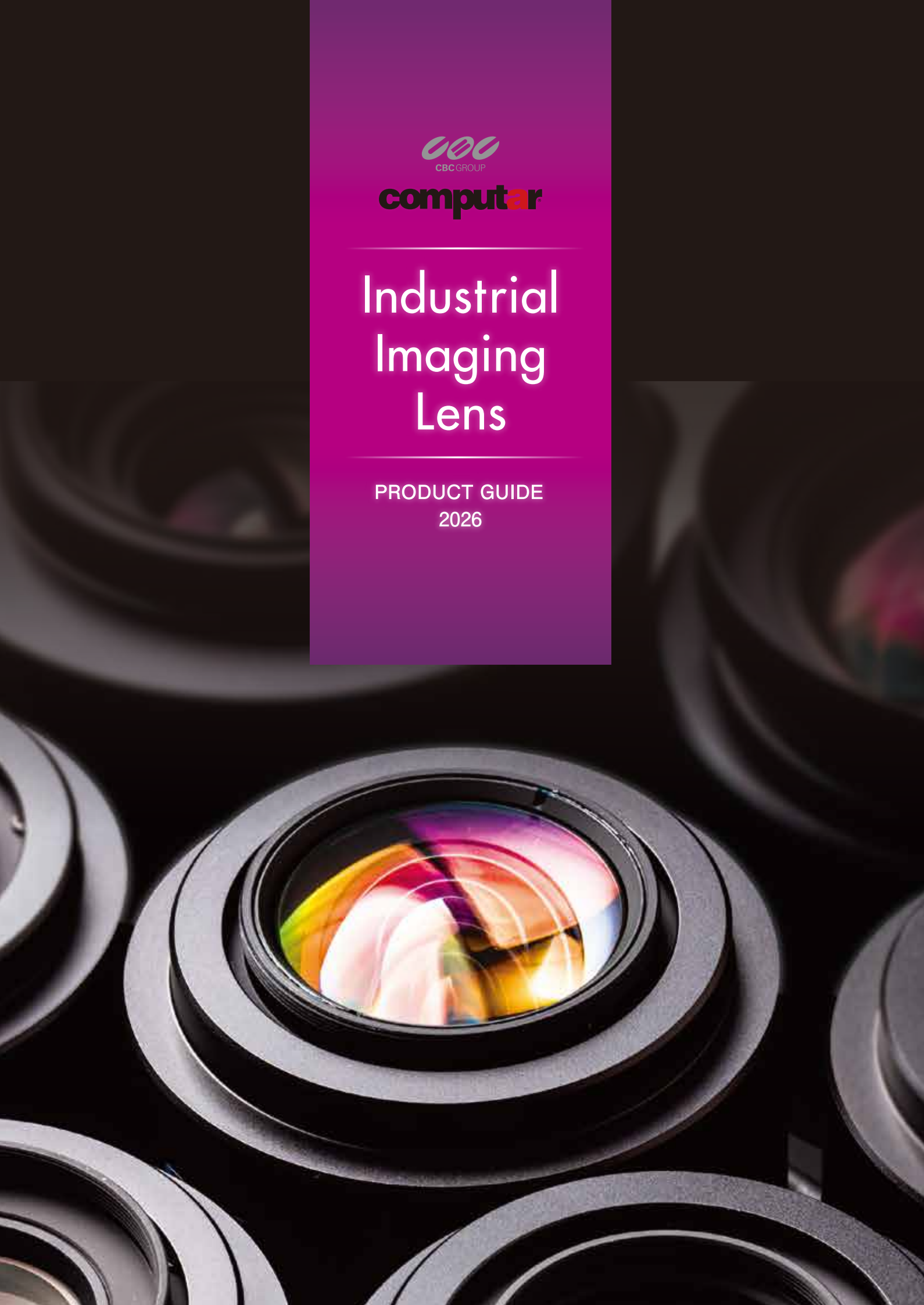




computar

Industrial Imaging Lens

PRODUCT GUIDE
2026





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 fifty 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 TELECENTRIC Series

- The industry's first motorized telecentric lens
- New motorized lenses, enable power supply & control through USB (Available for I²C ver.)
- Maintain Telecentricity even during focus adjustment
- Ultra-high resolution lens (Compatible with 2.74μm pixel size)

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 (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=5.5mm/8mm/12mm/16mm/25mm/35mm/50mm/75mm

ViSWIR Series

- Dedicated design for next generation Visible+SWIR image sensor (IMX992/IMX993)
- Hyper Apochromat design, Fully corrected focus-shift between 400nm-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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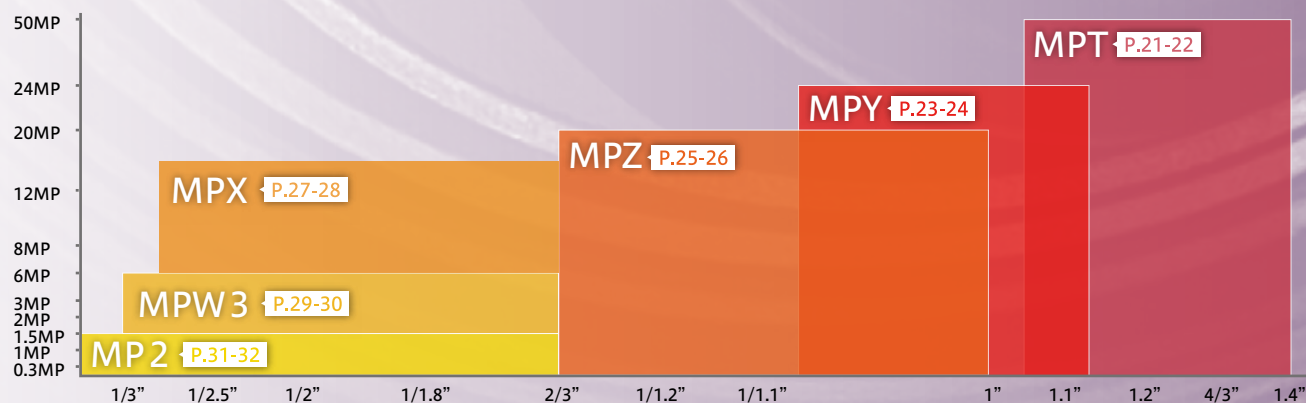
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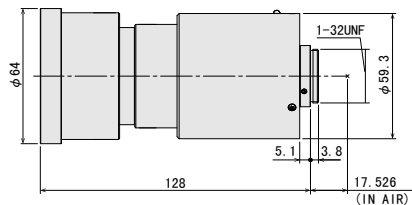
NEW LensConnect

I²C TELECENTRIC Series

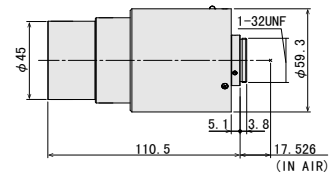
LensConnect I²C TELECENTRIC Series

Model No.	Format	Optical Magnification	Adjustable Working Distance	Weight
TEC-ML025139SC-MPW	2/3"	0.25x	119mm - 159mm	334g
TEC-ML05132SC-MPW		0.5x	122mm - 142mm	310g
TEC-ML10110SC-MPW		1.0x	102.5mm - 117.5mm	328g
TEC-ML2071SC-MPW		2.0x	66mm - 76mm	394g

TEC-ML025139SC-MPW



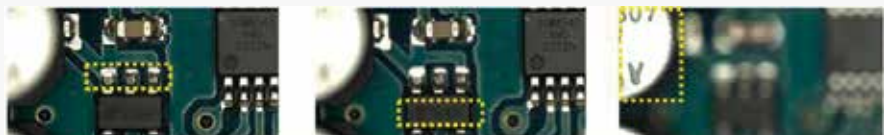
TEC-ML05132SC-MPW



Max. Image Circle	φ11.4mm		φ11.4mm
Optical Magnification	0.25x		0.5x
Adjustable Working Distance	119mm - 159mm		122mm - 142mm
Resolving Power *1	17.7μm		8.6μm
Depth of Field *2	8.32mm		2.08mm
NA	0.019		0.039
Control	Focus	Motorized	Motorized
Field of View	D	44.0mm	22.0mm
	H	35.2mm	17.6mm
	V	26.4mm	13.2mm
Operating temperature	-20°C - +60°C		-20°C - +60°C
Effective F-number	6.5		6.5
TV Distortion	2/3"	-0.16%	2/3" -0.01%
Back Focal Length	17.1mm (In Air)		17.0mm (In Air)
Flange Back Length	17.526mm (In Air)		17.526mm (In Air)
Mount	C-Mount		C-Mount
Filter thread	M62 P=0.75mm		M43 P=0.75mm
Weight	334g		310g
Control Interface	I ² C		I ² C
Power mode	DC5.0V±10%(500mA max)		DC5.0V±10%(500mA max)
Connector	-		-

*1:Resolving power = $0.61 \times \lambda / NA$ ($\lambda = 550\text{nm}$) *2:Depth of Field = $2 \times (\text{Permissible circle of confusion } [40\mu\text{m}] \times \text{Effective F-number} / \text{Magnification}^2)$

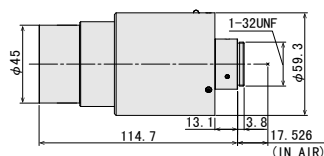
- The industry's first motorized telecentric lens
- New motorized lenses, enable power supply & control through USB (Available for I2C ver.)
- Maintain Telecentricity even during focus adjustment
- Ultra-high resolution lens (Compatible with 2.74um pixel size)



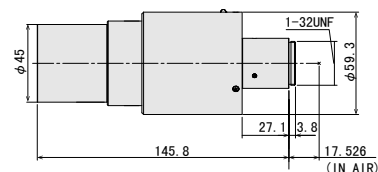
Instantly adjusts to the optimal focus position, even for workpieces with varying heights.



TEC-ML10110SC-MPW



TEC-ML2071SC-MPW



Max. Image Circle	φ11.4mm		φ11.4mm
Optical Magnification	1.0x		2.0x
Adjustable Working Distance	102.5mm - 117.5mm		66mm - 76mm
Resolving Power *1	4.4μm		2.2μm
Depth of Field *2	0.52mm		0.13mm
NA	0.077		0.154
Control	Focus	Motorized	
Field of View	D	11.0mm	5.5mm
	H	8.8mm	4.4mm
	V	6.6mm	3.3mm
Operating temperature	-20°C - +60°C		-20°C - +60°C
Effective F-number	6.5		6.5

TV Distortion	2/3"	0.02%	2/3"	0.01%
Back Focal Length	17.1mm (In Air)		17.1mm (In Air)	
Flange Back Length	17.526mm (In Air)		25.3mm (In Air)	
Mount	C-Mount		C-Mount	
Filter thread	M43 P=0.75mm		M43 P=0.75mm	
Weight	328g		394g	

Control Interface	I ² C		I ² C
Power mode	DC5.0V±10%(500mA max)		DC5.0V±10%(500mA max)
Connector	-		-

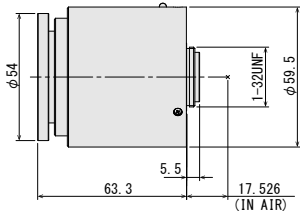
I²C DL-MPY Series

LensConnect I²C DL -MPY Series

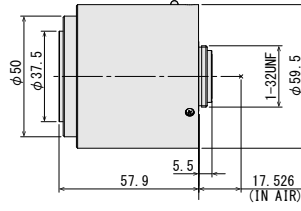


Model No.	Format	Focal Length	F No.	Working Distance	Weight
DL0828SC-MPY	1/1.1"	8mm	F2.8	0.1m-Inf.	170g
DL1224SC-MPY		12mm	F2.4	0.1m-Inf.	155g
DL1623SC-MPY		16mm	F2.3	0.11m-Inf.	165g
DL2523SC-MPY		25mm	F2.3	0.12m-Inf.	158g
DL3525SC-MPY		35mm	F2.5	0.16m-Inf.	152g
DL5028SC-MPY		50mm	F2.8	0.2m-Inf.	165g

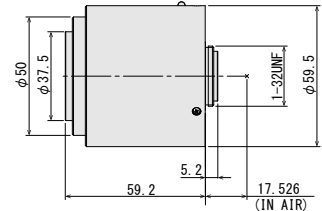
DL0828SC-MPY



DL1224SC-MPY



DL1623SC-MPY

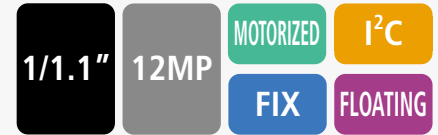


Focal Length		8mm						12mm						16mm					
Max. Image Format		ϕ 14.4mm						ϕ 14.4mm						ϕ 14.4mm					
Operation Range	Iris	F2.8 - F16.0						F2.4 - F16.0						F2.3 - F16.0					
	Focus	0.1m - Inf.						0.1m - Inf.						0.11m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
Angle of View	D		80.4°		68.3°		58.1°		60.2°		49.7°		41.5°		47.0°		38.2°		31.6°
	H	1/1.1"	69.4°	2/3"	57.0°	1/1.8"	47.8°	1/1.1"	50.5°	2/3"	40.6°	1/1.8"	33.6°	1/1.1"	38.9°	2/3"	31.0°	1/1.8"	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					

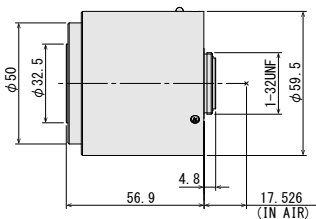
Optical Distortion	1/1.1"	0.0%	2/3"	-1.6%	1/1.8"	-1.7%	1/1.1"	-0.1%	2/3"	-1.0%	1/1.8"	-1.0%	1/1.1"	0.0%	2/3"	-0.7%	1/1.8"	-0.7%
Back Focal Length	13.0mm (In Air)						14.6mm (In Air)						14.3mm (In Air)					
Flange Back Length	17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M52 P=0.75mm						M35.5 P=0.5mm						M35.5 P=0.5mm					
Weight	170g						155g						165g					

Control Interface	I ² C						I ² C						I ² C					
Power mode	DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)					
Connector	-						-						-					

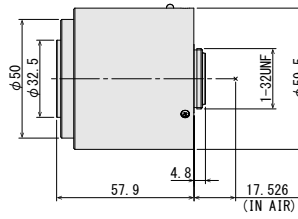
- Motorized lenses controllable via the I2C interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Ultra-high-resolution fixed-focal-length lenses supporting 1/1.1" 12-megapixel sensors
- Ultra-low-distortion design suitable for a wide range of machine vision applications



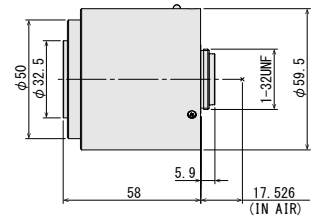
DL2523SC-MPY



DL3525SC-MPY



DL5028SC-MPY



Focal Length		25mm						35mm						50mm					
Max. Image Format		ϕ 14.4mm						ϕ 14.4mm						ϕ 14.4mm					
Operation Range	Iris	F2.3 - F16.0						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°		22.5°		17.9°		14.7°		16.3°		12.9°		10.6°
	H	1/1.1"	25.3°	2/3"	20.0°	1/1.8"	16.4°	1/1.1"	18.2°	2/3"	14.3°	1/1.8"	11.7°	1/1.1"	13.2°	2/3"	10.4°	1/1.8"	8.5°
	V		18.7°		15.1°		12.3°		13.4°		10.8°		8.8°		9.7°		7.8°		6.4°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

Optical Distortion	1/1.1"	0.1%	2/3"	-0.1%	1/1.8"	-0.1%	1/1.1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1/1.1"	0.0%	2/3"	0.0%	1/1.8"	0.0%
Back Focal Length	14.3mm (In Air)						14.3mm (In Air)						14.2mm (In Air)					
Flange Back Length	17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount	C-Mount						C-Mount						C-Mount					
Filter Size	M30.5 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm					
Weight	158g						152g						165g					

Control Interface	I²C						I²C						I²C					
Power mode	DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)					
Connector	-						-						-					

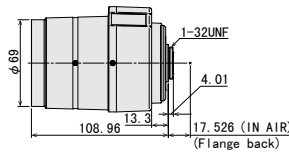
I²C VARI-FOCAL Series

LensConnect I²C VARI-FOCAL Series

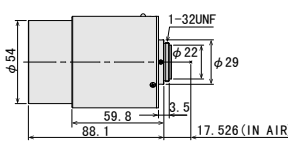


Model No.	Format	Focal Length	F No.	Resolution	Working Distance	Weight
VL6Z1626SC-MPYIR	1.1"	16-96mm	F2.6	12MP	3m-Inf.	322g
VL2Z2533SM6C-MPWIR	1"	25-50mm	F3.3	9MP	WIDE : 1m-Inf TELE : 3m-Inf	261g
ML3Z1226SC-MPW	2/3"	12-36mm	F2.6	9MP	WIDE : 0.1m-Inf TELE : 0.35m-Inf	239g
ML2Z0525SC-MPWIR	2/3"	5.5-12.7mm	F2.5	9MP	0.1m-Inf.	164g
EL3Z0416SC-MPWIR	1/1.8"	4-10mm	F1.6	5MP	0.2m-Inf.	153g
EL6Z0915SC-MPWIR	1/1.8"	9-50mm	F1.5	5MP	3m-Inf.	291g

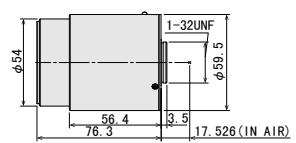
VL6Z1626SC-MPYIR



VL2Z2533SM6C-MPWIR



ML3Z1226SC-MPW

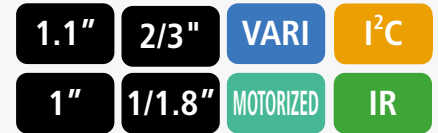


Focal Length		16mm - 96mm						25mm - 50mm						12mm - 36mm					
Max. Image Format		14.2mm × 10.4mm (φ 17.6mm)						φ 16.0mm						φ 11.8mm					
Operation Range	Iris	WIDE : F2.6 - F16.0 TELE : F2.7 - F16.0						WIDE : F3.3 - F16.0 TELE : F3.4 - F16.0						F2.6 - F16.0					
	Focus	3m - Inf.						WIDE : 1m - Inf. TELE : 3m - Inf.						WIDE : 0.1m - Inf. TELE : 0.35m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
	Zoom	Motorized						Motorized						Motorized					
Angle of View	D	1.1"	58.9° - 10.4°	1"	54.1° - 9.5°	2/3"	37.8° - 6.7°	1"	35.9° - 18.3°	2/3"	24.7° - 12.7°	1/1.8"	20.3° - 10.4°	2/3"	50.4° - 16.9°	1/1.8"	42.0° - 14.0°	1/3"	28.4° - 9.5°
	H		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°		22.8° - 7.6°
	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°		17.1° - 5.7°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

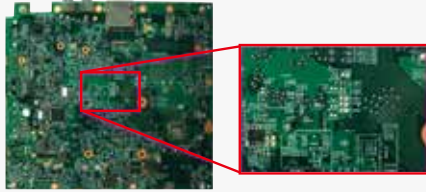
Back Focal Length	WIDE	13.9mm (In Air)	15.0 mm (in Air)	16.4 mm (In Air)
	TELE	13.9mm (In Air)	16.2 mm (in Air)	15.9 mm (In Air)
Flange Back Length	17.526mm (In Air)		17.526mm (In Air)	17.526mm (In Air)
Mount	C-Mount		C-Mount	C-Mount
Filter Size	M67 P=0.75mm		M52 x P0.75mm	M49 P=0.75mm
Tripod Screw	1/4-20UNC			
Weight	322g		261g	239g

Control Interface	I ² C					I ² C					I ² C				
Power mode	DC5.0V±10%(500mA max)					DC5.0V±10%(500mA max)					DC5.0V±10%(500mA max)				
Connector	-					-					-				

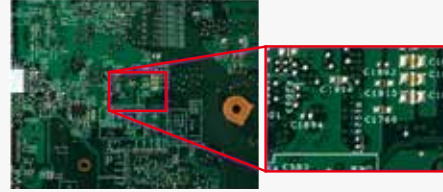
- Motorized lenses controllable via the I2C interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of zoom, focus, and iris
- High-speed focus control with excellent repeatability
- Ultra-high-resolution varifocal lenses compatible with 1.1-inch 12-megapixel sensors, as well as 1-inch, 2/3-inch, and 1/1.8-inch formats



