



Quality of Light

CCTV LENSES

2017-2018 Ver1.0



Technology

Function

Performance

Optimal Performance in Various Environments



Kowa CCTV Lenses



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Function Icons

5MEGA Lens for 5 Megapixel Camera

1" 1 Inch Format Lens

2MEGA Lens for 2 Megapixel Camera

2/3" 2/3 Inch Format Lens

MEGA Lens for Megapixel Camera

1/1.8" 1/1.8 Inch Format Lens

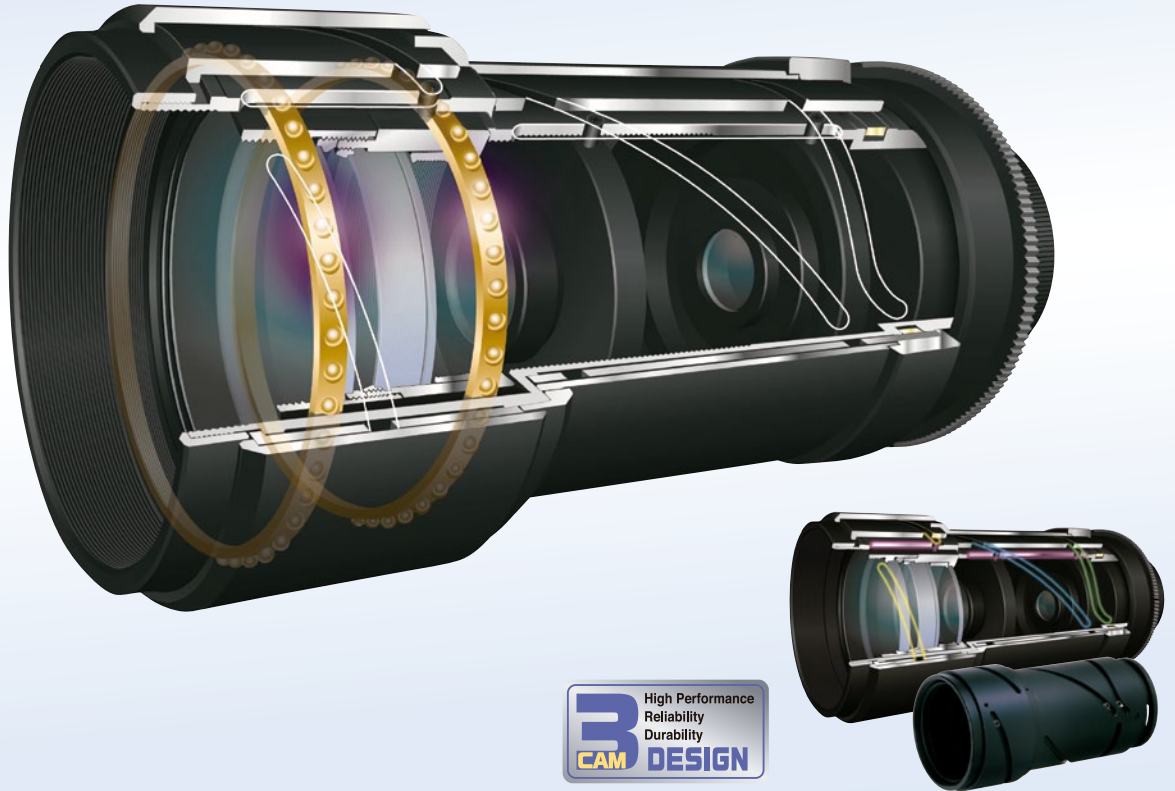
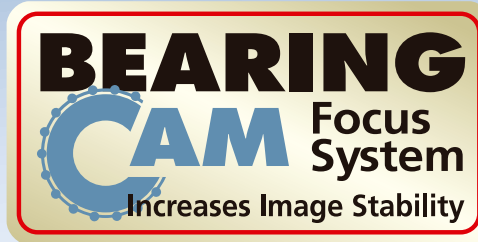
C-mt C-mount Lens

1/2" 1/2 Inch Format Lens

CS-mt CS-mount Lens

1/3" 1/3 Inch Format Lens

Kowa Zoom Lenses



New Technology Bearing CAM Focus System

Conventional zoom lenses commonly employ a helicoid system for the focus mechanism, which is essentially an internal screw type device that allows the user to twist the lens into focus. However, one of the main problems with a helicoid system is that environmental factors such as cold temperatures can make the focus torque too heavy for any parts to move freely without strong force.

To help prevent such problems from occurring, Kowa developed a "3-CAM" system for use in all of its varifocal and zoom lenses. Kowa's innovative 3-CAM design utilizes guide pins to minimize the contact points of all the internal mechanical parts so that they move freely with significantly less friction and torque. In other words, the result you get is a more robust lens with a longer product life since the 3-CAM system reduces wear and tear of all moving parts. The 3-CAM system also increases optical performance by solving the problem of de-centering, decreases internal reflection, and reduces the need for grease on the focus and zoom mechanisms.

In an effort to further improve on the 3-CAM technology, Kowa has designed a "Bearing CAM" focus system for the internal moving mechanisms of our zoom lenses. This new Bearing CAM focus system is especially important for long range zoom lenses because the heavy weight and large diameter of such lenses can push down on the internal moving parts. If the pressure on such lenses gets to be too much, the inside barrel can become deformed, thus changing the alignment of the optical path. Kowa's Bearing CAM focus system helps to resolve this issue because it uses dozens of ball bearings to absorb extra pressure and at the same time, allows for a smoother rotation of moving parts. What this translates to is that you get a lens with an even longer product life that is more resilient against frequent focus and zoom movement.

Kowa has released a high definition 2 megapixel 20-750mm **LMZ20750AMPDC-XF** long range zoom lens with the new Bearing CAM focus system.

Ultra High Sensitivity HD Color Camera

Super Bright Surveillance Camera

0.005 Lux
Color
2Megapixel Camera



SC200PK1C
2/3" CMOS 2MP Color 0.005 Lux

SPECIFICATION **SC200PK1C**

| | |
|----------------------|---|
| Imaging Device | 2/3" CMOS |
| Valid Pixels | Approx 2M pixels |
| Pixel Size | 5.0 μm |
| Scanning Method | Progressive |
| Minimum Illumination | 0.005Lux (F1.4) 30fps |
| S/N | More than 50dB |
| Synchronization | Internal/External |
| Gain | 0—72dB |
| Shutter Type | Rolling Shutter |
| Lens Mount | CS |
| Iris Control | DC |
| Day & Night | IR Cut Filter ON/OFF |
| Video Output | HD:HD-SDI / SD:NTSC, PAL |
| Output Format | 1920x1080 1280 x 720 29.97 30 60 25 50 |
| Remote Control | RS-485 |
| Input Voltage | DC12V |
| Power Consumption | Lower than 7W |
| Size (mm) | 78(W)x66(H)x146(D) |
| Weight (g) | 600 |

**LMZ20750 Zoom Lens at 900m Distance
under 0.35 Lux Light Condition**



Suggested Megapixel Lenses for SC200PK1C

Low light level lenses

LM60JS5MA 1" 5MEGA CS-mt
1" 60mm/F0.8



| | |
|---------------------|-------------------|
| LM60JS5MA | |
| Iris | DC |
| Focus | Manual |
| Focal Length(mm) | 60 |
| Iris Range(F) | 0.8-360 |
| MOD(m) | 3.0 |
| H. Angle of View(°) | 1":12.8 2/3":8.8 |
| Filter Size | M77x0.75 |
| Size(DxHxL) (mm) | 78.5 x 91.5 x 124 |
| Weight(g) | 1,000 |

LM35JS5MA 1" 5MEGA CS-mt
1" 35mm/F0.85



| | |
|---------------------|-------------------|
| LM35JS5MA | |
| Iris | DC |
| Focus | Manual |
| Focal Length(mm) | 35 |
| Iris Range(F) | 0.85-360 |
| MOD(m) | 3.0 |
| H. Angle of View(°) | 1":21.6 2/3":14.9 |
| Filter Size | M77x0.75 |
| Size(DxHxL) (mm) | 78.5 x 91.5 x 145 |
| Weight(g) | 1,200 |

LM25JS5MA 1" 5MEGA CS-mt
1" 25mm/F0.85



| | |
|---------------------|---------------------|
| LM25JS5MA | |
| Iris | DC |
| Focus | Manual |
| Focal Length(mm) | 25 |
| Iris Range(F) | 0.85-360 |
| MOD(m) | 3.0 |
| H. Angle of View(°) | 1":29.0 2/3":20.0 |
| Filter Size | M77x0.75 |
| Size(DxHxL) (mm) | 78.5 x 91.5 x 116.6 |
| Weight(g) | 800 |

Auto Focus Zoom Lenses

Auto Focus Zoom Lenses

LMZ1236AMPDC-XFAF 1/1.8" 2MEGA C-mt
30x 1/1.8" 12-360mm/F2.6



LMZ11176AMPDC-IRAF 2/3" 2MEGA C-mt
16x 2/3" 11-176mm/F1.6
 Day&Night



LMZ0824AMPDC-XFAF 1/1.8" 2MEGA C-mt
30x 1/1.8" 8-240mm/F1.7



LMZ25300AMPDC-IRAF 1" 5MEGA C-mt
12x 1" 25-300mm/F2.8
 Day&Night



LMZ20750AMPDC-XFAF 1/1.8" 2MEGA C-mt
37.5x 1/1.8" 20-750mm/F4.6-F7.0(Tele)



