46 P=0.75mm			M43 P=0.75mm			M46 P=0.75mm		
Weight	334g			273g			280g			257g		

Control Interface	USB2.0			USB2.0			USB2.0			USB2.0		
Power mode	Bus power (500mA)			Bus power (500mA)			Bus power (500mA)			Bus power (500mA)		
Connector	USB TypeA			USB TypeA			USB TypeA			USB TypeA		

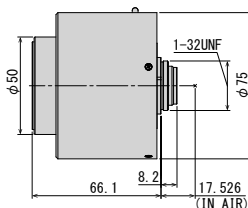
\*When using filters, lens requires VM0810 (sold separately). For more detail please refer to P.36

# 1" 20 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

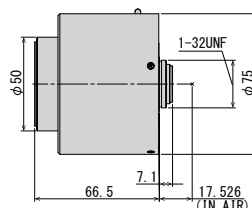
- Motorized FA lens that can be operated easily with a single USB cable
- Focus and Iris can be controlled via USB
- Ultra-high resolution lens, suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest optical design, which has a much higher relative illuminance compared to conventional models, despite having a large format 1" sensor (Ø16mm)



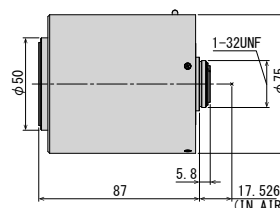
VL3522U-MPZ



VL5024U-MPZ



VL7531U-MPZ



Focal Length	35mm						50mm						75mm						
Max. Aperture Ratio	1:2.2						1:2.4						1:3.1						
Max. Image Format	12.8mm × 9.6mm(φ 16mm)						12.8mm × 9.6mm(φ 16mm)						12.8mm × 9.6mm(φ 16mm)						
Operation Range	Iris	F2.2 - F16.0					F2.4 - F16.0					F3.1 - F16.0							
	Focus	0.2m - Inf.					0.2m - Inf.					0.25m - Inf.							
Control	Iris	Motorized					Motorized					Motorized							
	Focus	Motorized					Motorized					Motorized							
Angle of View	D	1" 25.8°		2/3" 17.9°		1/1.8" 14.7°		1" 18.2°		2/3" 12.6°		1/1.8" 10.3°		1" 12.2°		2/3" 8.4°		1/1.8" 6.9°	
	H	1" 20.8°		2/3" 14.4°		1/1.8" 11.8°		1" 14.6°		2/3" 10.1°		1/1.8" 8.3°		1" 9.8°		2/3" 6.7°		1/1.8" 5.5°	
	V	1" 15.7°		2/3" 10.8°		1/1.8" 8.9°		1" 11.0°		2/3" 7.6°		1/1.8" 6.2°		1" 7.3°		2/3" 5.0°		1/1.8" 4.1°	
Operating Temperature	-10° C ~ +50° C						-10° C ~ +50° C						-10° C ~ +50° C						

Optical Distortion	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%
Back Focal Length	9.7mm (In Air)						11.1mm (In Air)						12.0mm (In Air)					
Flange Back Length	17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M43 P=0.75mm						M43 P=0.75mm						M43 P=0.75mm					
Weight	313g						326g						415g					

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power (500mA)						Bus power (500mA)						Bus power (500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

**NEW** Lens  **connect**

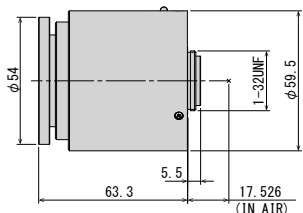
## DL-MPY Series

1/1.1" 12 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

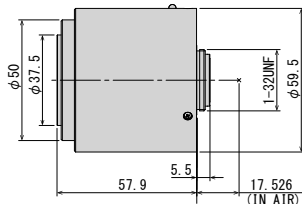


Model No.	Format	Focal Length	F No.	Working Distance	Weight
DL0828UC-MPY	1/1.1"	8mm	F2.8	0.1m-Inf.	178g
DL1224UC-MPY		12mm	F2.4	0.1m-Inf.	163g
DL1623UC-MPY		16mm	F2.3	0.11m-Inf.	173g
DL2523UC-MPY		25mm	F2.3	0.12m-Inf.	166g
DL3525UC-MPY		35mm	F2.5	0.16m-Inf.	160g
DL5028UC-MPY		50mm	F2.8	0.2m-Inf.	173g

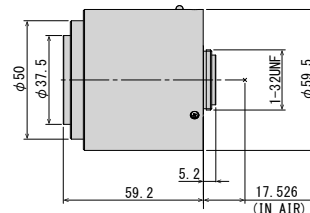
**DL0828UC-MPY**



**DL1224UC-MPY**



**DL1623UC-MPY**



Focal Length		8mm					12mm					16mm							
Max. Image Format		φ 14.4mm					φ 14.4mm					φ 14.4mm							
Operation Range	Iris	F2.8 - F16.0					F2.4 - F16.0					F2.3 - F16.0							
	Focus	0.1m - Inf.					0.1m - Inf.					0.11m - Inf.							
Control	Iris	Motorized					Motorized					Motorized							
	Focus	Motorized					Motorized					Motorized							
Angle of View	D	80.4°		68.3°		58.1°		60.2°		49.7°		41.5°		47.0°		38.2°		31.6°	
	H	69.4°		57.0°		47.8°		50.5°		40.6°		33.6°		38.9°		31.0°		25.5°	
	V	53.8°		44.1°		36.6°		38.1°		31.0°		25.5°		29.0°		23.4°		19.2°	
Operating Temperature		-20°C ~ +60°C					-20°C ~ +60°C					-20°C ~ +60°C							

Optical Distortion	1/1.1"	0.0%	2/3"	-1.6%	1/1.8"	-1.7%	1/1.1"	-0.1%	2/3"	-1.0%	1/1.8"	-1.0%	1/1.1"	0.0%	2/3"	-0.7%	1/1.8"	-0.7%
Back Focal Length	13.0mm (In Air)						14.6mm (In Air)						14.3mm (In Air)					
Flange Back Length	17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M52 P=0.75mm						M35.5 P=0.5mm						M35.5 P=0.5mm					
Weight	178g						163g						173g					

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power (500mA)						Bus power (500mA)						Bus power (500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

# 1/1.1" 12 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

- Motorized FA lens that can be operated easily with a single USB cable
- Focus can be controlled via USB
- Fast speed focus control
- Ultra-high-resolution lens, suitable for 1/1.1" 12 megapixel sensor
- All models are designed for minimum distortion, which benefits various machine vision applications

1/1.1"

12MP

MOTORIZED

FIX

FLOATING



Remote adjustment in out-of-reach places

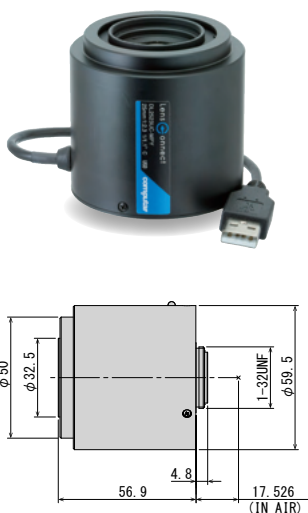


Make precise adjustments to lenses after installation

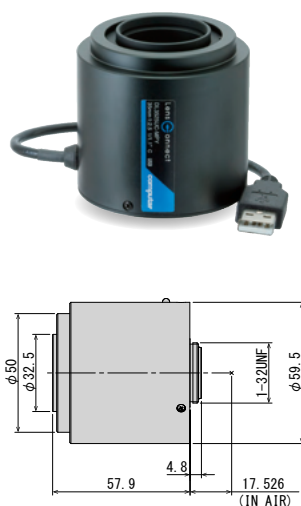


Easily change the focus point for workpieces at different heights

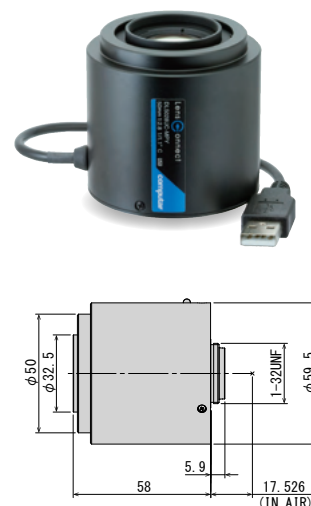
## DL2523UC-MPY



## DL3525UC-MPY



## DL5028UC-MPY



Focal Length	25mm					35mm					50mm										
Max. Image Format	φ 14.4mm					φ 14.4mm					φ 14.4mm										
Operation Range	Iris	F2.3 - F16.0				Iris	F2.5 - F16.0				Iris	F2.8 - F16.0									
	Focus	0.12m - Inf.				Focus	0.16m - Inf.				Focus	0.2m - Inf.									
Control	Iris	Motorized				Iris	Motorized				Iris	Motorized									
	Focus	Motorized				Focus	Motorized				Focus	Motorized									
Angle of View	D	31.0°		24.8°		20.4°		D	22.5°		17.9°		14.7°		D	16.3°		12.9°		10.6°	
	H	1/1.1" 25.3°		2/3" 20.0°		1/1.8" 16.4°		H	1/1.1" 18.2°		2/3" 14.3°		1/1.8" 11.7°		H	1/1.1" 13.2°		2/3" 10.4°		1/1.8" 8.5°	
	V	18.7°		15.1°		12.3°		V	13.4°		10.8°		8.8°		V	9.7°		7.8°		6.4°	
Operating Temperature	-20°C ~ +60°C					-20°C ~ +60°C					-20°C ~ +60°C										

Optical Distortion	1/1.1"	0.1%	2/3"	-0.1%	1/1.8"	-0.1%	1/1.1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1/1.1"	0.0%	2/3"	0.0%	1/1.8"	0.0%
Back Focal Length	14.3mm (In Air)						14.3mm (In Air)						14.2mm (In Air)					
Flange Back Length	17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M30.5 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm					
Weight	166g						160g						173g					

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power (500mA)						Bus power (500mA)						Bus power (500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

**NEW** Lens  **connect**

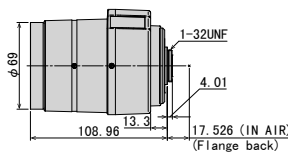
## Vari focal Series

HIGH-RESOLUTION VARI-FOCAL REMOTE CONTROL LENS

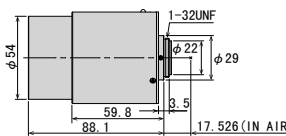


Model No.	Format	Focal Length	F No.	Resolution	Working Distance	Weight
VL6Z1626UC-MPYIR	1.1"	16-96mm	F2.6	12MP	3m-Inf.	330g
VL2Z2533UM6C-MPWIR	1"	25-50mm	F3.3	9MP	WIDE:1m-Inf TELE:3m-Inf	269g
ML3Z1226UC-MPW	2/3"	12-36mm	F2.6	9MP	WIDE: 0.1m-Inf TELE: 0.35m-Inf	247g
EL3Z0416UCS-MPWIR	1/1.8"	4-10mm	F1.6	5MP	0.2m-Inf.	161g
EL6Z0915UCS-MPWIR	1/1.8"	9-50mm	F1.5	5MP	3m-Inf.	299g

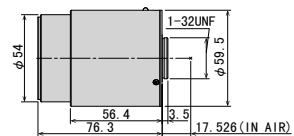
**VL6Z1626UC-MPYIR**



**VL2Z2533UM6C-MPWIR**



**ML3Z1226UC-MPW**



Focal Length	16mm - 96mm			25mm - 50mm			12mm - 36mm												
Max. Image Format	14.2mm × 10.4mm ( φ 17.6mm)			φ 16.0mm			φ 11.8mm												
F-Number	WIDE	F2.6 - F16C			F3.3 - F16C			F2.6 - F16C											
	TELE	F2.7 - F16C			F3.4 - F16C			F2.6 - F16C											
Control	Iris	Motorized			Motorized			Motorized											
	Focus	Motorized			Motorized			Motorized											
	Zoom	Motorized			Motorized			Motorized											
Angle of View	D	1.1"	58.9° ~ 10.4°	1"	54.1° ~ 9.5°	2/3"	37.8° ~ 6.7°	1"	35.9° ~ 18.3°	2/3"	24.7° ~ 12.7°	1/1.8"	20.3° ~ 10.4°	2/3"	50.4° ~ 16.9°	1/1.8"	42.0° ~ 14.0°	1/3"	28.4° ~ 9.5°
	H	1.1"	48.1° ~ 8.5°	1"	48.1° ~ 8.5°	2/3"	30.3° ~ 5.4°	1"	28.8° ~ 14.7°	2/3"	19.8° ~ 10.2°	1/1.8"	16.2° ~ 8.3°	2/3"	41.1° ~ 13.7°	1/1.8"	33.9° ~ 11.3°	1/3"	22.8° ~ 7.6°
	V	1.1"	35.6° ~ 6.3°	1"	25.7° ~ 4.5°	2/3"	22.8° ~ 4.0°	1"	21.6° ~ 11.1°	2/3"	14.9° ~ 7.7°	1/1.8"	12.2° ~ 6.3°	2/3"	31.2° ~ 10.4°	1/1.8"	25.6° ~ 8.5°	1/3"	17.1° ~ 5.7°
Min. Objective Distance	3m from front of lens			WIDE: 1m - Inf TELE: 3m - Inf			WIDE: 0.1m - Inf TELE: 0.35m - Inf												
Operating Temperature	-20°C - +60°C			-20°C - +60°C			-20°C - +60°C												

Back Focal Length	WIDE	13.9mm (In Air)			15.0 mm (in Air)			16.4 mm (In Air)		
	TELE	13.9mm (In Air)			16.2 mm (in Air)			15.9 mm (In Air)		
Flange Back Length	17.526mm (In Air)			17.526mm (In Air)			17.526mm (In Air)			
Mount	C-Mount			C-Mount			C-Mount			
Filter Size	M67 P=0.75mm			M52 P=0.75mm			M49 P=0.75mm			
Tripod Screw	1/4-20UNC									
Weight	330g			269g			247g			

Control Interface	USB2.0			USB2.0			USB2.0		
Power mode	Bus power (500mA)			Bus power(500mA)			Bus power(500mA)		
Connector	USB TypeA			USB TypeA			USB TypeA		

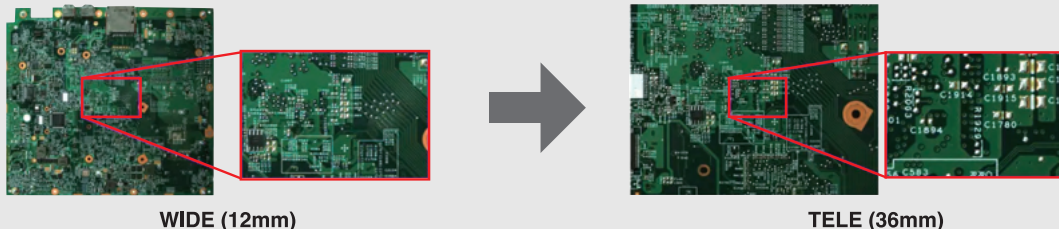


# HIGH-RESOLUTION VARI-FOCAL REMOTE CONTROL LENS

- Motorized lens that can be operated easily with a single USB cable
- Focus can be controlled via USB
- Fast speed focus control
- Ultra-high-resolution lens, suitable for 2/3" · 1/1.8" · 1.1"



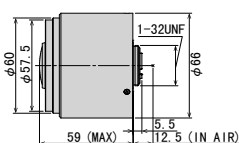
## ML3Z1226UC-MPW



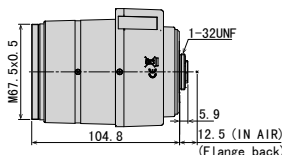
WIDE (12mm)

TELE (36mm)

## EL3Z0416UCS-MPWIR



## EL6Z0915UCS-MPWIR



Focal Length	4.0mm - 10mm				9mm - 50mm				
Max. Image Format	7.1mm × 5.4mm (φ 8.9mm)				7.1mm × 5.4mm (φ 8.9mm)				
F-Number	WIDE	F1.6 - F16C				F1.5 - F16C			
	TELE	F2.7 - F16C				F1.6 - F16C			
Control	Iris	Motorized				Motorized			
	Focus	Motorized				Motorized			
	Zoom	Motorized				Motorized			
Angle of View	D	138.1° ~ 52.9°	86.5° ~ 35.5°	120.3° ~ 47.5°	52.5° ~ 10.2°	35.9° ~ 7.0°	47.4° ~ 9.2°		
	H	104.8° ~ 42.2°	68.1° ~ 28.4°	92.9° ~ 37.9°	42.3° ~ 8.2°	28.8° ~ 5.7°	38.2° ~ 7.5°		
	V	76.3° ~ 31.6°	50.5° ~ 21.3°	68.1° ~ 28.4°	32.4° ~ 6.3°	21.7° ~ 4.3°	28.8° ~ 5.7°		
Min. Objective Distance	0.2m from front of lens				3m from front of lens				
Operating Temperature	-20°C - +60°C				-20°C - +60°C				

Back Focal Length	WIDE	8.5mm (In Air)	9.2mm (In Air)
	TELE	8.5mm (In Air)	9.2mm (In Air)
Flange Back Length	12.5mm (In Air)		12.5mm (In Air)
Mount	CS-Mount		CS-Mount
Filter Size	M55 P=0.75mm (With VM0418)*		M67 P=0.75mm (With VM0918)*
Tripod Screw			1/4-20UNC
Weight	161g		299g

Control Interface	USB2.0	
Power mode	Bus power (500mA)	
Connector	USB TypeA	

\*Adapting for between 6mm and 10mm.

