



computar

Industrial Imaging Lens

PRODUCT GUIDE
2026



풍림무역주식회사
RICHWOOD TRADING COMPANY, LTD.



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 2.74um 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



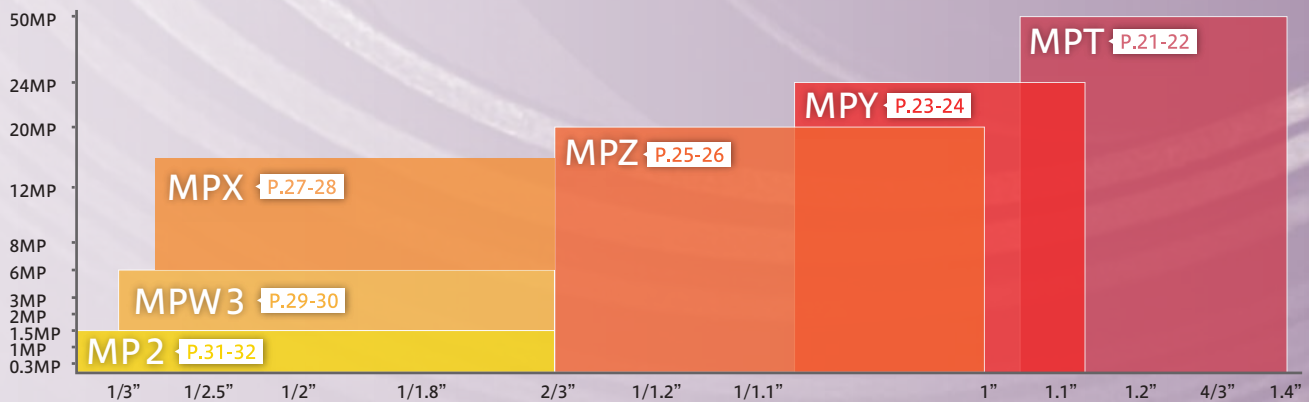
ViSWIR Series

- 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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NEW LensConnect

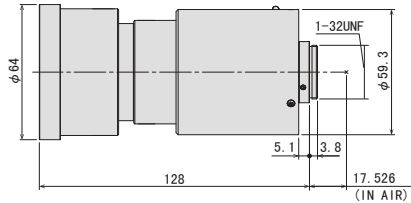
I²C TELECENTRIC Series

LensConnect I²C TELECENTRIC Series

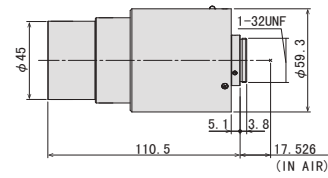


| Model No. | Format | Optical Magnification | Adjustable Working Distance | Weight |
|--------------------|--------|-----------------------|-----------------------------|--------|
| TEC-ML025139SC-MPW | 2/3" | 0.25x | 119mm - 159mm | 334g |
| TEC-ML05132SC-MPW | | 0.5x | 122mm - 142mm | 310g |
| TEC-ML10110SC-MPW | | 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 |
| | H | 2/3" 35.2mm |
| | V | 26.4mm |
| 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 = 0.61x λ / NA (λ = 550nm) *2:Depth of Field = 2x (Permissible circle of confusion [40um] × Effective F-number / Magnification²)

- 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)

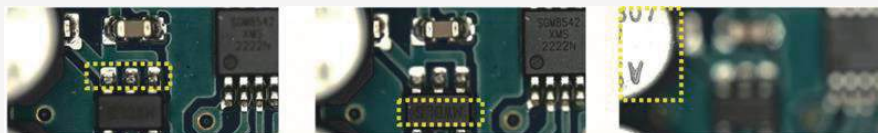
2/3"

8MP

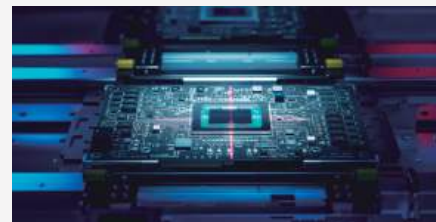
MOTORIZED

I²C

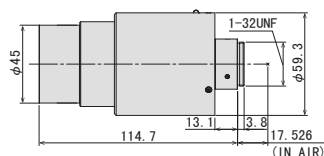
TELECENTRIC



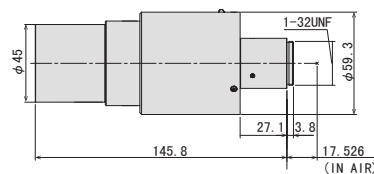
Instantly adjusts to the optimal focus position, even for workpieces with varying heights.



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 | 4.4 μm | | 2.2 μm | |
| Depth of Field *2 | 0.52mm | | 0.13mm | |
| NA | 0.077 | | 0.154 | |
| Control | Focus | Motorized | | Motorized |
| Field of View | D | 11.0mm | | 5.5mm |
| | H | 2/3" | 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 | - | | - | |

NEW LensConnect

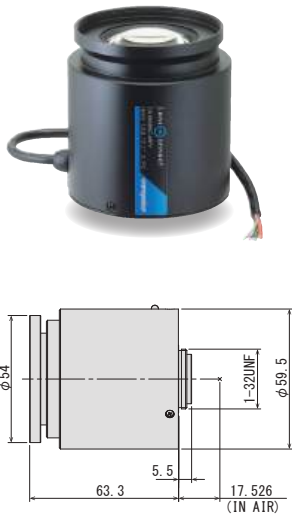
I²C DL-MPY Series

LensConnect I²C DL -MPY Series

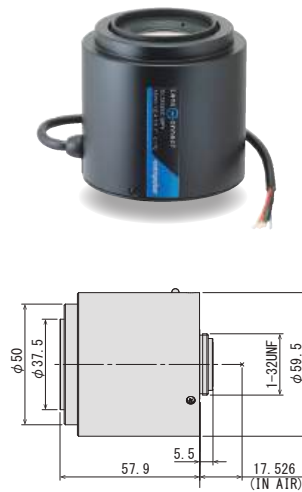


| Model No. | Format | Focal Length | F No. | Working Distance | Weight |
|--------------|--------|--------------|-------|------------------|--------|
| DL0828SC-MPY | 1/1.1" | 8mm | F2.8 | 0.1m-Inf. | 170g |
| DL1224SC-MPY | | 12mm | F2.4 | 0.1m-Inf. | 155g |
| DL1623SC-MPY | | 16mm | F2.3 | 0.11m-Inf. | 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 |

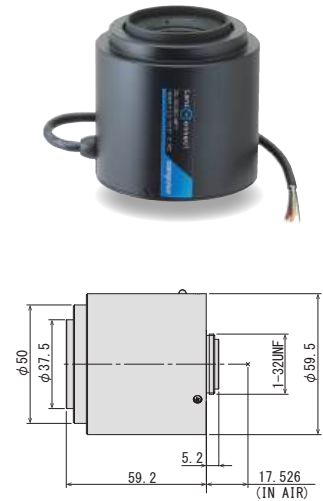
DL0828SC-MPY



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 | | | | | Iris F2.4 - F16.0 | | | | | Iris F2.3 - F16.0 | | | | | | | | |
| | Focus 0.1m - Inf. | | | | | Focus 0.1m - Inf. | | | | | Focus 0.11m - Inf. | | | | | | | | |
| Control | Iris Motorized | | | | | Iris Motorized | | | | | Iris Motorized | | | | | | | | |
| | Focus Motorized | | | | | Focus Motorized | | | | | Focus 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

1/1.1"

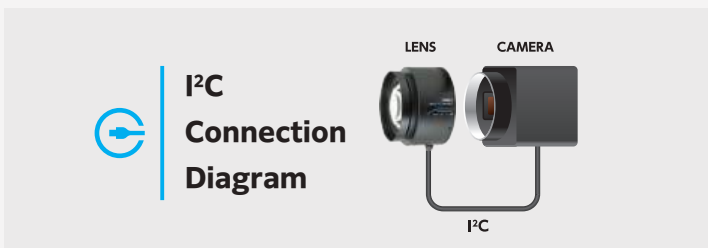
12MP

MOTORIZED

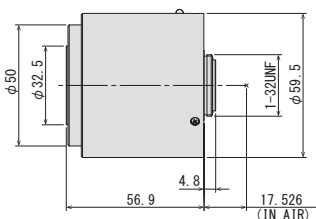
I²C

FIX

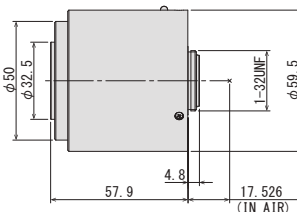
FLOATING



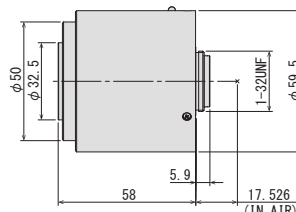
DL2523SC-MPY



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 | | | | | Iris | F2.5 - F16.0 | | | | | Iris | F2.8 - F16.0 | | | | | |
| | Focus | 0.12m - Inf. | | | | | Focus | 0.16m - Inf. | | | | | Focus | 0.2m - Inf. | | | | | |
| Control | Iris | Motorized | | | | | Iris | Motorized | | | | | Iris | Motorized | | | | | |
| | Focus | Motorized | | | | | Focus | Motorized | | | | | Focus | Motorized | | | | | |
| Angle of View | D | | 31.0° | | 24.8° | | 20.4° | | 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 | 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

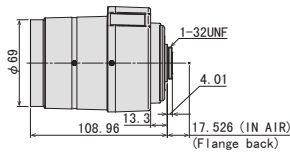
I²C VARI-FOCAL Series

LensConnect I²C VARI-FOCAL Series

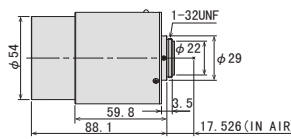


| Model No. | Format | Focal Length | F No. | Resolution | Working Distance | Weight |
|--------------------|--------|--------------|-------|------------|--------------------------------|--------|
| VL6Z1626SC-MPYIR | 1.1" | 16-96mm | F2.6 | 12MP | 3m-Inf. | 322g |
| VL2Z2533SM6C-MPWIR | 1" | 25-50mm | 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 |
| EL6Z0915SCS-MPWIR | 1/1.8" | 9-50mm | F1.5 | 5MP | 3m-Inf. | 291g |

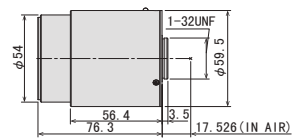
VL6Z1626SC-MPYIR



VL2Z2533SM6C-MPWIR



ML3Z1226SC-MPW

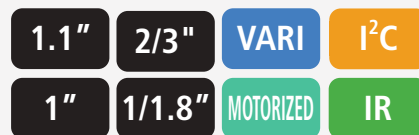


| Focal Length | 16mm - 96mm | 25mm - 50mm | 12mm - 36mm | | | | | | | |
|-------------------|----------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---------------|---------------|---------------|---------------|---------------|--------------|
| 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 | | | | | | | |
| | Focus | 3m - Inf. | WIDE: 1m - Inf. TELE: 3m - Inf. | WIDE: 0.1m - Inf. TELE: 0.35m - Inf. | | | | | | |
| Control | Iris | Motorized | Motorized | | | | | | | |
| | Focus | Motorized | Motorized | | | | | | | |
| | Zoom | Motorized | Motorized | | | | | | | |
| Angle of View | D | 58.9° - 10.4° | 54.1° - 9.5° | 37.8° - 6.7° | 35.9° - 18.3° | 24.7° - 12.7° | 20.3° - 10.4° | 50.4° - 16.9° | 42.0° - 14.0° | 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 | | |

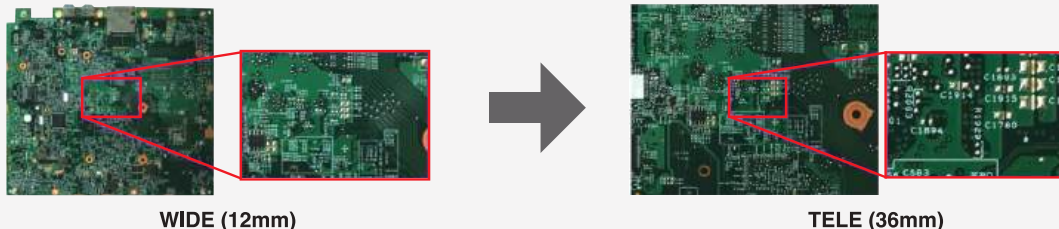
| | | | | |
|--------------------|------|-------------------|-------------------|-------------------|
| Back Focal Length | WIDE | 13.9mm (In Air) | 15.0 mm (in Air) | 16.4 mm (In Air) |
| | TELE | 13.9mm (In Air) | 16.2 mm (in Air) | 15.9 mm (In Air) |
| Flange Back Length | | 17.526mm (In Air) | 17.526mm (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



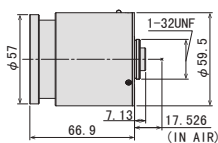
ML3Z1226SC-MPW



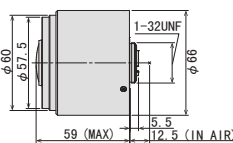
WIDE (12mm)

TELE (36mm)

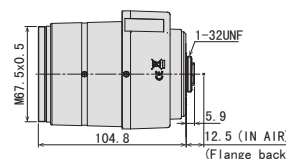
ML2Z0525SC-MPWIR



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" | | 1/1.8" | | 1/3" | | 1/1.8" | | 1/2" | | 1/3" | | 1/1.8" | | 1/2" | | 1/3" | |
| | H | 105.2° - 49.6° | | 87.8° - 41.0° | | 59.8° - 27.6° | | 138.1° - 52.9° | | 120.3° - 47.5° | | 86.5° - 35.5° | | 52.5° - 10.2° | | 47.4° - 9.2° | | 35.9° - 7.0° | |
| | V | 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° | |
| 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

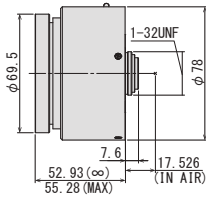
I²C VL-MPZ Series

LensConnect I²C VL -MPZ Series

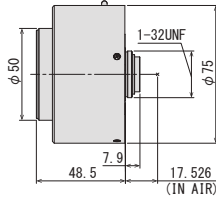


| Model No. | Format | Focal Length | F No. | Working Distance | Weight |
|-------------|--------|--------------|-------|------------------|--------|
| VL0826U-MPZ | 1" | 8mm | F2.6 | 0.1m-Inf. | 326g |
| VL1226U-MPZ | | 12mm | F2.6 | 0.1m-Inf. | 265g |
| VL1624U-MPZ | | 16mm | F2.4 | 0.1m-Inf. | 272g |
| 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 |

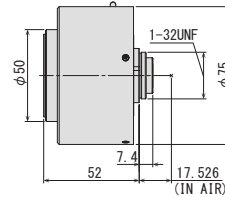
VL0826U-MPZ



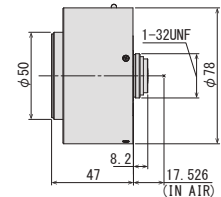
VL1226U-MPZ



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° | 57.1° | 47.8° | 56.7° | 40.7° | 33.7° | 43.8° | 30.9° | 25.5° | 28.8° | 20.0° | 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)

1"

20MP

MOTORIZED

I²C

FIX

FLOATING



High-Precision Vision for Accurate Logistic Monitoring.