ML3Z1226SC-MPW

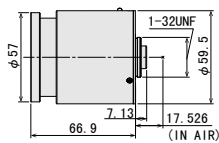


WIDE (12mm)

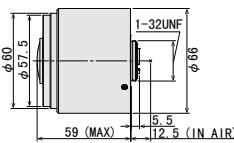


TELE (36mm)

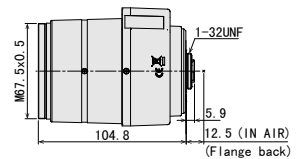
ML2Z0525SC-MPWIR



EL3Z0416SCS-MPWIR



EL6Z0915SCS-MPWIR



Focal Length		5.5mm - 12.7mm						4mm - 10mm						9mm - 50mm					
Max. Image Format		φ 11.8mm						7.1mm × 5.4mm (φ 8.9mm)						7.1mm × 5.4mm (φ 8.9mm)					
Operation Range	Iris	WIDE : F2.5 - F16.0 TELE : F3.7 - F16.0						WIDE : F1.6 - F16.0 TELE : F2.7 - F16.0						WIDE : F1.5 - F16.0 TELE : F1.6 - F16.0					
	Focus	0.1m - Inf.						0.2m -Inf.						3m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
	Zoom	Motorized						Motorized						Motorized					
Angle of View	D	2/3"	105.2° - 49.6°	1/1.8"	87.8° - 41.0°	1/3"	59.8° - 27.6°	1/1.8"	138.1° - 52.9°	1/2"	120.3° - 47.5°	1/3"	86.5° - 35.5°	1/1.8"	52.5° - 10.2°	1/2"	47.4° - 9.2°	1/3"	35.9° - 7.0°
	H		86.0° - 40.1°		71.3° - 33.0°		48.1° - 22.2°		104.8° - 42.2°		92.9° - 37.9°		68.1° - 28.4°		42.3° - 8.2°		38.2° - 7.5°		28.8° - 5.7°
	V		65.6° - 30.3°		54.0° - 24.9°		36.3° - 16.7°		76.3° - 31.6°		68.1° - 28.4°		50.5° - 21.3°		32.4° - 6.3°		28.8° - 5.7°		21.7° - 4.3°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

Back Focal Length	WIDE	11.4mm (In Air)	8.5mm (In Air)	9.2mm (In Air)
	TELE	11.4mm (In Air)	8.5mm (In Air)	9.2mm (In Air)
Flange Back Length	17.526mm (In Air)		12.5mm (In Air)	12.5mm (In Air)
Mount	C-Mount		CS-Mount	CS-Mount
Filter Size	M55 P=0.75mm		M55 P=0.75mm (With VM0418)*	M67 P=0.75mm (With VM0918)*
Tripod Screw				1/4-20UNC
Weight	164g		153g	291g

Control Interface	I ² C		I ² C	I ² C
Power mode	DC5.0V±10%(500mA max)		DC5.0V±10%(500mA max)	DC5.0V±10%(500mA max)
Connector	-		-	-

*When using filters, lens requires VM0418 (sold separately).
For more detail please refer to P.50

*When using filters, lens requires VM0918 (sold separately).
For more detail please refer to P.50

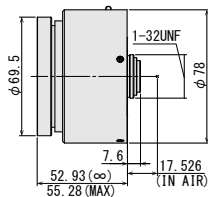
I²C VL-MPZ Series

LensConnect I²C VL -MPZ Series

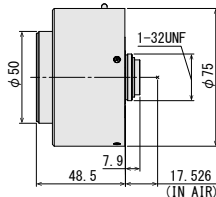


Model No.	Format	Focal Length	F No.	Working Distance	Weight
VL0826U-MPZ	1"	8mm	F2.6	0.1m-Inf.	326g
VL1226U-MPZ		12mm	F2.6	0.1m-Inf.	265g
VL1624U-MPZ		16mm	F2.4	0.1m-Inf.	272g
VL2520U-MPZ		25mm	F2.0	0.15m-Inf.	249g
VL3522U-MPZ		35mm	F2.2	0.2m-Inf.	305g
VL5024U-MPZ		50mm	F2.4	0.2m-Inf.	318g
VL7531U-MPZ		75mm	F3.1	0.25m-Inf.	407g

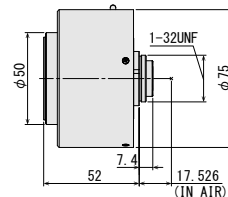
VL0826U-MPZ



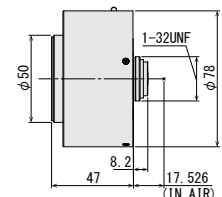
VL1226U-MPZ



VL1624U-MPZ



VL2520U-MPZ



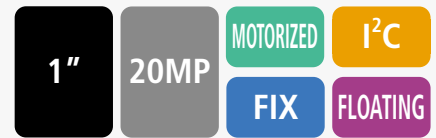
Focal Length		8mm						12mm						16mm						25mm					
Max. Aperture Ratio		1:2.6						1:2.6						1:2.4						1:2.0					
Max. Image Format		12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)					
Operation Range	Iris	F2.6 - F16.0						F2.6 - F16.0						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	76.9°	2/3"	57.1°	1/1.8"	47.8°	1"	56.7°	2/3"	40.7°	1/1.8"	33.7°	1"	43.8°	2/3"	30.9°	1/1.8"	25.5°	1"	28.8°	2/3"	20.0°	1/1.8"	16.4°	
	V	61.5°		44.2°		36.6°		44.1°		31.0°		25.5°		33.6°		23.4°		19.2°		21.8°		15.1°		12.4°	
Operating Temperature		-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	326g						265g						272g						249g					

Control Interface	I ² C					I ² C					I ² C					I ² C				
Power mode	DC5.0V±10%(500mA max)					DC5.0V±10%(500mA max)					DC5.0V±10%(500mA max)					DC5.0V±10%(500mA max)				
Connector	-					-					-					-				

*When using filters, lens requires ZM0810 (sold separately).
For more detail please refer to P.50

- Motorized lenses controllable via the I2C interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Ultra-high resolution lens, suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest optical design, which has a much higher relative illuminance compared to conventional models, despite having a large format 1" sensor (Ø16mm)



High-Precision Vision for
Accurate Logistic Monitoring.

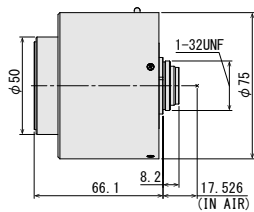


High-Precision Inspection for
Accurate Assembly Line Quality.

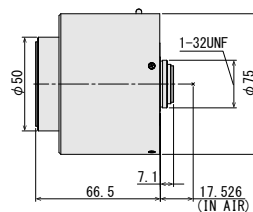


Supporting Accurate Inspection in
Assembly Processes.

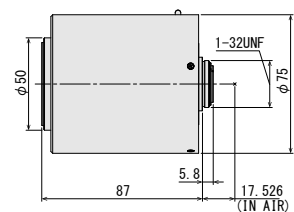
VL3522U-MPZ



VL5024U-MPZ



VL7531U-MPZ



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

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	305g						318g						407g					

Control Interface	I ² C						I ² C						I ² C					
Power mode	DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)						DC5.0V±10%(500mA max)					
Connector	-						-						-					



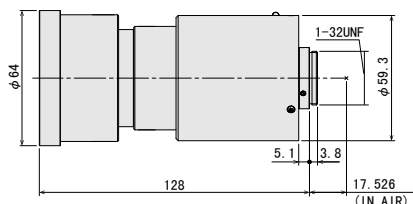
NEW LensConnect

USB TELECENTRIC Series

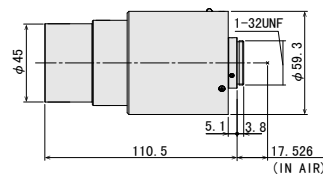
LensConnect USB TELECENTRIC Series

Model No.	Format	Optical Magnification	Adjustable Working Distance	Weight
TEC-ML025139UC-MPW	2/3"	0.25x	119mm - 159mm	342g
TEC-ML05132UC-MPW		0.5x	122mm - 142mm	318g
TEC-ML10110UC-MPW		1.0x	102.5mm - 117.5mm	336g
TEC-ML2071UC-MPW		2.0x	66mm - 76mm	402g

TEC-ML025139UC-MPW



TEC-ML05132UC-MPW



Max. Image Circle	φ11.4mm		φ11.4mm
Optical Magnification	0.25x		0.5x
Adjustable Working Distance	119mm - 159mm		122mm - 142mm
Resolving Power *1	17.7μm		8.6μm
Depth of Field *2	8.32mm		2.08mm
NA	0.019		0.039
Control	Focus	Motorized	Motorized
Field of View	D	44.0mm	22.0mm
	H	35.2mm	17.6mm
	V	26.4mm	13.2mm
Operating temperature	-20°C - +60°C		-20°C - +60°C
Effective F-number	6.5		6.5
TV Distortion	2/3"	-0.16%	2/3" -0.01%
Back Focal Length	17.1mm (In Air)		17.0mm (In Air)
Flange Back Length	17.526mm (In Air)		17.526mm (In Air)
Mount	C-Mount		C-Mount
Filter thread	M62 P=0.75mm		M43 P=0.75mm
Weight	342g		318g
Control Interface	USB2.0		USB2.0
Power mode	Bus power(5V:500mA)		Bus power(5V:500mA)
Connector	USB TypeA		USB TypeA

*1:Resolving power = $0.61 \times \lambda / NA$ ($\lambda = 550\text{nm}$) *2:Depth of Field = $2 \times (\text{Permissible circle of confusion } [40\mu\text{m}] \times \text{Effective F-number} / \text{Magnification}^2)$

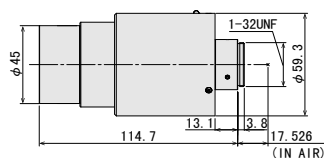
- The industry's first motorized telecentric lens
- New motorized lenses, enable power supply & control through USB (Available for I2C ver.)
- Maintain Telecentricity even during focus adjustment
- Ultra-high resolution lens (Compatible with 2.74μm pixel size)



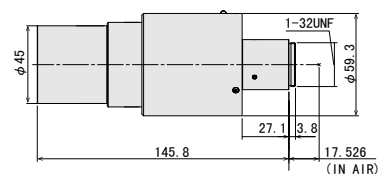
Instantly adjusts to the optimal focus position, even for workpieces with varying heights.



TEC-ML10110UC-MPW



TEC-ML2071UC-MPW



Max. Image Circle	φ11.4mm		φ11.4mm
Optical Magnification	1.0x		2.0x
Adjustable Working Distance	102.5mm - 117.5mm		66mm - 76mm
Resolving Power *1	4.4μm		2.2μm
Depth of Field *2	0.52mm		0.13mm
NA	0.077		0.154
Control	Focus	Motorized	
Field of View	D	11.0mm	5.5mm
	H	8.8mm	4.4mm
	V	6.6mm	3.3mm
Operating temperature	-20°C - +60°C		-20°C - +60°C
Effective F-number	6.5		6.5
TV Distortion	2/3"	0.02%	2/3" 0.01%
Back Focal Length	17.1mm (In Air)		17.1mm (In Air)
Flange Back Length	17.526mm (In Air)		25.3mm (In Air)
Mount	C-Mount		C-Mount
Filter thread	M43 P=0.75mm		M43 P=0.75mm
Weight	336g		402g
Control Interface	USB2.0		USB2.0
Power mode	Bus power(5V:500mA)		Bus power(5V:500mA)
Connector	USB TypeA		USB TypeA

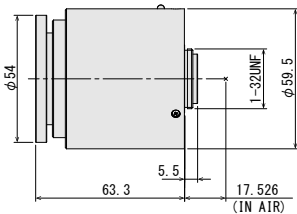
USB DL-MPY Series

LensConnect USB TELECENTRIC Series

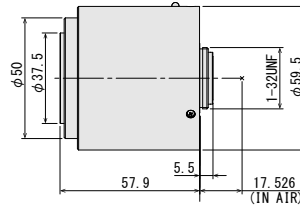


Model No.	Format	Focal Length	F No.	Working Distance	Weight
DL0828UC-MPY	1/1.1"	8mm	F2.8	0.1m-Inf.	178g
DL1224UC-MPY		12mm	F2.4	0.1m-Inf.	163g
DL1623UC-MPY		16mm	F2.3	0.11m-Inf.	173g
DL2523UC-MPY		25mm	F2.3	0.12m-Inf.	166g
DL3525UC-MPY		35mm	F2.5	0.16m-Inf.	160g
DL5028UC-MPY		50mm	F2.8	0.2m-Inf.	173g

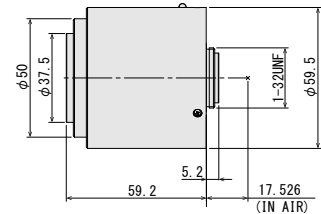
DL0828UC-MPY



DL1224UC-MPY



DL1623UC-MPY

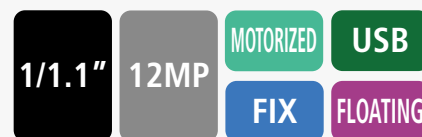


Focal Length		8mm						12mm						16mm					
Max. Image Format		φ 14.4mm						φ 14.4mm						φ 14.4mm					
Operation Range	Iris	F2.8 - F16.0						F2.4 - F16.0						F2.3 - F16.0					
	Focus	0.1m - Inf.						0.1m - Inf.						0.11m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
Angle of View	D		80.4°		68.3°		58.1°		60.2°		49.7°		41.5°		47.0°		38.2°		31.6°
	H	1/1.1"	69.4°	2/3"	57.0°	1/1.8"	47.8°	1/1.1"	50.5°	2/3"	40.6°	1/1.8"	33.6°	1/1.1"	38.9°	2/3"	31.0°	1/1.8"	25.5°
	V		53.8°		44.1°		36.6°		38.1°		31.0°		25.5°		29.0°		23.4°		19.2°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

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

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power(5V:500mA)						Bus power(5V:500mA)						Bus power(5V:500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

- Motorized lenses controllable via the USB interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Ultra-high-resolution fixed-focal-length lenses supporting 1/1.1" 12-megapixel sensors
- Ultra-low-distortion design suitable for a wide range of machine vision applications



Remote adjustment in out-of-reach places

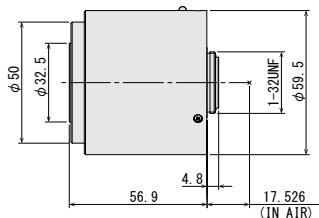


Make precise adjustments to lenses after installation

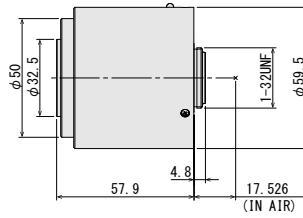


Easily change the focus point for workpieces at different heights

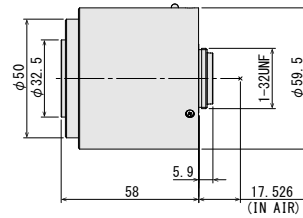
DL2523UC-MPY



DL3525UC-MPY



DL5028UC-MPY



Focal Length		25mm						35mm						50mm					
Max. Image Format		ϕ 14.4mm						ϕ 14.4mm						ϕ 14.4mm					
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°		22.5°		17.9°		14.7°		16.3°		12.9°		10.6°
	H	1/1.1"	25.3°	2/3"	20.0°	1/1.8"	16.4°	1/1.1"	18.2°	2/3"	14.3°	1/1.8"	11.7°	1/1.1"	13.2°	2/3"	10.4°	1/1.8"	8.5°
	V		18.7°		15.1°		12.3°		13.4°		10.8°		8.8°		9.7°		7.8°		6.4°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

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

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power(5V:500mA)						Bus power(5V:500mA)						Bus power(5V:500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

USB VARI-FOCAL Series

LensConnect USB VARI-FOCAL Series



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
ML2Z0525UC-MPWIR	2/3"	5.5-12.7mm	F2.5	9MP	0.1m-Inf.	172g
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							
Operation Range	Iris	WIDE : F2.6 - F16.0 TELE : F2.7 - F16.0					WIDE : F3.3 - F16.0 TELE : F3.4 - F16.0					F2.6 - F16.0							
	Focus	3m - Inf.					WIDE : 1m - Inf. TELE : 3m - Inf.					WIDE : 0.1m - Inf. TELE : 0.35m - Inf.							
Control	Iris	Motorized					Motorized					Motorized							
	Focus	Motorized					Motorized					Motorized							
	Zoom	Motorized					Motorized					Motorized							
Angle of View	D	1.1"	58.9° - 10.4°	1"	54.1° - 9.5°	2/3"	37.8° - 6.7°	1"	35.9° - 18.3°	2/3"	24.7° - 12.7°	1/1.8"	20.3° - 10.4°	2/3"	50.4° - 16.9°	1/1.8"	42.0° - 14.0°	1/3"	28.4° - 9.5°
	H		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°		22.8° - 7.6°
	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°		17.1° - 5.7°
Operating Temperature		-20°C - +60°C					-20°C - +60°C					-20°C - +60°C							

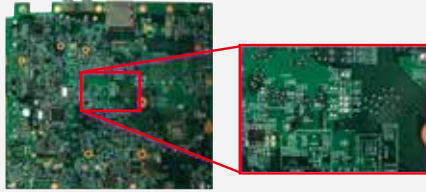
Back Focal Length	WIDE	13.9mm (In Air)					15.0 mm (in Air)					16.4 mm (In Air)				
	TELE	13.9mm (In Air)					16.2 mm (in Air)					15.9 mm (In Air)				
Flange Back Length		17.526mm (In Air)					17.526mm (In Air)					17.526mm (In Air)				
Mount		C-Mount					C-Mount					C-Mount				
Filter Size		M67 P=0.75mm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

Control Interface	USB2.0					USB2.0					USB2.0				
Power mode	Bus power(5V:500mA)					Bus power(5V:500mA)					Bus power(5V:500mA)				
Connector	USB TypeA					USB TypeA					USB TypeA				

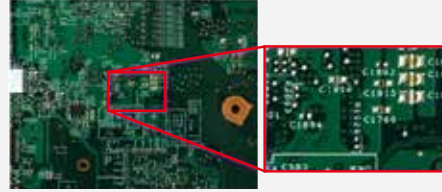
- Motorized lenses controllable via the USB interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of zoom, focus, and iris
- High-speed focus control with excellent repeatability
- Ultra-high-resolution varifocal lenses compatible with 1.1-inch 12-megapixel sensors, as well as 1-inch, 2/3-inch, and 1/1.8-inch formats



ML3Z1226SC-MPW

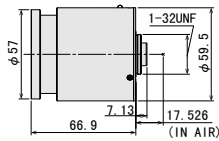


WIDE (12mm)

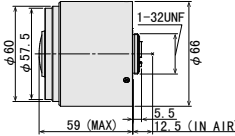


TELE (36mm)

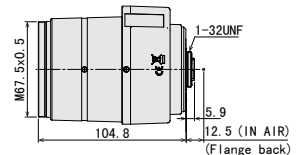
ML2Z0525UC-MPWIR



EL3Z0416UCS-MPWIR



EL6Z0915UCS-MPWIR



Focal Length		5.5mm - 12.7mm						4.0mm - 10mm						9mm - 50mm					
Max. Image Format		φ 11.8mm						7.1mm × 5.4mm (φ 8.9mm)						7.1mm × 5.4mm (φ 8.9mm)					
Operation Range	Iris	WIDE : F2.5 - F16.0 TELE : F3.7 - F16.0						WIDE : F1.6 - F16.0 TELE : F2.7 - F16.0						WIDE : F1.5 - F16.0 TELE : F1.6 - F16.0					
	Focus	0.1m - Inf.						0.2m -Inf.						3m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
	Zoom	Motorized						Motorized						Motorized					
Angle of View	D	2/3"	105.2° - 49.6°	1/1.8"	87.8° - 41.0°	1/3"	59.8° - 27.6°	1/1.8"	138.1° - 52.9°	1/2"	120.3° - 47.5°	1/3"	86.5° - 35.5°	1/1.8"	52.5° - 10.2°	1/2"	47.4° - 9.2°	1/3"	35.9° - 7.0°
	H		86.0° - 40.1°		71.3° - 33.0°		48.1° - 22.2°		104.8° - 42.2°		92.9° - 37.9°		68.1° - 28.4°		42.3° - 8.2°		38.2° - 7.5°		28.8° - 5.7°
	V		65.6° - 30.3°		54.0° - 24.9°		36.3° - 16.7°		76.3° - 31.6°		68.1° - 28.4°		50.5° - 21.3°		32.4° - 6.3°		28.8° - 5.7°		21.7° - 4.3°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					