LMZ10360AMPDC-IRAF 1/1.8" MEGA C-mt
36x 1/1.8" 10-360mm/F1.9
 Day&Night



LMZ20550AMPDC-IRAF 1/1.8" 2MEGA C-mt
27.5x 1/1.8" 20-550mm/F4.6
 Day&Night



LMZ14500AMPDC-IRAF 1/1.8" MEGA C-mt
36x 1/1.8" 14-500mm/F2.9
 Day&Night



LMZ1000AMPDC-XFAF 1/2" 2MEGA C-mt
50x 1/2" 20-1000mm/F3.5-F8.9(Tele)



LMZ16160AMPDC-IRAF 1" 5MEGA C-mt
10x 1" 16-160mm/F1.9
 Day&Night



External Auto Focus Box KC4AF

- For Kowa Zoom Lenses
- Corresponded 3Motor Zoom Lenses
- RS232/RS422/RS485 (Pelco-D protocol)
- Power DC12V
- Size 121mm(H)x61mm(V)x22.5mm(D)

External Serial Signal Controller KC3s

- RS422 (Pelco-D protocol)-RS485/RS232 is also available
- Power DC12V
- Size 75mm(H)x55mm(V)x22.5mm(D)

Long Range Megapixel Zoom Lenses

LMZ1000-XF 50x Series

1/2" 2MEGA C-mt



1/2" 20-1000mm / F3.5



| LMZ1000-XF | AMDC | AMPDC |
|---------------------|-----------------|----------|
| Serial | | ○ |
| Iris | | DC |
| Zoom | | Motor(P) |
| Focus | | Motor(P) |
| Preset | × | ○ |
| Focal Length(mm) | 20-1000 | |
| Iris Range(F) | 3.5-360 | |
| MOD(m) | 5 | |
| H. Angle of View(°) | 17.8-0.38 | |
| Filter Size | M114x0.75 | |
| Size(DxHxL) (mm) | 139 x 130 x 450 | |
| Weight(g) | 5,470 | 5,500 |

LMZ20750-XF 37.5x Series

1/1.8" 2MEGA C-mt



1/1.8" 20-750mm / F4.6



| LMZ20750-XF | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|----------|-------|----------|
| Serial | | ○ | | |
| Iris | DC | | | Motor(P) |
| Zoom | | Motor(P) | | |
| Focus | | Motor(P) | | |
| Preset | × | ○ | × | ○ |
| Focal Length(mm) | 20-750 | | | |
| Iris Range(F) | 4.6-32 | | | |
| MOD(m) | 5 | | | |
| H. Angle of View(°) | 20.0-0.75 | | | |
| Filter Size | M112x1.0 | | | |
| Size(DxHxL) (mm) | 130 x 130 x 342 | | | |
| Weight(g) | 3,470 | 3,500 | 3,450 | 3,500 |

LMZ11250-XF 23x Series

2/3" 2MEGA C-mt

2/3" 11-250mm / F1.8



| LMZ11250-XF | AMDC | AMPDC | M3 | M3P |
|---------------------|-------------------|----------|-------|----------|
| Serial | | ○ | | |
| Iris | DC | | | Motor(P) |
| Zoom | | Motor(P) | | |
| Focus | | Motor(P) | | |
| Preset | × | ○ | × | ○ |
| Focal Length(mm) | 11-250 | | | |
| Iris Range(F) | 1.8-32 | | | |
| MOD(m) | 5 | | | |
| H. Angle of View(°) | 43.5-2.0 | | | |
| Filter Size | M95x1.0 | | | |
| Size(DxHxL) (mm) | 101 x 100 x 235.5 | | | |
| Weight(g) | 1,970 | 2,000 | 1,950 | 2,000 |

LMZ2EX (Exclusive 2x Extender)

| Model | Focal Length | Mount | Size(mm) | Weight |
|----------|--------------|-------|-----------|--------|
| LMZ 2 EX | 2 times | C | φ50x7.1mm | 50g |

* Corresponded for 1/2 or less C-mount lenses

LMZ1236-XF

1/1.8" 2MEGA C-mt

30x Series

1/1.8" 12-360mm / F2.6



| LMZ1236-XF | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|-------|----------|
| Serial | | | ○ | |
| Iris | DC | | | Motor(P) |
| Zoom | | | | Motor(P) |
| Focus | | | | Motor(P) |
| Preset | × | ○ | × | ○ |
| Focal Length(mm) | 12-360 | | | |
| Iris Range(F) | 2.6-32 | | | |
| MOD(m) | 1.8 | | | |
| H. Angle of View(°) | 29.4-1.05 | | | |
| Filter Size | M92x1.0 | | | |
| Size(DxHxL) (mm) | 100 x 100 x 257 | | | |
| Weight(g) | 1,690 | 1,720 | 1,670 | 1,720 |

LMZ0824-XF

1/1.8" 2MEGA C-mt

30x Series

1/1.8" 8-240mm / F1.7



| LMZ0824-XF | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|-------|----------|
| Serial | | | ○ | |
| Iris | DC | | | Motor(P) |
| Zoom | | | | Motor(P) |
| Focus | | | | Motor(P) |
| Preset | × | ○ | × | ○ |
| Focal Length(mm) | 8-240 | | | |
| Iris Range(F) | 1.7-32 | | | |
| MOD(m) | 1.8 | | | |
| H. Angle of View(°) | 43.5-1.56 | | | |
| Filter Size | M92x1.0 | | | |
| Size(DxHxL) (mm) | 100 x 100 x 256 | | | |
| Weight(g) | 1,670 | 1,700 | 1,650 | 1,700 |

LMZ7527

1/2" 2MEGA C-mt

17x Series

1/2" 7.5-127mm / F1.6



| LMZ7527 | AMDC | AMPDC |
|---------------------|---------------|----------|
| Serial | | × |
| Iris | | DC |
| Zoom | | Motor(P) |
| Focus | | Motor(P) |
| Preset | × | ○ |
| Focal Length(mm) | 7.5-127 | |
| Iris Range(F) | 1.6-360 | |
| MOD(m) | 1.5 | |
| H. Angle of View(°) | 45.6-2.9 | |
| Filter Size | M58x0.75 | |
| Size(DxHxL) (mm) | 80 x 80 x 132 | |
| Weight(g) | 550 | 580 |

Technical Data

Wiring Diagram Auto Iris Lenses

| Control System | Video Type / with AI amp. | DC Type / without AI amp. | | | | | | | | | | | | | | | |
|------------------------|--|---------------------------|---------|-------|---------|---|-------|-----------|---|--------|-----------|---|-----|---------|---|-------|---------|
| Input Voltage | DC8~16V (Max.40mA) | — | | | | | | | | | | | | | | | |
| Input Signal | Video Signal (V or VS) | — | | | | | | | | | | | | | | | |
| Sensitivity Adjustment | V Signal Level 0.5—1.0V p-p | — | | | | | | | | | | | | | | | |
| Input Impedance | High Impedance | — | | | | | | | | | | | | | | | |
| Iris Response Time | Approx 2 Second | — | | | | | | | | | | | | | | | |
| Metering Method | Peak-average adjustable method | — | | | | | | | | | | | | | | | |
| Operation Temperature | —10°C~+50°C | —10°C~+50°C | | | | | | | | | | | | | | | |
| Connection | <table border="1"> <thead> <tr> <th>Pin No.</th> <th>Color</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Green</td> <td>Control -</td> </tr> <tr> <td>2</td> <td>Yellow</td> <td>Control +</td> </tr> <tr> <td>3</td> <td>Red</td> <td>Drive +</td> </tr> <tr> <td>4</td> <td>Black</td> <td>Drive -</td> </tr> </tbody> </table> | | Pin No. | Color | Control | 1 | Green | Control - | 2 | Yellow | Control + | 3 | Red | Drive + | 4 | Black | Drive - |
| Pin No. | Color | Control | | | | | | | | | | | | | | | |
| 1 | Green | Control - | | | | | | | | | | | | | | | |
| 2 | Yellow | Control + | | | | | | | | | | | | | | | |
| 3 | Red | Drive + | | | | | | | | | | | | | | | |
| 4 | Black | Drive - | | | | | | | | | | | | | | | |

Day & Night Megapixel Zoom Lenses

LMZ25300-IR 1" 5MEGA C-mt 12x Series Day&Night

1" 25-300mm / F2.8



| LMZ25300-IR | AMDC | AMPDC | M3 | M3P |
|---------------------|-------------------|-------|----------|-------|
| SERIAL | ○ | | | |
| IRIS | DC | | Motor(P) | |
| ZOOM | Motor(P) | | | |
| FOCUS | Motor(P) | | | |
| PRESET | × | ○ | × | ○ |
| FOCAL LENGTH(mm) | 25-300 | | | |
| IRIS RANGE(F) | 2.8-22 | | | |
| MOD(m) | 2 | | | |
| H. ANGLE OF VIEW(°) | 28.6-2.5 | | | |
| FILTER SIZE | M86 x 1.0 | | | |
| SIZE(DxHxL) (mm) | 100 x 101 x 297.5 | | | |
| WEIGHT(g) | 1,920 | 1,950 | 1,900 | 1,950 |