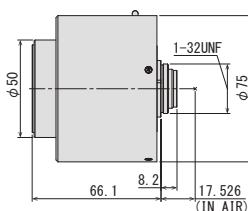


High-Precision Inspection for Accurate Assembly Line Quality.

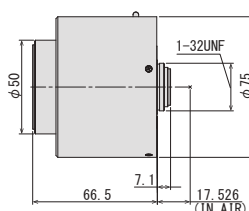


Supporting Accurate Inspection in Assembly Processes.

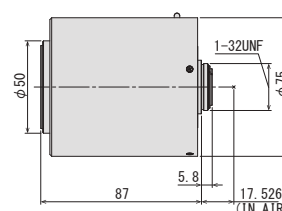
VL3522U-MPZ



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 | 1" | 20.8° | 2/3" | 14.4° | 1/1.8" | 11.8° | 1" | 14.6° | 2/3" | 10.1° | 1/1.8" | 8.3° | 1" | 9.8° | 2/3" | 6.7° | 1/1.8" | 5.5° |
| | V | 1" | 15.7° | 2/3" | 10.8° | 1/1.8" | 8.9° | 1" | 11.0° | 2/3" | 7.6° | 1/1.8" | 6.2° | 1" | 7.3° | 2/3" | 5.0° | 1/1.8" | 4.1° |
| Operating Temperature | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | | |

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

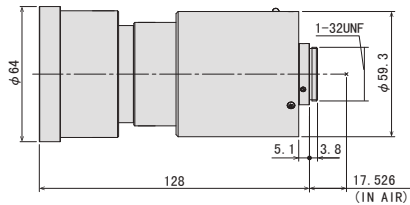
USB TELECENTRIC Series

LensConnect USB TELECENTRIC Series

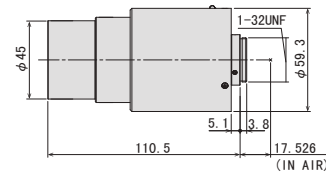


| Model No. | Format | Optical Magnification | Adjustable Working Distance | Weight |
|--------------------|--------|-----------------------|-----------------------------|--------|
| TEC-ML025139UC-MPW | 2/3" | 0.25x | 119mm - 159mm | 342g |
| TEC-ML05132UC-MPW | | 0.5x | 122mm - 142mm | 318g |
| TEC-ML10110UC-MPW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

TEC-ML025139UC-MPW



TEC-ML05132UC-MPW



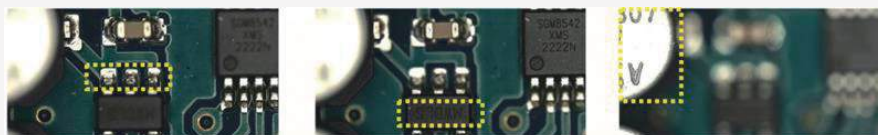
| | | | | | |
|-----------------------------|---------------|-----------|---------------|-----------|--------|
| Max. Image Circle | φ11.4mm | | φ11.4mm | | |
| Optical Magnification | 0.25x | | 0.5x | | |
| Adjustable Working Distance | 119mm - 159mm | | 122mm - 142mm | | |
| Resolving Power *1 | 17.7μm | | 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 | 2/3" | 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 | |

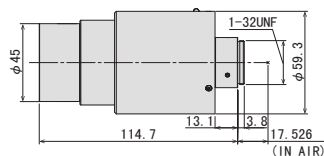
*1:Resolving power = $0.61\lambda / NA$ ($\lambda = 550\text{nm}$) *2:Depth of Field = $2x$ (Permissible circle of confusion [40μm] × Effective F-number / Magnification²)

- The industry's first motorized telecentric lens
- New motorized lenses, enable power supply & control through USB (Available for 1²C ver.)
- Maintain Telecentricity even during focus adjustment
- Ultra-high resolution lens (Compatible with 2.74um pixel size)

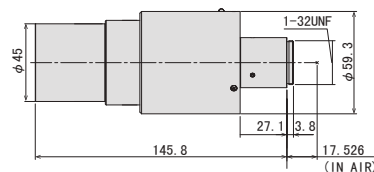


Instantly adjusts to the optimal focus position, even for workpieces with varying heights.

TEC-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 | 4.4 μm | | 2.2 μm | |
| Depth of Field *2 | 0.52mm | | 0.13mm | |
| NA | 0.077 | | 0.154 | |
| Control | Focus | Motorized | | Motorized |
| Field of View | D | 11.0mm | | 5.5mm |
| | H | 2/3" | 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 | |

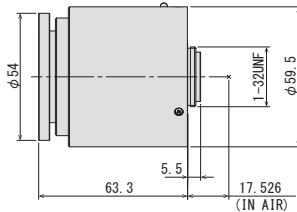
USB DL-MPY Series

LensConnect USB TELECENTRIC Series

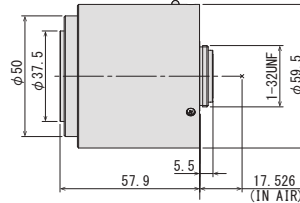


| Model No. | Format | Focal Length | F No. | Working Distance | Weight |
|--------------|--------|--------------|-------|------------------|--------|
| DL0828UC-MPY | 1/1.1" | 8mm | F2.8 | 0.1m-Inf. | 178g |
| DL1224UC-MPY | | 12mm | F2.4 | 0.1m-Inf. | 163g |
| DL1623UC-MPY | | 16mm | F2.3 | 0.11m-Inf. | 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 |

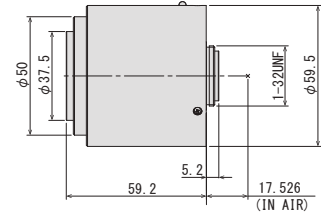
DL0828UC-MPY



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" | | 2/3" | | 1/1.8" | | 1/1.1" | | 2/3" | | 1/1.8" | | 1/1.1" | | 2/3" | | 1/1.8" | |
| | V | 69.4° | | 57.0° | | 47.8° | | 50.5° | | 40.6° | | 33.6° | | 38.9° | | 31.0° | | 25.5° | |
| 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

1/1.1"

12MP

MOTORIZED

USB

FIX

FLOATING



Remote adjustment in out-of-reach places

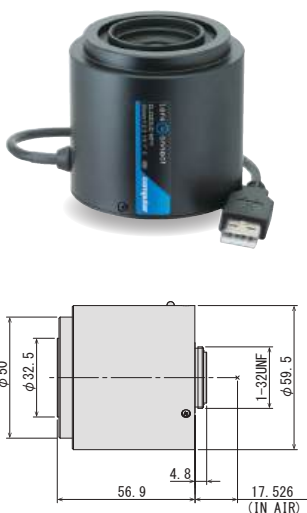


Make precise adjustments to lenses after installation

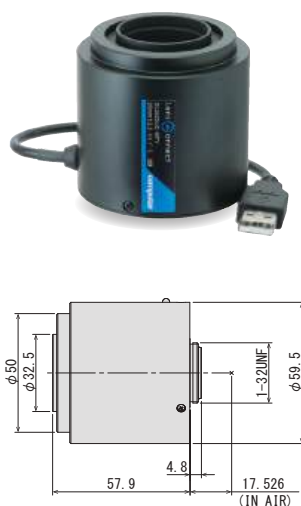


Easily change the focus point for workpieces at different heights

DL2523UC-MPY



DL3525UC-MPY



DL5028UC-MPY



| | | | | | | | | | | | | | | | |
|-----------------------|---------------|--------------|--|------------|--|---------------|--------------|---|--------------|--|---------------|--------------|--------------|--|--|
| Focal Length | 25mm | | | | | 35mm | | | | | 50mm | | | | |
| Max. Image Format | φ 14.4mm | | | | | φ 14.4mm | | | | | φ 14.4mm | | | | |
| Operation Range | Iris | F2.3 - F16.0 | | | | Iris | F2.5 - F16.0 | | | | Iris | F2.8 - F16.0 | | | |
| | Focus | 0.12m - Inf. | | | | Focus | 0.16m - Inf. | | | | Focus | 0.2m - Inf. | | | |
| Control | Iris | Motorized | | | | Iris | Motorized | | | | Iris | Motorized | | | |
| | Focus | Motorized | | | | Focus | Motorized | | | | Focus | Motorized | | | |
| Angle of View | D | 31.0° | | 24.8° | | 20.4° | | D | 22.5° | | 17.9° | | 14.7° | | |
| | H | 1/1.1" 25.3° | | 2/3" 20.0° | | 1/1.8" 16.4° | | H | 1/1.1" 18.2° | | 2/3" 14.3° | | 1/1.8" 11.7° | | |
| | V | 18.7° | | 15.1° | | 12.3° | | V | 13.4° | | 10.8° | | 8.8° | | |
| 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 | | | | | |

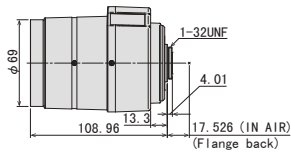
USB VARI-FOCAL Series

LensConnect USB VARI-FOCAL Series

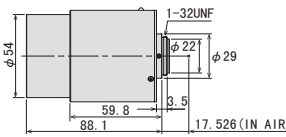


| Model No. | Format | Focal Length | F No. | Resolution | Working Distance | Weight |
|--------------------|--------|--------------|-------|------------|--------------------------------|--------|
| VL6Z1626UC-MPYIR | 1.1" | 16-96mm | F2.6 | 12MP | 3m-Inf. | 330g |
| VL2Z2533UM6C-MPWIR | 1" | 25-50mm | 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 |

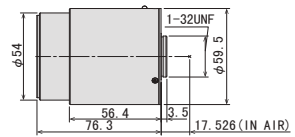
VL6Z1626UC-MPYIR



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° |
| | H | 1.1" | 48.1° - 8.5° | 1" | 48.1° - 8.5° | 2/3" | 30.3° - 5.4° | 1" | 28.8° - 14.7° | 2/3" | 19.8° - 10.2° | 1/1.8" | 16.2° - 8.3° |
| | V | 1.1" | 35.6° - 6.3° | 1" | 25.7° - 4.5° | 2/3" | 22.8° - 4.0° | 1" | 21.6° - 11.1° | 2/3" | 14.9° - 7.7° | 1/1.8" | 12.2° - 6.3° |
| Operating Temperature | -20°C - +60°C | | | | -20°C - +60°C | | | | -20°C - +60°C | | | | |

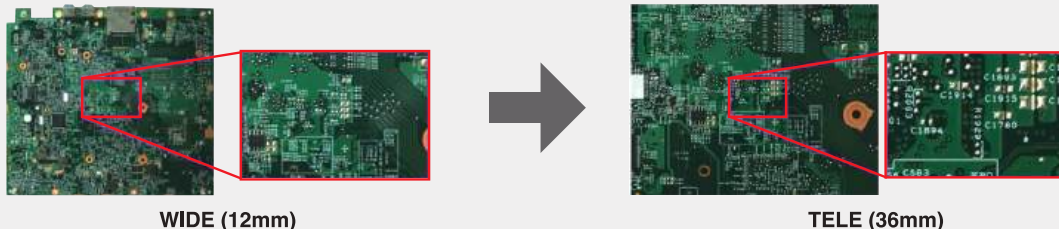
| Back Focal Length | WIDE | 13.9mm (In Air) | | | | 15.0 mm (in Air) | | | | 16.4 mm (In Air) | | | |
|--------------------|-------------------|-----------------|--|--|-------------------|------------------|--|--|-------------------|------------------|--|--|--|
| | TELE | 13.9mm (In Air) | | | | 16.2 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



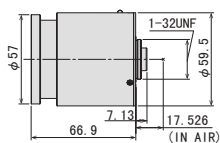
ML3Z1226SC-MPW



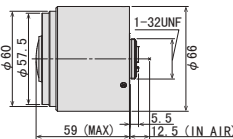
WIDE (12mm)

TELE (36mm)

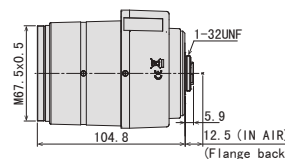
ML2Z0525UC-MPWIR



EL3Z0416UCS-MPWIR



EL6Z0915UCS-MPWIR



| Focal Length | | 5.5mm - 12.7mm | | | | | 4.0mm - 10mm | | | | | 9mm - 50mm | | | | | | | |
|-----------------------|-------|---|-------------------|--------|------------------|------|---|--------|-------------------|------|-------------------|---|------------------|--------|------------------|------|-----------------|------|-----------------|
| Max. Image Format | | ϕ 11.8mm | | | | | 7.1mm \times 5.4mm (ϕ 8.9mm) | | | | | 7.1mm \times 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

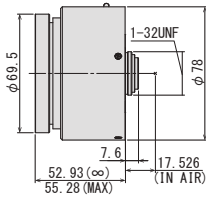
USB VL-MPZ Series

LensConnect USB VL-MPZ Series

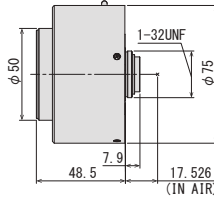


| Model No. | Format | Focal Length | F No. | Working Distance | Weight |
|-------------|--------|--------------|-------|------------------|--------|
| VL0826U-MPZ | 1" | 8mm | F2.6 | 0.1m-Inf. | 334g |
| VL1226U-MPZ | | 12mm | F2.6 | 0.1m-Inf. | 273g |
| VL1624U-MPZ | | 16mm | F2.4 | 0.1m-Inf. | 280g |
| 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 |