\*When using filters, lens requires VM0418 (sold separately).  
For more detail please refer to P.36

\*When using filters, lens requires VM0418 (sold separately).  
For more detail please refer to P.36

**NEW**

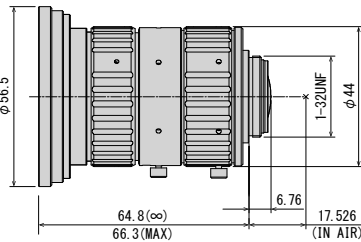
## MPT Series

1.4" 45 MEGAPIXEL FIXED FOCAL LENS

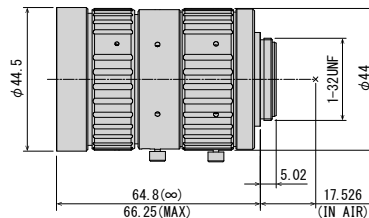


Model No.	Format	Focal Length	F No.	Working Distance	Weight
F1228-MPT	1.4"	12mm	F2.8	0.15m - Inf.	205g
F1628-MPT		16mm	F2.8	0.15m - Inf.	187g
F2524-MPT		25mm	F2.4	0.15m - Inf.	152g
F3526-MPT		35mm	F2.6	0.15m - Inf.	122g
F5026-MPT		50mm	F2.6	0.25m - Inf.	151g

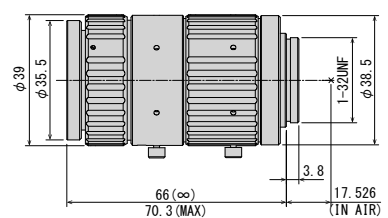
**F1228-MPT**



**F1628-MPT**



**F2524-MPT**



Focal Length	12mm					16mm					25mm								
Max. Aperture Ratio	1:2.8					1:2.8					1:2.4								
Image Circle Diameter	19.08mm × 13.03mm (φ 23.1mm)					19.08mm × 13.03mm (φ 23.1mm)					19.08mm × 13.03mm (φ 23.1mm)								
Operation Range	Iris	F2.8 - F16.0				Iris	F2.8 - F16.0				Iris	F2.4 - F16.0							
	Focus	0.15m - Inf.				Focus	0.15m - Inf.				Focus	0.15m - Inf.							
Control	Iris	Manual				Iris	Manual				Iris	Manual							
	Focus	Manual				Focus	Manual				Focus	Manual							
Angle of View	D	1.4"	86.1°	1.2"	76.6°	1.1"	71.6°	1.4"	70.1°	1.2"	61.0°	1.1"	56.5°	1.4"	49.6°	1.2"	42.4°	1.1"	39.0°
	H	1.4"	76.0°	1.2"	61.9°	1.1"	60.4°	1.4"	60.4°	1.2"	48.1°	1.1"	46.9°	1.4"	41.9°	1.2"	32.7°	1.1"	31.8°
	V	1.4"	56.2°	1.2"	54.8°	1.1"	46.1°	1.4"	43.4°	1.2"	42.2°	1.1"	35.2°	1.4"	29.3°	1.2"	28.5°	1.1"	23.6°
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C								
Optical Distortion	1.4"	0.13	1.2"	-0.98	1.1"	-1.23	1.4"	0.06	1.2"	-0.43	1.1"	-0.54	1.4"	0.06	1.2"	-0.34	1.1"	-0.39	
Back Focal Length	10.8mm					12.7mm					18.1mm								
Flange Back Length	17.526mm					17.526mm					17.526mm								
Mount	C-Mount					C-Mount					C-Mount								
Filter Size	M72 P=0.75mm*					M52 P=0.75mm*					M34 P=0.5mm								
Dimensions	φ56.5mm × 64.8mm					φ44.5mm × 64.8mm					φ39mm × 66mm								
	φ75mm × 66.1mm (with TM-1243)					φ54mm × 66.4mm (with TM-1643)													
Weight	205g					187g					152g								

\*When using filters, lens requires TM-1243(for 12mm)/TM-1643(for 16mm) (sold separately.) For more detail, please refer to P.36.

- Ultra-high-resolution lens, suitable for 1.4" 45-megapixel sensor
- Enlarged image circle up to Ø23.1mm (1.4" sensor)
- The most compact, lightweight lens design on the machine vision market
- The newest optical design achieves much higher relative illuminance compared to conventional models despite a large format 1.4" sensor (Ø23.1mm)
- The floating design achieves an ultra-high-resolution from near focus to infinity
- Vibration resistance up to 5G

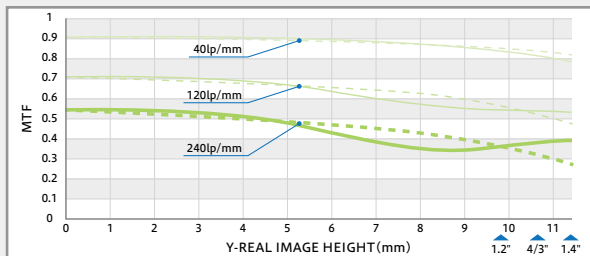
1.4"

45MP

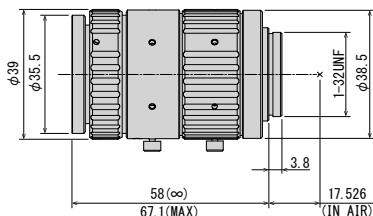
MANUAL

FIX

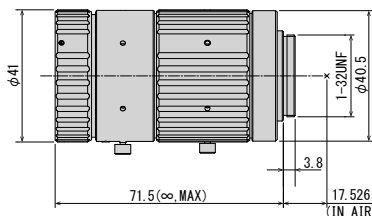
FLOATING



### F3526-MPT



### F5026-MPT



Focal Length	35mm						50mm						
Max. Aperture Ratio	1:2.6						1:2.6						
Image Circle Diameter	19.08mm × 13.03mm (φ 23.1mm)						19.08mm × 13.03mm (φ 23.1mm)						
Operation Range	Iris	F2.6 - F16.0						F2.6 - F16.0					
	Focus	0.15m - Inf.						0.25m - Inf.					
Control	Iris	Manual						Manual					
	Focus	Manual						Manual					
Angle of View	D	1.4"	36.6°	1.2"	30.9°	1.1"	28.3°	1.4"	26.1°	1.2"	21.9°	1.1"	20.0°
	H	1.4"	30.6°	1.2"	23.6°	1.1"	23.0°	1.4"	21.7°	1.2"	16.7°	1.1"	16.2°
	V	1.4"	21.1°	1.2"	20.5°	1.1"	16.9°	1.4"	14.9°	1.2"	14.4°	1.1"	11.9°
Operating Temperature	-10°C ~ +50°C						-10°C ~ +50°C						
Optical Distortion	1.4"	0.01	1.2"	-0.05	1.1"	-0.06	1.4"	-0.02	1.2"	-0.03	1.1"	-0.03	
Back Focal Length	23.1mm						14.2mm						
Flange Back Length	17.526mm						17.526mm						
Mount	C-Mount						C-Mount						
Filter Size	M34 P=0.5mm						M30.5 P=0.5mm						
Dimensions	φ39mm × 58mm						φ41mm × 71.5mm						
Weight	122g						151g						

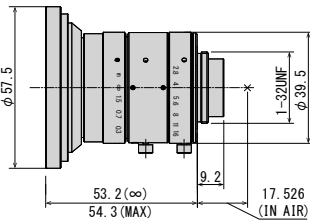


# MPY Series

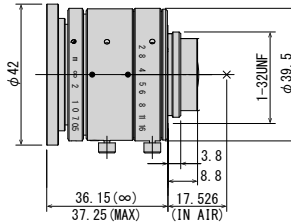
1.1" 24 MEGAPIXEL FIXED FOCAL LENS

Model No.	Format	Focal Length	F No.	Working Distance	Weight
V0828-MPY2	1.1"	8mm	F2.8-F16	0.2m-Inf.	157g
V1228-MPY2		12mm		0.3m-Inf.	97g
V1628-MPY2		16mm		0.3m-Inf.	89g
V2528-MPY		25mm		0.3m-Inf.	78g
V3528-MPY		35mm		0.3m-Inf.	103g
V5028-MPY		50mm		0.5m-Inf.	107g

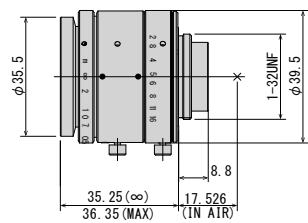
V0828-MPY2



V1228-MPY2



V1628-MPY2

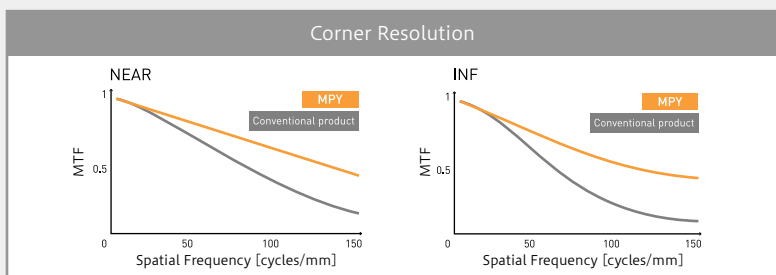


Focal Length	8mm					12mm					16mm							
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8							
Max. Image Format	14.2mm × 10.4mm (φ 17.6mm)					14.2mm × 10.4mm (φ 17.6mm)					14.2mm × 10.4mm (φ 17.6mm)							
Operation Range	Iris F2.8 - F16.0					Iris F2.8 - F16.0					Iris F2.8 - F16.0							
	Focus 0.2m - Inf.					Focus 0.3m - Inf.					Focus 0.3m - Inf.							
Control	Iris Manual					Iris Manual					Iris Manual							
	Focus Manual					Focus Manual					Focus Manual							
Angle of View	D	93.9°	89.3°	69.0°		71.1°	66.4°	48.6°		57.9°	53.4°	38.2°						
	H	83.0°	77.3°	57.3°	1.1"	60.5°	55.5°	39.6°	1.1"	48.2°	43.9°	30.9°	1.1"					
	V	66.0°	61.7°	44.2°	2/3"	46.2°	42.9°	30.1°	2/3"	36.2°	33.6°	23.4°	2/3"					
Operating Temperature	-10° C ~ +50° C					-10° C ~ +50° C					-10° C ~ +50° C							
Optical Distortion	1.1"	-0.6%	1"	-1.7%	2/3"	-2.8%	1.1"	-0.5%	1"	-1.0%	2/3"	-1.4%	1.1"	-0.5%	1"	-0.6%	2/3"	-0.6%
Back Focal Length	8.6mm					8.4mm					9.4mm							
Flange Back Length	17.526mm					17.526mm					17.526mm							
Mount	C-Mount					C-Mount					C-Mount							
Filter Size	M72 P=0.75mm (with VM0811)* M67 P=0.75mm (with VM0810)*					M40.5 P=0.5mm					M34.0 P=0.5mm							
Dimensions	φ75mm × 54mm					φ42.0mm × 36.1mm					φ39.5mm × 35.2mm							
Weight	157g					97g					89g							

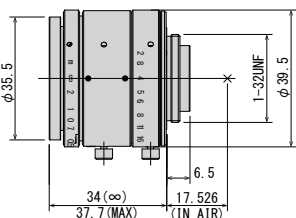
\*There is no filter mount on the top of the lens.  
When using filters, lens requires VM0811 or VM0810 (sold separately).  
For more detail, please refer to P36.

# 1.1" 24 MEGAPIXEL FIXED FOCAL LENS

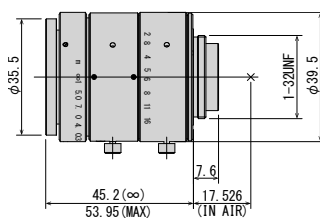
- Ultra-high-resolution lens, suitable for 1.1" 24 megapixel sensor
- Enlarged image circle up to  $\varnothing 17.6\text{mm}$  (1.1" sensor)
- The most compact, lightweight lens design on the machine vision market
- The floating design achieves an ultra-high-resolution from near focus to infinity
- Vibration resistance up to 5G



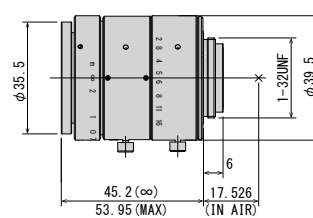
V2528-MPY



V3528-MPY



V5028-MPY



Focal Length	25mm						35mm						50mm						
Max. Aperture Ratio	1:2.8						1:2.8						1:2.8						
Max. Image Format	14.2mm × 10.4mm ( $\varnothing 17.6\text{mm}$ )						14.2mm × 10.4mm ( $\varnothing 17.6\text{mm}$ )						14.2mm × 10.4mm ( $\varnothing 17.6\text{mm}$ )						
Operation Range	Iris	F2.8 - F16.0					Iris	F2.8 - F16.0					Iris	F2.8 - F16.0					
	Focus	0.3m - Inf.					Focus	0.3m - Inf.					Focus	0.5m - Inf.					
Control	Iris	Manual					Iris	Manual					Iris	Manual					
	Focus	Manual					Focus	Manual					Focus	Manual					
Angle of View	D	1.1"	38.7°	1"	35.4°	2/3"	24.8°	1.1"	28.2°	1"	25.8°	2/3"	17.9°	1.1"	20.0°	1"	18.2°	2/3"	12.6°
	H		31.7°		28.7°		20.0°		22.9°		20.7°		14.3°		16.2°		14.6°		10.1°
	V		23.5°		21.7°		15.0°		16.9°		15.6°		10.8°		11.9°		11.0°		7.6°
Operating Temperature	-10°C ~ +50°C						-10°C ~ +50°C						-10°C ~ +50°C						
Optical Distortion	1.1"	0.3%	1"	0.2%	2/3"	0.1%	1.1"	-0.1%	1"	0.0%	2/3"	0.0%	1.1"	0.1%	1"	0.1%	2/3"	0.1%	
Back Focal Length	11.3mm						11.9mm						11.9mm						
Flange Back Length	17.526mm						17.526mm						17.526mm						
Mount	C-Mount						C-Mount						C-Mount						
Filter Size	M34.0 P=0.5mm						M34.0 P=0.5mm						M34.0 P=0.5mm						
Dimensions	$\varnothing 39.5\text{mm} \times 34\text{mm}$						$\varnothing 39.5\text{mm} \times 45.2\text{mm}$						$\varnothing 39.5\text{mm} \times 45.1\text{mm}$						
Weight	78g						103g						107g						

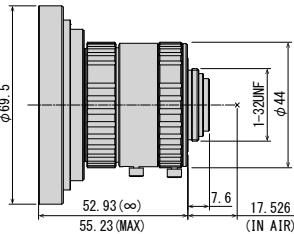


# MPZ Series

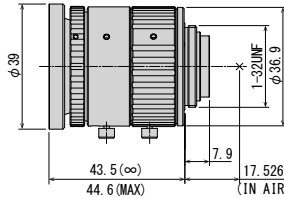
1" 20 MEGA PIXEL FIXED FOCAL LENS

Model No.	Format	Focal Length	F No.	Working Distance	Weight
V0826-MPZ	1"	8mm	F2.6-F16	0.1m-Inf.	203g
V1226-MPZ		12mm	F2.6-F16	0.1m-Inf.	98g
V1624-MPZ		16mm	F2.4-F16	0.1m-Inf.	108g
V2520-MPZ		25mm	F2.0-F16	0.15m-Inf.	73g
V3522-MPZ		35mm	F2.2-F16	0.2m-Inf.	118g
V5024-MPZ		50mm	F2.4-F16	0.2m-Inf.	138g
V7531-MPZ		75mm	F3.1-F16	0.25m-Inf.	176g

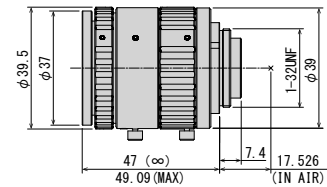
V0826-MPZ



V1226-MPZ



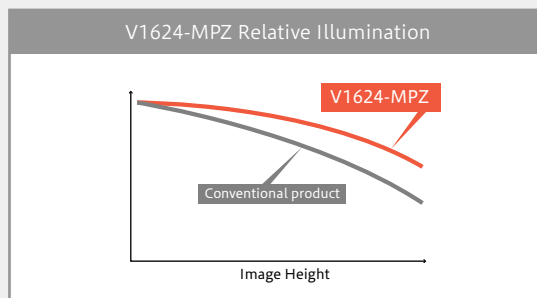
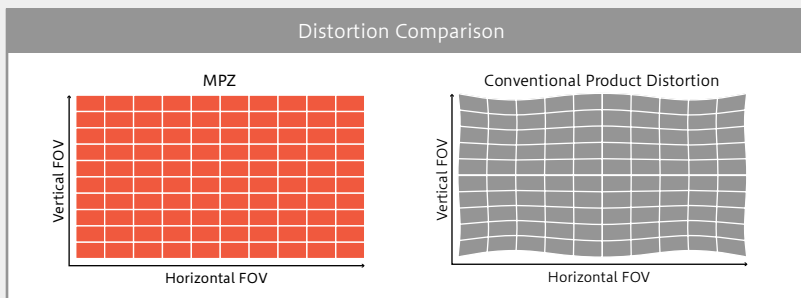
V1624-MPZ



Focal Length	8mm						12mm						16mm					
Max. Aperture Ratio	1:2.6						1:2.6						1:2.4					
Max. Image Format	12.8mm × 9.6mm (φ 16mm)						12.8mm × 9.6mm (φ 16mm)						12.8mm × 9.6mm (φ 16mm)					
Operation Range	Iris F2.6 - F16.0						Iris F2.6 - F16.0						Iris F2.4 - 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	88.8°		68.6°		58.2°	D	67.4°		49.8°		41.5°	D	53.2°		38.1°		31.6°
	H	76.9°	2/3"	57.1°	1/1.8"	47.8°	H	56.7°	2/3"	40.7°	1/1.8"	33.7°	H	43.8°	2/3"	30.9°	1/1.8"	25.5°
	V	61.5°		44.2°		36.6°	V	44.1°		31.0°		25.5°	V	33.6°		23.4°		19.2°
Operating Temperature	-10° C ~ +50° C						-10° C ~ +50° C						-10° C ~ +50° C					
Optical Distortion	1"	-0.8%	2/3"	-2.1%	1/1.8"	-1.9%	1"	0.0%	2/3"	-1.1%	1/1.8"	-1.0%	1"	0.0%	2/3"	-0.4%	1/1.8"	-0.4%
Back Focal Length	10.6mm						10.6mm						10.7mm					
Flange Back Length	17.526mm						17.526mm						17.526mm					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M82 P=0.75mm (with ZM0810)*						M37.5 P=0.5mm						M35.5 P=0.5mm					
Dimensions	φ 69.5mm × 52.93mm						φ 39mm × 43.5mm						φ 39.5mm × 47mm					
	φ 85.0mm × 53.83mm (with ZM0810)																	
Weight	203g						98g						108g					

\*There is no filter mount on the top of the lens.  
When using filters, lens requires ZM0810 (sold separately).  
For more detail, please refer to P.34.