LMZ16160-IR 1" 5MEGA C-mt 10x Series Day&Night

1" 16-160mm / F1.9



| LMZ16160-IR | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|-------|
| SERIAL | ○ | | | |
| IRIS | DC | | Motor(P) | |
| ZOOM | Motor(P) | | | |
| FOCUS | Motor(P) | | | |
| PRESET | × | ○ | × | ○ |
| FOCAL LENGTH(mm) | 11-160 | | | |
| IRIS RANGE(F) | 1.9-22 | | | |
| MOD(m) | 1.7 | | | |
| H. ANGLE OF VIEW(°) | 42.7-4.6 | | | |
| FILTER SIZE | M89 x 1.0 | | | |
| SIZE(DxHxL) (mm) | 100 x 100 x 208 | | | |
| WEIGHT(g) | 1,320 | 1,350 | 1,300 | 1,350 |

LMZ11176-IR 2/3" 2MEGA C-mt 16x Series Day&Night

2/3" 11-176mm / F1.6



| LMZ11176-IR | AMDC | AMPDC | M3 | M3P |
|---------------------|-------------------|-------|----------|-------|
| SERIAL | ○ | | | |
| IRIS | DC | | Motor(P) | |
| ZOOM | Motor(P) | | | |
| FOCUS | Motor(P) | | | |
| PRESET | × | ○ | × | ○ |
| FOCAL LENGTH(mm) | 11-176 | | | |
| IRIS RANGE(F) | 1.6-32 | | | |
| MOD(m) | 3 | | | |
| H. ANGLE OF VIEW(°) | 43.3-2.9 | | | |
| FILTER SIZE | M105 x 1.0 | | | |
| SIZE(DxHxL) (mm) | 109 x 109 x 211.5 | | | |
| WEIGHT(g) | 2,820 | 2,850 | 2,800 | 2,850 |

LMZ1177-IR 2/3" 5MEGA C-mt 7x Series Day&Night

2/3" 11-77mm / F1.6



| LMZ1177-IR | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|-----|
| SERIAL | ○ | | | |
| IRIS | DC | | Motor(P) | |
| ZOOM | Motor(P) | | | |
| FOCUS | Motor(P) | | | |
| PRESET | × | ○ | × | ○ |
| FOCAL LENGTH(mm) | 11-77 | | | |
| IRIS RANGE(F) | 1.6-22 | | | |
| MOD(m) | 1.5 | | | |
| H. ANGLE OF VIEW(°) | 43.3-6.6 | | | |
| FILTER SIZE | M67 x 0.75 | | | |
| SIZE(DxHxL) (mm) | 80 x 80 x 120.5 | | | |
| WEIGHT(g) | 750 | 780 | 730 | 780 |

LMZ10360-IR

36x Series

1/1.8" 2MEGA C-mt

Day & Night



1/1.8" 10-360mm / F1.9



| LMZ10360-IR | AMDC | AMPDC |
|---------------------|-------|-----------------|
| SERIAL | | ○ |
| IRIS | | DC |
| ZOOM | | Motor(P) |
| FOCUS | | Motor(P) |
| PRESET | × | ○ |
| FOCAL LENGTH(mm) | | 10-360 |
| IRIS RANGE(F) | | 1.9-30 |
| MOD(m) | | 10 |
| H. ANGLE OF VIEW(°) | | 39.1-1.16 |
| FILTER SIZE | | M112 x 1.0 |
| SIZE(DxHxL) (mm) | | 116 x 116 x 271 |
| WEIGHT(g) | 2,650 | 2,680 |

LMZ14500-IR

36x Series

1/1.8" 2MEGA C-mt

Day & Night



1/1.8" 14-500mm / F2.9



| LMZ14500-IR | AMDC | AMPDC |
|---------------------|-------|-------------------|
| SERIAL | | ○ |
| IRIS | | DC |
| ZOOM | | Motor(P) |
| FOCUS | | Motor(P) |
| PRESET | × | ○ |
| FOCAL LENGTH(mm) | | 14-500 |
| IRIS RANGE(F) | | 2.9-30 |
| MOD(m) | | 10 |
| H. ANGLE OF VIEW(°) | | 28.1-0.83 |
| FILTER SIZE | | M112 x 1.0 |
| SIZE(DxHxL) (mm) | | 116 x 116 x 290.6 |
| WEIGHT(g) | 2,690 | 2,720 |

LMZ20550-IR

27.5x Series

1/1.8" 2MEGA C-mt

Day & Night



1/1.8" 20-550mm / F4.6



| LMZ20550-IR | AMDC | AMPDC |
|---------------------|-------|-----------------|
| SERIAL | | ○ |
| IRIS | | DC |
| ZOOM | | Motor(P) |
| FOCUS | | Motor(P) |
| PRESET | × | ○ |
| FOCAL LENGTH(mm) | | 20-550 |
| IRIS RANGE(F) | | 4.6-32 |
| MOD(m) | | 5 |
| H. ANGLE OF VIEW(°) | | 17.9-0.64 |
| FILTER SIZE | | M112 x 1.0 |
| SIZE(DxHxL) (mm) | | 130 x 138 x 342 |
| WEIGHT(g) | 3,370 | 3,400 |

LMZ0812-IR

15x Series

1/2" 5MEGA C-mt

Day & Night

1/2" 8-120mm / F1.8



| LMZ0812-IR | AM | AMP | AMDC | AMPDC | M3 | M3P |
|---------------------|-----|-------|------|---------------|-----|----------|
| SERIAL | × | | | ○ | | |
| IRIS | | Video | | DC | | Motor(P) |
| ZOOM | | | | Motor(P) | | |
| FOCUS | | | | Motor(P) | | |
| PRESET | × | ○ | × | ○ | × | ○ |
| FOCAL LENGTH(mm) | | | | 8-120 | | |
| IRIS RANGE(F) | | | | 1.8-360 | | 1.8-22 |
| MOD(m) | | | | 1.5 | | |
| H. ANGLE OF VIEW(°) | | | | 43.2-3.1 | | |
| FILTER SIZE | | | | M72x0.75 | | |
| SIZE(DxHxL) (mm) | | | | 87 x 80 x 157 | | |
| WEIGHT(g) | 740 | 750 | 750 | 780 | 730 | 780 |

High Resolution Zoom Lenses

LMZ750-XF 25x Series

1/2" C-mt

1/2" 30-750mm / F4.6



| LMZ750-XF | AM | AMP | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|--------|----------|-------|
| SERIAL | | | X | | | |
| IRIS | Video | | DC | | Motor(P) | |
| ZOOM | | | Motor(P) | | | |
| FOCUS | | | Motor(P) | | | |
| PRESET | X | O | X | O | X | O |
| FOCAL LENGTH(mm) | 30-750 | | | | | |
| IRIS RANGE(F) | 4.6-360 | | | 4.6-22 | | |
| MOD(m) | 2.5 | | | | | |
| H. ANGLE OF VIEW(°) | 11.8-0.5 | | | | | |
| FILTER SIZE | | | | | | |
| SIZE(DxHxL) (mm) | 122 x 122 x 313 | | | | | |
| WEIGHT(g) | 2,680 | 2,690 | 2,690 | 2,720 | 2,670 | 2,720 |

LMZ375-XF 25x Series

1/2" C-mt

1/2" 15-375mm / F2.3



| LMZ375-XF | AM | AMP | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|--------|----------|-------|
| SERIAL | | | X | | | |
| IRIS | Video | | DC | | Motor(P) | |
| ZOOM | | | Motor(P) | | | |
| FOCUS | | | Motor(P) | | | |
| PRESET | X | O | X | O | X | O |
| FOCAL LENGTH(mm) | 15-375 | | | | | |
| IRIS RANGE(F) | 2.3-360 | | | 2.3-22 | | |
| MOD(m) | 2.5 | | | | | |
| H. ANGLE OF VIEW(°) | 23.2-0.99 | | | | | |
| FILTER SIZE | | | | | | |
| SIZE(DxHxL) (mm) | 122 x 122 x 261 | | | | | |
| WEIGHT(g) | 2,540 | 2,550 | 2,550 | 2,580 | 2,530 | 2,580 |

LMZ123-XF 25x Series

1/2" C-mt

1/2" 12-300mm / F1.8



| LMZ123-XF | AM | AMP | AMDC | AMPDC |
|---------------------|-----------------|-------|----------|-------|
| SERIAL | | | X | |
| IRIS | Video | | DC | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 12-300 | | | |
| IRIS RANGE(F) | 1.8-300 | | | |
| MOD(m) | 2.5 | | | |
| H. ANGLE OF VIEW(°) | 29.4-1.24 | | | |
| FILTER SIZE | | | | |
| SIZE(DxHxL) (mm) | 122 x 122 x 258 | | | |
| WEIGHT(g) | 2,480 | 2,490 | 2,490 | 2,520 |