Back Focal Length	WIDE	11.4mm (In Air)	8.5mm (In Air)	9.2mm (In Air)
	TELE	11.4mm (In Air)	8.5mm (In Air)	9.2mm (In Air)
Flange Back Length	17.526mm(In Air)		12.5mm (In Air)	12.5mm (In Air)
Mount	C-Mount		CS-Mount	CS-Mount
Filter Size	M55 P=0.75mm		M55 P=0.75mm (With VM0418)*	M67 P=0.75mm (With VM0918)*
Tripod Screw				1/4-20UNC
Weight	172g		161g	299g

Control Interface	USB2.0		USB2.0	USB2.0
Power mode	Bus power(5V:500mA)		Bus power(5V:500mA)	Bus power(5V:500mA)
Connector	USB TypeA		USB TypeA	USB TypeA

*When using filters, lens requires VM0418 (sold separately).
For more detail please refer to P.50

*When using filters, lens requires VM0918 (sold separately).
For more detail please refer to P.50

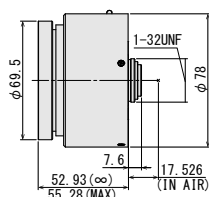
USB VL-MPZ Series

LensConnect USB VL-MPZ Series

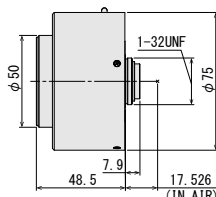


Model No.	Format	Focal Length	F No.	Working Distance	Weight
VL0826U-MPZ	1"	8mm	F2.6	0.1m-Inf.	334g
VL1226U-MPZ		12mm	F2.6	0.1m-Inf.	273g
VL1624U-MPZ		16mm	F2.4	0.1m-Inf.	280g
VL2520U-MPZ		25mm	F2.0	0.15m-Inf.	257g
VL3522U-MPZ		35mm	F2.2	0.2m-Inf.	313g
VL5024U-MPZ		50mm	F2.4	0.2m-Inf.	326g
VL7531U-MPZ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

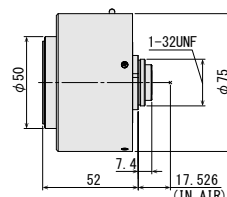
VL0826U-MPZ



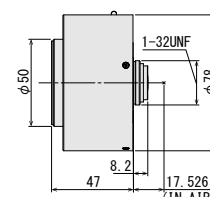
VL1226U-MPZ



VL1624U-MPZ



VL2520U-MPZ



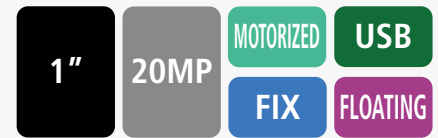
Focal Length		8mm						12mm						16mm						25mm					
Max. Aperture Ratio		1:2.6						1:2.6						1:2.4						1:2.0					
Max. Image Format		12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)						12.8mm × 9.6mm(ϕ 16mm)					
Operation Range	Iris	F2.6 - F16.0						F2.6 - F16.0						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"	33.7°	1"	43.8°	2/3"	30.9°	1/1.8"	25.5°	1"	28.8°	2/3"	20.0°	1/1.8"	16.4°
	V		61.5°		44.2°		36.6°		44.1°		31.0°		25.5°		33.6°		23.4°		19.2°		21.8°		15.1°		12.4°
Operating Temperature		-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					

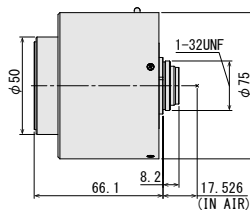
Control Interface	USB2.0					USB2.0					USB2.0					USB2.0				
Power mode	Bus power(5V:500mA)					Bus power(5V:500mA)					Bus power(5V:500mA)					Bus power(5V:500mA)				
Connector	USB TypeA					USB TypeA					USB TypeA					USB TypeA				

*When using filters, lens requires ZM0810 (sold separately).
For more detail please refer to P.50

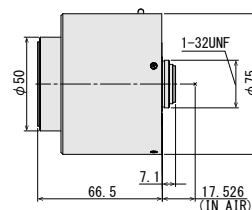
- Motorized FA lens that can be operated easily with a single USB cable
- Focus and Iris can be controlled via USB
- Ultra-high resolution lens, suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest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



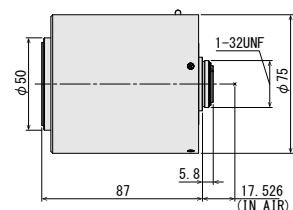
VL3522U-MPZ



VL5024U-MPZ



VL7531U-MPZ



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

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

Control Interface	USB2.0						USB2.0						USB2.0					
Power mode	Bus power(5V:500mA)						Bus power(5V:500mA)						Bus power(5V:500mA)					
Connector	USB TypeA						USB TypeA						USB TypeA					

NEW LensConnect

I²C ITS Series

LensConnect I²C ITS Series



- Motorized lenses controllable via the I2C interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Equipped with ICR switching mechanism inside the lens
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR

1.1"

16MP

I²C

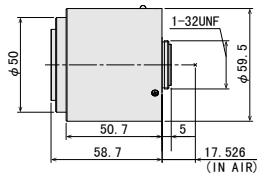
IR

MOTORIZED

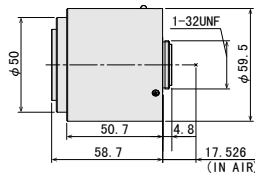
FIX

FLOATING

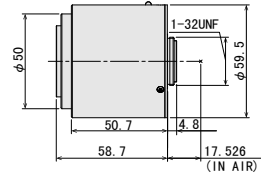
VL2028SM6C-MPYIR



VL2528SM6C-MPYIR



VL3528SM6C-MPYIR



Focal Length	20mm							25mm							35mm							
Max. Image Format	ϕ 17.6mm							ϕ 17.6mm							ϕ 17.6mm							
Operation Range	Iris	F2.8 - F16.0							F2.8 - F16.0							F2.8 - F16.0						
	Focus	0.1m - Inf.							0.12m - Inf.							0.25m - Inf.						
Control	Iris	Motorized							Motorized							Motorized						
	Focus	Motorized							Motorized							Motorized						
Angle of View	D		47.2°		45.6°		43.8°		38.5°		37.1°		35.6°		28.0°		27.0°		25.8°			
	H	1.1" (3:1)	45.0°	1.1" (16:9)	40.2°	1" (16:9)	39.2°	1.1" (3:1)	36.7°	1.1" (16:9)	32.6°	1" (16:9)	31.7°	1.1" (3:1)	26.6°	1.1" (16:9)	23.6°	1" (16:9)	22.9°			
	V		15.9°		23.5°		21.3°		12.8°		18.9°		17.1°		9.1°		13.6°		12.3°			
Operating Temperature	-20°C - +60°C							-20°C - +60°C							-20°C - +60°C							

Back Focal Length	18.5mm							15.9mm							17.9mm						
Flange Back Length	17.526mm (In Air)							17.526mm (In Air)							17.526mm (In Air)						
Mount	C-Mount							C-Mount							C-Mount						
Filter Size	M35.5 P=0.5mm							M35.5 P=0.5mm							M35.5 P=0.5mm						
Weight	162g							166g							160g						

Control Interface	I²C							I²C							I²C						
Power mode	DC5.0V±10%(500mA max)							DC5.0V±10%(500mA max)							DC5.0V±10%(500mA max)						
Connector	-							-							-						

NEW LensConnect

USBITS Series

LensConnect USB ITS Series

- Motorized lenses controllable via the USB interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Equipped with ICR switching mechanism inside the lens
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR

1.1"

16MP

USB

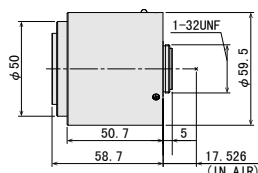
IR

MOTORIZED

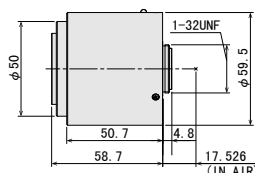
FIX

FLOATING

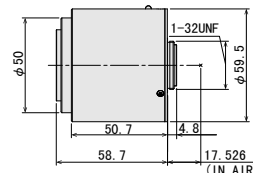
VL2028UM6C-MPYIR



VL2528UM6C-MPYIR



VL3528UM6C-MPYIR



Focal Length		20mm						25mm						35mm					
Max. Image Format		ϕ 17.6mm						ϕ 17.6mm						ϕ 17.6mm					
Operation Range	Iris	F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0					
	Focus	0.1m - Inf.						0.12m - Inf.						0.25m - Inf.					
Control	Iris	Motorized						Motorized						Motorized					
	Focus	Motorized						Motorized						Motorized					
Angle of View	D		47.2°		45.6°		43.8°		38.5°		37.1°		35.6°		28.0°		27.0°		25.8°
	H	1.1" (3:1)	45.0°	1.1" (16:9)	40.2°	1" (16:9)	39.2°	1.1" (3:1)	36.7°	1.1" (16:9)	32.6°	1" (16:9)	31.7°	1.1" (3:1)	26.6°	1.1" (16:9)	23.6°	1" (16:9)	22.9°
	V		15.9°		23.5°		21.3°		12.8°		18.9°		17.1°		9.1°		13.6°		12.3°
Operating Temperature		-20°C - +60°C						-20°C - +60°C						-20°C - +60°C					
Back Focal Length		18.5mm						15.9mm						17.9mm					
Flange Back Length		17.526mm (In Air)						17.526mm (In Air)						17.526mm (In Air)					
Mount		C-Mount						C-Mount						C-Mount					
Filter Size		M35.5 P=0.5mm						M35.5 P=0.5mm						M35.5 P=0.5mm					
Weight		170g						174g						168g					
Control Interface		USB2.0						USB2.0						USB2.0					
Power mode		Bus power(5V:500mA)						Bus power(5V:500mA)						Bus power(5V:500mA)					
Connector		USB TypeA						USB TypeA						USB TypeA					

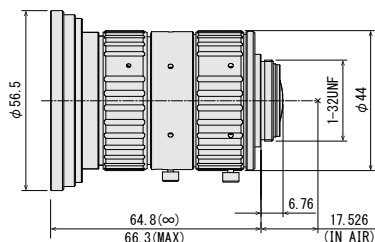


MPT Series

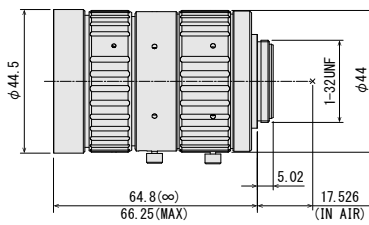
1.4" 50 MEGAPIXEL FIXED FOCAL LENS

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

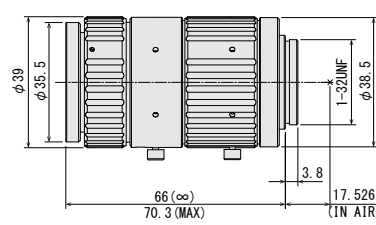
F1228-MPT



F1628-MPT



F2524-MPT



Focal Length	12mm							16mm							25mm							
Max. Aperture Ratio	1:2.8							1:2.8							1:2.4							
Max. Image Format	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						
	Focus	Manual							Manual							Manual						
Angle of View	D		86.1°		76.6°		71.6°		70.1°		61.0°		56.5°		49.6°		42.4°		39.0°			
	H	1.4"	76.0°	1.2"	61.9°	1.1"	60.4°	1.4"	60.4°	1.2"	48.1°	1.1"	46.9°	1.4"	41.9°	1.2"	32.7°	1.1"	31.8°			
	V		56.2°		54.8°		46.1°		43.4°		42.2°		35.2°		29.3°		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					
	φ75mm × 66.1mm (with TM-1243)						φ54mm × 66.4mm (with TM-1643)											
Weight	205g						187g						152g					

*When using filters, lens requires TM-1243 (for 12mm) (sold separately). For more detail please refer to P.50

*When using filters, lens requires TM-1643 (for 16mm) (sold separately). For more detail please refer to P.50

1.4" 50 MEGA PIXEL FIXED FOCAL LENS

- Ultra-high-resolution lens, suitable for 1.4" 50-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)
- Supports vibration and shock resistance up to 5G
- Compatible with the latest image sensor (IMX06A)

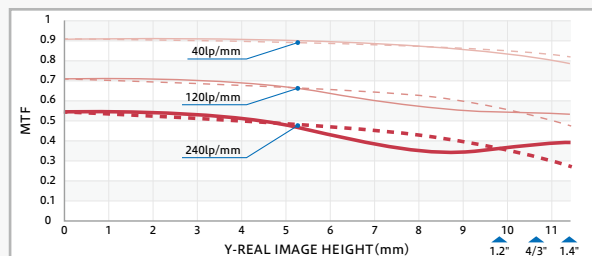
1.4"

50MP

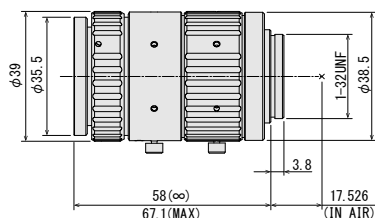
MANUAL

FIX

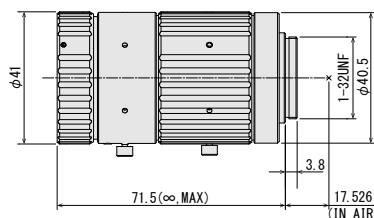
FLOATING



F3526-MPT



F5026-MPT



Focal Length	35mm						50mm						
Max. Aperture Ratio	1:2.6						1:2.6						
Max. Image Format	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°		30.9°		28.3°		26.1°		21.9°		20.0°
	H	1.4"	30.6°	1.2"	23.6°	1.1"	23.0°	1.4"	21.7°	1.2"	16.7°	1.1"	16.2°
	V		21.1°		20.5°		16.9°		14.9°		14.4°		11.9°
Operating Temperature	-10°C - +50°C						-10°C - +50°C						

Optical Distortion	1.4"	0.01%	1.2"	-0.05%	1.1"	-0.06%	1.4"	-0.02%	1.2"	-0.03%	1.1"	-0.03%
Back Focal Length	23.1mm						14.2mm					
Flange Back Length	17.526mm						17.526mm					
Mount	C-Mount						C-Mount					
Filter Size	M34 P=0.5mm						M30.5 P=0.5mm					
Dimensions	ϕ39mm × 58mm						ϕ41mm × 71.5mm					
Weight	122g						151g					

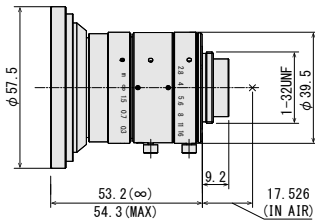
MPY Series

1.1" 24 MEGAPIXEL FIXED FOCAL LENS

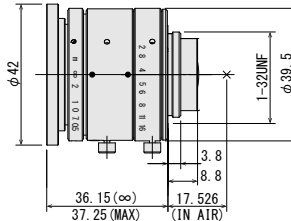


Model No.	Format	Focal Length	F No.	Working Distance	Weight
V0828-MPY2	1.1"	8mm	F2.8-F16	0.2m-Inf.	157g
V1228-MPY2		12mm		0.3m-Inf.	97g
V1628-MPY2		16mm		0.3m-Inf.	89g
V2528-MPY		25mm		0.3m-Inf.	78g
V3528-MPY		35mm		0.3m-Inf.	103g
V5028-MPY		50mm		0.5m-Inf.	107g

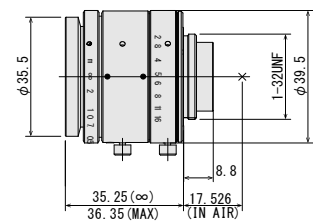
V0828-MPY2



V1228-MPY2



V1628-MPY2



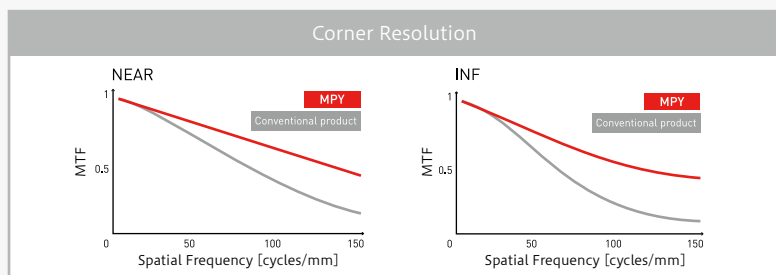
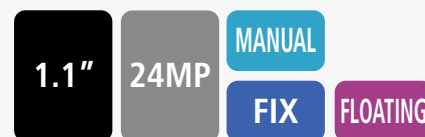
Focal Length		8mm						12mm						16mm					
Max. Aperture Ratio		1:2.8						1:2.8						1:2.8					
Max. Image Format		14.2mm × 10.4mm (ϕ 17.6mm)						14.2mm × 10.4mm (ϕ 17.6mm)						14.2mm × 10.4mm (ϕ 17.6mm)					
Operation Range	Iris	F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0					
	Focus	0.2m - Inf.						0.3m - Inf.						0.3m - Inf.					
Control	Iris	Manual						Manual						Manual					
	Focus	Manual						Manual						Manual					
Angle of View	D	1.1"	93.9°	1"	89.3°	2/3"	69.0°	1.1"	71.1°	1"	66.4°	2/3"	48.6°	1.1"	57.9°	1"	53.4°	2/3"	38.2°
	H		83.0°		77.3°		57.3°		60.5°		55.5°		39.6°		48.2°		43.9°		30.9°
	V		66.0°		61.7°		44.2°		46.2°		42.9°		30.1°		36.2°		33.6°		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	φ75mm × 53.2mm						φ42.0mm × 36.1mm						φ39.5mm × 35.2mm					
Weight	157g						97g						89g					

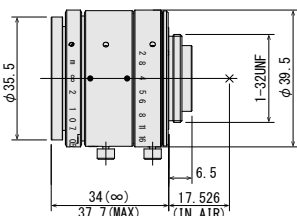
*There is no filter mount on the top of the lens.
When using filters, lens requires VM0811 or VM0810 (sold separately).
For more detail, please refer to P50.