- Ultra-high resolution lens, which is suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest optical design, which has a much higher relative illuminance compared to conventional models, despite having a large format 1" sensor
- Vibration resistance up to 5G



Focal Length	25mm					35mm					50mm					75mm				
Max. Aperture Ratio	1:2.0					1:2.2					1:2.4					1:3.1				
Max. Image Format	12.8mm × 9.6mm (φ 16mm)					12.8mm × 9.6mm (φ 16mm)					12.8mm × 9.6mm (φ 16mm)					12.8mm × 9.6mm (φ 16mm)				
Operation Range	Iris	F2.0 - F16.0				F2.2 - F16.0					F2.4 - F16.0					F3.1 - F16.0				
	Focus	0.15m - Inf.				0.2m - Inf.					0.2m - Inf.					0.25m - Inf.				
Control	Iris	Manual				Manual					Manual					Manual				
	Focus	Manual				Manual					Manual					Manual				
Angle of View	D	35.5°	24.9°	20.5°		25.8°	17.9°	14.7°		18.2°	12.6°	10.3°		12.2°	8.4°	6.9°				
	H	1" 28.8°	2/3" 20.0°	1/1.8" 16.4°		1" 20.8°	2/3" 14.4°	1/1.8" 11.8°		1" 14.6°	2/3" 10.1°	1/1.8" 8.3°		1" 9.8°	2/3" 6.7°	1/1.8" 5.5°				
	V	21.8°	15.1°	12.4°		15.7°	10.8°	8.9°		11.0°	7.6°	6.2°		7.3°	5.0°	4.1°				
Operating Temperature	-10° C ~ +50° C					-10° C ~ +50° C					-10° C ~ +50° C					-10° C ~ +50° C				

Optical Distortion	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%
Back Focal Length	9.1mm					9.7mm					11.1mm					12.0mm								
Flange Back Length	17.526mm					17.526mm					17.526mm					17.526mm								
Mount	C-Mount					C-Mount					C-Mount					C-Mount								
Filter Size	M35.5 P=0.5mm					M34 P=0.5mm					M30.5 P=0.5mm					M30.5 P=0.5mm								
Dimensions	φ 37.5mm × 35.5mm					φ 39.5mm × 55.7mm					φ 69.5mm × 52.93mm					φ 42.0mm × 79.8mm								
Weight	73g					118g					138g					176g								

NEW

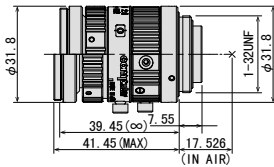
# MPX Series

2/3" 16MEGAPIXEL FIXED FOCAL LENS

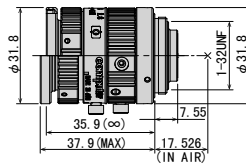


Model No.	Format	Focal Length	F No.	Working Distance	Weight
M0828-MPX	2/3"	8mm	F2.8-F16	0.1m - Inf	89g
M1228-MPX		12mm			78g
M1628-MPX		16mm			74g
M2528-MPX		25mm	F3.8 - F16	0.15m - Inf	83g
M3528-MPX		35mm			82g
M5028-MPX		50mm			85g
M7538-MPX		75mm			89g

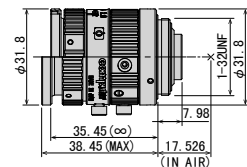
M0828-MPX



M1228-MPX



M1628-MPX



Focal Length	8mm						12mm						16mm						
Max. Aperture Ratio	1:2.8						1:2.8						1:2.8						
Max. Image Format	φ 11.8mm						φ 11.8mm						φ 11.8mm						
Operation Range	Iris F2.8 - F16.0						Iris F2.8 - F16.0						Iris F2.8 - 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	67.5°		52.0°		40.2°		49.2°		36.9°		28.1°		37.9°		28.1°		21.3°	
	H	2/3"	56.4°		1/2"	42.6°		1/3"	32.6°		2/3"	40.3°		1/2"	29.9°		1/3"	22.7°	
	V		43.9°			32.6°			24.7°			30.8°			22.7°			17.1°	
Operating Temperature	-10°C - +50°C						-10°C - +50°C						-10°C - +50°C						
Optical Distortion	2/3"	+0.06%	1/2"	-0.39%	1/3"	-0.38%	2/3"	+0.13%	1/2"	-0.03%	1/3"	-0.05%	2/3"	0.24%	1/2"	0.00%	1/3"	-0.03%	
Back Focal Length	10.2mm						10.2mm						10.3mm						
Flange Back Length	17.526mm						17.526mm						17.526mm						
Mount	C-Mount						C-Mount						C-Mount						
Filter Size	-						M30.5 P=0.5m						M30.5 P=0.5m						
Dimensions	φ 31.8mm × 39.45mm						φ 31.8mm × 35.9mm						φ 31.8mm × 35.45mm						
Weight	89g						78g						74g						



- Anti-vibration (10G) and shock resistance design (10G) to adapt to harsh inspection environments
- High-resolution lens 2μm or less pixel size supported
- Floating mechanism enables high performance from close-up to long distance
- Precise focus adjustment with a focus rotation angle 3 times greater than usual lenses
- Adoption of click-type iris mechanism
- Wide lineup of f=8mm/12mm/16mm/25mm/35mm/50mm/75mm

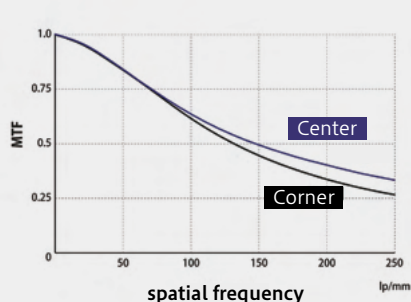
2/3"

16MP

MANUAL

FIX

FLOATING



Existing Lens  
Focus ring rotation angle: 200°



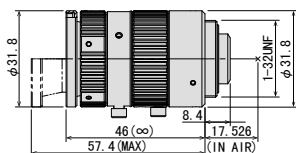
3x wider rotation angle!  
Easy focus adjustment



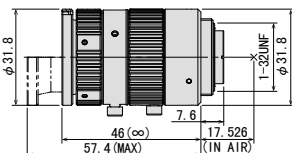
MPX  
Focus ring rotation angle: 610°



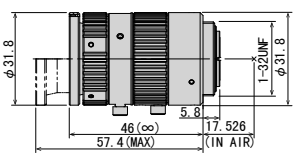
### M2528-MPX



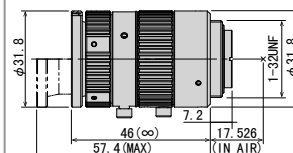
### M3528-MPX



### M5028-MPX



### M7538-MPX



Focal Length	25mm					35mm					50mm					75mm									
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8					1:3.8									
Max. Image Format	φ 11.8mm					φ 11.8mm					φ 11.8mm					φ 11.8mm									
Operation Range	Iris	F2.8 - F16.0					F2.8 - F16.0					F2.8 - F16.0					F3.8 - F16.0								
	Focus	0.1m - Inf					0.15m - Inf					0.2m - Inf					0.25m - Inf								
Control	Iris	Manual					Manual					Manual					Manual								
	Focus	Manual					Manual					Manual					Manual								
Angle of View	D	24.8°	18.2°	13.7°		17.8°	13.0°	9.8°		12.6°	9.1°	6.9°		8.6°	6.3°	4.7°									
	H	2/3"	20.0°	1/2"	14.6°	1/3"	11.0°	2/3"	14.3°	1/2"	10.4°	1/3"	7.8°	2/3"	10.1°	1/2"	7.3°	1/3"	5.5°	2/3"	6.9°	1/2"	5.0°	1/3"	3.8°
	V	15.1°	11.0°	8.3°		10.8°	7.8°	5.9°		7.5°	5.5°	4.1°		5.2°	3.8°	2.8°									
Operating Temperature	-10°C - +50°C					-10°C - +50°C					-10°C - +50°C					-10°C - +50°C									
Optical Distortion	2/3"	+0.06%	1/2"	0.00%	1/3"	-0.01%	2/3"	+0.10%	1/2"	+0.10%	1/3"	+0.06%	2/3"	+0.04%	1/2"	+0.07%	1/3"	+0.05%	2/3"	+0.00%	1/2"	+0.14%	1/3"	+0.11%	
Back Focal Length	9.5mm					10.9mm					13.2mm					11.9mm									
Flange Back Length	17.526mm					17.526mm					17.526mm					17.526mm									
Mount	C-Mount					C-Mount					C-Mount					C-Mount									
Filter Size	M30.5 P=0.5mm					M30.5 P=0.5mm					M30.5 P=0.5mm					M30.5 P=0.5mm									
Dimensions	φ 31.8mm × 46mm					φ 31.8mm × 46mm					φ 31.8mm × 46mm					φ 31.8mm × 46mm									
Weight	83g					82g					85g					89g									

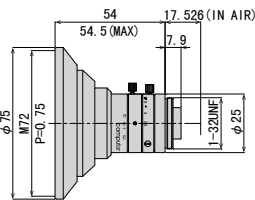


# MPW3 Series

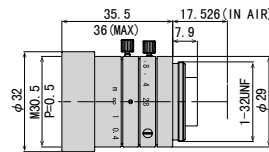
2/3" 6 MEGAPIXEL FIXED FOCAL LENS

Model No.	Format	Focal Length	F No.	Working Distance	Weight
M0528-MPW3	2/3"	5mm	F2.8-F16	0.1m-Inf.	163g
M0828-MPW3		8mm		0.1m-Inf.	58g
M1228-MPW3		12mm		0.1m-Inf.	60g
M1628-MPW3		16mm		0.25m-Inf.	37g
M2528-MPW3		25mm		0.2m-Inf.	42g
M3528-MPW3		35mm		0.25m-Inf.	48g
M5028-MPW3		50mm		0.3m-Inf.	65g
M7528-MPW3		75mm		0.4m-Inf.	102g

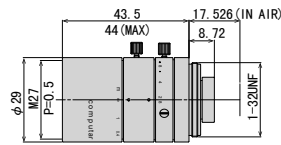
M0528-MPW3



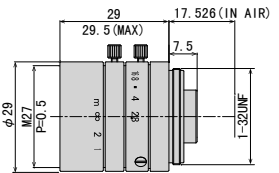
M0828-MPW3



M1228-MPW3



M1628-MPW3



Focal Length	5mm					8mm					12mm					16mm								
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8					1:2.8								
Max. Image Format	8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)								
Operation Range	Iris F2.8 - F16.0					Iris F2.8 - F16.0					Iris F2.8 - F16.0					Iris F2.8 - F16.0								
	Focus 0.1m - Inf.					Focus 0.1m - Inf.					Focus 0.1m - Inf.					Focus 0.25m - Inf.								
Control	Iris Manual					Iris Manual					Iris Manual					Iris Manual								
	Focus Manual					Focus Manual					Focus Manual					Focus Manual								
Angle of View	D	94.6°	83.8°	71.4°		68.5°	57.7°	47.2°		49.3°	40.8°	33.0°		37.8°	31.4°	25.0°								
	H	2/3"	83.2°	1/1.8"	71.6°	1/2.5"	59.8°	2/3"	57.0°	1/1.8"	47.3°	1/2.5"	38.5°	2/3"	40.3°	1/1.8"	33.1°	1/2.5"	26.7°					
	V		67.5°		58.3°		46.6°		44.2°		37.5°		29.4°		30.8°		26.0°		20.3°					
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C								
Optical Distortion	2/3"	0.03%	1/1.8"	-2.14%	1/2.5"	-2.72%	2/3"	-1.80%	1/1.8"	-1.68%	1/2.5"	-1.28%	2/3"	-0.10%	1/1.8"	0.04%	1/2.5"	0.00%	2/3"	0.47%	1/1.8"	0.15%	1/2.5"	0.03%
Back Focal Length	9.2mm					10.1mm					9.2mm					10.3mm								
Flange Back Length	17.526mm					17.526mm					17.526mm					17.526mm								
Mount	C-Mount					C-Mount					C-Mount					C-Mount								
Filter Size	M72 P=0.75mm					M30.5 P=0.5mm					M27 P=0.5mm					M27 P=0.5mm								
Dimensions	φ 75mm × 54mm					φ 32mm × 35.5mm					φ 29mm × 43.5mm					φ 29mm × 29mm								
Weight	163g					58g					60g					37g								

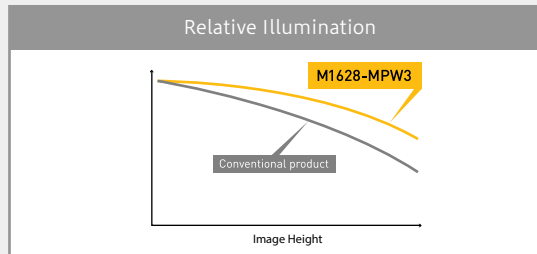
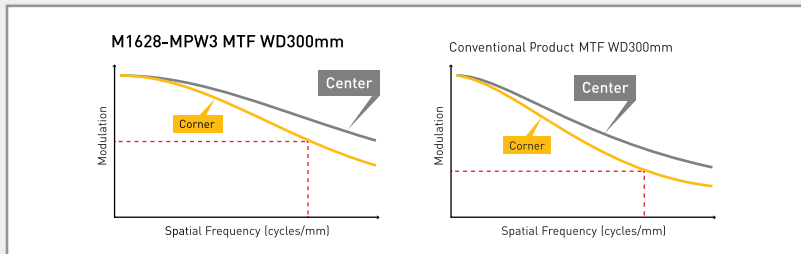
- Suitable for 2/3" 6 megapixel
- A variety of focal lengths from 5mm to 75mm
- Maintains high performance at long WD
- Has an ultra-compact Ø29 diameter with a nearly-identical mechanical length
- High resolution up to the edges of the screen
- Vibration resistance up to 5G

2/3"

6MP

MANUAL

FIX



	M2528-MPW3	M3528-MPW3	M5028-MPW3	M7528-MPW3

Focal Length	25mm					35mm					50mm					75mm				
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8					1:2.8				
Max. Image Format	8.8mm × 6.6mm ( φ 11mm)					8.8mm × 6.6mm ( φ 11mm)					8.8mm × 6.6mm ( φ 11mm)					8.8mm × 6.6mm ( φ 11mm)				
Operation Range	Iris F2.8 - F16.0					Iris F2.8 - F16.0					Iris F2.8 - F16.0					Iris F2.8 - F16.0				
	Focus 0.2m - Inf.					Focus 0.25m - Inf.					Focus 0.3m - Inf.					Focus 0.4m - Inf.				
Control	Iris Manual					Iris Manual					Iris Manual					Iris Manual				
	Focus Manual					Focus Manual					Focus Manual					Focus Manual				
Angle of View	D	24.6°	20.3°	16.1°		17.9°	14.4°	9.8°		12.5°	10.2°	8.1°		8.4°	6.9°	5.4°				
	H	2/3" 19.9°	1/1.8" 16.3°	1/2.5" 13.0°		2/3" 14.3°	1/1.8" 11.7°	1/2.5" 7.8°		2/3" 10.0°	1/1.8" 8.2°	1/2.5" 6.5°		2/3" 6.7°	1/1.8" 5.5°	1/2.5" 4.3°				
	V	15.0°	12.3°	9.8°		10.8°	8.7°	5.9°		7.5°	6.2°	4.9°		5.0°	4.1°	3.3°				
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C				

Optical Distortion	2/3"	0.77%	1/1.8"	0.49%	1/2.5"	0.29%	2/3"	0.06%	1/1.8"	0.04%	1/2.5"	0.03%	2/3"	0.00%	1/1.8"	0.00%	1/2.5"	0.00%	2/3"	0.33%	1/1.8"	0.21%	1/2.5"	0.12%
Back Focal Length	11.5mm					18.0mm					26.3mm					14.6mm								
Flange Back Length	17.526mm					17.526mm					17.526mm					17.526mm								
Mount	C-Mount					C-Mount					C-Mount					C-Mount								
Filter Size	M27 P=0.5mm					M27 P=0.5mm					M27 P=0.5mm					M34 P=0.5mm								
Dimensions	φ 29mm × 31.5mm					φ 29mm × 38.5mm					φ 29mm × 56mm					φ 36mm × 75mm								
Weight	42g					48g					65g					102g								