LMZ112 18x Series

1/2" C-mt

1/2" 11-200mm / F1.9



| LMZ112 | AM | AMP | AMDC | AMPDC |
|---------------------|-----------------|-----|----------|-------|
| SERIAL | | | X | |
| IRIS | Video | | DC | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 11-200 | | | |
| IRIS RANGE(F) | 1.9-360 | | | |
| MOD(m) | 1.5 | | | |
| H. ANGLE OF VIEW(°) | 32.1-1.9 | | | |
| FILTER SIZE | M72 x 0.75 | | | |
| SIZE(DxHxL) (mm) | 87 x 80 x 170.5 | | | |
| WEIGHT(g) | 715 | 725 | 725 | 755 |

LMZ300 30x Series

1/3" CS-mt

1/3" 5.5-165mm / F1.8



| LMZ300 | AM | AMP | AMDC | AMPDC |
|---------------------|---------------|-----|----------|-------|
| SERIAL | | | X | |
| IRIS | Video | | DC | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 5.5-165 | | | |
| IRIS RANGE(F) | 1.8-360 | | | |
| MOD(m) | 1.8 | | | |
| H. ANGLE OF VIEW(°) | 47.6-1.7 | | | |
| FILTER SIZE | M72 x 0.75 | | | |
| SIZE(DxHxL) (mm) | 87 x 80 x 167 | | | |
| WEIGHT(g) | 840 | 850 | 850 | 880 |

LMZ200 20x Series

1/3" CS-mt

1/3" 5.6-112mm / F1.6



| LMZ200 | AM | AMP | AMDC | AMPDC |
|---------------------|-----------------|-----|----------|-------|
| SERIAL | | | X | |
| IRIS | Video | | DC | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 5.6-112 | | | |
| IRIS RANGE(F) | 1.6-360 | | | |
| MOD(m) | 1.5 | | | |
| H. ANGLE OF VIEW(°) | 47.6-2.6 | | | |
| FILTER SIZE | M55 x 0.75 | | | |
| SIZE(DxHxL) (mm) | 69 x 79 x 119.5 | | | |
| WEIGHT(g) | 530 | 540 | 540 | 570 |

LMZ110 15x Series

1/3" CS-mt

1/3" 6-90mm / F1.6



| LMZ110 | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|--------|
| SERIAL | | | X | |
| IRIS | DC | | Motor(P) | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 6-90 | | | |
| IRIS RANGE(F) | 1.6-360 | | | 1.6-22 |
| MOD(m) | 1.2 | | | |
| H. ANGLE OF VIEW(°) | 44.2-3.1 | | | |
| FILTER SIZE | | | | |
| SIZE(DxHxL) (mm) | 69 x 79 x 116.5 | | | |
| WEIGHT(g) | 520 | 550 | 500 | 550 |

LMZ111 10x Series

1/3" CS-mt

1/3" 6-60mm / F1.6



| LMZ111 | AMDC | AMPDC | M3 | M3P |
|---------------------|-----------------|-------|----------|--------|
| SERIAL | | | X | |
| IRIS | DC | | Motor(P) | |
| ZOOM | | | Motor(P) | |
| FOCUS | | | Motor(P) | |
| PRESET | X | O | X | O |
| FOCAL LENGTH(mm) | 6-60 | | | |
| IRIS RANGE(F) | 1.6-360 | | | 1.6-22 |
| MOD(m) | 1.2 | | | |
| H. ANGLE OF VIEW(°) | 32.1-1.9 | | | |
| FILTER SIZE | M55 x 0.75 | | | |
| SIZE(DxHxL) (mm) | 69 x 79 x 116.5 | | | |
| WEIGHT(g) | 520 | 550 | 500 | 550 |

External DC/Video Iris Converter KP933SP

KP933SP to drive DC-Iris lens with Video-Iris Camera

Size 16.4mm x 33.6mm x 11.9mm, Approx. 20g



Fixed Focal Day & Night Megapixel Lenses

5Megapixel P-Iris Day & Night Fixed Focal Lenses

2/3" 5MEGA C-mt Day & Night



LM16JC5M 2/3" 16mm / F1.4

LM25JC5M 2/3" 25mm / F1.4

LM35JC5M 2/3" 35mm / F2.0

| | LM16JC5M | | | LM25JC5M | | | LM35JC5M | | |
|---------------------|----------------|--------|--------|----------------|--------|--------|----------------|--------|--------|
| | A-IR | M-IR | -IR | A-IR | M-IR | -IR | A-IR | M-IR | -IR |
| IRIS | DC | P | Manual | DC | P | Manual | DC | P | Manual |
| FOCAL LENGTH(mm) | 16 | | | 25 | | | 35 | | |
| IRIS RANGE(F) | 1.4-360 | 1.4-38 | 1.4-16 | 1.4-360 | 1.4-38 | 1.4-16 | 2.0-360 | 2.0-40 | 2.0-22 |
| MOD(m) | 0.5 | | | 0.3 | | | 0.5 | | |
| H. ANGLE OF VIEW(°) | 30.9 | | | 20.1 | | | 13.9 | | |
| FILTER SIZE | M30.5 x 0.5 | | | M30.5 x 0.5 | | | M35.5 x 0.5 | | |
| SIZE(DxHxL) (mm) | 37 x 44 x 55.4 | | | 37 x 44 x 57.6 | | | 37 x 44 x 52.8 | | |
| WEIGHT(g) | 100 | | | 110 | | | 100 | | |

5Megapixel NIR / Day & Night Fixed Focal Lenses

1" 5MEGA C-mt Day & Night

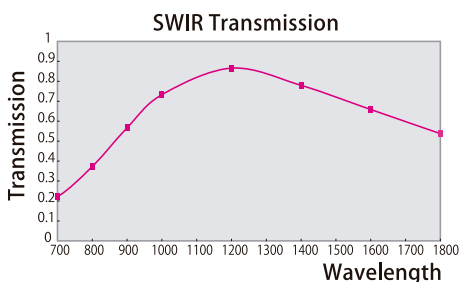


LM50HC-IR 1" 50mm / F1.8

LM60HC-IR 1" 60mm / F1.8

| | LM50HC-IR | LM60HC-IR |
|---------------------|--------------|--------------|
| IRIS | Manual | |
| FOCAL LENGTH(mm) | 50 | 60 |
| IRIS RANGE(F) | 1.8-16 | 2.0-16 |
| MOD(m) | 1.0-∞ | 1.0-∞ |
| H. ANGLE OF VIEW(°) | 14.4 | 12.2 |
| DISTORTION | -0.09 | -0.06 |
| SIZE(DxHxL) (mm) | φ50.0 x 47.4 | φ49.2 x 54.6 |
| WEIGHT(g) | 100 | 200 |

SWIR Zoom Lenses



LMZ25300-SW 12x Series 1" 25-300mm / F2.8

LMZ16160-SW 10x Series 1" 16-160mm / F1.9

LMZ20750-SW 37.5x Series 1/1.8" 20-750mm / F4.6-F7.0(Tele)



| Model | Image Size | Focal Length (mm) | Iris Range (F) | MOD. (m) | Mount | H.Angle of View (°) | Operation | | | Mega | IR Correct | Filter Size | Size(DxHxL) (mm) | Weight (g) |
|----------------|------------|-------------------|----------------|----------|-------|---------------------|-----------|----------|----------|------|------------|-------------|------------------|------------|
| | | | | | | | Iris | Zoom | Focus | | | | | |
| LMZ25300M3P-SW | 1" | 25-300 | 2.8-32 | 2 | C | 28.6-2.5 | Motor(P) | Motor(P) | Motor(P) | - | - | M86x1.0 | 100x100x297.5 | 1,950 |
| LMZ16160M3P-SW | 1" | 16-160 | 1.9-22 | 1.7 | C | 42.7-4.6 | Motor(P) | Motor(P) | Motor(P) | - | - | M89x1.0 | 100x100x208 | 1,350 |
| LMZ20750M3P-SW | 1/1.8" | 20-750 | 4.6-32 | 5 | C | 17.8-0.5 | Motor(P) | Motor(P) | Motor(P) | - | - | M112x1.0 | 130x130x342 | 3,500 |

Other Varifocal and Fixed Focal Lenses

*(1) Available while stocks last

| Model | Image Size | Focal Length (mm) | Iris Range (F) | M.O.D. (m) | Mount | H.Angle of View (°) | Operation | | | Mega | IR Correct | Filter Size | Size(DxHxL) (mm) | Weight (g) |
|-------|------------|-------------------|----------------|------------|-------|---------------------|-----------|------|-------|------|------------|-------------|------------------|------------|
| | | | | | | | Iris | Zoom | Focus | | | | | |

Day & Night Varifocal Lenses

| | | | | | | | | | | | | | | |
|--------------|--------|--------------|---------|-----|----|-----------|--------|--------|--------|-----|---|----------|----------------|-----|
| LMVZ990-IR | 1/2" | 9.0-90 (10x) | 1.8—16 | 0.3 | C | 41.1—4.2 | Manual | Manual | Manual | — | ○ | M43x0.75 | φ45x93 | 194 |
| LMVZ990A-IR | 1/2" | 9.0-90 (10x) | 1.8—360 | 0.3 | C | 41.1—4.2 | DC | Manual | Manual | — | ○ | M43x0.75 | 45x53.5x93 | 194 |
| LMVZ3109A-IR | 1/2.7" | 3.1-9(2.9x) | 1.3—360 | 0.5 | CS | 99.4—34.8 | DC | Manual | Manual | 3MP | ○ | - | 36.5x47.1x52.1 | 70 |
| LMVZ7550A-IR | 1/2.7" | 7.5-50(2x) | 1.5—360 | 0.5 | CS | 38.0—6.2 | DC | Manual | Manual | 3MP | ○ | - | 47.5x53.6x68.4 | TBA |