1.1" 24 MEGA PIXEL FIXED FOCAL LENS

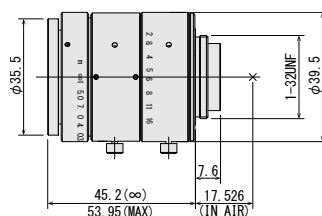
- Ultra-high-resolution lens, suitable for 1.1" 24 megapixel sensor
- Enlarged image circle up to Ø17.6mm (1.1" sensor)
- The most compact, lightweight lens design on the machine vision market
- The floating design achieves an ultra-high-resolution from near focus to infinity
- Supports vibration and shock resistance up to 5G



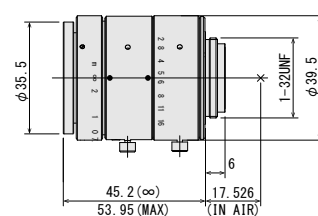
V2528-MPY



V3528-MPY



V5028-MPY



Focal Length		25mm						35mm						50mm					
Max. Aperture Ratio		1:2.8						1:2.8						1:2.8					
Max. Image Format		14.2mm × 10.4mm (ϕ 17.6mm)						14.2mm × 10.4mm (ϕ 17.6mm)						14.2mm × 10.4mm (ϕ 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 × 45.2mm					
Weight		78g						103g						107g					

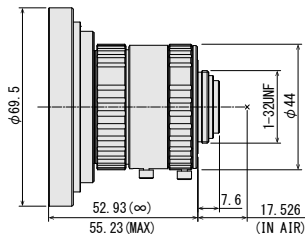


MPZ Series

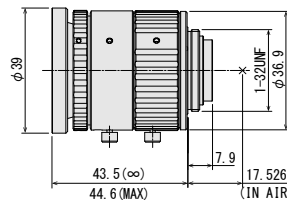
1" 20 MEGAPIXEL FIXED FOCAL LENS

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

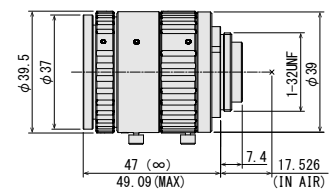
V0826-MPZ



V1226-MPZ



V1624-MPZ

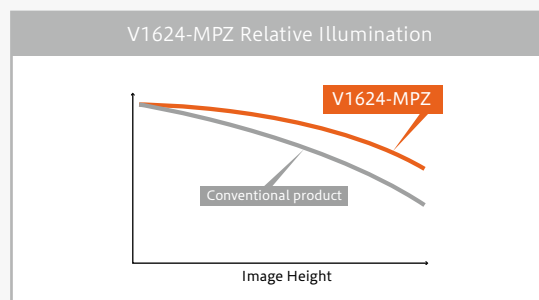
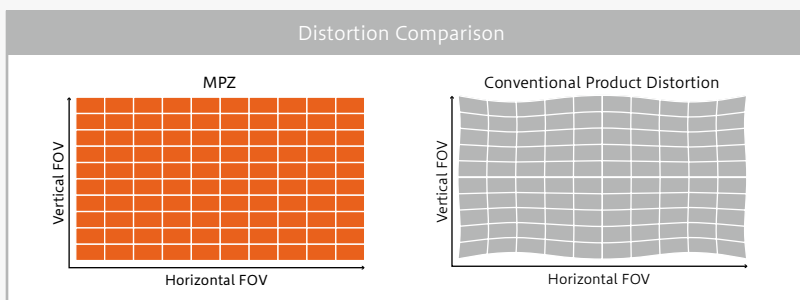
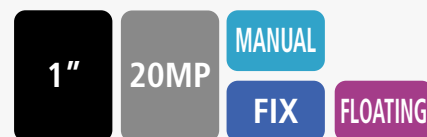


Focal Length	8mm						12mm						16mm						
Max. Aperture Ratio	1:2.6						1:2.6						1:2.4						
Max. Image Format	12.8mm × 9.6mm (ϕ 16mm)						12.8mm × 9.6mm (ϕ 16mm)						12.8mm × 9.6mm (ϕ 16mm)						
Operation Range	Iris	F2.6 - F16.0						F2.6 - F16.0						F2.4 - F16.0					
	Focus	0.1m - Inf.						0.1m - Inf.						0.1m - Inf.					
Control	Iris	Manual						Manual						Manual					
	Focus	Manual						Manual						Manual					
Angle of View	D	1"	88.8°	2/3"	68.6°	1/1.8"	58.2°	1"	67.4°	2/3"	49.8°	1/1.8"	41.5°	1"	53.2°	2/3"	38.1°	1/1.8"	31.6°
	H		76.9°		57.1°		47.8°		56.7°		40.7°		33.7°		43.8°		30.9°		25.5°
	V		61.5°		44.2°		36.6°		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						
	ϕ 85.0mm × 53.83mm (with ZM0810)																		
Weight	203g						98g						108g						

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

1" 20 MEGAPIXEL FIXED FOCAL LENS

- 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
- Supports vibration and shock resistance up to 5G



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	1"	35.5°	2/3"	24.9°	1/1.8"	20.5°	1"	25.8°	2/3"	17.9°	1/1.8"	14.7°	1"	18.2°	2/3"	12.6°	1/1.8"	10.3°	1"	12.2°	2/3"	8.4°	1/1.8"	6.9°
	H		28.8°		20.0°		16.4°		20.8°		14.4°		11.8°		14.6°		10.1°		8.3°		9.8°		6.7°		5.5°
	V		21.8°		15.1°		12.4°		15.7°		10.8°		8.9°		11.0°		7.6°		6.2°		7.3°		5.0°		4.1°
Operating Temperature		-10° C - +50° C						-10° C - +50° C						-10° C - +50° C						-10° C - +50° C					

Optical Distortion	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%	1"	0.0%	2/3"	0.0%	1/1.8"	0.0%
Back Focal Length	9.1mm						9.7mm						11.1mm						12.0mm					
Flange Back Length	17.526mm						17.526mm						17.526mm						17.526mm					
Mount	C-Mount						C-Mount						C-Mount						C-Mount					
Filter Size	M35.5 P=0.5mm						M34 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm					
Dimensions	ϕ 37.5mm × 35.7mm						ϕ 39.5mm × 55.7mm						ϕ 42mm × 60.1mm						ϕ 42.0mm × 79.8mm					
Weight	73g						118g						138g						176g					

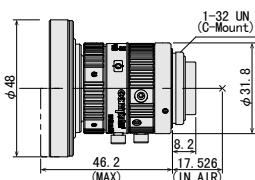


MPX Series

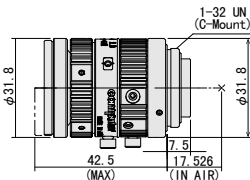
2/3" 16MEGAPIXEL FIXED FOCAL LENS

Model No.	Format	Focal Length	F No.	Working Distance	Weight
M0528-MPX	2/3"	5.5mm	F2.8-F16	0.1m - Inf	116g
M0828-MPX		8mm			89g
M1228-MPX		12mm			78g
M1628-MPX		16mm			74g
M2528-MPX		25mm		0.15m - Inf	83g
M3528-MPX		35mm			82g
M5028-MPX		50mm			85g
M7538-MPX		75mm	F3.8 - F16	0.25m - Inf	89g

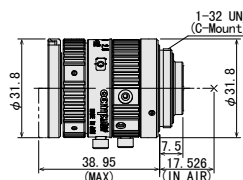
NEW M0528-MPX



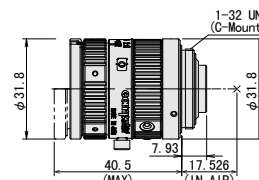
M0828-MPX



M1228-MPX



M1628-MPX



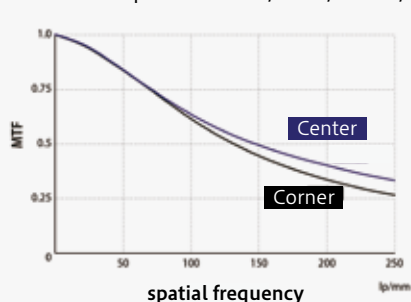
Focal Length		5.5mm						8mm						12mm						16mm					
Max. Aperture Ratio		1:2.8						1:2.8						1:2.8						1:2.8					
Max. Image Format		ϕ 11.8mm						ϕ 11.8mm						ϕ 11.8mm						ϕ 11.8mm					
Operation Range	Iris	F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0					
	Focus	0.1m - Inf						0.1m - Inf						0.1m - Inf						0.1m - Inf					
Control	Iris	Manual						Manual						Manual						Manual					
	Focus	Manual						Manual						Manual						Manual					
Angle of View	D		90.4°		73.8°		58.6°		67.5°		52.0°		40.2°		49.2°		36.9°		28.1°		37.9°		28.1°		21.3°
	H	2/3"	78.9°	1/2"	61.8°	1/3"	48.1°	2/3"	56.4°	1/2"	42.6°	1/3"	32.6°	2/3"	40.3°	1/2"	29.9°	1/3"	22.7°	2/3"	30.8°	1/2"	22.7°	1/3"	17.1°
	V		63.4°		48.1°		36.8°		43.9°		32.6°		24.7°		30.8°		22.7°		17.1°		23.4°		17.1°		12.9°
Operating Temperature		-10°C - +50°C						-10°C - +50°C						-10°C - +50°C						-10°C - +50°C					

Optical Distortion	2/3"	-0.10%	1/2"	-2.47%	1/3"	-2.12%	2/3 型	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	9.4mm						10.2mm						10.2mm						10.3mm					
Flange Back Length	17.526mm						17.526mm						17.526mm						17.526mm					
Mount	C-Mount						C-Mount						C-Mount						C-Mount					
Filter Size	M58 P=0.75mm						M40.5 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm					
Dimensions	ϕ 48.0mm × 43.2mm						ϕ 31.8mm × 39.45mm						ϕ 31.8mm × 35.9mm						ϕ 31.8mm × 39.5mm					
Weight	116g						89g						78g						74g					

*When using filters, lens requires XM0523 (sold separately).
For more detail please refer to P.50

*When using filters, lens requires XM0823 (sold separately).
For more detail please refer to P.50

- 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=5.5mm/8mm/12mm/16mm/25mm/35mm/50mm/75mm



Existing Lens
Focus ring rotation angle: 200°



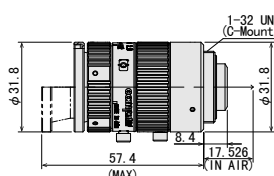
3x wider rotation angle!
Easy focus adjustment



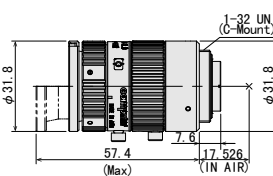
MPX
Focus ring rotation angle: 610°



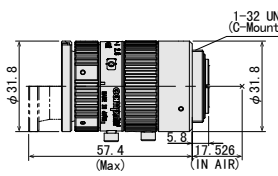
M2528-MPX



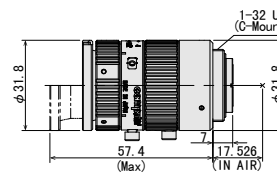
M3528-MPX



M5028-MPX



M7538-MPX



Focal Length		25mm						35mm						50mm						75mm					
Max. Aperture Ratio		1:2.8						1:2.8						1:2.8						1:3.8					
Max. Image Format		ϕ 11.8mm						ϕ 11.8mm						ϕ 11.8mm						ϕ 11.8mm					
Operation Range	Iris	F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0						F3.8 - F16.0					
	Focus	0.1m - Inf						0.15m - Inf						0.2m - Inf						0.25m - Inf					
Control	Iris	Manual						Manual						Manual						Manual					
	Focus	Manual						Manual						Manual						Manual					
Angle of View	D		24.8°		18.2°		13.7°		17.8°		13.0°		9.8°		12.6°		9.1°		6.9°		8.6°		6.3°		4.7°
	H	2/3"	20.0°	1/2"	14.6°	1/3"	11.0°	2/3"	14.3°	1/2"	10.4°	1/3"	7.8°	2/3"	10.1°	1/2"	7.3°	1/3"	5.5°	2/3"	6.9°	1/2"	5.0°	1/3"	3.8°
	V		15.1°		11.0°		8.3°		10.8°		7.8°		5.9°		7.5°		5.5°		4.1°		5.2°		3.8°		2.8°
Operating Temperature		-10°C - +50°C						-10°C - +50°C						-10°C - +50°C						-10°C - +50°C					

Optical Distortion	2/3"	0.06%	1/2"	0.00%	1/3"	-0.01%	2/3"	0.10%	1/2"	0.10%	1/3"	0.06%	2/3"	0.04%	1/2"	0.07%	1/3"	0.05%	2/3"	0.00%	1/2"	0.14%	1/3"	0.11%
Back Focal Length	9.5mm						10.9mm						13.2mm						11.9mm					
Flange Back Length	17.526mm						17.526mm						17.526mm						17.526mm					
Mount	C-Mount						C-Mount						C-Mount						C-Mount					
Filter Size	M30.5 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm						M30.5 P=0.5mm					
Dimensions	φ 31.8mm × 46mm						φ 31.8mm × 46mm						φ 31.8mm × 46mm						φ 31.8mm × 46mm					
Weight	83g						82g						85g						89g					

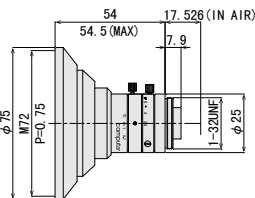


MPW3 Series

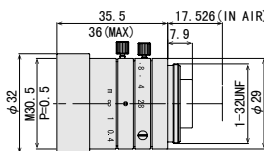
2/3" 6 MEGA PIXEL FIXED FOCAL LENS

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

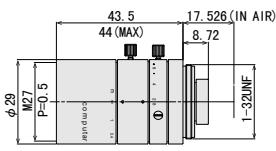
M0528-MPW3



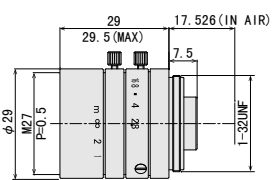
M0828-MPW3



M1228-MPW3



M1628-MPW3



Focal Length	5mm					8mm					12mm					16mm				
Max. Aperture Ratio	1:2.8					1:2.8					1:2.8					1:2.8				
Max. Image Format	8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)					8.8mm × 6.6mm (φ 11mm)				
Operation Range	Iris					Iris					Iris					Iris				
	F2.8 - F16.0					F2.8 - F16.0					F2.8 - F16.0					F2.8 - F16.0				
Control	Focus					Focus					Focus					Focus				
	0.1m - Inf.					0.1m - Inf.					0.1m - Inf.					0.25m - Inf.				
Angle of View	Iris					Iris					Iris					Iris				
	Manual					Manual					Manual					Manual				
Operating Temperature	D					D					D					D				
	94.6°					94.6°					94.3°					94.3°				
	83.8°					83.8°					83.1°					83.1°				
Operating Temperature	H					H					H					H				
	2/3"					2/3"					2/3"					2/3"				
	83.2°					83.2°					83.2°					83.2°				
Operating Temperature	V					V					V					V				
	1/1.8"					1/1.8"					1/1.8"					1/1.8"				
	71.6°					71.6°					71.6°					71.6°				
Operating Temperature	1/2.5"					1/2.5"					1/2.5"					1/2.5"				
	59.8°					59.8°					59.8°					59.8°				
	46.6°					46.6°					46.6°					46.6°				
Operating Temperature	2/3"					2/3"					2/3"					2/3"				
	-10° C - +50° C					-10° C - +50° C					-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	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

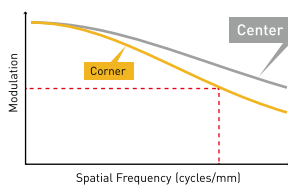
2/3"

6MP

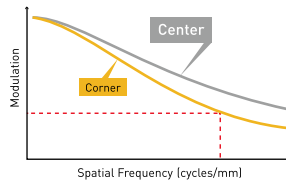
MANUAL

FIX

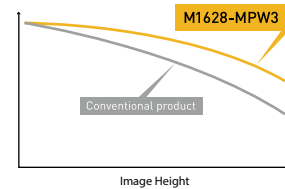
M1628-MPW3 MTF WD300mm



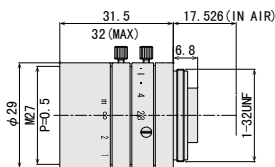
Conventional Product MTF WD300mm



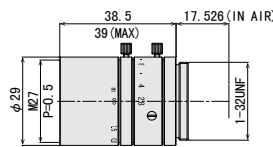
Relative Illumination



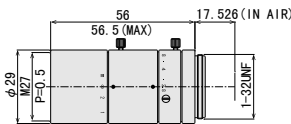
M2528-MPW3



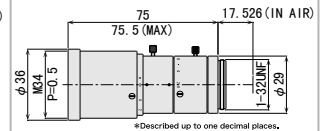
M3528-MPW3



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						F2.8 - F16.0						F2.8 - F16.0						F2.8 - F16.0					
	Focus	0.2m - Inf.						0.25m - Inf.						0.3m - Inf.						0.4m - Inf.					
Control	Iris	Manual						Manual						Manual						Manual					
	Focus	Manual						Manual						Manual						Manual					
Angle of View	D		24.6°		20.3°		16.1°		17.9°		14.4°		11.6°		12.5°		10.2°		8.1°		8.4°		6.9°		5.4°
	H	2/3"	19.9°	1/1.8"	16.3°	1/2.5"	13.0°	2/3"	14.3°	1/1.8"	11.7°	1/2.5"	9.3°	2/3"	10.0°	1/1.8"	8.2°	1/2.5"	6.5°	2/3"	6.7°	1/1.8"	5.5°	1/2.5"	4.3°
	V		15.0°		12.3°		9.8°		10.8°		8.7°		7.0°		7.5°		6.2°		4.9°		5.0°		4.1°		3.3°
Operating Temperature		-10° C - +50° C						-10° C - +50° C						-10° C - +50° C						-10° C - +50° C					

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

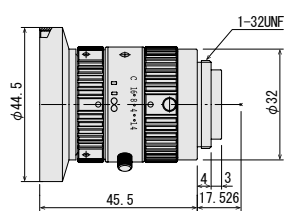


MP2 Series

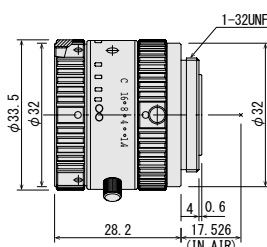
2/3" 1.5 MEGAPIXEL FIXED FOCAL LENS

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

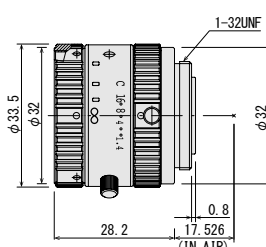
H0514-MP2



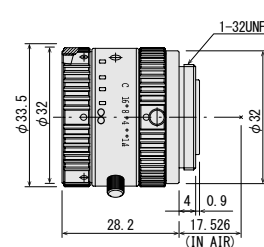
M0814-MP2



M1214-MP2



M1614-MP2



Focal Length		5mm				8mm				12mm				16mm			
Max. Aperture Ratio		1:1.4				1:1.4				1:1.4				1:1.4			
Max. Image Format		6.4mm × 4.8mm (ϕ 8mm)				8.8mm × 6.6mm (ϕ 11mm)				8.8mm × 6.6mm (ϕ 11mm)				8.8mm × 6.6mm (ϕ 11mm)			
Operation Range	Iris	F1.4 - F16C				F1.4 - F16C				F1.4 - F16C				F1.4 - F16C			
	Focus	0.1m - Inf				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				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	φ 44.5mm × 45.5mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm				φ33.5mm × 28.2mm			
Weight	102g				63g				62g				60g			

2/3" 1.5 MEGA PIXEL FIXED FOCAL LENS

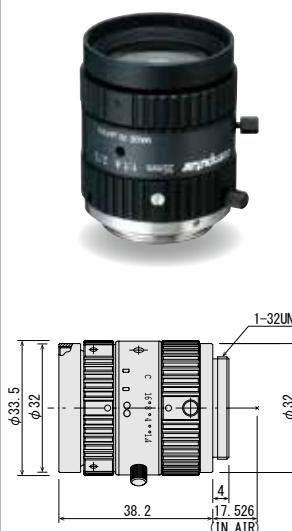
- Eight focal lengths in series: 5mm, 8mm, 12mm, 16mm, 25mm, 35mm, 50mm, and 75mm
- Compatible with 2/3" format sensor (H0514-MP2 : 1/2")
- Low distortion (less than 1.0%)
- Locking set screws for focus and iris
- Compact design - diameter 33.5mm (H0514-MP2 : 44.5mm)



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				17.1mm				13.1mm				21.5mm			
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 × 57.7mm			
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

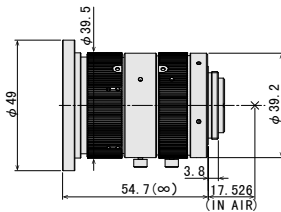


VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

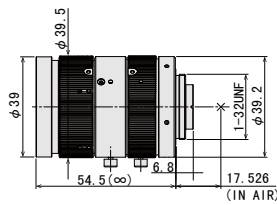
- Dedicated design for next generation Visible+SWIR InGaAs image sensor (IMX992/IMX993)
- Hyper-Apochromat design with fully correct focus shift between 400-1700nm
- Floating-focus mechanism realizes axial chromatic aberration and chromatic aberration of magnification at all WD and wavelengths
- High 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" (2/3")	8mm	F1.8	0.1m - Inf.	171g
M1218-APVSW3		12mm		0.1m - Inf.	159g
M1618-APVSW2		16mm		0.1m - Inf.	170g
M2518-APVSW2		25mm		0.1m - Inf.	140g
M3518-APVSW		35mm		0.15m - Inf.	199g
M5018-APVSW		50mm		0.2m - Inf.	174g

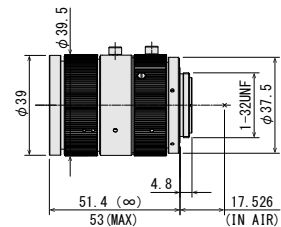
M0818-APVSW2



M1218-APVSW3



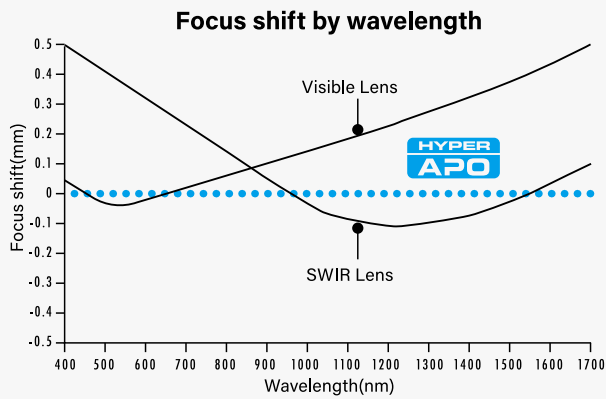
M1618-APVSW2



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°		56.6°		53.2°		28.1°		50.5°		40.4°		37.9°		19.5°		38.9°		31.0°		28.8°		14.6°
	H	1/1.4"	56.6°	1/1.8"	46.7°	1/2"	42.7°	1/4"	22.1°	1/1.4"	40.5°	1/1.8"	32.9°	1/2"	30.0°	1/4"	15.2°	1/1.4"	31.0°	1/1.8"	25.0°	1/2"	22.7°	1/4"	11.4°
	V		46.7°		35.8°		34.7°		17.7°		32.9°		25.0°		24.2°		12.2°		25.0°		18.9°		18.2°		9.2°
Operating Temperature		-10° C - +50° C								-10° C - +50° C								-10° C - +50° C							

Optical Distortion	1/1.4"	0.6%	1/1.8"	-0.3%	1/1.4"	-0.02%	1/1.8"	-0.3%	1/1.4"	0.1%	1/1.8"	-0.3%
Back Focal Length	11.5mm				12.0mm				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×54.5mm				φ39.5mm×51.4mm			
Weight	171g				159g				170g			

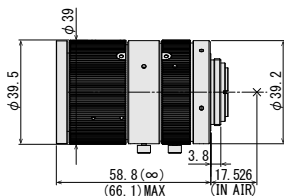
VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



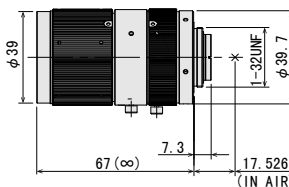
Ultra-high resolution from 400 nm visible light to 1700 nm near infrared with no focus shift.