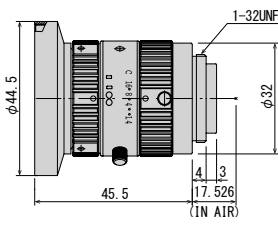


# MP2 Series

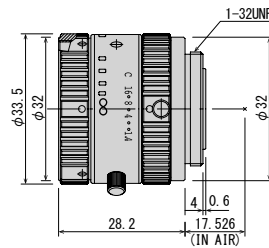
2/3" 1.5 MEGAPIXEL FIXED FOCAL LENS

Model No.	Format	Focal Length	F No.	Working Distance	Weight
H0514-MP2	1/2"	5mm	F1.4 - F16C	0.1m - 0.9m	102g
M0814-MP2	2/3"	8mm	F1.4 - F16C	0.1m - Inf.	63g
M1214-MP2		12mm	F1.4 - F16C	0.15m - Inf.	62g
M1614-MP2		16mm	F1.4 - F16C	0.3m - Inf.	60g
M2514-MP2		25mm	F1.4 - F16C	0.3m - Inf.	71g
M3514-MP		35mm	F1.4 - F16C	0.3m - Inf.	87g
M5018-MP2		50mm	F1.8 - F16C	0.5m - Inf.	85g
M7528-MP		75mm	F2.8 - F16C	0.3m - Inf.	113g

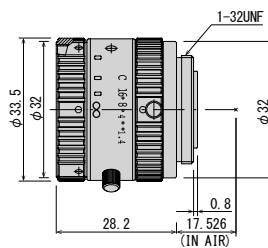
H0514-MP2



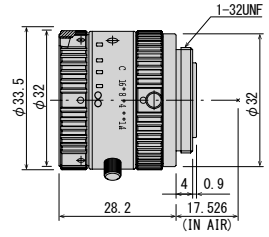
M0814-MP2



M1214-MP2



M1614-MP2



Focal Length	5mm				8mm				12mm				16mm				
Max. Aperture Ratio	1:1.4				1:1.4				1:1.4				1:1.4				
Max. Image Format	6.4mm × 4.8mm (φ 8mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				
Operation Range	Iris	F1.4 - F16C			Iris	F1.4 - F16C			Iris	F1.4 - F16C			Iris	F1.4 - F16C			
	Focus	0.1m - 0.9m			Focus	0.1m - Inf.			Focus	0.15m - Inf.			Focus	0.3m - Inf.			
Control	Iris	Manual			Iris	Manual			Iris	Manual			Iris	Manual			
	Focus	Manual			Focus	Manual			Focus	Manual			Focus	Manual			
Angle of View	D	76.7°		62.3°		67.1°		51.9°		49.2°		37.0°		38.0°		28.2°	
	H	65.5°		51.4°		56.3°		42.5°		40.4°		30.0°		30.8°		22.7°	
	V	51.4°		39.5°		43.7°		32.4°		30.8°		22.7°		23.4°		17.1°	
Operating Temperature	-10°C ~ +50°C				-10°C ~ +50°C				-10°C ~ +50°C				-10°C ~ +50°C				
Optical Distortion	1/2"	-0.48%	1/3"	-2.26%	2/3"	-0.1%	1/2"	-1.1%	2/3"	-0.1%	1/2"	-0.35%	2/3"	-0.1%	1/2"	-0.3%	
Back Focal Length	10.8mm (WD=900mm)				13.1mm (Inf)				13.1mm (Inf)				13.1mm (Inf)				
Flange Back Length	17.526mm				17.526mm				17.526mm				17.526mm				
Mount	C-Mount				C-Mount				C-Mount				C-Mount				
Filter Size	M43 P=0.75mm				M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm				
Dimensions	φ 44.5mm × 45.5mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm				
Weight	102g				63g				62g				60g				

# 2/3" 1.5 MEGA PIXEL FIXED FOCAL LENS

- Eight focal lengths in series: 5mm, 8mm, 12mm, 16mm, 25mm, 35mm, 50mm, and 75mm
- Compatible with 2/3" format sensor (H0514-MP2 : 1/2")
- Low distortion (less than 1.0%)
- Locking set screws for focus and iris
- Compact design - diameter 33.5mm (H0514-MP2 : 44.5mm)

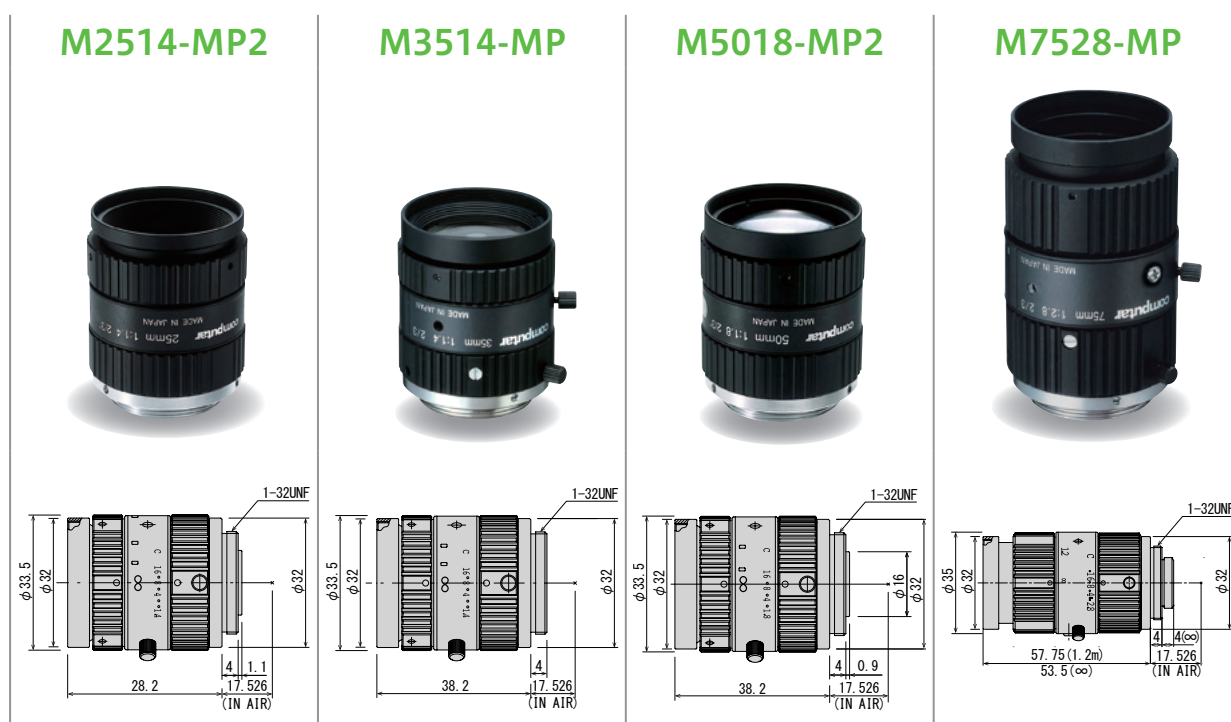
1/2"

1.5MP

MANUAL

2/3"

FIX



Focal Length	25mm				35mm				50mm				75mm				
Max. Aperture Ratio	1:1.4				1:1.4				1:1.8				1:2.8				
Max. Image Format	8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				
Operation Range	Iris	F1.4 - F16C			Iris	F1.4 - F16C			Iris	F1.8 - F16C			Iris	F2.8 - F16C			
	Focus	0.3m - Inf.			Focus	0.3m - Inf.			Focus	0.5m - Inf.			Focus	0.3m - Inf. (※)			
Control	Iris	Manual			Iris	Manual			Iris	Manual			Iris	Manual			
	Focus	Manual			Focus	Manual			Focus	Manual			Focus	Manual			
Angle of View	D	24.9°		18.2°		17.3°		12.6°		13.1°		9.5°		8.5°		6.2°	
	H	2/3" 20.0°		1/2" 14.6°		2/3" 13.9°		1/2" 10.1°		2/3" 10.5°		1/2" 7.6°		2/3" 6.8°		1/2" 5.0°	
	V	15.1°		11.0°		10.4°		7.6°		7.9°		5.7°		5.1°		3.7°	
Operating Temperature	-10° C ~ +50° C				-10° C ~ +50° C				-10° C ~ +50° C				-10° C ~ +50° C				

Optical Distortion	2/3"	-0.3%	1/2"	-0.1%	2/3"	-0.8%	1/2"	-0.4%	2/3"	-0.3%	1/2"	-0.2%	2/3"	-0.4%	1/2"	-0.2%
Back Focal Length	13.1mm (Inf)				17.1mm (WD=400mm)				13.1mm (Inf)				21.5mm (WD=400mm)			
Flange Back Length	17.526mm				17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount				C-Mount			
Filter Size	M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm			
Dimensions	φ33.5mm × 36.0mm				φ 33.5mm × 38.2mm				φ 33.5mm × 38.2mm				φ 35mm × 57.75mm			
Weight	71g				87g				85g				113g			

\*Factory setting is 0.3-1.2m. Focus can be adjusted to infinity by removing "Focus Limit Screw"

# VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



**NEW**

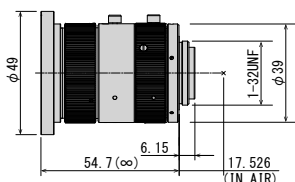
**VISWIR HYPER APO**

## VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

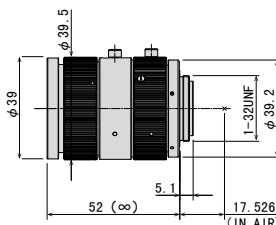
- Dedicated design for next generation Visible+SWIR InGaAs image sensor (IMX990/IMX991/IMX992/IMX993)
- Hyper-Apochromat design with fully correct focus shift between 400-1700nm
- Floating-focus mechanism realizes axial chromatic aberration and chromatic aberration of magnification at all WD and wavelengths
- 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

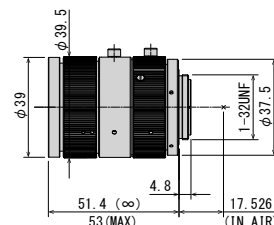
### M0818-APVSW2



### M1218-APVSW2

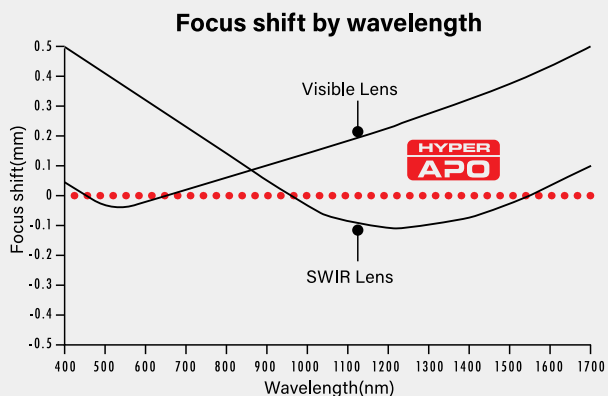


### M1618-APVSW2



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

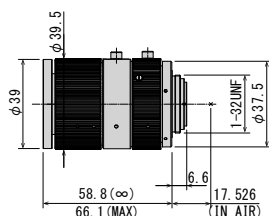


Ultra-high resolution from 400 nm visible light to 1700 nm near infrared with no focus shift.

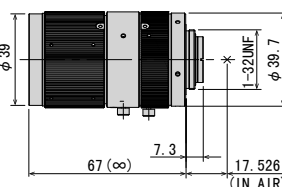
2/3" (1/1.4") 5MP Visible + SWIR MANUAL Apochromat FIX FLOATING



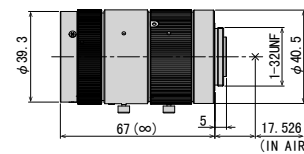
## M2518-APVSW2



## 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°	1/1.4"	20.0°	1/1.8"	16.1°	1/2"	14.6°	1/4"	7.3°	1/1.4"	14.4°	1/1.8"	11.6°	1/2"	10.5°	1/4"	5.3°	1/1.4"	10.2°	1/1.8"	8.1°	1/2"	7.4°	1/4"	3.7°
	H	16.1°	12.1°	11.7°	5.9°	11.6°	8.7°	8.4°	4.2°	8.2°	6.1°	5.9°	3.0°	1/1.4"	16.1°	1/1.8"	12.1°	1/2"	14.6°	1/4"	7.3°	1/1.4"	14.4°	1/1.8"	11.6°	1/2"	10.5°	1/4"	5.3°	1/1.4"	10.2°	1/1.8"	8.1°	1/2"	7.4°	1/4"	3.7°
	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°	1/1.4"	16.1°	1/1.8"	12.1°	1/2"	14.6°	1/4"	7.3°	1/1.4"	14.4°	1/1.8"	11.6°	1/2"	10.5°	1/4"	5.3°	1/1.4"	10.2°	1/1.8"	8.1°	1/2"	7.4°	1/4"	3.7°
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%	1/1.4"	0.0%	1/1.8"	0.0%	1/1.4"	0.2%	1/1.8"	0.2%	1/1.4"	0.0%	1/1.8"	0.0%	1/1.4"	0.2%	1/1.8"	0.2%	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																				

# VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

NEW

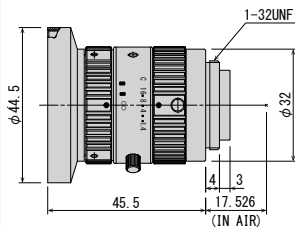
## VISIR Lite

### VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

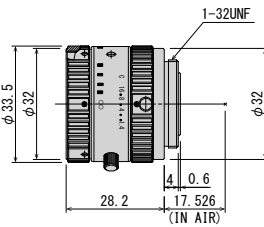


Model No.	Format	Focal Length	F-No.	Working Distance	Distortion	Weight
H0514-VSW	1/2"	5mm	F1.4	0.1m - Inf.	-0.48%(y=4.0)	102g
M0814-VSW	2/3"	8mm		0.1m - Inf.	-0.1%(y=5.5)	62g
M1214-VSW		12mm		0.15m - Inf.	-0.1%(y=5.5)	61g
M1614-VSW		16mm		0.3m - Inf.	-0.1%(y=5.5)	60g
M2514-VSW		25mm		0.3m - Inf.	-0.3%(y=5.5)	71g
M3514-VSW		35mm		0.3m - Inf.	-0.8%(y=5.5)	87g
M5018-VSW		50mm	F1.8	0.5m - Inf.	-0.3%(y=5.5)	85g

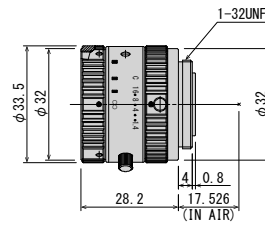
H0514-VSW



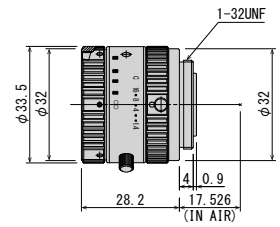
M0814-VSW



M1214-VSW



M1614-VSW



Focal Length	5mm					8mm					12mm					16mm									
Max. Aperture Ratio	1:1.4					1:1.4					1:1.4					1:1.4									
Max. Image Format	6.40mm × 5.12mm (φ 8.20mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)									
Wavelength Range	400nm - 1700nm					400nm - 1700nm					400nm - 1700nm					400nm - 1700nm									
Operation Range	Iris	F1.4 - 16C					F1.4 - F16C					F1.4 - F16C					F1.4 - F16C								
	Focus	0.1m - 0.9m					0.1m - Inf.					0.15m - Inf.					0.3m - Inf.								
Control	Iris	Manual					Manual					Manual					Manual								
	Focus	Manual					Manual					Manual					Manual								
Angle of View	D	IMX990	77.8°	IMX991	44.6°	76.7°	IMX990	53.0°	IMX991	27.9°	67.1°	IMX990	37.8°	IMX991	19.4°	49.2°	IMX990	28.8°	IMX991	14.6°	38.0°				
	H	6.40mm	65.5°	3.20mm	35.3°	1/2"	65.5°	6.40mm	42.5°	3.20mm	21.9°	2/3"	56.3°	6.40mm	30.0°	3.20mm	15.2°	2/3"	40.4°	6.40mm	22.7°	3.20mm	11.4°	2/3"	30.8°
	V	5.12mm	54.5°	2.56mm	28.5°	51.4°	5.12mm	34.5°	2.56mm	17.6°	43.7°	5.12mm	24.1°	2.56mm	12.2°	30.8°	5.12mm	18.2°	2.56mm	9.2°	23.4°				
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C									

Optical Distortion	1/2"	-0.48%	1/3"	-2.26%	2/3"	-0.1%	1/2"	-1.1%	2/3"	-0.1%	1/2"	-0.35%	2/3"	-0.1%	1/2"	-0.3%
Back Focal Length	10.8mm				13.1mm				13.1mm				13.1mm			
Flange Back Length	17.526mm				17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount				C-Mount			
Filter Size	M43 P=0.75mm				M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm			
Dimensions	φ44.5mm × 45.5mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm			
Weight	102g				62g				61g				60g			



# VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

- High transmittance at entire wavelength of 400nm-1700nm by adopting hyper wideband AR coat
- Outstanding cost-performance for single-wavelength lighting and narrow-band imaging
- Series includes 5mm, 8mm, 12mm, 16mm, 25mm, 35mm, and 50mm focal lengths
- The NIR-absorbent coating prevents light scattering and provides clear image quality
- Compact design

1/2"

