

# 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.

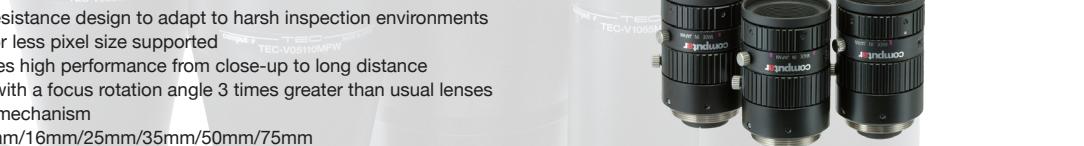
### LensConnect Series

- 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 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



### 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



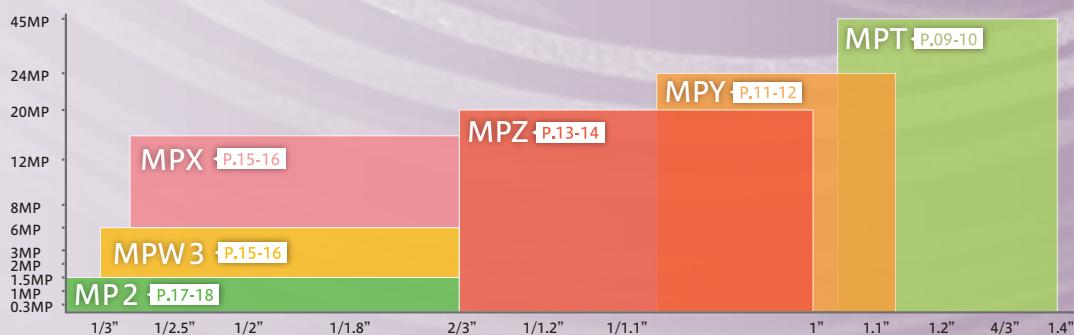
### ViSWIR Series

- 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



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**NEW** Lens  connect

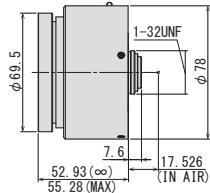


# VL-MPZ Series

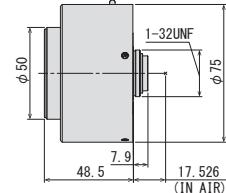
1" 20 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

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

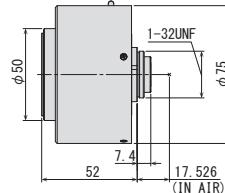
**VL0826U-MPZ**



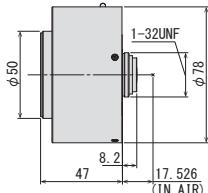
**VL1226U-MPZ**



**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					F2.0 - F16.0						
	Focus	0.1m - Inf.					0.1m - Inf.					0.1m - Inf.					0.15m - Inf.						
Control	Iris	Motorized					Motorized					Motorized					Motorized						
	Focus	Motorized					Motorized					Motorized					Motorized						
Angle of View	D	88.8°		68.6°		58.2°		67.4°		49.8°		41.5°		53.2°		38.1°		31.6°		35.5°		24.9°	20.5°
	H	1°		76.9°		2/3°		57.1°		1/1.8°		47.8°		1°		56.7°		2/3°		40.7°		1/1.8°	25.5°
	V	61.5°		44.2°		36.6°		44.1°		31.0°		25.5°		1°		33.6°		23.4°		19.2°		21.8°	15.1°
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-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%	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																						
Power mode	Bus powerd (500mA)																						
Connector	USB TypeA																						

\*When using filters, lens requires VM0810 (sold separately).

For more detail please refer to P.36

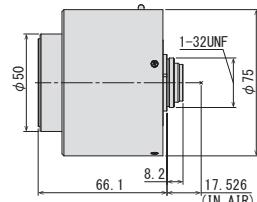
# 1" 20 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

- 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 ( $\varnothing 16\text{mm}$ )

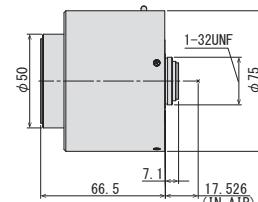
1"  
20MP  
MOTORIZED  
FIX  
FLOATING



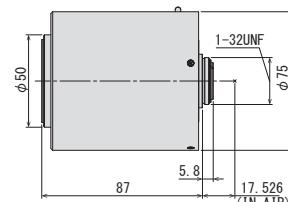
**VL3522U-MPZ**



**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( $\phi 16\text{mm}$ )					12.8mm × 9.6mm( $\phi 16\text{mm}$ )					12.8mm × 9.6mm( $\phi 16\text{mm}$ )						
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	25.8°	17.9°	14.7°	1/1.8"	11.8°	18.2°	12.6°	10.3°	1/1.8"	8.3°	12.2°	8.4°	6.9°	1/1.8"	5.5°		
	H	20.8°	2/3"	14.4°			14.6°	10.1°	8.3°			9.8°	6.7°	5.0°	4.1°			
	V	15.7°	10.8°	8.9°			11.0°	7.6°	6.2°			7.3°	5.0°					
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 powerd (500mA)					Bus powerd (500mA)					Bus powerd (500mA)						
Connector	USB TypeA					USB TypeA					USB TypeA						

**NEW** Lens  connect

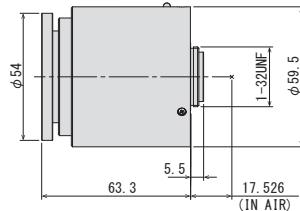
# DL-MPY Series

1/1.1" 12 MEGAPIXEL FIXED FOCAL REMOTE CONTROL LENS

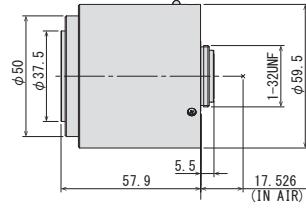


Model No.	Format	Focal Length	F No.	Working Distance	Weight
DL0828UC-MPY	1/1.1"	8mm	F2.8	0.1m-Inf.	178g
		12mm	F2.4	0.1m-Inf.	163g
		16mm	F2.3	0.11m-Inf.	173g
		25mm	F2.3	0.12m-Inf.	166g
		35mm	F2.5	0.16m-Inf.	160g
		50mm	F2.8	0.2m-Inf.	173g

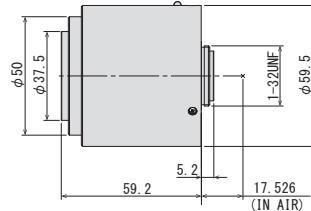
**DL0828UC-MPY**



**DL1224UC-MPY**



**DL1623UC-MPY**



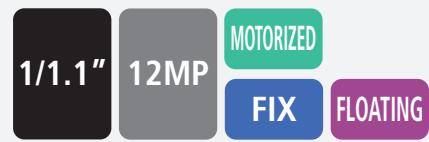
Focal Length	8mm					12mm					16mm								
Max. Image Format	φ 14.4mm					φ 14.4mm					φ 14.4mm								
Operation Range	Iris	F2.8 - F16.0					F2.4 - F16.0					F2.3 - F16.0							
	Focus	0.1m - Inf.					0.1m - Inf.					0.11m - Inf.							
Control	Iris	Motorized					Motorized					Motorized							
	Focus	Motorized					Motorized					Motorized							
Angle of View	D	1/1.1"	80.4°	2/3"	68.3°	1/1.8"	58.1°	1/1.1"	60.2°	2/3"	49.7°	1/1.8"	41.5°	1/1.1"	47.0°	2/3"	38.2°	1/1.8"	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							

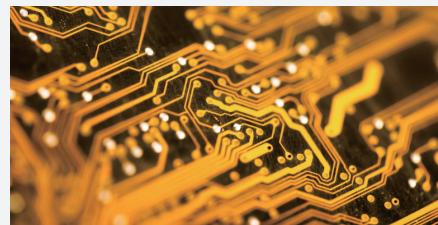
Control Interface	USB2.0					USB2.0					USB2.0							
Power mode	Bus powerd (500mA)					Bus powerd (500mA)					Bus powerd (500mA)							
Connector	USB TypeA					USB TypeA					USB TypeA							

# 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



Remote adjustment in out-of-reach places

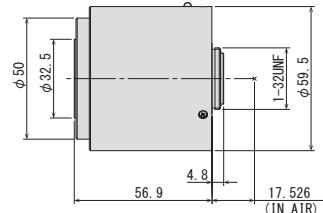


Make precise adjustments to lenses after installation

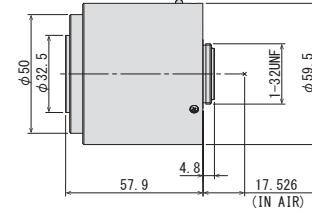


Easily change the focus point for workpieces at different heights

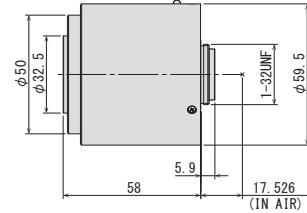
**DL2523UC-MPY**



**DL3525UC-MPY**



**DL5028UC-MPY**



Focal Length	25mm					35mm					50mm							
Max. Image Format	$\phi 14.4\text{mm}$					$\phi 14.4\text{mm}$					$\phi 14.4\text{mm}$							
Operation Range	Iris	F2.3 - F16.0					F2.5 - F16.0					F2.8 - F16.0						
	Focus	0.12m - Inf.					0.16m - Inf.					0.2m - Inf.						
Control	Iris	Motorized					Motorized					Motorized						
	Focus	Motorized					Motorized					Motorized						
Angle of View	D	31.0°	24.8°	20.4°	1/1.1"	22.5°	17.9°	14.7°	1/1.1"	16.3°	12.9°	10.6°	1/1.1"	13.2°	2/3"	10.4°	1/1.8"	8.5°
	H	25.3°	20.0°	16.4°		18.2°	14.3°	11.7°		9.7°	7.8°	6.4°						
	V	18.7°	15.1°	12.3°		13.4°	10.8°	8.8°		7.8°	6.4°	5.9°						
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 powerd (500mA)					Bus powerd (500mA)					Bus powerd (500mA)				
Connector	USB TypeA					USB TypeA					USB TypeA				

**NEW** Lens  connect

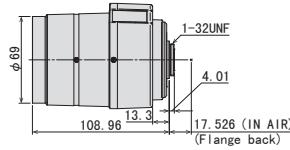


# Vari focal Series

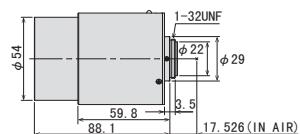
HIGH-RESOLUTION VARI-FOCAL REMOTE CONTROL LENS

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

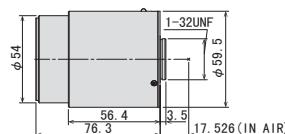
**VL6Z1626UC-MPYIR**



**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°	1/3"	42.0° ~ 14.0°					
	H		48.1° ~ 8.5°		48.1° ~ 8.5°		30.3° ~ 5.4°		28.8° ~ 14.7°		19.8° ~ 10.2°		16.2° ~ 8.3°		41.1° ~ 13.7°		33.9° ~ 11.3°					
	V		35.6° ~ 6.3°		25.7° ~ 4.5°		22.8° ~ 4.0°		21.6° ~ 11.1°		14.9° ~ 7.7°		12.2° ~ 6.3°		31.2° ~ 10.4°		25.6° ~ 8.5°					
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										

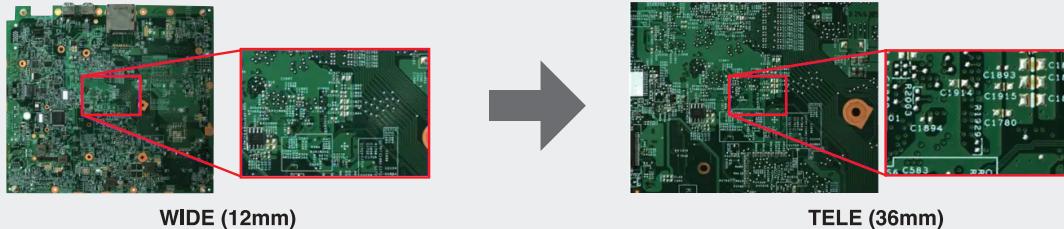
Back Focal Length	WIDE	13.9mm (In Air)	15.0 mm (in Air)	16.4 mm (In Air)
	TELE	13.9mm (In Air)	16.2 mm (in Air)	15.9 mm (In Air)
Flange Back Length		17.526mm (In Air)	17.526mm (In Air)	17.526mm (In Air)
Mount		C-Mount	C-Mount	C-Mount
Filter Size		M67 P=0.75mm	M52 P=0.75mm	M49 P=0.75mm
Tripod Screw		1/4-20UNC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

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

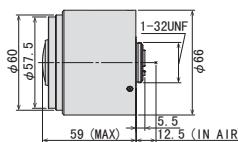
# HIGH-RESOLUTION VARI-FOCAL REMOTE CONTROL LENS

- 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"

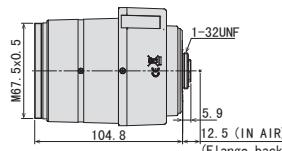
ML3Z1226UC-MPW



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	1/1.8"	1/3"	138.1° ~ 52.9°	1/2"	86.5° ~ 35.5°	1/1.8"	120.3° ~ 47.5°	1/3"	52.5° ~ 10.2°	1/2"	35.9° ~ 7.0°			
	H			104.8° ~ 42.2°		68.1° ~ 28.4°		92.9° ~ 37.9°		42.3° ~ 8.2°		28.8° ~ 5.7°			
	V			76.3° ~ 31.6°		50.5° ~ 21.3°		68.1° ~ 28.4°		32.4° ~ 6.3°		21.7° ~ 4.3°			
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	USB2.0
Power mode	Bus powerd (500mA)	Bus powerd (500mA)
Connector	USB TypeA	USB TypeA

\*Adapting for between 6mm and 10mm.

\*When using filters, lens requires VM0418 (sold separately).