Megapixel Varifocal Lenses

| | | | | | | | | | | | | | | |
|-----------|--------|---------------|--------|-----|---|-----------|--------|--------|--------|-----|---|----------|----------|-----|
| LMVZ4411 | 1/1.8" | 4.4-11 (2.5x) | 1.6—16 | 0.5 | C | 76.6—36.7 | Manual | Manual | Manual | 2MP | — | M43x0.75 | φ45x56.5 | 125 |
| LMVZ166HC | 1" | 16-64 (4x) | 1.8—16 | 0.5 | C | 45.9—11.7 | Manual | Manual | Manual | 2MP | — | M58x0.75 | φ60x124 | 370 |

High Resolution Varifocal Lenses

| | | | | | | | | | | | | | | | |
|----------|------|------|----------------|---------|-----|----|------------|--------|--------|--------|---|---|----------|----------------|-----|
| LMVZ164 | *(1) | 1/3" | 1.6-3.4 (2.1x) | 1.4—C | 0.2 | CS | 180.0—84.3 | Manual | Manual | Manual | — | — | — | φ42x52.1 | 98 |
| LMVZ164A | *(1) | 1/3" | 1.6-3.4 (2.1x) | 1.4—360 | 0.2 | CS | 180.0—84.3 | DC | Manual | Manual | — | — | — | 39.5x45.8x52.1 | 105 |
| LMVZ256 | *(1) | 1/3" | 2.5-6.0 (2.4x) | 1.4—C | 0.2 | CS | 107.6—45.6 | Manual | Manual | Manual | — | — | — | φ42x47.4 | 83 |
| LMVZ256A | *(1) | 1/3" | 2.5-6.0 (2.4x) | 1.4—360 | 0.2 | CS | 107.6—45.6 | DC | Manual | Manual | — | — | — | 39.5x45.8x47.6 | 90 |
| LMVZ510A | *(1) | 1/3" | 5-100 (20x) | 1.6—360 | 0.3 | CS | 52.7—2.8 | DC | Manual | Manual | — | — | M46x0.75 | 48x55x93 | 190 |

Fixed Focal Lenses

| | | | | | | | | | | | | | | | |
|---------|------|------|-----|---------|-----|----|-------|--------|---|--------|---|---|-----------|--------------|----|
| LM2.3PB | *(1) | 1/3" | 2.3 | 1.4—360 | 0.2 | CS | 116.1 | DC | — | Manual | — | — | — | 39.2x48.6x41 | 80 |
| LM3PB | *(1) | 1/3" | 2.8 | 1.4—360 | 0.2 | CS | 97.4 | DC | — | Manual | — | — | M35.5x0.5 | 39.2x48.6x39 | 69 |
| LM4NCR | | 1/2" | 3.5 | 1.4—C | 0.2 | C | 103.6 | Manual | — | Manual | — | — | — | φ35x31 | 56 |
| LM5NCR | | 1/2" | 4.5 | 1.4—C | 0.2 | C | 79.0 | Manual | — | Manual | — | — | M30.5x0.5 | φ35x32 | 54 |
| LM6NCR | | 1/2" | 6 | 1.4—C | 0.2 | C | 57.3 | Manual | — | Manual | — | — | M30.5x0.5 | φ35x39.5 | 72 |
| LM12NCR | | 1/2" | 12 | 1.4—C | 0.3 | C | 30.7 | Manual | — | Manual | — | — | M30.5x0.5 | φ35x30 | 53 |
| LM25JCR | *(1) | 2/3" | 25 | 1.6—C | 0.5 | C | 21.1 | Manual | — | Manual | — | — | M30.5x0.5 | φ35x26 | 54 |

FA Industrial Lenses

| Model | Image Size | Focal Length (mm) | Iris Range (F) | M.O.D. (m) | Mount | H.Angle of View (°) | Operation | | | Filter Size | Size(DxHxL) (mm) | Weight (g) |
|-------|------------|-------------------|----------------|------------|-------|---------------------|-----------|------|-------|-------------|------------------|------------|
| | | | | | | | Iris | Zoom | Focus | | | |

8Megapixel Fixed Focal

| | | | | | | | | | | | | |
|--------|------|-----|--------|------|---|------|--------|---|--------|-----------|----------|-----|
| LM8XC | 4/3" | 8.5 | 2.8—22 | 0.1 | C | 93.5 | Manual | — | Manual | M72x0.75 | φ74x82.5 | 245 |
| LM12XC | 4/3" | 12 | 2.0—22 | 0.1 | C | 74.9 | Manual | — | Manual | M55x0.75 | φ57x85 | 270 |
| LM16XC | 4/3" | 16 | 2.0—22 | 0.1 | C | 60.6 | Manual | — | Manual | M40.5x0.5 | φ45x79.5 | 250 |
| LM25XC | 4/3" | 25 | 2.0—16 | 0.15 | C | 40.9 | Manual | — | Manual | M40.5x0.5 | φ45x89 | 250 |
| LM35XC | 4/3" | 35 | 2.0—16 | 0.2 | C | 29.6 | Manual | — | Manual | M37.5x0.5 | φ45x74 | 210 |
| LM50XC | 4/3" | 50 | 2.0—22 | 0.3 | C | 20.6 | Manual | — | Manual | M37.5x0.5 | φ45x74 | 220 |

6Megapixel Fixed Focal

| | | | | | | | | | | | | |
|--------|----|----|--------|------|---|------|--------|---|--------|-----------|----------|-----|
| LM12SC | 1" | 12 | 1.8—16 | 0.1 | C | 55.9 | Manual | — | Manual | M40.5x0.5 | φ43x84.0 | 255 |
| LM16SC | 1" | 16 | 1.8—22 | 0.1 | C | 44.0 | Manual | — | Manual | M34x0.5 | φ43x80.0 | 240 |
| LM25SC | 1" | 25 | 1.8—16 | 0.15 | C | 28.9 | Manual | — | Manual | M34x0.5 | φ43x89.0 | 245 |
| LM35SC | 1" | 35 | 2.0—16 | 0.2 | C | 20.8 | Manual | — | Manual | M34x0.5 | φ43x74.0 | 200 |
| LM50SC | 1" | 50 | 2.0—22 | 0.3 | C | 14.6 | Manual | — | Manual | M34x0.5 | φ43x78.5 | 210 |

4Megapixel Fixed Focal

| | | | | | | | | | | | | |
|--------|----|------|--------|-----|---|------|--------|---|--------|-----------|----------|-----|
| LM6HC | 1" | 6 | 1.4—16 | 0.1 | C | 96.8 | Manual | — | Manual | — | φ54x56.2 | 215 |
| LM8HC | 1" | 8 | 1.4—16 | 0.1 | C | 79.7 | Manual | — | Manual | M55x0.75 | φ57x58 | 200 |
| LM12HC | 1" | 12.5 | 1.4—16 | 0.3 | C | 55.6 | Manual | — | Manual | M35x0.5 | φ42x52 | 150 |
| LM16HC | 1" | 16 | 1.4—16 | 0.3 | C | 44.3 | Manual | — | Manual | M35.5x0.5 | φ42x52.9 | 140 |
| LM25HC | 1" | 25 | 1.4—16 | 0.3 | C | 29.3 | Manual | — | Manual | M35.5x0.5 | φ42x43 | 125 |
| LM35HC | 1" | 35 | 1.4—16 | 0.3 | C | 20.9 | Manual | — | Manual | M35.5x0.5 | φ42x43 | 130 |
| LM50HC | 1" | 50 | 1.4—16 | 0.5 | C | 14.5 | Manual | — | Manual | M40.5x0.5 | φ47.5x48 | 200 |
| LM75HC | 1" | 75 | 1.8—16 | 1 | C | 9.7 | Manual | — | Manual | M46x0.75 | φ48x57 | 180 |

Megapixel SWIR Fixed Focal

| | | | | | | | | | | | | |
|-----------|----|------|--------|-----|---|------|--------|---|--------|-----------|------------|-----|
| LM8HC-SW | 1" | 8 | 1.4—16 | 0.1 | C | 79.7 | Manual | — | Manual | M55x0.75 | φ57 x 58 | 200 |
| LM12HC-SW | 1" | 12.5 | 1.4—16 | 0.3 | C | 55.6 | Manual | — | Manual | M27x0.5 | φ43 x 52 | 150 |
| LM16HC-SW | 1" | 16 | 1.4—16 | 0.3 | C | 44.3 | Manual | — | Manual | M35.5x0.5 | φ43 x 52.9 | 140 |
| LM25HC-SW | 1" | 25 | 1.4—16 | 0.3 | C | 29.3 | Manual | — | Manual | M35.5x0.5 | φ43 x 43 | 125 |
| LM35HC-SW | 1" | 35 | 1.4—16 | 0.3 | C | 20.9 | Manual | — | Manual | M35.5x0.5 | φ43 x 43 | 130 |
| LM50HC-SW | 1" | 50 | 1.4—16 | 0.5 | C | 14.5 | Manual | — | Manual | M40.5x0.5 | φ49 x 48 | 200 |