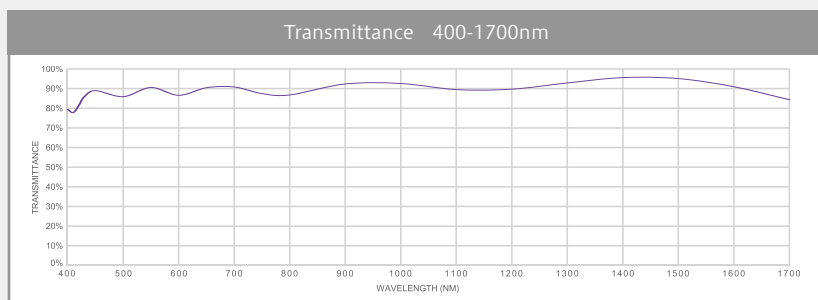
Visible  
+SWIR

MANUAL

2/3"

Visible  
+SWIR

FIX



### M2514-VSW



### M3514-VSW



### M5018-VSW



Focal Length	25mm					35mm					50mm								
Max. Aperture Ratio	1:1.4					1:1.4					1:1.8								
Max. Image Format	8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)								
Wavelength Range	400nm - 1700nm					400nm - 1700nm					400nm - 1700nm								
Operation Range	Iris	F1.4 - F16C					Iris	F1.4 - F16C					Iris	F1.8 - F16C					
	Focus	0.3m - Inf.					Focus	0.3m - Inf.					Focus	0.5m - Inf.					
Control	Iris	Manual					Iris	Manual					Iris	Manual					
	Focus	Manual					Focus	Manual					Focus	Manual					
Angle of View	D	IMX990	18.6°	IMX991	9.4°	2/3"	24.9°	IMX990	13.7°	IMX991	6.9°	2/3"	17.3°	IMX990	9.8°	IMX991	4.9°	2/3"	13.1°
	H	6.40mm × 5.12mm	14.6°	3.20mm × 2.56mm	7.3°		20.0°	6.40mm × 5.12mm	10.7°	3.20mm × 2.56mm	5.4°		13.9°	6.40mm × 5.12mm	7.6°	3.20mm × 2.56mm	3.8°		10.5°
	V		11.7°		5.9°		15.1°		8.6°		4.3°		10.4°		6.1°		3.1°		
Operating Temperature	-10° C - +50° C					-10° C - +50° C					-10° C - +50° C								
Optical Distortion	2/3"	-0.3%	1/2"	-0.1%		2/3"	-0.8%	1/2"	-0.39%		2/3"	-0.3%	1/2"	-0.2%					
Back Focal Length	13.1mm					17.1mm					13.1mm								
Flange Back Length	17.526mm					17.526mm					17.526mm								
Mount	C-Mount					C-Mount					C-Mount								
Filter Size	M30.5 P=0.5mm					M30.5 P=0.5mm					M30.5 P=0.5mm								
Dimensions	φ33.5mm × 36mm					φ33.5mm × 38.2mm					φ33.5mm × 38.2mm								
Weight	71g					87g					85g								



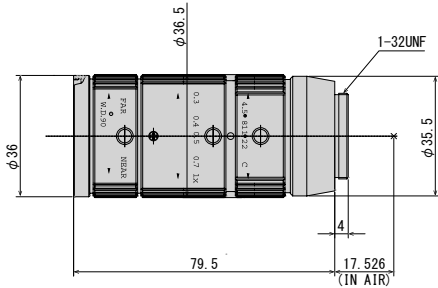
# MACRO ZOOM LENS

- 1/2" and 2/3" format models are ideal for a variety of inspection applications
- Optimal performance at variable working distances
- Highly versatile 3.3x magnification type suitable for megapixel applications
- Compact design

1/2" 1MP MANUAL  
2/3" ZOOM MACRO

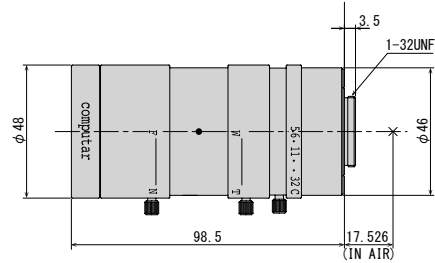
## MLM-3XMP

2/3"  
1MP



## MLH-10X

1/2"



Optical Magnification	0.3x - 1.0x				0.084x - 0.84x						
Max. Aperture Ratio	1:4.5				1:5.6						
Max. Image Format	8.8mm × 6.6mm (φ 11mm)				6.4mm × 4.8mm (φ 8mm)						
Operation Range	Iris	F4.5 - F22C			F5.6 - F32C						
	Focus	90mm			150mm - 450mm						
Control	Iris	Manual			Manual						
	Focus	Manual			Manual						
	Zoom	Manual			Manual						
Angle of View	D	2/3"	14.9° - 2.9°	1/2"	10.7° - 2.8°	1/2"	21.6° - 4.5°	1/3"	17.0° - 3.3°	1/4"	13.0° - 2.5°
	H		11.8° - 2.8°		8.5° - 2.2°		18.0° - 3.6°		13.8° - 2.7°		10.6° - 2.0°
	V		8.8° - 2.3°		6.4° - 1.7°		13.8° - 2.7°		10.6° - 2.0°		8.0° - 1.5°
Operating Temperature	-10° C ~ +50° C				-10° C ~ +50° C						
Optical Distortion	2/3"	+0.12% at 0.3x		1/2"	+0.12% at 0.3x		1/2"	+0.9% at 0.084x			
		+1.78% at 1.0x			+0.77% at 1.0x			+1.6% at 0.84x			
Back Focal Length	20.4mm				23.29mm						
Flange Back Length	17.526mm				17.526mm						
Mount	C-Mount				C-Mount						
Filter Size	M34 P=0.5mm				M46 P=0.75mm						
Dimensions	φ36.5mm × 79.5mm				φ48mm × 98.5mm						
Weight	150g				260g						

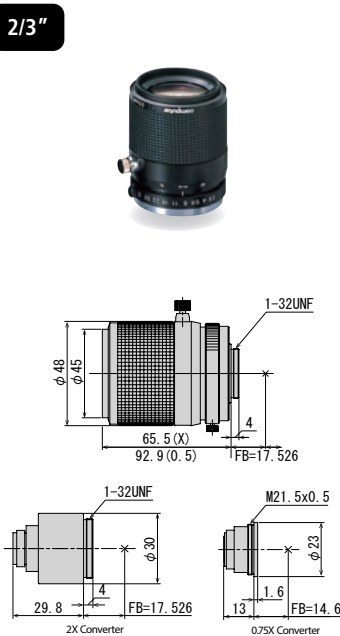
# TELECENTRIC MACRO LENS



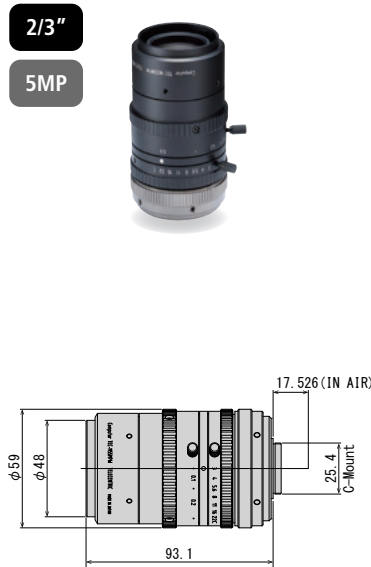
- WD140mm~Infinity. Suitable for use as a telephoto lens and macro lens [TEC-M55]
- Compact design, compatible with 5MP sensors [TEC-M55MPW]
- 1.1" format 5MP, 7.1X magnification (0.5X-0.07X) [TEC-V7X]

1.1"	5MP	MANUAL	MACRO
2/3"		ZOOM	TELECENTRIC

## TEC-M55



## TEC-M55MPW



## TEC-V7X



Focal Length	55mm	55mm ( at 0.057x) 51mm ( at 0.5x)	
Magnification	0.5x - Inf. (Max 1.0x at 140mm with 2X Converter)	0.057x - 0.5x	0.07x - 0.5x
Max. Aperture Ratio	1:2.8	1:3.0	1:4.3
Max. Image Format	8.8mm × 6.6mm ( φ 11mm)	8.8mm × 6.6mm ( φ 11mm)	12.3mm × 12.3mm ( φ 17.4mm)
Operation Range	Iris	F2.8 - F32C	F4.3 - F32
	Focus	140mm - Inf.	139mm - 1000mm
Control	Iris	Manual	Manual
	Focus	Manual	Manual
	Zoom		Manual
Operating Temperature	-20° C ~ 50° C	-10° C ~ 50° C	-10° C ~ 50° C

Optical Distortion	2/3"	+0.2% at 0.2x +0.6% at 0.5x	1/2"	+0.1% at 0.2x +0.3% at 0.5x	2/3"	+0.52% at 0.057x +0.6% at 0.5x	Tele 1.1"	1.0%	1"	0.84%	2/3"	0.39%
							Wide	-1.7%		-1.45%		-0.7%
Back Focal Length	29.8mm				17.0mm				Tele 39.53mm			
Flange Back Length	17.526mm				17.526mm				Wide 49.78mm			
Mount	C-Mount				C-Mount				C-Mount			
Filter Size	M43 P=0.75mm				M46.0 P=0.75mm				M62 P=0.75mm			
Dimensions	φ53.0mm × 92.9mm (Max. at 0.5x)				φ 59.0mm × 93.1mm				φ 61 × 152.86mm			
Weight	320g				470g				1400g			



# TEC-V Series

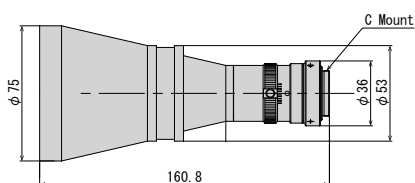
1.1" ,1" MEGAPIXEL TELECENTRIC LENS

- 1.1" format 12MP (3.45μm) [TEC-V0345165MPY-WI]
- 1" format 5MP
- Versatile lineup designed for WD65mm and 110mm [TEC-V05/10]

1.1"	12MP	
1"	5MP	TELECEN

## 1.1" 12 MEGAPIXEL TELECENTRIC LENS

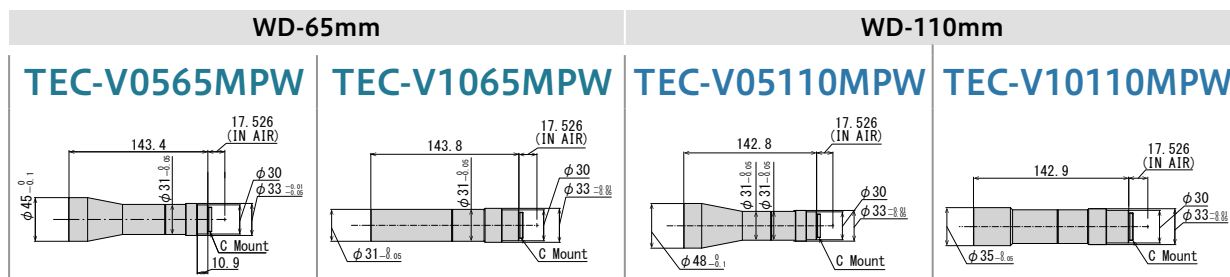
### TEC-V0345165MPY-WI



Model (with coaxial type)	TEC-V0345165MPY-WI
Format	14.2mm × 10.4mm (φ 17.6mm)
Magnification	0.345x
Working Distance	165.2mm
Resolving Power *1	9.7μm
Depth of Field *2	6.63mm
NA	0.035
Effective F-number	5.0
TV Distortion	-0.024%

Mount	C-mount
Filter Size	M72 P=0.75mm
Weight	380g

## 1" 5 MEGAPIXEL TELECENTRIC LENS



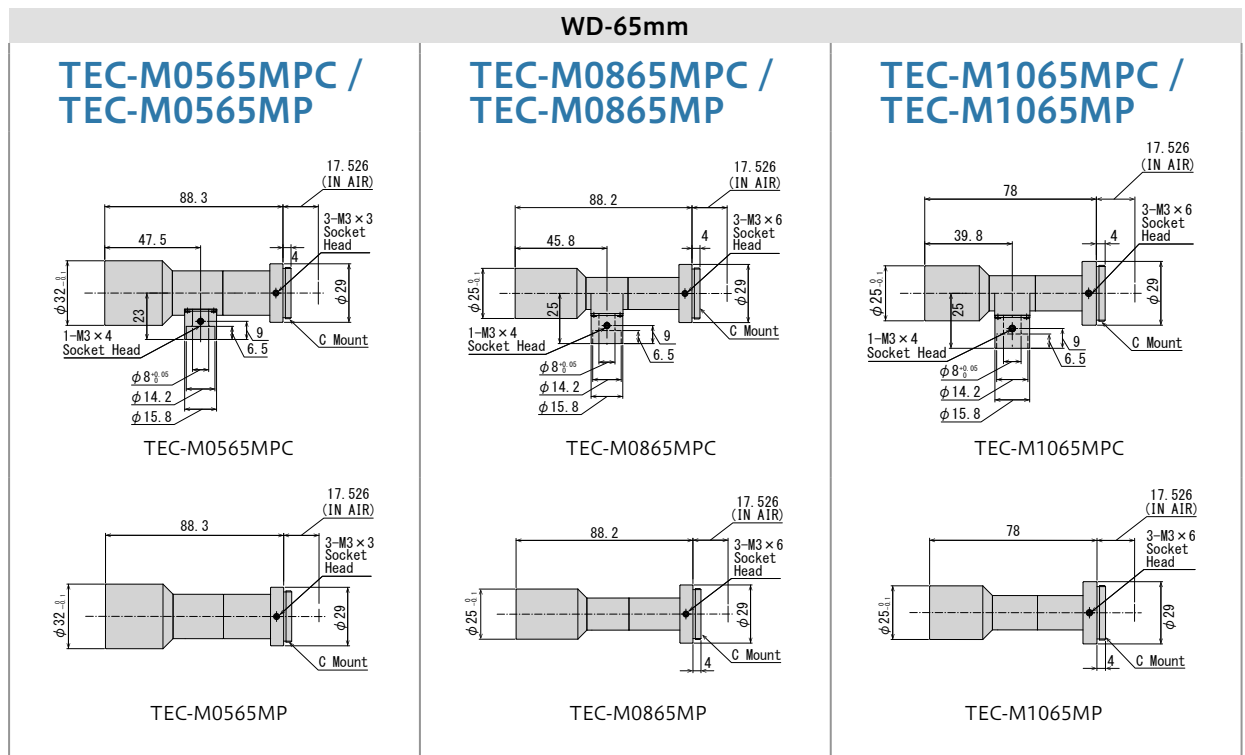
Model (with coaxial type)	TEC-V0565MPW	TEC-V1065MPW	TEC-V05110MPW	TEC-V10110MPW
Format	12.8mm × 9.6mm (φ 16.0mm)	12.8mm × 9.6mm (φ 16.0mm)	12.8mm × 9.6mm (φ 16.0mm)	12.8mm × 9.6mm (φ 16.0mm)
Magnification	0.5x	1.0x	0.5x	1.0x
Working Distance	65.2mm	65.2mm	110.2mm	110.2mm
Resolving Power *1	12μm	6μm	12μm	6μm
Depth of Field *2	2.88mm	0.72mm	2.88mm	0.72mm
NA	0.027	0.055	0.027	0.055
Effective F-number	9.0	9.0	9.0	9.0
TV Distortion	-0.014%	-0.023%	0.012%	0.015%
Mount	C-Mount	C-Mount	C-Mount	C-Mount
Weight	189g	158g	197g	159g

\*1 : Theoretical resolution calculated with a wavelength of 550nm \*2 : Value calculated with a permissible circle of confusion of 40μm  
 \*Variable Iris type available (TEC-V05110MPW WI/TEC-V10110MPW WI).