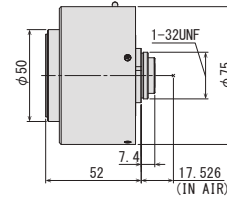
VL0826U-MPZ



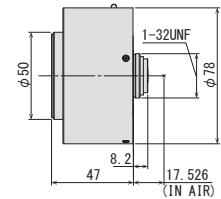
VL1226U-MPZ



VL1624U-MPZ



VL2520U-MPZ



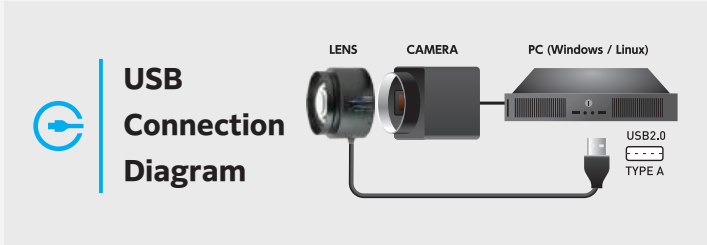
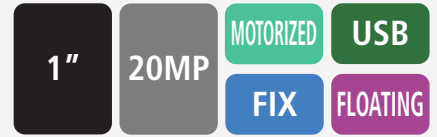
| Focal Length | 8mm | 12mm | 16mm | 25mm |
|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Max. Aperture Ratio | 1:2.6 | 1:2.6 | 1:2.4 | 1:2.0 |
| Max. Image Format | 12.8mm × 9.6mm (φ 16mm) | 12.8mm × 9.6mm (φ 16mm) | 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 |
| | Focus | 0.1m - Inf. | 0.1m - Inf. | 0.1m - Inf. |
| Control | Iris | Motorized | Motorized | Motorized |
| | Focus | Motorized | Motorized | Motorized |
| Angle of View | D | 88.8° | 68.6° | 58.2° |
| | H | 76.9° | 57.1° | 47.8° |
| | V | 61.5° | 44.2° | 36.6° |
| Operating Temperature | -10° C - +50° C | | | -10° C - +50° C |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|-----------------------------|-------|------|-------|--------|-------|-------------------|------|------|-------|--------|-------|-------------------|------|------|-------|--------|-------|-------------------|------|------|------|--------|------|
| Optical Distortion | 1" | -0.8% | 2/3" | -2.1% | 1/1.8" | -1.9% | 1" | 0.0% | 2/3" | -1.1% | 1/1.8" | -1.0% | 1" | 0.0% | 2/3" | -0.4% | 1/1.8" | -0.4% | 1" | 0.0% | 2/3" | 0.0% | 1/1.8" | 0.0% |
| Back Focal Length | 10.6mm (In Air) | | | | | | 10.6mm (In Air) | | | | | | 10.7mm (In Air) | | | | | | 9.1mm (In Air) | | | | | |
| Flange Back Length | 17.526mm (In Air) | | | | | | 17.526mm (In Air) | | | | | | 17.526mm (In Air) | | | | | | 17.526mm (In Air) | | | | | |
| Mount | C-Mount | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | |

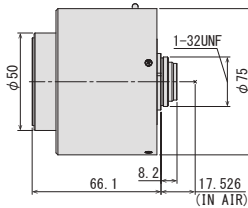
| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------|---------------------|--|--|--|--|--|--------|--|--|--|--|--|--------|--|--|--|--|--|--------|--|--|--|--|--|
| Control Interface | USB2.0 | | | | | | USB2.0 | | | | | | USB2.0 | | | | | | USB2.0 | | | | | |
| Power mode | Bus power(5V:500mA)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

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

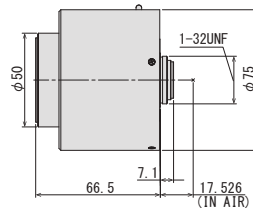
- Motorized FA lens that can be operated easily with a single USB cable
- Focus and Iris can be controlled via USB
- Ultra-high resolution lens, suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest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



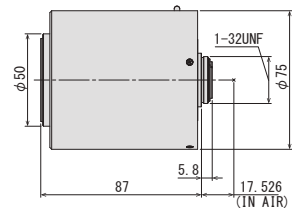
VL3522U-MPZ



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 | 1" 20.8° | | 2/3" 14.4° | | 1/1.8" 11.8° | | 1" 14.6° | | 2/3" 10.1° | | 1/1.8" 8.3° | | 1" 9.8° | | 2/3" 6.7° | | 1/1.8" 5.5° | |
| | V | 1" 15.7° | | 2/3" 10.8° | | 1/1.8" 8.9° | | 1" 11.0° | | 2/3" 7.6° | | 1/1.8" 6.2° | | 1" 7.3° | | 2/3" 5.0° | | 1/1.8" 4.1° | |
| Operating Temperature | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | | |

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

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

NEW LensConnect

I²C ITS Series

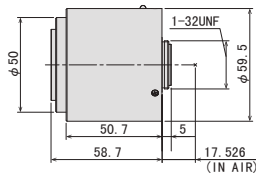
LensConnect I²C ITS Series



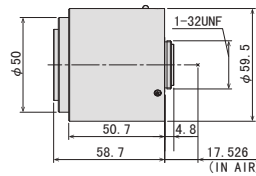
- Motorized lenses controllable via the I²C interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Ultra-high-resolution fixed-focal-length lenses supporting 1/1.1" 12-megapixel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

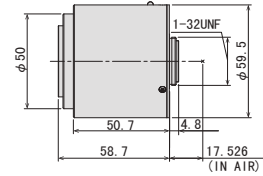
VL2028SM6C-MPYIR



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 | 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 ITS Series

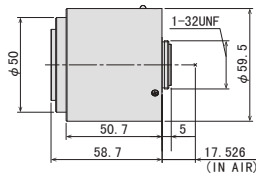
LensConnect USB ITS Series



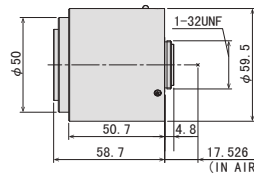
- Motorized lenses controllable via the USB interface
- Motorized lenses that can be easily operated from compatible cameras, enabling remote control of focus and iris
- Focus control through a high-speed and stable interface
- Ultra-high-resolution fixed-focal-length lenses supporting 1/1.1" 12-megapixel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

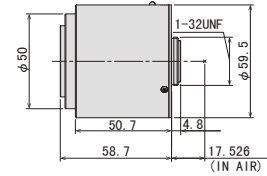
VL2028UM6C-MPYIR



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 | | | | | |

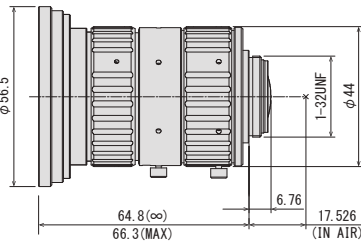


MPT Series

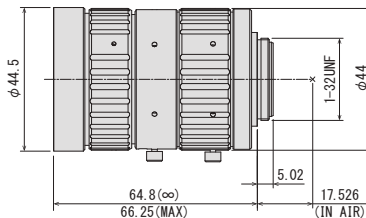
1.4" 50 MEGAPIXEL FIXED FOCAL LENS

| 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 |

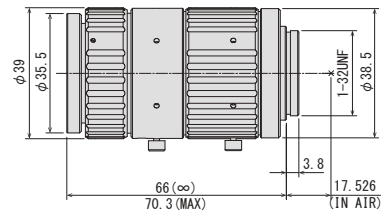
F1228-MPT



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

*When using filters, lens requires TM-1243 (for 12mm) (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)

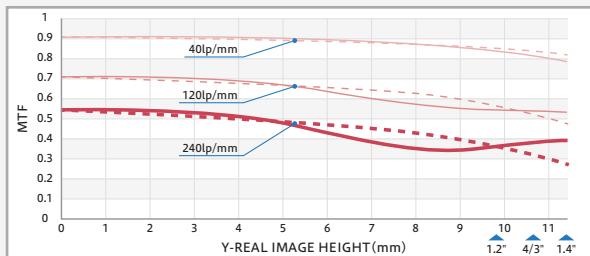
1.4"

50MP

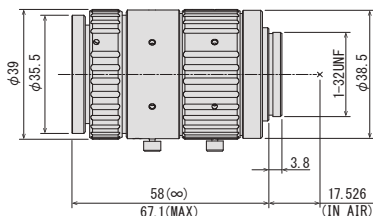
MANUAL

FIX

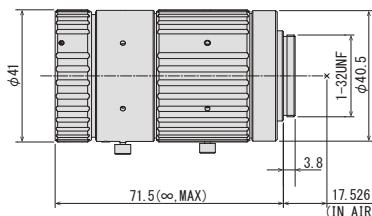
FLOATING



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 | 1.4" | 36.6° | 1.2" | 30.9° | 1.1" | 28.3° | 1.4" | 26.1° | 1.2" | 21.9° | 1.1" | 20.0° |
| | H | 1.4" | 30.6° | 1.2" | 23.6° | 1.1" | 23.0° | 1.4" | 21.7° | 1.2" | 16.7° | 1.1" | 16.2° |
| | V | 1.4" | 21.1° | 1.2" | 20.5° | 1.1" | 16.9° | 1.4" | 14.9° | 1.2" | 14.4° | 1.1" | 11.9° |
| Operating Temperature | -10°C - +50°C | | | | | | -10°C - +50°C | | | | | | |
| Optical Distortion | 1.4" | 0.01% | 1.2" | -0.05% | 1.1" | -0.06% | 1.4" | -0.02% | 1.2" | -0.03% | 1.1" | -0.03% | |
| Back Focal Length | 23.1mm | | | | | | 14.2mm | | | | | | |
| Flange Back Length | 17.526mm | | | | | | 17.526mm | | | | | | |
| Mount | C-Mount | | | | | | C-Mount | | | | | | |
| Filter Size | M34 P=0.5mm | | | | | | M30.5 P=0.5mm | | | | | | |
| Dimensions | φ39mm × 58mm | | | | | | φ41mm × 71.5mm | | | | | | |
| Weight | 122g | | | | | | 151g | | | | | | |

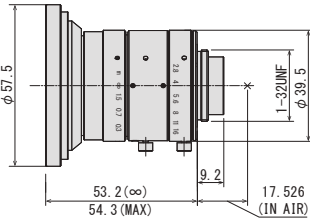


MPY Series

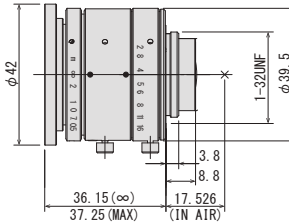
1.1" 24 MEGAPIXEL FIXED FOCAL LENS

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

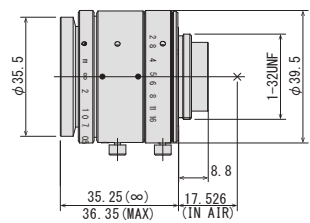
V0828-MPY2



V1228-MPY2



V1628-MPY2

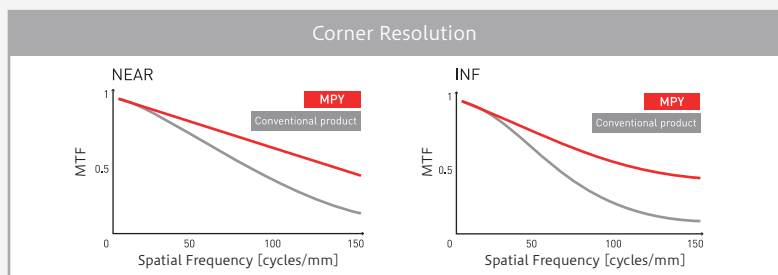


| Focal Length | 8mm | | | | | 12mm | | | | | 16mm | | | | | | | |
|-----------------------|--|-------|-------|-------|------|----------------------------|-------|-------|------|-------|----------------------------|-------|------|-------|----|-------|------|-------|
| Max. Aperture Ratio | 1:2.8 | | | | | 1:2.8 | | | | | 1:2.8 | | | | | | | |
| Max. Image Format | 14.2mm × 10.4mm (φ 17.6mm) | | | | | 14.2mm × 10.4mm (φ 17.6mm) | | | | | 14.2mm × 10.4mm (φ 17.6mm) | | | | | | | |
| Operation Range | Iris F2.8 - F16.0 | | | | | Iris F2.8 - F16.0 | | | | | Iris F2.8 - F16.0 | | | | | | | |
| | Focus 0.2m - Inf. | | | | | Focus 0.3m - Inf. | | | | | Focus 0.3m - Inf. | | | | | | | |
| Control | Iris Manual | | | | | Iris Manual | | | | | Iris Manual | | | | | | | |
| | Focus Manual | | | | | Focus Manual | | | | | Focus Manual | | | | | | | |
| Angle of View | D | 93.9° | 89.3° | 69.0° | | 71.1° | 66.4° | 48.6° | | 57.9° | 53.4° | 38.2° | | | | | | |
| | H | 83.0° | 77.3° | 57.3° | 1.1" | 60.5° | 55.5° | 39.6° | 1.1" | 48.2° | 43.9° | 30.9° | 1" | | | | | |
| | V | 66.0° | 61.7° | 44.2° | 2/3" | 46.2° | 42.9° | 30.1° | 2/3" | 36.2° | 33.6° | 23.4° | 2/3" | | | | | |
| Operating Temperature | -10° C - +50° C | | | | | -10° C - +50° C | | | | | -10° C - +50° C | | | | | | | |
| Optical Distortion | 1.1" | -0.6% | 1" | -1.7% | 2/3" | -2.8% | 1.1" | -0.5% | 1" | -1.0% | 2/3" | -1.4% | 1.1" | -0.5% | 1" | -0.6% | 2/3" | -0.6% |
| Back Focal Length | 8.6mm | | | | | 8.4mm | | | | | 9.4mm | | | | | | | |
| Flange Back Length | 17.526mm | | | | | 17.526mm | | | | | 17.526mm | | | | | | | |
| Mount | C-Mount | | | | | C-Mount | | | | | C-Mount | | | | | | | |
| Filter Size | M72 P=0.75mm (with VM0811)* M67 P=0.75mm (with VM0810)* | | | | | M40.5 P=0.5mm | | | | | M34.0 P=0.5mm | | | | | | | |
| Dimensions | φ75mm × 53.2mm | | | | | φ42.0mm × 36.1mm | | | | | φ39.5mm × 35.2mm | | | | | | | |
| Weight | 157g | | | | | 97g | | | | | 89g | | | | | | | |

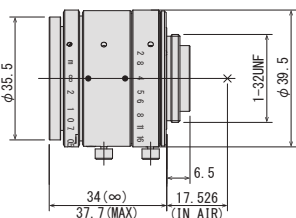
*There is no filter mount on the top of the lens.
When using filters, lens requires VM0811 or VM0810 (sold separately).
For more detail, please refer to P50.