(sold separately).  
For more detail please refer to P.36

\*When using filters, lens requires VM0418

When using filters, lens requires filter adapter (sold separately).  
For more detail please refer to P.36



NEW

# MPT Series

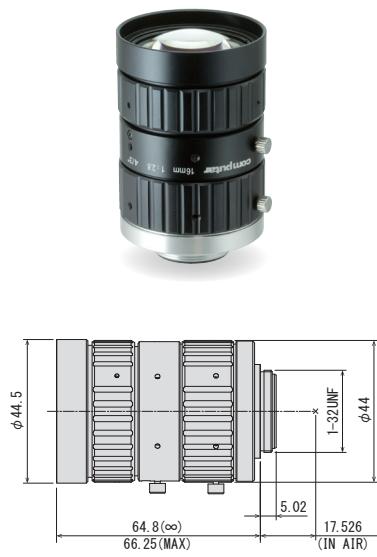
1.4" 45 MEGAPIXEL FIXED FOCAL LENS

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

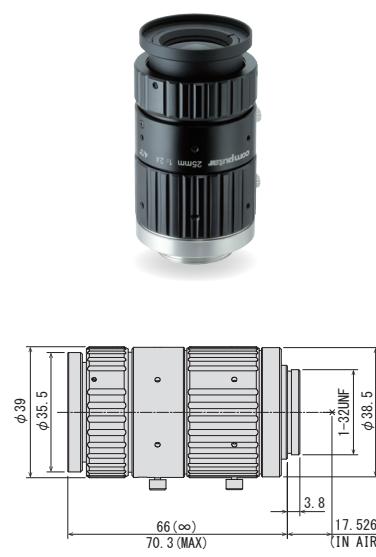
F1228-MPT



F1628-MPT



F2524-MPT



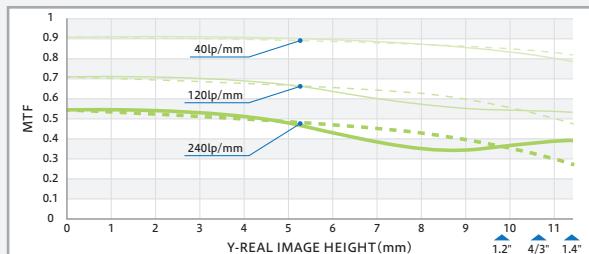
Focal Length	12mm					16mm					25mm				
Max. Aperture Ratio	1:2.8					1:2.8					1:2.4				
Image Circle Diameter	19.08mm × 13.03mm (φ 23.1mm)					19.08mm × 13.03mm (φ 23.1mm)					19.08mm × 13.03mm (φ 23.1mm)				
Operation Range	Iris F2.8 - F16.0					F2.8 - F16.0					F2.4 - F16.0				
Focus	0.15m - Inf.					0.15m - Inf.					0.15m - Inf.				
Control	Iris	Manual				Manual				Manual				Manual	
Angle of View	D	86.1°	76.6°	71.6°	60.4°	70.1°	60.4°	61.0°	48.1°	61.0°	46.9°	49.6°	41.9°	42.4°	39.0°
	H	1.4"	1.2"	1.1"	1.1"	1.4"	1.2"	1.2"	1.1"	1.1"	1.1"	1.4"	1.2"	1.1"	31.8°
	V	56.2°	54.8°	46.1°	43.4°	42.2°	42.2°	35.2°	29.3°	29.3°	28.5°	28.5°	28.5°	28.5°	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							
Dimensions	φ75mm × 66.1mm (with TM-1243)					φ54mm × 66.4mm (with TM-1643)					φ39mm × 66mm							
Weight	205g					187g					152g							

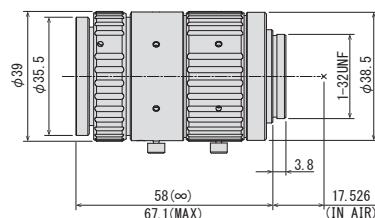
\*When using filters, lens requires TM-1243(for 12mm)/TM-1643(for 16mm) (sold separately.) For more detail, please refer to P.36.

- 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

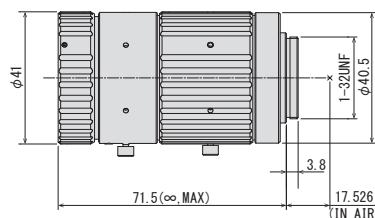
1.4" 45MP MANUAL  
FIX FLOATING



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	36.6°		1.2"	30.9°		1.1"	28.3°		1.4"	26.1°		1.2"	21.7°		1.1"	16.7°		1.1"	21.9°		1.1"	14.9°		1.1"	16.2°		1.1"	20.0°											
	H	30.6°			23.6°			23.0°			21.7°			16.7°			14.4°			14.9°			11.9°			14.4°			11.9°											
	V	21.1°			20.5°			16.9°			21.9°			16.7°			14.4°			14.9°			11.9°			14.4°			11.9°											
Operating Temperature	-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-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					14.2mm				
Flange Back Length	17.526mm					17.526mm					17.526mm				
Mount	C-Mount					C-Mount					C-Mount				
Filter Size	M34 P=0.5mm					M30.5 P=0.5mm					M30.5 P=0.5mm				
Dimensions	φ39mm × 58mm					φ41mm × 71.5mm					φ41mm × 71.5mm				
Weight	122g					151g					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



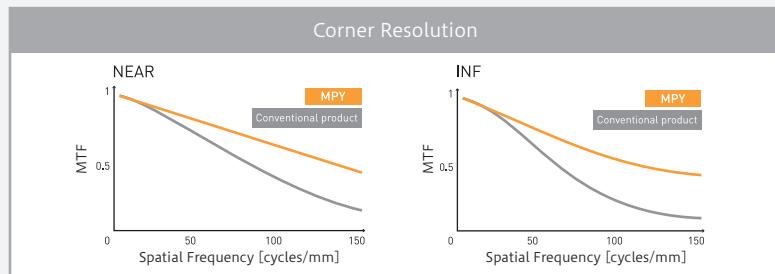
Focal Length	8mm				12mm				16mm							
Max. Aperture Ratio	1:2.8				1:2.8				1:2.8							
Max. Image Format	14.2mm × 10.4mm (Ø 17.6mm)				14.2mm × 10.4mm (Ø 17.6mm)				14.2mm × 10.4mm (Ø 17.6mm)							
Operation Range	Iris	F2.8 - F16.0			F2.8 - F16.0			F2.8 - F16.0								
	Focus	0.2m - Inf.			0.3m - Inf.				0.3m - Inf.							
Control	Iris	Manual			Manual			Manual								
	Focus	Manual			Manual				Manual							
Angle of View	D	93.9°	1"	89.3°	2/3"	69.0°	1.1"	71.1°	2/3"	66.4°	1.1"	57.9°	2/3"	53.4°	38.2°	
	H	83.0°		77.3°		57.3°		60.5°		55.5°		48.2°		43.9°		30.9°
	V	66.0°		61.7°		44.2°		46.2°		42.9°		30.1°		36.2°		23.4°
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)*				M40.5 P=0.5mm				M34.0 P=0.5mm									
	M67 P=0.75mm (with VM0810)*																	
Dimensions	Ø75mm × 54mm				Ø42.0mm × 36.1mm				Ø39.5mm × 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 P.36.

- Ultra-high-resolution lens, suitable for 1.1" 24 megapixel sensor
- Enlarged image circle up to Ø17.6mm (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

1.1" 24MP MANUAL  
FIX FLOATING



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 (Ø 17.6mm)					14.2mm × 10.4mm (Ø 17.6mm)					14.2mm × 10.4mm (Ø 17.6mm)								
Operation Range	Iris	F2.8 - F16.0					F2.8 - F16.0					F2.8 - F16.0							
	Focus	0.3m - Inf.					0.3m - Inf.					0.5m - Inf.							
Control	Iris	Manual					Manual					Manual							
	Focus	Manual					Manual					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	φ39.5mm × 34mm					φ39.5mm × 45.2mm					φ 39.5mm × 45.1mm							
Weight	78g					103g					107g							

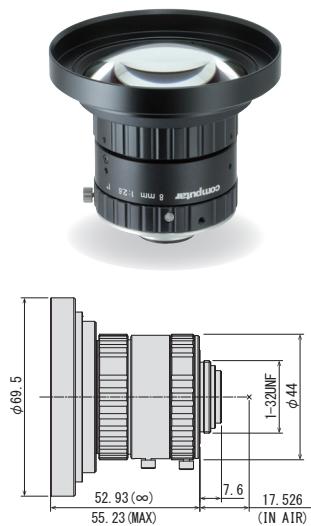


# MPZ Series

1" 20 MEGAPIXEL 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

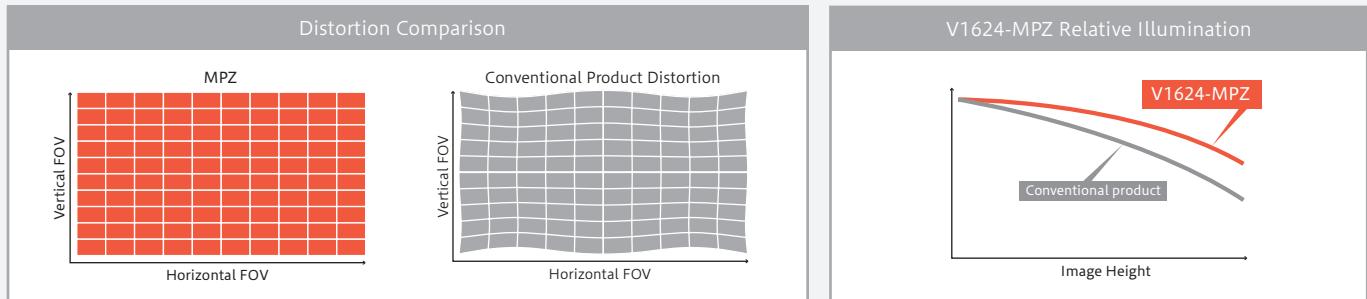


Focal Length	8mm					12mm					16mm							
Max. Aperture Ratio	1:2.6					1:2.6					1:2.4							
Max. Image Format	12.8mm × 9.6mm (φ 16mm)					12.8mm × 9.6mm (φ 16mm)					12.8mm × 9.6mm (φ 16mm)							
Operation Range	Iris F2.6 - F16.0					F2.6 - F16.0					F2.4 - F16.0							
Focus	0.1m - Inf.					0.1m - Inf.					0.1m - Inf.							
Control	Iris Manual					Manual					Manual							
Focus	Manual					Manual					Manual							
Angle of View	D	88.8°	68.6°	58.2°		67.4°	49.8°	41.5°		53.2°	38.1°	31.6°						
	H	1"	76.9°	57.1°	1/1.8"	56.7°	40.7°	33.7°	1/1.8"	43.8°	30.9°	25.5°	1/1.8"					
	V	61.5°		44.2°		44.1°	31.0°	25.5°		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							
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

1" 20MP MANUAL  
FIX FLOATING



V2520-MPZ



V3522-MPZ



V5024-MPZ



V7531-MPZ



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°	1/2.0"	1/1.8"	25.8°	17.9°	14.7°	18.2°	12.6°	10.3°	12.2°	8.4°	6.9°	1/2.0"	9.8°	2/3"	6.7°	1/1.8"	5.5°
	H	1"	28.8°	2/3"	20.0°	1/1.8"	16.4°	20.8°	14.4°	14.6°	2/3"	10.1°	1/1.8"	8.3°	11.0°	7.6°	7.3°	5.0°	1/1.8"	4.1°	
	V	21.8°	15.1°	12.4°			15.7°	10.8°	8.9°												
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									



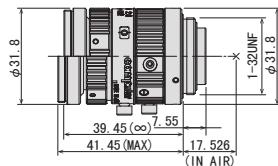
NEW

# MPX Series

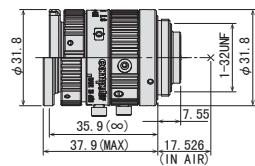
2/3" 16MEGAPIXEL FIXED FOCAL LENS

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		0.15m - Inf	83g
M3528-MPX		35mm			82g
M5028-MPX		50mm		0.2m - Inf	85g
M7538-MPX		75mm	F3.8 - F16	0.25m - Inf	89g

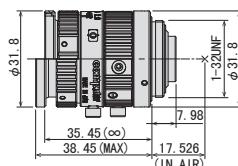
M0828-MPX



M1228-MPX



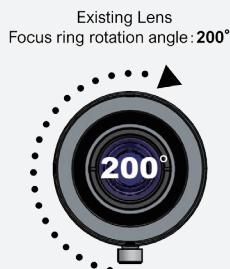
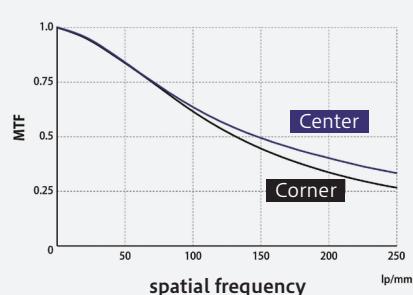
M1628-MPX



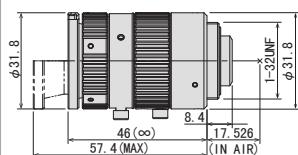
Focal Length	8mm					12mm					16mm							
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8							
Max. Image Format	$\phi$ 11.8mm					$\phi$ 11.8mm					$\phi$ 11.8mm							
Operation Range	Iris F2.8 - F16.0					F2.8 - F16.0					F2.8 - F16.0							
Focus	0.1m - Inf					0.1m - Inf					0.1m - Inf							
Control	Iris Manual					Manual					Manual							
Focus	Manual					Manual					Manual							
Angle of View	D	67.5°		52.0°		40.2°		49.2°		36.9°		28.1°		37.9°				
	H	2/3"	56.4°	1/2"	42.6°	1/3"	32.6°	2/3"	40.3°	29.9°	1/3"	22.7°	2/3"	30.8°	1/2"			
	V	43.9°		32.6°		24.7°		30.8°		22.7°		17.1°		23.4°	1/3"	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	$\phi$ 31.8mm x 39.45mm					$\phi$ 31.8mm x 35.9mm					$\phi$ 31.8mm x 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

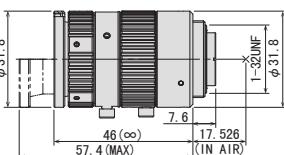
2/3" 16MP MANUAL  
FIX FLOATING



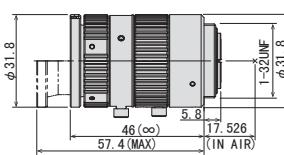
M2528-MPX



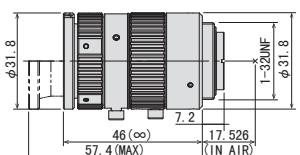
M3528-MPX



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°
	V	15.1°		11.0°			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								

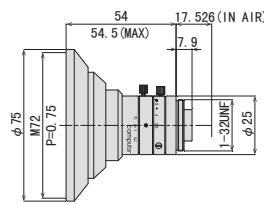


# MPW3 Series

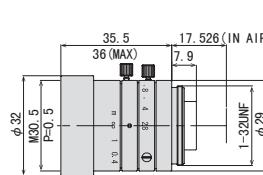
2/3" 6 MEGAPIXEL FIXED FOCAL LENGTH

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

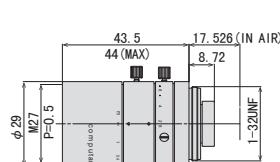
M0528-MPW3



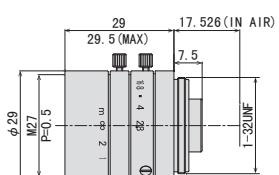
M0828-MPW3



M1228-MPW3



M1628-MPW3

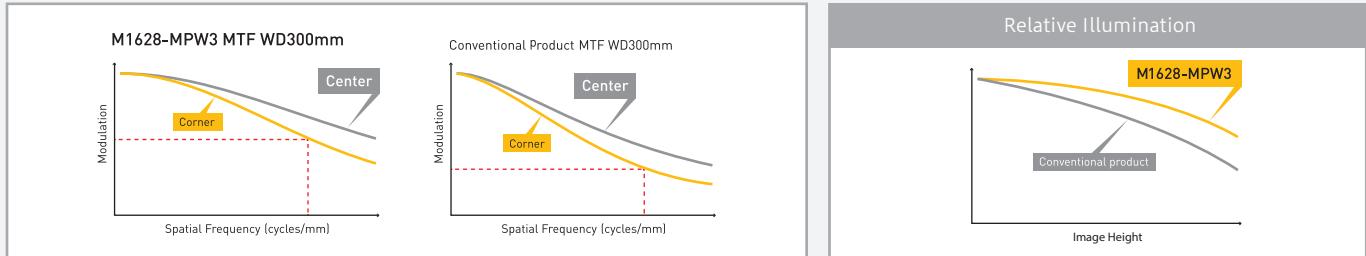
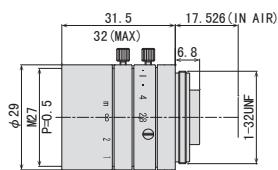
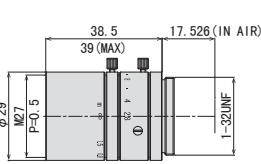
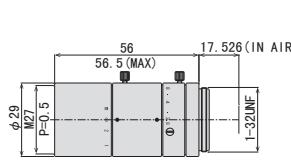
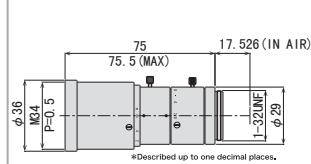