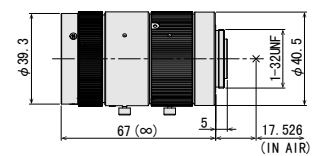
M2518-APVSW2



M3518-APVSW



M5018-APVSW



Focal Length		25mm								35mm								50mm							
Max. Aperture Ratio		1:1.8								1:1.8								1:1.8							
Max. Image Format		ϕ 11.4mm								ϕ 11.4mm								ϕ 11.4mm							
Wavelength Range		400nm - 1700nm								400nm - 1700nm								400nm - 1700nm							
Operation Range	Iris	F1.8 - F16.0								F1.8 - F16.0								F1.8 - F16.0							
	Focus	0.1m - Inf.								0.15m - Inf.								0.2m - Inf.							
Control	Iris	Manual								Manual								Manual							
	Focus	Manual								Manual								Manual							
Angle of View	D		25.5°		20.0°		18.6°		9.4°		18.4°		14.4°		13.4°		6.8°		12.8°		10.1°		9.5°		4.7°
	H	1/1.4"	20.0°	1/1.8"	16.1°	1/2"	14.6°	1/4"	7.3°	1/1.4"	14.4°	1/1.8"	11.6°	1/2"	10.5°	1/4"	5.3°	1/1.4"	10.2°	1/1.8"	8.1°	1/2"	7.4°	1/4"	3.7°
	V		16.1°		12.1°		11.7°		5.9°		11.6°		8.7°		8.4°		4.2°		8.2°		6.1°		5.9°		3.0°
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	ϕ39.5mm×58.8mm				ϕ41mm×67.0mm				ϕ41mm×67.0mm			
Weight	140g				199g				174g			

VISBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS



VISBLE + SWIR Lite

VISBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

Model No.	Format	Focal Length	F-No.	Working Distance	Distortion	Weight
H0514-VSW	1/2"	5mm	F1.4	0.1m - Inf.	-0.48%(y=4.0)	102g
M0814-VSW	2/3"	8mm		0.1m - Inf.	-0.1%(y=5.5)	63g
M1214-VSW		12mm		0.15m - Inf.	-0.1%(y=5.5)	62g
M1614-VSW		16mm		0.3m - Inf.	-0.1%(y=5.5)	60g
M2514-VSW		25mm		0.3m - Inf.	-0.3%(y=5.5)	71g
M3514-VSW		35mm		0.3m - Inf.	-0.8%(y=5.5)	87g
M5018-VSW		50mm	F1.8	0.5m - Inf.	-0.3%(y=5.5)	85g

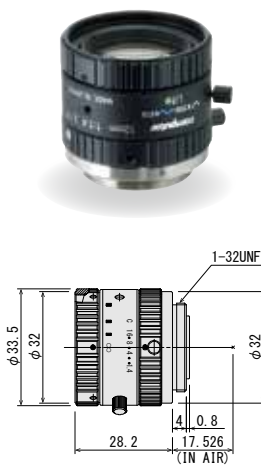
H0514-VSW



M0814-VSW



M1214-VSW



M1614-VSW



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

Optical Distortion	1/2"	-0.48%	1/3"	-2.26%	2/3"	-0.1%	1/2"	-1.1%	2/3"	-0.1%	1/2"	-0.35%	2/3"	-0.1%	1/2"	-0.3%
Back Focal Length	10.8mm				13.1mm				13.1mm				13.1mm			
Flange Back Length	17.526mm				17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount				C-Mount			
Filter Size	M43 P=0.75mm				M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm			
Dimensions	ϕ44.5mm × 45.5mm				ϕ33.5mm × 28.2mm				ϕ33.5mm × 28.2mm				ϕ33.5mm × 28.2mm			
Weight	102g				63g				62g				60g			

VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

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

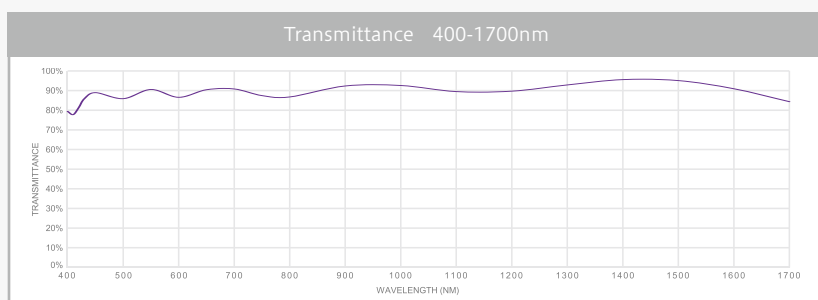
1/2"

Visible
+SWIR

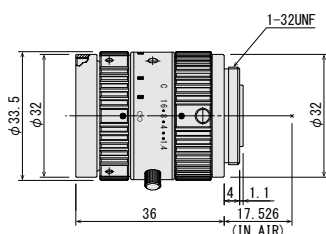
MANUAL

2/3"

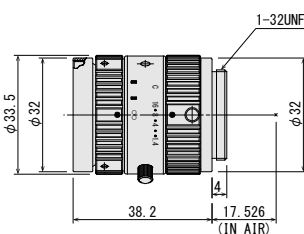
FIX



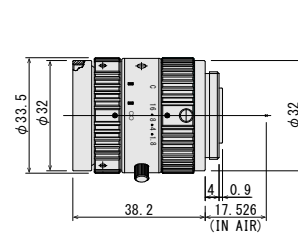
M2514-VSW



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	18.6°	IMX991	9.4°	2/3"	24.9°	IMX990	13.7°	IMX991	6.9°	2/3"	17.3°	IMX990	9.8°	IMX991	4.9°	2/3"	13.1°
	H	6.40mm x 5.12mm	14.6°	3.20mm x 2.56mm	7.3°		20.0°	6.40mm x 5.12mm	10.7°	3.20mm x 2.56mm	5.4°		13.9°	6.40mm x 5.12mm	7.6°	3.20mm x 2.56mm	3.8°		10.5°
	V		11.7°		5.9°		15.1°		8.6°		4.3°		10.4 °		6.1°		3.1°		
Operating Temperature		-10° C - +50° C						-10° C - +50° C						-10° C - +50° C					

Optical Distortion	2/3"	-0.3%	1/2"	-0.1%	2/3"	-0.8%	1/2"	-0.39%	2/3"	-0.3%	1/2"	-0.2%
Back Focal Length	13.1mm				17.1mm				13.1mm			
Flange Back Length	17.526mm				17.526mm				17.526mm			
Mount	C-Mount				C-Mount				C-Mount			
Filter Size	M30.5 P=0.5mm				M30.5 P=0.5mm				M30.5 P=0.5mm			
Dimensions	ϕ33.5mm × 36mm				ϕ33.5mm × 38.2mm				ϕ33.5mm × 38.2mm			
Weight	71g				87g				85g			



NEW

I²C LensConnect
ViSWIR

VISIBLE+SWIR IMAGE SENSOR LensConnect I²C Series

- Compatible with IMX992 / IMX993 / IMX990 / IMX991
- High transmittance from 400 nm to 1700 nm
- Field of view (FOV) can be adjusted depending on the application
- Optional: A filter switcher can be added inside the lens

Visible
+SWIR

1/1.4"

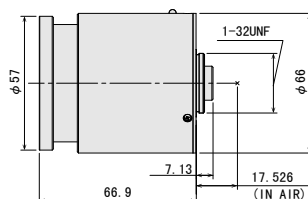
5MP

I²C

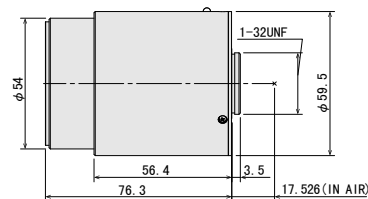
VARI

MOTORIZED

ML2Z0525SC-VSW



ML3Z1226SC-VSW



Focal Length		5.5mm - 12.5mm										12mm - 35mm									
Max. Image Format		φ11.4mm										φ11.4mm									
Operation Range	Iris	F2.5 - F16C										F2.6 - F16C									
	Focus	0.1m-Inf										WIDE:0.1m - Inf TELE:0.35m - Inf									
Control	Iris	Motorized										Motorized									
	Focus	Motorized										Motorized									
	Zoom	Motorized										Motorized									
Angle of View	D	1/1.4"	107.6°~50.9°	1/1.8"	86.0°~40.1°	1/2"	80.6°~37.5°	1/4"	41.2°~19.0°	1/1.4"	51.7°~18.0°	1/1.8"	41.1°~14.3°	1/2"	38.5°~13.3°	1/4"	19.5°~6.8°				
	H		86.3°~40.2°		70.0°~32.4°		63.7°~29.4°		32.3°~14.8°		41.3°~14.3°		33.4°~11.6°		30.3°~10.5°		15.3°~5.3°				
	V		70.0°~32.4°		53.0°~24.5°		51.3°~23.6°		25.9°~11.9°		33.4°~11.6°		25.2°~8.7°		24.3°~8.4°		12.3°~4.3°				
Operating Temperature		-20° C - +60° C										-20°C - +60°C									

Back Focal Length	WIDE	11.4mm (In Air)										16.4mm (In Air)									
	TELE	11.4mm (In Air)										15.9mm (In Air)									
Flange Back Length		17.526mm (In Air)										17.526mm (In Air)									
Mount		C-Mount										C-Mount									
Filter Size		M55 P=0.75mm										M49 P=0.75mm									
Weight		164g										239g									

Control Interface		I ² C										I ² C									
Power mode		DC5.0V ± 10%(500mA max)										DC5.0V±10%(500mA max)									
Connector		-										-									



NEW

USB LensConnect
ViSWIR

VISIBLE+SWIR IMAGE SENSOR LensConnect USB Series

- Compatible with IMX992 / IMX993 / IMX990 / IMX991
- High transmittance from 400 nm to 1700 nm
- Field of view (FOV) can be adjusted depending on the application
- Optional: A filter switcher can be added inside the lens

Visible
+SWIR

1/1.4"

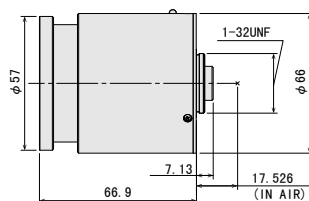
5MP

USB

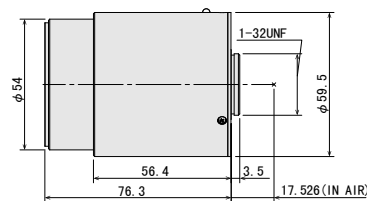
VARI

MOTORIZED

ML2Z0525UC-VSW



ML3Z1226UC-VSW



Focal Length		5.5mm - 12.5mm										12mm - 35mm									
Max. Image Format		φ11.4mm										φ11.4mm									
Operation Range	Iris	F2.5 - F16C										F2.6 - F16C									
	Focus	0.1m-Inf										WIDE:0.1m - Inf TELE:0.35m - Inf									
Control	Iris	Motorized										Motorized									
	Focus	Motorized										Motorized									
	Zoom	Motorized										Motorized									
Angle of View	D	1/1.4"	107.6°~50.9°	1/1.8"	86.0°~40.1°	1/2"	80.6°~37.5°	1/4"	41.2°~19.0°	1/1.4"	51.7°~18.0°	1/1.8"	41.1°~14.3°	1/2"	38.5°~13.3°	1/4"	19.5°~6.8°				
	H		86.3°~40.2°		70.0°~32.4°		63.7°~29.4°		32.3°~14.8°		41.3°~14.3°		33.4°~11.6°		30.3°~10.5°		15.3°~5.3°				
	V		70.0°~32.4°		53.0°~24.5°		51.3°~23.6°		25.9°~11.9°		33.4°~11.6°		25.2°~8.7°		24.3°~8.4°		12.3°~4.3°				
Operating Temperature		-20° C - +60° C										-20°C - +60°C									

Back Focal Length	WIDE	11.4mm (In Air)										16.4mm (In Air)									
	TELE	11.4mm (In Air)										15.9mm (In Air)									
Flange Back Length		17.526mm (In Air)										17.526mm (In Air)									
Mount		C-Mount										C-Mount									
Filter Size		M55 P=0.75mm										M49 P=0.75mm									
Weight		172g										247g									

Control Interface		USB2.0										USB2.0									
Power mode		Bus power (5V:500mA)										Bus power (5V:500mA)									
Connector		USB TypeA										USB Type A									



MACRO ZOOM LENS

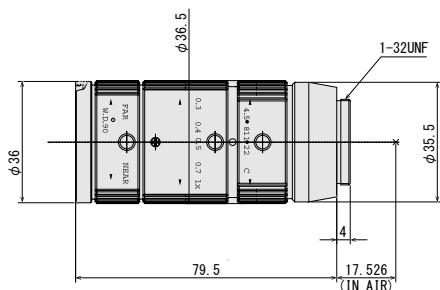
- 1/2" and 2/3" format models are ideal for a variety of inspection applications
- Optimal performance at variable working distances
- Highly versatile 3.3x magnification type suitable for megapixel applications
- Compact design



MLM-3XMP

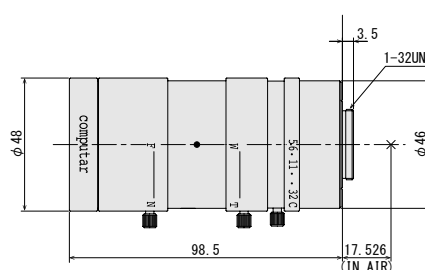
2/3"

1MP



MLH-10X

1/2"



OpticalMagnification		0.3x - 1.0x				0.084x - 0.84x					
Max. Aperture Ratio		1:4.5				1:5.6					
Max. Image Format		8.8mm × 6.6mm (ϕ 11mm)				6.4mm × 4.8mm (ϕ 8mm)					
Operation Range	Iris	F4.5 - F22C				F5.6 - F32C					
	Focus	90mm				150mm - 450mm					
Control	Iris	Manual				Manual					
	Focus	Manual				Manual					
	Zoom	Manual				Manual					
Angle of View	D	2/3"	14.9° - 2.9°	1/2"	10.7° - 2.8°	1/2"	21.6° - 4.5°	1/3"	17.0° - 3.3°	1/4"	13.0° - 2.5°
	H		11.8° - 2.8°		8.5° - 2.2°		18.0° - 3.6°		13.8° - 2.7°		10.6° - 2.0°
	V		8.8° - 2.3°		6.4° - 1.7°		13.8° - 2.7°		10.6° - 2.0°		8.0° - 1.5°
Operating Temperature		-10° C - +50° C				-10° C - +50° C					
Optical Distortion		2/3"	+0.12% at 0.3x	1/2"	+0.12% at 0.3x	1/2"	+0.9% at 0.084x				
			+1.78% at 1.0x		+0.77% at 1.0x		+1.6% at 0.84x				
Back Focal Length		20.4m				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 (0.07X-0.5X) [TEC-V7X]

1.1"

2/3"

5MP

MANUAL

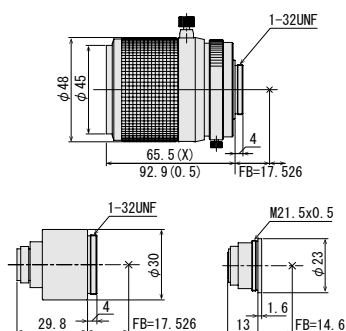
MACRO

ZOOM

TELECENTRIC

TEC-M55

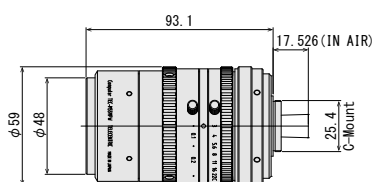
2/3"



TEC-M55MPW

2/3"

5MP

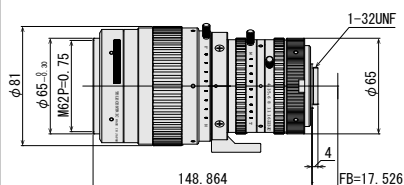


TEC-V7X

1.1"

5MP

ZOOM



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	Iris	F3.0 - F22C	Iris	F4.3 - F32
	Focus	140mm - Inf.		139mm - 1000mm		182mm - 577.2mm
Control	Iris	Manual	Iris	Manual	Iris	Manual
	Focus	Manual		Manual		Manual
	Zoom	Manual		Manual		Manual
Operating Temperature	-20° C - +50° C		-10° C - +50° C		-10° C - +50° C	

Optical Distortion	2/3"	+0.2% at 0.2x +0.6% at 0.5x	1/2"	+0.1% at 0.2x +0.3% at 0.5x	2/3"	+0.52% at 0.057x +0.6% at 0.5x	Tele 1.1"	1.0%	1"	0.84%	2/3"	0.39%
							Wide	-1.7%		-1.45%		-0.7%
Back Focal Length	29.8mm				17.0mm				Tele 39.53mm			
Flange Back Length	17.526mm				17.526mm				Wide 49.78mm			
Mount	C-Mount				C-Mount				C-Mount			
Filter Size	M43 P=0.75mm				M46.0 P=0.75mm				M62 P=0.75mm			
Dimensions	$\phi 53.0\text{mm} \times 92.9\text{mm}$ (Max. at 0.5x)				$\phi 59.0\text{mm} \times 93.1\text{mm}$				$\phi 61 \times 152.86\text{mm}$			
Weight	320g				400g				1400g			



TEC-V Series

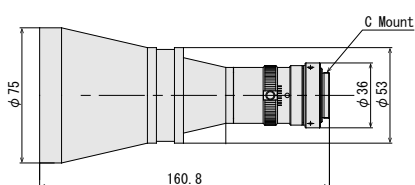
1.1", 1" MEGAPIXEL TELECENTRIC LENS

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

1.1"	12MP
1"	5MP
	TELECEN

1.1" 12 MEGAPIXEL TELECENTRIC LENS

TEC-V0345165MPY-WI



Model	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	0.0345
Effective F-number	5-32.4
TV Distortion	-0.024%

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

1" 5 MEGAPIXEL TELECENTRIC LENS

WD-65mm		WD-110mm	
TEC-V0565MPW	TEC-V1065MPW	TEC-V05110MPW	TEC-V10110MPW

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

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

*Variable Iris type available (TEC-V05110MPW WI/TEC-V10110MPW WI)