1.1" 24 MEGAPIXEL FIXED FOCAL LENS

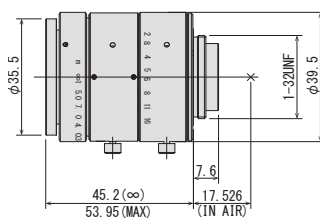
- Ultra-high-resolution lens, suitable for 1.1" 24 megapixel sensor
- Enlarged image circle up to $\varnothing 17.6\text{mm}$ (1.1" sensor)
- The most compact, lightweight lens design on the machine vision market
- The floating design achieves an ultra-high-resolution from near focus to infinity
- Supports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



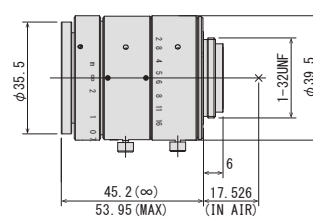
V2528-MPY



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

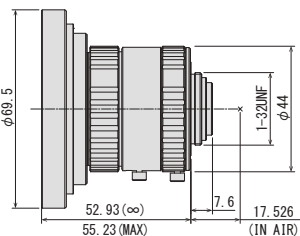


MPZ Series

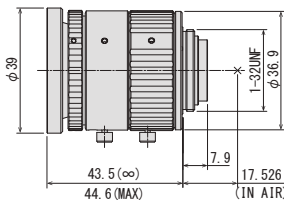
1" 20 MEGA PIXEL FIXED FOCAL LENS

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

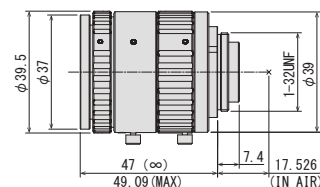
V0826-MPZ



V1226-MPZ



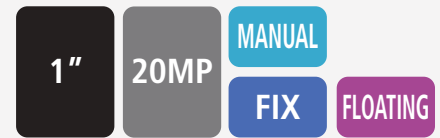
V1624-MPZ



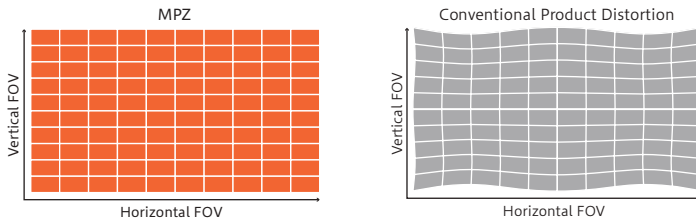
| Focal Length | 8mm | | | | | | 12mm | | | | | | 16mm | | | | | |
|-----------------------|----------------------------------|-------|------|-------|--------|-------|-------------------------|-------|------|-------|--------|-------|-------------------------|-------|------|-------|--------|-------|
| Max. Aperture Ratio | 1:2.6 | | | | | | 1:2.6 | | | | | | 1:2.4 | | | | | |
| Max. Image Format | 12.8mm × 9.6mm (φ 16mm) | | | | | | 12.8mm × 9.6mm (φ 16mm) | | | | | | 12.8mm × 9.6mm (φ 16mm) | | | | | |
| Operation Range | Iris F2.6 - F16.0 | | | | | | Iris F2.6 - F16.0 | | | | | | Iris F2.4 - F16.0 | | | | | |
| | Focus 0.1m - Inf. | | | | | | Focus 0.1m - Inf. | | | | | | Focus 0.1m - Inf. | | | | | |
| Control | Iris Manual | | | | | | Iris Manual | | | | | | Iris Manual | | | | | |
| | Focus Manual | | | | | | Focus Manual | | | | | | Focus Manual | | | | | |
| Angle of View | D | 88.8° | | 68.6° | | 58.2° | D | 67.4° | | 49.8° | | 41.5° | D | 53.2° | | 38.1° | | 31.6° |
| | H | 76.9° | 2/3" | 57.1° | 1/1.8" | 47.8° | H | 56.7° | 2/3" | 40.7° | 1/1.8" | 33.7° | H | 43.8° | 2/3" | 30.9° | 1/1.8" | 25.5° |
| | V | 61.5° | | 44.2° | | 36.6° | V | 44.1° | | 31.0° | | 25.5° | V | 33.6° | | 23.4° | | 19.2° |
| Operating Temperature | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | | -10° C - +50° C | | | | | |
| Optical Distortion | 1" | -0.8% | 2/3" | -2.1% | 1/1.8" | -1.9% | 1" | 0.0% | 2/3" | -1.1% | 1/1.8" | -1.0% | 1" | 0.0% | 2/3" | -0.4% | 1/1.8" | -0.4% |
| Back Focal Length | 10.6mm | | | | | | 10.6mm | | | | | | 10.7mm | | | | | |
| Flange Back Length | 17.526mm | | | | | | 17.526mm | | | | | | 17.526mm | | | | | |
| Mount | C-Mount | | | | | | C-Mount | | | | | | C-Mount | | | | | |
| Filter Size | M82 P=0.75mm (with ZM0810)* | | | | | | M37.5 P=0.5mm | | | | | | M35.5 P=0.5mm | | | | | |
| Dimensions | φ 69.5mm × 52.93mm | | | | | | φ 39mm × 43.5mm | | | | | | φ 39.5mm × 47mm | | | | | |
| | φ 85.0mm × 53.83mm (with ZM0810) | | | | | | | | | | | | | | | | | |
| Weight | 203g | | | | | | 98g | | | | | | 108g | | | | | |

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

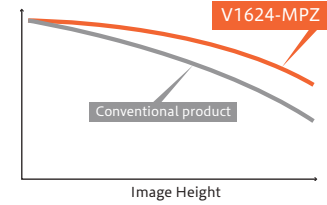
- Ultra-high resolution lens, which is suitable for 1" 20 megapixel sensor
- Much lower distortion design for all models is beneficial for a variety of machine vision applications
- Has the newest optical design, which has a much higher relative illuminance compared to conventional models, despite having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



Distortion Comparison



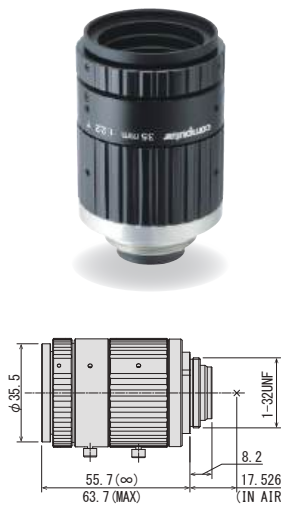
V1624-MPZ Relative Illumination



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 | | | | Iris | F2.2 - F16.0 | | | | Iris | F2.4 - F16.0 | | | | Iris | F3.1 - F16.0 | | | |
| | Focus | 0.15m - Inf. | | | | Focus | 0.2m - Inf. | | | | Focus | 0.2m - Inf. | | | | Focus | 0.25m - Inf. | | | |
| Control | Iris | Manual | | | | Iris | Manual | | | | Iris | Manual | | | | Iris | Manual | | | |
| | Focus | Manual | | | | Focus | Manual | | | | Focus | Manual | | | | Focus | Manual | | | |
| Angle of View | D | 35.5° | 24.9° | 20.5° | | 25.8° | 17.9° | 14.7° | | 18.2° | 12.6° | 10.3° | | 12.2° | 8.4° | 6.9° | | | | |
| | H | 28.8° | 20.0° | 16.4° | 1" 1/1.8" | 20.8° | 14.4° | 11.8° | 1" 2/3" | 14.6° | 10.1° | 8.3° | 1" 1/1.8" | 9.8° | 6.7° | 5.5° | 1" 1/1.8" | | | |
| | 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 | | | | | | | | |

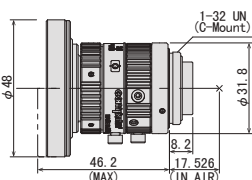


MPX Series

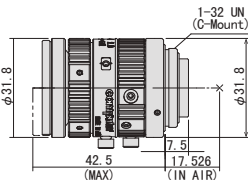
2/3" 16MEGAPIXEL FIXED FOCAL LENS

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

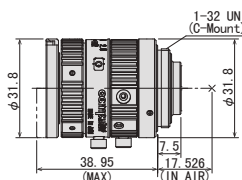
NEW M0528-MPX



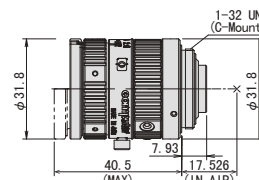
M0828-MPX



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° | 40.2° | 67.5° | 52.0° | 40.2° | 28.1° | 49.2° | 36.9° | 28.1° | 21.3° | 37.9° | 28.1° | 21.3° | 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° | 2/3" 30.8° | 1/2" 22.7° | 1/3" 17.1° | 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° | 23.4° | 17.1° | 12.9° | 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

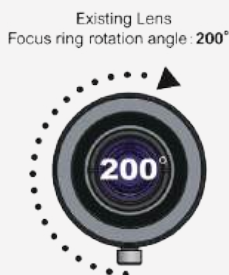
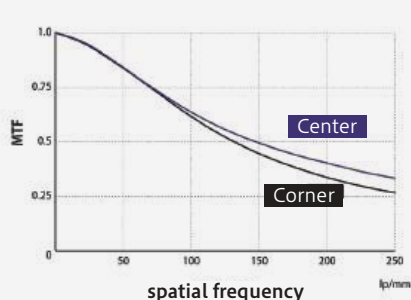
2/3"

16MP

MANUAL

FIX

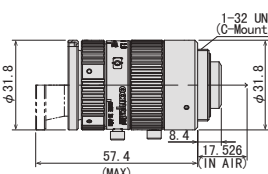
FLOATING



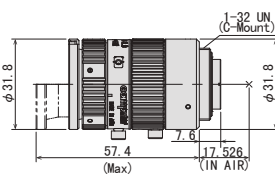
3x wider rotation angle!
Easy focus adjustment



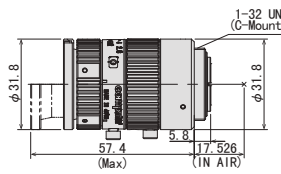
M2528-MPX



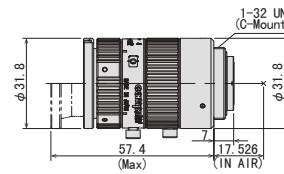
M3528-MPX



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° | | 2/3" | 10.8° | 1/2" | 7.8° | 1/3" | 5.9° | | 2/3" | 7.5° | 1/2" | 5.5° | 1/3" | 4.1° | | 2/3" | 5.2° | 1/2" | 3.8° | 1/3" | 2.8° |
| Operating Temperature | -10°C - +50°C | | | | | -10°C - +50°C | | | | | -10°C - +50°C | | | | | -10°C - +50°C | | | | | | | | | | | | |

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

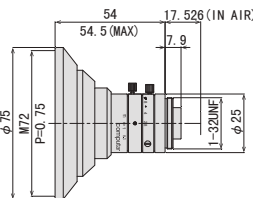


MPW3 Series

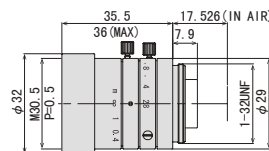
2/3" 6 MEGAPIXEL FIXED FOCAL LENS

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

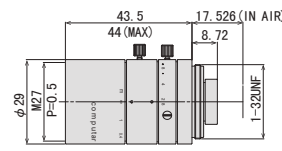
M0528-MPW3



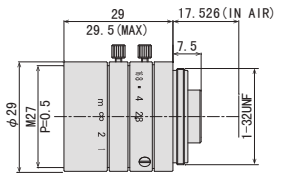
M0828-MPW3



M1228-MPW3



M1628-MPW3



| Focal Length | 5mm | | | | | 8mm | | | | | 12mm | | | | | 16mm | | | | |
|-----------------------|------------------------|------------|--------------|--------------|--|------------------------|--------------|--------------|--|------------|------------------------|--------------|--|------------|--------------|------------------------|--|--|--|--|
| Max. Aperture Ratio | 1:2.8 | | | | | 1:2.8 | | | | | 1:2.8 | | | | | 1:2.8 | | | | |
| Max. Image Format | 8.8mm × 6.6mm (φ 11mm) | | | | | 8.8mm × 6.6mm (φ 11mm) | | | | | 8.8mm × 6.6mm (φ 11mm) | | | | | 8.8mm × 6.6mm (φ 11mm) | | | | |
| Operation Range | Iris F2.8 - F16.0 | | | | | F2.8 - F16.0 | | | | | F2.8 - F16.0 | | | | | F2.8 - F16.0 | | | | |
| | Focus 0.1m - Inf. | | | | | 0.1m - Inf. | | | | | 0.1m - Inf. | | | | | 0.25m - Inf. | | | | |
| Control | Iris Manual | | | | | Manual | | | | | Manual | | | | | Manual | | | | |
| | Focus Manual | | | | | Manual | | | | | Manual | | | | | Manual | | | | |
| Angle of View | D | 94.6° | 83.8° | 71.4° | | 68.5° | 57.7° | 47.2° | | 49.3° | 40.8° | 33.0° | | 37.8° | 31.4° | 25.0° | | | | |
| | H | 2/3" 83.2° | 1/1.8" 71.6° | 1/2.5" 59.8° | | 2/3" 57.0° | 1/1.8" 47.3° | 1/2.5" 38.5° | | 2/3" 40.3° | 1/1.8" 33.1° | 1/2.5" 26.7° | | 2/3" 30.7° | 1/1.8" 25.3° | 1/2.5" 20.2° | | | | |
| | V | 67.5° | 58.3° | 46.6° | | 44.2° | 37.5° | 29.4° | | 30.8° | 26.0° | 20.3° | | 23.3° | 19.2° | 15.3° | | | | |
| Operating Temperature | -10°C - +50°C | | | | | -10°C - +50°C | | | | | -10°C - +50°C | | | | | -10°C - +50°C | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|---------------|-------|--------|--------|--------|-----------------|------|--------|--------|--------|-----------------|--------|------|--------|--------|---------------|--------|-------|------|-------|--------|-------|--------|-------|
| Optical Distortion | 2/3" | 0.03% | 1/1.8" | -2.14% | 1/2.5" | -2.72% | 2/3" | -1.80% | 1/1.8" | -1.68% | 1/2.5" | -1.28% | 2/3" | -0.10% | 1/1.8" | 0.04% | 1/2.5" | 0.00% | 2/3" | 0.47% | 1/1.8" | 0.15% | 1/2.5" | 0.03% |
| Back Focal Length | 9.2mm | | | | | 10.1mm | | | | | 9.2mm | | | | | 10.3mm | | | | | | | | |
| Flange Back Length | 17.526mm | | | | | 17.526mm | | | | | 17.526mm | | | | | 17.526mm | | | | | | | | |
| Mount | C-Mount | | | | | C-Mount | | | | | C-Mount | | | | | C-Mount | | | | | | | | |
| Filter Size | M72 P=0.75mm | | | | | M30.5 P=0.5mm | | | | | M27 P=0.5mm | | | | | M27 P=0.5mm | | | | | | | | |
| Dimensions | φ 75mm × 54mm | | | | | φ 32mm × 35.5mm | | | | | φ 29mm × 43.5mm | | | | | φ 29mm × 29mm | | | | | | | | |
| Weight | 163g | | | | | 58g | | | | | 60g | | | | | 37g | | | | | | | | |

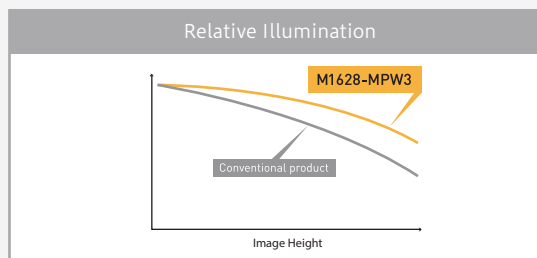
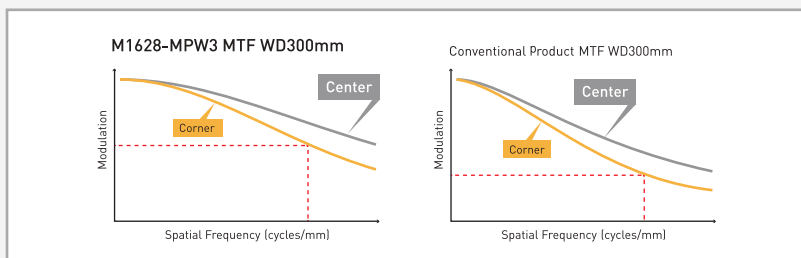
- Suitable for 2/3" 6 megapixel
- A variety of focal lengths from 5mm to 75mm
- Maintains high performance at long WD
- Has an ultra-compact Ø29 diameter with a nearly-identical mechanical length
- High resolution up to the edges of the screen
- Vibration resistance up to 5G

2/3"