Focal Length		5mm				8mm				12mm				16mm				
Max. Aperture Ratio		1:2.8				1:2.8				1:2.8				1:2.8				
Max. Image Format		8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				8.8mm × 6.6mm (φ 11mm)				
Operation Range	Iris	F2.8 - F16.0				F2.8 - F16.0				F2.8 - F16.0				F2.8 - F16.0				
	Focus	0.1m - Inf.				0.1m - Inf.				0.1m - Inf.				0.25m - Inf.				
Control	Iris	Manual				Manual				Manual				Manual				
	Focus	Manual				Manual				Manual				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"	40.3°	1/1.8"	33.1°	1/2.5"	26.7°	2/3"	30.7°	1/1.8"	25.3°
	V	67.5°		58.3°	46.6°	44.2°	37.5°	29.4°		30.8°	26.0°	20.3°		23.3°	19.2°	1/2.5"	20.2°	
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																			
	Focus	0.2m - Inf.					0.25m - Inf.					0.3m - Inf.					0.4m - Inf.				
Control	Iris	Manual																			
	Focus	Manual																			
Angle of View	D	24.6°					20.3°					16.1°					17.9°				
	H	2/3" 19.9°					1/1.8" 16.3°					1/2.5" 13.0°					14.3°				
	V	15.0°					12.3°					9.8°					11.7°				
Operating Temperature		-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C					-10°C ~ +50°C				

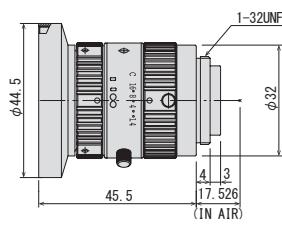
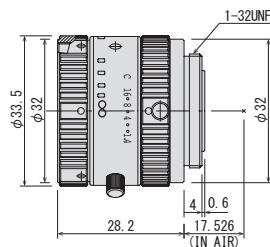
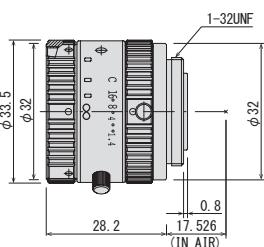
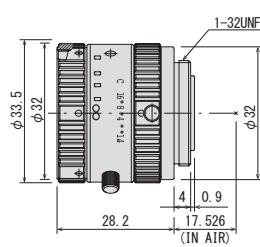
Optical Distortion	2/3"	0.77%	1/1.8"	0.49%	1/2.5"	0.29%	2/3"	0.06%	1/1.8"	0.04%	1/2.5"	0.03%	2/3"	0.00%	1/1.8"	0.00%	1/2.5"	0.00%	2/3"	0.33%	1/1.8"	0.21%	1/2.5"	0.12%	
Back Focal Length	11.5mm					18.0mm					26.3mm					14.6mm									
Flange Back Length	17.526mm					17.526mm					17.526mm					17.526mm									
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		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

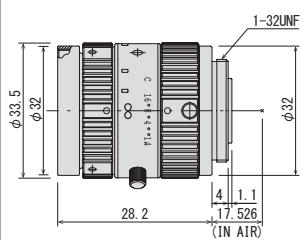
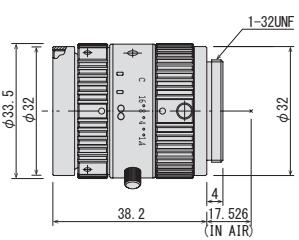
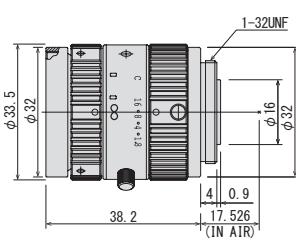
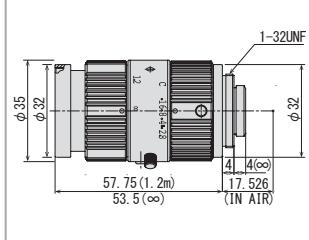
**H0514-MP2****M0814-MP2****M1214-MP2****M1614-MP2**

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				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	1/2"	76.7°	1/3"	62.3°	2/3"	67.1°	1/2"	51.9°	2/3"	49.2°	1/2"	37.0°	2/3"	38.0°	1/2"	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			

- 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"** **2/3"** **1.5MP** **MANUAL**  
**FIX**

**M2514-MP2****M3514-MP****M5018-MP2****M7528-MP**

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				F1.4 - F16C				F1.8 - F16C				F2.8 - F16C			
	Focus	0.3m - Inf.				0.3m - Inf.				0.5m - Inf.				0.3m - Inf. (※)			
Control	Iris	Manual				Manual				Manual				Manual			
	Focus	Manual				Manual				Manual				Manual			
Angle of View	D	2/3"	24.9°	1/2"	18.2°	2/3"	17.3°	1/2"	12.6°	2/3"	13.1°	1/2"	9.5°	2/3"	8.5°	1/2"	6.2°
	H		20.0°		14.6°		13.9°		10.1°		10.5°		7.6°		6.8°		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**

**VISIONAR** **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**



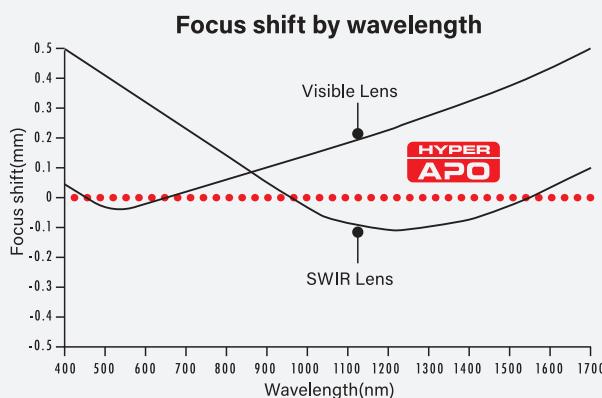
**M1618-APVSW2**



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	F1.8 - F16.0	F1.8 - F16.0									
	Focus 0.1m - Inf.	0.1m - Inf.	0.1m - Inf.									
Control	Iris Manual	Manual	Manual									
	Focus Manual	Manual	Manual									
Angle of View	D 68.7° H 56.6° V 46.7°	56.6° 1/1.8° 35.8°	53.2° 1/2° 34.7°	28.1° 1/4° 17.7°	50.4° 40.5° 32.9°	40.5° 32.9° 25.0°	37.9° 30.0° 24.2°	19.5° 15.2° 12.2°	38.9° 31.0° 25.0°	31.0° 25.0° 18.9°	28.8° 22.7° 18.2°	14.6° 11.4° 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.



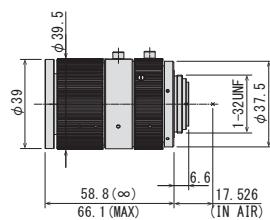
inspect

award 2022  
winner

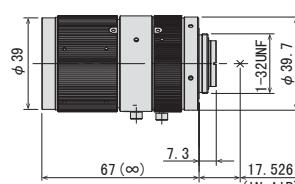
1.

Category  
Vision

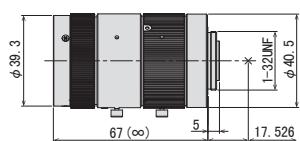
M2518-APVSW2



M3518-APVSW



M5018-APVSW



Focal Length		25mm							35mm							50mm													
Max. Aperture Ratio		1:1.8							1:1.8							1:1.8													
Max. Image Format		Ø 11.4mm							Ø 11.4mm							Ø 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°	16.1°	14.6°	12.1°	11.7°	25.5°	20.0°	18.4°	16.1°	14.4°	11.6°	8.7°	18.4°	14.4°	11.6°	10.5°	8.4°	12.8°	10.1°	9.5°	7.4°	4.7°				
	H	1/1.4"	20.0°	1/1.8"	16.1°	1/2"	14.6°	11.7°	1/1.4"	20.0°	1/1.8"	16.1°	1/2"	14.4°	11.6°	8.7°	1/1.4"	14.4°	11.6°	10.5°	8.4°	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°	11.6°	11.6°	11.6°	11.6°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	5.9°	4.2°	4.2°	4.2°	4.2°	4.2°	4.2°	3.0°			
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%
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	Ø39.5mm×58.8mm				Ø41mm×67.0mm				Ø41mm×67.0mm			
Weight	140g				199g				174g			

# VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



**NEW**

**viswir** 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		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)

**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 Focus 0.1m - 0.9m	Iris F1.4 - F16C Focus 0.1m - Inf.	Iris F1.4 - F16C Focus 0.15m - Inf.	Iris F1.4 - F16C Focus 0.3m - Inf.					
Control	Iris Manual Focus Manual	Iris Manual Focus Manual	Iris Manual Focus Manual	Iris Manual Focus Manual					
Angle of View	D 77.8° H 65.5° V 54.5°	IMX990 53.0° 6.40mm 42.5° 5.12mm 34.5°	IMX991 27.9° 3.20mm x 21.9° 2.56mm 17.6°	IMX991 19.4° 3.20mm x 15.2° 2.56mm 12.2°	IMX990 49.2° 6.40mm 40.4° 5.12mm 30.8°	IMX991 14.6° 3.20mm x 11.4° 2.56mm 9.2°	IMX990 28.8° 6.40mm 22.7° 5.12mm 18.2°	IMX991 14.6° 3.20mm x 11.4° 2.56mm 9.2°	IMX990 38.0° 6.40mm 30.8° 5.12mm 23.4°
Operating Temperature	-10°C ~ +50°C	-10°C ~ +50°C	-10°C ~ +50°C	-10°C ~ +50°C					

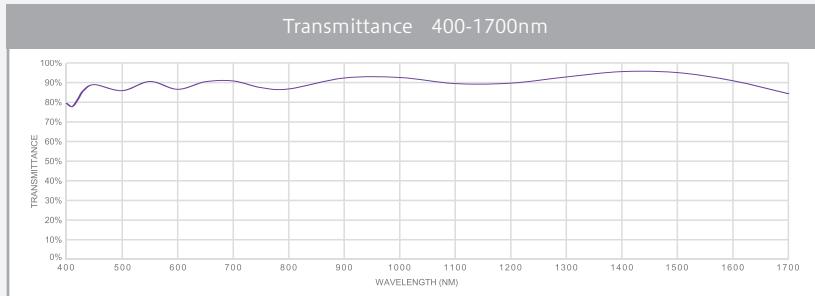
Optical Distortion	1/2"	-0.48%	1/3"	-2.26%	2/3"	-0.1%	1/2"	-1.1%	2/3"	-0.1%	1/2"	-0.35%	2/3"	-0.1%	1/2"	-0.3%
Back Focal Length	10.8mm				13.1mm				13.1mm				13.1mm			
Flange Back Length	17.526mm				17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount				C-Mount			
Filter Size	M43 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			

- 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

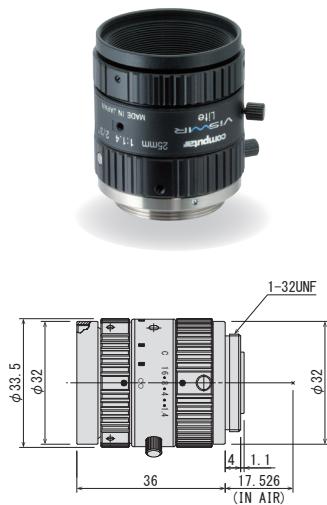
**1/2"**  
**2/3"**

**Visible +SWIR**

**MANUAL**  
**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					F1.4 - F16C					F1.8 - F16C							
	Focus	0.3m - Inf.					0.3m - Inf.					0.5m - Inf.							
Control	Iris	Manual					Manual					Manual							
	Focus	Manual					Manual					Manual							
Angle of View	D	IMX990 6.40mm	18.6°	IMX991 3.20mm	9.4°	2/3"	24.9°	IMX990 6.40mm	13.7°	IMX991 3.20mm	6.9°	2/3"	17.3°	IMX990 6.40mm	9.8°	IMX991 3.20mm	4.9°	2/3"	13.1°
	H	x 14.6°		x 7.3°			20.0°	x 10.7°		x 5.4°			13.9°	x 13.9°	x 7.6°	x 3.8°	10.5°		
	V	5.12mm	11.7°	2.56mm	5.9°		15.1°	5.12mm	8.6°	2.56mm	4.3°		10.4 °	5.12mm	6.1°	2.56mm	3.1°	7.9°	
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

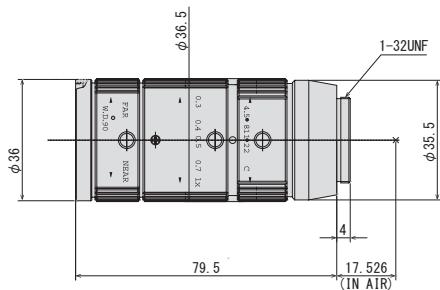
- 1/2" and 2/3" format models are ideal for a variety of inspection applications
- Optimal performance at variable working distances
- Highly versatile 3.3x magnification type suitable for megapixel applications
- Compact design

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

MLM-3XMP

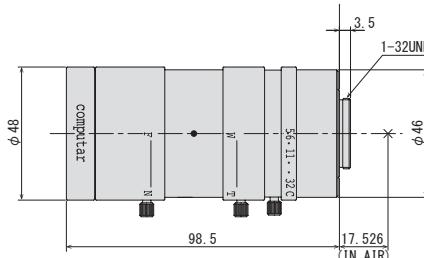
2/3"

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 Focus 90mm				F5.6 - F32C 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°	1/4"	17.0° - 3.3°	
	H		11.8° - 2.8°		8.5° - 2.2°		18.0° - 3.6°		13.8° - 2.7°	
	V		8.8° - 2.3°		6.4° - 1.7°		13.8° - 2.7°		10.6° - 2.0°	
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	1/4"	13.0° - 2.5°		
		+1.78% at 1.0x		+0.77% at 1.0x		+1.6% at 0.84x		10.6° - 2.0°		
Back Focal Length	20.4m				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

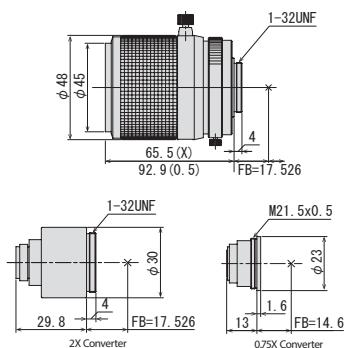


- WD140mm~Infinity. Suitable for use as a telephoto lens and macro lens [TEC-M55]
- Compact design, compatible with 5MP sensors [TEC-M55MPW]
- 1.1" format 5MP, 7.1X magnification (0.5X-0.07X) [TEC-V7X]