TEC-M Series

2/3" 2 MEGAPIXEL TELECENTRIC LENS

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



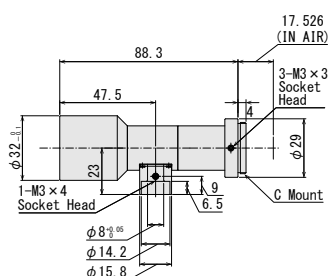
2/3"

2MP

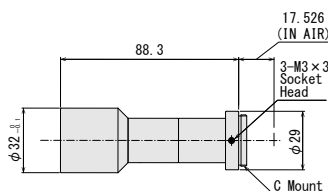
TELECENTRIC

WD-65mm

TEC-M0565MPC / TEC-M0565MP

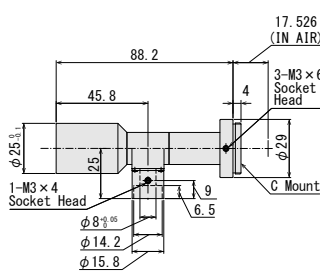


TEC-M0565MPC

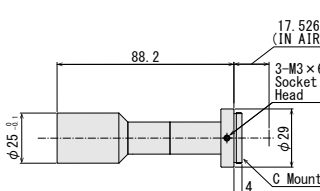


TEC-M0565MP

TEC-M0865MPC / TEC-M0865MP

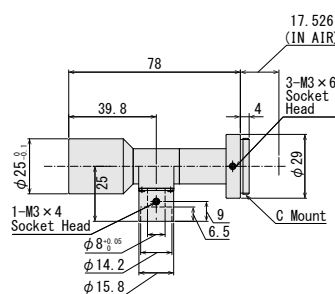


TEC-M0865MPC

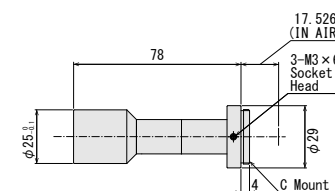


TEC-M0865MP

TEC-M1065MPC / TEC-M1065MP



TEC-M1065MPC



TEC-M1065MP

Model	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

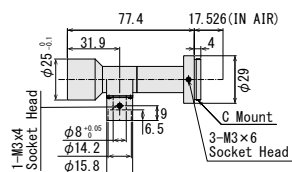
*1 : Theoretical resolution calculated with a wavelength of 550nm *2 : Value calculated with a permissible circle of confusion of 40μm

2/3" 2 MEGA PIXEL TELECENTRIC LENS

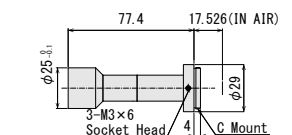
- Suitable for 2/3" 2MP sensor, WD65mm WD110mm

WD-65mm

TEC-M2065MPC / TEC-M2065MP

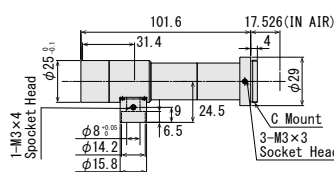


TEC-M2065MPC

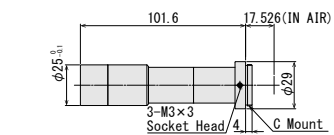


TEC-M2065MP

TEC-M4065MPC / TEC-M4065MP

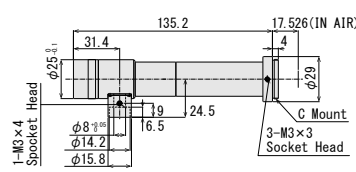


TEC-M4065MPC

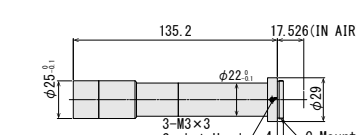


TEC-M4065MP

TEC-M6065MPC / TEC-M6065MP



TEC-M6065MPC



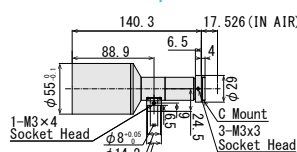
TEC-M6065MP

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

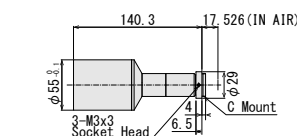
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	55g	85g	100g
Weight (straight type)	49g	83g	98g

WD-110mm

TEC-M03110MPC / TEC-M03110MP

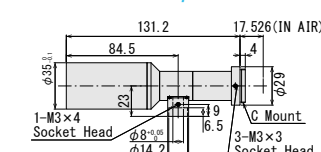


TEC-M03110MPC

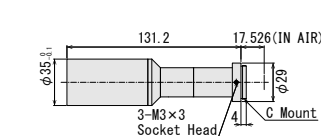


TEC-M03110MP

TEC-M05110MPC / TEC-M05110MP

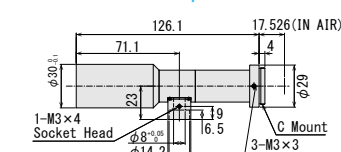


TEC-M05110MPC

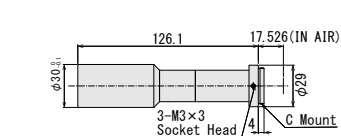


TEC-M05110MP

TEC-M08110MPC / TEC-M08110MP



TEC-M08110MPC



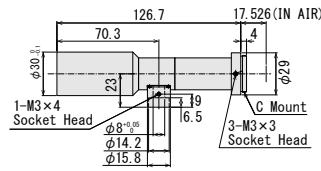
TEC-M08110MP

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

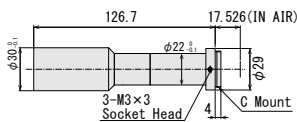
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	166g	131g	106g
Weight (straight type)	160g	128g	103g

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

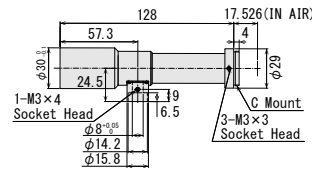
TEC-M20110MPC / TEC-M20110MP



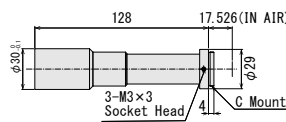
TEC-M10110MPC



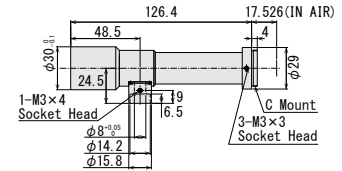
TEC-M10110MP



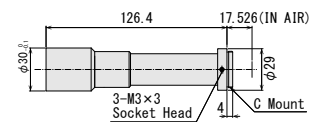
TEC-M15110MPC



TEC-M15110MP



TEC-M20110MPC



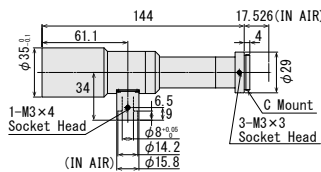
TEC-M20110MP

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%

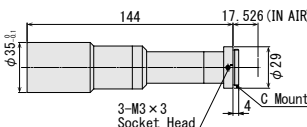
Mount	C-Mount	C-Mount	C-Mount
Weight (with coaxial type)	108g	110g	115g
Weight (straight type)	105g	108g	113g

WD-110mm

TEC-M30110MPC / TEC-M30110MP

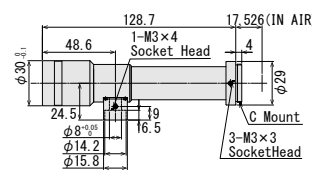


TEC-M30110MPC

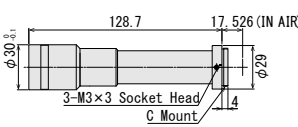


TEC-M30110MP

TEC-M40110MPC / TEC-M40110MP

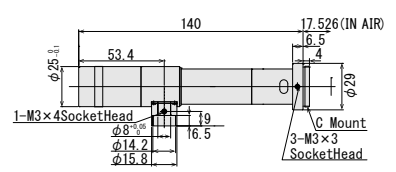


TEC-M40110MPC

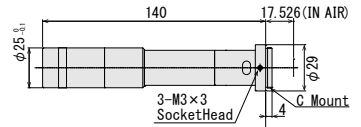


TEC-M40110MP

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" ϕ 12.8mm	8.8mm $\times$ 6.6m (ϕ 11.0mm)	2/3" ϕ 12.8mm
Magnification	3.0x	4.0x	6.0x
Working Distance	111.4mm	110.5mm	110mm
Resolving Power *1	3.6 μ m	3.7 μ m	4.4 μ m
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

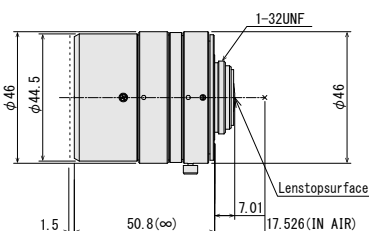


MPYIR Series

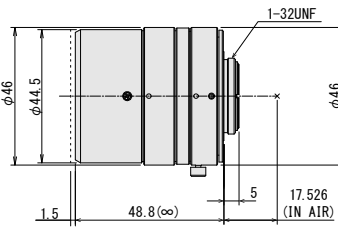
1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

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

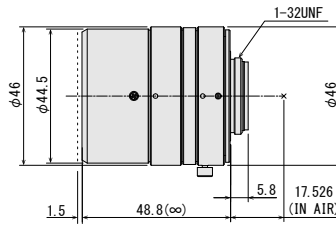
V2518FIC-MPYIR



V3518FIC-MPYIR



V5020FIC-MPYIR



Focal Length	25mm							35mm							50mm							
Max. Aperture Ratio	1:1.8							1:1.8							1:2.0							
Max. Image Format	14.2mm × 10.4mm (ϕ 17.6mm)							14.2mm × 10.4mm (ϕ 17.6mm)							14.2mm × 10.4mm (ϕ 17.6mm)							
Operation Range	Iris	F1.8 - F16C							F1.8 - F16C							F2.0 - F16C						
	Focus	1m - Inf.							2m - Inf.							3m - Inf.						
Control	Iris	Manual							Manual							Manual						
	Focus	Manual							Manual							Manual						
Angle of View	D		38.8°		35.6°		24.9°		27.4°		25.1°		17.4°		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							

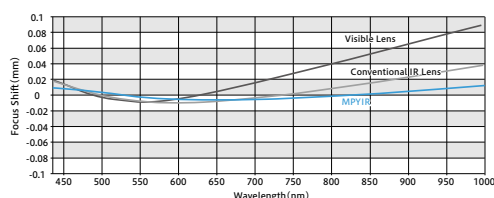
Back Focal Length	10.6mm							14.2mm							14.2mm						
Flange Back Length	17.526mm							17.526mm							17.526mm						
Mount	C-Mount							C-Mount							C-Mount						
Filter Size	M40.5 P=0.5mm							M40.5 P=0.5mm							M40.5 P=0.5mm						
Dimensions	ϕ46mm × 50.8mm							ϕ46mm × 48.8mm							ϕ46mm × 48.8mm						
Weight	158g							153g							151g						

1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

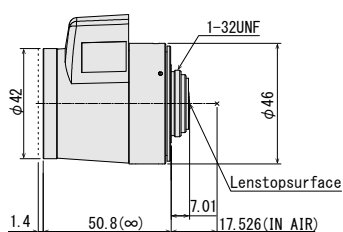
- Suitable for 1.1" 12MP sensor, same size as conventional products
- Usable lineup for ANPR, 25mm/35mm/50mm
- Manual iris and P-iris options are available for each focal length
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR



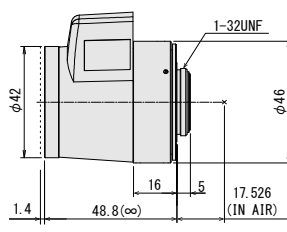
Chromatic Focus Shift



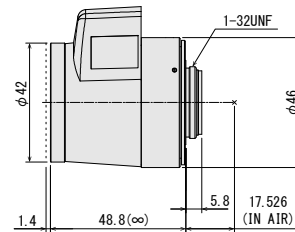
VG2518KC-MPYIR



VG3518KC-MPYIR



VG5020KC-MPYIR



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

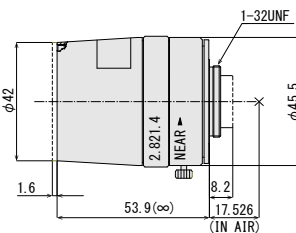
MPIR Series

2/3" IR CORRECTIVE 5 MEGAPIXEL LENS for ITS

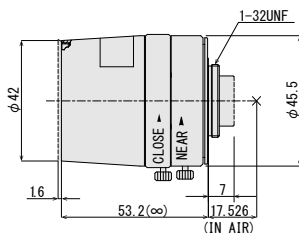


Model No.	Format	Focal Length	F No.	IRIS	Working Distance	Weight
M2514FIC-MPIR	2/3"	25mm	F1.4 - F16C	Manual	1m - Inf.	154g
M3518FIC-MPIR		35mm	F1.8 - F16C		1m - Inf.	149g
M5020FIC-MPIR		50mm	F2.0 - F16C		2m - Inf.	155g
MG2514KC-MPIR		25mm	F1.4 - F16C	P-IRIS	1m - Inf.	128g
MG3518KC-MPIR		35mm	F1.8 - F16C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

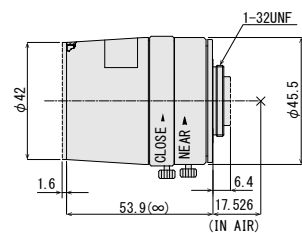
M2514FIC-MPIR



M3518FIC-MPIR



M5020FIC-MPIR

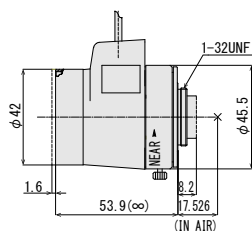


Focal Length	25mm							35mm							50mm							
Max. Aperture Ratio	1:1.4							1:1.8							1:2.0							
Max. Image Format	11.3mm × 6.0mm (ϕ 12.8mm)							11.3mm × 6.0mm (ϕ 12.8mm)							11.3mm × 6.0mm (ϕ 12.8mm)							
Operation Range	Iris	F1.4 - F16C							F1.8 - F16C							F2.0 - F16C						
	Focus	1m - Inf.							1m - Inf.							2m - Inf.						
Control	Iris	Manual							Manual							Manual						
	Focus	Manual							Manual							Manual						
Angle of View	D		24.9°		18.2°		13.7°		17.4°		12.7°		9.5°		12.2°		8.9°		6.7°			
	H	2/3"	20.0°	1/2"	14.6°	1/3"	11.0°	2/3"	13.9°	1/2"	10.2°	1/3"	7.6°	2/3"	9.8°	1/2"	7.1°	1/3"	5.3°			
	V		15.1°		11.0°		8.2°		10.5°		7.6°		5.7°		7.3°		5.3°		4.0°			
CMV2000 11.264 × 5.984 (ϕ 12.75)	D	28.6°							20.0°							14.1°						
	H	25.4°							17.8°							12.5°						
	V	13.7°							9.5°							6.7°						
Operating Temperature	-10°C - +50°C							-10°C - +50°C							-10°C - +50°C							
Back Focal Length	10.8mm							14.3mm							14.8mm							
Flange Back Length	17.526mm							17.526mm							17.526mm							
Mount	C-Mount							C-Mount							C-Mount							
Filter Size	M40.5 P=0.5mm							M40.5 P=0.5mm							M40.5 P=0.5mm							
Dimensions	ϕ46.5mm × 53.9mm							ϕ46.5mm × 53.2mm							ϕ46.5mm × 53.9mm							
Weight	154g							149g							155g							

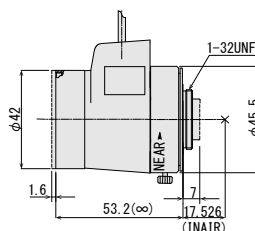
- Suitable for 2/3" 5MP sensors
- Compact design
- Usable lineup for ANPR, 25mm, 35mm, and 50mm
- Manual iris and P-iris options are available for each focal length
- Minimizes focus shift between visible light to NIR
- High spectral transmittance between visible light to NIR



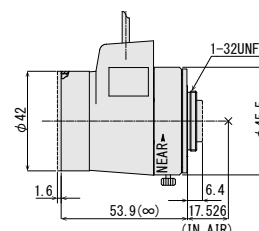
MG2514KC-MPIR



MG3518KC-MPIR



MG5020KC-MPIR



Focal Length	25mm							35mm							50mm							
Max. Aperture Ratio	1:1.4							1:1.8							1:2.0							
Max. Image Format	11.3mm × 6.0mm (φ 12.8mm)							11.3mm × 6.0mm (φ 12.8mm)							11.3mm × 6.0mm (φ 12.8mm)							
Operation Range	Iris	F1.4 - F16C							F1.8 - F16C							F2.0 - F16C						
	Focus	1m - Inf.							1m - Inf.							2m - Inf.						
Control	Iris	Stepping Motor							Stepping Motor							Stepping Motor						
	Focus	Manual							Manual							Manual						
Angle of View	D		24.9°		18.2°		13.7°		17.4°		12.7°		9.5°		12.2°		8.9°		6.7°			
	H	2/3"	20.0°	1/2"	14.6°	1/3"	11.0°	2/3"	13.9°	1/2"	10.2°	1/3"	7.6°	2/3"	9.8°	1/2"	7.1°	1/3"	5.3°			
	V		15.1°		11.0°		8.2°		10.5°		7.6°		5.7°		7.3°		5.3°		4.0°			
CMV2000 11.264 × 5.984 (φ 12.75)	D	28.6°							20.0°							14.1°						
	H	25.4°							17.8°							12.5°						
	V	13.7°							9.5°							6.7°						
Operating Temperature	-10°C - +50°C							-10°C - +50°C							-10°C - +50°C							
Back Focal Length	10.8mm							14.3mm							14.8mm							
Flange Back Length	17.526mm							17.526mm							17.526mm							
Mount	C-Mount							C-Mount							C-Mount							
Filter Size	M40.5 P=0.5mm							M40.5 P=0.5mm							M40.5 P=0.5mm							
Dimensions	φ42mm × 58.6mm × 53.9mm							φ42mm × 56.8mm × 53.2 mm							φ42mm × 56.8mm × 53.9mm							
Weight	128g							123g							129g							

MEGAPIXEL BOARD LENS

NEW

8MEGAPIXEL LOW DISTORTION BOARD LENS

1/1.8" 8MP FIX BOARD



E1228KY

E0828KY

3 MEGAPIXEL ULTRA-LOW DISTORTION BOARD LENS

1/1.8" 3MP FIX BOARD



E1220KV

E2520KV

1 MEGAPIXEL BOARD LENS

1/2" 1MP FIX BOARD



H0320KP

H0624KP

Model Name		E0828KY		E1228KY		E1628KY		E1220KV		E1620KV		E2520KV		H0320KP		H0624KP		H0924KP		H1620KP		H2520KP	
Format		1/1.8"		1/1.8"		1/1.8"		1/1.8"		1/1.8"		1/1.8"		1/2"		1/2"		1/2"		1/2"		1/2"	
Mount		M12																					
Pitch		0.5																					
Focal Length		8mm		12mm		16mm		12.0mm		16.0mm		25.0mm		3mm		6mm		9mm		16mm		25mm	
Aperture		F2.8		F2.8		F2.8		F2.0		F2.0		F2.0		F2.0		F2.4		F2.4		F2.0		F2.0	
Optical Distortion		-0.20%		-0.20%		0.29%		0.04%		-0.07%		0.02%		-37.5%		-9.0%		-1.6%		0.4%		1.0%	
Angle of View at Inf.	D		56.1°		39.1°		30.6°		39.5°		30.0°		19.5°		125.3°		72.5°		48.6°		27.9°		18.0°
	H	1/1.8"	44.7°	1/1.8"	30.5°	1/1.8"	23.7°	1/1.8"	32.1°	1/1.8"	24.3°	1/1.8"	15.7°	1/2"	104.3°	1/2"	59.1°	1/2"	39.6°	1/2"	22.6°	1/2"	14.5°
	V		38.0°		25.7°		20.0°		24.4°		18.4°		11.9°		80.5°		45.0°		30.1°		17.0°		10.9°
	D		54.7°		38°		29.7°		36.8°		27.9°		18.1°		98.6°		55.6°		37.3°		21.2°		13.6°
	H	1/2"	43.5°	1/2"	29.7°	1/2"	23.1°	1/2"	29.8°	1/2"	22.6°	1/2"	14.6°	1/3"	80.5°	1/3"	45.0°	1/3"	30.1°	1/3"	17.0°	1/3"	10.9°
	V		36.7°		24.8°		19.3°		22.6°		17.0°		11.0°		61.3°		34.0°		22.7°		12.8°		8.2°
	D		40.3°		27.3°		21.3°		28.1°		21.2°		13.7°		75.8°		42.3°		28.3°		16.0°		10.3°
	H	1/3"	32.7°	1/3"	22.1°	1/3"	17.1°	1/3"	22.6°	1/3"	17.0°	1/3"	11.0°	1/4"	61.3°	1/4"	34.0°	1/4"	22.7°	1/4"	12.8°	1/4"	8.2°
	V		24.8°		16.6°		12.9°		17.1°		12.8°		8.2°		46.3°		25.6°		17.1°		9.6°		6.2°