6MP

MANUAL

FIX



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

| Focal Length | 25mm | 35mm | 50mm | 75mm |
|-----------------------|-------------------------|------------|---------------|--------------|
| Max. Aperture Ratio | 1:2.8 | 1:2.8 | 1:2.8 | 1:2.8 |
| Max. Image Format | 8.8mm × 6.6mm (φ 11mm) | | | |
| Operation Range | Iris F2.8 - F16.0 | | | |
| | Focus 0.2m - Inf. | | | |
| Control | Iris Manual | | | |
| | Focus Manual | | | |
| Angle of View | D | 24.6° | 20.3° | 16.1° |
| | H | 2/3" 19.9° | 1/1.8" 16.3° | 1/2.5" 13.0° |
| | V | 15.0° | 12.3° | 9.8° |
| Operating Temperature | -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 | | |

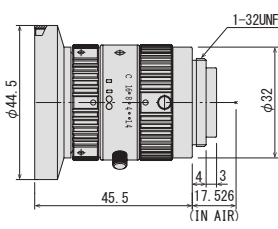


MP2 Series

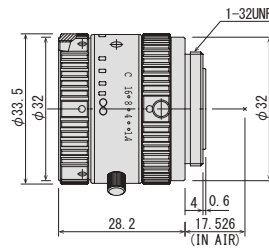
2/3" 1.5 MEGA PIXEL FIXED FOCAL LENS

| 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 |

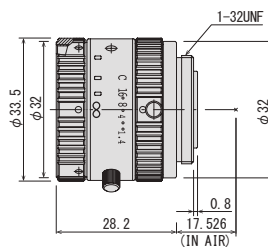
H0514-MP2



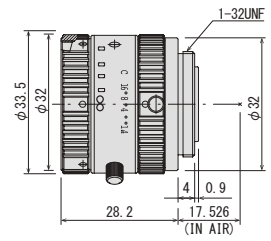
M0814-MP2



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 | 76.7° | | 62.3° | | 67.1° | | 51.9° | | 49.2° | | 37.0° | | 38.0° | | 28.2° | |
| | H | 1/2" 65.5° | | 1/3" 51.4° | | 2/3" 56.3° | | 1/2" 42.5° | | 2/3" 40.4° | | 1/2" 30.0° | | 2/3" 30.8° | | 1/2" 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)

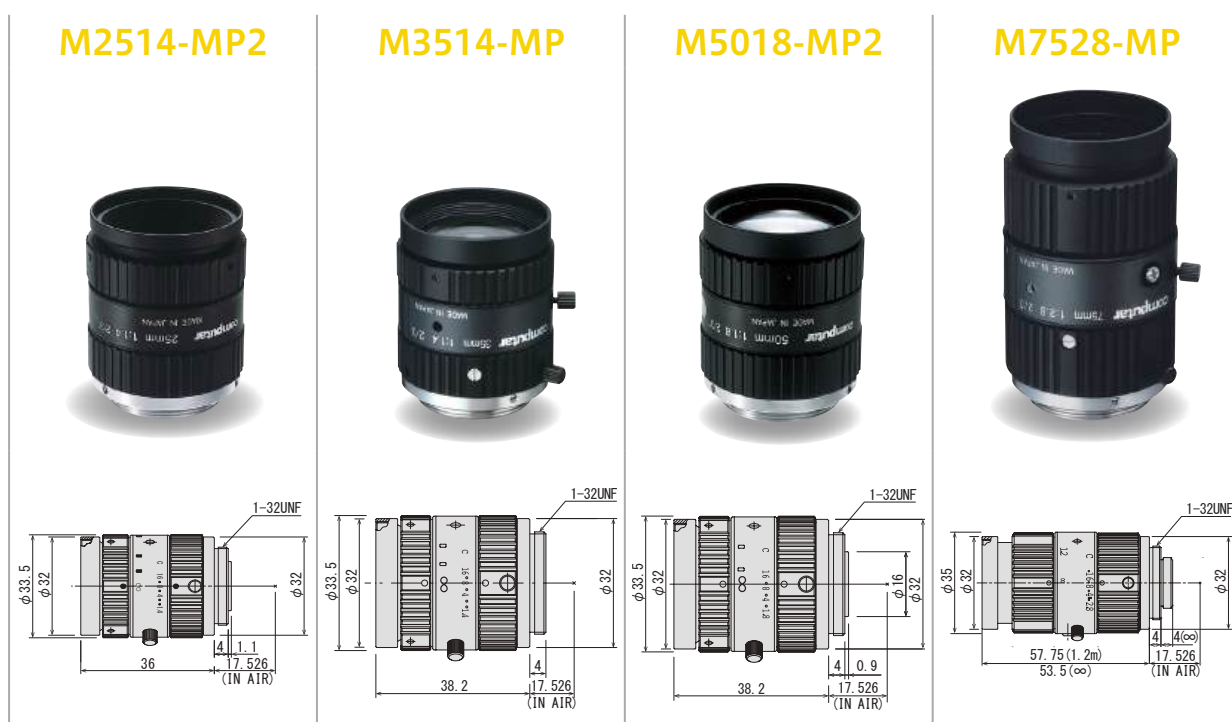
1/2"

1.5MP

MANUAL

2/3"

FIX



| Focal Length | 25mm | | | | 35mm | | | | 50mm | | | | 75mm | | | | |
|-----------------------|------------------------|------------|------|------------|------------------------|------------|------|------------|------------------------|------------|------|-----------|------------------------|-----------|------|-----------|--|
| Max. Aperture Ratio | 1:1.4 | | | | 1:1.4 | | | | 1:1.8 | | | | 1:2.8 | | | | |
| Max. Image Format | 8.8mm × 6.6mm (φ 11mm) | | | | 8.8mm × 6.6mm (φ 11mm) | | | | 8.8mm × 6.6mm (φ 11mm) | | | | 8.8mm × 6.6mm (φ 11mm) | | | | |
| Operation Range | Iris F1.4 - F16C | | | | Iris F1.4 - F16C | | | | Iris F1.8 - F16C | | | | Iris F2.8 - F16C | | | | |
| | Focus 0.3m - Inf. | | | | Focus 0.3m - Inf. | | | | Focus 0.5m - Inf. | | | | Focus 0.3m - Inf. (※) | | | | |
| Control | Iris Manual | | | | Iris Manual | | | | Iris Manual | | | | Iris Manual | | | | |
| | Focus Manual | | | | Focus Manual | | | | Focus Manual | | | | Focus Manual | | | | |
| Angle of View | D | 24.9° | | 18.2° | | 17.3° | | 12.6° | | 13.1° | | 9.5° | | 8.5° | | 6.2° | |
| | H | 2/3" 20.0° | | 1/2" 14.6° | | 2/3" 13.9° | | 1/2" 10.1° | | 2/3" 10.5° | | 1/2" 7.6° | | 2/3" 6.8° | | 1/2" 5.0° | |
| | V | 15.1° | | 11.0° | | 10.4° | | 7.6° | | 7.9° | | 5.7° | | 5.1° | | 3.7° | |
| Operating Temperature | -10° C - +50° C | | | | -10° C - +50° C | | | | -10° C - +50° C | | | | -10° C - +50° C | | | | |
| Optical Distortion | 2/3" | -0.3% | 1/2" | -0.1% | 2/3" | -0.8% | 1/2" | -0.4% | 2/3" | -0.3% | 1/2" | -0.2% | 2/3" | -0.4% | 1/2" | -0.2% | |
| Back Focal Length | 13.1mm | | | | 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

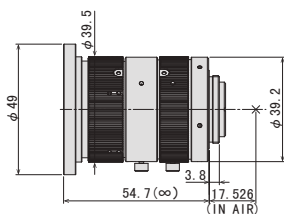


VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

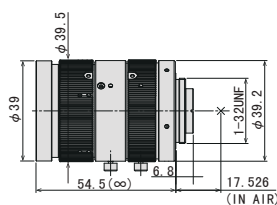
- Dedicated design for next generation Visible+SWIR InGaAs image sensor (IMX992/IMX993)
- Hyper-Apochromat design with fully correct focus shift between 400-1700nm
- Floating-focus mechanism realizes axial chromatic aberration and chromatic aberration of magnification at all WD and wavelengths
- High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

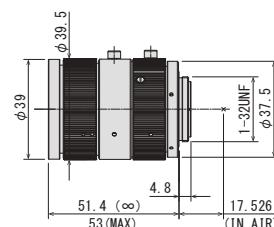
M0818-APVSW2



M1218-APVSW3



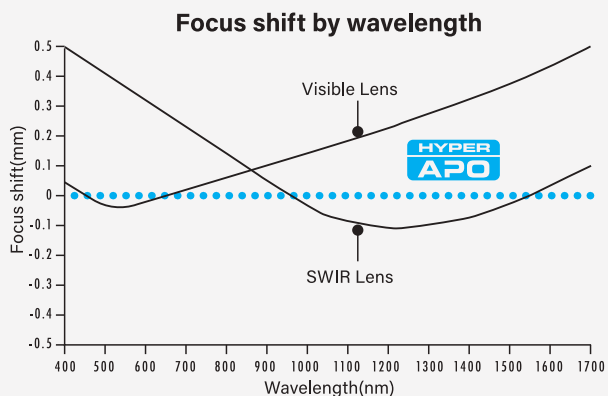
M1618-APVSW2



| 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 | | | | | | | | Iris F1.8 - F16.0 | | | | | | | | Iris F1.8 - F16.0 | | | | | | | | |
| | Focus 0.1m - Inf. | | | | | | | | Focus 0.1m - Inf. | | | | | | | | Focus 0.1m - Inf. | | | | | | | | |
| Control | Iris Manual | | | | | | | | Iris Manual | | | | | | | | Iris Manual | | | | | | | | |
| | Focus Manual | | | | | | | | Focus Manual | | | | | | | | Focus Manual | | | | | | | | |
| Angle of View | D | | 68.7° | | 56.6° | | 53.2° | | 28.1° | | 50.5° | | 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

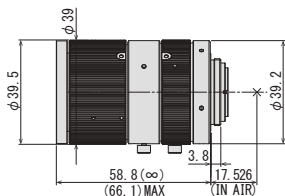


Ultra-high resolution from 400 nm visible light to 1700 nm near infrared with no focus shift.

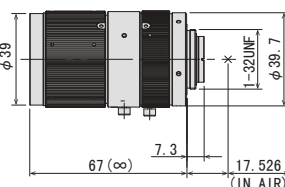
1/1.4" (2/3") 5MP Visible + SWIR MANUAL Apochromat FIX FLOATING



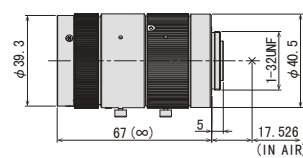
M2518-APVSW2



M3518-APVSW



M5018-APVSW



| | | | | | | | | | | | | | |
|-----------------------|-----------------|--------------|--------------|------------|-----------------|--------------|--------------|------------|-----------------|--------------|-------------|-----------|-----------|
| Focal Length | 25mm | | | | 35mm | | | | 50mm | | | | |
| Max. Aperture Ratio | 1:1.8 | | | | 1:1.8 | | | | 1:1.8 | | | | |
| Max. Image Format | φ 11.4mm | | | | φ 11.4mm | | | | φ 11.4mm | | | | |
| Wavelength Range | 400nm - 1700nm | | | | 400nm - 1700nm | | | | 400nm - 1700nm | | | | |
| Operation Range | Iris | F1.8 - F16.0 | | | Iris | F1.8 - F16.0 | | | Iris | F1.8 - F16.0 | | | |
| | Focus | 0.1m - Inf. | | | Focus | 0.15m - Inf. | | | Focus | 0.2m - Inf. | | | |
| Control | Iris | Manual | | | Iris | Manual | | | Iris | Manual | | | |
| | Focus | Manual | | | Focus | Manual | | | Focus | 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 | | | |

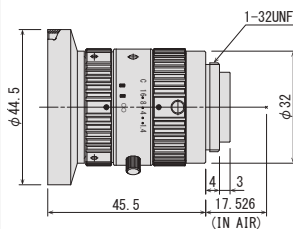


VISIR Lite

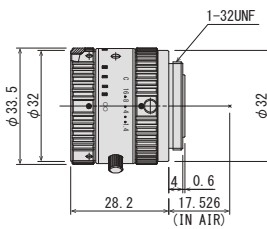
VISIBLE + SWIR IMAGE SENSOR FIXED FOCAL LENS

| Model No. | Format | Focal Length | F-No. | Working Distance | Distortion | Weight |
|-----------|--------|--------------|-------|------------------|---------------|--------|
| H0514-VSW | 1/2" | 5mm | F1.4 | 0.1m - Inf. | -0.48%(y=4.0) | 102g |
| M0814-VSW | 2/3" | 8mm | | 0.1m - Inf. | -0.1%(y=5.5) | 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 |

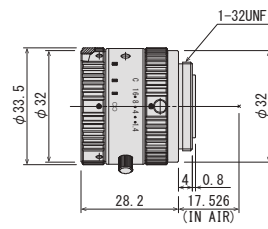
H0514-VSW



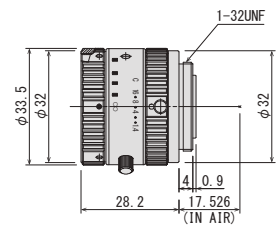
M0814-VSW



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 | | | Iris | F1.4 - F16C | | | Iris | F1.4 - F16C | | | Iris | F1.4 - F16C | | | | | | | | | | |
| | Focus | 0.1m - Inf. | | | Focus | 0.1m - Inf. | | | Focus | 0.15m - Inf. | | | Focus | 0.3m - Inf. | | | | | | | | | | |
| Control | Iris | Manual | | | Iris | Manual | | | Iris | Manual | | | Iris | Manual | | | | | | | | | | |
| | Focus | Manual | | | Focus | Manual | | | Focus | Manual | | | Focus | Manual | | | | | | | | | | |
| Angle of View | D | 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° | 49.2° | IMX990 | 28.8° | IMX991 | 14.6° | 38.0° | |
| | H | 6.40mm | 65.5° | 3.20mm | 35.3° | 1/2" | 65.5° | 6.40mm | 42.5° | 3.20mm | 21.9° | 2/3" | 56.3° | 6.40mm | 30.0° | 3.20mm | 15.2° | 40.4° | 6.40mm | 22.7° | 3.20mm | 11.4° | 2/3" | 30.8° |
| | V | 5.12mm | 54.5° | 2.56mm | 28.5° | 1/2" | 51.4° | 5.12mm | 34.5° | 2.56mm | 17.6° | 2/3" | 43.7° | 5.12mm | 24.1° | 2.56mm | 12.2° | 30.8° | 5.12mm | 18.2° | 2.56mm | 9.2° | 2/3" | 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"