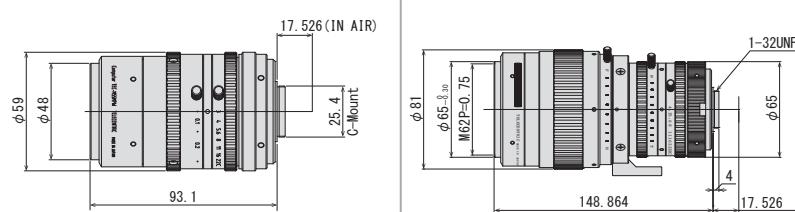
1.1"  
 2/3"  
 5MP  
 MANUAL  
 MACRO  
 ZOOM  
 TELECN

## TEC-M55

2/3"

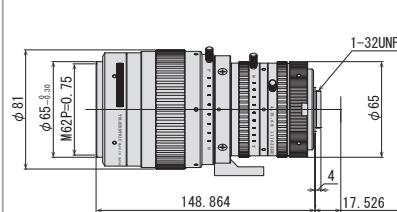


## TEC-M55MPW

2/3"  
5MP

## TEC-V7X

1.1"  
 5MP  
 ZOOM



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 Focus 140mm - Inf.	F3.0 - F22C 139mm - 1000mm	F4.3 - F32 182mm - 577.2mm
Control	Iris Manual Focus Manual	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	1/2"	+0.1% at 0.2x	2/3"	+0.52% at 0.057x	Tele	1.1"	1.0%	1"	0.84%	2/3"	0.39%
		+0.6% at 0.5x	+0.3% at 0.5x	+0.6% at 0.5x		+0.6% at 0.5x	Wide	-1.7%	1"	-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

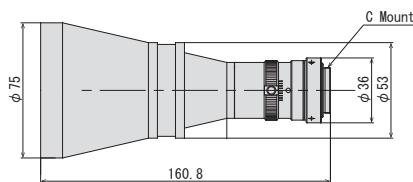
1.1", 1" MEGAPIXEL TELECENTRIC LENS

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

1.1"  
1"  
12MP  
5MP  
TELECN

## 1.1" 12 MEGAPIXEL TELECENTRIC LENS

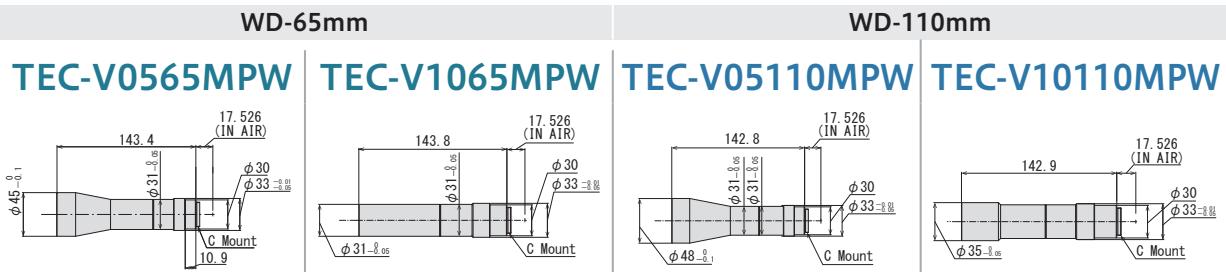
### TEC-V0345165MPY-WI



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)			
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

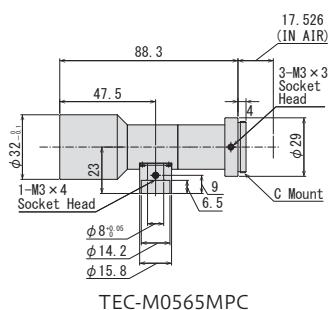
2/3" 2 MEGAPIXEL TELECENTRIC LENS

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

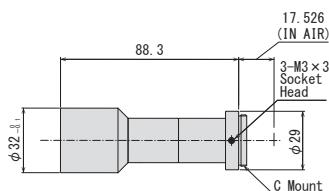
2/3"  
2MP  
TELECN

WD-65mm

## TEC-M0565MPC / TEC-M0565MP

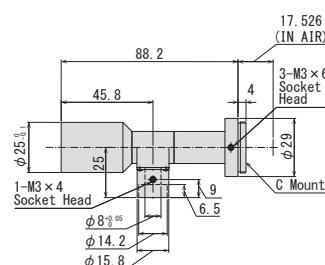


TEC-M0565MPC

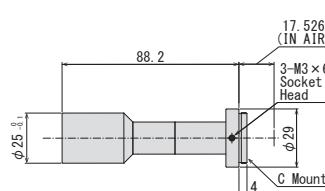


TEC-M0565MP

## TEC-M0865MPC / TEC-M0865MP

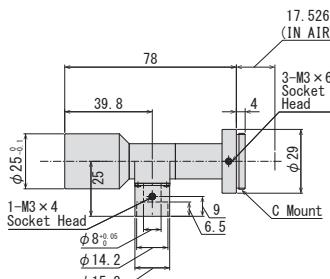


TEC-M0865MPC

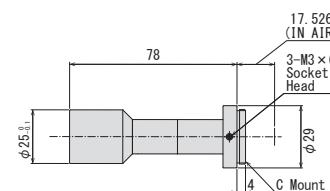


TEC-M0865MP

## TEC-M1065MPC / TEC-M1065MP



TEC-M1065MPC



TEC-M1065MP

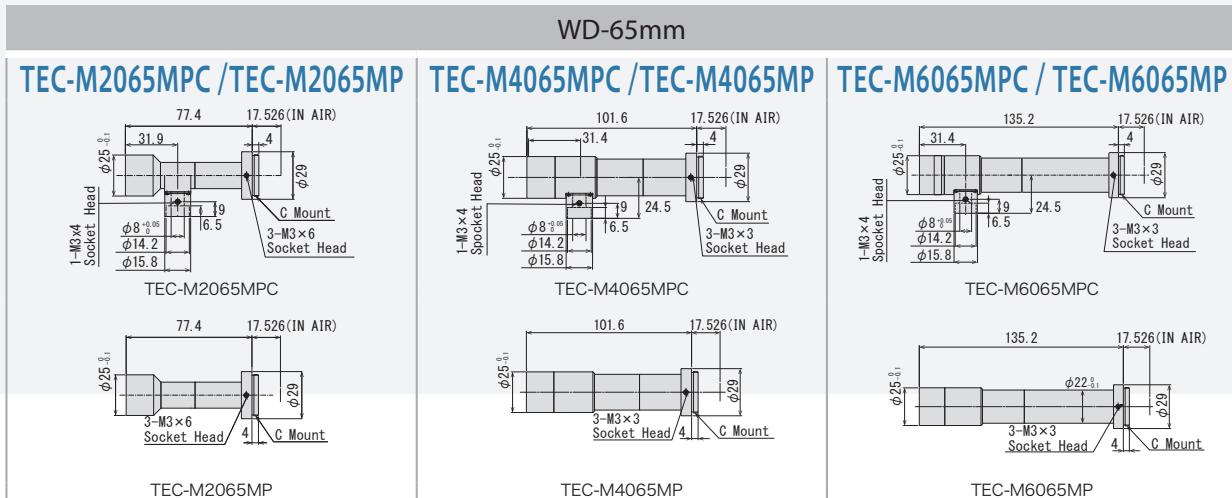
Model (with coaxial type)	TEC-M0565MPC	TEC-M0865MPC	TEC-M1065MPC
Model (straight type)	TEC-M0565MP	TEC-M0865MP	TEC-M1065MP
Format	8.8mm × 6.6mm (φ 11.0mm)	8.8mm × 6.6mm (φ 11.0mm)	8.8mm × 6.6mm (φ 11.0mm)
Magnification	0.5x	0.8x	1.0x
Working Distance	65.5mm	66mm	65.5mm
Resolving Power *1	12μm	8μm	6.7μm
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

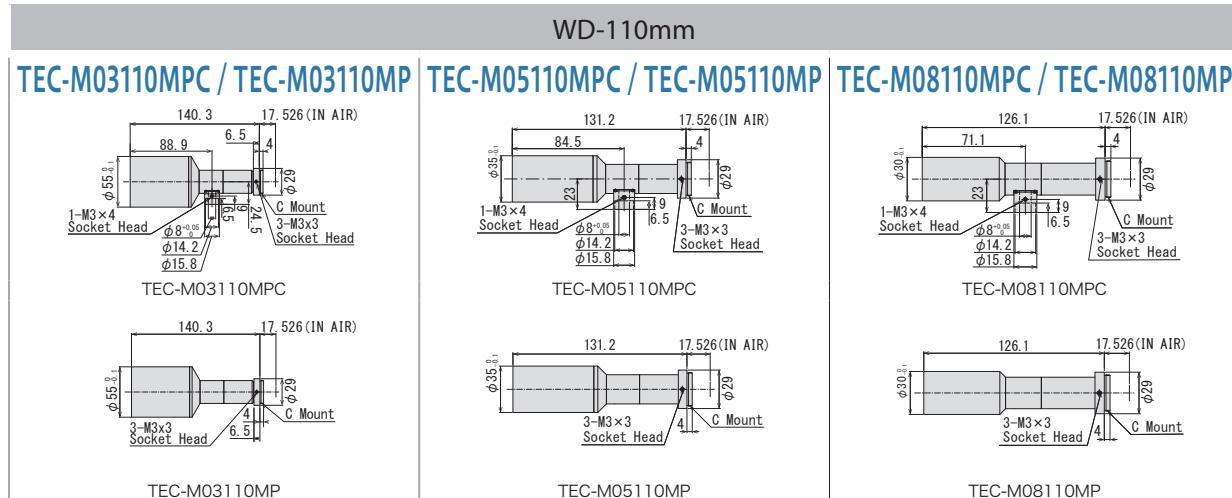
# 2/3" 2 MEGAPIXEL TELECENTRIC LENS

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



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



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

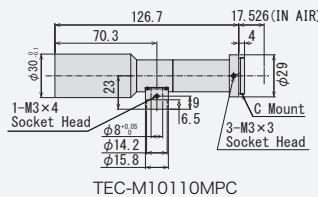
2/3"

2MP

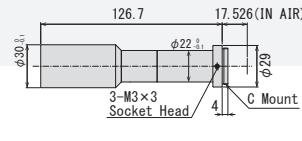
TELECEN

WD-110mm

TEC-M10110MPC / TEC-M10110MP

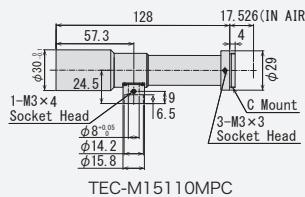


TEC-M10110MPC

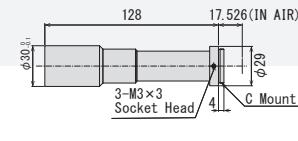


TEC-M10110MP

TEC-M15110MPC / TEC-M15110MP

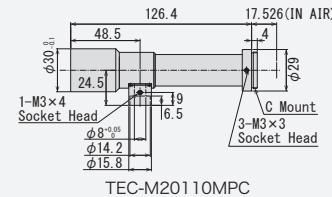


TEC-M15110MPC

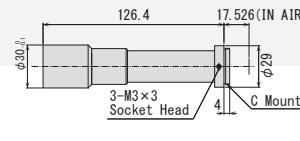


TEC-M15110MP

TEC-M20110MPC / TEC-M20110MP



TEC-M20110MPC



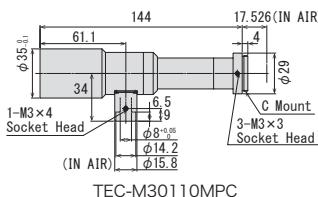
TEC-M20110MP

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%

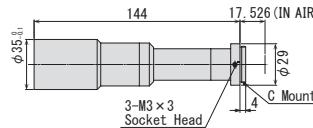
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	108g	110g	115g
Weight (straight type)	105g	108g	113g

WD-110mm

TEC-M30110MPC / TEC-M30110MP

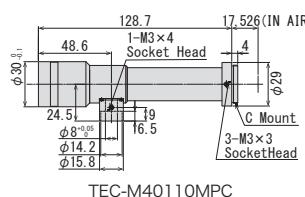


TEC-M30110MPC

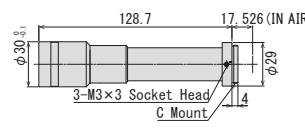


TEC-M30110MP

TEC-M40110MPC / TEC-M40110MP

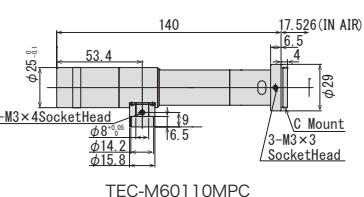


TEC-M40110MPC

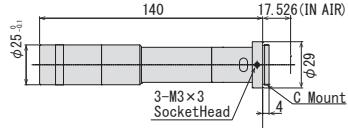


TEC-M40110MP

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	F1.8 - F16C		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	F1.8 - F16C		2m - Inf.	123g
VG5020KC-MPYIR		50mm	F2.0 - F16C		3m - Inf.	121g

V2518FIC-MPYIR



V3518FIC-MPYIR



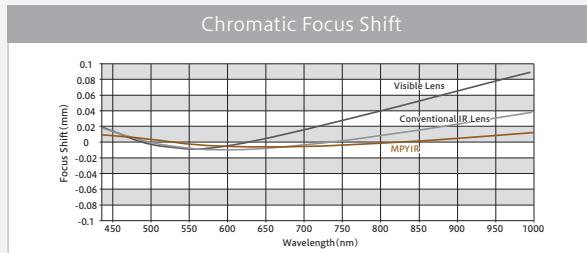
V5020FIC-MPYIR



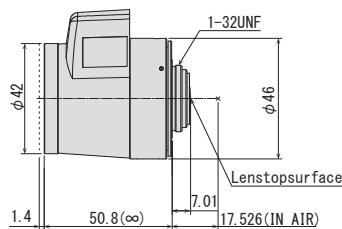
Focal Length	25mm						35mm						50mm						
Max. Aperture Ratio	1:1.8						1:1.8						1:2.0						
Max. Image Format	14.2mm × 10.4mm (φ 17.6mm)						14.2mm × 10.4mm (φ 17.6mm)						14.2mm × 10.4mm (φ 17.6mm)						
Operation Range	Iris	F1.8 - F16C						F1.8 - F16C						F2.0 - F16C					
	Focus	1m - Inf.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

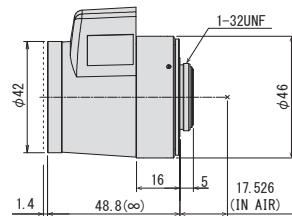
- Suitable for 1.1" 12MP sensor, same size as conventional products
- Usable lineup for ANPR, 25mm/35mm/50mm
- Manual iris and P-iris available for each model
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR



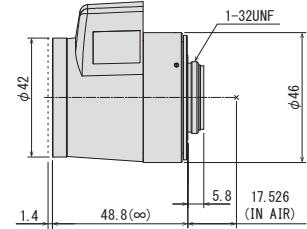
VG2518KC-MPYIR



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)						14.2mm × 10.4mm (φ 17.6mm)						14.2mm × 10.4mm (φ 17.6mm)					
Operation Range	Iris F1.8 - F16C Focus 1m - Inf.						Iris F1.8 - F16C Focus 2m - Inf.						Iris F2.0 - F16C Focus 3m - Inf.					
Control	Iris Stepping Motor Focus Manual						Iris Stepping Motor Focus Manual						Iris Stepping Motor Focus 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						-10°C ~ +50°C						-10°C ~ +50°C					

