

PENTAX



CCTV

CERTIFIED
ISO 9001 & ISO 14001

Manual Iris Lens Auto Iris Lens
Special Auto / Manual Iris Monofocal Lens
Manual / Auto-Iris Pinhole Lens
Auto / Manual Vari-Focal and Zoom Lens
Special Zoom Lens CCTV Lens Accessory





PENTAX Precision Co., Ltd.

We, PENTAX Precision Co., Ltd. have over 50 years of experience manufacturing and marketing CCTV lenses on a worldwide basis. As a member of PENTAX group, a world renowned optical products manufacturer and leader in the field of optics and state of the art technology, we continually strive to provide the highest quality, highest performance, most extensive line lenses available.

We hope you will take advantage of the opportunity to increase your profitability with the finest ISO 9001 and ISO 14001 CCTV Lenses from the preferred industry leader, PENTAX.

● ISO 9001

This is a quality management and quality assurance system which insures all PENTAX lenses are produced under the strictest quality standards available. ISO 9001 includes guidelines for overall quality management, product development and manufacturing as well as marketing and servicing.

● ISO 14001

ISO 14001 is an environmental management system process. Our firm's commitment to a healthy, fiscally responsible coexistence with nature and the utmost respect for the environment has allowed us to achieve this prestigious certification.

We are honored to be the first lens manufacture in the CCTV industry to have been awarded both ISO 9001 and 14001 Certification.

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Monofocal Manual Iris Lens

1/4 FORMAT

| | | | | | | | | | | | |
|---------------|-----|---------|----|-------|--|--|--|-----------|----|--|---|
| QS210(C40206) | 2.2 | 1.0 - C | CS | 92.60 | | | | 36.8 36.3 | 44 | | 4 |
| QS310(C40301) | 3.0 | 1.0 - C | CS | 64.24 | | | | 36.8 33.8 | 40 | | 4 |
| QS610(C40601) | 6.0 | 1.0 - C | CS | 34.83 | | | | 36.8 33.8 | 37 | | 4 |

1/3 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|---------|----|-------|-------|--|--|-----------|----|----------------|---|
| TS212A(C70214) | 2.8 | 1.2 - C | CS | 71.54 | 94.30 | | | 36.8 36.3 | 44 | | 4 |
| TS320NX(C91665) | 3.6 | 2.0 | CS | 53.90 | 72.00 | | | 30 8 | 20 | FOR B/W CAMERA | |
| TS412A(C70409) | 4 | 1.2 - C | CS | 49.18 | 63.89 | | | 36.8 33.8 | 39 | | 4 |
| TS820NX(C91666) | 8 | 2.0 | CS | 23.90 | 31.40 | | | 30 8 | 18 | FOR B/W CAMERA | |
| TS812A(C70807) | 8 | 1.2 - C | CS | 25.05 | 33.33 | | | 36.8 33.8 | 34 | | 4 |

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|----------|----|-------|-------|-------|------------|---------|-----|------------------|---|
| HS316A(C60305) | 3.7 | 1.6 - C | CS | 53.54 | 71.02 | 93.67 | 30.5 P=0.5 | 32 35.7 | 34 | | 5 |
| HS614B(C60622) | 6 | 1.4 - C | CS | 33.86 | 44.55 | 57.81 | 30.5 P=0.5 | 32 35.7 | 32 | | 5 |
| HS1214D(C61217) | 12 | 1.4 - C | CS | 16.55 | 22.06 | 29.42 | 30.5 P=0.5 | 32 35.7 | 26 | | 5 |
| H416(C60402) | 4.2 | 1.6 - C | C | 47.87 | 64.27 | 86.77 | | 42 43.5 | 120 | | 5 |
| H612A(C60607) | 6 | 1.2 - C | C | 32.97 | 43.55 | 56.93 | 40.5 P=0.5 | 42 46 | 125 | LOCK SCREW EXTRA | 5 |
| H1212B(C61215) | 12 | 1.2 - 22 | C | 16.93 | 22.60 | 30.18 | 27.0 P=0.5 | 30 35.5 | 67 | LOCK SCREW EXTRA | 5 |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|------------------|------|----------|---|-------|-------|-------|-------------|-----------|-----|------------------|---|
| C418DX(C30405) | 4.8 | 1.8 - C | C | 41.68 | 55.11 | 72.37 | | 40.5 35.5 | 105 | LOCK SCREW EXTRA | 6 |
| B618CX-2(C20612) | 6.5 | 1.8 - C | C | 29.94 | 39.73 | 52.52 | | 48 42 | 120 | LOCK SCREW EXTRA | 6 |
| C814(C30808) | 8 | 1.4 - C | C | 25.15 | 33.31 | 43.88 | 40.5 P=0.5 | 42 58 | 160 | LOCK SCREW EXTRA | 6 |
| C815B(C30811) | 8.5 | 1.5 - C | C | 24.02 | 31.87 | 42.09 | 40.5 P=0.5 | 42 40 | 120 | LOCK SCREW EXTRA | 6 |
| B1214D-2(C21211) | 12.5 | 1.4 - C | C | 16.21 | 21.53 | 28.51 | 40.5 P=0.5 | 42 50 | 135 | LOCK SCREW EXTRA | 6 |
| B1218-2(C21212) | 12.5 | 1.8 - C | C | 16.48 | 21.90 | 29.01 | 40.5 P=0.5 | 42 40 | 95 | LOCK SCREW EXTRA | 6 |
| C1614A(C31630) | 16 | 1.4 - 22 | C | 12.70 | 16.91 | 22.48 | 27.0 P=0.5 | 30 33 | 58 | LOCK SCREW EXTRA | 7 |
| B2514D(C22525) | 25 | 1.4 - 22 | C | 8.23 | 10.97 | 14.62 | 27.0 P=0.5 | 30 37.3 | 76 | LOCK SCREW EXTRA | 7 |
| B2518(C22516) | 25 | 1.8 - C | C | 8.23 | 10.95 | 14.55 | 40.5 P=0.5 | 42 40 | 87 | LOCK SCREW EXTRA | 7 |
| B5014A(C25011) | 50 | 1.4 - C | C | 4.13 | 5.50 | 7.32 | 46.0 P=0.75 | 48 48 | 180 | LOCK SCREW EXTRA | 7 |
| B5018A-3(C25010) | 50 | 1.8 - C | C | 4.13 | 5.50 | 7.32 | 40.5 P=0.5 | 42 52.5 | 130 | LOCK SCREW EXTRA | 7 |
| B7514C(C27509) | 75 | 1.4 - C | C | 2.75 | 3.67 | 4.90 | 58.0 P=0.75 | 62 79 | 450 | LOCK SCREW EXTRA | 7 |

Machine Vision Lens

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|
| H1214-M(C61232) | 12 | 1.4 - 16 | C | 16.49 | 21.88 | 28.91 | 27.0 P=0.5 | 29.5 28.5 | 55 | LOCK SCREW | 8 |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|

2/3 FORMAT

| | | | | | | | | | | | |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|
| C1614-M(C31634) | 16 | 1.4 - 16 | C | 12.86 | 17.11 | 22.72 | 27.0 P=0.5 | 29.5 33.2 | 63 | LOCK SCREW | 8 |
| C2514-M(C32500) | 25 | 1.4 - 16 | C | 8.24 | 10.97 | 14.60 | 27.0 P=0.5 | 29.5 32 | 55 | LOCK SCREW | 8 |
| C3516-M(C33500) | 35 | 1.6 - 16 | C | 6.07 | 8.09 | 10.76 | 27.0 P=0.5 | 29.5 35.4 | 64 | LOCK SCREW | 8 |
| C5028-M(C35001) | 50 | 2.8 - 22 | C | 4.12 | 5.50 | 7.32 | 27.0 P=0.5 | 29.5 34 | 55 | LOCK SCREW | 8 |

Line-Scan Lens

| | | | | | | | | | | | |
|-----------------|----|----------|---|--------------------------|--|--|-----------|---------|-----|------------------------------|-----|
| YF3528(C52915F) | 35 | 2.8 - 22 | F | 64.4 (45mm Image Format) | | | 62 P=0.75 | 72 56.8 | 440 | NOT FOR PHOTOGRAPHIC CAMERAS | 9 |
| YK3528(C52915K) | 35 | 2.8 - 22 | K | 64.4 (45mm Image Format) | | | 62 P=0.75 | 72 57.8 | 440 | | (9) |
| YF5028(C52893F) | 50 | 2.8 - 22 | F | 47.6 (45mm Image Format) | | | 62 P=0.75 | 72 56.8 | 440 | | (9) |
| YK5028(C52893K) | 50 | 2.8 - 22 | K | 47.6 (45mm Image Format) | | | 62 P=0.75 | 72 57.8 | 440 | | (9) |

UV Lens (Ultraviolet Ray)

| | | | | | | | | | | | |
|---------------------|----|----------|---|------|-------|-------|------------|---------|----|------------------|---|
| H2520-UV(M(C62500)) | 25 | 2.0 - 16 | C | 8.24 | 10.98 | 14.62 | 27.0 P=0.5 | 29.5 46 | 78 | 200nm-1000nm Ray | 9 |
|---------------------|----|----------|---|------|-------|-------|------------|---------|----|------------------|---|

Pinhole Lens

1/3 FORMAT

| | | | | | | | | | | | |
|-----------------|---|----------|----|-------|-------|--|--|----------------|----|-------------|----|
| TS420P(C70404) | 4 | 2.0 - C | CS | 51.24 | 68.47 | | | 36.5 65.9 | 74 | MANUAL IRIS | 15 |
| TS420PE(C70403) | 4 | 2.0 - 64 | CS | 51.24 | 68.47 | | | 36.5 42.3 65.9 | 79 | DC IRIS | 15 |

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|-----------|----|-------|-------|-------|--|--------------|-----|-----------------|----|
| HS620P(C60613) | 6.2 | 2.0 - C | CS | 32.44 | 42.82 | 56.12 | | 29 88.1 | 67 | MANUAL IRIS | 15 |
| H620P(C60612) | 6.2 | 2.0 - C | C | 32.44 | 42.82 | 56.12 | | 29 83.1 | 63 | MANUAL IRIS | 15 |
| HS620PE(C60627) | 6.2 | 2.0 - 300 | CS | 32.44 | 42.82 | 56.12 | | 39 45.5 88.2 | 105 | VIDEO & DC IRIS | 15 |
| H620PE(C60626) | 6.2 | 2.0 - 300 | C | 32.44 | 42.82 | 56.12 | | 39 45.5 83.2 | 100 | VIDEO & DC IRIS | 15 |

2/3 FORMAT

| | | | | | | | | | | | |
|----------------|---|----------|---|-------|-------|-------|--|----------|-----|------------------|----|
| C934P(C30900) | 9 | 3.4 - 22 | C | 22.30 | 29.60 | 39.11 | | 34 163.8 | 175 | MANUAL IRIS | 16 |
| C934PL(C30901) | 9 | 3.4 - 22 | C | 22.30 | 29.60 | 39.11 | | | 210 | R/A, MANUAL IRIS | 16 |

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Monofocal Auto-Iris Lens

1/4 FORMAT

| | | | | | | | | | | | |
|----------------|-----|-----------|----|-------|--|--|--|----------------|----|-----------------|----|
| QS210E(C40202) | 2.2 | 1.0 - 200 | CS | 92.60 | | | | 36.8 43.5 36.3 | 54 | VIDEO & DC IRIS | 10 |
| QS310E(C40300) | 3.0 | 1.0 - 200 | CS | 64.24 | | | | 36.8 43.5 33.8 | 50 | VIDEO & DC IRIS | 10 |
| QS610E(C40600) | 6.0 | 1.0 - 200 | CS | 34.83 | | | | 36.8 43.5 33.8 | 47 | VIDEO & DC IRIS | 10 |

1/3 FORMAT

| | | | | | | | | | | | |
|----------------|-----|-----------|----|-------|-------|--|--|----------------|----|-----------------|----|
| TS212E(C70210) | 2.8 | 1.2 - 200 | CS | 71.54 | 94.30 | | | 36.8 43.5 36.3 | 54 | VIDEO & DC IRIS | 10 |
| TS412E(C70406) | 4 | 1.2 - 200 | CS | 49.18 | 63.89 | | | 36.8 43.5 33.8 | 49 | VIDEO & DC IRIS | 10 |
| TS812E(C70804) | 8 | 1.2 - 200 | CS | 25.05 | 33.33 | | | 36.8 43.5 33.8 | 44 | VIDEO & DC IRIS | 10 |

1/2 FORMAT

| | | | | | | | | | | | |
|------------------|-----|-----------|----|-------|-------|-------|-----------|----------------|-----|-----------------|----|
| HS316TE(C60310) | 3.7 | 1.6 - 90 | CS | 53.54 | 71.02 | 93.67 | 34 P=0.5 | 42.8 47.1 36.5 | 57 | VIDEO & DC IRIS | 11 |
| HS614TE(C60631) | 6 | 1.4 - 90 | CS | 33.86 | 44.55 | 57.81 | 34 P=0.5 | 42.8 47.1 36.5 | 60 | VIDEO & DC IRIS | 11 |
| HS1214TE(C61228) | 12 | 1.4 - 90 | CS | 16.55 | 22.06 | 29.42 | 34 P=0.5 | 42.8 47.1 36.5 | 46 | VIDEO & DC IRIS | 11 |
| HS316E(C60309) | 3.7 | 1.6 - 300 | CS | 53.54 | 71.02 | 93.67 | 34 P=0.5 | 42.8 47.1 36.5 | 57 | VIDEO & DC IRIS | 11 |
| HS614E(C60630) | 6 | 1.4 - 300 | CS | 33.86 | 44.55 | 57.81 | 34 P=0.5 | 42.8 47.1 36.5 | 60 | VIDEO & DC IRIS | 11 |
| HS1214E(C61227) | 12 | 1.4 - 300 | CS | 16.55 | 22.06 | 29.42 | 34 P=0.5 | 42.8 47.1 36.5 | 46 | VIDEO & DC IRIS | 11 |
| H416E(C60405) | 4.2 | 1.6 - 360 | C | 47.87 | 64.27 | 86.77 | | 46.5 50.5 45 | 135 | VIDEO & DC IRIS | 12 |
| H612E(C60625) | 6 | 1.2 - 360 | C | 32.97 | 43.55 | 56.93 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |
| H1212E(C61220) | 12 | 1.2 - 360 | C | 16.93 | 22.60 | 30.18 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|----------------|------|-----------|---|-------|-------|-------|-----------|----------------|-----|-----------------|----|
| C418E(C30407) | 4.8 | 1.8 - 360 | C | 41.27 | 54.57 | 71.65 | | 46.5 50.5 37.5 | 120 | VIDEO & DC IRIS | 12 |
| C814E(C30821) | 8 | 1.4 - 360 | C | 25.10 | 33.22 | 43.67 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |
| B1214E(C21223) | 12.5 | 1.4 - 360 | C | 16.22 | 21.55 | 28.54 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO & DC IRIS | 12 |
| C1614E(C31632) | 16 | 1.4 - 360 | C | 12.72 | 16.92 | 22.50 | 43 P=0.75 | 46.5 50.5 46.7 | 110 | VIDEO & DC IRIS | 13 |
| B2514E(C22527) | 25 | 1.4 - 360 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO & DC IRIS | 13 |
| B5018E(C25018) | 50 | 1.8 - 360 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO & DC IRIS | 13 |
| B7518E(C27513) | 75 | 1.8 - 360 | C | 2.76 | 3.67 | 4.90 | 49 P=0.75 | 62 70.5 | 300 | VIDEO & DC IRIS | 13 |

Ultra-High Speed Auto-Iris Lens

1/3 FORMAT

| | | | | | | | | | | | |
|--------------------|-----|------------|----|-------|-------|--|------------|------------|-----|---------|----|
| TS209E-ASP(C70204) | 2.8 | 0.95 - 180 | CS | 72.69 | 98.24 | | | 48 53 46.9 | 140 | DC IRIS | 14 |
| TS407E-ASP(C70405) | 4 | 0.75 - 180 | CS | 48.39 | 62.55 | | 40.5 P=0.5 | 48 53 53.1 | 145 | DC IRIS | 14 |
| TS807E-ASP(C70803) | 8 | 0.75 - 180 | CS | 25.07 | 33.31 | | 40.5 P=0.5 | 48 53 46.9 | 135 | DC IRIS | 14 |

Mega-Pixel Auto-Iris Lens

1/1.8 FORMAT

| | | | | | | | | | | | |
|-----------------|---|-----------|---|-------------|-------------|---------------|------------|--------------|-----|-----------------|----|
| H612E-M(C60632) | 6 | 1.2 - 200 | C | 44.23 (1/3) | 58.70 (1/2) | 65.40 (1/1.8) | 40.5 P=0.5 | 47 52.5 53.1 | 170 | VIDEO & DC IRIS | 14 |
| H912E-M(C60900) | 9 | 1.2 - 200 | C | 29.65 (1/3) | 39.38 (1/2) | 43.90 (1/1.8) | 40.5 P=0.5 | 47 52.5 51.6 | 160 | VIDEO & DC IRIS | 14 |

Manual Override (Remote-Control Iris) Lens

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|-----------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| H416ER(C60404) | 4.2 | 1.6 - 360 | C | 47.87 | 64.27 | 86.77 | | 46.5 50.5 45 | 135 | VIDEO IRIS | (12) |
| H612ER(C60624) | 6 | 1.2 - 360 | C | 32.97 | 43.55 | 56.93 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |
| H1212ER(C61219) | 12 | 1.2 - 360 | C | 16.93 | 22.60 | 30.18 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|-----------------|------|-----------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| C418ER(C30406) | 4.8 | 1.8 - 360 | C | 41.27 | 54.57 | 71.65 | | 46.5 50.5 37.5 | 120 | VIDEO IRIS | (12) |
| C814ER(C30820) | 8 | 1.4 - 360 | C | 25.10 | 33.22 | 43.67 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |
| B1214ER(C21221) | 12.5 | 1.4 - 360 | C | 16.21 | 21.53 | 28.51 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO IRIS | (12) |
| C1614ER(C31631) | 16 | 1.4 - 360 | C | 12.70 | 16.91 | 22.48 | 43 P=0.75 | 46.5 50.5 46.7 | 110 | VIDEO IRIS | (13) |
| B2514ER(C22526) | 25 | 1.4 - 360 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO IRIS | (13) |
| B5018ER(C25017) | 50 | 1.8 - 360 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO IRIS | (13) |

High Sensitivity Auto-Iris (F1000/2000) Lens

1 FORMAT

| | | | | | | | | | | | |
|---------------------|------|------------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| B1214E-2000(C21224) | 12.5 | 1.4 - 2000 | C | 16.21 | 21.53 | 28.51 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO IRIS | (12) |
| B2514E-2000(C22528) | 25 | 1.4 - 2000 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO IRIS | (13) |
| B5018E-1000(C25019) | 50 | 1.8 - 1000 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO IRIS | (13) |
| B7518E-1000(C27514) | 75 | 1.8 - 1000 | C | 2.76 | 3.67 | 4.90 | 49 P=0.75 | 62 70.5 | 300 | VIDEO IRIS | (13) |

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Manual Iris Vari-Focal Lens

1/4 FORMAT

| | | | | | | | | | | | |
|------------------|---------|---------|----|-------------|--|--|------------|---------|----|-------------|----|
| Q52V2212 | 2.2-4.5 | 1.2 - C | CS | 94.48-51.88 | | | | | | COMING SOON | 17 |
| Q52V2812(C40207) | 2.8-5.8 | 1.2 - C | CS | 76.22-36.40 | | | 30.5 P=0.5 | 36 43.5 | 45 | | 17 |

1/3 FORMAT

| | | | | | | | | | | | |
|------------------|-------|---------|----|-------------|-------------|--|------------|---------|----|-----------|----|
| TS2V214(C70213) | 2.8-6 | 1.4 - C | CS | 72.46-35.15 | 96.94-46.76 | | | 36 43.2 | 47 | | 18 |
| TS2V314B(C70313) | 3.5-8 | 1.4 - C | CS | 58.74-26.55 | 79.83-35.44 | | 30.5 P=0.5 | 36 43.5 | 43 | DAY&NIGHT | 18 |
| TS2V616(C70612) | 6-12 | 1.6 - C | CS | 34.92-17.21 | 47.22-22.97 | | 30.5 P=0.5 | 36 43.5 | 43 | | 18 |

Auto-Iris Vari-Focal Lens

1/4 FORMAT

| | | | | | | | | | | | |
|-------------------|---------|-----------|----|-------------|--|--|------------|----------------|----|-----------------|----|
| Q52V2212E | 2.2-4.5 | 1.2 - 200 | CS | 94.48-51.88 | | | | | | COMING SOON | 17 |
| Q52V2812E(C40205) | 2.8-5.8 | 1.2 - 200 | CS | 76.22-36.40 | | | 30.5 P=0.5 | 40.4 45.7 43.5 | 57 | VIDEO & DC IRIS | 17 |

1/3 FORMAT

| | | | | | | | | | | | |
|-------------------|---------|-----------|----|--------------|--------------|--|------------|----------------|-----|--------------------------|----|
| TS2V114E(C70100) | 1.6-3.4 | 1.4 - 64 | CS | 180.00-64.89 | 180.00-89.55 | | | 38.3 44.7 56.7 | 140 | FISH EYE, DC IRIS | 19 |
| TS2V214AE(C70220) | 2.8-6 | 1.4 - 300 | CS | 72.26-35.35 | 96.70-47.04 | | | 40.4 45.7 43.2 | 59 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS2V314BE(C70312) | 3.5-8 | 1.4 - 300 | CS | 58.74-26.55 | 79.83-35.44 | | 30.5 P=0.5 | 40.4 45.7 43.5 | 59 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS2V616AE(C70622) | 6-12 | 1.6 - 300 | CS | 34.98-17.23 | 47.37-23.01 | | 30.5 P=0.5 | 40.4 45.7 43.5 | 53 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS10V518E(C70508) | 5-50 | 1.8 - 360 | CS | 37.80-4.14 | 50.00-5.52 | | | 44.5 50.8 61.5 | 140 | DC IRIS | 19 |

Manual Zoom Lens

1/3 FORMAT

| | | | | | | | | | | | |
|---------------|--------|-----------|----|------------|------------|--|-----------|-----------|-----|-----------------|----|
| TS6ZE(C70605) | 6.3-38 | 1.2 - 512 | CS | 31.26-5.59 | 41.12-7.43 | | 49 P=0.75 | 57.5 77.8 | 320 | VIDEO & DC IRIS | 20 |
|---------------|--------|-----------|----|------------|------------|--|-----------|-----------|-----|-----------------|----|

1/2 FORMAT

| | | | | | | | | | | | |
|----------------|------|-----------|---|------------|------------|------------|-----------|----------|-----|-----------------|----|
| H6Z810(C60812) | 8-48 | 1.0 - 22 | C | 24.92-4.42 | 32.99-5.86 | 43.26-7.73 | 55 P=0.75 | 57 95 | 430 | MANUAL IRIS | 20 |
| H6ZBE(C60811) | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 69 64 95 | 465 | VIDEO & DC IRIS | 20 |