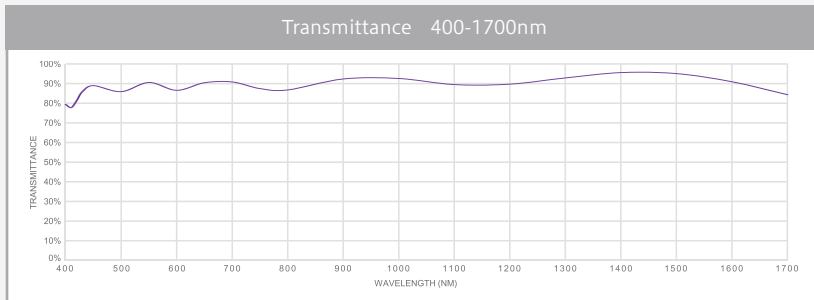
Visible
+SWIR

MANUAL

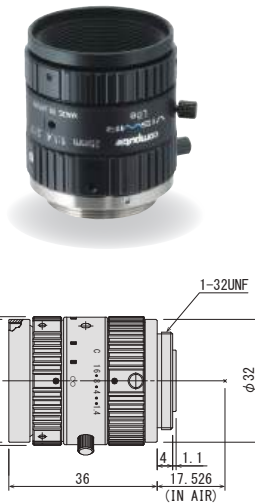
2/3"

Visible
+SWIR

FIX



M2514-VSW



M3514-VSW



M5018-VSW



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

NEW

I²C LensConnect VISWIR

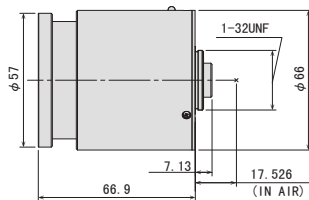
VISIBLE+SWIR IMAGE SENSOR LensConnect I²C Series



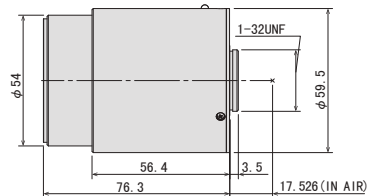
- Compatible with IMX992 / IMX993 / IMX990 / IMX991
- High transmittance from 400 nm to 1700 nm
- Field of view (FOV) can be adjusted depending on the application
- Optional: A filter switcher can be added inside the lens

| | | | |
|---------------|--------|------|------------------|
| Visible +SWIR | 1/1.4" | 5MP | I ² C |
| | | 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" | | | 1/1.8" | | | 1/2" | | | 1/4" | | | 1/1.4" | | | 1/1.8" | | | 1/2" | | | 1/4" | | |
| | H | 107.6°~50.9° | | | 86.0°~40.1° | | | 80.6°~37.5° | | | 41.2°~19.0° | | | 51.7°~18.0° | | | 41.1°~14.3° | | | 38.5°~13.3° | | | 19.5°~6.8° | | |
| | V | 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° | | |
| 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 VISIR

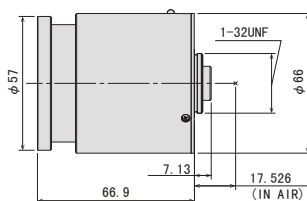
VISIBLE+SWIR IMAGE SENSOR LensConnect USB Series



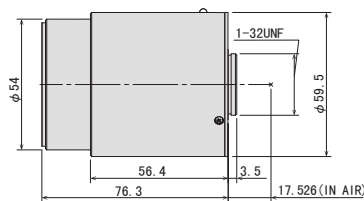
- Compatible with IMX992 / IMX993 / IMX990 / IMX991
- High transmittance from 400 nm to 1700 nm
- Field of view (FOV) can be adjusted depending on the application
- Optional: A filter switcher can be added inside the lens

| | | | |
|------------------|--------|------|-----------|
| 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 | 107.6°~50.9° | | | 86.0°~40.1° | | | 80.6°~37.5° | | | 41.2°~19.0° | | | 51.7°~18.0° | | | 41.1°~14.3° | | | 38.5°~13.3° | | | 19.5°~6.8° | | |
| | H | 1/1.4" 86.3°~40.2° | | | 1/1.8" 70.0°~32.4° | | | 1/2" 63.7°~29.4° | | | 1/4" 32.3°~14.8° | | | 1/1.4" 41.3°~14.3° | | | 1/1.8" 33.4°~11.6° | | | 1/2" 30.3°~10.5° | | | 1/4" 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 | | | | | | | | | | | | |



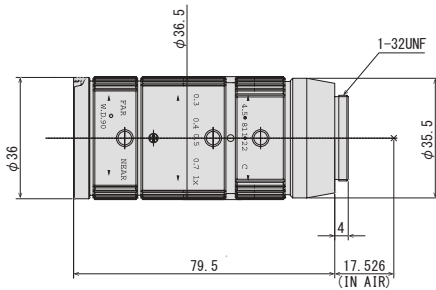
MACRO ZOOM LENS

- 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

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

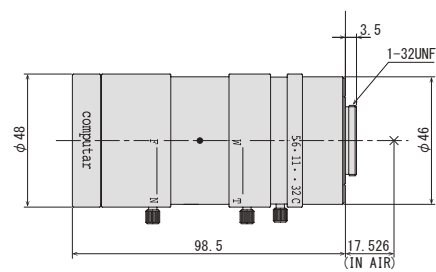
MLM-3XMP

2/3"
1MP



MLH-10X

1/2"



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

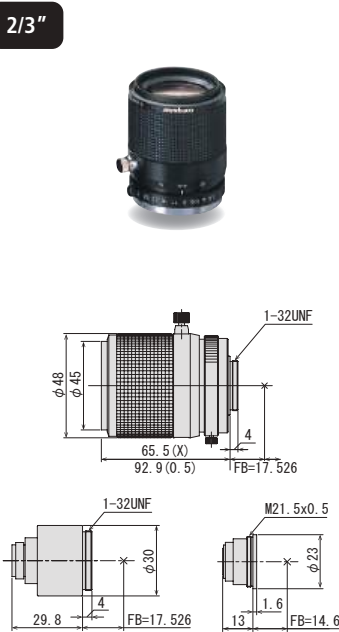
TELECENTRIC MACRO LENS



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

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

TEC-M55



TEC-M55MPW



TEC-V7X



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

| | | | | | | | | | | | | |
|--------------------|---------------------------------|--------------------------------|------|--------------------------------|-------------------|-----------------------------------|-----------------|-------|--------------|--------|------|-------|
| Optical Distortion | 2/3" | +0.2% at 0.2x +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 | | Wide 49.78mm | | | |
| Flange Back Length | 17.526mm | | | | 17.526mm | | 17.526mm | | | | | |
| Mount | C-Mount | | | | C-Mount | | C-Mount | | | | | |
| Filter Size | M43 P=0.75mm | | | | M46.0 P=0.75mm | | M62 P=0.75mm | | | | | |
| Dimensions | φ53.0mm × 92.9mm (Max. at 0.5x) | | | | φ 59.0mm × 93.1mm | | φ 61 × 152.86mm | | | | | |
| Weight | 320g | | | | 400g | | 1400g | | | | | |



TEC-V Series

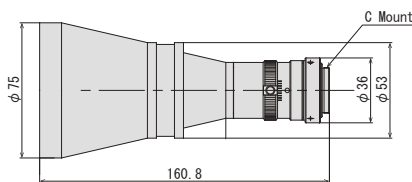
1.1" ,1" MEGAPIXEL TELECENTRIC LENS

- 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

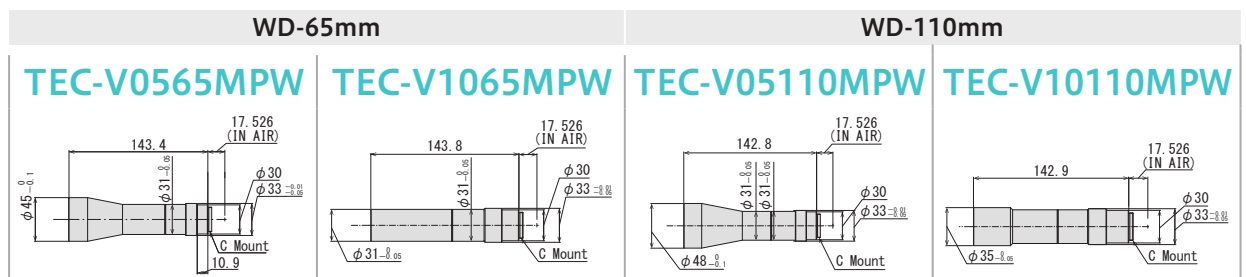
TEC-V0345165MPY-WI



| | |
|--------------------|----------------------------|
| 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-65mm | WD-110mm | 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% |

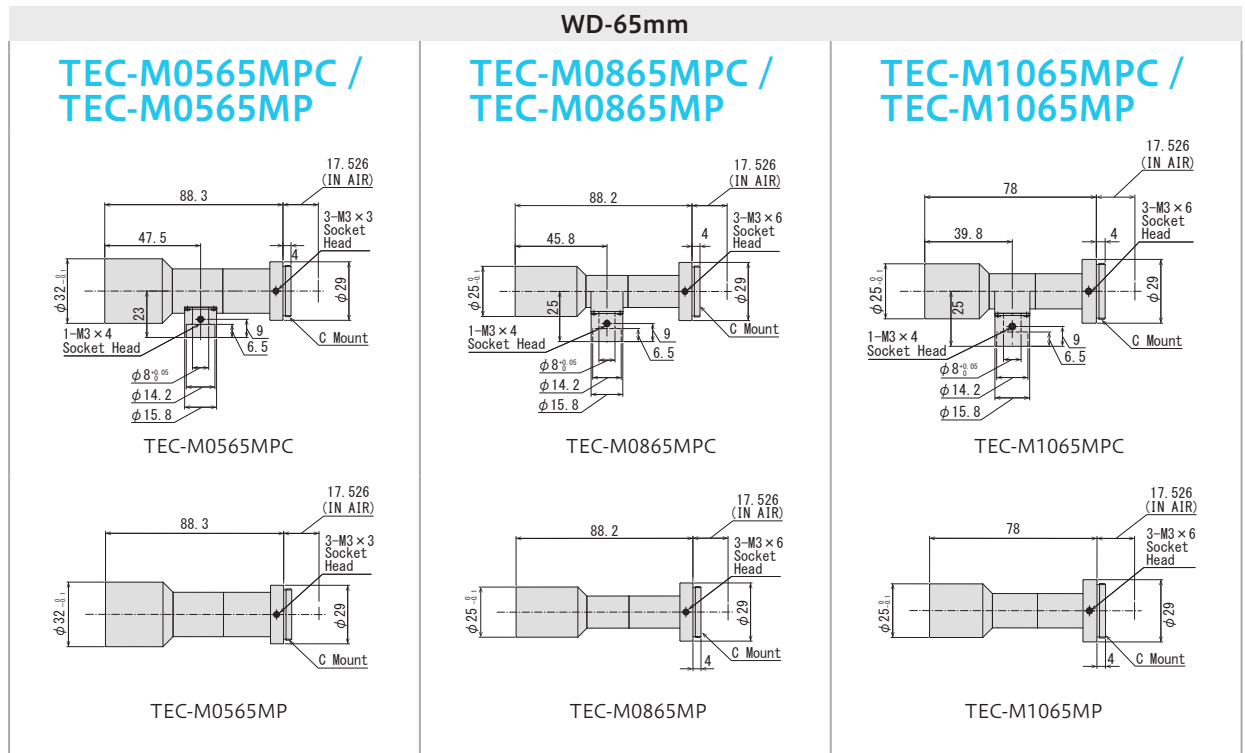
| | | | | |
|--------|---------|---------|---------|---------|
| Mount | C-Mount | C-Mount | C-Mount | C-Mount |
| Weight | 189g | 158g | 197g | 159g |

*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



| 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 |

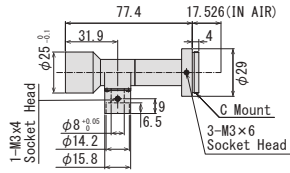
*1 : Theoretical resolution calculated with a wavelength of 550nm *2 : Value calculated with a permissible circle of confusion of 40μm

2/3" 2 MEGAPIXEL TELECENTRIC LENS

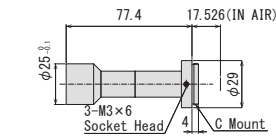
- Suitable for 2/3" 2MP sensor, WD65mm WD110mm

WD-65mm

TEC-M2065MPC / TEC-M2065MP

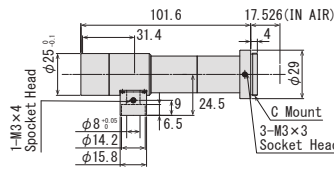


TEC-M2065MPC

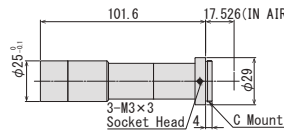


TEC-M2065MP

TEC-M4065MPC / TEC-M4065MP

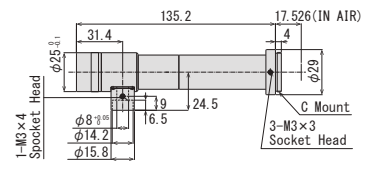


TEC-M4065MPC

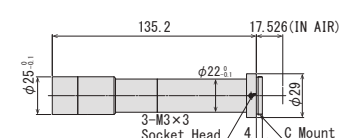


TEC-M4065MP

TEC-M6065MPC / TEC-M6065MP



TEC-M6065MPC



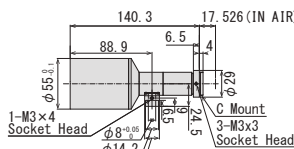
TEC-M6065MP

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

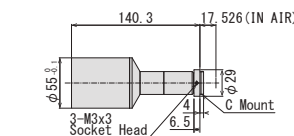
| | | | |
|----------------------------|---------|---------|---------|
| Mount | C-Mount | C-Mount | C-Mount |
| Weight (with coaxial type) | 55g | 85g | 100g |
| Weight (straight type) | 49g | 83g | 98g |

WD-110mm

TEC-M03110MPC / TEC-M03110MP

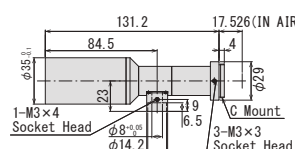


TEC-M03110MPC

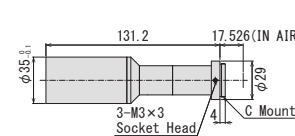


TEC-M03110MP

TEC-M05110MPC / TEC-M05110MP

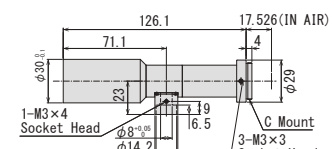


TEC-M05110MPC

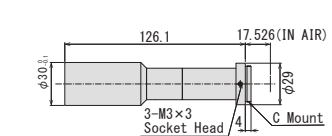


TEC-M05110MP

TEC-M08110MPC / TEC-M08110MP



TEC-M08110MPC



TEC-M08110MP

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

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

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

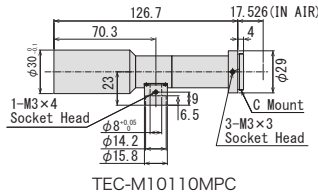
2/3"