FA Industrial Lenses

| Model | Image Size | Focal Length (mm) | Iris Range (F) | M.O.D. (m) | Mount | H.Angle of View (°) | Operation | | | Filter Size | Size(DxHxL) (mm) | Weight (g) |
|-------|------------|-------------------|----------------|------------|-------|---------------------|-----------|------|-------|-------------|------------------|------------|
| | | | | | | | Iris | Zoom | Focus | | | |

10Megapixel Fixed Focal

| | | | | | | | | | | | | |
|-----------|------|-----|--------|-----|---|------|--------|---|--------|-----------|----------|-----|
| LM5JC10M | 2/3" | 5 | 1.8—16 | 0.1 | C | 82.2 | Manual | — | Manual | M46x0.75 | φ48x57.1 | 120 |
| LM8JC10M | 2/3" | 8.5 | 1.8—22 | 0.1 | C | 54 | Manual | — | Manual | M34x0.5 | φ36x56 | 115 |
| LM12JC10M | 2/3" | 12 | 1.8—11 | 0.1 | C | 39.1 | Manual | — | Manual | M25.5x0.5 | φ33x52.5 | 105 |
| LM16JC10M | 2/3" | 16 | 1.8—16 | 0.1 | C | 30 | Manual | — | Manual | M25.5x0.5 | φ33x47.5 | 90 |
| LM25JC10M | 2/3" | 25 | 1.8—16 | 0.1 | C | 20 | Manual | — | Manual | M25.5x0.5 | φ33x45.5 | 95 |
| LM35JC10M | 2/3" | 35 | 2.0—16 | 0.1 | C | 14.3 | Manual | — | Manual | M34x0.5 | φ43x49 | 160 |
| LM50JC10M | 2/3" | 50 | 2.8—16 | 0.1 | C | 10.1 | Manual | — | Manual | M30.5x0.5 | φ38x77 | 170 |

5Megapixel Fixed Focal

| | | | | | | | | | | | | |
|-----------|------|----|--------|------|---|------|--------|---|--------|-----------|------------|-----|
| LM12JC5M2 | 2/3" | 12 | 1.4—16 | 0.1 | C | 38.4 | Manual | — | Manual | M30.5x0.5 | φ38.5x61.7 | 160 |
| LM16JC5M2 | 2/3" | 16 | 1.4—16 | 0.1 | C | 29.9 | Manual | — | Manual | M30.5x0.5 | φ38.5x63.3 | 160 |
| LM25JC5M2 | 2/3" | 25 | 1.4—16 | 0.1 | C | 19.9 | Manual | — | Manual | M30.5x0.5 | φ38.5x59.9 | 140 |
| LM35JC5M2 | 2/3" | 35 | 1.6—16 | 0.18 | C | 14.3 | Manual | — | Manual | M35.5x0.5 | φ38.5x63.6 | 150 |

3Megapixel Fixed Focal

| | | | | | | | | | | | | |
|-----------|------|----|--------|------|---|------|--------|---|--------|---------|------------|----|
| LM8JC3M2 | 2/3" | 8 | 1.4—C | 0.1 | C | 56.5 | Manual | — | Manual | M27x0.5 | φ34x41.6 | 90 |
| LM12JC3M2 | 2/3" | 12 | 1.4—C | 0.15 | C | 38.3 | Manual | — | Manual | M27x0.5 | φ34x37 | 85 |
| LM16JC3M2 | 2/3" | 16 | 1.4—16 | 0.2 | C | 30.0 | Manual | — | Manual | M27x0.5 | φ33.5x36.5 | 85 |
| LM25JC3M2 | 2/3" | 25 | 1.4—16 | 0.2 | C | 19.6 | Manual | — | Manual | M27x0.5 | φ33.5x39.5 | 90 |
| LM35JC3M2 | 2/3" | 35 | 2.0—16 | 0.2 | C | 14.4 | Manual | — | Manual | M27x0.5 | φ34x36.5 | 70 |
| LM50JC3M2 | 2/3" | 50 | 2.8—22 | 0.2 | C | 9.6 | Manual | — | Manual | M27x0.5 | φ34x55 | 95 |

Megapixel Fixed Focal

| | | | | | | | | | | | | |
|---------|------|-----|--------|------|---|------|--------|---|--------|-----------|----------|-----|
| LM3NCM | 1/2" | 3.5 | 2.4—14 | 0.1 | C | 82.4 | Manual | — | Manual | M40.5x0.5 | φ42x38.2 | 75 |
| LM4NCM | 1/2" | 4.4 | 1.6—16 | 0.1 | C | 70.2 | Manual | — | Manual | M43xP0.75 | φ45x57.3 | 150 |
| LM6NCM | 1/2" | 6 | 1.2—16 | 0.1 | C | 56.2 | Manual | — | Manual | M30.5x0.5 | φ32x45.8 | 88 |
| LM5JCM | 2/3" | 5 | 2.8—16 | 0.15 | C | 82.4 | Manual | — | Manual | M40.5x0.5 | φ42x38.2 | 85 |
| LM8JCM | 2/3" | 8 | 1.4—C | 0.12 | C | 56.5 | Manual | — | Manual | M27x0.5 | φ34x41.6 | 83 |
| LM12JCM | 2/3" | 12 | 1.4—C | 0.15 | C | 38.3 | Manual | — | Manual | M27x0.5 | φ34x37 | 75 |
| LM16JCM | 2/3" | 16 | 1.4—16 | 0.2 | C | 30.0 | Manual | — | Manual | M25.5x0.5 | φ33x36.5 | 81 |
| LM25JCM | 2/3" | 25 | 1.4—16 | 0.2 | C | 19.6 | Manual | — | Manual | M27x0.5 | φ33x39.5 | 89 |
| LM35JCM | 2/3" | 35 | 2.0—16 | 0.2 | C | 14.4 | Manual | — | Manual | M27x0.5 | φ34x36.5 | 92 |
| LM50JCM | 2/3" | 50 | 2.8—22 | 0.2 | C | 9.6 | Manual | — | Manual | M27x0.5 | φ34x55 | 92 |

Large Format NIR

| | | | | | | | | | | | | |
|---------|-------|----|--------|-----|---|-----------|--------|---|--------|-----------|-------------|-----|
| LM50-IR | φ43.3 | 50 | 1.9—16 | 0.5 | F | 40.2x27.2 | Manual | — | Manual | M52xP0.75 | φ58.5x105.2 | 605 |
| LM65-IR | φ43.3 | 65 | 1.9—16 | 0.7 | F | 30.7x23.4 | Manual | — | Manual | M67xP0.75 | φ69x105.1 | 650 |

Line Scan

| | | | | | | | | | | | | |
|----------------|-------|----|--------|------|---|---|--------|---|--------|----------|------------|-----|
| LM28CLS (3CCD) | φ30 | 28 | 2.8—22 | 0.5 | F | — | Manual | — | Manual | M72x0.75 | φ75 x 108 | 482 |
| LM35CLS (3CCD) | φ30 | 35 | 2.8—22 | 0.5 | F | — | Manual | — | Manual | M62x0.75 | φ65 x 108 | 480 |
| LM50CLS (3CCD) | φ30 | 50 | 2.8—22 | 0.3 | F | — | Manual | — | Manual | M52x0.75 | φ58 x 71.4 | 358 |
| LM28LF | φ43.3 | 28 | 2.8—16 | 0.3 | F | — | Manual | — | Manual | M72x0.75 | φ75 x 98 | 500 |
| LM35LF | φ43.3 | 35 | 2.8—16 | 0.26 | F | — | Manual | — | Manual | M52x0.75 | φ54 x 71 | 420 |
| LM50LF | φ43.3 | 50 | 2.8—16 | 0.26 | F | — | Manual | — | Manual | M52x0.75 | φ54 x 77 | 460 |

NF-Mount

| | | | | | | | | | | | | |
|-------|------|-----|--------|-----|----|-------|--------|---|--------|---|----------|----|
| LM3NF | 1/3" | 2.7 | 1.8—16 | 0.1 | NF | 100.8 | Manual | — | Manual | — | φ21 x 27 | 26 |
| LM5NF | 1/3" | 4.5 | 1.8—11 | 0.1 | NF | 59.2 | Manual | — | Manual | — | φ21 x 31 | 35 |
| LM9NF | 1/3" | 9 | 1.8—11 | 0.1 | NF | 30.2 | Manual | — | Manual | — | φ21 x 34 | 40 |

FA Industrial Lenses

| Model | Image Size | Focal Length (mm) | Iris Range (F) | M.O.D. (m) | Mount | H.Angle of View (°) | Operation | | | Filter Size | Size(DxHxL) (mm) | Weight (g) |
|-------|------------|-------------------|----------------|------------|-------|---------------------|-----------|------|-------|-------------|------------------|------------|
| | | | | | | | Iris | Zoom | Focus | | | |