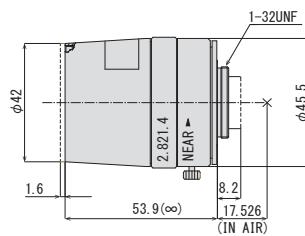
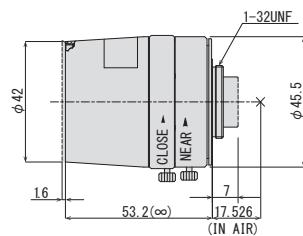
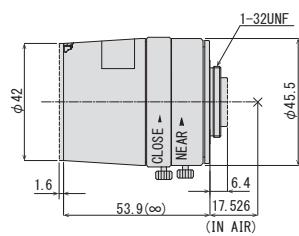
Back Focal Length	10.6mm						14.2mm						14.2mm					
Flange Back Length	17.526mm						17.526mm						17.526mm					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M40.5 P=0.5mm						M40.5 P=0.5mm						M40.5 P=0.5mm					
Dimensions	φ42mm × 57mm × 50.8mm						φ42mm × 57mm × 48.8mm						φ42mm ×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



# MPIR Series

2/3" IR CORRECTIVE 5 MEGAPIXEL LENS for ITS

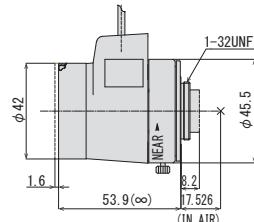
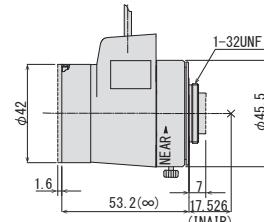
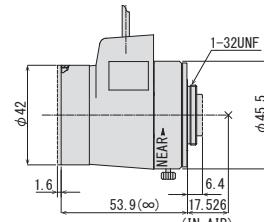
Model No.	Format	Focal Length	F No.	IRIS	Working Distance	Weight
M2514FIC-MPIR	2/3"	25mm	F1.4 - F16C	Manual	1m - Inf.	154g
M3518FIC-MPIR		35mm	F1.8 - F16C		1m - Inf.	149g
M5020FIC-MPIR		50mm	F2.0 - F16C		2m - Inf.	155g
MG2514KC-MPIR		25mm	F1.4 - F16C	P-IRIS	1m - Inf.	128g
MG3518KC-MPIR		35mm	F1.8 - F16C		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	F1.8 - F16C	F2.0 - F16C							
Focus	1m - Inf.	1m - Inf.	2m - Inf.							
Control	Iris Manual	Manual	Manual							
Focus	Manual	Manual	Manual							
Angle of View	D H V	24.9° 20.0° 15.1°	18.2° 14.6° 11.0°	13.7° 11.0° 8.2°	17.4° 13.9° 10.5°	12.7° 10.2° 7.6°	9.5° 7.6° 5.7°	12.2° 9.8° 7.3°	8.9° 7.1° 5.3°	6.7° 5.3° 4.0°
CMV2000 T1.264 x 5.984 (φ 12.75)	D H V	28.6° 25.4° 13.7°	20.0° 17.8° 9.5°			14.1° 12.5° 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	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 x 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

# MEGAPIXEL BOARD LENS

## 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%
D	125.3°	72.5°	48.6°	27.9°	18.0°	39.5°	30.0°	19.5°
H	104.3°	59.1°	39.6°	22.6°	14.5°	32.1°	24.3°	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	80.5°	45.0°	30.1°	17.0°	10.9°	29.8°	22.6°	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	61.3°	34.0°	22.7°	12.8°	8.2°	22.6°	17.0°	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	
D	1/1.7" 190.0°	1/1.7" 185.0°	1/1.7" 190.0°	1/1.7" 185.0°	1/1.8" -	1/2.5" 190.0°	1/2.5" 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" 108.6°	1/2.5" 190.0°	1/2.5" 180.0°	
V	1/1.7" 190.0°	1/1.7" 185.0°	1/1.7" 190.0°	1/1.7" 185.0°	1/1.8" -	1/2.5" 180.0°	1/2.5" 180.0°	
D	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°	
H	1/3" 168.2°	1/3" 171.5°	1/3" 168.2°	1/3" 171.5°	1/2" 119.5°	1/3" 163.2°	1/3" 163.2°	
V	1/3" 168.2°	1/3" 171.5°	1/3" 168.2°	1/3" 171.5°	1/2" 119.5°	1/3" 163.2°	1/3" 163.2°	
D	1/4" 125.5°	1/4" 139.5°	1/4" 125.5°	1/4" 139.5°	1/3" 149.2°	1/4" 180.0°	1/4" 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	1/4" 94.2°	1/4" 110.3°	1/4" 94.2°	1/4" 110.3°	1/3" 89.6°	1/4" 130.2°	1/4" 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.

# TECHNICAL INFORMATION

## 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

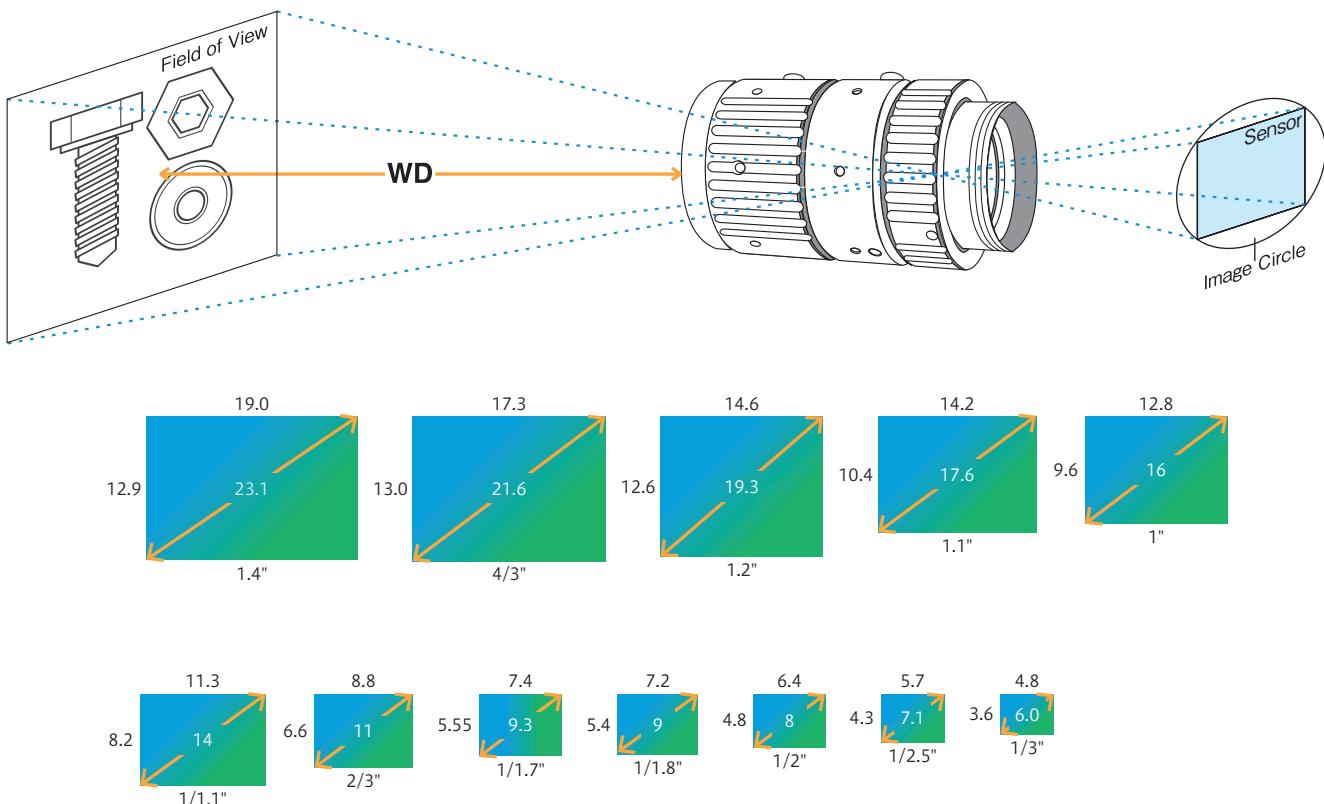
H1 : first principal point

y : vertical size of object

y' : vertical size of camera's imaging device

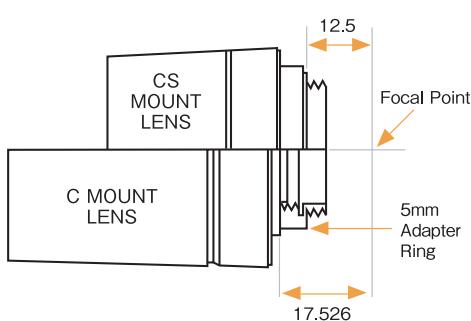
## CAMERA FORMAT

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.



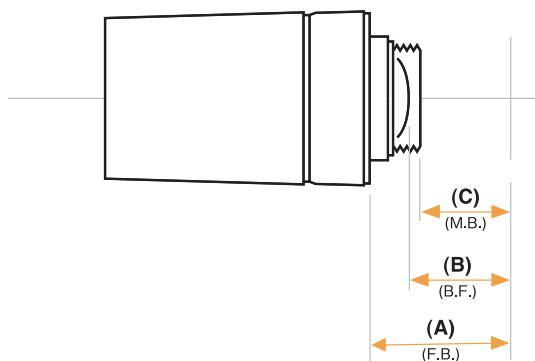
## C OR CS MOUNT

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	O	X
CS mount camera	needs 5mm ring	O

## 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

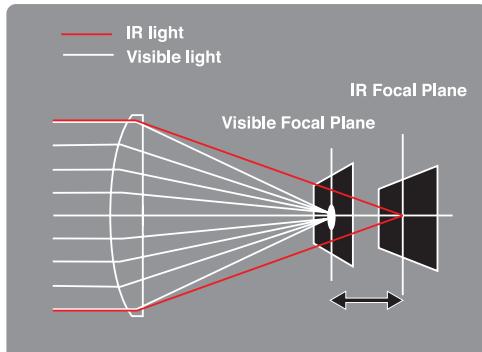
Distance between the surface of the rear lens element and focal plane

(C) Mechanical Back Focal Length

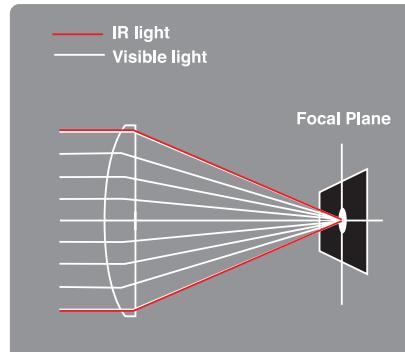
Distance between the surface of the lens frame and focal plane

## MECHANISM AND ADVANTAGEOUS EFFECT OF IR LENS

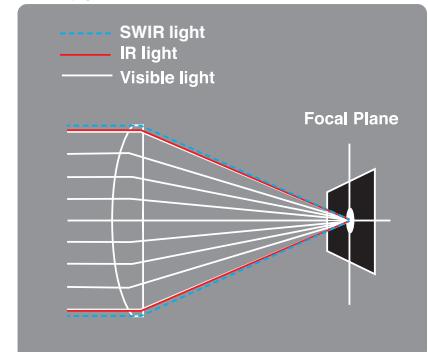
### NON IR LENS



### 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. Computar 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.

# FIELD OF VIEW

## LensConnect DL-MPY Series

### DL0828UC-MPY (f=8mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.008	-	1399.5	1023.8	1097.3	818.7	894.6	667.5
900	0.009	-	1261.0	922.4	988.5	737.5	805.9	601.3
800	0.010	-	1122.5	820.9	879.9	656.4	717.3	535.2
700	0.012	-	984.1	719.5	771.2	575.3	628.6	469.0
600	0.014	-	845.6	618.1	662.5	494.1	540.0	402.9
500	0.016	-	707.1	516.7	553.8	413.0	451.3	336.7
450	0.018	-	637.9	466.0	499.5	372.4	407.0	303.6
400	0.020	-	568.6	415.2	445.1	331.9	362.7	270.5
350	0.023	-	499.3	364.5	390.8	291.3	318.4	237.4
300	0.027	-	430.1	313.8	336.4	250.7	274.0	204.4
250	0.032	-	360.8	263.0	282.0	210.1	229.7	171.3
200	0.040	-	291.4	212.3	227.6	169.5	185.3	138.2
150	0.052	-	222.0	161.5	173.2	128.9	140.9	105.0
100	0.076	-	152.4	110.6	118.7	88.2	96.5	71.9

### DL1224UC-MPY (f=12mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.012	-	950.2	695.0	744.6	556.6	607.8	454.5
900	0.013	-	855.6	625.8	670.4	501.1	547.2	409.2
800	0.015	-	761.2	556.6	596.3	445.7	486.7	363.9
700	0.017	-	666.7	487.4	522.2	390.3	426.2	318.7
600	0.020	-	572.2	418.2	448.1	334.9	365.7	273.4
500	0.024	-	477.7	349.0	374.0	279.4	305.2	228.1
450	0.026	-	430.4	314.4	336.9	251.7	274.9	205.5
400	0.030	-	383.1	279.8	299.8	224.0	244.6	182.8
350	0.034	-	335.8	245.2	262.7	196.2	214.3	160.2
300	0.040	-	288.5	210.5	225.6	168.5	184.0	137.5
250	0.047	-	241.2	175.9	188.5	140.7	153.7	114.9
200	0.059	-	193.8	141.2	151.4	113.0	123.4	92.2
150	0.078	-	146.3	106.4	114.1	85.1	93.0	69.5
100	0.117	-	98.5	71.5	76.7	57.1	62.4	46.6

### DL1623UC-MPY (f=16mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.016	-	712.8	521.6	558.7	418.0	456.3	341.5
900	0.018	-	642.0	469.8	503.2	376.5	411.0	307.6
800	0.020	-	571.3	418.0	447.8	335.0	365.7	273.7
700	0.023	-	500.6	366.3	392.3	293.5	320.5	239.8
600	0.026	-	429.9	314.5	336.9	252.0	275.1	205.9
500	0.032	-	359.1	262.7	281.4	210.5	229.8	172.0
450	0.035	-	323.7	236.8	253.6	189.7	207.1	155.0
400	0.039	-	288.3	210.9	225.9	169.0	184.5	138.0
350	0.045	-	252.9	184.9	198.1	148.2	161.8	121.0
300	0.052	-	217.4	158.9	170.3	127.3	139.0	104.0
250	0.062	-	181.8	132.9	142.4	106.5	116.3	87.0
200	0.078	-	146.2	106.8	114.4	85.6	93.4	69.9
150	0.103	-	110.2	80.5	86.3	64.5	70.4	52.7
110	0.140	-	81.0	59.2	63.4	47.4	51.8	38.8