2MP

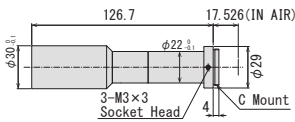
TELECCN

WD-110mm

TEC-M10110MPC / TEC-M10110MP

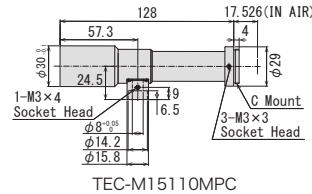


TEC-M10110MPC

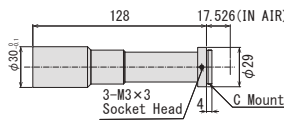


TEC-M10110MP

TEC-M15110MPC / TEC-M15110MP

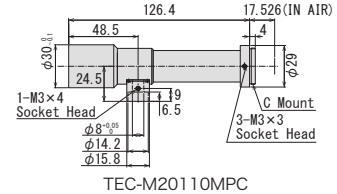


TEC-M15110MPC

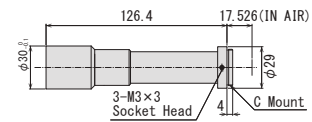


TEC-M15110MP

TEC-M20110MPC / TEC-M20110MP



TEC-M20110MPC



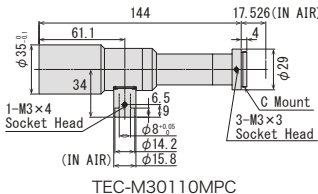
TEC-M20110MP

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

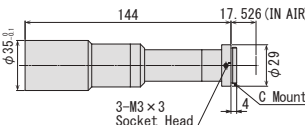
| | | | |
|----------------------------|---------|---------|---------|
| Mount | C-Mount | C-Mount | C-Mount |
| Weight (with coaxial type) | 108g | 110g | 115g |
| Weight (straight type) | 105g | 108g | 113g |

WD-110mm

TEC-M30110MPC / TEC-M30110MP

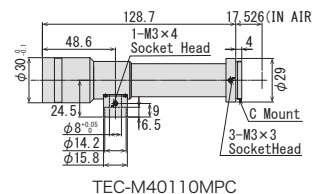


TEC-M30110MPC

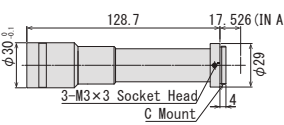


TEC-M30110MP

TEC-M40110MPC / TEC-M40110MP

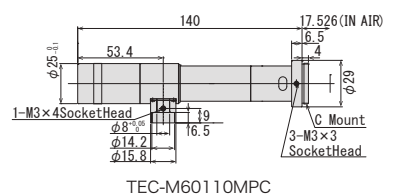


TEC-M40110MPC

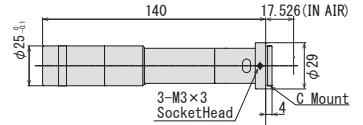


TEC-M40110MP

TEC-M60110MPC / TEC-M60110MP



TEC-M60110MPC



TEC-M60110MP

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

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

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

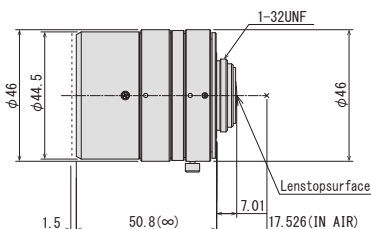


MPYIR Series

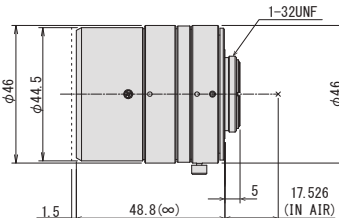
1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

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

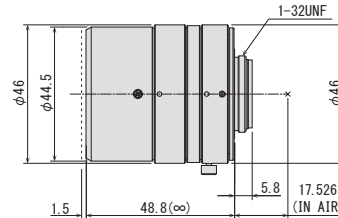
V2518FIC-MPYIR



V3518FIC-MPYIR



V5020FIC-MPYIR



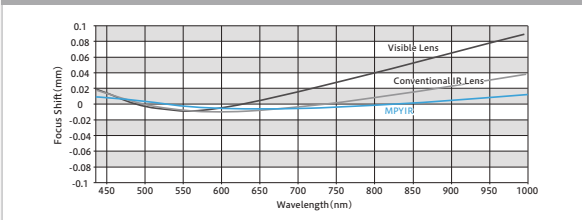
| Focal Length | | 25mm | | 35mm | | 50mm | |
|-----------------------|-------|----------------------------|----------|----------------------------|------------|----------------------------|------------|
| Max. Aperture Ratio | | 1:1.8 | | 1:1.8 | | 1:2.0 | |
| Max. Image Format | | 14.2mm × 10.4mm (φ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

1.1" IR CORRECTIVE 12 MEGAPIXEL LENS for ITS

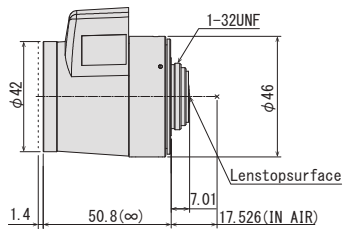
- Suitable for 1.1" 12MP sensor, same size as conventional products
- Usable lineup for ANPR, 25mm/35mm/50mm
- Manual iris and P-iris options are available for each focal length
- No focus shift from visible light to NIR
- High spectral transmittance between visible light to NIR



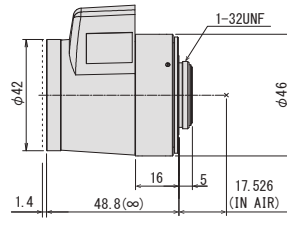
Chromatic Focus Shift



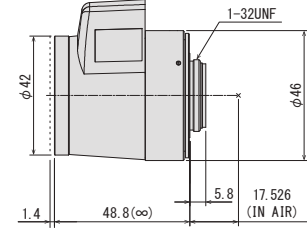
VG2518KC-MPYIR



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 | | | | Iris | F1.8 - F16C | | | | Iris | F2.0 - F16C | | | |
| | Focus | 1m - Inf. | | | | Focus | 2m - Inf. | | | | Focus | 3m - Inf. | | | |
| Control | Iris | Stepping Motor | | | | Iris | Stepping Motor | | | | Iris | Stepping Motor | | | |
| | Focus | Manual | | | | Focus | Manual | | | | Focus | Manual | | | |
| Angle of View | D | 38.8° | 35.6° | 24.9° | | 27.4° | 25.1° | 17.4° | 19.4° | 17.7° | 12.2° | | | | |
| | H | 1.1" 31.8° | 1" 28.8° | 2/3" 20.0° | | 1.1" 22.3° | 1" 20.2° | 2/3" 14.0° | 1.1" 15.7° | 1" 14.2° | 2/3" 9.8° | | | | |
| | V | 23.6° | 21.8° | 15.1° | | 16.5° | 15.2° | 10.5° | 11.6° | 10.7° | 7.4° | | | | |
| Operating Temperature | -10° C - +50° C | | | | | -10° C - +50° C | | | | | -10° C - +50° C | | | | |

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

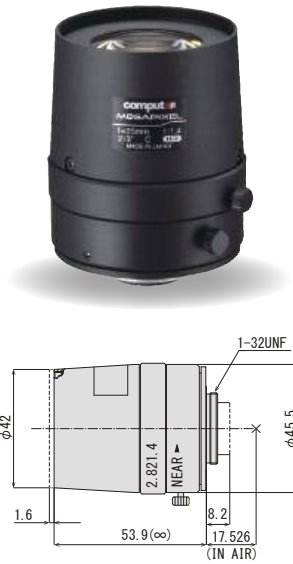
MPIR Series

2/3" IR CORRECTIVE 5 MEGAPIXEL LENS for ITS

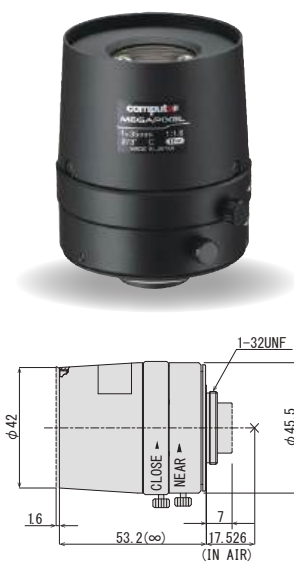


| Model No. | Format | Focal Length | F No. | IRIS | Working Distance | Weight |
|---------------|--------|--------------|-------------|--------|------------------|--------|
| M2514FIC-MPIR | 2/3" | 25mm | F1.4 - F16C | Manual | 1m - Inf. | 154g |
| M3518FIC-MPIR | | 35mm | F1.8 - F16C | | 1m - Inf.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

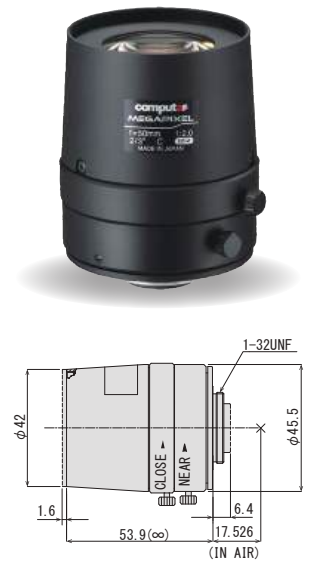
M2514FIC-MPIR



M3518FIC-MPIR



M5020FIC-MPIR

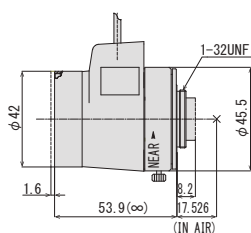


| Focal Length | 25mm | 35mm | 50mm | |
|--|---------------------------|------------------|------------------|------------|
| Max. Aperture Ratio | 1:1.4 | 1:1.8 | 1:2.0 | |
| Max. Image Format | 11.3mm × 6.0mm (φ 12.8mm) | | | |
| Operation Range | Iris | F1.4 - F16C | F1.8 - F16C | |
| | Focus | 1m - Inf. | 1m - Inf. | |
| Control | Iris | Manual | Manual | |
| | Focus | Manual | Manual | |
| Angle of View | D | 24.9° | 18.2° | 13.7° |
| | H | 2/3" 20.0° | 1/2" 14.6° | 1/3" 11.0° |
| | V | 15.1° | 11.0° | 8.2° |
| 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 | | | |
| Back Focal Length | 10.8mm | 14.3mm | 14.8mm | |
| Flange Back Length | 17.526mm | 17.526mm | 17.526mm | |
| Mount | C-Mount | | | |
| Filter Size | M40.5 P=0.5mm | | | |
| Dimensions | φ46.5mm × 53.9mm | φ46.5mm × 53.2mm | φ46.5mm × 53.9mm | |
| Weight | 154g | 149g | 155g | |

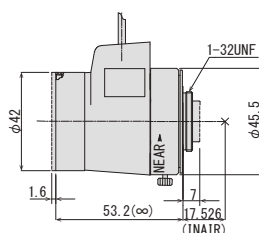
- Suitable for 2/3" 5MP sensors
- Compact design
- Usable lineup for ANPR, 25mm, 35mm, and 50mm
- Manual iris and P-iris options are available for each focal length
- Minimizes focus shift between visible light to NIR
- High spectral transmittance between visible light to NIR



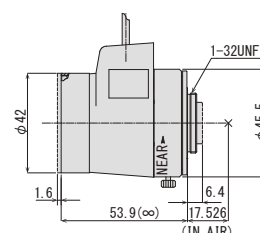
MG2514KC-MPIR



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 | | | | | | | |
| | Focus | 1m - Inf. | 1m - Inf. | | | | | | | |
| Control | Iris | Stepping Motor | Stepping Motor | | | | | | | |
| | Focus | 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 | | | | | | | |

NEW

8MEGAPIXEL LOW DISTORTION BOARD LENS

1/1.8" 8MP FIX BOARD



3 MEGAPIXEL ULTRA-LOW DISTORTION BOARD LENS

1/1.8" 3MP FIX BOARD



1 MEGAPIXEL BOARD LENS

1/2" 1MP FIX BOARD



| 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



4K FISHEYE BOARD LENS

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



5 MEGAPIXEL FISHEYE BOARD LENS

1/2.5" 5MP IR
FIX FISHEYE



| 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 | 185.0° | 185.0° | 185.0° | 185.0° | 185.0° | 180.0° | 180.0° | |
| | H | 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" 190.0° | 1/2.5" 180.0° | 1/2.5" 180.0° |
| | V | 185.0° | 185.0° | 190.0° | 185.0° | 190.0° | 108.6° | 180.0° | 180.0° |
| | D | 185.0° | 185.0° | 190.0° | 185.0° | 190.0° | 159.0° | 180.0° | 180.0° |
| | H | 1/1.8" 185.0° | 1/3" 171.5° | 1/3" 168.2° | 1/3" 171.5° | 1/3" 168.2° | 1/2" 159.0° | 1/3" 163.2° | 1/3" 163.2° |
| | V | 149.1° | 139.5° | 125.5° | 139.5° | 125.5° | 119.5° | 163.2° | 163.2° |
| | D | 164.2° | 164.2° | 157.3° | 164.2° | 157.3° | 149.2° | 180.0° | 180.0° |
| | H | 1/4" 139.5° | 1/4" 125.5° | 1/4" 139.5° | 1/4" 125.5° | 1/4" 125.5° | 1/3" 119.5° | 1/4" 163.2° | 1/4" 163.2° |
| | V | 110.3° | 110.3° | 94.2° | 110.3° | 94.2° | 89.6° | 130.2° | 130.2° |
| | 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

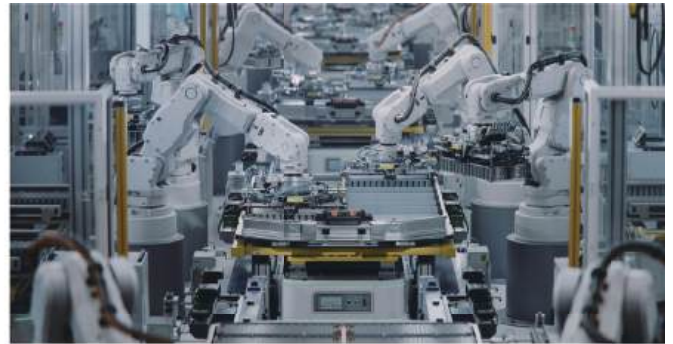
Ruggedized Series

- 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"
- 最新機種IMX485/585用レンズ(NSF2.3Z5915BHRW)