High Resolution Fixed Focal

| | | | | | | | | | | | | |
|---------|------|-----|--------|------|---|-------|--------|---|--------|-----------|------------|-----|
| LM6JC | 2/3" | 6 | 1.4-16 | 0.1 | C | 81.9 | Manual | — | Manual | — | φ30 x 32.8 | 63 |
| LM8JC | 2/3" | 8 | 1.4-16 | 0.15 | C | 64.2 | Manual | — | Manual | M27x0.5 | φ30 x 30 | 60 |
| LM12JC | 2/3" | 12 | 1.4-16 | 0.1 | C | 42.5 | Manual | — | Manual | M27x0.5 | φ30 x 31.5 | 63 |
| LM16JC | 2/3" | 16 | 1.4-16 | 0.12 | C | 30.5 | Manual | — | Manual | M27x0.5 | φ30 x 28 | 55 |
| LM25JC | 2/3" | 25 | 1.6-16 | 0.15 | C | 21.0 | Manual | — | Manual | M27x0.5 | φ30 x 28.5 | 58 |
| LM35JC | 2/3" | 35 | 1.6-16 | 0.2 | C | 14.4 | Manual | — | Manual | M30x0.5 | φ32 x 36.5 | 85 |
| LM50JC | 2/3" | 50 | 2.0-22 | 0.2 | C | 10.1 | Manual | — | Manual | M30x0.5 | φ32 x 39.5 | 88 |
| LM75JC | 2/3" | 75 | 2.5-22 | 0.2 | C | 6.7 | Manual | — | Manual | M34x0.5 | φ36 x 51 | 105 |
| LM100JC | 2/3" | 100 | 2.8-32 | 0.2 | C | 5.0 | Manual | — | Manual | M48.5x0.5 | φ40.5 x 70 | 150 |
| LM4NCL | 1/2" | 3.5 | 1.4-16 | 0.2 | C | 103.6 | Manual | — | Manual | — | φ31 x 30.5 | 73 |
| LM5NCL | 1/2" | 4.5 | 1.4-16 | 0.2 | C | 79.0 | Manual | — | Manual | — | φ31 x 29.5 | 71 |
| LM6NCL | 1/2" | 6 | 1.4-16 | 0.2 | C | 57.3 | Manual | — | Manual | M25.5x0.5 | φ31 x 34 | 60 |
| LM12NCL | 1/2" | 12 | 1.4-16 | 0.3 | C | 30.7 | Manual | — | Manual | M25.5x0.5 | φ31 x 29.5 | 70 |

Macro Zoom

| | | | | | | | | | | | | |
|---------|------|---------|-------|------|---|----------|--------|--------|--------|----------|-------------|-----|
| LMZ50M | 1/3" | 8.5-90 | 2.5-C | 0.15 | C | 31.3-3.2 | Manual | Manual | Manual | M48x0.75 | φ60 x 130 | 437 |
| LMZ68M | 1/2" | 8-48 | 1.0-C | 0.01 | C | 43.6-7.7 | Manual | Manual | Manual | M46x0.75 | φ48 x 97.3 | 280 |
| LMZ69M | 2/3" | 11.5-69 | 1.4-C | 0.01 | C | 41.9-7.3 | Manual | Manual | Manual | M46x0.75 | φ48 x 102.7 | 300 |
| LMZ45T3 | 2/3" | 18-108 | 2.5-C | 0.13 | C | 27.3-4.7 | Manual | Manual | Manual | M52x0.75 | φ62 x 171.7 | 595 |

Ruggedized Megapixel (JCM-V)

| | | | | | | | | | | | | |
|-----------|------|----|------------------|------|---|------|--------|---|--------|---------|------------|----|
| LM8JCM-V | 2/3" | 8 | 1.4 / 4 / 8 / 16 | 0.1 | C | 56.5 | Manual | — | Manual | M27x0.5 | φ33 x 41.6 | 88 |
| LM12JCM-V | 2/3" | 12 | 1.4 / 4 / 8 / 16 | 0.15 | C | 38.3 | Manual | — | Manual | M27x0.5 | φ33 x 37.0 | 75 |
| LM16JCM-V | 2/3" | 16 | 1.4 / 4 / 8 / 16 | 0.2 | C | 30.0 | Manual | — | Manual | M27x0.5 | φ33 x 36.5 | 77 |
| LM25JCM-V | 2/3" | 25 | 1.4 / 4 / 8 / 16 | 0.2 | C | 19.6 | Manual | — | Manual | M27x0.5 | φ33 x 39.5 | 83 |
| LM35JCM-V | 2/3" | 35 | 2 / 4 / 8 / 16 | 0.2 | C | 14.4 | Manual | — | Manual | M27x0.5 | φ33 x 37.8 | 73 |
| LM50JCM-V | 2/3" | 50 | 2.8 / 4 / 8 / 16 | 0.2 | C | 9.6 | Manual | — | Manual | M27x0.5 | φ33 x 56.2 | 85 |

Ruggedized Megapixel (HC-V)

| | | | | | | | | | | | | |
|----------|----|------|-------------------|-----|---|------|--------|---|--------|-----------|------------|-----|
| LM8HC-V | 1" | 8 | 1.4 / 2.8 / 4 / 8 | 0.1 | C | 79.4 | Manual | — | Manual | M55x0.75 | φ58 x 58 | 183 |
| LM12HC-V | 1" | 12.5 | 1.4 / 2.8 / 4 / 8 | 0.3 | C | 55.6 | Manual | — | Manual | M35.5x0.5 | φ43 x 51.5 | 130 |
| LM16HC-V | 1" | 16 | 1.4 / 2.8 / 4 / 8 | 0.3 | C | 44.3 | Manual | — | Manual | M35.5x0.5 | φ43 x 53 | 120 |
| LM25HC-V | 1" | 25 | 1.4 / 2.8 / 4 / 8 | 0.3 | C | 29.3 | Manual | — | Manual | M35.5x0.5 | φ43 x 43 | 104 |
| LM35HC-V | 1" | 35 | 1.4 / 2.8 / 4 / 8 | 0.3 | C | 20.9 | Manual | — | Manual | M35.5x0.5 | φ43 x 44.1 | 133 |
| LM50HC-V | 1" | 50 | 1.4 / 2.8 / 4 / 8 | 0.5 | C | 14.5 | Manual | — | Manual | M40.5x0.5 | φ43 x 48 | 170 |

Telecentric Lenses

| Model | Magnification | Image Size | Shooting Magnification | Objective N.A | W.D (mm) | Shooting Range(mm) | TV Distortion (%) | Back Focus in Air(mm) | Mount | Resolution | Size (mm) | Weight (g) |
|-------|---------------|------------|------------------------|---------------|----------|--------------------|-------------------|-----------------------|-------|------------|-----------|------------|
|-------|---------------|------------|------------------------|---------------|----------|--------------------|-------------------|-----------------------|-------|------------|-----------|------------|

2/3" Telecentric Macro Zoom

| | | | | | | | | | | | | |
|--------|----------|---------------|--------------|----------------|---------------|------------------------------------|---------------|------|---|-----------|-------------|-----|
| LM50TC | 0.3-1.0x | 8.8x6.6 (φ11) | 0.3x 1.0x | 0.038 0.100 | 193.4 81.8 | 29.5x22.2 (2/3") 8.8x6.6 (2/3") | -0.19 -0.1 | 22.0 | C | 120 lp/mm | φ56 x 115.7 | 317 |
|--------|----------|---------------|--------------|----------------|---------------|------------------------------------|---------------|------|---|-----------|-------------|-----|

4/3" Telecentric Macro Zoom

| | | | | | | | | | | | | |
|-----------|----------|-----------------|--------------|-------------|------------|--------------------------------------|------------|------|---|-----------|-------------|------|
| LM11138TC | 2.0x | 13.8x18.4 (φ23) | 2.0x | 0.2 | 80.6 | 9.20x6.90(4/3") | 0.1 | 14.7 | C | 120 lp/mm | φ64 x 151.0 | — |
| LM1119TC | 0.5-1.0x | 18.4x13.8 (φ23) | 0.5x 1.0x | 0.05 0.1 | 80 81.8 | 36.8x27.7 (4/3") 18.4x13.8 (4/3") | 0.1 0.1 | 14.7 | C | 120 lp/mm | φ82 x 151.5 | 1000 |