# TEC-M Series

2/3" 2 MEGAPIXEL TELECENTRIC LENS

- Suitable for 2/3" 2MP sensor, WD65mm WD110mm



Model (with coaxial type)	TEC-M0565MPC	TEC-M0865MPC	TEC-M1065MPC
Model (straight type)	TEC-M0565MP	TEC-M0865MP	TEC-M1065MP
Format	8.8mm × 6.6mm (φ 11.0mm)	8.8mm × 6.6mm (φ 11.0mm)	8.8mm × 6.6mm (φ 11.0mm)
Magnification	0.5x	0.8x	1.0x
Working Distance	65.5mm	66mm	65.5mm
Resolving Power *1	12μm	8μm	6.7μm
Depth of Field *2	2.87mm	1.18mm	0.79mm
NA	0.028	0.042	0.05
Effective F-number	9.0	9.4	9.8
TV Distortion	-0.012%	0.008%	-0.022%
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	80g	62g	54g
Weight (straight type)	77g	57g	49g

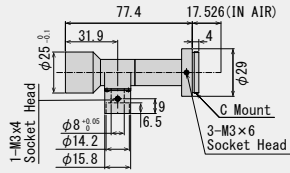
\*1 : Theoretical resolution calculated with a wavelength of 550nm \*2 : Value calculated with a permissible circle of confusion of 40μm

# 2/3" 2 MEGAPIXEL TELECENTRIC LENS

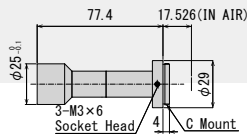
- Suitable for 2/3" 2MP sensor, WD65mm WD110mm

## WD-65mm

### TEC-M2065MPC / TEC-M2065MP

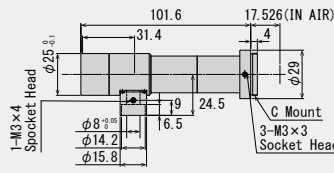


TEC-M2065MPC

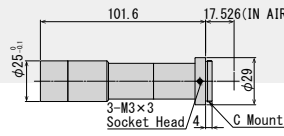


TEC-M2065MP

### TEC-M4065MPC / TEC-M4065MP

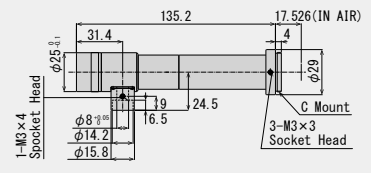


TEC-M4065MPC

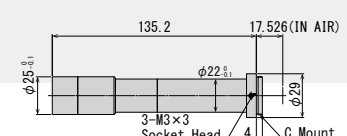


TEC-M4065MP

### TEC-M6065MPC / TEC-M6065MP



TEC-M6065MPC



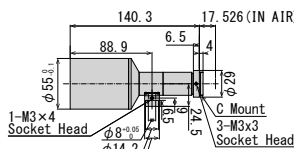
TEC-M6065MP

Model (with coaxial type)	TEC-M2065MPC	TEC-M4065MPC	TEC-M6065MPC
Model (straight type)	TEC-M2065MP	TEC-M4065MP	TEC-M6065MP
Format	8.8mm × 6.6m (φ 11.0mm)	2/3" φ 12.8mm	2/3" φ 12.8mm
Magnification	2.0x	4.0x	6.0x
Working Distance	65.4mm	65.3mm	64.0mm
Resolving Power *1	4.4μm	2.9μm	2.9μm
Depth of Field *2	0.26mm	0.08mm	0.06mm
NA	0.076	0.118	0.118
Effective F-number	12.8	16.9	25.5
TV Distortion	0.020%	-0.003%	-0.026%

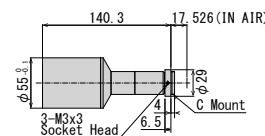
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	55g	85g	100g
Weight (straight type)	49g	83g	98g

## WD-110mm

### TEC-M03110MPC / TEC-M03110MP

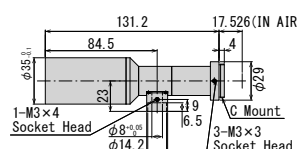


TEC-M03110MPC

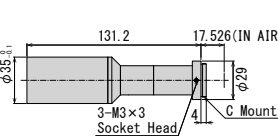


TEC-M03110MP

### TEC-M05110MPC / TEC-M05110MP

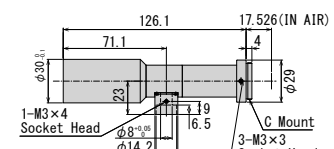


TEC-M05110MPC

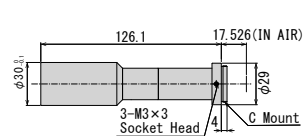


TEC-M05110MP

### TEC-M08110MPC / TEC-M08110MP



TEC-M08110MPC



TEC-M08110MP

Model (with coaxial type)	TEC-M03110MPC	TEC-M05110MPC	TEC-M08110MPC
Model (straight type)	TEC-M03110MP	TEC-M05110MP	TEC-M08110MP
Format	8.8mm × 6.6m (φ 11.0mm)	8.8mm × 6.6m (φ 11.0mm)	8.8mm × 6.6m (φ 11.0mm)
Magnification	0.3x	0.5x	0.8x
Working Distance	111mm	111.8mm	111mm
Resolving Power *1	14.5μm	12.7μm	8.8μm
Depth of Field *2	5.75mm	3.03mm	1.31mm
NA	0.023	0.026	0.038
Effective F-number	6.5	9.4	10.2
TV Distortion	0.026%	-0.009%	-0.027%

Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	166g	131g	106g
Weight (straight type)	160g	128g	103g

\*1 : Theoretical resolution calculated with a wavelength of 550nm \*2 : Value calculated with a permissible circle of confusion of 40μm

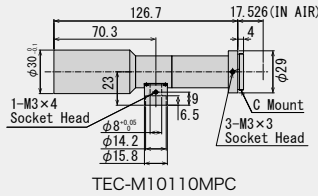
2/3"

2MP

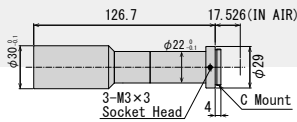
TELECENT

## WD-110mm

### TEC-M10110MPC / TEC-M10110MP

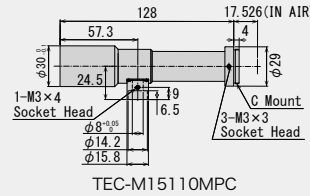


TEC-M10110MPC

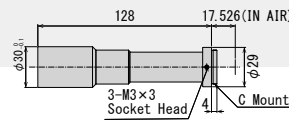


TEC-M10110MP

### TEC-M15110MPC / TEC-M15110MP

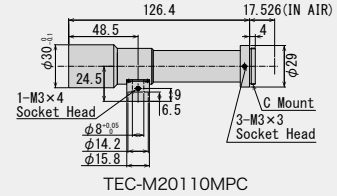


TEC-M15110MPC

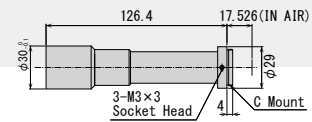


TEC-M15110MP

### TEC-M20110MPC / TEC-M20110MP



TEC-M20110MPC



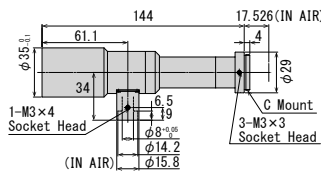
TEC-M20110MP

Model (with coaxial type)	TEC-M10110MPC	TEC-M15110MPC	TEC-M20110MPC
Model (straight type)	TEC-M10110MP	TEC-M15110MP	TEC-M20110MP
Format	8.8mm × 6.6m (φ 11.0mm)	8.8mm × 6.6m (φ 11.0mm)	8.8mm × 6.6m (φ 11.0mm)
Magnification	1.0x	1.5x	2.0x
Working Distance	111.5mm	110.7mm	110.9mm
Resolving Power *1	6.9μm	5.2μm	4.5μm
Depth of Field *2	0.82mm	0.42mm	0.27mm
NA	0.049	0.064	0.075
Effective F-number	10.1	11.5	13.0
TV Distortion	-0.003%	0.031%	-0.019%

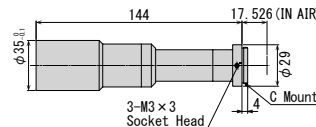
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	108g	110g	115g
Weight (straight type)	105g	108g	113g

## WD-110mm

### TEC-M30110MPC / TEC-M30110MP

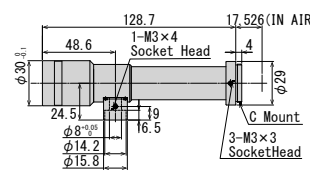


TEC-M30110MPC

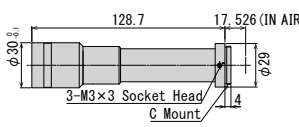


TEC-M30110MP

### TEC-M40110MPC / TEC-M40110MP

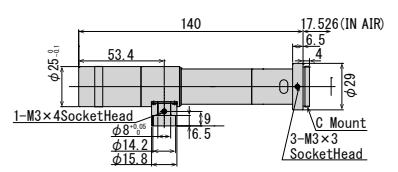


TEC-M40110MPC

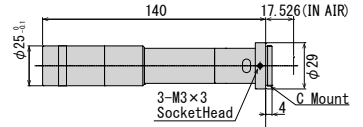


TEC-M40110MP

### TEC-M60110MPC / TEC-M60110MP



TEC-M60110MPC



TEC-M60110MP

Model (with coaxial type)	TEC-M30110MPC	TEC-M40110MPC	TEC-M60110MPC
Model (straight type)	TEC-M30110MP	TEC-M40110MP	TEC-M60110MP
Format	2/3" φ12.8mm	8.8mm × 6.6m (φ 11.0mm)	2/3" φ12.8mm
Magnification	3.0x	4.0x	6.0x
Working Distance	111.4mm	110.5mm	110mm
Resolving Power *1	3.6μm	3.7μm	4.4μm
Depth of Field *2	0.14mm	0.11mm	0.09mm
NA	0.094	0.091	0.076
Effective F-number	16.0	21.9	39.6
TV Distortion	-0.012%	-0.004%	-0.015%

Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	166g	121g	103g
Weight (straight type)	160g	120g	101g

\*1 : Theoretical resolution calculated with a wavelength of 550nm \*2 : Value calculated with a permissible circle of confusion of 40μm

**NEW**

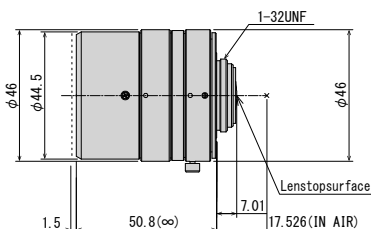
## MPYIR Series

1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

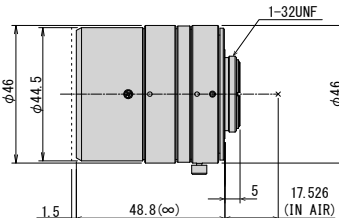


Model No.	Format	Focal Length	F No.	IRIS	Working Distance	Weight
V2518FIC-MPYIR	1.1"	25mm	F1.8 - F16C	Manual	1m - Inf.	158g
V3518FIC-MPYIR		35mm			2m - Inf.	153g
V5020FIC-MPYIR		50mm	F2.0 - F16C		3m - Inf.	151g
VG2518KC-MPYIR		25mm	F1.8 - F16C	P-IRIS	1m - Inf.	127g
VG3518KC-MPYIR		35mm			2m - Inf.	123g
VG5020KC-MPYIR		50mm	F2.0 - F16C		3m - Inf.	121g

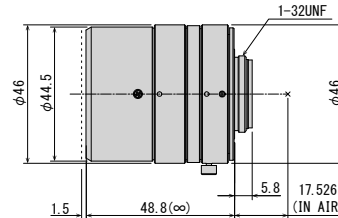
**V2518FIC-MPYIR**



**V3518FIC-MPYIR**



**V5020FIC-MPYIR**



Focal Length		25mm		35mm		50mm	
Max. Aperture Ratio		1:1.8		1:1.8		1:2.0	
Max. Image Format		14.2mm × 10.4mm (φ 17.6mm)		14.2mm × 10.4mm (φ 17.6mm)		14.2mm × 10.4mm (φ 17.6mm)	
Operation Range	Iris	F1.8 - F16C		F1.8 - F16C		F2.0 - F16C	
	Focus	1m - Inf.		2m - Inf.		3m - Inf.	
Control	Iris	Manual		Manual		Manual	
	Focus	Manual		Manual		Manual	
Angle of View	D	38.8°	35.6°	24.9°	27.4°	25.1°	17.4°
	H	1.1" 31.8°	1" 28.8°	2/3" 20.0°	1.1" 22.3°	1" 20.2°	2/3" 14.0°
	V	23.6°	21.8°	15.1°	16.5°	15.2°	10.5°
Operating Temperature		-10°C - +50°C		-10°C - +50°C		-10°C - +50°C	
Back Focal Length		10.6mm		14.2mm		14.2mm	
Flange Back Length		17.526mm		17.526mm		17.526mm	
Mount		C-Mount		C-Mount		C-Mount	
Filter Size		M40.5 P=0.5mm		M40.5 P=0.5mm		M40.5 P=0.5mm	
Dimensions		φ46mm × 50.8mm		φ46mm × 48.8mm		φ46mm × 48.8mm	
Weight		158g		153g		151g	

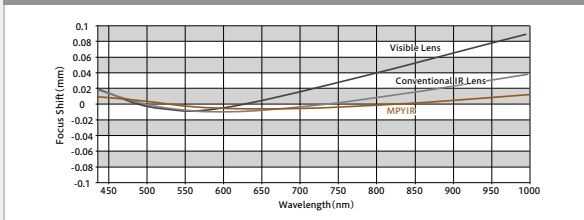


# 1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

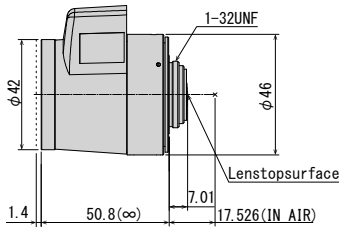
- Suitable for 1.1" 12MP sensor, same size as conventional products
- Usable lineup for ANPR, 25mm/35mm/50mm
- Manual iris and P-iris available for each model
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR



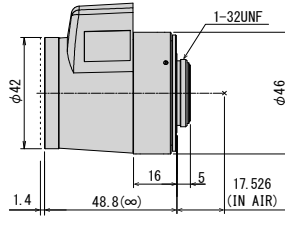
Chromatic Focus Shift



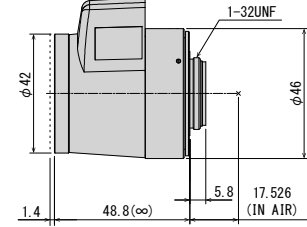
**VG2518KC-MPYIR**



**VG3518KC-MPYIR**



**VG5020KC-MPYIR**



Focal Length	25mm					35mm					50mm					
Max. Aperture Ratio	1:1.8					1:1.8					1:2.0					
Max. Image Format	14.2mm × 10.4mm (φ 17.6mm)															
Operation Range	Iris	F1.8 - F16C					F1.8 - F16C					F2.0 - F16C				
	Focus	1m - Inf.					2m - Inf.					3m - Inf.				
Control	Iris	Stepping Motor														
	Focus	Manual					Manual					Manual				
Angle of View	D	38.8°	35.6°	24.9°	27.4°	25.1°	17.4°	19.4°	17.7°	12.2°						
	H	1.1" 31.8°	1" 28.8°	2/3" 20.0°	1.1" 22.3°	1" 20.2°	2/3" 14.0°	1.1" 15.7°	1" 14.2°	2/3" 9.8°						
	V	23.6°	21.8°	15.1°	16.5°	15.2°	10.5°	11.6°	10.7°	7.4°						
Operating Temperature	-10°C ~ +50°C															

Back Focal Length	10.6mm					14.2mm					14.2mm				
Flange Back Length	17.526mm														
Mount	C-Mount														
Filter Size	M40.5 P=0.5mm														
Dimensions	φ42mm × 57mm × 50.8mm					φ42mm × 57mm × 48.8mm					φ42mm × 57mm × 48.8mm				
Weight	127g					123g					121g				

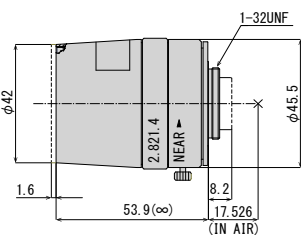
# MPIR Series

2/3" IR CORRECTIVE 5 MEGAPIXEL LENS for ITS

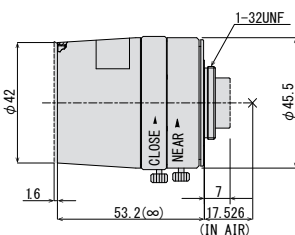


Model No.	Format	Focal Length	F No.	IRIS	Working Distance	Weight
M2514FIC-MPIR	2/3"	25mm	F1.4 - F16C	Manual	1m - Inf.	154g
M3518FIC-MPIR		35mm	F1.8 - F16C		1m - Inf.	149g
M5020FIC-MPIR		50mm	F2.0 - F16C		2m - Inf.	155g
MG2514KC-MPIR		25mm	F1.4 - F16C	P-IRIS	1m - Inf.	128g
MG3518KC-MPIR		35mm	F1.8 - F16C		1m - Inf.	123g
MG5020KC-MPIR		50mm	F2.0 - F16C		2m - Inf.	129g

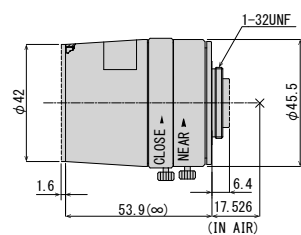
M2514FIC-MPIR



M3518FIC-MPIR



M5020FIC-MPIR

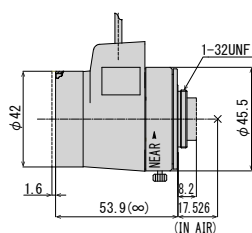


Focal Length	25mm				35mm				50mm			
Max. Aperture Ratio	1:1.4				1:1.8				1:2.0			
Max. Image Format	11.3mm × 6.0mm (φ 12.8mm)				11.3mm × 6.0mm (φ 12.8mm)				11.3mm × 6.0mm (φ 12.8mm)			
Operation Range	Iris	F1.4 - F16C			Iris	F1.8 - F16C			Iris	F2.0 - F16C		
	Focus	1m - Inf.			Focus	1m - Inf.			Focus	2m - Inf.		
Control	Iris	Manual			Iris	Manual			Iris	Manual		
	Focus	Manual			Focus	Manual			Focus	Manual		
Angle of View	D	24.9°	18.2°	13.7°	D	17.4°	12.7°	9.5°	D	12.2°	8.9°	6.7°
	H	2/3" 20.0°	1/2" 14.6°	1/3" 11.0°	H	2/3" 13.9°	1/2" 10.2°	1/3" 7.6°	H	2/3" 9.8°	1/2" 7.1°	1/3" 5.3°
	V	15.1°	11.0°	8.2°	V	10.5°	7.6°	5.7°	V	7.3°	5.3°	4.0°
CMV2000 11,264 × 5,984 (φ 12.75)	D	28.6°			D	20.0°			D	14.1°		
	H	25.4°			H	17.8°			H	12.5°		
	V	13.7°			V	9.5°			V	6.7°		
Operating Temperature	-10°C - +50°C				-10°C - +50°C				-10°C - +50°C			
Back Focal Length	10.8mm				14.3mm				14.8mm			
Flange Back Length	17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount			
Filter Size	M40.5 P=0.5mm				M40.5 P=0.5mm				M40.5 P=0.5mm			
Dimensions	φ46.5mm × 53.9mm				φ46.5mm × 53.2mm				φ46.5mm × 53.9mm			
Weight	154g				149g				155g			