2/3 FORMAT

| | | | | | | | | | | | |
|-----------------|---------|-----------|---|------------|------------|------------|-----------|-------|-----|-----------------|----|
| C6Z1218(C31204) | 12.5-75 | 1.8 - 22 | C | 16.08-2.75 | 21.40-3.66 | 28.44-4.87 | 49 P=0.75 | 51 90 | 320 | MANUAL IRIS | 20 |
| C6ZE(C31219) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 68 90 | 385 | VIDEO & DC IRIS | 20 |

Motorized Zoom Lens

1/4 FORMAT

| | | | | | | | | | | | |
|----------------|--------|-----------|----|------------|--|--|-----------|------------|-----|-----------------|----|
| Q56ZME(C40400) | 4.6-28 | 1.0 - 250 | CS | 41.64-7.50 | | | 49 P=0.75 | 65 72.8 77 | 430 | VIDEO & DC IRIS | 21 |
|----------------|--------|-----------|----|------------|--|--|-----------|------------|-----|-----------------|----|

1/3 FORMAT

| | | | | | | | | | | | |
|---------------------|--------|-----------|----|------------|------------|--|-----------|--------------|------|-----------------|----|
| TS6ZME(C70600) | 6.3-38 | 1.2 - 360 | CS | 31.26-5.59 | 41.12-7.43 | | 49 P=0.75 | 58 63.5 78 | 410 | VIDEO & DC IRIS | 22 |
| TS10ZME(C70500) | 5.8-58 | 1.2 - 360 | CS | 33.77-3.62 | 44.07-4.78 | | 49 P=0.75 | 64.6 70.3 85 | 380 | VIDEO & DC IRIS | 22 |
| TS10ZME-P(C70501)* | 5.8-58 | 1.2 - 360 | CS | 33.77-3.62 | 44.07-4.78 | | 49 P=0.75 | 64.6 70.3 85 | 430 | VIDEO & DC IRIS | 22 |
| TS15ZAME(C70624) | 6-90 | 1.2 - 430 | CS | 32.96-2.33 | 43.48-3.08 | | 62 P=0.75 | 78 88.5 119 | 760 | VIDEO & DC IRIS | 23 |
| TS15ZAME-P(C70627)* | 6-90 | 1.2 - 430 | CS | 32.96-2.33 | 43.48-3.08 | | 62 P=0.75 | 78 88.5 119 | 770 | VIDEO & DC IRIS | 23 |
| TS20ZME(C70900) | 9-180 | 1.2 - 510 | CS | 22.61-1.15 | 30.28-1.53 | | 95 P=1.0 | 116 135 216 | 2590 | VIDEO IRIS | 23 |
| TS20ZME-P(C70903)* | 9-180 | 1.2 - 510 | CS | 22.61-1.15 | 30.28-1.53 | | 95 P=1.0 | 116 135 216 | 2620 | VIDEO IRIS | 23 |

1/2 FORMAT

| | | | | | | | | | | | |
|--------------------|----------|------------|----|------------|------------|------------|-----------|---------------|------|-------------------------|----|
| HS6ZME(C60806) | 8-48 | 1.4 - 360 | CS | 24.81-4.39 | 32.78-5.82 | 42.88-7.69 | 49 P=0.75 | 58 63.5 78 | 400 | VIDEO & DC IRIS | 24 |
| H6ZBME(C60809) | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 64 74.5 97 | 530 | VIDEO & DC IRIS | 24 |
| H6ZBME-P(C60810)* | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 64 74.5 97 | 540 | VIDEO & DC IRIS | 24 |
| HS10ZME(C60700) | 7.5-75 | 1.4 - 360 | CS | 26.15-2.83 | 34.52-3.75 | 45.05-4.95 | 58 P=0.75 | 67 75 112 | 580 | VIDEO & DC IRIS | 25 |
| H10ZME(C60701) | 7.5-75 | 1.2 - 512 | C | 26.45-2.84 | 34.94-3.77 | 45.63-4.99 | 62 P=0.75 | 70 80.5 121.5 | 715 | VIDEO & DC IRIS | 25 |
| H10ZME-P(C60702)* | 7.5-75 | 1.2 - 512 | C | 26.45-2.84 | 34.94-3.77 | 45.63-4.99 | 62 P=0.75 | 70 80.5 121.5 | 740 | VIDEO & DC IRIS | 25 |
| H15ZAME(C60826) | 8-120 | 1.6 - 1000 | C | 24.76-1.76 | 32.85-2.34 | 43.37-3.09 | 62 P=0.75 | 78 88.5 134 | 800 | VIDEO & DC IRIS | 26 |
| H15ZAME-P(C60829)* | 8-120 | 1.6 - 1000 | C | 24.76-1.76 | 32.85-2.34 | 43.37-3.09 | 62 P=0.75 | 78 88.5 134 | 810 | VIDEO & DC IRIS | 26 |
| H20ZME(C61221) | 12-240 | 1.6 - 720 | C | 17.17-0.88 | 22.95-1.17 | 30.78-1.56 | 95 P=1.0 | 116 135 216 | 2590 | VIDEO IRIS | 26 |
| H20ZME-P(C61224)* | 12-240 | 1.6 - 720 | C | 17.17-0.88 | 22.95-1.17 | 30.78-1.56 | 95 P=1.0 | 116 135 216 | 2620 | VIDEO IRIS | 26 |
| H55ZME-F(C61233) | 12 -1320 | 4.0 - 360 | C | 17.17-0.16 | 23.18-0.21 | 31.65-0.28 | 105 P=1.0 | 155 138 355 | 5400 | VIDEO IRIS, 2X EXTENDER | 27 |

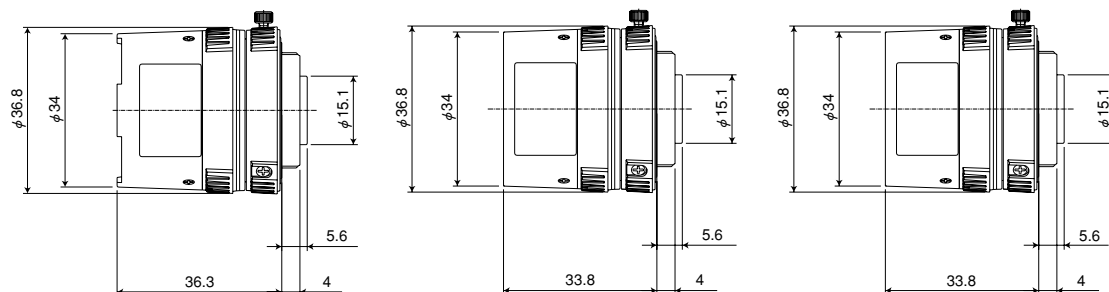
2/3 FORMAT

| | | | | | | | | | | | |
|--------------------|----------|------------|---|------------|------------|------------|-----------|-----------------|------|----------------|----|
| C6Z1218M3(C31211) | 12.5-75 | 1.8 - C | C | 16.06-2.75 | 21.40-3.66 | 28.44-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 820 | MOTORIZED IRIS | 28 |
| C6ZAME(C31220) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 620 | VIDEO IRIS | 28 |
| C6ZME-P(C31221) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 655 | VIDEO IRIS | 28 |
| C10ZAME(C31002) | 10.5-105 | 1.4 - 1000 | C | 18.97-2.02 | 25.24-2.68 | 33.49-3.56 | 72 P=0.75 | 121 109.5 149.5 | 1380 | VIDEO IRIS | 29 |
| C10ZAME-P(C31003)* | 10.5-105 | 1.4 - 1000 | C | 18.97-2.02 | 25.24-2.68 | 33.49-3.56 | 72 P=0.75 | 121 109.5 149.5 | 1420 | VIDEO IRIS | 29 |
| C14ZME(C31009) | 10-140 | 1.9 - 720 | C | 19.89-1.52 | 26.41-2.02 | 34.96-2.68 | 86 P=1.0 | 128 118.6 165 | 2000 | VIDEO IRIS | 29 |
| C14ZME-P(C31010)* | 10-140 | 1.9 - 720 | C | 19.89-1.52 | 26.41-2.02 | 34.96-2.68 | 86 P=1.0 | 128 118.6 165 | 2040 | VIDEO IRIS | 29 |

Manual Override option is available on the models asterisked (*)

1/4 Format Manual Iris

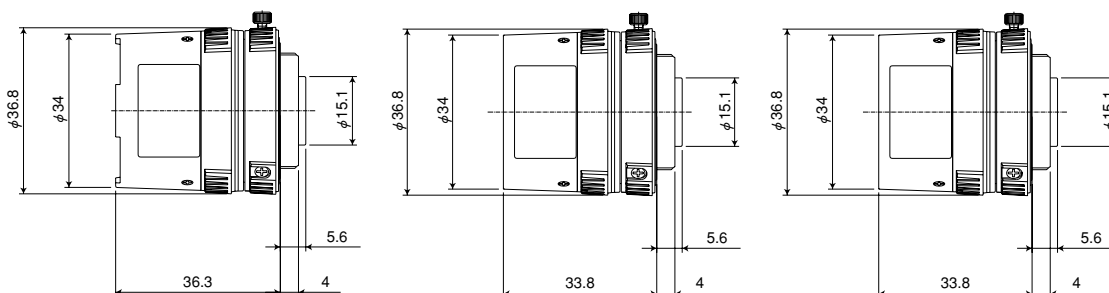
Unit: mm



| | QS210 (C40206) | QS310 (C40301) | QS610 (C40601) |
|----------------------|----------------|----------------|----------------|
| Format Size | 1/4 | 1/4 | 1/4 |
| Focal Length | 2.2mm | 3.0mm | 6.0mm |
| Max. Aperture Ratio | 1 : 1.0 | 1 : 1.0 | 1 : 1.0 |
| Iris Range | F1.0 Close | F1.0 Close | F1.0 Close |
| Horizontal | 92.60 | 64.24 | 34.83 |
| Angle of View | 1/3 | | |
| (Degrees) | 1/2 | | |
| Min. Object Distance | 0.15m | 0.15m | 0.2m |
| Back Focal Length | 7.76mm | 7.75mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 44g | 40g | 37g |
| Remarks | | | |

1/3 Format Manual Iris

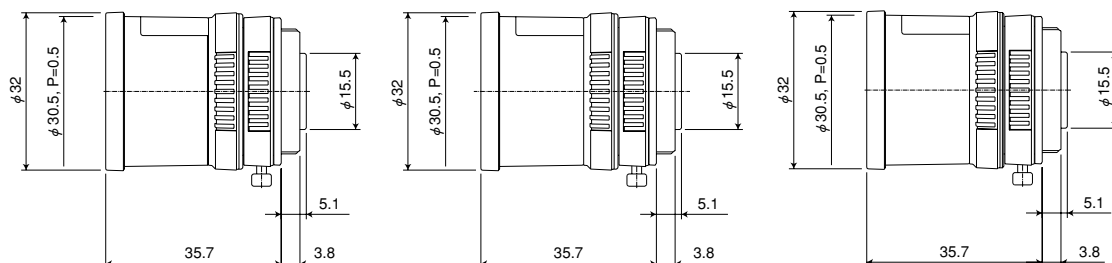
Unit: mm



| | TS212A (C70214) | TS412A (C70409) | TS812A (C70807) |
|----------------------|-----------------|-----------------|-----------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.2 Close | F1.2 Close | F1.2 Close |
| Horizontal | 71.54 | 49.18 | 25.05 |
| Angle of View | 1/3 | | |
| (Degrees) | 1/2 | | |
| Min. Object Distance | 0.3m | 0.2m | 0.3m |
| Back Focal Length | 7.67mm | 8.01mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 44g | 39g | 34g |
| Remarks | | | |

1/2 Format Manual Iris

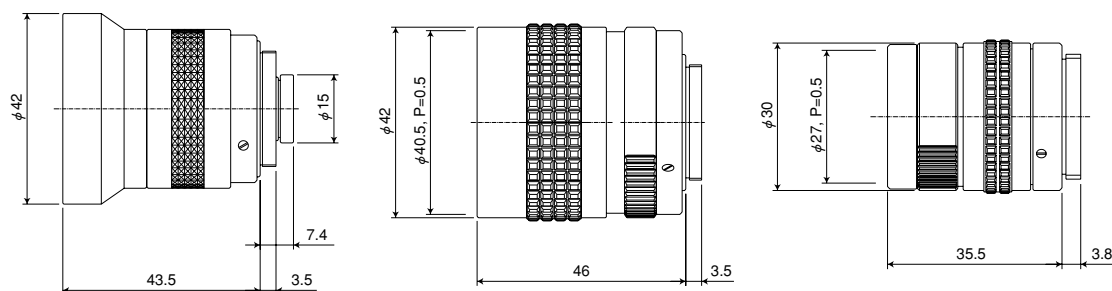
Unit: mm



| | HS316A (C60305) | HS614B (C60622) | HS1214D (C61217) |
|----------------------|-----------------|-----------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 Close | F1.4 Close | F1.4 Close |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.3m | 0.8m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 30.5mm P=0.5mm | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 34g | 32g | 26g |
| Remarks | | | |

1/2 Format Manual Iris

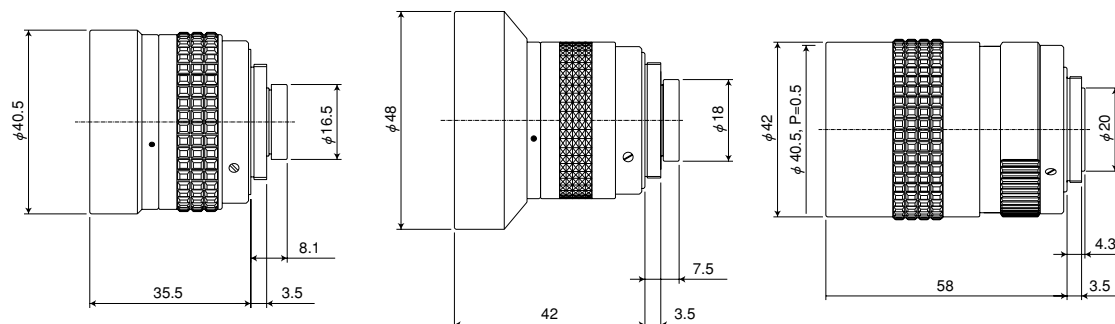
Unit: mm



| | H416 (C60402) | H612A (C60607) | H1212B (C61215) |
|----------------------|---------------|------------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 4.2mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.6 Close | F1.2 Close | F1.2 22 |
| Horizontal 1/4 | 47.87 | 32.97 | 16.93 |
| Angle of View 1/3 | 64.27 | 43.55 | 22.60 |
| (Degrees) 1/2 | 86.77 | 56.93 | 30.18 |
| Min. Object Distance | 0.2m | 0.2m | 0.2m |
| Back Focal Length | 10.42mm | 14.31mm | 13.87mm |
| Filter size | | 40.5mm P=0.5mm | 27mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 125g | 67g |
| Remarks | | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

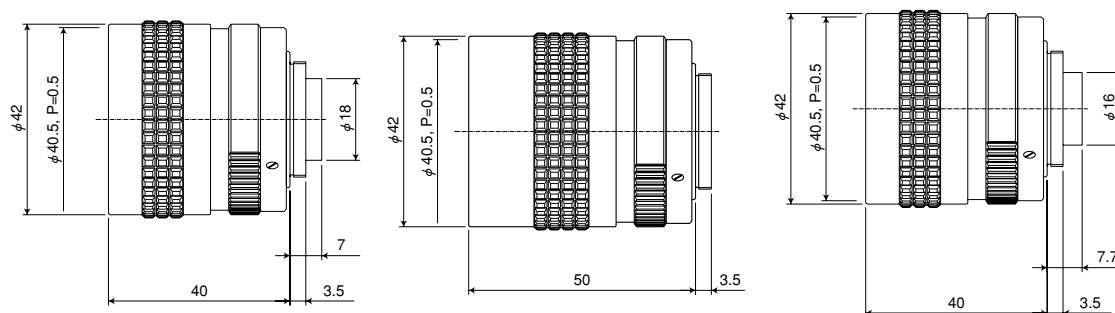
Unit: mm



| | C418DX (C30405) | B618CX-2 (C20612) | C814 (C30808) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 2/3 | 1 | 2/3 |
| Focal Length | 4.8mm | 6.5mm | 8mm |
| Max. Aperture Ratio | 1 : 1.8 | 1 : 1.8 | 1 : 1.4 |
| Iris Range | F1.8 Close | F1.8 Close | F1.4 Close |
| Horizontal 1/4 | 41.68 | 29.94 | 25.15 |
| Angle of View 1/3 | 55.11 | 39.73 | 33.31 |
| (Degrees) 1/2 | 72.37 | 52.52 | 43.88 |
| Min. Object Distance | 0.3m | 0.2m | 0.2m |
| Back Focal Length | 9.7mm | 10.19mm | 14.6mm |
| Filter size | | | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 105g | 120g | 160g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

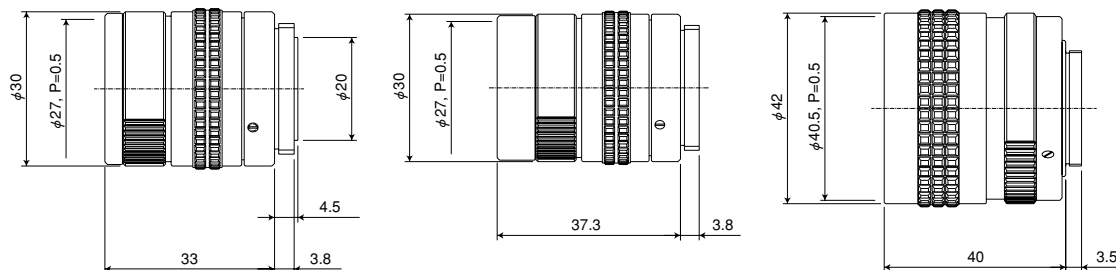
Unit: mm



| | C815B (C30811) | B1214D-2 (C21211) | B1218-2 (C21212) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 8.5mm | 12.5mm | 12.5mm |
| Max. Aperture Ratio | 1 : 1.5 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.5 Close | F1.4 Close | F1.8 Close |
| Horizontal 1/4 | 24.02 | 16.21 | 16.48 |
| Angle of View 1/3 | 31.87 | 21.53 | 21.90 |
| (Degrees) 1/2 | 42.09 | 28.51 | 29.01 |
| Min. Object Distance | 0.2m | 0.3m | 0.3m |
| Back Focal Length | 10.9mm | 14.4mm | 10.1mm |
| Filter size | 40.5mm P=0.5mm | 40.5mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 135g | 95g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

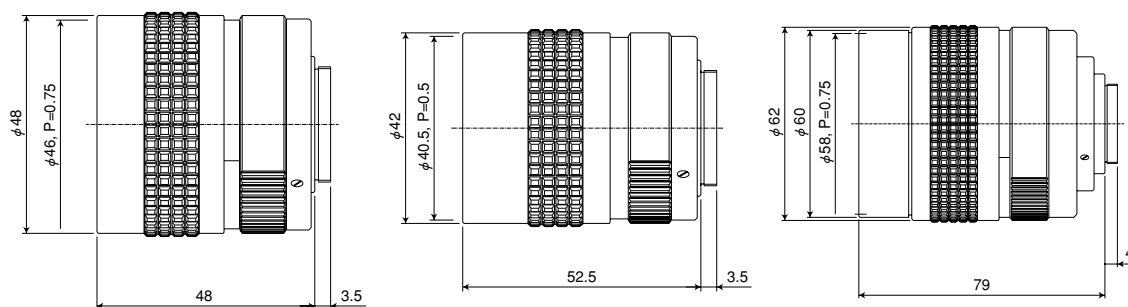
Unit: mm



| | C1614A (C31630) | B2514D (C22525) | B2518 (C22516) |
|----------------------|------------------|------------------|------------------|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 16mm | 25mm | 25mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.4 22 | F1.4 22 | F1.8 Close |
| Horizontal 1/4 | 12.70 | 8.23 | 8.23 |
| Angle of View 1/3 | 16.91 | 10.97 | 10.95 |
| (Degrees) 1/2 | 22.48 | 14.62 | 14.55 |
| Min. Object Distance | 0.3m | 0.3m | 0.6m |
| Back Focal Length | 13.2mm | 14.98mm | 14.9mm |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 58g | 76g | 87g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

1 Format Manual Iris

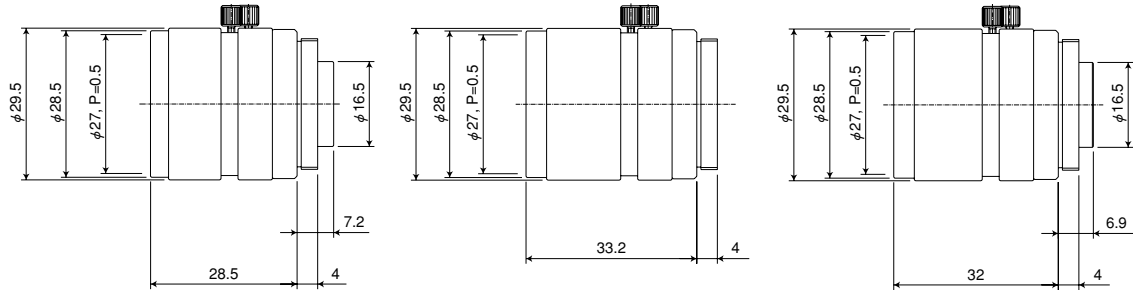
Unit: mm



| | B5014A (C25011) | B5018A-3 (C25010) | B7514C (C27509) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 1 | 1 | 1 |
| Focal Length | 50mm | 50mm | 75mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.8 | 1 : 1.4 |
| Iris Range | F1.4 Close | F1.8 Close | F1.4 Close |
| Horizontal 1/4 | 4.13 | 4.13 | 2.75 |
| Angle of View 1/3 | 5.50 | 5.50 | 3.67 |
| (Degrees) 1/2 | 7.32 | 7.32 | 4.90 |
| Min. Object Distance | 1m | 1m | 1.2m |
| Back Focal Length | 18.1mm | 31.7mm | 18.5mm |
| Filter size | 46mm P=0.75mm | 40.5mm P=0.5mm | 58mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 180g | 130g | 450g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