2/3" Telecentric 5 Megapixel Plus Series

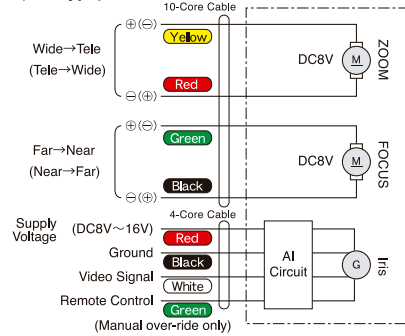
| | | | | | | | | | | | | |
|----------|-------------|---------------|--------|-------|-------|-----------------|--------|------|---|-----------|-------------|-----|
| LM1120TC | 3.45-4.4x | 8.8x6.6 (φ11) | 3.45x | 0.2 | 65.9 | 1.9x2.6(2/3") | 0.015 | 17.1 | C | 120 lp/mm | φ57 x 180 | 645 |
| | | | 4.0x | 0.2 | 65.9 | 1.7x2.2(2/3") | 0.003 | 24.5 | | | | |
| | | | 4.4x | 0.2 | 65.9 | 1.5x2.0(2/3") | -0.002 | 30 | | | | |
| LM1121TC | 1.725-2.2x | 8.8x6.6 (φ11) | 1.725x | 0.131 | 114.8 | 5.1x3.8 (2/3") | 0.011 | 55.8 | C | 120 lp/mm | φ48 x 147.5 | 420 |
| | | | 2.0x | 0.131 | 111.4 | 4.4x3.3 (2/3") | 0.004 | 67.7 | | | | |
| | | | 2.2x | 0.131 | 109.4 | 4.0x3.0 (2/3") | 0.001 | 76.3 | | | | |
| LM1122TC | 1.15-1.47x | 8.8x6.6 (φ11) | 1.15x | 0.101 | 111.6 | 7.6x5.7 (2/3") | -0.015 | 18.7 | C | 120 lp/mm | φ50 x 123.9 | 330 |
| | | | 1.3x | 0.101 | 111.6 | 6.6x5.0 (2/3") | -0.001 | 23.6 | | | | |
| | | | 1.47x | 0.101 | 111.6 | 6.5x4.5 (2/3") | 0.011 | 29.8 | | | | |
| LM1123TC | 0.69-0.88x | 8.8x6.6 (φ11) | 0.69x | 0.07 | 111.0 | 12.7x9.6 (2/3") | -0.001 | 34 | C | 120 lp/mm | φ50 x 121.5 | 290 |
| | | | 0.8x | 0.07 | 111.0 | 11.0x8.2 (2/3") | -0.009 | 28.8 | | | | |
| | | | 0.88x | 0.07 | 111.0 | 10.0x7.5 (2/3") | 0.005 | 25.3 | | | | |
| LM1125TC | 0.346-0.44x | 8.8x6.6 (φ11) | 0.346x | 0.04 | 112.7 | 19.1x25.4(2/3") | 0.02 | 17.6 | C | 120 lp/mm | φ51.5x142.3 | 395 |
| | | | 0.4x | 0.04 | 112.7 | 16.5x22.0(2/3") | -0.009 | 17 | | | | |
| | | | 0.44x | 0.04 | 112.7 | 15.0x20.0(2/3") | 0.01 | 16.5 | | | | |

Wiring Diagram for Motorized Zoom Auto Iris Lenses

N.B.

The following are wiring diagrams of our standard models. For other detailed information, see the instruction manual in individual box.

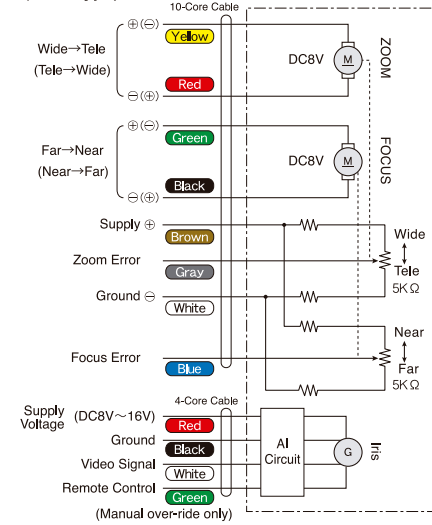
Auto iris with Motorized Zoom, Focus (AM Type)



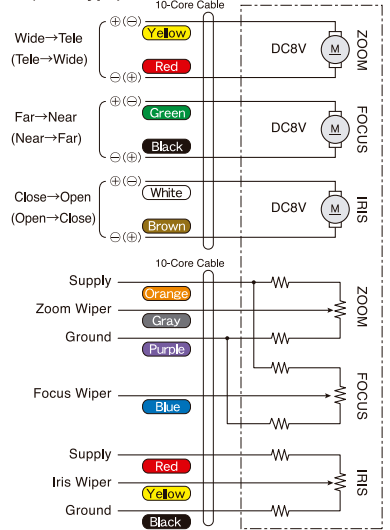
Zoom/Focus Motor Electrical Information

| | Z/F | Z/F | Z/F | Z/F |
|---------------------|-------------|--------------|--------------|-----------------|
| Input Voltage | DC6V-12V | DC6V-12V | DC6V-12V | DC6V-12V |
| Current Consumption | Max 60mA | Max 60mA | Max 60mA | Max 60mA |
| Speed (at DC8V) | approx 7sec | approx 10sec | approx 14sec | approx 11/28sec |
| Model No | LMZ111 | LMZ112 | LMZ123 | LMZ1000 |
| | LMZ110 | LMZ300 | LMZ0824 | LMZ20750 |
| | LMZ200 | LMVZ161604R | LMZ1236 | LMZ750 |
| | LMZ7527 | LMZ0812-IR | | LMZ375 |
| | LMZ1177-IR | LMZ25300-IR | | LMZ20550-IR |

AI, Motorized Zoom with Preset on Zoom, Focus (AMP Type)



Motorized Zoom 3 Motor Type (M3P Type)



Selection Guide for CCTV Lenses

1. Angle of View and Field of View

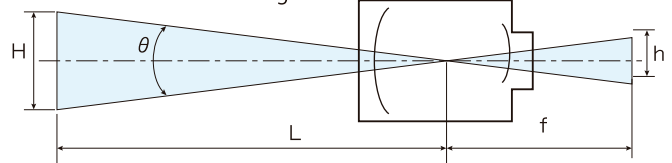
(A) The angle of view can be obtained by following formula.

$$\theta = 2 \tan^{-1} h/2f$$

(B) The Field of View can be obtained by following formula.

$$H = h L/f$$

θ : Angle of View
 h : Image Size
 f : Focal Length
 H : Field of View
 L : Object Distance



2. F-Number

The F-number is an index of the amount of light that passes through a lens. The smaller the number, the greater the amount of light.

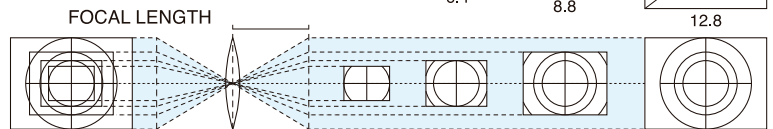
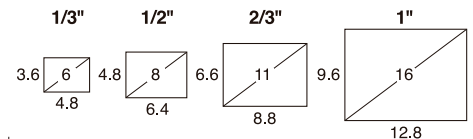
The relationship between the F-Number, focal length, and effective diameter can be calculated by the following formula. $F\text{-number} = f/A$ Where f =focal length, and A =effective diameter

3. Image Format Size (unit:mm)

○ Image sensor sizes are in a ratio of 1 : 0.69 : 0.5 : 0.38 i.e. 1/2" format is 50% of 1" format, 1/2" format is 75% of 2/3" format, 1/3" format is 75% of 1/2" format.

○ Even when the same lens is used, angles of view vary in terms of ratio between image sensor sizes. The smaller the format, the narrower the angle of view for any given lens.

○ When using a 1/2" lens for a 1/3" camera, the correlation list the right may help to select a 1/2" lens with an angle of view similar to that of a 1/3" lens.



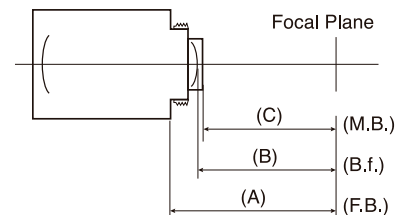
| Focal length of 1/2" lens | Focal length of 1/3" lens |
|---------------------------|------------------------------|
| $f=4\text{mm}$ | $f=3\text{mm}(2.8\text{mm})$ |
| $f=6\text{mm}$ | $f=4.5\text{mm}$ |
| $f=12\text{mm}$ | $f=9\text{mm}(8\text{mm})$ |

4. Flange Back & Back Focal Length

(A) Flange Back. The distance from a basic plane of a mount to a Focal Plane. The Flange Back of each mount is standardized as follows: C mount : 17.526mm CS mount : 12.5mm

(B) Back Focal Length. The distance from a center of a rear lens to a Focal Plane. When a lens is attached to a camera, the back focal length may be a standard to judge whether an end of rear lens hits any mechanical parts inside a camera.

(C) Mechanical Back Focal Length. The distance from any closest parts of a lens to a Focal Plane. When a lens is attached to a camera, the Mechanical Back Focal Length may be a standard to judge whether any rear parts of lens hits any mechanical parts inside a camera.



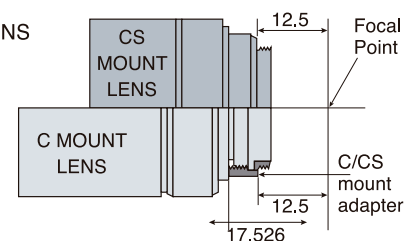
5. C Mount and CS Mount

Compatibility

| | C Mount Camera | CS Mount Camera |
|---------------|----------------|-----------------|
| C Mount Lens | OK | OK |
| CS Mount Lens | NO | OK |

When using a C mount lens for a CS mount camera, attach a C/CS mount adapter (thickness 5mm) between the lens and camera.

C / CS MOUNT LENS (unit:mm)





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