### DL2523UC-MPY (f=25mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.025	-	454.9	333.3	356.8	267.5	291.8	218.8
900	0.027	-	409.9	300.3	321.5	241.0	263.0	197.2
800	0.031	-	364.9	267.3	286.2	214.6	234.1	175.5
700	0.035	-	319.9	234.4	250.9	188.1	205.2	153.9
600	0.041	-	274.9	201.4	215.6	161.6	176.4	132.2
500	0.049	-	229.9	168.4	180.3	135.2	147.5	110.5
450	0.054	-	207.3	151.9	162.6	121.9	133.0	99.7
400	0.061	-	184.8	135.3	144.9	108.6	118.5	88.9
350	0.069	-	162.2	118.8	127.2	95.3	104.0	78.0
300	0.081	-	139.5	102.2	109.4	82.0	89.5	67.1
250	0.096	-	116.8	85.6	91.6	68.7	74.9	56.2
200	0.120	-	94.0	68.9	73.7	55.3	60.3	45.2
150	0.158	-	71.0	52.0	55.7	41.7	45.5	34.1
120	0.198	-	56.9	41.7	44.6	33.5	36.5	27.4

### DL3525UC-MPY (f=35mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.034	-	332.1	243.0	260.2	195.0	212.8	159.5
900	0.038	-	299.9	219.4	234.9	176.0	192.1	144.0
800	0.042	-	267.6	195.7	209.6	157.1	171.4	128.5
700	0.048	-	235.3	172.1	184.3	138.1	150.6	112.9
600	0.056	-	202.9	148.3	158.9	119.0	129.9	97.3
500	0.066	-	170.4	124.5	133.4	99.9	109.0	81.7
450	0.073	-	154.1	112.6	120.6	90.3	98.6	73.8
400	0.082	-	137.7	100.6	107.7	80.7	88.1	66.0
350	0.093	-	121.2	88.5	94.8	71.0	77.5	58.1
300	0.108	-	104.6	76.4	81.8	61.3	66.9	50.1
250	0.129	-	87.8	64.1	68.7	51.4	56.1	42.0
200	0.160	-	70.8	51.7	55.3	41.4	45.2	33.9
160	0.200	-	56.7	41.4	44.3	33.2	36.2	27.1

### DL5028UC-MPY (f=50mm)

Working Distance (mm)	Optical Magnification	ExExtension Ring (mm)	Field of View (mm)					
			1/1.1"		2/3"		1/18"	
			H	V	H	V	H	V
1000	0.046	-	246.7	180.5	193.3	144.9	158.1	118.5
900	0.050	-	223.3	163.4	175.0	131.1	143.1	107.3
800	0.056	-	199.9	146.2	156.6	117.4	128.1	96.0
700	0.064	-	176.4	129.0	138.2	103.5	113.0	84.7
600	0.074	-	152.8	111.7	119.6	89.6	97.8	73.3
500	0.087	-	129.0	94.3	101.0	75.7	82.6	61.9
450	0.096	-	117.0	85.6	91.6	68.6	74.9	56.1
400	0.107	-	105.0	76.7	82.2	61.6	67.2	50.4
350	0.122	-	92.8	67.9	72.7	54.4	59.4	44.5
300	0.140	-	80.5	58.9	63.0	47.2	51.5	38.6
250	0.166	-	68.0	49.7	53.2	39.9	43.5	32.6
200	0.205	-	55.2	40.3	43.2	32.3	35.3	26.5

## MPT Series

F1228-MPT (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.4"		1.2"		1.1"	
		H	V	H	V	H	V	
1000	0.012	-	1582.7	1081.4	1213.1	1047.7	1178.8	858.7
900	0.014	-	1426.7	974.6	1093.4	944.3	1062.4	773.9
800	0.015	-	1270.8	867.9	973.7	840.9	946.1	689.1
700	0.017	-	1114.8	761.1	854.0	737.4	829.8	604.3
600	0.020	-	958.8	654.4	734.3	634.0	713.4	519.5
500	0.024	-	802.9	547.6	614.6	530.6	597.1	434.7
450	0.027	-	724.9	494.3	554.7	478.9	538.9	392.3
400	0.030	-	646.9	440.9	494.8	427.1	480.8	349.9
350	0.034	-	568.9	387.5	435.0	375.4	422.6	307.5
300	0.040	-	490.9	334.1	375.1	323.7	364.4	265.1
250	0.047	-	412.8	280.7	315.2	272.0	306.2	222.7
200	0.058	-	334.8	227.3	255.3	220.2	248.0	180.3
150	0.076	-	256.7	173.9	195.4	168.5	189.8	137.8
100	0.109	0.4	180.7	121.2	137.7	118.3	133.8	97.1

F1628-MPT (f=16mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.4"		1.2"		1.1"	
		H	V	H	V	H	V	
1000	0.016	-	1183.6	808.5	906.4	783.5	880.9	643.1
900	0.018	-	1067.2	729.0	817.2	706.4	794.2	579.8
800	0.020	-	950.9	649.4	728.1	629.3	707.5	516.5
700	0.023	-	834.5	569.8	638.9	552.2	620.9	453.2
600	0.027	-	718.1	490.3	549.7	475.1	534.2	389.9
500	0.032	-	601.8	410.7	460.5	398.0	447.5	326.7
450	0.035	-	543.6	371.0	416.0	359.5	404.2	295.0
400	0.040	-	485.4	331.2	371.4	320.9	360.9	263.4
350	0.045	-	427.2	291.4	326.8	282.4	317.5	231.7
300	0.052	-	369.0	251.6	282.2	243.8	274.2	200.1
250	0.062	-	310.8	211.8	237.6	205.3	230.9	168.4
200	0.076	-	252.6	172.1	193.0	166.7	187.5	136.8
150	0.099	-	194.4	132.3	148.4	128.2	144.2	105.1
100	0.141	0.7	136.6	92.2	104.5	90.0	101.6	74.1

F2524-MPT (f=25mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.4"		1.2"		1.1"	
		H	V	H	V	H	V	
1000	0.025	-	771.4	526.8	590.5	510.6	573.9	419.3
900	0.028	-	694.9	474.5	531.9	459.9	516.9	377.7
800	0.031	-	618.3	422.2	473.3	409.2	460.0	336.1
700	0.035	-	541.7	369.9	414.7	358.5	403.0	294.4
600	0.041	-	465.1	317.6	356.0	307.9	346.0	252.8
500	0.049	-	388.5	265.3	297.4	257.2	289.1	211.2
450	0.055	-	350.2	239.2	268.1	231.8	260.6	190.4
400	0.061	-	312.0	213.1	238.8	206.5	232.1	169.6
350	0.070	-	273.7	186.9	209.5	181.1	203.6	148.8
300	0.081	-	235.4	160.8	180.2	155.8	175.1	128.0
250	0.097	-	197.1	134.6	150.9	130.5	146.6	107.2
200	0.121	-	158.8	108.5	121.6	105.1	118.1	86.3
150	0.159	-	120.5	82.3	92.3	79.8	89.7	65.5
100	0.235	1.8	80.9	55.0	62.2	53.7	60.5	44.3

F3526-MPT (f=35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.4"		1.2"		1.1"	
		H	V	H	V	H	V	
1000	0.035	-	540.3	369.0	413.5	357.6	401.8	293.9
900	0.039	-	485.7	331.7	371.7	321.5	361.3	264.2
800	0.044	-	431.1	294.5	330.0	285.4	320.7	234.5
700	0.051	-	376.6	257.2	288.2	249.3	280.1	204.9
600	0.059	-	322.0	219.9	246.5	213.2	239.5	175.2
500	0.071	-	267.5	182.7	204.7	177.1	199.0	145.5
450	0.080	-	240.2	164.1	183.8	159.0	178.7	130.7
400	0.090	-	212.9	145.4	163.0	141.0	158.4	115.8
350	0.103	-	185.6	126.8	142.1	122.9	138.1	101.0
300	0.121	-	158.3	108.2	121.2	104.9	117.8	86.2
250	0.146	-	131.1	89.5	100.3	86.8	97.5	71.3
200	0.184	-	103.8	70.9	79.5	68.7	77.2	56.5
150	0.249	-	76.5	52.3	58.6	50.7	56.9	41.7
100	0.387	2.6	49.3	33.7	37.7	32.7	36.7	26.9

F5026-MPT (f=50mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.4"		1.2"		1.1"	
		H	V	H	V	H	V	
1000	0.052	-	369.2	252.1	282.5	244.4	274.6	200.8
900	0.058	-	331.0	226.0	253.3	219.1	246.2	180.1
800	0.065	-	292.8	200.0	224.1	193.8	217.8	159.3
700	0.075	-	254.6	173.9	194.9	168.6	189.4	138.5
600	0.088	-	216.4	147.8	165.6	143.3	161.0	117.8
500	0.107	-	178.3	121.8	136.4	118.0	132.6	97.0
450	0.120	-	159.2	108.7	121.8	105.4	118.4	86.6
400	0.136	-	140.1	95.7	107.2	92.7	104.2	76.2
350	0.158	-	121.0	82.6	92.6	80.1	90.0	65.8
300	0.187	-	101.9	69.6	78.0	67.5	75.8	55.5
250	0.230	-	82.8	56.6	63.4	54.8	61.6	45.1
200	0.299	3.50	63.2	42.9	48.6	34.6	47.3	34.6
150	0.433	10.00	43.8	29.8	33.8	24.1	32.8	24.1
100	0.773	26.50	24.6	16.7	18.9	13.5	18.4	13.5

V0828-MPY2 (f=8mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1.1"		1"		2/3"	
		H	V	H	V	H	V	
1000	0.008	-	1790.8	1310.2	1617.6	1206.7	1103.1	820.5
900	0.009	-	1614.2	1180.9	1458.0	1087.5	994.2	739.5
800	0.010	-	1437.5	1051.4	1298.3	968.3	885.2	658.4
700	0.012	-	1260.1	921.4	1137.9	848.5	775.7	576.9
600	0.014	-	1083.5	792.0	978.3	729.3	666.7	495.9
500	0.016	-	906.4	662.2	818.2	609.8	557.4	414.6
450	0.018	-	817.8	597.3	738.1	550.0	502.8	373.9
400	0.020	-	729.5	532.6	658.3	490.4	448.3	333.3
350	0.023	-	641.0	467.7	578.3	430.7	393.6	292.7
300	0.027	-	552.1	402.6	497.9	370.6	338.8	251.9
250	0.032	-	463.7	337.9	418.0	311.0	284.3	211.3
200	0.039	-	375.6					

# FIELD OF VIEW

 Lens Connect VL-MPZ / MPZ Series

V3528-MPY (f=35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		1'		2/3"	
		H	V	H	V	H	V	
1000	0.036	-	393.4	288.2	354.6	266.0	243.9	182.9
900	0.040	-	352.7	258.4	317.9	238.5	218.6	164.0
800	0.046	-	312.1	228.6	281.3	211.0	193.5	145.1
700	0.052	-	271.6	198.9	244.8	183.6	168.3	126.3
600	0.061	-	231.0	169.2	208.2	156.2	143.2	107.4
500	0.075	-	190.4	139.5	171.6	128.8	118.0	88.6
450	0.083	-	170.1	124.6	153.4	115.1	105.5	79.1
400	0.095	-	149.8	109.8	135.1	101.3	92.9	69.7
350	0.110	-	129.5	94.9	116.8	87.6	80.3	60.3
300	0.130	-	109.3	80.1	98.5	73.9	67.8	50.8
250	0.157	1.5	90.4	66.2	81.5	61.1	56.0	42.0
200	0.201	3.0	70.9	51.9	63.9	47.9	43.9	32.9
150	0.277	6.0	51.6	37.7	46.5	34.8	31.9	23.9
100	0.435	15.0	32.9	24.0	29.6	22.2	20.3	15.2

V5028-MPY (f=50mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		1'		2/3"	
		H	V	H	V	H	V	
1000	0.055	-	257.9	188.9	232.5	174.4	159.8	119.9
900	0.062	-	229.5	168.1	206.9	155.1	142.2	106.7
800	0.071	-	201.1	147.2	181.2	135.9	124.6	93.4
700	0.082	-	172.7	126.4	155.6	116.7	107.0	80.2
600	0.099	-	144.2	105.6	130.0	97.5	89.4	67.0
500	0.123	-	115.9	84.8	104.4	78.3	71.8	53.8
450	0.138	1.0	103.1	75.4	92.9	69.6	63.8	47.9
400	0.158	2.0	89.9	65.8	81.0	60.7	55.7	41.7
350	0.181	5.0	78.5	57.4	70.7	53.0	48.6	36.4
300	0.222	6.0	64.2	47.0	57.8	43.3	39.7	29.8
250	0.276	10.0	51.7	37.8	46.6	34.9	32.0	24.0
200	0.373	15.0	38.2	27.9	34.4	25.8	23.6	17.7
150	0.583	25.0	24.5	17.9	22.1	16.5	15.1	11.3
100	1.255	61.5	11.3	8.3	10.2	7.7	7.0	5.3

VL0826U-MPZ/V0826-MPZ (f=8mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2/3"		1/18"	
		H	V	H	V	H	V	
1000	0.009	-	1619.6	1211.4	1108.2	825.6	902.4	672.9
900	0.009	-	1460.8	1092.4	999.3	744.4	813.6	606.7
800	0.011	-	1302.0	973.4	890.4	663.2	724.9	540.5
700	0.012	-	1143.3	854.4	781.5	582.0	636.2	474.3
600	0.014	-	984.5	735.4	672.6	500.8	547.5	408.2
500	0.016	-	825.7	616.3	563.7	419.6	458.7	342.0
450	0.018	-	746.3	556.8	509.2	379.0	414.4	308.9
400	0.020	-	666.9	497.3	454.7	338.4	370.0	275.8
350	0.023	-	587.5	437.8	400.3	297.8	325.6	242.7
300	0.027	-	508.0	378.3	345.8	257.2	281.2	209.6
250	0.031	-	428.6	318.7	291.3	216.6	236.9	176.5
200	0.039	-	349.1	259.2	236.8	176.0	192.5	143.4
150	0.050	-	269.6	199.6	182.3	135.4	148.1	110.3
100	0.071	-	189.9	140.0	127.8	94.8	103.7	77.2

VL1226U-MPZ/V1226-MPZ (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2/3"		1/18"	
		H	V	H	V	H	V	
1000	0.012	-	1093.8	819.7	750.6	561.0	612.6	458.2
900	0.014	-	986.0	738.8	676.5	505.7	552.2	413.0
800	0.015	-	878.1	658.0	602.5	450.3	491.7	367.7
700	0.017	-	770.3	577.1	528.5	395.0	431.3	322.5
600	0.020	-	662.5	496.3	454.4	339.6	370.8	277.3
500	0.024	-	554.6	415.4	380.4	284.3	310.4	232.1
450	0.026	-	500.7	375.0	343.3	256.6	280.2	209.5
400	0.029	-	446.8	334.6	306.3	228.9	250.0	186.9
350	0.033	-	392.9	294.1	269.3	201.2	219.7	164.3
300	0.039	-	338.9	253.7	232.3	173.5	189.5	141.7
250	0.046	-	285.0	213.3	195.3	145.9	159.3	119.1
200	0.057	-	231.1	172.9	158.2	118.2	129.1	96.5
150	0.074	-	177.2	132.4	121.2	90.5	98.9	73.9
100	0.106	-	123.2	92.0	84.2	62.8	68.6	51.3

VL1624U-MPZ/V1624-MPZ (f=16mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2/3"		1/18"	
		H	V	H	V	H	V	
1000	0.016	-	811.4	608.4	557.5	417.6	455.7	341.5
900	0.018	-	761.1	548.1	502.3	376.6	410.6	370.7
800	0.020	-	650.8	487.9	447.1	334.9	365.5	273.8
700	0.023	-	570.5	427.7	391.9	293.6	320.4	240.0
600	0.027	-	490.2	367.4	336.7	252.2	275.2	206.2
500	0.032	-	409.8	307.2	281.5	210.9	230.1	172.4
450	0.035	-	369.7	277.1	253.9	190.2	207.6	155.5
400	0.039	-	329.5	247.0	226.3	169.5	185.0	138.6
350	0.045	-	289.4	216.9	198.7	148.8	162.4	121.7
300	0.052	-	249.2	186.8	171.1	128.2	139.9	104.8
250	0.062	-	209.1	156.6	143.5	107.5	117.3	87.9
200	0.077	-	168.9	126.5	115.9	86.8	94.8	71.0
150	0.101	-	128.7	96.4	88.3	66.2	72.2	54.1
100	0.146	-	88.6	66.3	60.7	45.5	49.6	37.2

VL2520U-MPZ/V2520-MPZ (f=25mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2/3"		1/18"	
		H	V	H	V	H	V	
1000	0.026	-	502.6	376.9	345.4	259.0	282.6	211.9
900	0.028	-	451.3	338.4	310.1	232.6	253.7	190.3
800	0.032	-	400.1	300.0	274.9	206.2	224.9	168.7
700	0.037	-	348.9	261.5	239.7	179.7	196.1	147.1
600	0.043	-	297.7	223.1	204.5	153.3	167.3	125.5
500	0.052	-	246.4	184.7	169.3	126.9	138.5	103.8
450	0.058	-	220.8	165.5	151.7	113.7	124.1	93.0
400	0.066	-	195.2	146.3	134.1	100.5	109.7	82.2
350	0.076	-	169.6	127.1	116.5	87.3	95.3	71.4
300	0.089	-	143.9	107.8	98.8	74.1	80.8	60.6
250	0.109	-	118.3	88.				