Manual Iris for Machine Vision

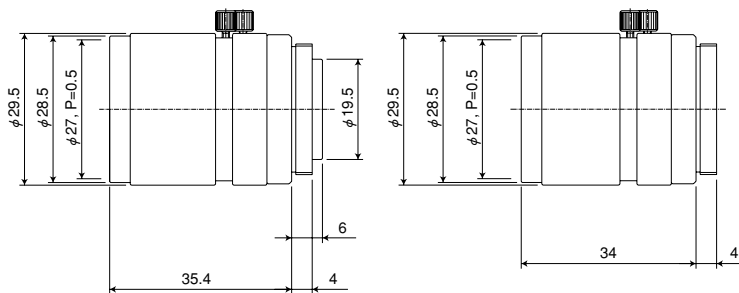
Unit: mm



| | H1214-M (C61232) | C1614-M (C31634) | C2514-M (C32500) |
|----------------------|---|---|---|
| Format Size | 1/2 | 2/3 | 2/3 |
| Focal Length | 12mm | 16mm | 25mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.4 16 | F1.4 16 | F1.4 16 |
| Horizontal 1/4 | 16.49 | 12.86 | 8.24 |
| Angle of View 1/3 | 21.88 | 17.11 | 10.97 |
| (Degrees) 1/2 | 28.91 | 22.72 | 14.60 |
| Min. Object Distance | 0.25m | 0.25m | 0.25m |
| Back Focal Length | 11.50mm | 14.61mm | 11.50mm |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | 27mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 55g | 63g | 55g |
| Remarks | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application |

Manual Iris for Machine Vision

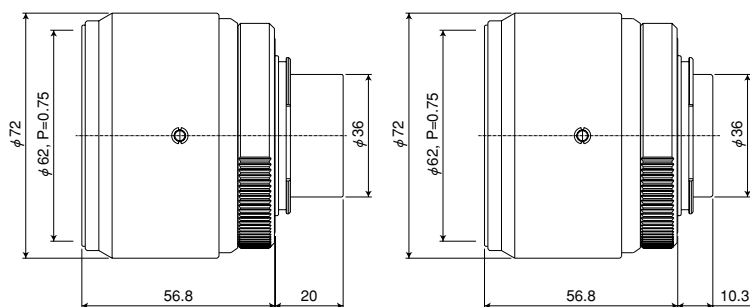
Unit: mm



| | C3516-M (C33500) | C5028-M (C35001) | |
|----------------------|---|---|--|
| Format Size | 2/3 | 2/3 | |
| Focal Length | 35mm | 50mm | |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 2.8 | |
| Iris Range | F1.6 16 | F2.8 22 | |
| Horizontal 1/4 | 6.07 | 4.12 | |
| Angle of View 1/3 | 8.09 | 5.50 | |
| (Degrees) 1/2 | 10.76 | 7.32 | |
| Min. Object Distance | 0.4m | 0.9m | |
| Back Focal Length | 11.85mm | 21.03mm | |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 64g | 55g | |
| Remarks | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application | |

Manual Iris for Line-Scan Cameras

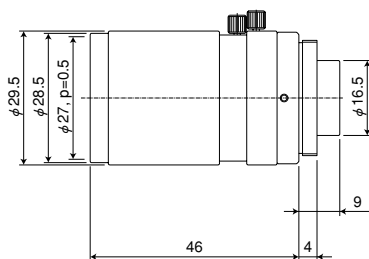
Unit: mm



| | YF3528 (C52915F) | YF5028 (C52893F) | |
|------------------------------------|--|--|--|
| Format Size | 45mm Image Circle | 45mm Image Circle | |
| Focal Length | 35mm | 50mm | |
| Max. Aperture Ratio | 1 : 2.8 | 1 : 2.8 | |
| Iris Range | F2.8 22 | F2.8 22 | |
| Horizontal Angle of View (Degrees) | 64.40 (45mm Image Format) | 47.60 (45mm Image Format) | |
| Min. Object Distance | 0.19m | 0.25m | |
| Back Focal Length | 33.22mm | 36.99mm | |
| Filter size | 62mm P=0.75mm | 62mm P=0.75mm | |
| Mount (Flange back) | F-Mount | F-Mount | |
| Weight | 440g | 440g | |
| Remarks | Lock Screw, Click-stop Iris For Close-Up application K-Mount: YK3528 (C52915K) | Lock Screw, Click-stop Iris For Close-Up application K-Mount: YK5028 (C52893K) | |

1/2 Format Manual Iris for UV (Ultraviolet) Cameras

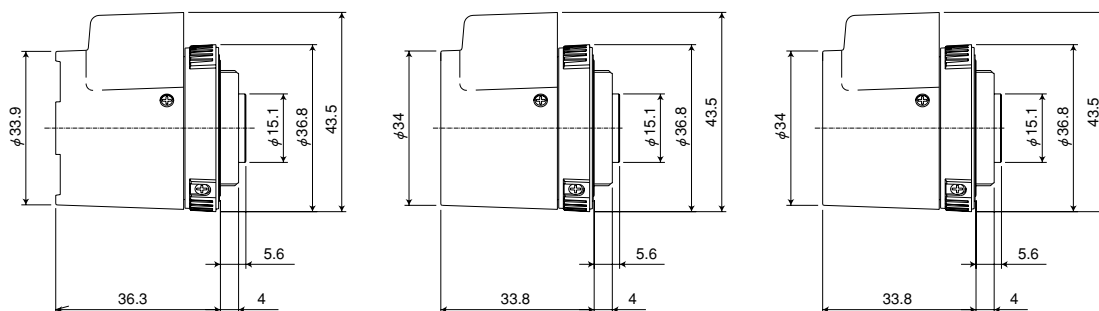
Unit: mm



| | H2520-UVM (C62500) | | |
|------------------------------------|---|--|--|
| Format Size | 1/2 | | |
| Focal Length | 25mm | | |
| Max. Aperture Ratio | 1 : 2.0 | | |
| Iris Range | F2.0 16 | | |
| Horizontal Angle of View (Degrees) | 8.24 | | |
| Min. Object Distance | 0.25m | | |
| Back Focal Length | 12.01mm (330nm) | | |
| Filter size | 27mm P=0.5mm | | |
| Mount (Flange back) | C (17.526mm) | | |
| Weight | 78g | | |
| Remarks | Wave Length: 200nm more than 1,000nm (280nm 365nm for up to 2M pixels UV cameras) For Close-Up application | | |

1/4 Format Auto-Iris

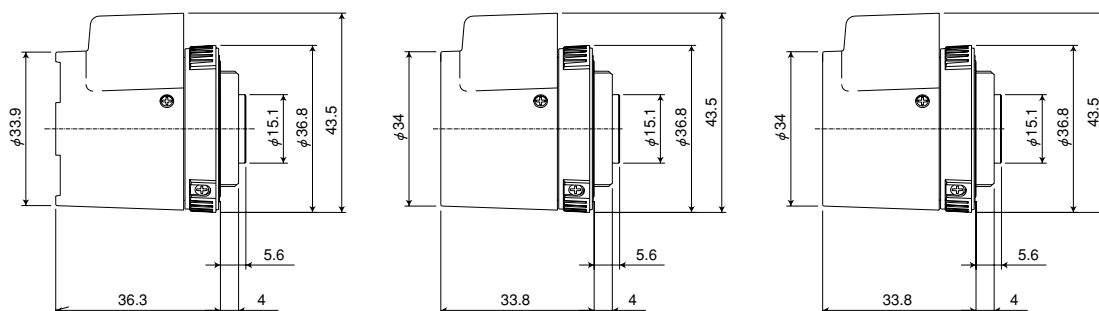
Unit: mm



| | QS210E (C40202) | QS310E (C40300) | QS610E (C40600) |
|------------------------------------|-----------------|-----------------|-----------------|
| Format Size | 1/4 | 1/4 | 1/4 |
| Focal Length | 2.2mm | 3.0mm | 6.0mm |
| Max. Aperture Ratio | 1 : 1.0 | 1 : 1.0 | 1 : 1.0 |
| Iris Range | F1.0 200 | F1.0 200 | F1.0 200 |
| Horizontal Angle of View (Degrees) | 92.60 | 64.24 | 34.83 |
| Min. Object Distance | 0.15m | 0.15m | 0.2m |
| Back Focal Length | 7.76mm | 7.75mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 54g | 50g | 47g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/3 Format Auto-Iris

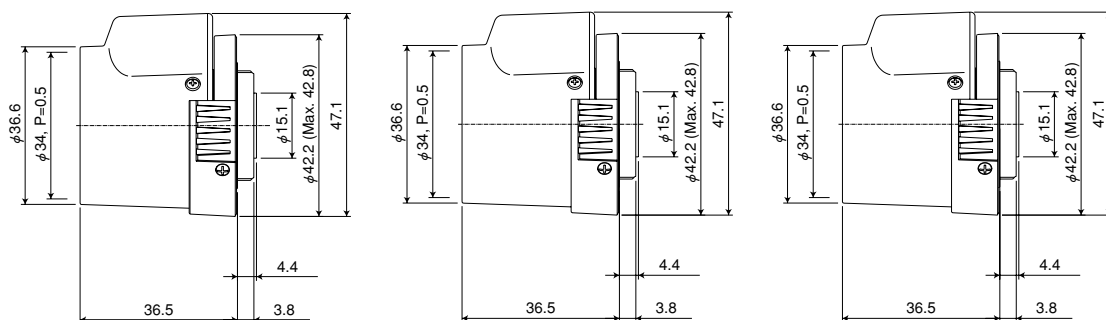
Unit: mm



| | TS212E (C70210) | TS412E (C70406) | TS812E (C70804) |
|------------------------------------|-----------------|-----------------|-----------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.2 200 | F1.2 200 | F1.2 200 |
| Horizontal Angle of View (Degrees) | 71.54 | 49.18 | 25.05 |
| Min. Object Distance | 0.3m | 0.2m | 0.2m |
| Back Focal Length | 7.67mm | 8.01mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 54g | 49g | 44g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

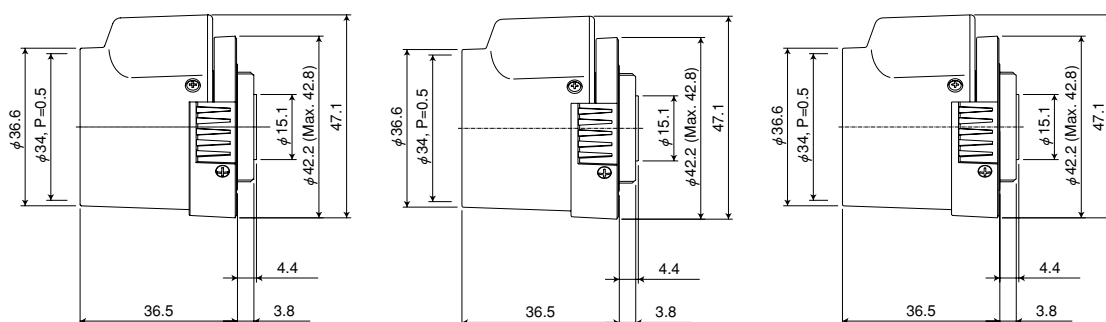
Unit: mm



| | HS316TE (C60310) | HS614TE (C60631) | HS1214TE (C61228) |
|----------------------|------------------|------------------|-------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 90 | F1.4 90 | F1.4 90 |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.2m | 0.5m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 34mm P=0.5mm | 34mm P=0.5mm | 34mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 57g | 60g | 46g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

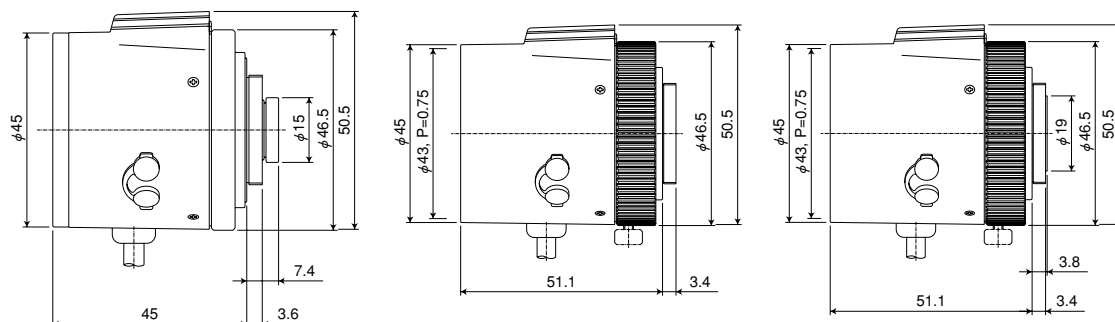
Unit: mm



| | HS316E (C60309) | HS614E (C60630) | HS1214E (C61227) |
|----------------------|-----------------|-----------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 300 | F1.4 300 | F1.4 300 |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.2m | 0.5m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 34mm P=0.5mm | 34mm P=0.5mm | 34mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 57g | 60g | 46g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

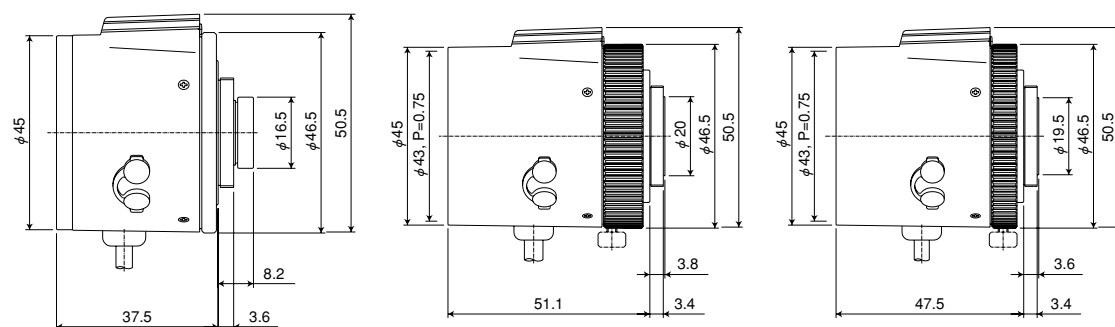
Unit: mm



| | H416E (C60405) | H612E (C60625) | H1212E (C61220) |
|----------------------|---|---|--|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 4.2mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.6 360 | F1.2 360 | F1.2 360 |
| Horizontal 1/4 | 47.87 | 32.97 | 16.93 |
| Angle of View 1/3 | 64.27 | 43.55 | 22.60 |
| (Degrees) 1/2 | 86.77 | 56.93 | 30.18 |
| Min. Object Distance | 0.2m | 0.2m | 0.3m |
| Back Focal Length | 10.4mm | 14.3mm | 13.9mm |
| Filter size | | 43mm P=0.75mm | 43mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 135g | 140g | 140g |
| Remarks | Video & DC Iris Manual Override: H416ER (C60404) | Video & DC Iris Manual Override: H612ER (C60624) | Video & DC Iris Manual Override: H1212ER (C61219) |

2/3, 1 Format Auto-Iris

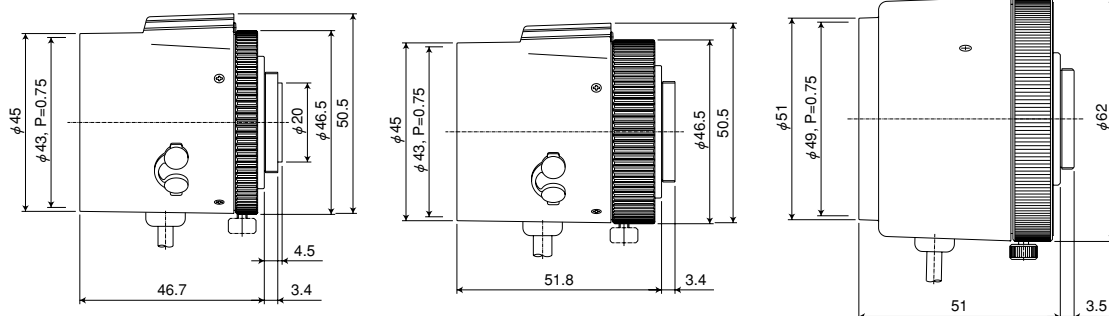
Unit: mm



| | C418E (C30407) | C814E (C30821) | B1214E (C21223) |
|----------------------|---|---|---|
| Format Size | 2/3 | 2/3 | 1 |
| Focal Length | 4.8mm | 8mm | 12.5mm |
| Max. Aperture Ratio | 1 : 1.8 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.8 360 | F1.4 360 | F1.4 360 |
| Horizontal 1/4 | 41.27 | 25.10 | 16.22 |
| Angle of View 1/3 | 54.57 | 33.22 | 21.55 |
| (Degrees) 1/2 | 71.65 | 43.67 | 28.54 |
| Min. Object Distance | 0.3m | 0.2m | 0.3m |
| Back Focal Length | 9.71mm | 14.5mm | 14.4mm |
| Filter size | | 43mm P=0.75mm | 43mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 140g | 140g |
| Remarks | Video & DC Iris Manual Override: C418ER (C30406) | Video & DC Iris Manual Override: C814ER (C30820) | Video & DC Iris Manual Override: B1214ER (C21221) F1.4-2000: B1214E-2000 (C21224) |

2/3, 1 Format Auto-Iris

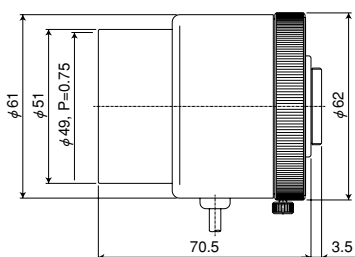
Unit: mm



| | C1614E (C31632) | B2514E (C22527) | B5018E (C25018) |
|----------------------|--|---|---|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 16mm | 25mm | 50mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.4 360 | F1.4 360 | F1.8 360 |
| Horizontal 1/4 | 12.72 | 8.23 | 4.13 |
| Angle of View 1/3 | 16.92 | 10.97 | 5.50 |
| (Degrees) 1/2 | 22.50 | 14.62 | 7.32 |
| Min. Object Distance | 0.5m | 0.9m | 1m |
| Back Focal Length | 13.2mm | 14.98mm | 31.7mm |
| Filter size | 43mm P=0.75mm | 43mm P=0.75mm | 49mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 110g | 140g | 230g |
| Remarks | Video & DC Iris Manual Override: C1614ER (C31631) | Video & DC Iris Manual Override: B2514ER (C22526) F1.4-2000: B2514E-2000 (C22528) | Video & DC Iris Manual Override: B5018ER (C25017) F1.8-1000: B5018E-1000 (C25019) |

1 Format Auto-Iris

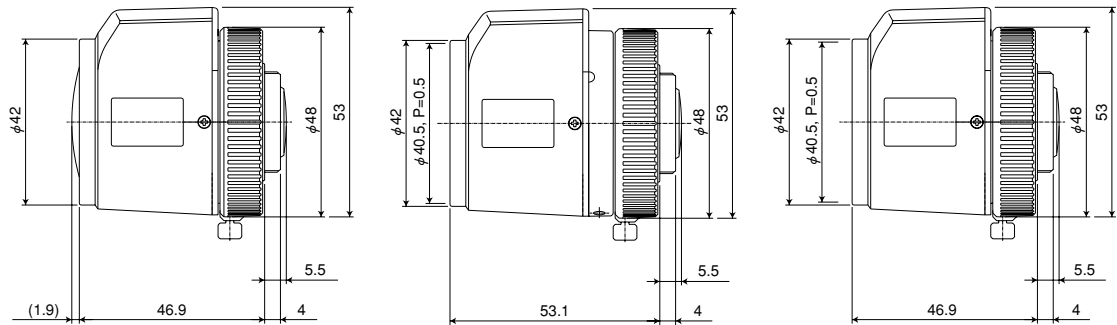
Unit: mm



| | B7518E (C27513) | | |
|----------------------|--|--|--|
| Format Size | 1 | | |
| Focal Length | 75mm | | |
| Max. Aperture Ratio | 1 : 1.8 | | |
| Iris Range | F1.8 360 | | |
| Horizontal 1/4 | 2.76 | | |
| Angle of View 1/3 | 3.67 | | |
| (Degrees) 1/2 | 4.90 | | |
| Min. Object Distance | 2.5m | | |
| Back Focal Length | 28.3mm | | |
| Filter size | 49mm P=0.75mm | | |
| Mount (Flange back) | C (17.526mm) | | |
| Weight | 300g | | |
| Remarks | Video & DC Iris F1.8-1000: B7518E-1000 (C27514) | | |

1/3 Format Ultra-High Speed Auto-Iris

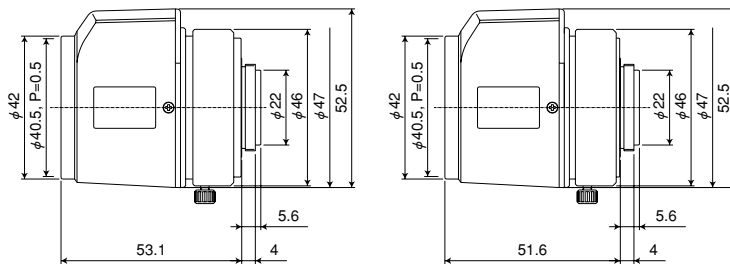
Unit: mm



| | TS209E-ASP (C70204) | TS407E-ASP (C70405) | TS807E-ASP (C70803) |
|----------------------|---------------------|---------------------|---------------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 0.95 | 1 : 0.75 | 1 : 0.75 |
| Iris Range | F0.95 180 | F0.75 180 | F0.75 180 |
| Horizontal 1/4 | 72.69 | 48.39 | 25.07 |
| Angle of View 1/3 | 98.24 | 62.55 | 33.31 |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 7.51mm | 7.51mm | 7.98mm |
| Filter size | | 40.5mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 140g | 145g | 135g |
| Remarks | DC Iris | DC Iris | DC Iris |

1/1.8 Format Mega-Pixel Auto-Iris

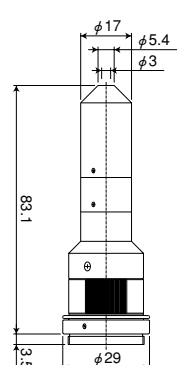
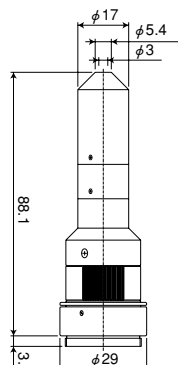
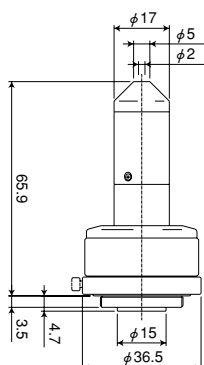
Unit: mm



| | H612E-M (C60632) | H912E-M (C60900) | |
|----------------------|--|--|--|
| Format Size | 1/1.8 | 1/1.8 | |
| Focal Length | 6mm | 9mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 200 | F1.2 200 | |
| Horizontal 1/3 | 44.23 | 29.65 | |
| Angle of View 1/2 | 58.70 | 39.38 | |
| (Degrees) 1/1.8 | 65.40 | 43.90 | |
| Min. Object Distance | 0.12m | 0.2m | |
| Back Focal Length | 12.13mm | 12.22mm | |
| Filter size | 40.5mm P=0.5mm | 40.5mm P=0.5mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 170g | 160g | |
| Remarks | Video & DC Iris Up to 3M pixels cameras | Video & DC Iris Up to 3M pixels cameras | |