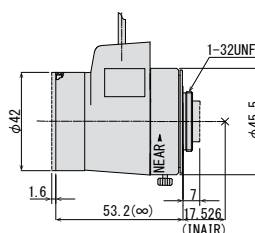
- Suitable for 2/3" 5MP sensors
- Compact design
- Usable lineup for ANPR, 25mm, 35mm, and 50mm
- Each model available in manual iris and P-iris
- Minimizes focus shift between visible light to NIR
- High spectral transmittance between visible light to NIR



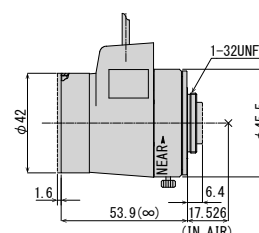
### MG2514KC-MPIR



### MG3518KC-MPIR



### MG5020KC-MPIR



Focal Length	25mm				35mm				50mm				
Max. Aperture Ratio	1:1.4				1:1.8				1:2.0				
Max. Image Format	11.3mm × 6.0mm (φ 12.8mm)				11.3mm × 6.0mm (φ 12.8mm)				11.3mm × 6.0mm (φ 12.8mm)				
Operation Range	Iris	F1.4 - F16C				F1.8 - F16C				F2.0 - F16C			
	Focus	1m - Inf.				1m - Inf.				2m - Inf.			
Control	Iris	Stepping Motor				Stepping Motor				Stepping Motor			
	Focus	Manual				Manual				Manual			
Angle of View	D	24.9°	18.2°	13.7°	17.4°	12.7°	9.5°	12.2°	8.9°	6.7°			
	H	2/3" 20.0°	1/2" 14.6°	1/3" 11.0°	2/3" 13.9°	1/2" 10.2°	1/3" 7.6°	2/3" 9.8°	1/2" 7.1°	1/3" 5.3°			
	V	15.1°	11.0°	8.2°	10.5°	7.6°	5.7°	7.3°	5.3°	4.0°			
CMV2000 11.264 × 5.984 (φ 12.75)	D	28.6°				20.0°				14.1°			
	H	25.4°				17.8°				12.5°			
	V	13.7°				9.5°				6.7°			
Operating Temperature	-10°C ~ +50°C				-10°C ~ +50°C				-10°C ~ +50°C				

Back Focal Length	10.8mm	14.3mm	14.8mm
Flange Back Length	17.526mm	17.526mm	17.526mm
Mount	C-Mount	C-Mount	C-Mount
Filter Size	M40.5 P=0.5mm	M40.5 P=0.5mm	M40.5 P=0.5mm
Dimensions	φ42mm × 58.6mm × 53.9mm	φ42mm × 56.8mm × 53.2 mm	φ42mm × 56.8mm × 53.9mm
Weight	128g	123g	129g

## 1 MEGAPIXEL BOARD LENS

**1/2" 1MP FIX BOARD**



H0320KP

H0624KP

## 3 MEGAPIXEL ULTRA-LOW DISTORTION BOARD LENS

**1/1.8" 3MP FIX BOARD**



E1220KV

E2520KV

Model Name	H0320KP		H0624KP		H0924KP		H1620KP		H2520KP		E1220KV		E1620KV		E2520KV		
Format	1/2"		1/2"		1/2"		1/2"		1/2"		1/1.8"		1/1.8"		1/1.8"		
Mount	M12																
Pitch	0.5																
Focal Length	3mm		6mm		9mm		16mm		25mm		12.0mm		16.0mm		25.0mm		
Aperture	F2.0		F2.4		F2.4		F2.0		F2.0		F2.0		F2.0		F2.0		
Optical Distortion	-37.5%		-9.0%		-1.6%		0.4%		1.0%		0.04%		-0.07%		0.02%		
Angle of view at Inf.	D	125.3°		72.5°		48.6°		27.9°		18.0°		39.5°		30.0°		19.5°	
	H	1/2"	104.3°	1/2"	59.1°	1/2"	39.6°	1/2"	22.6°	1/2"	14.5°	1/1.8"	32.1°	1/1.8"	24.3°	1/1.8"	15.7°
	V		80.5°		45.0°		30.1°		17.0°		10.9°		24.4°		18.4°		11.9°
	D	98.6°		55.6°		37.3°		21.2°		13.6°		36.8°		27.9°		18.1°	
	H	1/3"	80.5°	1/3"	45.0°	1/3"	30.1°	1/3"	17.0°	1/3"	10.9°	1/2"	29.8°	1/2"	22.6°	1/2"	14.6°
	V		61.3°		34.0°		22.7°		12.8°		8.2°		22.6°		17.0°		11.0°
	D	75.8°		42.3°		28.3°		16.0°		10.3°		28.1°		21.2°		13.7°	
	H	1/4"	61.3°	1/4"	34.0°	1/4"	22.7°	1/4"	12.8°	1/4"	8.2°	1/3"	22.6°	1/3"	17.0°	1/3"	11.0°
	V		46.3°		25.6°		17.1°		9.6°		6.2°		17.1°		12.8°		8.2°

\*Please contact us for lead-time as it is a made-to-order product.

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## 4K FISHEYE BOARD LENS

**1/1.7" 4K IR FIX FISHEYE**



E1628KRY

E1222KRY

## 5 MEGAPIXEL FISHEYE BOARD LENS

**1/2.5" 5MP IR FIX FISHEYE**



L1028KRW

L1028KDRW

Model Name	E1628KRY		E1222KRY		E1628KF3RY*		E1222KF3RY*		E2328KRY		L1028KRW		L1028KDRW		
Format	1/1.7"		1/1.7"		1/1.7"		1/1.7"		1/1.8"		1/2.5"		1/2.5"		
Mount	M12														
Pitch	0.5														
Focal Length	1.6mm		1.2mm		1.6mm		1.2mm		2.3mm		1.05mm		1.05mm		
Aperture	F2.8		F2.2		F2.8		F2.2		F2.8		F2.8		F2.8		
Angle of view at Inf.	D	190.0°		185.0°		190.0°		185.0°		-		180.0°		180.0°	
	H	1/1.7"	190.0°	1/1.7"	185.0°	1/1.7"	190.0°	1/1.7"	185.0°	1/1.8"	190.0°	1/2.5"	180.0°	1/2.5"	180.0°
	V										108.6°				
	D	190.0°		185.0°		190.0°		185.0°		-		180.0°		180.0°	
	H	1/3"	168.2°	1/3"	171.5°	1/3"	168.2°	1/3"	171.5°	1/2"	159.0°	1/3"	180.0°	1/3"	180.0°
	V		125.5°		139.5°		125.5°		139.5°		119.5°		163.2°		163.2°
	D	157.3°		164.2°		157.3°		164.2°		149.2°		180.0°		180.0°	
	H	1/4"	125.5°	1/4"	139.5°	1/4"	125.5°	1/4"	139.5°	1/3"	119.5°	1/4"	163.2°	1/4"	163.2°
	V		94.2°		110.3°		94.2°		110.3°		89.6°		130.2°		130.2°
	IRCF					○		○						○	

\*Please note E1628KF3RY and E1222KF3RY are produced to order.

\*Please contact us for lead-time as it is a made-to-order product.

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**EX1.5C**



**EX2C**



**VM100**



Description	1.5X Extender for C-mount	2X Extender for C-mount	Extension Tube Kit 40, 20, 10, 5, 1, 0.5mm
Application	Attached between lens and camera - Makes focal length 1.5X	Attached between lens and camera - Makes focal length 2X	Attached between lens and camera - Reduces minimum focusing distance

**VM400**



**M55-0.75X**



**M55-2.0X**



Description	5mm Adapter Ring	Rear converter 0.75X (Designed for TEC-M55)	Rear converter 2.0X (Designed for TEC-M55)
Application	Attached between lens and camera - Adapts C-mount lens to CS-mount camera	Makes focal length 0.75X	Makes focal length 2.0X

**VM0811**



**VM0810**



**ZM0810**



Description	Filter holder for V0828-MPY2 (M72 P=0.75)	Filter holder for V0828-MPY2 (M67 P=0.75)	Filter holder for V0826-MPZ (M82 P=0.75)
Application	Attached between filter and lens for 1.1" sensor camera	Attached between filter and lens for 1" sensor camera	Attached between filter and lens for 1" sensor camera

**VM0918**



**TM1243**



**TM1643**



Description	Filter holder for EG6Z0915 series (M67 P=0.75)	Filter holder for F1228-MPT (M72 P=0.75)	Filter holder for F1628-MPT (M52 P=0.75)
Application	Attached between filter and lens	Attached between filter and lens for 1.4" sensor camera	Attached between filter and lens for 1.4" sensor camera



## 4K/5MP Varifocal Lens

- Ultra-high-resolution 5MP and 8MP (4K) models
- High performance from center to the edge, ideal for multi-ROI
- Day/Night design, minimizing focus shift at NIR
- Various focal lengths from wide 2.8mm to telephoto 50mm
- F1.5 flat F-stop from wide to telephoto (EG6Z0915)

Model Name	Format	Mount	Focal Length	F No.	Type	M.O.D	Front Filter Thread	Dimensions (mm)			Weight
								φ	H	D	
E3Z3915CS-MPWIR	1/1.8"	CS	3.9mm - 10mm	F1.5 - F16C	Manual	0.8m	-	43	-	59	69g
EG3Z3915FCS-MPWIR	1/1.8"	CS	3.9mm - 10mm	F1.5 - F360C	DC	0.8m	-	40	49	59	72g
EG3Z3915KCS-MPWIR	1/1.8"	CS	3.9mm - 10mm	F1.5 - F16C	P-iris	0.8m	-	40	49	59	71g
EG3Z3915TCS-MPWIR	1/1.8"	CS	3.9mm - 10mm	F1.5 - F16C	i-CS	0.8m	-	54	67	59	109g
EG6Z0915FCS-MPWIR	1/1.8"	CS	9mm - 50mm	F1.5 - F360C	DC	3.0m	M67 P=0.75	68	83	104	279g
EG6Z0915KCS-MPWIR	1/1.8"	CS	9mm - 50mm	F1.5 - F16C	P-iris	3.0m	M67 P=0.75	68	83	104	278g
EG6Z0915TCS-MPWIR	1/1.8"	CS	9mm - 50mm	F1.5 - F16C	i-CS	3.0m	-	77	84	104	291g
A3Z2812CS-MPWIR	1/2.7"	CS	2.8mm - 8.5mm	F1.2 - F16C	Manual	0.5m	-	43	-	59	64g
AG3Z2812FCS-MPWIR	1/2.7"	CS	2.8mm - 8.5mm	F1.2 - F360C	DC	0.5m	-	40	49	59	67g
AG3Z2812KCS-MPWIR	1/2.7"	CS	2.8mm - 8.5mm	F1.2 - F16C	P-iris	0.5m	-	40	49	59	66g
AG3Z2812TCS-MPWIR	1/2.7"	CS	2.8mm - 8.5mm	F1.2 - F16C	i-CS	0.5m	-	55	68	59	103g



## 3MP Varifocal Lens

- 1/2.7" 3MP
- Compact design
- Various focal lengths, from wide to telephoto
- Each model available in manual iris, DC iris, and P-iris

Model Name	Format	Mount	Focal Length	F No.	Type	M.O.D	Front Filter Thread	Dimensions (mm)			Weight
								φ	H	D	
A4Z2812CS-MPIR	1/2.7"	CS	2.8mm - 10mm	F1.2 - F16C	Manual	0.5m	-	43.6	-	59	63g
AG4Z2812FCS-MPIR	1/2.7"	CS	2.8mm - 10mm	F1.2 - F360C	DC	0.5m	-	40	49	59	66g
AG4Z2812KCS-MPIR	1/2.7"	CS	2.8mm - 10mm	F1.2 - F16C	P-iris	0.5m	-	40	49	59	65g
A6Z8516CS-MP	1/2.7"	CS	8.5mm - 50mm	F1.6 - F16C	Manual	1.0m	M40.5 P=0.5mm	49	-	58	77g
AG6Z8516FCS-MP	1/2.7"	CS	8.5mm - 50mm	F1.6 - F360C	DC	1.0m	M40.5 P=0.5mm	46	60	58	80g
AG6Z8516KCS-MP	1/2.7"	CS	8.5mm - 50mm	F1.6 - F16C	P-iris	1.0m	M40.5 P=0.5mm	46	60	58	78g
A4Z1214CS-MPIR	1/2.7"	CS	12.5mm - 50mm	F1.4 - F16C	Manual	1.0m	M40.5 P=0.5mm	49	-	58	80g
AG4Z1214FCS-MPIR	1/2.7"	CS	12.5mm - 50mm	F1.4 - F360C	DC	1.0m	M40.5 P=0.5mm	46	59.3	58	83g
AG4Z1214KCS-MPIR	1/2.7"	CS	12.5mm - 50mm	F1.4 - F16C	P-iris	1.0m	M40.5 P=0.5mm	40	49	59	81g



## ViSWIR Zoom

- Dedicated design for next generation Visible+SWIR image sensor (IMX990/IMX991)
- Special optical design for 400-1700nm, SWIR band
- Reflex zoom for super-telephoto spec
- Adjustable back-focus mechanism, Compact & Light weight body.
- ※ Please contact us for a lead-time as it is a made-to-order product

Model Name	Format	Mount	Focal Length	F No.	Type	M.O.D	Front Filter Thread	Dimensions (mm)			Weight
								φ	H	D	
E3Z5247P-MPSW	1/1.8"	C	520mm-1300mm	F4.7	Fixed	25m	-	130	134	276	2500g



## HD Zoom Lens

- 2/3", 1/1.8" available for full HD megapixel sensors
- Preset function and filter thread available
- Suitable for surveillance applications
- ※ Please contact us for a lead time as it is a made-to-order product

Model Name	Format	Mount	Focal Length	F No.	Type	M.O.D	Front Filter Thread	Dimensions (mm)			Weight
								φ	H	D	
E24Z1018DC-MP	1/1.8"	C	10mm - 240mm	F1.8 - F500C	DC	4.0m	M77 P=1.0mm	101	102	198	2060g
E24Z1018PDC-MPIR	1/1.8"	C	10mm - 240mm	F1.8 - F500C	DC/Preset	4.0m	M77 P=1.0mm	101	102	204	2140g
M24Z1527MP-MP	2/3"	C	15mm - 360mm	F2.7 - F22C	3 Motor/Preset	5.0m	M77 P=1.0mm	101	102.4	221	2240g
M24Z1527PDC-MP	2/3"	C	15mm - 360mm	F2.7 - F500C	DC/Preset	5.0m	M77 P=1.0mm	101	102.4	221	2180g
M24Z2138PDC-MP	2/3"	C	21mm - 500mm	F3.8 - F500C	DC/Preset	5.0m	M77 P=1.0mm	101	102.4	237	2240g



## Direct Mount Varifocal Lens

- Resolution up to 8MP supported
- Various image format options available from 1/3" to 1/1.2"
- Newly released compact varifocal lens for IMX485 (NSF2.3Z5915BHRW)
- Newly released compact varifocal lens for IMX415 (TSF2.9Z2813BHRW)
- ※ Please contact us for a lead time as it is a made-to-order product.

## 1. Calculation of Working Distance (WD)

Distance from lens to object (WD) is calculated by putting the size of a camera's imaging device, focal length, and an object size into the following formula.

<Formula>  
 $WD = H1 + y \times f / y'$

[ Ex ]  
 When 2/3" camera with M2514-MP2 films an object whose vertical size is 120 mm.  
 f : 25 mm  
 H1 : 23.8mm  
 y : 120mm  
 y' : 6.6mm

Distance from lens to object=  
 $WD = 23.8 + 120 \times 25 / 6.6 = 478.35\text{mm}$

## 2. Calculation of Focal Length

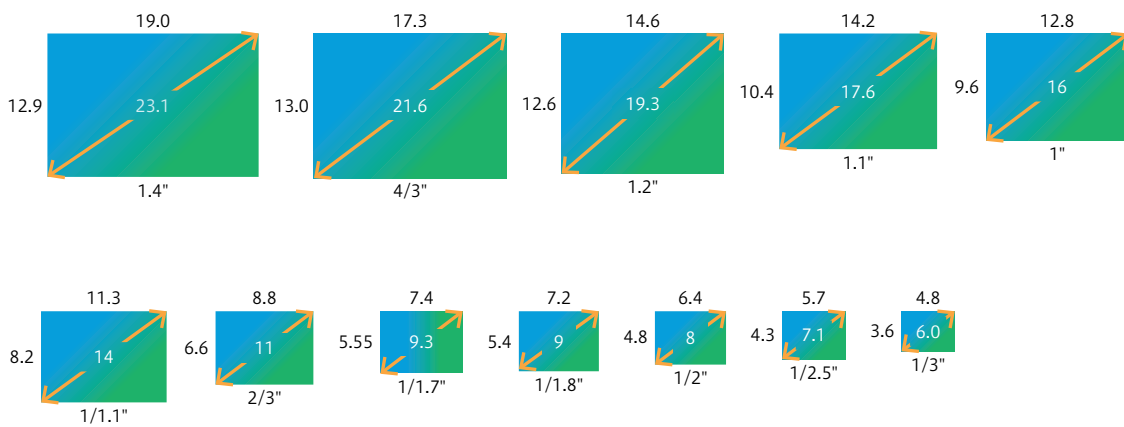
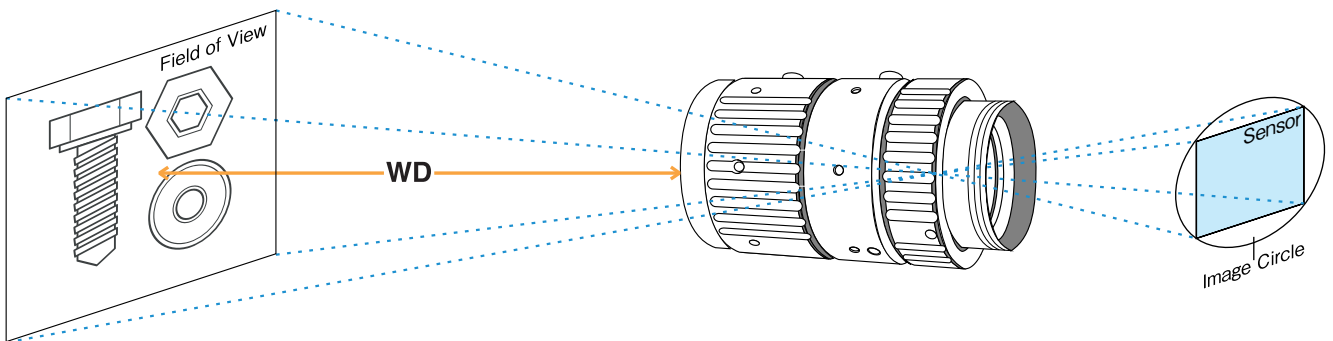
When choosing size of a camera's imaging device, the object size and WD are fixed, focal length can be calculated by the following formula. You can select appropriate lens from the focal length.