 MPX Series

## M0828-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.008	-	1082.8	812.2	787.5	589.8	589.8	441.8
900	0.009	-	975.6	731.7	709.4	531.3	531.3	398.0
800	0.010	-	868.4	651.2	631.4	472.9	472.9	354.2
700	0.012	-	761.1	570.7	553.4	414.4	414.4	310.4
600	0.014	-	653.9	490.2	475.3	355.9	355.9	266.6
500	0.016	-	546.7	409.8	397.3	297.5	297.5	222.8
450	0.018	-	493.1	369.5	358.3	268.2	268.2	200.9
400	0.020	-	439.4	329.3	319.2	239.0	239.0	179.0
350	0.023	-	385.8	289.0	280.2	209.8	209.8	157.1
300	0.027	-	332.2	248.8	241.2	180.5	180.5	135.2
250	0.032	-	278.6	208.5	202.2	151.3	151.3	113.3
200	0.040	-	225.0	168.3	163.2	122.1	122.1	91.4
150	0.052	-	171.3	128.1	124.1	92.8	92.8	69.5
100	0.076	-	117.7	87.8	85.1	63.6	63.6	47.6

## M1228-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.012	-	739.0	554.5	537.7	403.2	403.2	302.3
900	0.013	-	665.6	499.4	484.3	363.2	363.2	272.3
800	0.015	-	592.2	444.3	430.9	323.1	323.1	242.3
700	0.017	-	518.8	389.3	377.5	283.1	283.1	212.3
600	0.020	-	445.4	334.2	324.1	243.0	243.0	182.2
500	0.024	-	372.1	279.1	270.7	203.0	203.0	152.2
450	0.026	-	335.4	251.6	244.0	183.0	183.0	137.2
400	0.030	-	298.7	224.1	217.3	162.9	162.9	122.2
350	0.034	-	262.0	196.5	190.6	142.9	142.9	107.2
300	0.039	-	225.3	169.0	163.9	122.9	122.9	92.1
250	0.047	-	188.6	141.5	137.2	102.9	102.9	77.1
200	0.058	-	151.9	113.9	110.5	82.8	82.8	62.1
150	0.077	-	115.2	86.4	83.8	62.8	62.8	47.1
100	0.112	-	78.5	58.9	57.1	42.8	42.8	32.1

## M1628-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.016	-	558.1	418.7	406.0	304.5	304.5	228.3
900	0.018	-	503.1	377.4	366.0	274.5	274.5	205.8
800	0.020	-	448.0	336.2	326.0	244.4	244.4	183.3
700	0.022	-	393.0	294.9	285.9	214.4	214.4	160.8
600	0.026	-	338.0	253.6	245.9	184.4	184.4	138.3
500	0.031	-	283.0	212.3	205.9	154.4	154.4	115.7
450	0.035	-	255.5	191.7	185.8	139.3	139.3	104.5
400	0.039	-	228.0	171.0	165.8	124.3	124.3	93.2
350	0.044	-	200.5	150.4	145.8	109.3	109.3	82.0
300	0.051	-	173.0	129.7	125.8	94.3	94.3	70.7
250	0.061	-	145.5	109.1	105.8	79.3	79.3	59.5
200	0.075	-	118.0	88.4	85.8	64.3	64.3	48.2
150	0.098	-	90.5	67.8	65.7	49.3	49.3	36.9
100	0.140	-	62.9	47.1	45.7	34.3	34.3	25.7

## M2528-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.025	-	346.9	260.2	252.3	189.2	189.2	141.9
900	0.028	-	311.6	233.7	226.6	169.9	169.9	127.5
800	0.032	-	276.4	207.3	201.0	150.7	150.7	113.1
700	0.037	-	241.2	180.9	175.4	131.5	131.5	98.7
600	0.043	-	206.0	154.5	149.8	112.3	112.3	84.3
500	0.052	-	170.8	128.1	124.2	93.2	93.2	69.9
450	0.058	-	153.2	114.9	111.4	83.6	83.6	62.7
400	0.065	-	135.6	101.7	98.6	74.0	74.0	55.5
350	0.075	-	118.0	88.5	85.8	64.4	64.4	48.3
300	0.088	-	100.4	75.3	73.0	54.8	54.8	41.1
250	0.106	-	82.8	62.1	60.2	45.1	45.1	33.9
200	0.135	-	65.2	48.9	47.4	35.5	35.5	26.7
150	0.185	-	47.6	35.7	34.6	26.0	26.0	19.5
100	0.294	-	30.0	22.5	21.8	16.4	16.4	12.3

## M3528-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.036	-	242.6	182.0	176.5	132.4	132.4	99.3
900	0.040	-	217.8	163.4	158.5	118.9	118.9	89.2
800	0.046	-	192.7	144.6	140.2	105.2	105.2	78.9
700	0.053	-	167.6	125.7	121.9	91.5	91.5	68.6
600	0.062	-	142.6	107.0	103.7	77.8	77.8	58.4
500	0.075	-	117.1	87.9	85.2	63.9	63.9	48.0
450	0.084	-	104.6	78.5	76.1	57.1	57.1	42.8
400	0.095	-	92.2	69.1	67.1	50.3	50.3	37.7
350	0.111	-	79.5	59.7	57.9	43.4	43.4	32.6
300	0.131	-	67.0	50.3	48.7	36.6	36.6	27.4
250	0.162	-	54.4	40.8	39.6	29.7	29.7	22.3
200	0.210	-	41.8	31.4	30.4	22.8	22.8	17.1
150	0.300	-	29.3	22.0	21.3	16.0	16.0	12.0
100	0.459	10.0	19.3	14.4	14.0	10.5	10.5	7.8

## M5028-MPX

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
	H	V	H	V	H	V	H	V
1000	0.053	-	167.4	125.6	121.8	91.3	91.3	68.5
900	0.059	-	149.8	112.4	109.0	81.8	81.8	61.3
800	0.067	-	132.3	99.3	96.3	72.2	72.2	54.2
700	0.077	-	114.5	85.9	83.3	62.5	62.5	46.9
600	0.091	-	97.0	72.8	70.6	53.0	53.0	39.7
500	0.111	-	79.3	59.5	57.7	43.3	43.3	32.5
450	0.125	-	70.5	52.9	51.3	38.5	38.5	28.9
400	0.142	-	61.8	46.4	44.9	33.7	33.7	25.3
350	0.166	-	53.0	39.8	38.6	29.0	29.0	21.7
300	0.199	-	44.3	33.2	32.2	24.2	24.2	18.1
250	0.248	-	35.4	26.6	25.8	19.3	19.3	14.5
200	0.330	-	26.6	20.0	19.4	14.5	14.5	10.9
150	0.444	10.0	20.1	15.0	14.5	10.9	10.9	8.1
100	0.722	25.0	12.4	9.2	8.9	6.7	6.7</	

# FIELD OF VIEW

## MPW3 Series

**M0528-MPW3 (f=5mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.005	-	1811.6	1361.5	1487.1	1108.3	1171.7	876.9
900	0.006	-	1634.3	1228.1	1341.4	999.6	1056.8	790.8
800	0.006	-	1457.0	1094.6	1195.7	890.9	941.9	704.8
700	0.007	-	1279.8	961.2	1050.0	782.2	827.0	618.8
600	0.008	-	1102.5	827.2	904.2	673.5	712.1	532.8
500	0.010	-	925.2	694.2	758.5	564.8	597.2	446.7
450	0.011	-	836.6	627.5	685.7	510.5	539.7	403.7
400	0.012	-	747.9	560.8	612.8	456.1	482.3	360.7
350	0.014	-	659.3	494.0	539.9	401.8	424.8	317.7
300	0.016	-	570.6	427.3	467.1	347.4	367.4	274.7
250	0.019	-	482.0	360.6	394.2	293.1	309.9	231.7
200	0.023	-	393.3	293.8	321.3	238.7	252.5	188.7
150	0.030	-	304.7	227.1	248.5	184.4	195.0	145.7
100	0.043	-	216.0	160.4	175.6	130.0	137.6	102.6

**M0828-MPW3 (f=8mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.008	-	1099.4	820.0	896.0	668.7	706.4	530.9
900	0.009	-	990.8	739.0	807.5	602.6	636.6	478.4
800	0.010	-	882.2	657.9	719.0	536.5	566.8	425.9
700	0.012	-	773.7	576.9	630.4	470.4	497.0	373.5
600	0.014	-	665.1	495.9	541.9	404.3	427.1	321.0
500	0.016	-	556.5	414.9	453.4	338.2	357.3	268.5
450	0.018	-	502.3	374.4	409.2	305.2	322.4	242.3
400	0.020	-	448.0	333.9	364.9	272.2	287.6	216.1
350	0.023	-	393.7	293.3	320.6	239.1	252.6	189.8
300	0.027	-	339.4	252.8	276.3	206.0	217.7	163.5
250	0.032	-	285.1	212.3	232.1	173.0	182.8	137.3
200	0.039	-	230.8	171.8	187.8	139.9	147.9	111.1
150	0.051	-	176.5	131.3	143.5	106.9	113.0	84.8
100	0.074	-	122.2	90.7	99.3	73.9	78.1	58.6

**M1228-MPW3 (f=12mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.012	-	743.1	557.3	607.9	455.9	481.3	363.0
900	0.013	-	669.7	502.3	547.9	410.9	433.7	327.1
800	0.015	-	596.4	447.2	487.9	365.9	386.2	291.3
700	0.017	-	523.1	392.2	427.9	320.8	338.7	255.4
600	0.020	-	449.8	337.2	367.9	275.8	291.1	219.6
500	0.023	-	376.4	282.1	307.8	230.8	243.6	183.7
450	0.026	-	339.8	254.6	277.8	208.3	219.8	165.8
400	0.029	-	303.1	227.1	247.8	185.7	196.1	147.8
350	0.033	-	266.4	199.6	217.8	163.2	172.3	129.9
300	0.038	-	229.7	172.1	187.8	140.7	148.6	112.0
250	0.046	-	193.1	144.6	157.8	118.2	124.8	94.1
200	0.057	-	156.4	117.1	127.8	95.7	101.0	76.1
150	0.074	-	119.7	89.5	97.7	73.2	77.3	58.2
100	0.107	-	83.0	62.0	67.7	50.6	53.5	40.3

**M1628-MPW3 (f=16mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.016	-	552.5	414.6	452.3	339.2	358.1	270.1
900	0.018	-	497.6	373.4	407.3	305.5	322.5	243.2
800	0.020	-	442.7	332.1	362.3	271.7	286.8	216.4
700	0.023	-	387.7	290.9	317.4	238.0	251.2	189.5
600	0.026	-	332.8	249.7	272.4	204.3	215.6	162.6
500	0.032	-	277.9	208.5	227.4	170.5	180.0	135.8
450	0.035	-	250.5	187.8	204.9	153.6	162.2	122.3
400	0.040	-	223.0	167.2	182.5	136.8	144.4	108.9
350	0.045	-	195.5	146.6	160.0	119.9	126.6	95.4
300	0.052	-	168.1	126.0	137.5	103.0	108.8	82.0
250	0.063	-	140.6	105.4	115.0	86.2	91.0	68.6
200	0.078	0.3	113.2	84.8	92.5	69.3	73.2	55.1
150	0.103	0.6	85.7	64.1	70.0	52.4	55.3	41.7
100	0.153	1.5	58.2	43.5	47.5	35.5	37.5	28.3

**M2528-MPW3 (f=25mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.025	-	351.1	263.7	287.6	215.9	227.8	171.9
900	0.028	-	316.1	237.3	258.8	194.3	205.1	154.8
800	0.031	-	281.0	211.0	230.1	172.7	182.3	137.6
700	0.036	-	246.0	184.7	201.4	151.2	159.5	120.4
600	0.042	-	210.9	158.3	172.7	129.6	136.8	103.2
500	0.050	-	175.9	132.0	144.0	108.0	114.0	86.0
450	0.056	-	158.4	118.8	129.6	97.2	102.6	77.4
400	0.062	-	140.8	105.7	115.3	86.5	91.3	68.9
350	0.071	-	123.3	92.5	100.9	75.7	79.9	60.3
300	0.083	-	105.8	79.3	86.5	64.9	68.5	51.7
250	0.100	-	88.2	66.1	72.2	54.1	57.1	43.1
200	0.125	-	70.7	53.0	57.8	43.3	45.7	34.5
150	0.166	1.0	53.1	39.8	43.4	32.5	34.3	25.9
100	0.249	3.0	35.6	26.6	29.0	21.7	22.9	17.3

**M3528-MPW3 (f=35mm)**

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/2.5"	
		H	V	H	V	H	V	
1000	0.036	-	247.9	185.9	202.8	152.1	160.5	121.1
900	0.040	-	222.8	167.1	182.3	136.7	144.3	108.8
800	0.045	-	197.6	148.2	161.7	121.2	128.0	96.5
700	0.051	-	172.5	129.3	141.1	105.8	111.7	84.3
600	0.060	-	147.3	110.5	120.5	90.4	95.4	72.0
500	0.072	-	122.2	91.6	100.0	74.9	79.1	59.7
450	0.080	-	109.6	82.2	89.7	67.2	71.0	53.5
400	0.091	-	97.0	72.8	79.4	59.5	62.8	47.4
350	0.104	-	84.5	63.3	69.1	51.8	54.7	41.3
300	0.123	-	71.9	53.9	58.8	44.1	46.5	35.1
250	0.149	-	59.3	44.5	48.5	36.4	38.4	29.0</td