1/3, 1/2 Format Manual Iris Pinhole

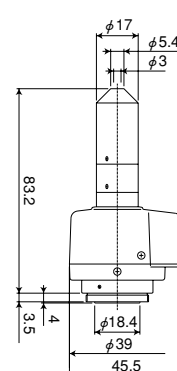
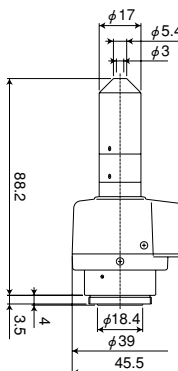
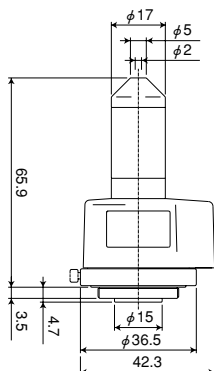
Unit: mm



| | TS420P (C70404) | HS620P (C60613) | H620P (C60612) |
|-----------------------------|------------------|------------------|------------------|
| Format Size | 1/3 | 1/2 | 1/2 |
| Focal Length | 4mm | 6.2mm | 6.2mm |
| Max. Aperture Ratio | 1 : 2.0 | 1 : 2.0 | 1 : 2.0 |
| Iris Range | F2.0 Close | F2.0 Close | F2.0 Close |
| Horizontal 1/4 | 51.24 | 32.44 | 32.44 |
| Angle of View 1/3 (Degrees) | 68.47 | 42.82 | 42.82 |
| 1/2 | | 56.12 | 56.12 |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 8.55mm | 14.23mm | 14.23mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | C (17.526mm) |
| Weight | 74g | 67g | 63g |
| Remarks | Straight pinhole | Straight pinhole | Straight pinhole |

1/3, 1/2 Format Auto-Iris Pinhole

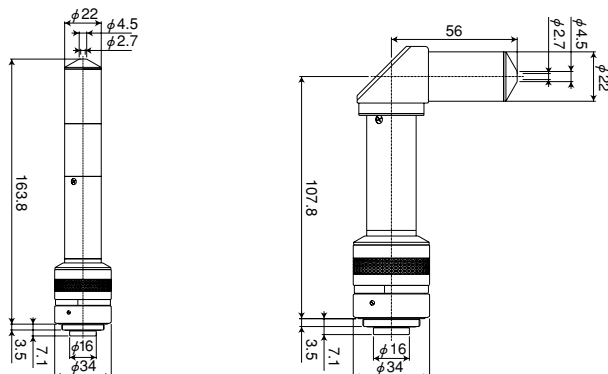
Unit: mm



| | TS420PE (C70403) | HS620PE (C60627) | H620PE (C60626) |
|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|
| Format Size | 1/3 | 1/2 | 1/2 |
| Focal Length | 4mm | 6.2mm | 6.2mm |
| Max. Aperture Ratio | 1 : 2.0 | 1 : 2.0 | 1 : 2.0 |
| Iris Range | F2.0 64 | F2.0 300 | F2.0 300 |
| Horizontal 1/4 | 51.24 | 32.44 | 32.44 |
| Angle of View 1/3 (Degrees) | 68.47 | 42.82 | 42.82 |
| 1/2 | | 56.12 | 56.12 |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 8.55mm | 14.23mm | 14.23mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | C (17.526mm) |
| Weight | 79g | 105g | 100g |
| Remarks | DC Iris Straight pinhole | Video & DC Iris Straight pinhole | Video & DC Iris Straight pinhole |

2/3 Format Manual Iris Pinhole

Unit: mm

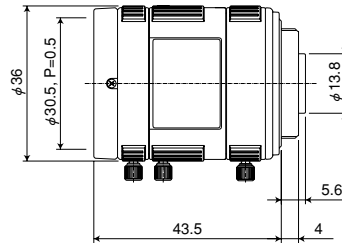


| | C934P (C30900) | C934PL (C30901) | |
|----------------------|------------------|---------------------|--|
| Format Size | 2/3 | 2/3 | |
| Focal Length | 9mm | 9mm | |
| Max. Aperture Ratio | 1 : 3.4 | 1 : 3.4 | |
| Iris Range | F3.4 22 | F3.4 22 | |
| Horizontal 1/4 | 22.30 | 22.30 | |
| Angle of View 1/3 | 29.60 | 29.60 | |
| (Degrees) 1/2 | 39.11 | 39.11 | |
| Min. Object Distance | 0.3m | 0.3m | |
| Back Focal Length | 11.8mm | 11.8mm | |
| Filter size | | | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 175g | 210g | |
| Remarks | Straight Pinhole | Right Angle Pinhole | |

1/4 Format Manual Iris Vari-Focal

Unit: mm

Coming Soon

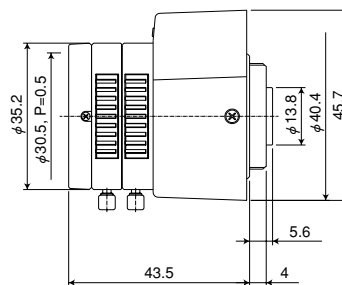


| | QS2V2212 | QS2V2812 (C40207) | |
|----------------------|-------------|-------------------|--|
| Format Size | 1/4 | 1/4 | |
| Focal Length | 2.2 4.5mm | 2.8 5.8mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 Close | F1.2 Close | |
| Horizontal 1/4 | 94.48 51.88 | 76.22 36.40 | |
| Angle of View 1/3 | | | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | | 0.3m | |
| Back Focal Length | | Min. 7.50mm | |
| Filter size | | 30.5mm P=0.5mm | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | |
| Weight | | 45g | |
| Remarks | | | |

1/4 Format Auto-Iris Vari-Focal

Unit: mm

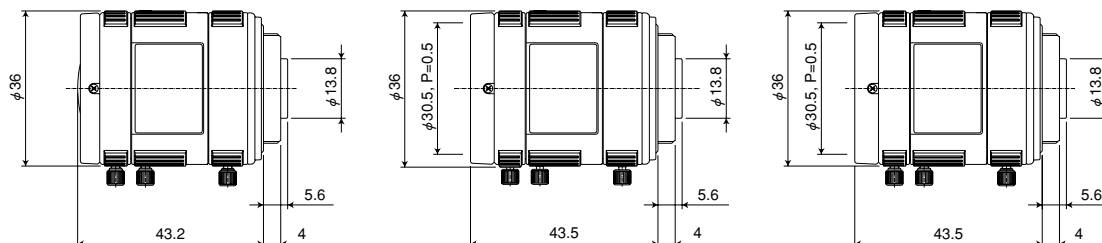
Coming Soon



| | QS2V2212E | QS2V2812E (C40205) | |
|----------------------|-------------|--------------------|--|
| Format Size | 1/4 | 1/4 | |
| Focal Length | 2.2 4.5mm | 2.8 5.8mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 200 | F1.2 200 | |
| Horizontal 1/4 | 94.48 51.88 | 76.22 36.40 | |
| Angle of View 1/3 | | | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | | 0.3m | |
| Back Focal Length | | Min. 7.50mm | |
| Filter size | | 30.5mm P=0.5mm | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | |
| Weight | | 57g | |
| Remarks | | Video & DC Iris | |

1/3 Format Manual Iris Vari-Focal

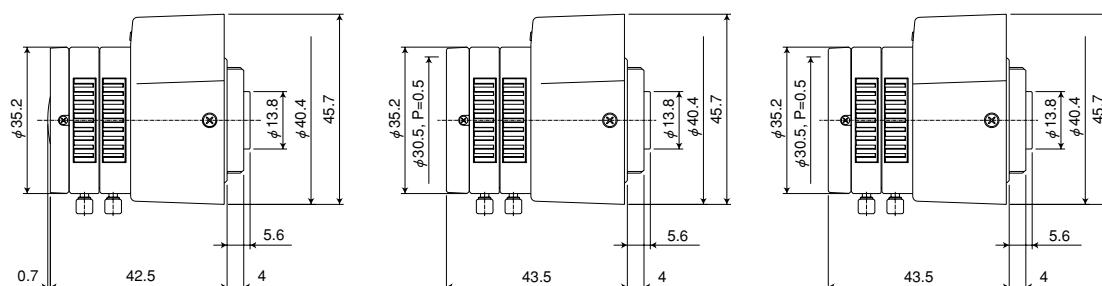
Unit: mm



| | TS2V214 (C70213) | TS2V314B (C70313) | TS2V616 (C70612) |
|-----------------------------|------------------|--------------------|------------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8 6mm | 3.5 8mm | 6 12mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.6 |
| Iris Range | F1.4 Close | F1.4 Close | F1.6 Close |
| Horizontal 1/4 | 72.46 35.15 | 58.74 26.55 | 34.92 17.21 |
| Angle of View 1/3 (Degrees) | 96.94 46.76 | 79.83 35.44 | 47.22 22.97 |
| Min. Object Distance | 0.3m | 0.35m | 1.0m |
| Back Focal Length | Min. 7.54mm | Min. 7.65mm | Min. 7.79mm |
| Filter size | | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 47g | 43g | 43g |
| Remarks | | Day & Night optics | |

1/3 Format Auto-Iris Vari-Focal

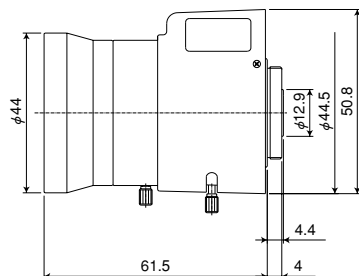
Unit: mm



| | TS2V214AE (C70220) | TS2V314BE (C70312) | TS2V616AE (C70622) |
|-----------------------------|---|---|---|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8 6mm | 3.5 8mm | 6 12mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.6 |
| Iris Range | F1.4 300 | F1.4 300 | F1.6 300 |
| Horizontal 1/4 | 72.26 35.35 | 58.74 26.55 | 34.98 17.23 |
| Angle of View 1/3 (Degrees) | 96.70 47.04 | 79.83 35.44 | 47.37 23.01 |
| Min. Object Distance | 0.3m | 0.35m | 1.0m |
| Back Focal Length | Min. 7.54mm | Min. 7.65mm | Min. 7.79mm |
| Filter size | | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 59g | 59g | 53g |
| Remarks | Video Iris DC-Iris: TS2V214AED Day & Night optics | Video Iris DC-Iris: TS2V314BED Day & Night optics | Video Iris DC-Iris: TS2V616AED Day & Night optics |

1/3 Format Auto-Iris Vari-Focal

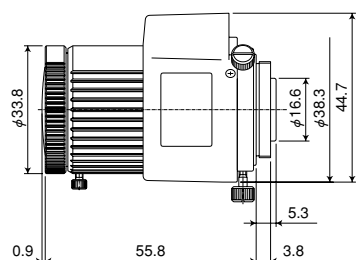
Unit: mm



| | TS10V518E (C70508) | | |
|----------------------|--------------------|------|--|
| Format Size | 1/3 | | |
| Focal Length | 5 50mm | | |
| Max. Aperture Ratio | 1 : 1.8 | | |
| Iris Range | F1.8 360 | | |
| Horizontal 1/4 | 37.80 | 4.14 | |
| Angle of View 1/3 | 50.00 | 5.52 | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.6m | | |
| Back Focal Length | Min. 7.6mm | | |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | | |
| Weight | 140g | | |
| Remarks | DC Iris | | |

1/3 Format Auto-Iris Fish-Eye Vari-Focal

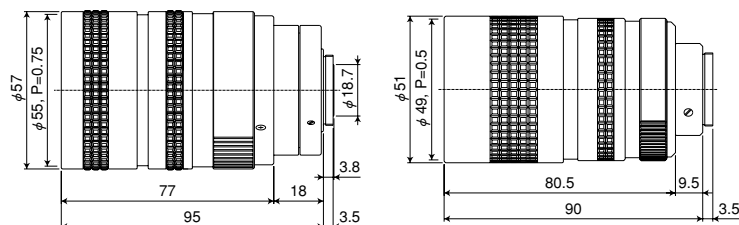
Unit: mm



| | TS2V114E (C70100) | | |
|----------------------|--------------------------|-------|--|
| Format Size | 1/3 | | |
| Focal Length | 1.6 3.4mm | | |
| Max. Aperture Ratio | 1 : 1.4 | | |
| Iris Range | F1.4 64 | | |
| Horizontal 1/4 | 180 | 64.89 | |
| Angle of View 1/3 | 180 | 89.55 | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.5m | | |
| Back Focal Length | 8.07mm | | |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | | |
| Weight | 140g | | |
| Remarks | DC Iris Fish-Eye lens | | |

1/2, 2/3 Format Manual Zoom

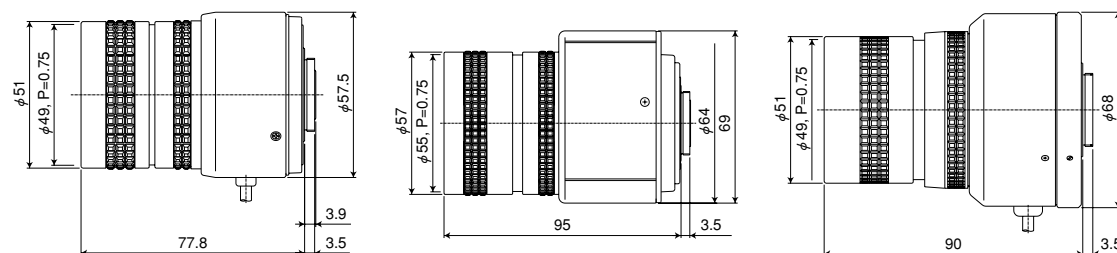
Unit: mm



| | H6Z810 (C60812) | C6Z1218 (C31204) | |
|----------------------|-------------------|--------------------------------------|--|
| Format Size | 1/2 | 2/3 | |
| Focal Length | 8 48mm | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.0 1.2 | 1 : 1.8 | |
| Iris Range | F1.0 22 | F1.8 22 | |
| Horizontal 1/4 | 24.92 4.42 | 16.08 2.75 | |
| Angle of View 1/3 | 32.99 5.86 | 21.40 3.66 | |
| (Degrees) 1/2 | 43.26 7.73 | 28.44 4.87 | |
| Min. Object Distance | 1.2m | 1.0m | |
| Back Focal Length | 13.65mm | 18.41mm | |
| Filter size | 55mm P=0.75mm | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 430g | 320g | |
| Remarks | Lock Screws Extra | Lock Screws Extra Click-stop Iris | |

1/3, 1/2, 2/3 Format Manual Zoom (Auto-Iris)

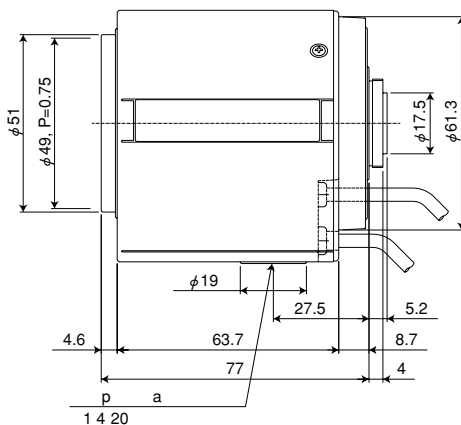
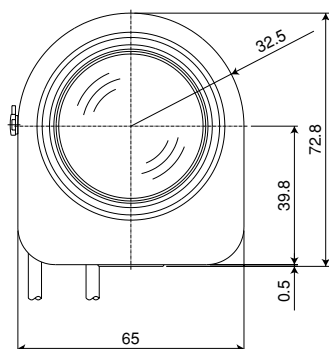
Unit: mm



| | TS6ZE (C70605) | H6ZBE (C60811) | C6ZE (C31219) |
|----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Format Size | 1/3 | 1/2 | 2/3 |
| Focal Length | 6.3 38mm | 8 48mm | 12.5 75mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.0 1.2 | 1 : 1.8 |
| Iris Range | F1.2 512 | F1.0 720 | F1.8 720 |
| Horizontal 1/4 | 31.26 5.59 | 24.92 4.42 | 16.06 2.75 |
| Angle of View 1/3 | 41.12 7.43 | 32.98 5.86 | 21.38 3.66 |
| (Degrees) 1/2 | | 43.24 7.73 | 28.41 4.87 |
| Min. Object Distance | 1.8m | 1.2m | 1.0m |
| Back Focal Length | 9.23mm | 13.65mm | 18.41mm |
| Filter size | 49mm P=0.75mm | 55mm P=0.75mm | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) | C (17.526mm) | C (17.526mm) |
| Weight | 320g | 465g | 385g |
| Remarks | Video & DC Iris Lock Screws Extra | Video & DC Iris Lock Screws Extra | Video & DC Iris Lock Screws Extra |

1/4 Format 6x Motorized Zoom

Unit: mm



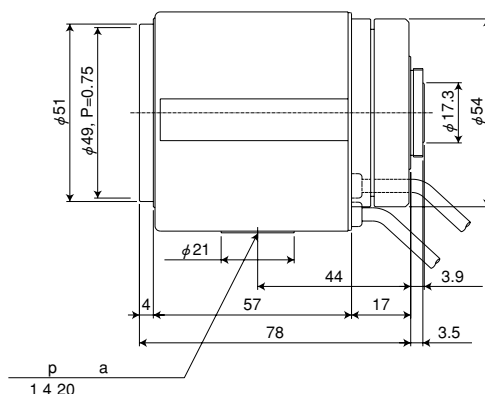
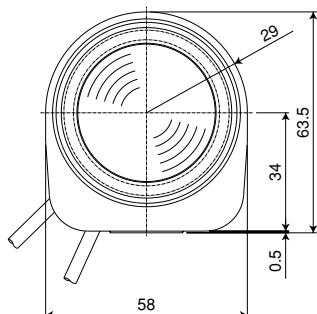
Basic Specification

| | |
|----------------------|---------------|
| Format Size | 1/4 |
| Focal Length | 4.6 28mm |
| Max. Aperture Ratio | 1 : 1.0 |
| Iris Range | F1.0 250 |
| Horizontal | 1/4 |
| Angle of View | 1/3 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 7.89mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| QS6ZME (C40400) | | |
|-----------------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized Approx. 5.0 sec | |
| Zoom | Motorized Approx. 4.0 sec | |
| Weight | 430g | |
| Remarks | | |

1/3 Format 6x Motorized Zoom

Unit: mm



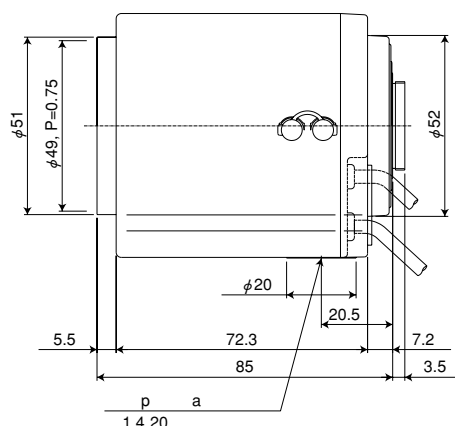
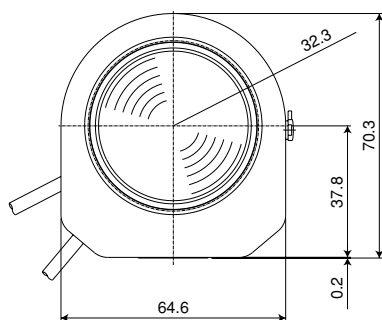
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 6.3 38mm |
| Max. Aperture Ratio | 1 : 1.2 |
| Iris Range | F1.2 360 |
| Horizontal | 1/4 31.26 5.59 |
| Angle of View | 1/3 41.12 7.43 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 9.23mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS6ZME (C70600) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized Approx. 5.0 sec | |
| Zoom | Motorized Approx. 5.0 sec | |
| Weight | 410g | |
| Remarks | | |

1/3 Format 10x Motorized Zoom

Unit: mm



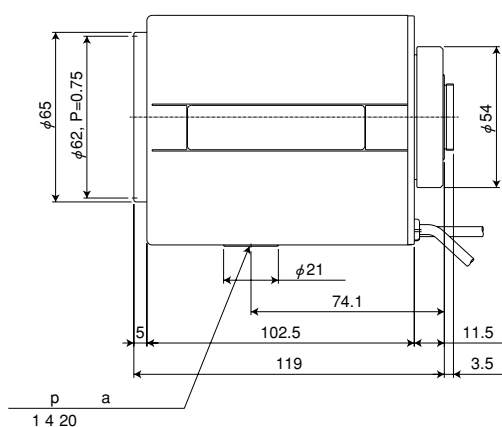
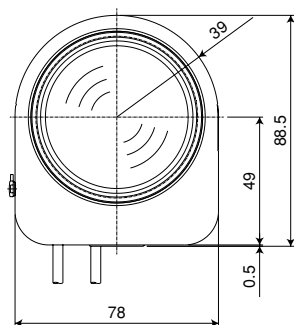
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 5.8 58mm |
| Max. Aperture Ratio | 1 : 1.2 1.7 |
| Iris Range | F1.2 360 |
| Horizontal | 1/4 33.77 3.62 |
| Angle of View | 1/3 44.07 4.78 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 8.99mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS10ZME (C70500) | TS10ZME-P (C70501) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec |
| Zoom | Motorized Approx. 6.5 sec | Motorized with Pre-Set Approx. 6.5 sec |
| Weight | 380g | 430g |
| Remarks | | Manual Override (only Video Iris) TS10ZME-F (C70506) |

1/3 Format 15x Motorized Zoom

Unit: mm



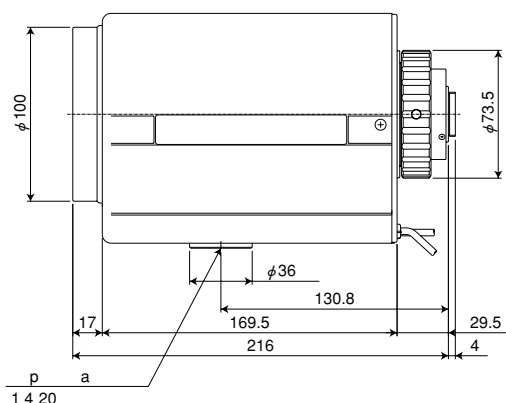
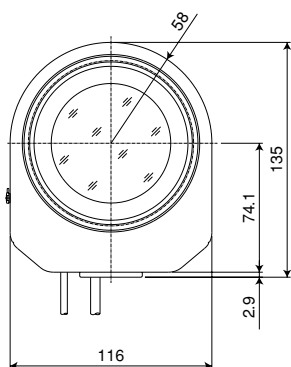
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 6.0 90mm |
| Max. Aperture Ratio | 1 : 1.2 1.8 |
| Iris Range | F1.2 430 |
| Horizontal | 1/4 32.96 2.33 |
| Angle of View | 1/3 43.48 3.08 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 10.7mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS15ZAME (C70624) | TS15ZAME-P (C70627) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 760g | 770g |
| Remarks | | Manual Override (only Video Iris) TS15ZAME-F (C70625) |