<Formula>  
 $f = y' \times WD / y$

f = focal length of lens  
 WD = distance from lens to object  
 H1 : first principal point  
 y : vertical size of object  
 y' : vertical size of camera's imaging device

## CAMERA FORMAT

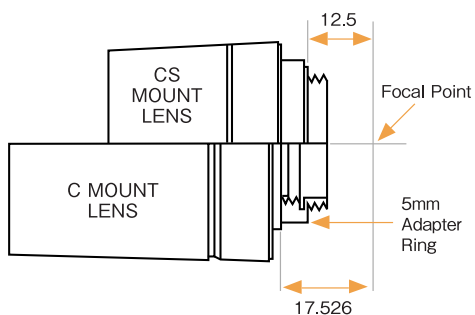
The size of the camera's imaging device also affects the angle of view, with the smaller devices creating narrower angles of view when used on the same lens. The format of the lens, however, is irrelevant to the angle of view; it merely needs to project an image that will cover the device, e.g., the same format as the camera or larger. This also means that 1/3" cameras can utilize the entire range of lenses from 1/3" to 2/3", with a 1/3" 8mm lens giving the same angle as a 2/3" 8mm lens. The latter combination also provides increased resolution and picture quality as only the center of the lens is being utilized, where the optics can be ground more accurately.





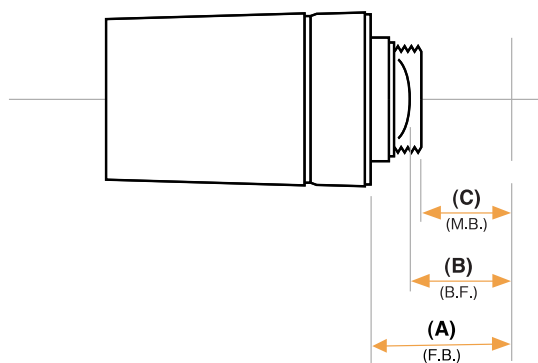
## C OR CS MOUNT

Modern cameras and lenses are generally CS mount. With CS mount cameras, both types of lenses can be used, but the C mount lens requires a 5mm ring (VM400) to be fitted between the camera and lens to achieve a focused image. With C mount cameras, it is impossible to use CS mount lenses as it is not physically possible to get the lens close enough to the sensor to achieve a focused image.



	C mount lens	CS mount lens
C mount camera	○	×
CS mount camera	needs 5mm ring	○

## FLANGE BACK, BACK FOCAL LENGTH, AND MECHANICAL BACK FOCAL LENGTH



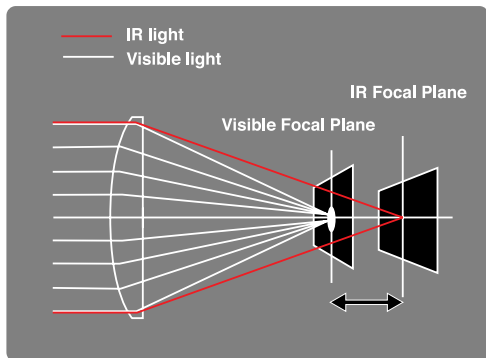
(A) Flange Back  
Distance between the lens flange and focal plane

(B) Back Focal Length  
Distance between the surface of the rear lens element and focal plane

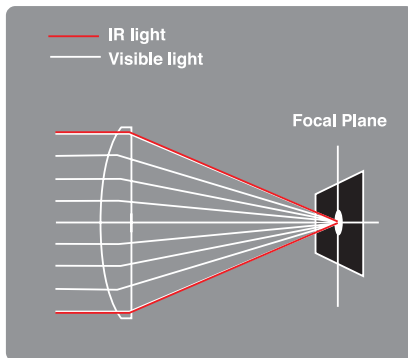
(C) Mechanical Back Focal Length  
Distance between the surface of the lens frame and focal plane

## MECHANISM AND ADVANTAGEOUS EFFECT OF IR LENS

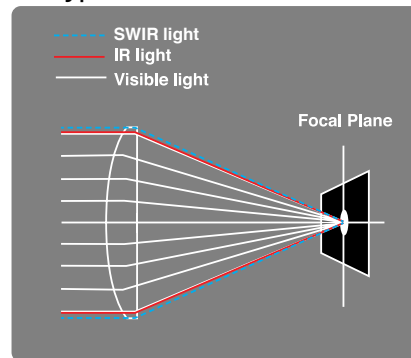
### NON IR LENS



### IR LENS



### Hyper-APO LENS



Day/Night cameras typically operate in the near-infrared/infrared zones at night, making the image "out of focus" and unsuitable if used with a conventional lens. Computer has developed IR Lenses that utilize a unique optical glass material that minimizes light dispersion. As a result, refocusing is not required when used with infrared lighting. The lens is manufactured with a special ED glass (extra dispersion) which does not widely disperse light of different wavelengths and has a "special coating." This combination allows the lens to deliver perfect focus under normal and IR illumination by transmitting more light to the infrared region.












**H0514-MP2/H0514-VSW (f=5mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			1/2"		1/3"	
			H	V	H	V
900	0.006	-	1179.8	882.3	882.3	657.2
800	0.006	-	1051.0	786.0	786.0	585.4
700	0.007	-	922.3	689.6	689.6	513.6
600	0.008	-	793.5	593.2	593.2	441.8
500	0.010	-	664.7	496.9	496.9	370.0
450	0.011	-	600.3	448.7	448.7	334.1
400	0.012	-	535.9	400.5	400.5	298.2
350	0.014	-	471.5	352.3	352.3	262.3
300	0.016	-	407.1	304.1	304.1	226.4
250	0.019	-	342.7	255.9	255.9	190.5
200	0.024	-	278.4	207.8	207.8	154.6
150	0.031	-	214.0	159.6	159.6	118.7
100	0.044	-	149.6	111.4	111.4	82.8

**M0814-MP2/M0814-VSW (f=8mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.009	-	976.8	731.5	709.1	530.1
800	0.010	-	869.8	651.3	631.4	471.9
700	0.012	-	762.8	571.1	553.6	413.8
600	0.014	-	655.8	490.9	475.8	355.6
500	0.016	-	548.8	410.7	398.1	297.5
450	0.018	-	495.3	370.6	359.2	268.4
400	0.020	-	441.8	330.5	320.3	239.3
350	0.023	-	388.3	290.4	281.4	210.2
300	0.027	-	334.8	250.3	242.6	181.2
250	0.032	-	281.2	210.2	203.7	152.1
200	0.039	-	227.7	170.0	164.8	123.0
150	0.052	-	174.2	129.9	125.9	93.9
100	0.075	-	120.7	89.8	87.0	64.9

**M1214-MP2/M1214-VSW (f=12mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.013	-	672.7	504.0	488.7	366.0
800	0.015	-	599.1	448.9	435.2	325.9
700	0.017	-	525.6	393.7	381.7	285.8
600	0.020	-	452.1	338.5	328.2	245.7
500	0.023	-	378.5	283.4	274.7	205.7
450	0.026	-	341.7	255.8	248.0	185.6
400	0.029	-	305.0	228.2	221.2	165.6
350	0.033	-	268.2	200.6	194.5	145.6
300	0.038	-	231.4	173.0	167.7	125.5
250	0.046	-	194.7	145.5	141.0	105.5
200	0.056	-	157.9	117.9	114.3	85.4
150	0.074	-	121.1	90.3	87.5	65.4
100	0.106	0.5	84.3	62.7	60.8	45.4

**M1614-MP2/M1614-VSW (f=16mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.018	-	503.2	376.8	365.4	273.7
800	0.020	-	448.0	335.5	325.3	243.6
700	0.023	-	392.8	294.1	285.2	213.6
600	0.026	-	337.6	252.8	245.1	183.5
500	0.031	-	282.5	211.4	204.9	153.5
450	0.035	-	254.9	190.7	184.9	138.4
400	0.039	-	227.3	170.0	164.8	123.4
350	0.044	-	199.7	149.4	144.8	108.4
300	0.052	-	172.1	128.7	124.7	93.4
250	0.061	-	144.5	108.0	104.7	78.3
200	0.076	-	116.9	87.3	84.6	63.3
150	0.100	0.5	89.3	66.6	64.6	48.3
100	0.145	1.0	61.7	45.9	44.5	33.2

**M2514-MP2/M2514-VSW (f=25mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.028	-	317.5	237.7	230.5	172.7
800	0.031	-	282.3	211.3	204.8	153.5
700	0.036	-	247.0	184.9	179.2	134.3
600	0.042	-	211.8	158.4	153.6	115.1
500	0.050	-	176.5	132.0	128.0	95.9
450	0.056	-	158.9	118.8	115.2	86.3
400	0.063	-	141.2	105.6	102.4	76.7
350	0.072	-	123.6	92.4	89.6	67.1
300	0.084	-	106.0	79.2	76.8	57.5
250	0.100	-	88.3	66.0	63.9	47.9
200	0.126	-	70.7	52.7	51.1	38.3
150	0.168	-	53.0	39.5	38.3	28.7
100	0.253	1.5	35.3	26.3	25.5	19.0

**M3514-MP/M3514-VSW (f=35mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.037	-	236.2	176.9	171.5	128.6
800	0.042	-	210.3	157.5	152.7	114.5
700	0.048	-	184.3	138.1	133.9	100.3
600	0.056	-	158.4	118.6	115.0	86.2
500	0.067	-	132.5	99.2	96.2	72.1
450	0.074	-	119.6	89.5	86.8	65.0
400	0.083	-	106.6	79.8	77.4	58.0
350	0.094	-	93.7	70.1	67.9	50.9
300	0.110	-	80.7	60.4	58.5	43.8
250	0.131	1.0	67.7	50.6	49.1	36.8
200	0.162	2.0	54.7	40.9	39.7	29.7
150	0.213	5.0	41.8	31.2	30.2	22.6
100	0.310	7.0	28.7	21.4	20.8	15.5

**M5018-MP2/M5018-VSW (f=50mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.055	-	160.8	120.4	116.7	87.5
800	0.062	-	142.4	106.6	103.4	77.5
700	0.071	-	124.0	92.9	90.0	67.5
600	0.084	-	105.6	79.1	76.7	57.5
500	0.101	-	87.3	65.3	63.3	47.5
450	0.113	0.5	78.1	58.4	56.7	42.5
400	0.128	1.5	68.9	51.6	50.0	37.5
350	0.148	2.5	59.7	44.7	43.3	32.5
300	0.175	3.5	50.5	37.8	36.6	27.4
250	0.214	5.5	41.3	30.9	30.0	22.4
200	0.276	8.5	32.1	24.0	23.3	17.4
150	0.387	14.0	22.9	17.1	16.6	12.4
100	0.647	26.5	13.6	10.2	9.9	7.4

**M7528-MP (f=75mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)			
			2/3"		1/2"	
			H	V	H	V
900	0.077	-	113.8	85.4	82.8	62.1
800	0.086	-	101.7	76.3	74.0	55.5
700	0.098	-	89.6	67.2	65.2	48.9
600	0.114	-	77.6	58.1	56.4	42.3
500	0.135	-	65.5	49.1	47.6	35.7
450	0.148	-	59.4	44.5	43.2	32.4
400	0.165	-	53.4	40.0	38.8	29.1
350	0.187	-	47.3	35.4	34.4	25.8
300	0.214	-	41.3	30.9	30.0	22.5
250	0.251	5.0	35.2	26.4	25.6	19.1
200	0.304	7.0	29.2	21.8	21.2	15.8
150	0.384	13.0	23.1	17.3	16.8	12.5
100	0.522	23.0	17.1	12.7	12.3	9.2







## TEC-V Series / TEC-M Series

**TEC-V0345165MPY-WI**

Field of View	
1.1"	41.1 × 30.1mm
1"	38.3 × 25.2mm
2/3"	25.5 × 19.1mm
1/1.8"	20.9 × 15.4mm
1/2"	18.6 × 13.9mm

**TEC-V0565MPW**

Field of View	
1"	25.6 × 19.2mm
2/3"	17.6 × 13.2mm
1/1.8"	14.4 × 10.8mm
1/2"	12.8 × 9.6mm

**TEC-V1065MPW**

Field of View	
1"	12.8 × 9.6mm
2/3"	8.8 × 6.6mm
1/1.8"	7.2 × 5.4mm
1/2"	6.4 × 4.8mm

**TEC-V05110MPW**

Field of View	
1"	25.6 × 19.2mm
2/3"	17.6 × 13.2mm
1/1.8"	14.4 × 10.8mm
1/2"	12.8 × 9.6mm

**TEC-V10110MPW**

Field of View	
1"	12.8 × 9.6mm
2/3"	8.8 × 6.6mm
1/1.8"	7.2 × 5.4mm
1/2"	6.4 × 4.8mm

**TEC-M0565MPC /  
TEC-M0565MP**

Field of View	
2/3"	17.6 × 13.2mm
1/1.8"	14.35 × 10.64mm
1/2"	12.8 × 9.6mm
1/3"	9.6 × 7.2mm

**TEC-M0865MPC /  
TEC-M0865MP**

Field of View	
2/3"	11 × 8.25mm
1/1.8"	8.97 × 6.65mm
1/2"	8 × 6mm
1/3"	6 × 4.5mm

**TEC-M1065MPC /  
TEC-M1065MP**

Field of View	
2/3"	8.8 × 6.6mm
1/1.8"	7.18 × 5.32mm
1/2"	6.4 × 4.8mm
1/3"	4.8 × 3.6mm

**TEC-M2065MPC /  
TEC-M2065MP**

Field of View	
2/3"	4.4 × 3.3mm
1/1.8"	3.59 × 2.66mm
1/2"	3.2 × 2.4mm
1/3"	2.4 × 1.8mm

**TEC-M4065MPC /  
TEC-M4065MP**

Field of View	
2/3"	2.2 × 1.65mm
1/1.8"	1.79 × 1.33mm
1/2"	1.6 × 1.2mm
1/3"	1.2 × 0.9mm

**TEC-M6065MPC /  
TEC-M6065MP**

Field of View	
2/3"	1.47 × 1.1mm
1/1.8"	1.2 × 0.89mm
1/2"	1.07 × 0.8mm
1/3"	0.8 × 0.6mm

**TEC-M03110MPC /  
TEC-M03110MP**

Field of View	
2/3"	29.3 × 22mm
1/1.8"	23.9 × 17.7mm
1/2"	21.3 × 16mm
1/3"	16 × 12mm

**TEC-M05110MPC /  
TEC-M05110MP**

Field of View	
2/3"	17.6 × 13.2mm
1/1.8"	14.35 × 10.64mm
1/2"	12.8 × 9.6mm
1/3"	9.6 × 7.2mm

**TEC-M08110MPC /  
TEC-M08110MP**

Field of View	
2/3"	11 × 8.25mm
1/1.8"	8.97 × 6.65mm
1/2"	8 × 6mm
1/3"	6 × 4.5mm

**TEC-M10110MPC /  
TEC-M10110MP**

Field of View	
2/3"	8.8 × 6.6mm
1/1.8"	7.18 × 5.32mm
1/2"	6.4 × 4.8mm
1/3"	4.8 × 3.6mm

**TEC-M15110MPC /  
TEC-M15110MP**

Field of View	
2/3"	5.87 × 4.4mm
1/1.8"	4.79 × 3.55mm
1/2"	4.27 × 3.2mm
1/3"	3.2 × 2.4mm

**TEC-M20110MPC /  
TEC-M20110MP**

Field of View	
2/3"	4.4 × 3.3mm
1/1.8"	3.59 × 2.66mm
1/2"	3.2 × 2.4mm
1/3"	2.4 × 1.8mm

**TEC-M30110MPC /  
TEC-M30110MP**

Field of View	
2/3"	2.93 × 2.2mm
1/1.8"	2.39 × 1.77mm
1/2"	2.13 × 1.6mm
1/3"	1.6 × 1.2mm

**TEC-M40110MPC /  
TEC-M40110MP**

Field of View	
2/3"	2.2 × 1.65mm
1/1.8"	1.79 × 1.33mm
1/2"	1.6 × 1.2mm
1/3"	1.2 × 0.9mm

**TEC-M60110MPC /  
TEC-M60110MP**

Field of View	
2/3"	1.5 × 1.1mm
1/1.8"	1.2 × 0.9mm
1/2"	1.1 × 0.8mm
1/3"	0.8 × 0.6mm

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2024.09