## MP2 / ViSWIR Lite Series

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	

# FIELD OF VIEW

## ViSWIR Hyper APO Series

### M0818-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.008	1112.2	882.6	795.4	635.4	396.2	316.8
900	0.009	1003.0	795.8	717.3	573.0	357.3	285.7
800	0.010	894.0	709.2	639.2	510.6	318.4	254.5
700	0.012	784.8	622.6	561.1	448.2	279.4	223.4
600	0.013	675.8	535.9	483.0	385.8	240.5	192.3
500	0.016	566.7	449.3	404.9	323.4	201.5	161.1
450	0.018	512.2	406.0	365.9	292.1	182.1	145.5
400	0.020	457.7	362.7	326.8	260.9	162.6	130.0
350	0.022	403.1	319.3	287.8	229.7	143.1	114.4
300	0.026	348.6	276.0	248.7	198.5	123.7	98.8
250	0.031	294.1	232.7	209.6	167.3	104.2	83.3
200	0.038	239.5	189.3	170.6	136.1	84.7	67.7
190	0.040	228.6	180.7	162.8	129.8	80.8	64.6
180	0.042	217.7	172.0	155.0	123.6	76.9	61.5
170	0.044	206.8	163.3	147.1	117.3	73.0	58.4
160	0.046	195.8	154.7	139.3	111.1	69.1	55.2
150	0.049	184.9	146.0	131.5	104.8	65.2	52.1
140	0.052	174.0	137.3	123.7	98.6	61.3	49.0
130	0.056	163.1	128.6	115.9	92.3	57.4	45.9
120	0.060	152.1	120.0	108.1	86.1	53.5	42.8
110	0.065	141.2	111.3	100.2	79.9	49.6	39.7
100	0.070	130.3	102.6	92.3	73.5	45.7	36.5

### M1218-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.012	764.4	605.9	545.7	436.3	272.4	217.8
900	0.013	689.6	546.5	492.4	393.6	245.7	196.5
800	0.015	614.8	487.2	439.0	350.9	219.0	175.2
700	0.017	540.0	427.9	385.7	308.2	192.4	153.9
600	0.019	465.1	368.5	332.2	265.5	165.7	132.5
500	0.023	390.2	309.1	278.7	222.7	139.0	111.1
450	0.026	352.7	279.5	252.0	201.3	125.6	100.5
400	0.029	315.2	249.8	225.2	179.9	112.3	89.8
350	0.032	277.8	220.1	198.4	158.5	98.9	79.1
300	0.038	240.3	190.3	171.6	137.1	85.5	68.4
250	0.044	202.9	160.7	144.8	115.7	72.2	57.7
200	0.055	165.5	131.0	118.0	94.3	58.8	47.0
190	0.057	158.0	125.0	112.7	90.0	56.1	44.9
180	0.060	150.5	119.1	107.3	85.7	53.5	42.8
170	0.063	143.0	113.2	102.0	81.4	50.8	40.6
160	0.067	135.5	107.2	96.6	77.1	48.1	38.5
150	0.071	128.0	101.3	91.2	72.9	45.4	36.3
140	0.075	120.4	95.3	85.9	68.6	42.8	34.2
130	0.080	112.9	89.3	80.5	64.3	40.1	32.0
120	0.086	105.4	83.4	75.1	60.0	37.4	29.9
110	0.092	97.9	77.4	69.8	55.7	34.7	27.8
100	0.100	90.4	71.5	64.4	51.4	32.0	25.6

### M1618-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.016	573.5	454.3	410.2	327.7	204.5	163.5
900	0.017	517.4	409.8	369.7	295.4	184.3	147.4
800	0.020	461.4	365.4	329.3	263.1	164.1	131.2
700	0.022	405.4	321.0	289.2	231.1	144.2	115.3
600	0.026	349.3	276.5	249.2	199.1	124.2	99.3
500	0.031	293.3	232.1	209.1	167.0	104.2	83.3
450	0.034	265.2	209.8	189.1	151.0	94.2	75.3
400	0.038	237.2	187.6	169.0	135.0	84.2	67.3
350	0.043	209.2	165.4	148.9	118.9	74.1	59.3
300	0.050	181.1	143.1	129.1	103.1	64.3	51.4
250	0.059	153.1	120.9	109.5	87.4	54.5	43.6
200	0.072	125.0	98.7	89.2	71.1	44.3	35.4
190	0.076	119.4	94.2	85.1	67.9	42.3	33.8
180	0.080	113.9	89.8	81.1	64.7	40.3	32.2
170	0.084	108.3	85.4	77.1	61.5	38.3	30.6
160	0.089	102.7	81.0	73.0	58.3	36.3	29.0
150	0.094	97.1	76.5	69.0	55.0	34.3	27.4
140	0.100	91.5	72.1	65.0	51.8	32.3	25.8
130	0.106	85.9	67.7	61.0	48.6	30.2	24.2
120	0.114	80.4	63.3	56.9	45.4	28.2	22.6
110	0.122	74.8	58.8	52.9	42.2	26.2	21.0
100	0.133	69.2	54.4	48.9	39.0	24.2	19.4

### M2518-APVSW2

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.025	361.9	286.9	258.5	206.7	129.1	103.3
900	0.028	326.1	258.5	232.7	186.1	116.3	93.0
800	0.031	290.3	230.1	207.1	165.6	103.5	82.8
700	0.035	254.5	201.7	181.3	145.0	90.6	72.5
600	0.041	218.6	173.3	155.7	124.5	77.8	62.2
500	0.049	182.8	144.9	130.1	104.0	65.0	52.0
450	0.055	164.9	130.7	117.3	93.8	58.6	46.9
400	0.061	147.0	116.5	104.5	83.6	52.2	41.8
350	0.070	128.6	102.0	91.8	73.4	45.8	36.7
300	0.081	110.8	87.8	79.0	63.2	39.5	31.6
250	0.097	92.9	73.6	66.3	53.0	33.1	26.5
200	0.120	75.1	59.5	53.6	42.8	26.8	21.4
190	0.126	71.5	56.7	51.1	40.8	25.5	20.4
180	0.132	68.0	53.9	48.5	38.8	24.2	19.4
170	0.140	64.4	51.0	46.0	36.7	22.9	18.3
160	0.148	60.9	48.2	43.4	34.7	21.7	17.3
150	0.157	57.3	45.4	40.9	32.7	20.4	16.3
140	0.168	53.8	42.6	38.4	30.6	19.1	15.3
130	0.179	50.2	39.8	35.8	28.6	17.9	14.3
120	0.193	46.7	37.0	33.3	26.6	16.6	13.3
110	0.209	43.2	34.2	30.8	24.6	15.3	12.3
100	0.228	39.6	31.4	28.2	22.6	14.1	11.3

### M3518-APVSW

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.036	260.0	206.2	181.1	144.2	91.7	72.7
900	0.040	220.3	174.7	162.5	129.4	82.3	65.2
800	0.045	204.7	162.4	144.0	114.7	72.9	57.8
700	0.052	168.8	133.9	125.4	99.9	63.5	50.4
600	0.061	151.2	120.0	107.0	85.2	54.2	42.9
500	0.073	120.1	95.2	88.4	70.4	44.8	35.5
450	0.082	111.0	88.0	79.2	63.1	40.1	31.8
400	0.093	96.4	76.5	70.0	55.7	35.4	28.1
350	0.107	82.9	65.7	60.8	48.4	30.8	24.4
300	0.126	71.0	56.3	51.6	41.1	26.1	20.7
250	0.153	58.5	46.4	42.4	33.8	21.5	17.0
200	0.195	46.1	36				

## MACRO ZOOM LENS / TELECENTRIC MACRO LENS

### TEC-V7X

Working Distance (mm)	Optical Magnification	Field of View (mm)									
		1/1"			1"			2/3"			
D	H	V	D	H	V	D	H	V			
182	Wide	0.2525	69.12	48.74	48.74	63.28	50.32	38.06	43.6	34.88	26.16
	Tele	0.5	34.75	24.6	24.6	31.88	25.4	19.246	22	17.65	13.26
200	Wide	0.2258	76.94	54.52	54.62	70.84	56.3	42.56	48.76	39	29.24
	Tele	0.4451	38.68	27.5	27.5	35.64	28.38	21.51	24.62	19.72	14.81
300	Wide	0.1413	124.06	87.48	87.48	114.1	90.34	68.18	78.178	62.46	46.8
	Tele	0.2784	61.94	44	44	57.46	45.42	34.3	39.38	31.55	23.69
400	Wide	0.1037	169.98	119.47	119.47	156.05	123.4	93.02	106.71	85.2	63.82
	Tele	0.2042	84.52	59.99	59.99	77.82	61.92	46.89	53.7	43	32.28
500	Wide	0.082	215.44	151.25	151.25	197.8	156.25	117.67	135.04	107.78	80.68
	Tele	0.1617	106.89	75.84	75.84	98.4	78.29	59.28	67.88	54.36	40.8
5775	Wide	0.0708	250.66	175.21	175.21	229.82	181.4	136.35	156.76	125.08	93.62
	Tele	0.1398	124.04	87.99	87.99	114.16	90.8	68.75	78.74	63.06	47.32

### TEC-M55MPW

Working Distance (mm)	Optical Magnification	Field of View (mm)								
		2/3"			1/2"			1/3"		
H	V	H	V	H	V					
1000	0.057	154.4	115.8	112.3	84.2	84.2	63.2			
950	0.060	146.7	110.0	106.7	80.0	80.0	60.0			
900	0.064	137.5	103.1	100.0	75.0	75.0	56.3			
850	0.067	131.3	98.5	95.5	71.6	71.6	53.7			
800	0.072	122.2	91.7	88.9	66.7	66.7	50.0			
750	0.077	114.3	85.7	83.1	62.3	62.3	46.8			
700	0.083	106.0	79.5	77.1	57.8	57.8	43.4			
650	0.089	98.9	74.2	71.9	53.9	53.9	40.4			
600	0.097	90.7	68.0	66.0	49.5	49.5	37.1			
550	0.106	83.0	62.3	60.4	45.3	45.3	34.0			
500	0.118	74.6	55.9	54.2	40.7	40.7	30.5			
450	0.132	66.7	50.0	48.5	36.4	36.4	27.3			
400	0.150	58.7	44.0	42.7	32.0	32.0	24.0			
350	0.173	50.9	38.2	37.0	27.7	27.7	20.8			
300	0.204	43.1	32.4	31.4	23.5	23.5	17.6			
250	0.251	35.1	26.3	25.5	19.1	19.1	14.3			
200	0.323	27.2	20.4	19.8	14.9	14.9	11.1			
150	0.456	19.3	14.5	14.0	10.5	10.5	7.9			
140	0.504	17.5	13.1	12.7	9.5	9.5	7.1			

### TEC-M55

#### TEC-M55

Working Distance (mm)	Optical Magnification	Field of View (mm)								
		2/3"		1/2"		1/3"		H	V	H
	H	V	H	V	H	V			H	V
5000	0.011	796.2	597.8	579.7	435.0	435.0	326.3			
4000	0.014	636.1	477.6	463.1	347.5	347.5	260.7			
3000	0.018	476.0	357.4	346.6	260.1	260.1	195.1			
2000	0.028	315.9	237.2	230.0	172.6	172.6	129.5			
1500	0.037	235.9	177.1	177.1	128.9	128.9	96.7			
1000	0.056	155.8	117.0	113.4	85.1	85.1	63.9			
950	0.059	147.8	111.0	107.6	80.7	80.7	60.6			
900	0.063	139.8	105.0	101.8	76.4	76.4	57.3			
850	0.067	131.8	99.0	96.0	72.0	72.0	54.0			
800	0.071	123.8	92.9	90.1	67.6	67.6	50.7			
750	0.076	115.8	86.9	84.3	63.2	63.2	47.4			
700	0.081	107.8	80.9	78.5	58.9	58.9	44.2			
650	0.088	99.8	74.9	72.6	55.5	54.5	40.9			
600	0.096	91.8	68.9	66.8	50.1	50.1	37.6			
550	0.105	83.8	62.9	61.0	45.8	45.8	34.3			
500	0.116	75.8	56.9	55.2	41.4	41.4	31.0			
450	0.130	67.8	50.9	49.3	37.0	37.0	27.8			
400	0.147	59.8	44.9	43.5	32.6	32.6	24.5			
350	0.170	51.8	38.8	37.7	28.3	28.3	21.2			
300	0.201	43.8	32.8	31.8	23.9	23.9	17.9			
250	0.246	35.7	26.8	26.0	19.5	19.5	14.6			
200	0.317	27.7	20.8	20.2	15.1	15.1	11.4			
150	0.446	19.7	14.8	14.3	10.8	10.8	8.1			
140	0.486	18.1	13.6	13.2	9.9	9.9	7.4			

### MLH-10X

Working Distance (mm)	Optical Magnification	Field of View (mm)									
		1/2"			1/3"			1/4"			
D	H	V	D	H	V	D	H	V			
150	Wide	0.084	95.2	76.2	57.1	3.73X	71.4	57.1	42.9	4.98X	53.6
	Tele	0.84	9.5	7.6	5.7	37.34X	7.1	5.7	4.3	49.78X	5.4
200	Wide	0.06	133.3	106.7	80.0	2.67X	100.0	80.0	60.0	3.56X	75.0
	Tele	0.60	13.3	10.7	8.0	26.67X	10.0	8.0	6.0	35.56X	12.1
250	Wide	0.045	177.8	142.2	106.7	2.00X	133.3	106.7	80.0	2.67X	100.0
	Tele	0.45	17.8	14.2	10.7	20.00X	13.3	10.7	8.0	26.67X	10.0
300	Wide	0.036	222.2	177.8	133.3	1.60X	166.7	133.3	100.0	2.13X	125.0
	Tele	0.36	22.2	17.8	13.3	16.00X	16.7	13.3	10.0	21.34X	12.5
350	Wide	0.03	266.7	213.3	160.0	1.33X	200.0	160.0	120.0	1.78X	150.0
	Tele	0.30	26.7	21.3	16.0	13.34X	20.0	16.0	12.0	17.78X	15.0
400	Wide	0.025	320.0	256.0	192.0	1.11X	240.0	192.0	144.0	1.48X	180.0
	Tele	0.25	32.0	25.6	19.2	11.11X	24.0	19.2	14.4	14.82X	18.0
450	Wide	0.022	363.6	290.9	218.2	0.98X	272.7	218.2	163.6	1.30X	204.5
	Tele	0.22	36.4	29.1	21.8	9.78X	27.3	21.8	16.4	13.04X	20.5

### MLM-3XMP

Optical Magnification	Field of View (mm)								
	2/3"			1/2"			1/3"		
D	H	V	D	H	V	D	H	V	
0.3	36.7	29.3	22.0	9.7X	26.7	21.3	16.0	13.3X	20.0
	27.5	22.0	16.5	12.9X	20.0	16.0	12.0	17.8X	15.0
0.5	22.0	17.6	13.2	16.2X	16.0	12.8	9.6	22.2X	12.0
	18.3	14.7	11.0	19.4X	13.3	10.7	8.0	26.7X	10.0
0.6	15.7	12.6	9.4	22.6X	11.4	9.1	6.9	31.1X	8.6
	13.8	11.0	8.3	25.9X	10.0	8.0			

# FIELD OF VIEW

## 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

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