1/3 Format 20x Motorized Zoom

Unit: mm



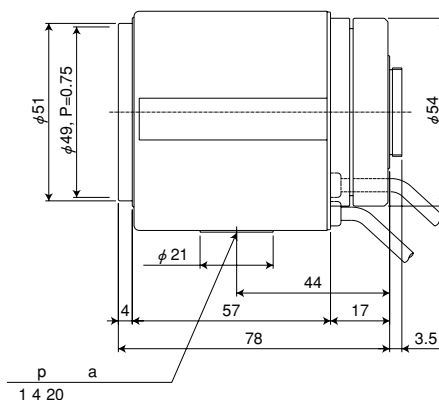
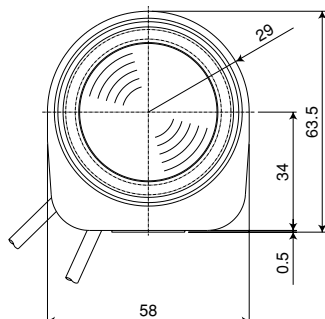
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 9 180mm |
| Max. Aperture Ratio | 1 : 1.2 2.1 |
| Iris Range | F1.2 510 |
| Horizontal | 1/4 22.61 1.15 |
| Angle of View | 1/3 30.28 1.53 |
| (Degrees) | 1/2 |
| Min. Object Distance | 2.2m |
| Back Focal Length | 14.25mm |
| Filter size | 95mm P=1.0mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS20ZME (C70900) | TS20ZME-P (C70903) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Zoom | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Weight | 2590g | 2620g |
| Remarks | | Manual Override TS20ZME-F (C70901) |

1/2 Format 6x Motorized Zoom

Unit: mm



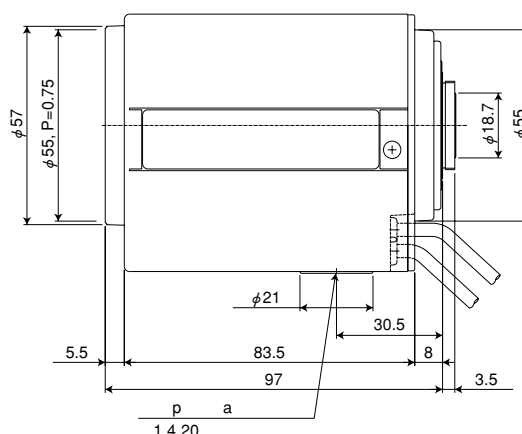
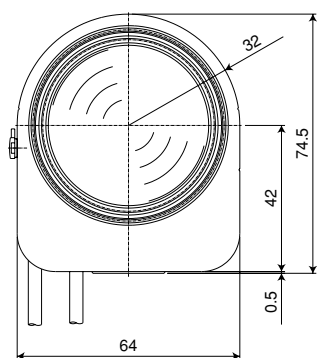
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8.0 48mm |
| Max. Aperture Ratio | 1 : 1.4 |
| Iris Range | F1.4 360 |
| Horizontal | 1/4 24.81 4.39 |
| Angle of View | 1/3 32.78 5.82 |
| (Degrees) | 1/2 42.88 7.69 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 11.6mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | HS6ZME (C60806) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.0 sec (Video Iris) | |
| Focus | Motorized Approx. 5.0 sec | |
| Zoom | Motorized Approx. 5.0 sec | |
| Weight | 400g | |
| Remarks | | |

1/2 Format 6x Motorized Zoom

Unit: mm



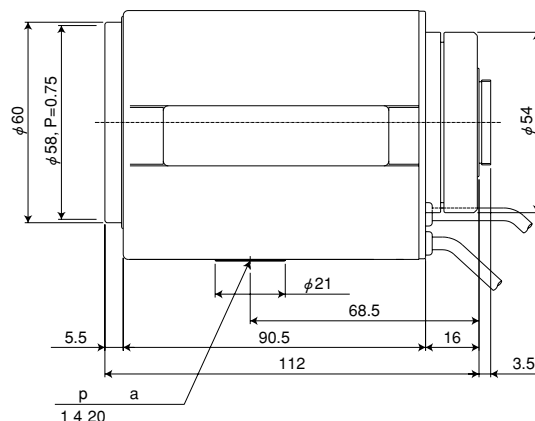
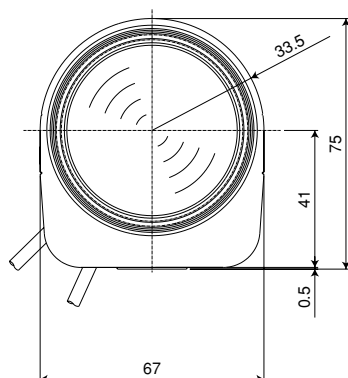
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8 48mm |
| Max. Aperture Ratio | 1 : 1.0 1.2 |
| Iris Range | F1.0 720 |
| Horizontal | 1/4 24.92 4.42 |
| Angle of View | 1/3 32.98 5.86 |
| (Degrees) | 1/2 43.24 7.73 |
| Min. Object Distance | 1.2m |
| Back Focal Length | 13.65mm |
| Filter size | 55mm P=0.75mm |
| Mount (Flange back) | C (17.256mm) |

| | H6ZBME (C60809) | H6ZBME-P (C60810) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 530g | 540g |
| Remarks | | Manual Override (only Video Iris) H6ZBME-F (C60813) |

1/2 Format 10x Motorized Zoom

Unit: mm



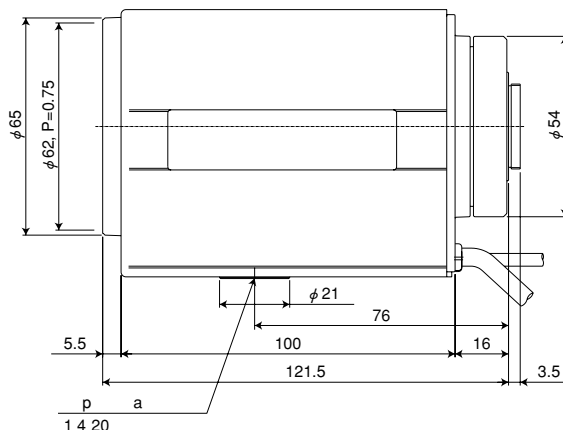
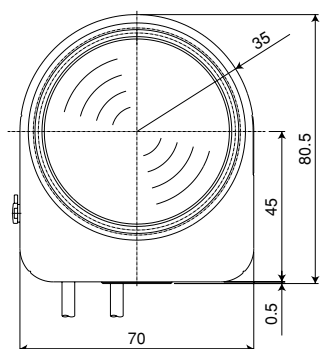
Basic Specification

| | |
|----------------------|-----------------|
| Format Size | 1/2 |
| Focal Length | 7.5 75mm |
| Max. Aperture Ratio | 1 : 1.4 1.5 |
| Iris Range | F1.4 360 |
| Horizontal | 1/4 26.15 2.83 |
| Angle of View | 1/3 34.52 3.75 |
| (Degrees) | 1/2 45.05 4.95 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 10.75mm |
| Filter size | 58.0mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | HS10ZME (C60700) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized Approx. 6.5 sec * | |
| Zoom | Motorized Approx. 5.5 sec ** | |
| Weight | 580g | |
| Remarks | * 6.0 sec for Type 2 ** 5.0 sec for Type 2 | |

1/2 Format 10x Motorized Zoom

Unit: mm



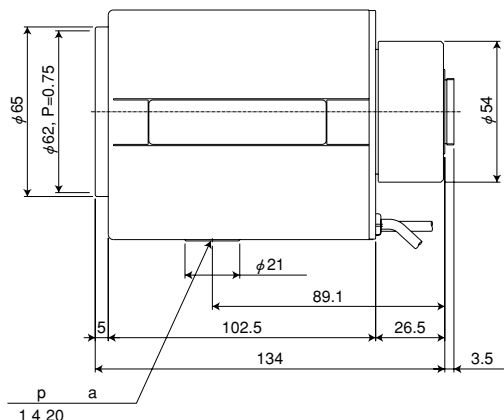
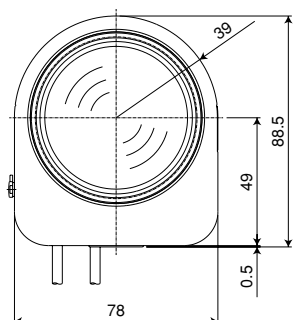
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 7.5 75mm |
| Max. Aperture Ratio | 1 : 1.2 1.5 |
| Iris Range | F1.2 512 |
| Horizontal | 1/4 26.45 2.84 |
| Angle of View | 1/3 34.94 3.77 |
| (Degrees) | 1/2 45.63 4.99 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 14.52mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | H10ZME (C60701) | H10ZME-P (C60702) |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 5.5 sec * | Motorized with Pre-Set Approx. 5.5 sec * |
| Zoom | Motorized Approx. 5.5 sec * | Motorized with Pre-Set Approx. 5.5 sec * |
| Weight | 715g | 740g |
| Remarks | * 6.0 sec for Type 1&3 | Manual Override (only Video Iris) H10ZME-F (C60704) * 6.0 sec for Type 1&3 |

1/2 Format 15x Motorized Zoom

Unit: mm



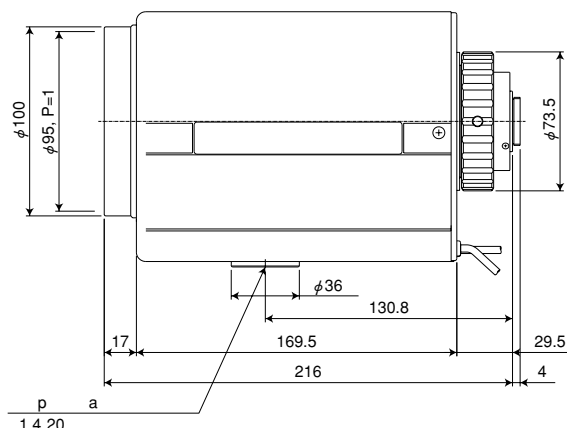
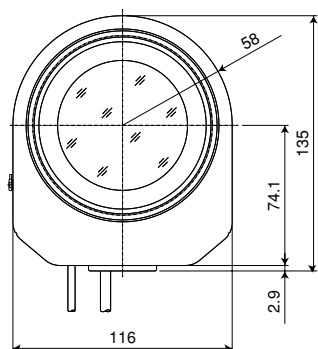
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8 120mm |
| Max. Aperture Ratio | 1 : 1.6 2.4 |
| Iris Range | F1.6 1000 |
| Horizontal | 1/4 24.76 1.76 |
| Angle of View | 1/3 32.85 2.34 |
| (Degrees) | 1/2 43.37 3.09 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 14.05mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | H15ZAME (C60826) | H15ZAME-P (C60829) |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec * |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 800g | 810g |
| Remarks | | Manual Overrid (only Video Iris) H15ZAME-F (C60827) * 6.0 sec for Type 1&3 |

1/2 Format 20x Motorized Zoom

Unit: mm



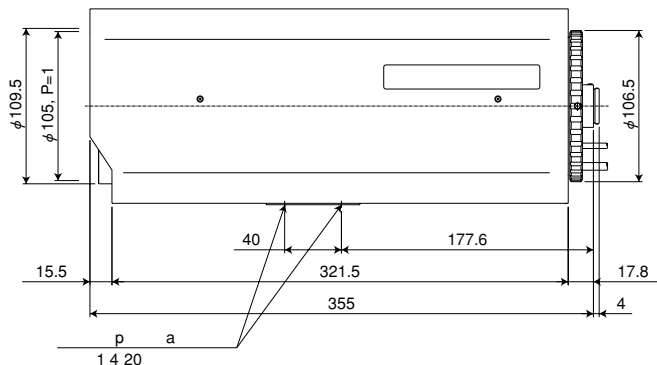
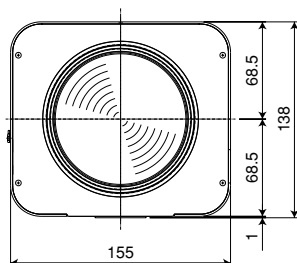
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 12 240mm |
| Max. Aperture Ratio | 1 : 1.6 2.8 |
| Iris Range | F1.6 720 |
| Horizontal | 1/4 17.17 0.88 |
| Angle of View | 1/3 22.95 1.17 |
| (Degrees) | 1/2 30.78 1.56 |
| Min. Object Distance | 2.8m |
| Back Focal Length | 19.82mm |
| Filter size | 95mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

| | H20ZME (C61221) | H20ZME-P (C61224) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Zoom | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Weight | 2590g | 2620g |
| Remarks | | Manual Override H20ZME-F (C61222) |

1/2 Format 55x (110x) Motorized Zoom

Unit: mm



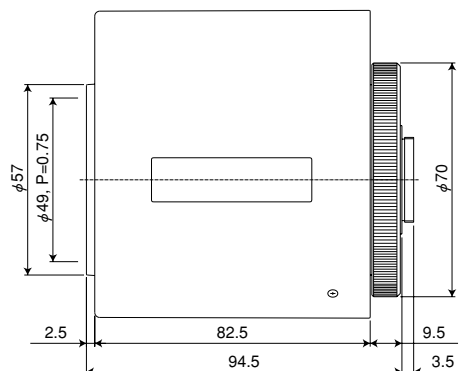
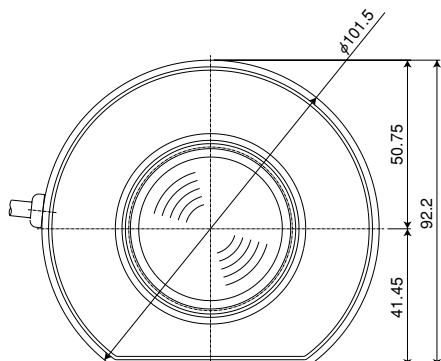
Basic Specification

| | |
|----------------------|-----------------------------|
| Format Size | 1/2 |
| Focal Length | 12 660mm (24 1320mm) |
| Max. Aperture Ratio | 1 : 4.0 14.4 |
| Iris Range | F4.0 360 |
| Horizontal | 1/4 17.17 0.31 (8.53 0.16) |
| Angle of View | 1/3 23.18 0.42 (11.40 0.21) |
| (Degrees) | 1/2 31.65 0.56 (15.27 0.28) |
| Min. Object Distance | 5m |
| Back Focal Length | 8.99mm |
| Filter size | 105mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

| H55ZME-F (C61233) | | |
|-------------------|--|--|
| Iris | Auto-Iris with Manual Override Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized with Pre-Set Approx. 4.5 sec | |
| Zoom | Motorized with Pre-Set Approx. 4.5 sec | |
| Extender | Motorized Approx. 1.5 sec | |
| Weight | 5400g | |
| Remarks | Built-In 2x Extender | |

2/3 Format 6x Motorized Zoom (Motorized Iris)

Unit: mm



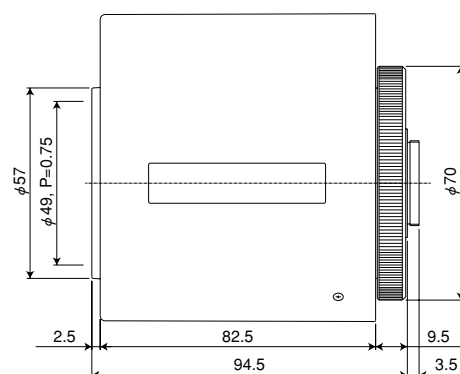
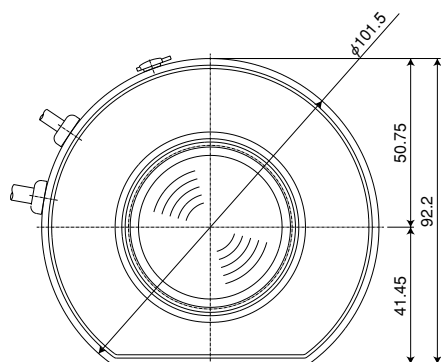
Basic Specification

| | | |
|----------------------|---------------|------------|
| Format Size | 2/3 | |
| Focal Length | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.8 | |
| Iris Range | F1.8 Close | |
| Horizontal | 1/4 | 16.06 2.75 |
| Angle of View | 1/3 | 21.40 3.66 |
| (Degrees) | 1/2 | 28.44 4.87 |
| Min. Object Distance | 1m | |
| Back Focal Length | 18.41mm | |
| Filter size | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | |

| | C6Z1218M3 (C31211) | |
|---------|--------------------------------|--|
| Iris | Motorized Approx. 4.0 sec | |
| Focus | Motorized Approx. 5.0 sec * | |
| Zoom | Motorized Approx. 5.0 sec * | |
| Weight | 820g | |
| Remarks | * 5.5 sec for Type 1 & 3 | |

2/3 Format 6x Motorized Zoom

Unit: mm



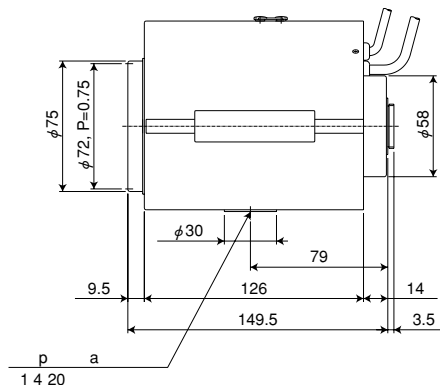
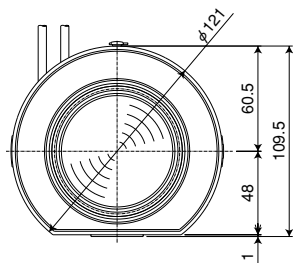
Basic Specification

| | | |
|----------------------|---------------|------------|
| Format Size | 2/3 | |
| Focal Length | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.8 | |
| Iris Range | F1.8 720 | |
| Horizontal | 1/4 | 16.06 2.75 |
| Angle of View | 1/3 | 21.38 3.66 |
| (Degrees) | 1/2 | 28.41 4.87 |
| Min. Object Distance | 1m | |
| Back Focal Length | 18.41mm | |
| Filter size | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | |

| | C6ZAME (C31220) | C6ZME-P (C31221) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 5.0 sec * | Motorized with Pre-Set Approx. 5.0 sec * |
| Zoom | Motorized Approx. 5.0 sec * | Motorized with Pre-Set Approx. 5.0 sec * |
| Weight | 620g | 655g |
| Remarks | * 5.5 sec for Type 1 & 3 | * 5.5 sec for Type 1 |

2/3 Format 10x Motorized Zoom

Unit: mm



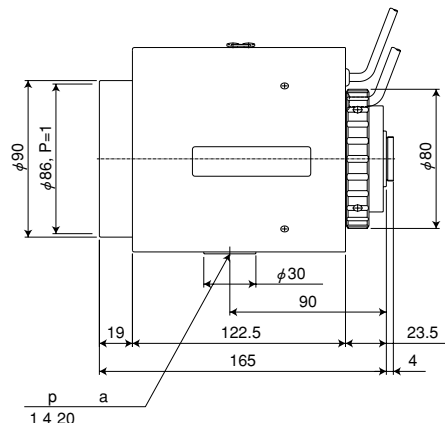
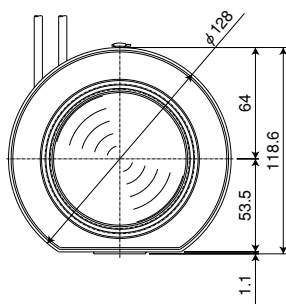
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 2/3 |
| Focal Length | 10.5 105mm |
| Max. Aperture Ratio | 1 : 1.4 1.6 |
| Iris Range | F1.4 1000 |
| Horizontal | 1/4 18.97 2.02 |
| Angle of View | 1/3 25.24 2.68 |
| (Degrees) | 1/2 33.49 3.56 |
| Min. Object Distance | 1m |
| Back Focal Length | 18.49mm |
| Filter size | 72mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | C10ZAME (C31002) | C10ZAME-P (C31003) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 5.5 sec | Motorized with Pre-Set Approx. 5.5 sec |
| Zoom | Motorized Approx. 5.5 sec | Motorized with Pre-Set Approx. 5.5 sec |
| Weight | 1380g | 1420g |
| Remarks | | Manual Override C10ZAME-F (C31005) |

2/3 Format 14x Motorized Zoom

Unit: mm



Basic Specification

| | |
|----------------------|----------------|
| Format Size | 2/3 |
| Focal Length | 10 140mm |
| Max. Aperture Ratio | 1 : 1.9 |
| Iris Range | F1.9 720 |
| Horizontal | 1/4 19.89 1.52 |
| Angle of View | 1/3 26.41 2.02 |
| (Degrees) | 1/2 34.96 2.68 |
| Min. Object Distance | 2.8m |
| Back Focal Length | 20.35mm |
| Filter size | 86mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

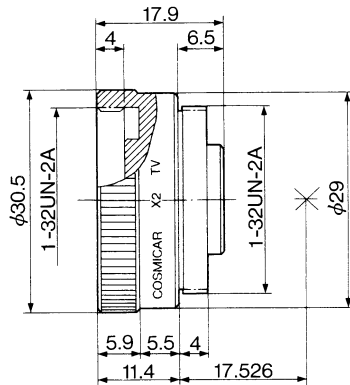
| | C14ZME (C31009) | C14ZME-P (C31010) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 9.0 sec | Motorized with Pre-Set Approx. 9.0 sec |
| Zoom | Motorized Approx. 9.5 sec | Motorized with Pre-Set Approx. 9.5 sec |
| Weight | 2000g | 2040g |
| Remarks | | Manual Override C14ZME-F (C31012) |

Extender

Unit: mm

2x Extender for C-Mount

2-EX (C80001)

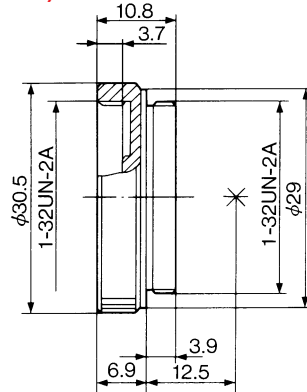


■ Specifications

| | | |
|-------------------------------|----------------|-----------------|
| | 2-EX (C80001) | S2-EX (C80034) |
| Magnification of Focal Length | 2X | 2X |
| Flange Back Length | 17.526mm | 12.5mm |
| Weight | 40g | 27g |
| Compatibility | C mount lenses | CS mount lenses |

2x Extender for CS-Mount

S2-EX (C80034)



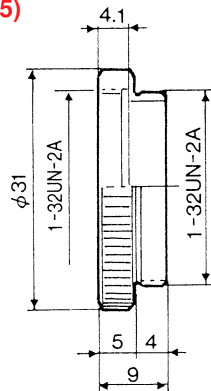
■ Note

- 1) According to the doubled focal length, the angle of view gets half and F No. will be double.
- 2) Minimum object distance and zoom ratio remains the same.