英語訳ください

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

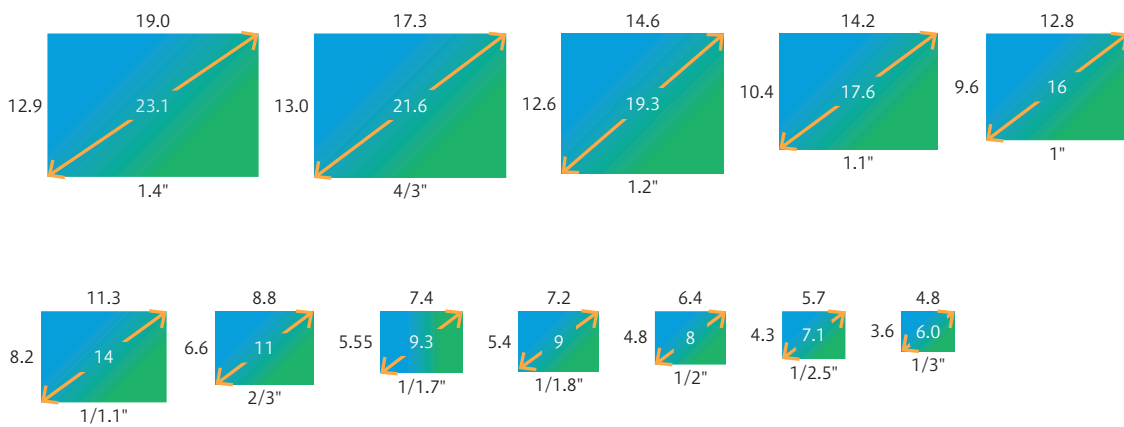
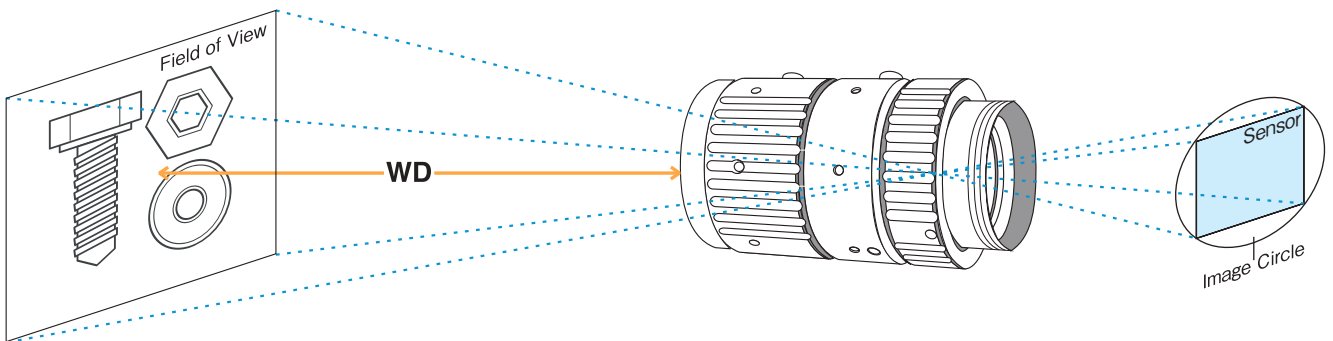
When choosing size of a camera's imaging device, the object size and WD are fixed, focal length can be calculated by the following formula. You can select appropriate lens from the focal length.

<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

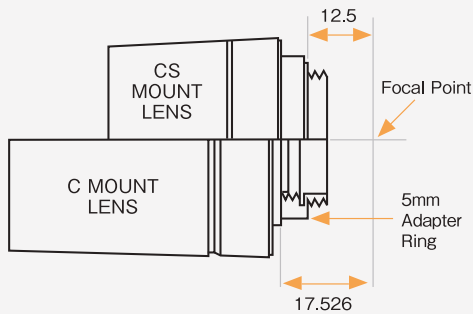
The size of the camera's imaging device also affects the angle of view, with the smaller devices creating narrower angles of view when used on the same lens. The format of the lens, however, is irrelevant to the angle of view; it merely needs to project an image that will cover the device, e.g., the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

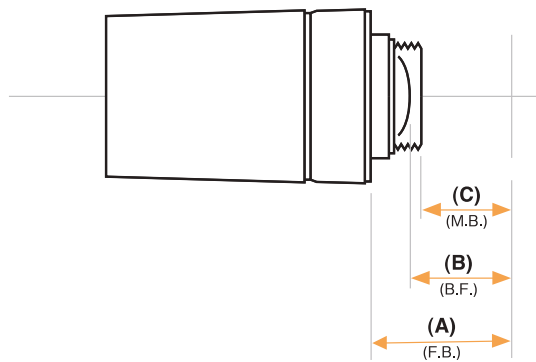
C or CS MOUNT

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

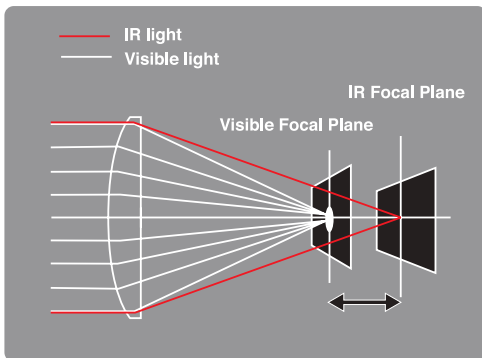
Distance between the surface of the rear lens element and focal plane

(C) Mechanical Back Focal Length

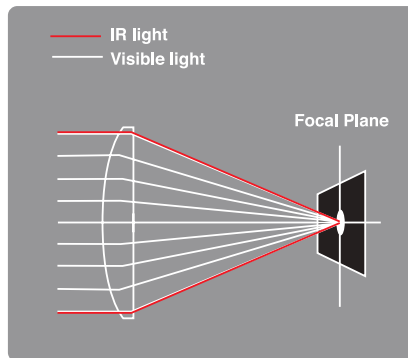
Distance between the surface of the lens frame and focal plane

MECHANISM AND ADVANTAGEOUS EFFECT OF IR LENS

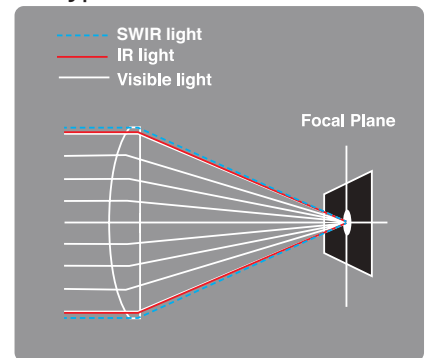
■ VISIBLE LENS



■ 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 | 415.2 | 310.3 |
| | TELE | 0.034 | - | 320.0 | 257.4 | 193.8 | 234.4 | 188.0 | 141.2 | 176.3 | 141.2 | 106.0 |
| 900 | WIDE | 0.013 | - | 880.7 | 698.9 | 519.1 | 633.1 | 502.9 | 374.9 | 470.7 | 374.9 | 280.2 |
| | TELE | 0.038 | - | 290.0 | 233.2 | 175.5 | 212.3 | 170.2 | 127.8 | 159.6 | 127.8 | 95.9 |
| 800 | WIDE | 0.015 | - | 786.6 | 623.9 | 463.3 | 565.1 | 448.9 | 334.6 | 420.1 | 334.6 | 250.0 |
| | TELE | 0.042 | - | 260.0 | 208.9 | 157.1 | 190.1 | 152.3 | 114.4 | 142.9 | 114.4 | 85.8 |
| 700 | WIDE | 0.016 | - | 692.5 | 549.0 | 407.6 | 497.2 | 394.9 | 294.3 | 369.6 | 294.3 | 219.9 |
| | TELE | 0.048 | - | 230.0 | 184.6 | 138.7 | 167.9 | 134.5 | 101.0 | 126.1 | 101.0 | 75.8 |
| 600 | WIDE | 0.019 | - | 598.3 | 474.1 | 351.8 | 429.3 | 340.8 | 254.0 | 319.0 | 254.0 | 189.8 |
| | TELE | 0.055 | - | 199.7 | 160.0 | 120.1 | 145.6 | 116.5 | 87.4 | 109.2 | 87.4 | 65.6 |
| 500 | WIDE | 0.023 | - | 504.0 | 399.0 | 296.0 | 361.2 | 286.7 | 213.6 | 268.3 | 213.6 | 159.6 |
| | TELE | 0.065 | - | 168.9 | 135.1 | 101.3 | 122.8 | 98.2 | 73.7 | 92.1 | 73.7 | 55.2 |
| 400 | WIDE | 0.028 | - | 409.9 | 324.1 | 240.2 | 293.3 | 232.7 | 173.4 | 217.8 | 173.4 | 129.5 |
| | TELE | 0.080 | - | 137.7 | 109.9 | 82.3 | 99.8 | 79.8 | 59.8 | 74.8 | 59.8 | 44.8 |
| 300 | WIDE | 0.036 | - | 315.6 | 249.1 | 184.4 | 225.3 | 178.7 | 133.0 | 167.2 | 133.0 | 99.3 |
| | TELE | 0.103 | 0.500 | 108.9 | 86.4 | 64.2 | 78.0 | 62.3 | 46.6 | 58.3 | 46.6 | 34.9 |
| 200 | WIDE | 0.052 | - | 221.2 | 174.0 | 128.6 | 157.3 | 124.5 | 92.6 | 116.5 | 92.6 | 69.2 |
| | TELE | 0.139 | 2.000 | 81.1 | 64.2 | 47.8 | 58.2 | 46.4 | 34.7 | 43.4 | 34.7 | 25.9 |
| 100 | WIDE | 0.093 | - | 126.4 | 98.6 | 72.6 | 89.0 | 70.3 | 52.2 | 65.7 | 52.2 | 38.9 |
| | TELE | 0.213 | 5.000 | 54.0 | 42.4 | 31.4 | 38.4 | 30.5 | 22.7 | 28.5 | 22.7 | 17.0 |

ML2Z0525UC/SC-MPWIR

| 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 | 0.006 | - | 105.42 | 86.26 | 65.74 | 88.06 | 71.44 | 54.13 | 59.97 | 48.24 | 36.33 |
| | TELE | 0.012 | - | 49.78 | 40.26 | 30.43 | 41.14 | 33.14 | 24.98 | 27.72 | 22.24 | 16.72 |
| 900 | WIDE | 0.006 | - | 105.46 | 86.29 | 65.76 | 88.09 | 71.47 | 54.15 | 59.99 | 48.26 | 36.35 |
| | TELE | 0.014 | - | 49.80 | 40.28 | 30.45 | 41.16 | 33.16 | 25.00 | 27.73 | 22.25 | 16.73 |
| 800 | WIDE | 0.007 | - | 105.50 | 86.33 | 65.80 | 88.13 | 71.50 | 54.18 | 60.02 | 48.28 | 36.37 |
| | TELE | 0.015 | - | 49.84 | 40.31 | 30.47 | 41.19 | 33.18 | 25.02 | 27.75 | | |

MPT Series

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 (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|-------|-------|-------|-------|-------|
| | | | 11" | | 1" | | 2/3" | |
| | | | H | V | H | V | H | V |
| 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 | 184.9 |
| 400 | 0.040 | - | 353.9 | 259.2 | 319.2 | 239.2 | 219.2 | 164.2 |
| 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 | 83.8 |
| 150 | 0.106 | 1.0 | 135.1 | 98.8 | 121.7 | 91.1 | 83.5 | 62.5 |
| 100 | 0.156 | 2.0 | 92.1 | 67.2 | 82.9 | 61.9 | 56.7 | 42.5 |

V2528-MPY (f=25mm)

| Working Distance (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|-------|-------|-------|-------|-------|
| | | | 11" | | 1" | | 2/3" | |
| | | | H | V | H | V | H | V |
| 1000 | 0.026 | - | 555.5 | 407.0 | 500.8 | 375.7 | 344.4 | 258.3 |
| 900 | 0.028 | - | 499.0 | 365.6 | 449.9 | 337.5 | 309.3 | |

V3528-MPY (f=35mm)

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

V5028-MPY (f=50mm)

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

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

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

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

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

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

| Working Distance (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|-------|-------|-------|-------|-------|
| | | | 1" | | 2/3" | | 1/18" | |
| | | | H | V | H | V | H | V |
| 1000 | 0.016 | - | 811.4 | 608.4 | 557.5 | 417.6 | 455.7 | 341.5 |
| 900 | 0.018 | - | 761.1 | 548.1 | 502.3 | 376.6 | 410.6 | 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" | | 2/3" | | 1/18" | |
| | | | H | V | H | V | H | V |
| 1000 | 0.026 | - | 502.6 | 376.9 | 345.4 | 259.0 | 282.6 | 211.9 |
| 900 | 0.028 | - | 451.3 | 338.4 | 310.1 | 232.6 | 253.7 | 190.3 |
| 800 | 0.032 | - | 400.1 | 300.0 | 274.9 | 206.2 | 224.9 | 168.7 |
| 700 | 0.037 | - | 348.9 | 261.5 | 239.7 | 179.7 | 196.1 | 147.1 |
| 600 | 0.043 | - | 297.7 | 223.1 | 204.5 | 153.3 | 167.3 | 125.5 |
| 500 | 0.052 | - | 246.4 | 184.7 | 169.3 | 126.9 | 138.5 | 103.8 |
| 450 | 0.058 | - | 220.8 | 165.5 | 151.7 | 113.7 | 124.1 | 93.0 |
| 400 | 0.066 | - | 195.2 | 146.3 | 134.1 | 103.5 | 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" | | 2/3" | | 1/18" | |
| | | | 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 (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|-------|-------|-------|-------|-------|
| | | | 1" | | 2/3" | | 1/18" | |
| | | | 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 |

VL7531U/S-MPZ V7531-MPZ (f=75mm)

| Working Distance (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|-------|-------|------|-------|------|
| | | | 1" | | 2/3" | | 1/18" | |
| | | | H | V | H | V | H | V |
| 1000 | 0.077 | - | 166.9 | 125.2 | 114.8 | 86.1 | 93.9 | 70.4 |
| 900 | 0.086 | - | 149.8 | 112.4 | 103.0 | 77.3 | 84.3 | 63.2 |
| 800 | 0.097 | - | 132.8 | 99.6 | 91.3 | 68.5 | 74.7 | 56.0 |

MPX Series

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 (mm) | Optical Magnification | Extension Ring (mm) | Field of View (mm) | | | | | |
|--------------------------|-----------------------|------------------------|--------------------|------|------|------|------|------|
| | | | 2/3" | | 1/2" | | 1/3" | |
| | | | 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 | 22.9 |
| 300 | 0.215 | 3.5 | 41.1 | 30.8 | 33.6 | 25.2 | 26.6 | 20.0 |
| 250 | 0.251 | 6.0 | 35.2 | 26.4 | 28.8 | 21.6 | 22.8 | 17.2 |
| 200 | 0.301 | 10.0 | 29.3 | 22.0 | 24.0 | 18.0 | 19.0 | 14.3 |
| 150 | 0.377 | 16.0 | 23.5 | 17.6 | 19.2 | 14.4 | 15.2 | 11.4 |
| 100 | 0.503 | 25.0 | 17.6 | 13.2 | 14.4 | 10.8 | 11.4 | 8.6 |

MP2 / ViSWIR Lite Series

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" | | | |
| | | 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 |
| 575 | 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" | | | Magnification on Monitor | 1/3" | | | Magnification on Monitor | 1/4" | | | Magnification on Monitor | |
| | | D | H | V | | D | H | V | | D | H | V | | |
| 150 | WIDE | 0.084 | 95.2 | 76.2 | 57.1 | 3.73X | 71.4 | 57.1 | 42.9 | 4.98X | 53.6 | 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" | | | Magnification on Monitor | 1/2" | | | Magnification on Monitor | 1/3" | | | Magnification on Monitor |
| | D | H | V | | D | H | V | | D | H | V | |
| 0.3 | 36.7 | 29.3 | 22.0 | 9.7X | 26.7 | 21.3 | 16.0 | 13.3X | 20.0 | 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 | 6.2 | 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 | 92.0 | 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 | 6 | | | |

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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