NEW

12MEGAPIXEL FISHEYE BOARD LENS

1/1.6" 12MP IR
FIX FISHEYE



E1722KRY

4K FISHEYE BOARD LENS

1/1.7" 1/1.8" 4K IR FIX FISHEYE



E1628KRY

E1222KRY

5 MEGAPIXEL FISHEYE BOARD LENS

1/2.5" 5MP IR
FIX FISHEYE



L1028KRW

L1028KDRW

Model Name		E1722KRY		E1222KRY		E1628KRY		E1222KF3RY		E1628KF3RY		E2328KRY		L1028KRW		L1028KDRW	
Format		1/1.6"		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		1.7mm		1.2mm		1.6mm		1.2mm		1.6mm		2.3mm		1.05mm		1.05mm	
Aperture		F2.2		F2.2		F2.8		F2.2		F2.8		F2.8		F2.8		F2.8	
Angle of View at Inf.	D	1/1.6"	185.0°	1/1.7"	185.0°	1/1.7"	190.0°	1/1.7"	185.0°	1/1.7"	190.0°	1/1.8"	—	1/2.5"	180.0°	1/2.5"	180.0°
	H		185.0°								190.0°						
	V		185.0°								108.6°						
	D	1/1.8"	185.0°	1/3"	185.0°	1/3"	190.0°	1/3"	190.0°	1/2"	—	1/3"	180.0°	1/3"	180.0°		
	H		185.0°								171.5°						
	V		149.1°								139.5°						
	D			1/4"	164.2°	1/4"	157.3°	1/4"	164.2°	1/4"	157.3°	1/3"	149.2°	1/4"	180.0°	1/4"	180.0°
	H				139.5°								139.5°				
	V				110.3°								110.3°				
IRCF								○		○						○	

	EX1.5C	EX2C	VM100	VM400
				
Description	1.5X Extender for C-mount	2X Extender for C-mount	Extension Tube Kit 40, 20, 10, 5, 1, 0.5mm	5mm Adapter Ring
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	Attached between lens and camera - Adapts C-mount lens to CS-mount camera

	M55-0.75X	M55-2.0X	VM0811	VM0810
				
Description	Rear converter 0.75X (Designed for TEC-M55)	Rear converter 2.0X (Designed for TEC-M55)	Filter holder for V0828-MPY2 (M72 P=0.75)	Filter holder for V0828-MPY2 (M67 P=0.75)
Application	Makes focal length 0.75X	Makes focal length 2.0X	Attached between filter and lens for 1.1" sensor camera	Attached between filter and lens for 1" sensor camera

	ZM0810	VM0918	TM1243	TM1643
				
Description	Filter holder for V0826-MPZ (M82 P=0.75)	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 for 1" sensor camera	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

	XM0823
	
Description	Filter holder for M0828-MPX (M82 P=0.75)
Application	Attached between filter and lens for 2/3" sensor camera



NEW

Ruggedized Series

- Designed for harsh environments with vibration resistance (10G) and shock resistance (15G)
- Customizable to your desired F-number
- High-resolution lens over 20MP (custom-made to order)
- Floating structure ensures high performance from close-up to long-distance
- Close-focus design with a minimum distance of 0.1m
- Compact and lightweight design
- Available for small-quantity orders

※ IEC 60068-2-6 compliant

・ Frequency 10-60Hz (amplitude 0.75mm), Frequency 60-500Hz (acceleration 100m/S²)

Model Name	Format	Focal Length	F No.	Working Distance	Distortion	Weight
V0826-MPZ-R	1"	8mm	F2.6	0.1m - Inf	-0.8%(y=8.0)	196g
V1226-MPZ-R	1"	12mm	F2.6	0.1m - Inf	0.0%(y=8.0)	98.4g
V1624-MPZ-R	1"	16mm	F2.4	0.1m - Inf	0.0%(y=8.0)	108.1g
V2520-MPZ-R	1"	25mm	F2.0	0.15m - Inf	0.0%(y=8.0)	73.1g
V3522-MPZ-R	1"	35mm	F2.2	0.2m - Inf	0.0%(y=8.0)	118.2g
V5024-MPZ-R	1"	50mm	F2.4	0.2m - Inf	0.0%(y=8.0)	138.5g
V7531-MPZ-R	1"	75mm	F3.1	0.25m - Inf	0.0%(y=8.0)	176.1g
V0828-MPY-R	1.1"	8mm	F2.8	0.2m - Inf	-0.6%(y=8.8)	157.4g
F1628-MPT-R	1.4"	16mm	F2.8	0.15m - Inf	0.06%(y=11.55)	187g
F3526-MPT-R	1.4"	35mm	F2.6	0.15m - Inf	0.01%(y=11.55)	122g





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)
- 100mm Super telephoto model (EG7Z1519)

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=0.75mm	68	83	104	279g
EG6Z0915KCS-MPWIR	1/1.8"	CS	9mm - 50mm	F1.5 - F16C	P-iris	3.0m	M67 P=0.75mm	68	83	104	278g
EG6Z0915TCS-MPWIR	1/1.8"	CS	9mm - 50mm	F1.5 - F16C	i-CS	3.0m	M67 P=0.75mm	77	84	104	291g
NEW EG7Z1519KCS-MPWIR	1/1.8"	CS	15mm - 100mm	F1.9 - F16C	P-iris	3.0m	M52 P=0.75mm	54	49	123	433g
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



Direct Mount Varifocal Lens

- Resolution up to 8MP supported
- Various image format options available from 1/3" to 1/1.2"
- Compatible with the latest IMX485/585 models (NSF2.3Z5915BHRW)

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

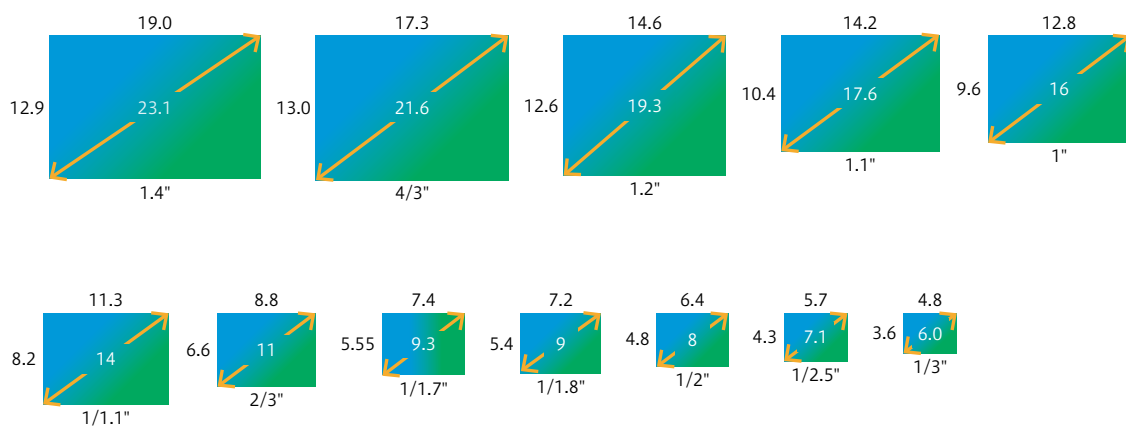
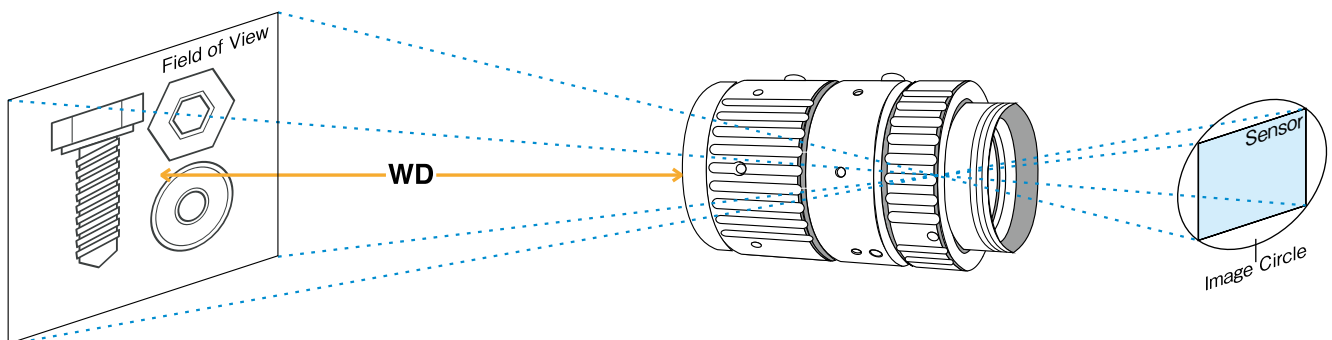
H1 : first principal point

y : vertical size of object

y' : vertical size of camera's imaging device

CAMERA FORMAT

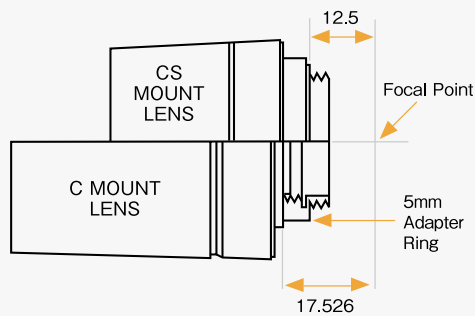
The size of the camera's imaging device also affects the angle of view, with the smaller devices creating narrower angles of view when used on the same lens. The format of the lens, however, is irrelevant to the angle of view; it merely needs to project an image that will cover the device, e.g., the 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.



* This specification is subject to change without any notice.

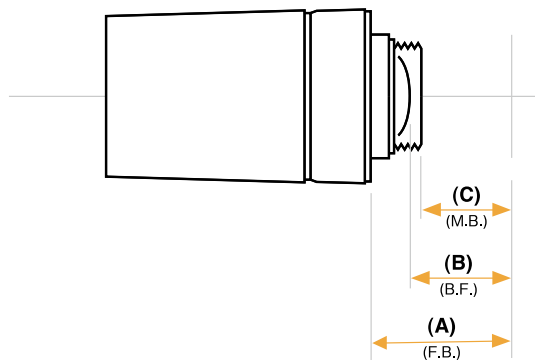
C or CS MOUNT

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



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

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



(A) Flange Back

Distance between the lens flange and focal plane

(B) Back Focal Length

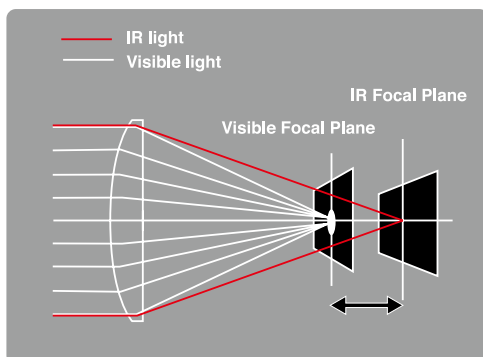
Distance between the surface of the rear lens element and focal plane

(C) Mechanical Back Focal Length

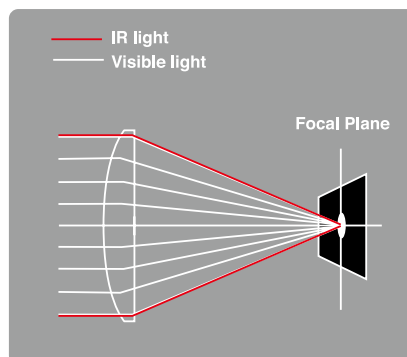
Distance between the surface of the lens frame and focal plane

MECHANISM AND ADVANTAGEOUS EFFECT OF IR LENS

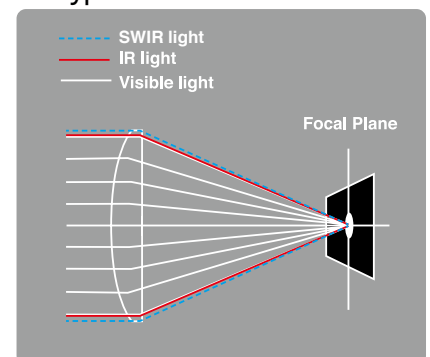
■ VISIBLE LENS



■ IR LENS



■ Hyper-APO LENS



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

FIELD OF VIEW

LensConnect I²C/USB DL-MPY Series

DL0828UC/SC-MPY (f=8mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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/SC-MPY (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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/SC-MPY (f=16mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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/SC-MPY (f=25mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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/SC-MPY (f=35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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/SC-MPY (f=50mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			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

Lens Connect I²C/USB Vari focal Series

ML3Z1226UC/SC-MPW

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)								
			2/3"			1/2"			1/3"		
			D	H	V	D	H	V	D	H	V
1000	WIDE	0.012	-	974.9	773.8	574.8	701.0	556.9	415.2	521.3	310.3
	TELE	0.034	-	320.0	257.4	193.8	234.4	188.0	141.2	176.3	106.0
900	WIDE	0.013	-	880.7	698.9	519.1	633.1	502.9	374.9	470.7	280.2
	TELE	0.038	-	290.0	233.2	175.5	212.3	170.2	127.8	159.6	95.9
800	WIDE	0.015	-	786.6	623.9	463.3	565.1	448.9	334.6	420.1	250.0
	TELE	0.042	-	260.0	208.9	157.1	190.1	152.3	114.4	142.9	85.8
700	WIDE	0.016	-	692.5	549.0	407.6	497.2	394.9	294.3	369.6	219.9
	TELE	0.048	-	230.0	184.6	138.7	167.9	134.5	101.0	126.1	75.8
600	WIDE	0.019	-	598.3	474.1	351.8	429.3	340.8	254.0	319.0	189.8
	TELE	0.055	-	199.7	160.0	120.1	145.6	116.5	87.4	109.2	65.6
500	WIDE	0.023	-	504.0	399.0	296.0	361.2	286.7	213.6	268.3	159.6
	TELE	0.065	-	168.9	135.1	101.3	122.8	98.2	73.7	92.1	55.2
400	WIDE	0.028	-	409.9	324.1	240.2	293.3	232.7	173.4	217.8	129.5
	TELE	0.080	-	137.7	109.9	82.3	99.8	79.8	59.8	74.8	44.8
300	WIDE	0.036	-	315.6	249.1	184.4	225.3	178.7	133.0	167.2	99.3
	TELE	0.103	0.500	108.1	86.0	64.2	78.0	62.3	46.6	58.3	34.9
200	WIDE	0.052	-	221.2	174.0	128.6	157.3	124.5	92.6	116.5	69.2
	TELE	0.139	2.000	81.1	64.2	47.8	58.2	46.4	34.7	43.4	25.9
100	WIDE	0.093	-	126.4	98.6	72.6	89.0	70.3	52.2	65.7	38.9
	TELE	0.213	5.000	54.0	42.4	31.4	38.4	30.5	22.7	28.5	17.0

ML2Z0525UC/SC-MPWIR

F1228-MPT (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			14"		12"		11"	
			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)					
			14"		12"		11"	
			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)					
			14"		12"		11"	
			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)					
			14"		12"		11"	
			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)					
			14"		12"		11"	
			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)					
			11"		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	273.3	338.4	251.6	229.9	170.9
150	0.051	0.2	287.1	208.5	258.4	191.9	175.3	130.3
100	0.075	0.2	198.5	143.7	178.4	132.2	120.8	89.7

V1228-MPY2 (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			11"		1"		2/3"	
			H	V	H	V	H	V
1000	0.012	-	1167.9	854.2	1053.4	787.5	720.9	538.6
900	0.014	-	1051.2	768.8	948.2	708.8	648.9	484.8
800	0.015	-	934.6	683.4	842.9	630.1	576.8	430.9
700	0.018	-	818.0	598.1	737.7	551.5	504.8	377.1
600	0.021	-	701.5	512.9	632.7	472.9	432.9	323.4
500	0.025	-	584.7	427.5	527.3	394.2	360.8	269.6
450	0.027	-	526.5	384.9	474.8	354.9	324.9	242.7
400	0.031	-	468.2	342.3	422.2	315.6	288.9	215.8
350	0.035	-	409.9	299.7	369.6	276.3	252.9	189.0
300	0.041	-	351.6	257.0	317.0	237.0	216.9	162.1
250	0.048	0.5	303.1	221.0	273.0	203.7	186.4	139.2
200	0.060	0.5	242.7	177.0	218.6	163.1	149.3	111.5
150	0.079	0.5	182.5	133.1	164.3	122.6	112.2	83.8
100	0.115	1.0	126.3	91.9	113.6	84.7	77.5	57.8

V1628-MPY2 (f=16mm)

Working Distance	Optical Magnification	Extension Ring	Field of View (mm)						
			1"		1"		2/3"		
			H	V	H	V	H	V	
(mm)		(mm)							
1000	0.016	-	890.1	651.4	802.4	601.0	550.7	412.4	
900	0.018	-	800.7	586.0	721.8	540.7	495.4	371.0	
800	0.020	-	711.5	520.8	641.5	480.5	440.3	329.8	
700	0.023	-	622.2	455.4	560.9	420.2	385.0	288.4	
600	0.027	-	532.7	390.0	480.3	359.9	329.7	247.0	
500	0.032	-	443.4	324.6	399.8	299.6	274.5	205.6	
450	0.036	-	398.7	291.9	359.5	269.4	246.9	184.4	
400	0.040	-	353.9	259.2	319.2	239.2	219.2	164.9	
350	0.046	-	309.3	226.5	278.9	209.1	191.6	143.5	
300	0.054	-	264.6	193.8	238.6	178.9	163.9	122.8	
250	0.063	1.0	227.8	166.3	205.1	153.3	140.5	105.1	
200	0.079	1.0	181.4	132.5	163.4	122.2	111.9	82.5	
150	0.106	1.0	135.1	98.8	121.7	91.1	83.5	63.8	
100	0.156	2.0	92.1	67.2	82.9	61.9	56.7	42.5	

V3528-MPY (f=35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		1 1/2"		2 1/8"	
			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 1/2"		2 1/8"	
			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/S-MPZ V0826-MPZ (f=8mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2 1/8"		1 1/8"	
			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/S-MPZ V1226-MPZ (f=12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2 1/8"		1 1/8"	
			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/S-MPZ V1624-MPZ (f=16mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2 1/8"		1 1/8"	
			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	307.7
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/S-MPZ V2520-MPZ (f=25mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2 1/8"		1 1/8"	
			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	88.6	81.2	60.9	66.4	49.8
200	0.139	-	92.7	69.4	63.6	47.7	52.0	39.0
150	0.192	-	67.0	50.2	46.0	34.5	37.6	28.2
100	0.312	5.0	41.4	31.0	28.4	21.3	23.2	17.4

VL3522U/S-MPZ V3522-MPZ (f=35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			1"		2 1/8"		1 1/8"	
			H	V	H	V	H	V
1000	0.035	-	362.4	271.8	249.1	186.8	203.8	152.9
900	0.039	-	325.8	244.3	224.0	168.0	183.2	137.4
800	0.044	-	289.3	216.9	198.8	149.1	162.7	122.0
700	0.051	-	252.7	189.5	173.7	130.3	142.1	106.6
600	0.059	-	216.1	162.1	148.5	111.4	121.5	91.1
500	0.071	-	179.5	134.6	123.4	92.5	101.0	75.7
450	0.080	-	161.2	120.9	110.8	83.1	90.7	68.0
400	0.090	-	142.9	107.2	98.2	73.7	80.4	60.3
350	0.103	-	124.7	93.5	85.7	64.3	80.1	52.6
300	0.121	-	106.4	79.7	73.1	54.8	59.8	44.9
250	0.146	-	88.1	66.0	60.5	45.4	49.5	37.1
200	0.184	-	69.9	52.4	48.0	36.0	39.3	29.5
150	0.249	2.5	51.7	38.7	35.5	26.6	29.0	21.8
100	0.385	7.0	33.5	25.1	23.0	17.2	18.8	14.1