Mount Adapter

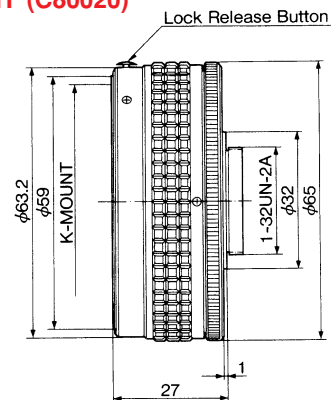
C-CS Mount Adapter (5mm Ring)

C-CS-A (C80035)



PENTAX Bayonet Mount for 35mm Photo Lens

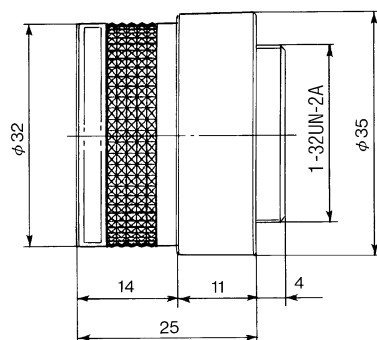
KC-MOUNT (C80020)



Dummy Lens

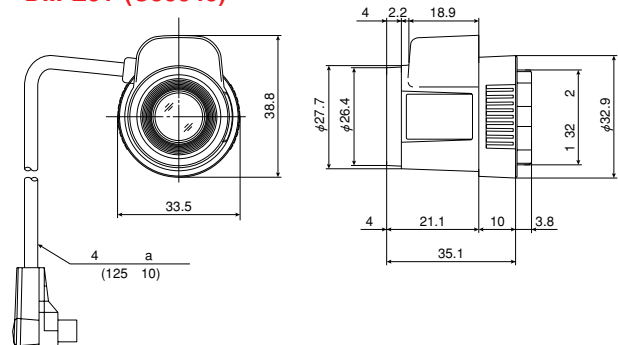
Monofocal type

DM-163 (C80039)



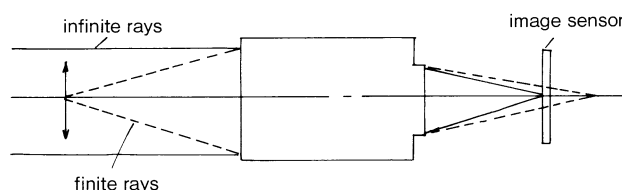
Vari-Focal type

DM-E01 (C80040)



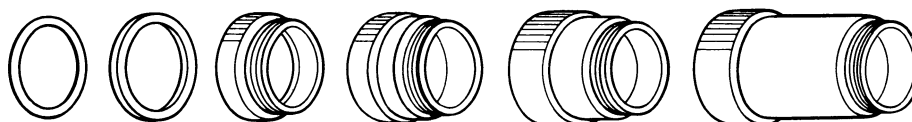
Extension Tube Set (Macro Ring)

When the rays originate from a finite object distance, the rays are condensed at a point further than the focal point, while the rays from infinite distance are condensed at the actual focal point. The focus adjustment moves the lens barrel toward the object to shift the focusing point at the image sensor. However, the amount of focusing adjustment is mechanically limited as seen by the minimum object distance. Extension Tube (Macro Ring) is inserted in between the lens and camera to shift the focus point further than the mechanical limit for close-up focus.



EX-C6 (C90100)

LENGTH 0.5mm 1.0mm 5mm 10mm 20mm 40mm

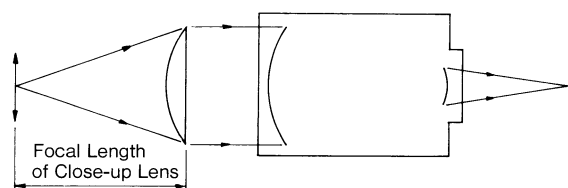


Specifications

| Maximum Diameter | | ϕ 31mm | | | | | |
|------------------|-----------|-------------|---|---|----|----|----|
| Length | Model No. | 1 | 2 | 3 | 4 | 5 | 6 |
| | : mm | 0.5 | 1 | 5 | 10 | 20 | 40 |

Close-Up Lens

The close-up lens has a positive meniscus lens as a supplementary lens. Generally, 3 types of close-up lenses are available, close-up lens No.1, 2&3. Close-up lens No.1, 2&3 have 1,000mm (1,000mm/1), 500mm (1,000mm/2), 333mm (1,000mm/3) respectively. When an object is placed at the focal point of the close-up lens, the rays from the object are converted by the close-up lens to be parallel rays against the optical axis as seen on the right.



This lens is effective when wishing to come closer to an object than the min. object distance of a lens, or taking close-up pictures of small objects.

Specifications

| Model No. | 1 | 2 | 3 |
|---------------------------|--------|-------|-------|
| Close-Up No. | No.1 | No.2 | No.3 |
| Dioptrie | 1 | 2 | 3 |
| Focusing Range (Infinity) | 1000mm | 500mm | 333mm |

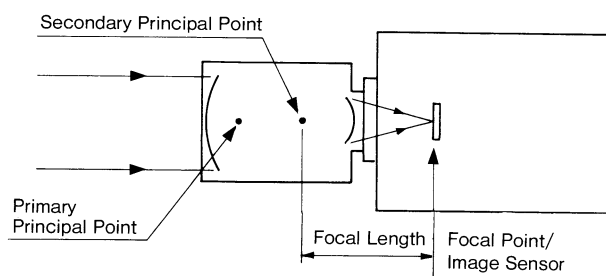
Note

Regardless of the focal length of a lens as long as focus is set to infinity, focus is obtained at a point equal to the distance from the tip of the lens to the focal length of the close-up lens.

CCTV is widely accepted as an important and valuable tool in many areas. Manual iris lenses for constant, stable lighting conditions and auto iris lenses for variable lighting conditions. Select the best suited lens for optimum performance in each application.

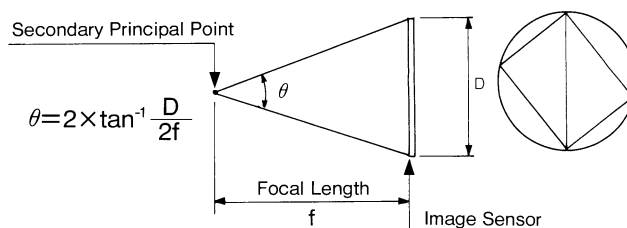
Focal Length

Rays from infinitely distant objects are condensed internally in the lens at a common point on the optical axis. The point at which the image sensor of the CCTV camera is positioned, is called a focal point. By virtue of design, lenses have 2 principal points, a primary principal point & a secondary principal point, the distance between the secondary principal point and the focal point (image sensor) determines the focal length of the lens.



Angle of View

The angle formed by the 2 lines from the secondary principal point to the image sensor is called the angle of view. Therefore, the focal length of the lens is fixed regardless of the image format size of the CCTV camera. Conversely, the angle of view varies in accordance with the image size. The focal lengths in the catalog are nominal and the angles of view calculated by the formula referring to the focal lengths are approximate.



F-Number

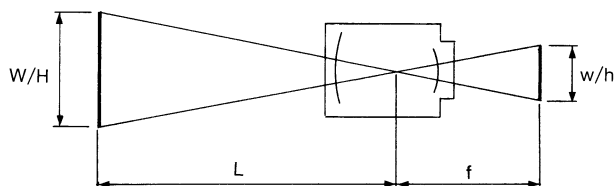
The F number is the index for the amount of light that passes through a lens. The smaller the number, the greater the amount of light. The F number is a ratio between focal length and effective aperture as follows.

$$F \text{ number} = \frac{f}{D}$$

f : focal length
D : effective diameter

Field of View

The field of view varies along with the focal length of the lens as follows.



$$\frac{w}{W} = \frac{h}{H} = \frac{f}{L}$$

W : width of object
H : height of object
w : width of format 1/2 format = 6.4mm, 1/3 format = 4.8mm,
 1/4 format = 3.6mm
h : height of format 1/2 format = 4.8mm, 1/3 format = 3.6mm,
 1/4 format = 2.7mm
f : focal length
L : object distance

Example : Full image of 4.5m-high object on a TV monitor camera :
1/3 format, Object distance : 10m

$$\begin{aligned} H &= 4.5\text{m} = 4,500\text{mm} & L &= 10\text{m} = 10,000\text{mm} \\ \frac{h}{H} &= \frac{f}{L} \rightarrow \frac{3.6}{4,500} = \frac{f}{10,000} \rightarrow 8\text{mm} \end{aligned}$$

Depth of Field

When an object is focused, it is typically observed that the area in front and behind the object is also in focus. The range in focus is called "depth of field". When the background is extended to infinity, the object distance (focusing distance) is called "hyper focal distance". Depth of field is calculated by using the following formula.

$$H = \frac{f^2}{C}$$

$$T1 = \frac{B(H + f)}{H \cdot B}$$

$$T2 = \frac{B(H - f)}{H \cdot B}$$

F : F No.
H : hyper focal distance
f : focal length
B : object distance (measured from image sensor)
T1 : near limit
T2 : far limit
C : circle of least confusion
1/2 format: 0.015mm, 1/3 format: 0.011mm,
1/4 format: 0.008mm

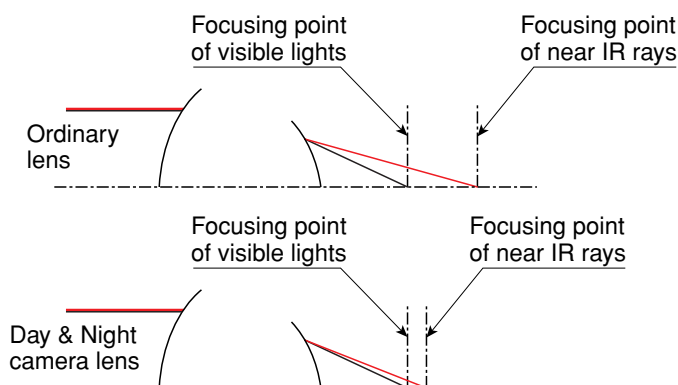
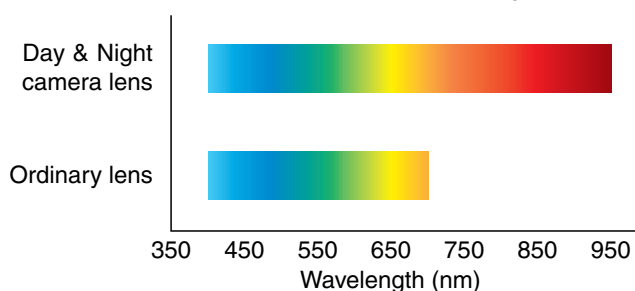
Depth of field increases when:
focal length is shorter
F-number is larger (F/1.4 F/5.6)
Object distance is longer

Day & Night Lens

Ordinary lenses are designed and chromatic aberration corrected in visible lights wave-lengths range from 400nm to 700nm.

The Day & Night camera lenses are designed to make all light rays from visible to near IR rays directed to the CCD in the camera at the same focusing point.

Chromatic aberration correction range



Meaning Day & Night camera lenses do not require the focus to be readjusted even when the lighting conditions have changed from daytime sun light to night-time, under near IR illuminators conditions.

Connection For Auto-Iris

| Wiring Diagram | Model |
|----------------|--|
| | DC Iris Monofocal and Varifocal Lenses |
| | DC Iris (with shield) Zoom Lenses |
| | Video Iris CS-Mount Monofocal Lenses CS-Mount Zoom Lenses (Except TS6ZE) H620PE |
| | Video Iris (with LEVEL Remote) C-Mount Monofocal Lenses (Except H620PE) C-Mount Zoom Lenses TS6ZE |
| | Manual Override Lenses |

Colour of leads is subject to change.

Wiring Diagram for Motorized Zoom Lens

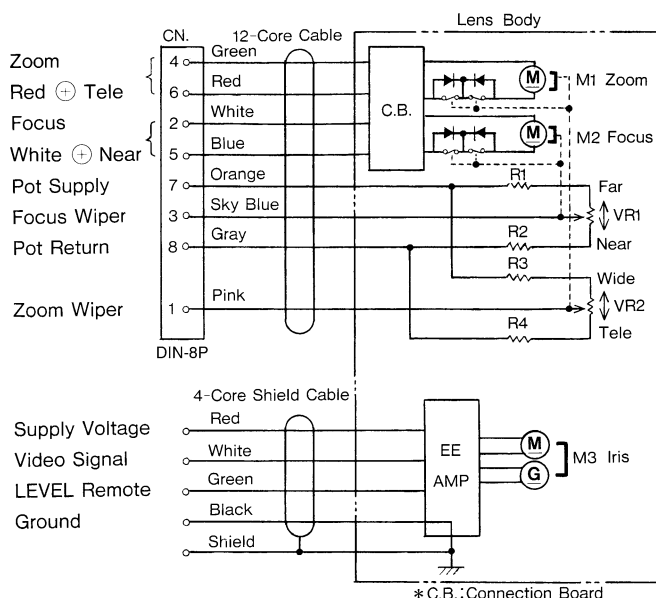
| Auto-Iris & Motorized Zoom Lenses | 3M Zoom Lenses |
|---|----------------|
| <p>TYPE 1 (DC6V) TYPE 5 (DC12V)</p> | |
| <p>TYPE 2 (DC 12V)</p> | |
| <p>TYPE 3 (DC 6V)</p> | |

Yellow and Black lead wires are for Remote Control ALC, and they are not connected to the connector, as shown in diagram.
Please note some lenses have no function of ALC Remote.
NFU : Noise Filter Unit.

Wiring Diagram for P type zoom lenses

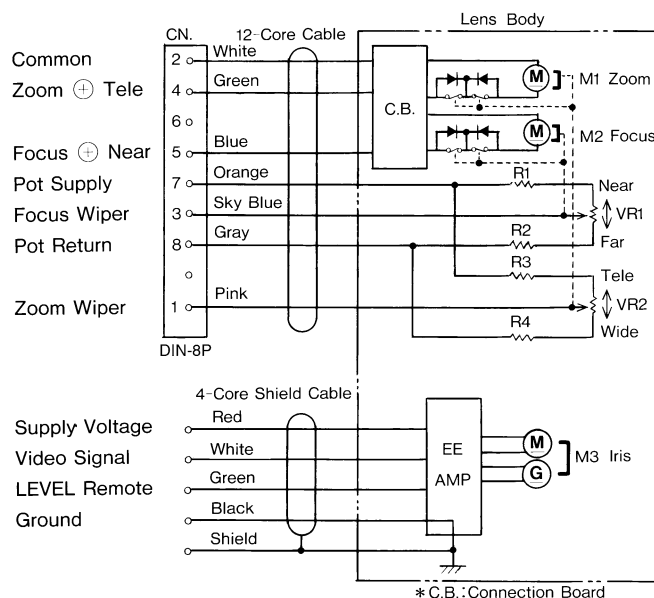
Motorized Zoom and Focus with Pre-set, Auto-Iris

TYPE 1 (DC6V) / TYPE 5 (DC12V)



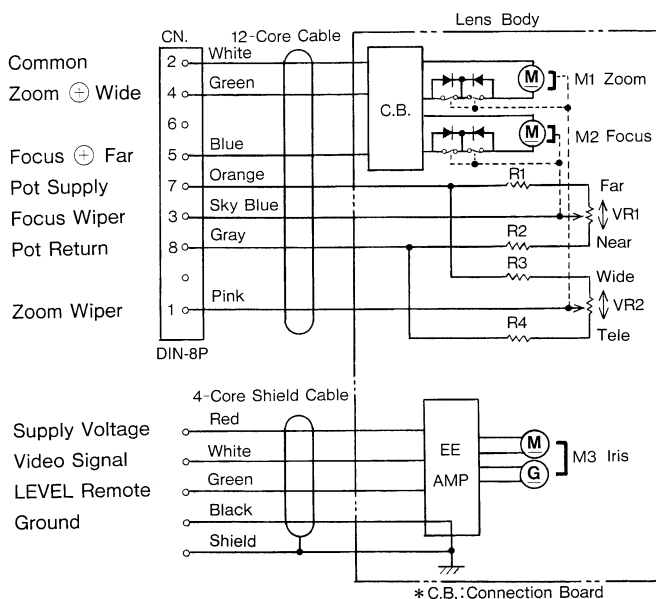
| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 2 (DC 12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 3 (DC 6V)



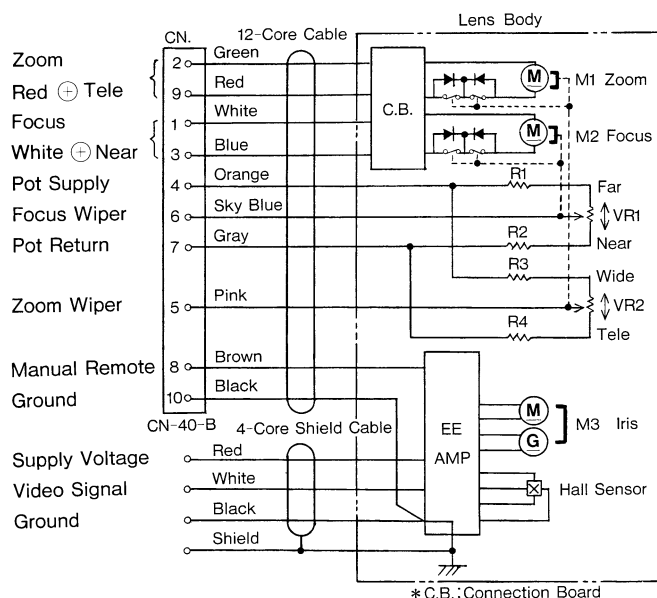
| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for F type zoom lenses

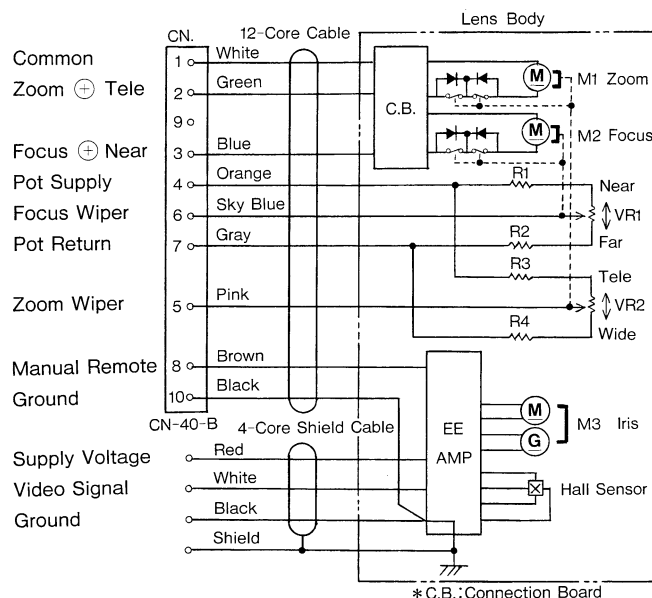
Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override

TYPE 1 (DC6V) / TYPE 5 (DC12V)



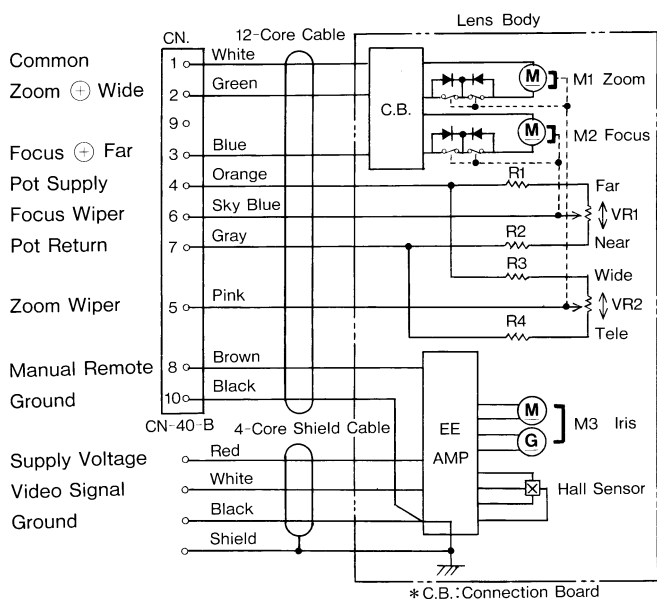
| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

TYPE 2 (DC 12V)



| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

TYPE 3 (DC 6V)



| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

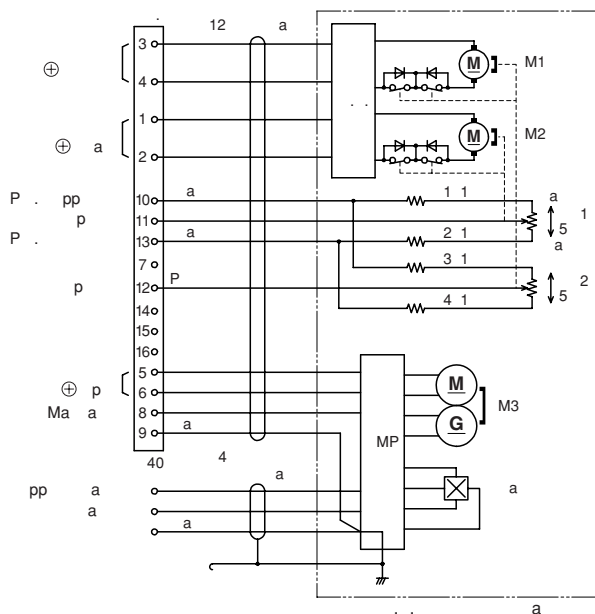
Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for F type zoom lenses (with D/A converter)

Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override

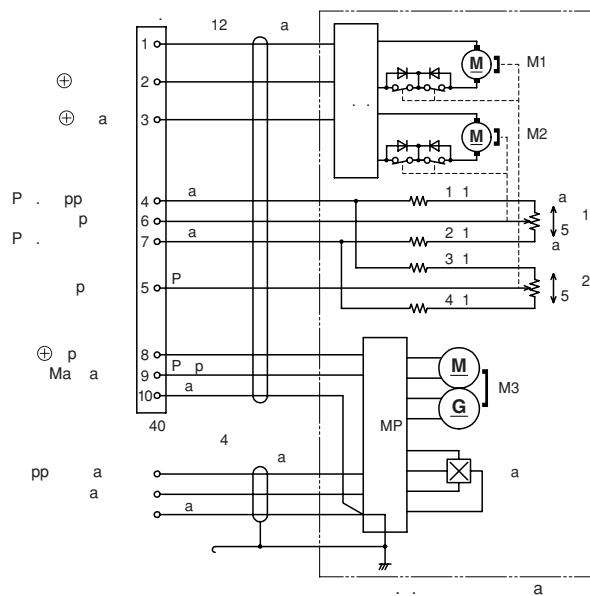
*D/A converter is option for F type zoom lenses.

TYPE 1 (DC6V) / TYPE 5 (DC12V)



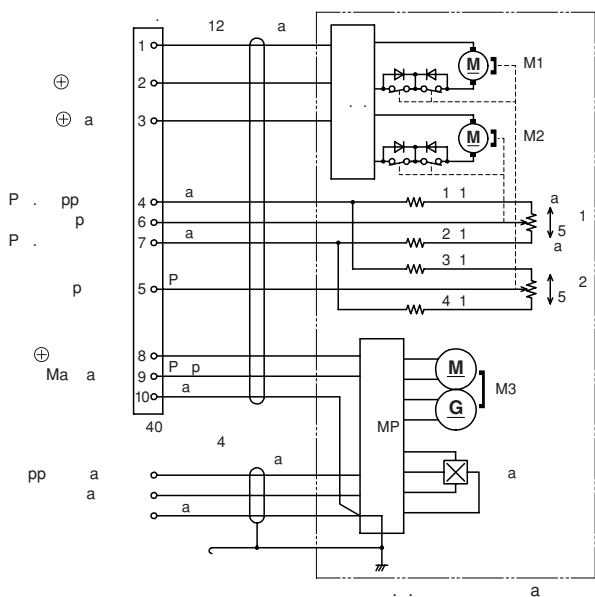
| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 2 (DC 12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 3 (DC 6V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

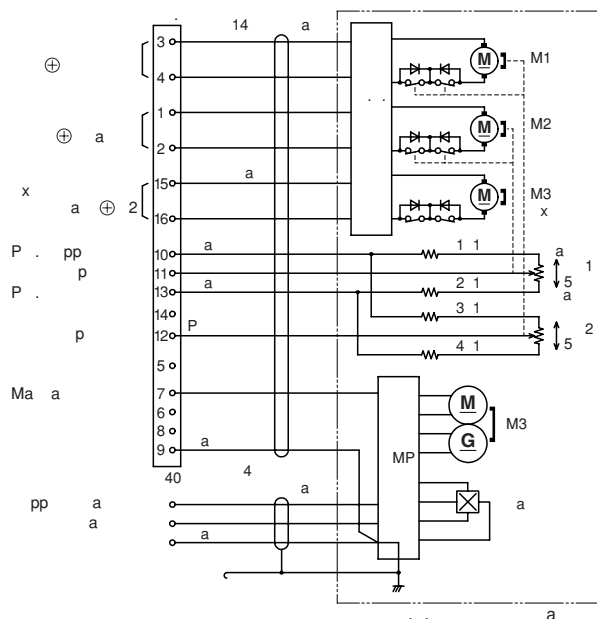
Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for H55ZME-F (Built-In 2x Extender)

Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override
Built-In Motorized 2x Extender

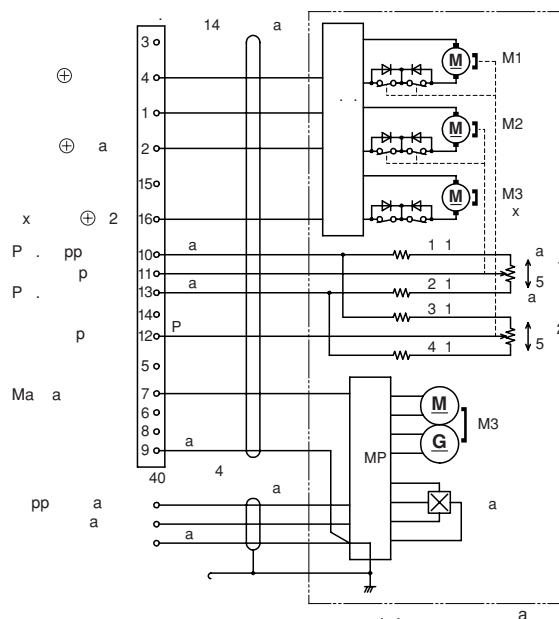
Without D/A Converter type

TYPE 5 (DC12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

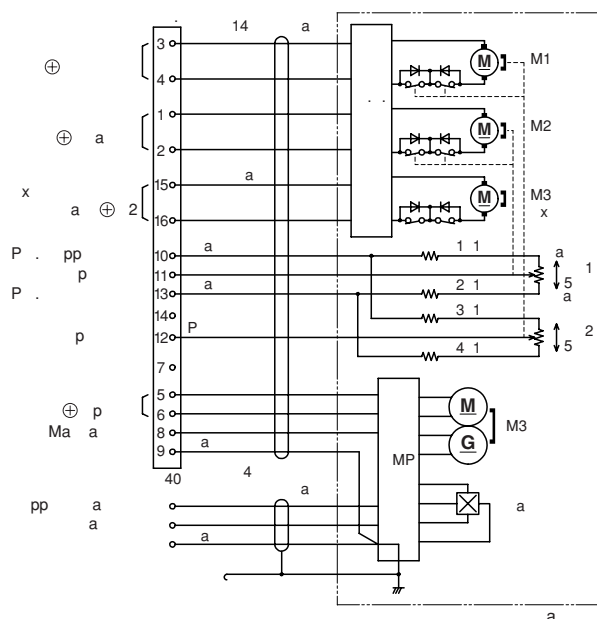
TYPE 2 (DC 12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

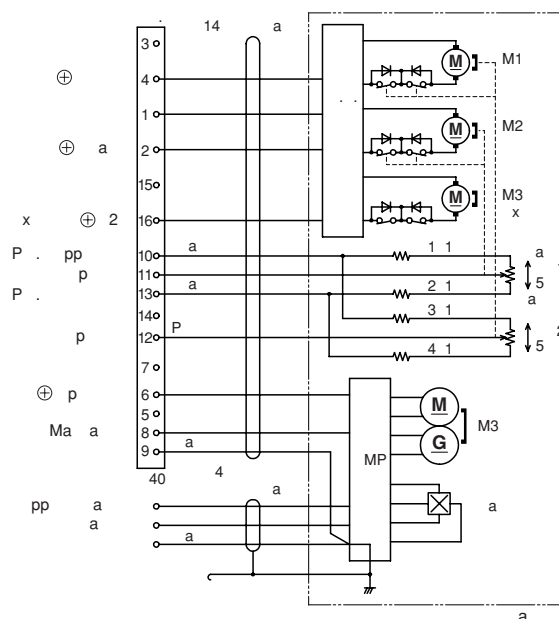
With D/A Converter type

TYPE 5 (DC12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 2 (DC 12V)

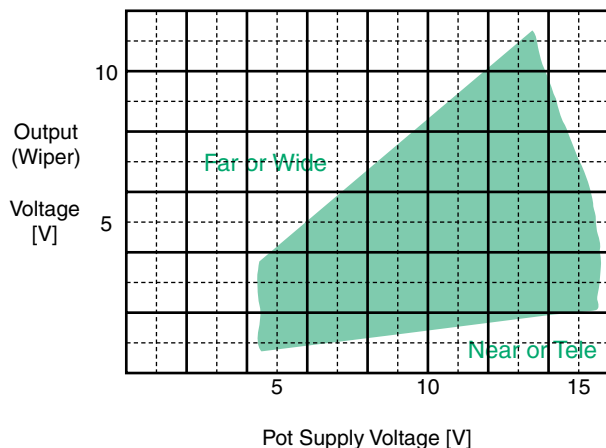


| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

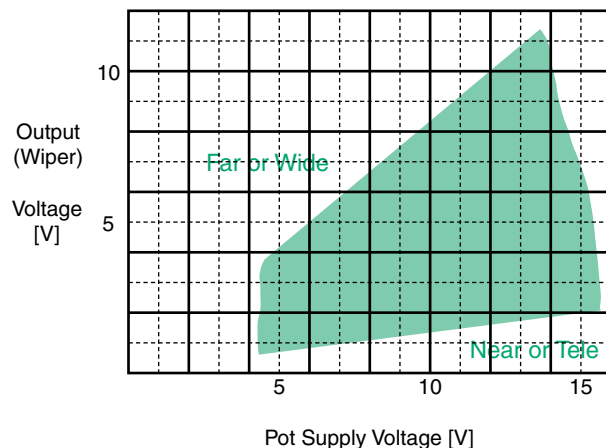
Kindly note some lenses have different diagram. Please contact us to clarify it.

Pot (Pre-Set) Supply Output range Characteristics

TYPE 1 & 3

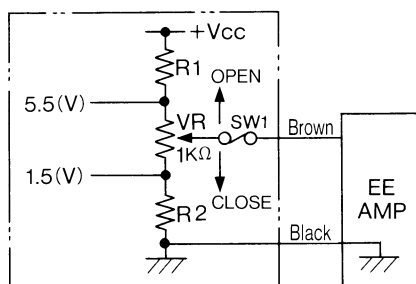


TYPE 2 & 5



Manual Override (without D/A Converter)

Manual Override and ALC can be controlled remotely as per the following schematic diagrams.



Manual Override

| | |
|----------------|---------------|
| SW1(Switch) | IRIS MODE |
| Open or Ground | Auto |
| Close | Manual Remote |

Vcc represents supply voltage from a lens controller.

Temperature Range

1) Definition

1. Applicable Temperature Range

This is the range in which a lens is specified to operate, as stated in the catalog. Additionally, the lens will not draw more current and operate at a faster speed than the rating indicated in the catalog.

2. Operation Temperature Range

This is the range that a lens operates in at an acceptable speed, drawing slightly more current than the rating that is indicated in the catalog., however, the lens will maintain its quality, performance and reliability characteristics.

2) Temperature Range

| | Applicable Temperature Range | | Operation Temperature Range | |
|-----------------------------|------------------------------|----|-----------------------------|----|
| Fixed Focal Auto-Iris | 20 | 50 | 30 | 70 |
| QS6Z, TS6Z, HS6Z, C6Z, C14Z | 10 | 50 | 20 | 70 |
| Other Zoom Lenses | 10 | 50 | 30 | 70 |

ANGLES OF VIEW

UNIT: Degrees

| Model | For 1/4 Format | | | For 1/3 Format | | | For 1/2 Format | | | For 2/3 Format | | |
|------------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|----------------------|---------------------|-------------------|
| | Diagonal 4.5mm | Horizontal 3.6mm | Vertical 2.7mm | Diagonal 6.0mm | Horizontal 4.8mm | Vertical 3.6mm | Diagonal 8.0mm | Horizontal 6.4mm | Vertical 4.8mm | Diagonal 10.991mm | Horizontal 8.8mm | Vertical 6.6mm |
| 2.2mm F1.0 QS210* | 114.06 | 92.60 | 70.12 | | | | | | | | | |
| 2.8mm F0.95 TS209E-ASP | 91.76 | 72.69 | 54.13 | 125.16 | 98.24 | 72.69 | | | | | | |
| 2.8mm F1.2 TS212* | 88.60 | 71.54 | 54.11 | 117.79 | 94.30 | 71.54 | | | | | | |
| 3mm F1.0 QS310* | 77.92 | 64.24 | 49.11 | | | | | | | | | |
| 3.7mm F1.6 HS316* | 66.68 | 53.54 | 40.26 | 88.09 | 71.02 | 53.54 | | | 71.02 | | | |
| 4mm F0.75 TS407E-ASP | 59.17 | 48.39 | 36.86 | 74.61 | 62.55 | 48.39 | | | | | | |
| 4mm F1.2 TS412* | 60.35 | 49.18 | 37.36 | 76.71 | 63.89 | 49.18 | | | | | | |
| 4mm F2.0 TS420P* | 64.14 | 51.24 | 38.39 | 86.17 | 68.47 | 51.24 | | | | | | |
| 4.2mm F1.6 H416* | 60.14 | 47.87 | 35.76 | 81.05 | 64.27 | 47.87 | 110.22 | 86.77 | 64.27 | | | |
| 4.8mm F1.8 C418DX | 51.78 | 41.68 | 31.40 | 68.14 | 55.11 | 41.68 | 88.66 | 72.37 | 55.11 | 115.94 | 96.36 | 74.46 |
| 4.8mm F1.8 C418E | 51.27 | 41.27 | 31.10 | 67.46 | 54.57 | 41.27 | 87.77 | 71.65 | 54.57 | 114.78 | 95.40 | 73.72 |
| 6mm F1.0 QS610* | 43.24 | 34.83 | 26.23 | | | | | | | | | |
| 6mm F1.2 H612E-M | 41.50 | 33.26 | 24.99 | 55.11 | 44.23 | 33.26 | 72.89 | 58.70 | 44.23 | | | |
| 6mm F1.2 H612* | 40.93 | 32.97 | 24.84 | 53.68 | 43.55 | 32.97 | 68.89 | 56.93 | 43.55 | | | |
| 6mm F1.4 HS614* | 41.92 | 33.86 | 25.57 | 54.64 | 44.55 | 33.86 | 69.27 | 57.81 | 44.55 | | | |
| 6.2mm F2.0 HS/H620P* | 40.26 | 32.44 | 24.46 | 52.86 | 42.82 | 32.44 | 68.66 | 56.12 | 42.82 | | | |
| 6.5mm F1.8 B618CX-2 | 37.29 | 29.94 | 22.51 | 49.35 | 39.73 | 29.94 | 64.91 | 52.52 | 39.73 | 86.66 | 70.92 | 54.09 |
| 8mm F0.75 TS807E-ASP | 31.27 | 25.07 | 18.81 | 41.17 | 33.31 | 25.07 | | | | | | |
| 8mm F1.2 TS812* | 31.27 | 25.05 | 18.80 | 41.33 | 33.33 | 25.05 | | | | | | |
| 8mm F1.4 C814 | 31.29 | 25.15 | 18.93 | 41.28 | 33.31 | 25.15 | 53.92 | 43.88 | 33.31 | 70.50 | 58.67 | 45.17 |
| 8mm F1.4 C814E | 31.21 | 25.10 | 18.91 | 41.11 | 33.22 | 25.10 | 53.57 | 43.67 | 33.22 | 70.08 | 58.25 | 44.94 |
| 8.5mm F1.5 C815B | 29.92 | 24.02 | 18.07 | 39.57 | 31.87 | 24.02 | 51.85 | 42.09 | 31.87 | 67.87 | 56.49 | 43.34 |
| 9mm F1.2 H912E-M | 27.81 | 22.28 | 16.73 | 36.96 | 29.65 | 22.28 | 48.97 | 39.38 | 29.65 | | | |
| 9mm F3.4 C934P* | 27.79 | 22.30 | 16.77 | 36.76 | 29.60 | 22.30 | 48.25 | 39.11 | 29.60 | 63.79 | 52.63 | 40.28 |
| 12mm F1.2 H1212* | 21.18 | 16.93 | 12.70 | 28.28 | 22.60 | 16.93 | 37.83 | 30.18 | 22.60 | | | |
| 12mm F1.4 H1214-M | 20.54 | 16.49 | 12.40 | 27.17 | 21.88 | 16.49 | 35.69 | 28.91 | 21.88 | | | |
| 12mm F1.4 HS1214* | 20.68 | 16.55 | 12.41 | 27.58 | 22.06 | 16.55 | 36.78 | 29.42 | 22.06 | | | |
| 12.5mm F1.4 B1214D-2 | 20.21 | 16.21 | 12.19 | 26.78 | 21.53 | 16.21 | 35.32 | 28.51 | 21.53 | 47.48 | 38.65 | 29.37 |
| 12.5mm F1.4 B1214E | 20.22 | 16.22 | 12.19 | 26.80 | 21.55 | 16.22 | 35.35 | 28.54 | 21.55 | 47.55 | 38.69 | 29.40 |
| 12.5mm F1.8 B1218-2 | 20.55 | 16.48 | 12.38 | 27.25 | 21.90 | 16.48 | 35.98 | 29.01 | 21.90 | 48.49 | 39.39 | 29.89 |
| 16mm F1.4 C1614A | 15.86 | 12.70 | 9.54 | 21.09 | 16.91 | 12.70 | 27.99 | 22.48 | 16.91 | 38.19 | 30.72 | 23.17 |
| 16mm F1.4 C1614-M | 16.05 | 12.86 | 9.66 | 21.32 | 17.11 | 12.86 | 28.25 | 22.72 | 17.11 | 38.28 | 30.97 | 23.41 |
| 16mm F1.4 C1614E | 15.87 | 12.72 | 9.55 | 21.11 | 16.92 | 12.72 | 28.02 | 22.50 | 16.92 | 38.26 | 30.76 | 23.19 |
| 25mm F1.4 B2514D | 10.29 | 8.23 | 6.17 | 13.71 | 10.97 | 8.23 | 18.27 | 14.62 | 10.97 | 25.10 | 20.10 | 15.08 |
| 25mm F1.4 C2514-M | 10.29 | 8.24 | 6.18 | 13.70 | 10.97 | 8.24 | 18.21 | 14.60 | 10.97 | 24.89 | 20.00 | 15.05 |
| 25mm F1.4 B2514E | 10.29 | 8.23 | 6.17 | 13.71 | 10.97 | 8.23 | 18.27 | 14.62 | 10.97 | 25.09 | 20.09 | 15.08 |
| 25mm F1.8 B2518 | 10.27 | 8.23 | 6.18 | 13.66 | 10.95 | 8.23 | 18.11 | 14.55 | 10.95 | 24.64 | 19.87 | 15.00 |
| 25mm F2.0 H2520-UVM | 10.30 | 8.24 | 6.18 | 13.71 | 10.98 | 8.24 | 18.24 | 14.62 | 10.98 | | | |
| 35mm F1.6 C3516-M | 7.58 | 6.07 | 4.55 | 10.10 | 8.09 | 6.07 | 13.43 | 10.76 | 8.09 | 18.39 | 14.76 | 11.10 |
| 50mm F1.4 B5014A | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.52 | 10.04 | 7.55 |
| 50mm F1.8 B5018A-3 | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.51 | 10.04 | 7.55 |
| 50mm F1.8 B5018E | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.51 | 10.04 | 7.55 |
| 50mm F2.8 C5028-M | 5.15 | 4.12 | 3.09 | 6.86 | 5.50 | 4.12 | 9.14 | 7.32 | 5.50 | 12.53 | 10.05 | 7.55 |
| 75mm F1.4 B7514C | 3.44 | 2.75 | 2.06 | 4.59 | 3.67 | 2.75 | 6.13 | 4.90 | 3.67 | 8.45 | 6.75 | 5.05 |
| 75mm F1.8 B7518E | 3.44 | 2.76 | 2.07 | 4.59 | 3.67 | 2.76 | 6.12 | 4.90 | 3.67 | 8.40 | 6.73 | 5.05 |

ANGLES OF VIEW

UNIT: Degrees

| Model | For 1/4 Format | | | For 1/3 Format | | | For 1/2 Format | | | For 2/3 Format | | |
|------------------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|----------------------|---------------------|-------------------|
| | Diagonal 4.5mm | Horizontal 3.6mm | Vertical 2.7mm | Diagonal 6.0mm | Horizontal 4.8mm | Vertical 3.6mm | Diagonal 8.0mm | Horizontal 6.4mm | Vertical 4.8mm | Diagonal 10.991mm | Horizontal 8.8mm | Vertical 6.6mm |
| 1.6-3.4mm F1.4 TS2V114E | 180-83.10 | 180-64.89 | 107.98-47.84 | 180-118.31 | 180-89.55 | 180-64.89 | | | | | | |
| 2.2-4.5mm F1.2 QS2V2212* | 120.00-65.09 | 94.48-51.88 | 69.94-38.80 | | | | | | | | | |
| 2.8-5.8mm F1.2 QS2V2812* | 98.48-45.67 | 76.22-36.40 | 55.85-27.23 | | | | | | | | | |
| 2.8-6mm F1.4 TS2V214 | 90.80-43.85 | 72.46-35.15 | 54.24-26.40 | 121.71-58.26 | 96.94-46.76 | 72.46-35.15 | | | | | | |
| 2.8-6mm F1.4 TS2V214AE | 90.54-44.13 | 72.26-35.35 | 54.08-26.54 | 121.44-58.68 | 96.70-47.04 | 72.26-35.35 | | | | | | |
| 3.5-8mm F1.4 TS2V314B | 74.45-33.22 | 58.74-26.55 | 43.57-19.90 | 102.34-44.37 | 79.83-35.44 | 58.74-26.55 | | | | | | |
| 3.5-8mm F1.4 TS2V314BE | 74.45-33.22 | 58.74-26.55 | 43.57-19.90 | 102.35-44.37 | 79.83-35.44 | 58.74-26.55 | | | | | | |
| 6-12mm F1.6 TS2V616 | 44.09-21.53 | 34.92-17.21 | 26.01-12.90 | 60.26-28.76 | 47.22-22.97 | 34.92-17.21 | | | | | | |
| 6-12mm F1.6 TS2V616AE | 44.21-21.56 | 34.98-17.23 | 26.03-12.91 | 60.62-28.85 | 47.37-23.01 | 34.97-17.23 | | | | | | |
| 5-50mm F1.8 TS10V518E | 47.25-5.18 | 37.80-4.14 | 28.35-3.11 | 63.00-6.90 | 50.00-5.52 | 37.80-4.14 | | | | | | |
| 4.6-28mm F1.0 QS6ZME* | 50.83-9.30 | 41.64-7.50 | 31.71-5.66 | | | | | | | | | |
| 6.3-38mm F1.2 TS6ZE | 38.70-6.97 | 31.26-5.59 | 23.60-4.20 | 50.39-9.23 | 41.12-7.43 | 31.26-5.59 | | | | | | |
| 5.8-58mm F1.2 TS10ZME* | 41.57-4.49 | 33.77-3.62 | 25.61-2.73 | 53.35-5.88 | 44.07-4.78 | 33.77-3.62 | | | | | | |
| 6-90mm F1.2 TS15ZAME* | 40.89-2.90 | 32.96-2.33 | 24.86-1.76 | 53.59-3.80 | 43.48-3.08 | 32.96-2.33 | | | | | | |
| 9-180mm F1.2 TS20ZME* | 28.35-1.43 | 22.61-1.15 | 16.93-0.87 | 38.16-1.90 | 30.28-1.53 | 22.61-1.15 | | | | | | |
| 8-48mm F1.0 H6Z810 | 30.99-5.50 | 24.92-4.42 | 18.76-3.33 | 40.75-7.27 | 32.99-5.86 | 24.92-4.42 | 52.74-9.52 | 43.26-7.73 | 32.99-5.86 | | | |
| 8-48mm F1.0 H6Z8* | 30.98-5.50 | 24.92-4.42 | 18.76-3.33 | 40.74-7.27 | 32.98-5.86 | 24.92-4.42 | 52.72-9.51 | 43.24-7.73 | 32.98-5.86 | | | |
| 8-48mm F1.4 HS6ZME | 30.81-5.46 | 24.81-4.39 | 18.70-3.30 | 40.42-7.23 | 32.78-5.82 | 24.81-4.39 | 52.07-9.48 | 42.88-7.69 | 32.78-5.82 | | | |
| 7.5-75mm F1.4 HS10ZME | 32.46-3.52 | 26.15-2.83 | 19.71-2.12 | 42.50-4.65 | 34.52-3.75 | 26.15-2.83 | 54.03-6.09 | 45.05-4.95 | 34.52-3.75 | | | |
| 7.5-75mm F1.2 H10ZME* | 32.85-3.54 | 26.45-2.84 | 19.93-2.13 | 43.04-4.69 | 34.94-3.77 | 26.45-2.84 | 55.25-6.18 | 45.63-4.99 | 34.94-3.77 | | | |
| 8-120mm F1.6 H15ZAME* | 30.84-2.19 | 24.76-1.76 | 18.62-1.32 | 40.78-2.90 | 32.85-2.34 | 24.76-1.76 | 53.64-3.81 | 43.37-3.09 | 32.85-2.34 | | | |
| 12-240mm F1.6 H20ZME* | 21.50-1.10 | 17.17-0.88 | 12.86-0.66 | 28.81-1.46 | 22.95-1.17 | 17.17-0.88 | 38.89-1.94 | 30.78-1.56 | 22.95-1.17 | | | |
| 12-660mm F4 H55ZME-F | 21.65-0.39 | 17.17-0.31 | 12.79-0.23 | 29.47-0.52 | 23.18-0.42 | 17.17-0.31 | 40.84-0.69 | 31.65-0.56 | 23.18-0.42 | | | |
| 24-1320mm F8 H55ZME(with 2X) | 10.68-0.20 | 8.53-0.16 | 6.39-0.12 | 14.29-0.26 | 11.40-0.21 | 8.53-0.16 | 19.20-0.35 | 15.27-0.28 | 11.40-0.21 | | | |
| 12.5-75mm F1.8 C6Z1218 | 20.07-3.43 | 16.08-2.75 | 12.07-2.06 | 26.69-4.57 | 21.40-3.66 | 16.08-2.75 | 35.39-6.07 | 28.44-4.87 | 21.40-3.66 | 48.08-8.30 | 38.82-6.67 | 29.32-5.02 |
| 12.5-75mm F1.8 C6ZE | 20.05-3.43 | 16.06-2.75 | 12.06-2.06 | 26.66-4.57 | 21.38-3.66 | 16.06-2.75 | 35.35-6.07 | 28.41-4.87 | 21.38-3.66 | 48.03-8.30 | 38.78-6.67 | 29.29-5.02 |
| 12.5-75mm F1.8 C6Z1218M3 | 20.07-3.43 | 16.08-2.75 | 12.07-2.06 | 26.69-4.57 | 21.40-3.66 | 16.08-2.75 | 35.39-6.07 | 28.44-4.87 | 21.40-3.66 | 48.08-8.30 | 38.82-6.67 | 29.32-5.02 |
| 12.5-75mm F1.8 C6ZAME* | 20.05-3.43 | 16.06-2.75 | 12.06-2.06 | 26.66-4.57 | 21.38-3.66 | 16.06-2.75 | 35.35-6.07 | 28.41-4.87 | 21.38-3.66 | 48.03-8.30 | 38.78-6.67 | 29.29-5.02 |
| 10.5-105mm F1.4 C10ZAME* | 23.68-2.52 | 18.97-2.02 | 14.25-1.51 | 31.44-3.34 | 25.24-2.68 | 18.97-2.02 | 41.56-4.42 | 33.49-3.56 | 25.24-2.68 | 56.05-5.98 | 45.52-4.84 | 34.51-3.67 |
| 10-140mm F1.9 C14ZME* | 24.79-1.90 | 19.89-1.52 | 14.95-1.14 | 32.84-2.52 | 26.41-2.02 | 19.89-1.52 | 43.35-3.33 | 34.96-2.68 | 26.41-2.02 | 59.12-4.49 | 47.49-3.64 | 36.02-2.76 |