VL5024U/S-MPZ V5024-MPZ (f=50mm)

Working Distance	Optical Magnification	Extension Ring	Field of View (mm)					
			1"		2 1/8"		1/18"	
(mm)		(mm)	H	V	H	V	H	V
1000	0.053	-	245.9	184.4	169.0	126.8	138.3	103.8
900	0.059	-	220.3	165.2	151.4	113.6	123.9	93.0
800	0.066	-	194.7	146.0	133.8	100.4	109.5	82.1
700	0.076	-	169.2	126.9	116.3	87.2	95.1	71.4
600	0.090	-	143.5	107.6	98.6	74.0	80.7	60.5
500	0.109	-	118.0	88.5	81.1	60.8	66.4	49.8
450	0.122	-	105.1	78.8	72.2	54.2	59.1	44.3
400	0.139	-	92.3	69.2	63.4	47.6	51.9	38.9
350	0.162	-	79.5	59.6	54.6	41.0	44.7	33.5
300	0.193	-	66.7	50.0	45.8	34.4	37.5	28.1
250	0.239	-	53.8	40.4	37.0	27.8	30.3	22.7
200	0.313	-	41.0	30.8	28.2	21.2	23.1	17.3
150	0.455	8.5	28.2	21.2	19.4	14.6	15.9	11.9
100	0.835	30.0	15.4	11.6	10.6	8.0	8.7	6.5

M0528-MPX (f = 5.5mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			H	V	H	V	H	V
1000	0.005	-	1665.4	1247.2	1208.5	899.3	899.3	670.2
900	0.006	-	1499.8	1122.7	1087.9	809.5	809.5	603.3
800	0.007	-	1335.5	999.4	968.4	720.5	720.5	536.9
700	0.008	-	1171.0	876.1	848.8	631.5	631.5	470.6
600	0.009	-	1006.8	752.9	729.4	542.6	542.6	404.3
500	0.011	-	842.8	629.9	610.3	453.8	453.8	338.1
450	0.012	-	760.8	568.4	550.6	409.4	409.4	305.0
400	0.013	-	678.2	506.4	490.6	364.7	364.7	271.7
350	0.015	-	596.2	444.9	431.0	320.3	320.3	238.6
300	0.018	-	513.9	383.1	371.1	275.8	275.8	205.4
250	0.021	-	431.5	321.3	311.2	231.1	231.1	172.1
200	0.026	-	348.6	259.0	250.9	186.2	186.2	138.6
150	0.035	-	266.0	197.1	190.9	141.5	141.5	105.3
100	0.051	-	183.7	135.4	131.1	97.0	97.0	72.1

M0828-MPX (f = 8mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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 (f = 12mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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 (f = 16mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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 (f = 25mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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 (f = 35mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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 (f = 50mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/2"		1/3"	
			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	5.0

M7538-MPX (f = 75mm)

Working Distance	Optical Magnification	Extension Ring	Field of View (mm)					
			2/3"		1/2"		1/3"	
(mm)		(mm)	H	V	H	V	H	V
1000	0.076	-	115.8	86.8	84.2	63.2	63.2	47.4
900	0.085	-	103.6	77.7	75.4	56.6	56.6	42.4
800	0.096	-	91.6	68.7	66.6	50.0	50.0	37.5
700	0.111	-	79.5	59.7	57.9	43.4	43.4	32.6
600	0.130	-	67.4	50.6	49.1	36.8	36.8	27.6
500	0.159	-	55.3	41.5	40.2	30.2	30.2	22.7
450	0.179	-	49.2	36.9	35.8	26.9	26.9	20.2
400	0.204	-	43.2	32.4	31.4	23.6	23.6	17.7
350	0.236	-	37.2	27.9	27.0	20.3	20.3	15.2
300	0.283	-	31.1	23.3	22.6	17.0	17.0	12.7
250	0.350	-	25.1	18.8	18.3	13.7	13.7	10.3
200	0.504	10.0	17.7	13.2	12.8	9.6	9.6	7.2
150	0.865	30.0	10.3	7.7	7.5	5.6	5.6	4.2

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"		1/25"	
			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	827.7	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"		1/25"	
			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"		1/25"	
			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"		1/25"	
			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"		1/25"	
			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"		1/25"	
			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
200	0.189	1.5	46.7	35.0	38.2	28.6	30.2	22.8
150	0.259	4.0	34.1	25.6	27.9	20.9	22.1	16.6
100	0.412	9.5	21.5	16.1	17.6	13.2	13.9	10.5

M5028-MPW3 (f=50mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/25"	
			H	V	H	V	H	V
1000	0.052	-	168.9	126.8	138.3	103.7	109.5	82.6
900	0.058	-	151.4	113.6	123.9	93.0	98.1	74.0
800	0.066	-	133.8	100.4	109.6	82.2	86.8	65.5
700	0.075	-	116.3	87.3	95.2	71.4	75.4	56.9
600	0.089	-	98.8	74.1	80.8	60.6	64.0	48.3
500	0.108	-	81.2	60.9	66.5	49.9	52.6	39.7
450	0.121	-	72.4	54.3	59.3	44.5	46.9	35.4
400	0.138	-	63.7	47.8	52.1	39.1	41.3	31.1
350	0.160	-	54.9	41.2	44.9	33.7	35.6	26.8
300	0.191	-	46.1	34.6	37.7	28.3	29.9	22.5
250	0.236	2.2	37.3	28.0	30.5	22.9	24.2	18.2
200	0.308	6.0	28.5	21.4	23.4	17.5	18.5	14.0
150	0.445	13.0	19.8	14.8	16.2	12.1	12.8	9.7
100	0.802	30.5	11.0	8.2	9.0	6.7	7.1	5.4

M7528-MPW3 (f=75mm)

Working Distance (mm)	Optical Magnification	Extension Ring (mm)	Field of View (mm)					
			2/3"		1/18"		1/25"	
			H	V	H	V	H	V
1000	0.071	-	123.1	92.3	100.7	75.5	79.7	60.1
900	0.079	-	111.4	83.5	91.1	68.3	72.1	54.4
800	0.088	-	99.7	74.7	81.5	61.1	64.5	48.7
700	0.100	-	87.9	65.9	71.9	53.9	56.9	43.0
600	0.116	-	76.2	57.1	62.4	46.7	49.3	37.2
500	0.137	-	64.5	48.4	52.8	39.6	41.8	31.5
450	0.150	-	58.7	44.0	48.0	36.0	38.0	28.6
400	0.167	-	52.8	39.6	43.2	32.4	34.2	25.8
350	0.188	1.5	46.9	35.2	38.4	28.8	30.4	22.

H0514-MP2/H0514-VSW (f=5mm) M0814-MP2/M0814-VSW (f=8mm) M1214-MP2/M1214-VSW (f=12mm)

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

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

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) M2514-MP2/M2514-VSW (f=25mm) 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	0.018	-	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

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

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) 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	0.055	-	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

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

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-APVSW3

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	36.5	33.3	26.5	16.9	13.4
190	0.206	43.5	34.5	31.5	25.1	16.0	12.7
180	0.219	41.1	32.6	29.7	23.7	15.1	11.9
170	0.233	38.6	30.6	27.9	22.2	14.1	11.2
160	0.249	35.9	28.5	26.1	20.8	13.2	10.5
150	0.268	33.6	26.7	24.3	19.4	12.3	9.8

M5018-APVSW

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		IMX992		IMX990		IMX991	
		H	V	H	V	H	V
1000	0.051	176.0	139.7	126.0	100.9	63.1	50.5
900	0.057	158.1	125.4	113.1	90.5	56.6	45.3
800	0.064	140.0	111.1	100.4	80.3	50.2	40.2
700	0.073	121.9	96.7	87.4	70.0	43.8	35.0
600	0.086	103.9	82.5	74.5	59.6	37.3	29.8
500	0.104	85.8	68.1	61.5	49.2	30.8	24.6
450	0.116	76.8	61.0	55.1	44.1	27.6	22.0
400	0.132	67.8	53.8	48.6	38.9	24.3	19.5
350	0.152	58.7	46.6	42.1	33.7	21.1	16.9
300	0.180	49.7	39.5	35.6	28.5	17.8	14.3
250	0.220	40.7	32.3	29.2	23.4	14.6	11.7
200	0.282	31.7	25.2	22.7	18.2	11.4	9.1

LensConnect I²C/USB SWIR Series

ML2Z0525UC/SC-MPWIR

Working Distance (mm)		Optical Magnification	EXtension Ring	Field of View (mm)					
				IMX992		IMX990		IMX991	
				H	V	H	V	H	V
1000	WIDE	0.006	-	1928.21	1422.04	1273.58	599.79	599.79	471.20
	TELE	0.012	-	763.20	599.52	546.15	432.62	273.48	216.48
900	WIDE	0.006	-	1738.52	1282.07	1148.21	540.72	540.72	424.79
	TELE	0.013	-	688.06	540.49	492.37	390.02	246.55	195.16
800	WIDE	0.007	-	1544.50	1139.32	1020.43	480.68	480.68	377.63
	TELE	0.015	-	612.88	481.42	438.57	347.39	219.60	173.83
700	WIDE	0.008	-	1354.91	999.42	895.12	421.63	421.63	331.24
	TELE	0.017	-	537.84	422.47	384.86	304.85	192.70	152.54
600	WIDE	0.009	-	1165.84	859.85	770.10	362.71	362.71	284.95
	TELE	0.020	-	462.46	363.25	330.92	262.12	165.69	131.15
500	WIDE	0.011	-	976.49	720.11	644.92	303.72	303.72	238.60
	TELE	0.024	-	387.26	304.18	277.10	219.48	138.74	109.82
400	WIDE	0.014	-	787.14	580.36	519.74	244.73	244.73	192.25
	TELE	0.029	-	312.05	245.09	223.27	176.85	111.79	88.48
300	WIDE	0.018	-	597.79	440.62	394.56	185.74	185.74	145.91
	TELE	0.039	-	236.84	186.01	169.45	134.21	84.83	67.15
200	WIDE	0.027	-	408.43	300.87	269.38	126.75	126.75	99.56
	TELE	0.057	-	161.64	126.93	115.62	91.57	57.88	45.81
100	WIDE	0.050	-	219.02	161.08	144.17	67.74	67.74	53.21
	TELE	0.106	-	86.43	67.85	61.80	48.94	30.92	24.48

ML3Z1226UC/SC-MPW

Working Distance (mm)		Optical Magnification	EXtension Ring	Field of View (mm)					
				IMX992		IMX990		IMX991	
				H	V	H	V	H	V
1000	WIDE	0.012	-	772.25	607.09	553.08	438.07	276.85	553.08
	TELE	0.032	-	278.96	221.61	202.53	161.37	102.63	81.36
900	WIDE	0.013	-	697.52	548.27	499.48	395.59	250.00	499.48
	TELE	0.025	-	340.00	281.22	258.86	208.12	132.98	105.48
800	WIDE	0.015	-	622.70	489.38	445.81	353.07	223.11	445.81
	TELE	0.038	-	233.63	185.42	169.41	134.92	85.77	67.99
700	WIDE	0.017	-	547.88	430.49	392.14	310.54	196.22	392.14
	TELE	0.043	-	206.00	163.41	149.28	118.86	75.54	59.88
600	WIDE	0.019	-	473.06	371.60	338.47	268.01	169.33	338.47
	TELE	0.050	-	178.25	141.31	129.06	102.73	65.27	51.73
500	WIDE	0.023	-	398.23	312.70	284.80	225.47	142.43	284.80
	TELE	0.060	-	150.28	119.03	108.69	86.48	54.92	43.53
400	WIDE	0.029	-	323.37	253.78	231.11	182.93	115.53	231.11
	TELE	0.074	-	121.79	96.36	87.96	69.95	44.40	35.19
300	WIDE	0.037	-	248.48	194.85	177.40	140.37	88.62	177.40
	TELE	0.093	0.500	96.76	76.44	69.76	55.44	35.17	27.87
200	WIDE	0.053	-	173.52	135.85	123.64	97.77	61.69	123.64
	TELE	0.127	2.000	71.67	56.50	51.53	40.91	25.92	20.53
100	WIDE	0.095	-	98.25	76.66	69.71	55.04	34.68	69.71
	TELE	0.213	5.000	46.56	36.54	33.29	26.37	16.68	13.20

MACRO ZOOM LENS / TELECENTRIC MACRO LENS

TEC-V7X

Working Distance (mm)		Optical Magnification	Field of View (mm)								
			1"			1 1/2"			2 3/4"		
			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
577.5	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

MLH-10X

Working Distance (mm)		Optical Magnification	Field of View (mm)											
			1/2"				1/3"				1/4"			
			D	H	V	Magnification on Monitor	D	H	V	Magnification on Monitor	D	H	V	Magnification on Monitor
150	WIDE	0.084	95.2	76.2	57.1	3.73X	71.4	57.1	42.9	4.98X	53.6	42.9	32.1	6.64X
	TELE	0.84	9.5	7.6	5.7	37.34X	7.1	5.7	4.3	49.78X	5.4	4.3	3.2	66.38X
200	WIDE	0.06	133.3	106.7	80.0	2.67X	100.0	80.0	60.0	3.56X	75.0	60.0	45.0	4.74X
	TELE	0.60	13.3	10.7	8.0	26.67X	10.0	8.0	6.0	35.56X	7.5	6.0	4.5	47.41X
250	WIDE	0.045	177.8	142.2	106.7	2.00X	133.3	106.7	80.0	2.67X	100.0	80.0	60.0	3.56X
	TELE	0.45	17.8	14.2	10.7	20.00X	13.3	10.7	8.0	26.67X	10.0	8.0	6.0	35.56X
300	WIDE	0.036	222.2	177.8	133.3	1.60X	166.7	133.3	100.0	2.13X	125.0	100.0	75.0	2.84X
	TELE	0.36	22.2	17.8	13.3	16.00X	16.7	13.3	10.0	21.34X	12.5	10.0	7.5	28.45X
350	WIDE	0.03	266.7	213.3	160.0	1.33X	200.0	160.0	120.0	1.78X	150.0	120.0	90.0	2.37X
	TELE	0.30	26.7	21.3	16.0	13.34X	20.0	16.0	12.0	17.78X	15.0	12.0	9.0	23.71X
400	WIDE	0.025	320.0	256.0	192.0	1.11X	240.0	192.0	144.0	1.48X	180.0	144.0	108.0	1.98X
	TELE	0.25	32.0	25.6	19.2	11.11X	24.0	19.2	14.4	14.82X	18.0	14.4	10.8	19.76X
450	WIDE	0.022	363.6	290.9	218.2	0.98X	272.7	218.2	163.6	1.30X	204.5	163.6	122.7	1.74X
	TELE	0.22	36.4	29.1	21.8	9.78X	27.3	21.8	16.4	13.04X	20.5	16.4	12.3	17.38X

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

MLM-3XMP

Optical Magnification	Field of View (mm)											
	2/3"				1/2"				1/3"			
	D	H	V	Magnification on Monitor	D	H	V	Magnification on Monitor	D	H	V	Magnification on Monitor
0.3	36.7	29.3	22.0	9.7X	26.7	21.3	16.0	13.3X	20.0	16.0	12.0	17.8X
0.4	27.5	22.0	16.5	12.9X	20.0	16.0	12.0	17.8X	15.0	12.0	9.0	23.7X
0.5	22.0	17.6	13.2	16.2X	16.0	12.8	9.6	22.2X	12.0	9.6	7.2	29.6X
0.6	18.3	14.7	11.0	19.4X	13.3	10.7	8.0	26.7X	10.0	8.0	6.0	35.6X
0.7	15.7	12.6	9.4	22.6X	11.4	9.1	6.9	31.1X	8.6	6.9	5.1	41.5X
0.8	13.8	11.0	8.3	25.9X	10.0	8.0	6.0	35.6X	7.5	6.0	4.5	47.4X
0.9	12.2	9.8	7.3	29.1X	8.9	7.1	5.3	40.0X	6.7	5.3	4.0	53.3X
1.0	11.0	8.8	6.6	32.3X	8.0	6.4	4.8	44.5X	6.0	4.8	3.6	59.3X

TEC-M55

TEC-M55

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		2/3"		1/2"		1/3"	
		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	55.5	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

TEC-M55 with 0.75X Converter

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		2/3"		1/2"		1/3"	
		H	V	H	V	H	V
5000	0.008	1066.2	797.6	773.3	579.2	579.2	434.0
4000	0.010	851.9	637.3	617.8	462.7	462.7	346.8
3000	0.014	637.6	476.9	462.4	346.3	346.3	259.5
2000	0.021	423.2	316.6	306.9	229.9	229.9	172.3
1500	0.028	316.1	236.4	229.2	171.7	171.7	128.6
1000	0.423	208.9	156.2	151.5	113.4	113.4	85.0
950	0.045	198.2	148.2	143.7	107.6	107.6	80.6
900	0.047	187.4	140.2	135.9	101.8	101.8	76.3
850	0.050	176.7	132.2	128.1	96.0	96.0	71.9
800	0.053	166.0	124.2	120.4	90.1	90.1	67.5
750	0.057	155.3	116.1	112.6	84.3	84.3	63.2
700	0.061	144.6	108.1	104.8	78.5	78.5	58.8
650	0.066	133.8	100.1	97.0	72.7	72.7	54.5
600	0.072	123.1	92.1	89.3	66.8	66.8	50.1
550	0.079	112.4	84.1	81.5	61.0	61.0	45.7
500	0.087	101.7	76.0	73.7	55.2	55.2	41.4
450	0.097	90.9	68.0	65.9	49.4	49.4	37.0
400	0.110	80.2	60.0	58.2	43.6	43.6	32.6
350	0.127	69.5	52.0	50.4	37.7	37.7	28.3
300	0.151	58.7	43.9	42.6	31.9	31.9	23.9
250	0.184	48.0	35.9	34.8	26.1	26.1	19.5
200	0.238	37.3	27.9	27.0	20.2	20.2	15.2
150	0.334	26.5	19.8	19.2	14.4	14.4	10.8
140	0.363	24.4	18.2	17.7	13.2	13.2	9.9

TEC-M55 with 2X Converter

Working Distance (mm)	Optical Magnification	Field of View (mm)					
		2/3"		1/2"		1/3"	
		H	V	H	V	H	V
5000	0.019	453.1	340.3	330.0	247.7	247.7	185.8
4000	0.024	362.0	271.9	263.6	197.9	197.9	148.5
3000	0.032	270.9	203.4	197.3	148.1	148.1	111.1
2000	0.049	179.8	135.0	130.9	98.3	98.3	73.7
1500	0.065	134.3	100.8	97.8	73.4	73.4	55.0
1000	0.098	88.7	66.6	64.6	48.5	48.5	36.4
950	0.104	84.1	63.2	61.3	46.0	46.0	34.5
900	0.110	79.6	59.8	58.0	43.5	43.5	32.6
850	0.116	75.0	56.3	54.6	41.0	41.0	30.8
800	0.124	70.5	52.9	51.3	38.5	38.5	28.9
750	0.133	65.9	49.5	48.0	36.0	36.0	27.0
700	0.142	61.4	46.1	44.7	33.5	33.5	25.2
650	0.154	56.8	42.7	41.4	31.0	31.0	23.3
600	0.167	52.3	39.2	38.1	28.6	28.6	21.4
550	0.183	47.7	35.8	34.7	26.1	26.1	19.6
500	0.203	43.2	32.4	31.4	23.6	23.6	17.7
450	0.227	38.6	29.0	28.1	21.1	21.1	15.8
400	0.257	34.0	25.6	24.8	18.6	18.6	14.0
350	0.297	29.5	22.1	21.5	16.1	16.1	12.1
300	0.352	24.9	18.7	18.2	13.6	13.6	10.2
250	0.431	20.4	15.3	14.8	11.1	11.1	8.4
200	0.558	15.8	11.9	11.5	8.7	8.7	6.5
150	0.789	11.3	8.5	8.2	6.2	6.2	4.6
140	0.861	10.4	7.8	7.6	5.7	5.7	4.3

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-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

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