For 1 Format

| Model | For 1 Format | | |
|----------------------|----------------------|----------------------|---------------------|
| | Diagonal 15.875mm | Horizontal 12.7mm | Vertical 9.525mm |
| 6.5mm F1.8 B618CX-2 | 116.08 | 97.88 | 76.21 |
| 12.5mm F1.4 B1214D-2 | 65.08 | 53.95 | 41.59 |
| 12.5mm F1.4 B1214E | 65.22 | 54.04 | 41.64 |
| 12.5mm F1.8 B1218-2 | 66.71 | 55.18 | 42.42 |
| 25mm F1.4 B2514D | 36.10 | 28.95 | 21.74 |
| 25mm F1.4 B2514E | 36.08 | 28.94 | 21.73 |
| 25mm F1.8 B2518 | 34.79 | 28.24 | 21.44 |
| 50mm F1.4 B5014A | 17.93 | 14.41 | 10.85 |
| 50mm F1.8 B5018A-3 | 17.89 | 14.40 | 10.85 |
| 50mm F1.8 B5018E | 17.89 | 14.40 | 10.85 |
| 75mm F1.4 B7514C | 12.30 | 9.78 | 7.30 |
| 75mm F1.8 B7518E | 12.10 | 9.69 | 7.28 |

For 1/1.8 Format

| Model | For 1/1.8 Format | | |
|------------------|--------------------|----------------------|--------------------|
| | Diagonal 8.94mm | Horizontal 7.15mm | Vertical 5.36mm |
| 6mm F1.2 H612E-M | 81.00 | 65.40 | 49.30 |
| 9mm F1.2 H912E-M | 54.40 | 43.90 | 33.10 |



PENTAX Precision Co., Ltd.

We, PENTAX Precision Co., Ltd. have over 50 years of experience manufacturing and marketing CCTV lenses on a worldwide basis. As a member of PENTAX group, a world renowned optical products manufacturer and leader in the field of optics and state of the art technology, we continually strive to provide the highest quality, highest performance, most extensive line lenses available.

We hope you will take advantage of the opportunity to increase your profitability with the finest ISO 9001 and ISO 14001 CCTV Lenses from the preferred industry leader, PENTAX.

● ISO 9001

This is a quality management and quality assurance system which insures all PENTAX lenses are produced under the strictest quality standards available. ISO 9001 includes guidelines for overall quality management, product development and manufacturing as well as marketing and servicing.

● ISO 14001

ISO 14001 is an environmental management system process. Our firm's commitment to a healthy, fiscally responsible coexistence with nature and the utmost respect for the environment has allowed us to achieve this prestigious certification.

We are honored to be the first lens manufacture in the CCTV industry to have been awarded both ISO 9001 and 14001 Certification.

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Monofocal Manual Iris Lens

1/4 FORMAT

| | | | | | | | | | | | |
|---------------|-----|---------|----|-------|--|--|--|-----------|----|--|---|
| QS210(C40206) | 2.2 | 1.0 - C | CS | 92.60 | | | | 36.8 36.3 | 44 | | 4 |
| QS310(C40301) | 3.0 | 1.0 - C | CS | 64.24 | | | | 36.8 33.8 | 40 | | 4 |
| QS610(C40601) | 6.0 | 1.0 - C | CS | 34.83 | | | | 36.8 33.8 | 37 | | 4 |

1/3 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|---------|----|-------|-------|--|--|-----------|----|----------------|---|
| TS212A(C70214) | 2.8 | 1.2 - C | CS | 71.54 | 94.30 | | | 36.8 36.3 | 44 | | 4 |
| TS320NX(C91665) | 3.6 | 2.0 | CS | 53.90 | 72.00 | | | 30 8 | 20 | FOR B/W CAMERA | |
| TS412A(C70409) | 4 | 1.2 - C | CS | 49.18 | 63.89 | | | 36.8 33.8 | 39 | | 4 |
| TS820NX(C91666) | 8 | 2.0 | CS | 23.90 | 31.40 | | | 30 8 | 18 | FOR B/W CAMERA | |
| TS812A(C70807) | 8 | 1.2 - C | CS | 25.05 | 33.33 | | | 36.8 33.8 | 34 | | 4 |

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|----------|----|-------|-------|-------|------------|---------|-----|------------------|---|
| HS316A(C60305) | 3.7 | 1.6 - C | CS | 53.54 | 71.02 | 93.67 | 30.5 P=0.5 | 32 35.7 | 34 | | 5 |
| HS614B(C60622) | 6 | 1.4 - C | CS | 33.86 | 44.55 | 57.81 | 30.5 P=0.5 | 32 35.7 | 32 | | 5 |
| HS1214D(C61217) | 12 | 1.4 - C | CS | 16.55 | 22.06 | 29.42 | 30.5 P=0.5 | 32 35.7 | 26 | | 5 |
| H416(C60402) | 4.2 | 1.6 - C | C | 47.87 | 64.27 | 86.77 | | 42 43.5 | 120 | | 5 |
| H612A(C60607) | 6 | 1.2 - C | C | 32.97 | 43.55 | 56.93 | 40.5 P=0.5 | 42 46 | 125 | LOCK SCREW EXTRA | 5 |
| H1212B(C61215) | 12 | 1.2 - 22 | C | 16.93 | 22.60 | 30.18 | 27.0 P=0.5 | 30 35.5 | 67 | LOCK SCREW EXTRA | 5 |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|------------------|------|----------|---|-------|-------|-------|-------------|-----------|-----|------------------|---|
| C418DX(C30405) | 4.8 | 1.8 - C | C | 41.68 | 55.11 | 72.37 | | 40.5 35.5 | 105 | LOCK SCREW EXTRA | 6 |
| B618CX-2(C20612) | 6.5 | 1.8 - C | C | 29.94 | 39.73 | 52.52 | | 48 42 | 120 | LOCK SCREW EXTRA | 6 |
| C814(C30808) | 8 | 1.4 - C | C | 25.15 | 33.31 | 43.88 | 40.5 P=0.5 | 42 58 | 160 | LOCK SCREW EXTRA | 6 |
| C815B(C30811) | 8.5 | 1.5 - C | C | 24.02 | 31.87 | 42.09 | 40.5 P=0.5 | 42 40 | 120 | LOCK SCREW EXTRA | 6 |
| B1214D-2(C21211) | 12.5 | 1.4 - C | C | 16.21 | 21.53 | 28.51 | 40.5 P=0.5 | 42 50 | 135 | LOCK SCREW EXTRA | 6 |
| B1218-2(C21212) | 12.5 | 1.8 - C | C | 16.48 | 21.90 | 29.01 | 40.5 P=0.5 | 42 40 | 95 | LOCK SCREW EXTRA | 6 |
| C1614A(C31630) | 16 | 1.4 - 22 | C | 12.70 | 16.91 | 22.48 | 27.0 P=0.5 | 30 33 | 58 | LOCK SCREW EXTRA | 7 |
| B2514D(C22525) | 25 | 1.4 - 22 | C | 8.23 | 10.97 | 14.62 | 27.0 P=0.5 | 30 37.3 | 76 | LOCK SCREW EXTRA | 7 |
| B2518(C22516) | 25 | 1.8 - C | C | 8.23 | 10.95 | 14.55 | 40.5 P=0.5 | 42 40 | 87 | LOCK SCREW EXTRA | 7 |
| B5014A(C25011) | 50 | 1.4 - C | C | 4.13 | 5.50 | 7.32 | 46.0 P=0.75 | 48 48 | 180 | LOCK SCREW EXTRA | 7 |
| B5018A-3(C25010) | 50 | 1.8 - C | C | 4.13 | 5.50 | 7.32 | 40.5 P=0.5 | 42 52.5 | 130 | LOCK SCREW EXTRA | 7 |
| B7514C(C27509) | 75 | 1.4 - C | C | 2.75 | 3.67 | 4.90 | 58.0 P=0.75 | 62 79 | 450 | LOCK SCREW EXTRA | 7 |

Machine Vision Lens

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|
| H1214-M(C61232) | 12 | 1.4 - 16 | C | 16.49 | 21.88 | 28.91 | 27.0 P=0.5 | 29.5 28.5 | 55 | LOCK SCREW | 8 |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|

2/3 FORMAT

| | | | | | | | | | | | |
|-----------------|----|----------|---|-------|-------|-------|------------|-----------|----|------------|---|
| C1614-M(C31634) | 16 | 1.4 - 16 | C | 12.86 | 17.11 | 22.72 | 27.0 P=0.5 | 29.5 33.2 | 63 | LOCK SCREW | 8 |
| C2514-M(C32500) | 25 | 1.4 - 16 | C | 8.24 | 10.97 | 14.60 | 27.0 P=0.5 | 29.5 32 | 55 | LOCK SCREW | 8 |
| C3516-M(C33500) | 35 | 1.6 - 16 | C | 6.07 | 8.09 | 10.76 | 27.0 P=0.5 | 29.5 35.4 | 64 | LOCK SCREW | 8 |
| C5028-M(C35001) | 50 | 2.8 - 22 | C | 4.12 | 5.50 | 7.32 | 27.0 P=0.5 | 29.5 34 | 55 | LOCK SCREW | 8 |

Line-Scan Lens

| | | | | | | | | | | | |
|-----------------|----|----------|---|--------------------------|--|--|-----------|---------|-----|------------------------------|-----|
| YF3528(C52915F) | 35 | 2.8 - 22 | F | 64.4 (45mm Image Format) | | | 62 P=0.75 | 72 56.8 | 440 | NOT FOR PHOTOGRAPHIC CAMERAS | 9 |
| YK3528(C52915K) | 35 | 2.8 - 22 | K | 64.4 (45mm Image Format) | | | 62 P=0.75 | 72 57.8 | 440 | | (9) |
| YF5028(C52893F) | 50 | 2.8 - 22 | F | 47.6 (45mm Image Format) | | | 62 P=0.75 | 72 56.8 | 440 | | (9) |
| YK5028(C52893K) | 50 | 2.8 - 22 | K | 47.6 (45mm Image Format) | | | 62 P=0.75 | 72 57.8 | 440 | | (9) |

UV Lens (Ultraviolet Ray)

| | | | | | | | | | | | |
|---------------------|----|----------|---|------|-------|-------|------------|---------|----|------------------|---|
| H2520-UV(M(C62500)) | 25 | 2.0 - 16 | C | 8.24 | 10.98 | 14.62 | 27.0 P=0.5 | 29.5 46 | 78 | 200nm-1000nm Ray | 9 |
|---------------------|----|----------|---|------|-------|-------|------------|---------|----|------------------|---|

Pinhole Lens

1/3 FORMAT

| | | | | | | | | | | | |
|-----------------|---|----------|----|-------|-------|--|--|----------------|----|-------------|----|
| TS420P(C70404) | 4 | 2.0 - C | CS | 51.24 | 68.47 | | | 36.5 65.9 | 74 | MANUAL IRIS | 15 |
| TS420PE(C70403) | 4 | 2.0 - 64 | CS | 51.24 | 68.47 | | | 36.5 42.3 65.9 | 79 | DC IRIS | 15 |

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|-----------|----|-------|-------|-------|--|--------------|-----|-----------------|----|
| HS620P(C60613) | 6.2 | 2.0 - C | CS | 32.44 | 42.82 | 56.12 | | 29 88.1 | 67 | MANUAL IRIS | 15 |
| H620P(C60612) | 6.2 | 2.0 - C | C | 32.44 | 42.82 | 56.12 | | 29 83.1 | 63 | MANUAL IRIS | 15 |
| HS620PE(C60627) | 6.2 | 2.0 - 300 | CS | 32.44 | 42.82 | 56.12 | | 39 45.5 88.2 | 105 | VIDEO & DC IRIS | 15 |
| H620PE(C60626) | 6.2 | 2.0 - 300 | C | 32.44 | 42.82 | 56.12 | | 39 45.5 83.2 | 100 | VIDEO & DC IRIS | 15 |

2/3 FORMAT

| | | | | | | | | | | | |
|----------------|---|----------|---|-------|-------|-------|--|----------|-----|------------------|----|
| C934P(C30900) | 9 | 3.4 - 22 | C | 22.30 | 29.60 | 39.11 | | 34 163.8 | 175 | MANUAL IRIS | 16 |
| C934PL(C30901) | 9 | 3.4 - 22 | C | 22.30 | 29.60 | 39.11 | | | 210 | R/A, MANUAL IRIS | 16 |

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Monofocal Auto-Iris Lens

1/4 FORMAT

| | | | | | | | | | | | |
|----------------|-----|-----------|----|-------|--|--|--|----------------|----|-----------------|----|
| QS210E(C40202) | 2.2 | 1.0 - 200 | CS | 92.60 | | | | 36.8 43.5 36.3 | 54 | VIDEO & DC IRIS | 10 |
| QS310E(C40300) | 3.0 | 1.0 - 200 | CS | 64.24 | | | | 36.8 43.5 33.8 | 50 | VIDEO & DC IRIS | 10 |
| QS610E(C40600) | 6.0 | 1.0 - 200 | CS | 34.83 | | | | 36.8 43.5 33.8 | 47 | VIDEO & DC IRIS | 10 |

1/3 FORMAT

| | | | | | | | | | | | |
|----------------|-----|-----------|----|-------|-------|--|--|----------------|----|-----------------|----|
| TS212E(C70210) | 2.8 | 1.2 - 200 | CS | 71.54 | 94.30 | | | 36.8 43.5 36.3 | 54 | VIDEO & DC IRIS | 10 |
| TS412E(C70406) | 4 | 1.2 - 200 | CS | 49.18 | 63.89 | | | 36.8 43.5 33.8 | 49 | VIDEO & DC IRIS | 10 |
| TS812E(C70804) | 8 | 1.2 - 200 | CS | 25.05 | 33.33 | | | 36.8 43.5 33.8 | 44 | VIDEO & DC IRIS | 10 |

1/2 FORMAT

| | | | | | | | | | | | |
|------------------|-----|-----------|----|-------|-------|-------|-----------|----------------|-----|-----------------|----|
| HS316TE(C60310) | 3.7 | 1.6 - 90 | CS | 53.54 | 71.02 | 93.67 | 34 P=0.5 | 42.8 47.1 36.5 | 57 | VIDEO & DC IRIS | 11 |
| HS614TE(C60631) | 6 | 1.4 - 90 | CS | 33.86 | 44.55 | 57.81 | 34 P=0.5 | 42.8 47.1 36.5 | 60 | VIDEO & DC IRIS | 11 |
| HS1214TE(C61228) | 12 | 1.4 - 90 | CS | 16.55 | 22.06 | 29.42 | 34 P=0.5 | 42.8 47.1 36.5 | 46 | VIDEO & DC IRIS | 11 |
| HS316E(C60309) | 3.7 | 1.6 - 300 | CS | 53.54 | 71.02 | 93.67 | 34 P=0.5 | 42.8 47.1 36.5 | 57 | VIDEO & DC IRIS | 11 |
| HS614E(C60630) | 6 | 1.4 - 300 | CS | 33.86 | 44.55 | 57.81 | 34 P=0.5 | 42.8 47.1 36.5 | 60 | VIDEO & DC IRIS | 11 |
| HS1214E(C61227) | 12 | 1.4 - 300 | CS | 16.55 | 22.06 | 29.42 | 34 P=0.5 | 42.8 47.1 36.5 | 46 | VIDEO & DC IRIS | 11 |
| H416E(C60405) | 4.2 | 1.6 - 360 | C | 47.87 | 64.27 | 86.77 | | 46.5 50.5 45 | 135 | VIDEO & DC IRIS | 12 |
| H612E(C60625) | 6 | 1.2 - 360 | C | 32.97 | 43.55 | 56.93 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |
| H1212E(C61220) | 12 | 1.2 - 360 | C | 16.93 | 22.60 | 30.18 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|----------------|------|-----------|---|-------|-------|-------|-----------|----------------|-----|-----------------|----|
| C418E(C30407) | 4.8 | 1.8 - 360 | C | 41.27 | 54.57 | 71.65 | | 46.5 50.5 37.5 | 120 | VIDEO & DC IRIS | 12 |
| C814E(C30821) | 8 | 1.4 - 360 | C | 25.10 | 33.22 | 43.67 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO & DC IRIS | 12 |
| B1214E(C21223) | 12.5 | 1.4 - 360 | C | 16.22 | 21.55 | 28.54 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO & DC IRIS | 12 |
| C1614E(C31632) | 16 | 1.4 - 360 | C | 12.72 | 16.92 | 22.50 | 43 P=0.75 | 46.5 50.5 46.7 | 110 | VIDEO & DC IRIS | 13 |
| B2514E(C22527) | 25 | 1.4 - 360 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO & DC IRIS | 13 |
| B5018E(C25018) | 50 | 1.8 - 360 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO & DC IRIS | 13 |
| B7518E(C27513) | 75 | 1.8 - 360 | C | 2.76 | 3.67 | 4.90 | 49 P=0.75 | 62 70.5 | 300 | VIDEO & DC IRIS | 13 |

Ultra-High Speed Auto-Iris Lens

1/3 FORMAT

| | | | | | | | | | | | |
|--------------------|-----|------------|----|-------|-------|--|------------|------------|-----|---------|----|
| TS209E-ASP(C70204) | 2.8 | 0.95 - 180 | CS | 72.69 | 98.24 | | | 48 53 46.9 | 140 | DC IRIS | 14 |
| TS407E-ASP(C70405) | 4 | 0.75 - 180 | CS | 48.39 | 62.55 | | 40.5 P=0.5 | 48 53 53.1 | 145 | DC IRIS | 14 |
| TS807E-ASP(C70803) | 8 | 0.75 - 180 | CS | 25.07 | 33.31 | | 40.5 P=0.5 | 48 53 46.9 | 135 | DC IRIS | 14 |

Mega-Pixel Auto-Iris Lens

1/1.8 FORMAT

| | | | | | | | | | | | |
|-----------------|---|-----------|---|-------------|-------------|---------------|------------|--------------|-----|-----------------|----|
| H612E-M(C60632) | 6 | 1.2 - 200 | C | 44.23 (1/3) | 58.70 (1/2) | 65.40 (1/1.8) | 40.5 P=0.5 | 47 52.5 53.1 | 170 | VIDEO & DC IRIS | 14 |
| H912E-M(C60900) | 9 | 1.2 - 200 | C | 29.65 (1/3) | 39.38 (1/2) | 43.90 (1/1.8) | 40.5 P=0.5 | 47 52.5 51.6 | 160 | VIDEO & DC IRIS | 14 |

Manual Override (Remote-Control Iris) Lens

1/2 FORMAT

| | | | | | | | | | | | |
|-----------------|-----|-----------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| H416ER(C60404) | 4.2 | 1.6 - 360 | C | 47.87 | 64.27 | 86.77 | | 46.5 50.5 45 | 135 | VIDEO IRIS | (12) |
| H612ER(C60624) | 6 | 1.2 - 360 | C | 32.97 | 43.55 | 56.93 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |
| H1212ER(C61219) | 12 | 1.2 - 360 | C | 16.93 | 22.60 | 30.18 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |

2/3, 1 FORMAT

| | | | | | | | | | | | |
|-----------------|------|-----------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| C418ER(C30406) | 4.8 | 1.8 - 360 | C | 41.27 | 54.57 | 71.65 | | 46.5 50.5 37.5 | 120 | VIDEO IRIS | (12) |
| C814ER(C30820) | 8 | 1.4 - 360 | C | 25.10 | 33.22 | 43.67 | 43 P=0.75 | 46.5 50.5 51.1 | 140 | VIDEO IRIS | (12) |
| B1214ER(C21221) | 12.5 | 1.4 - 360 | C | 16.21 | 21.53 | 28.51 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO IRIS | (12) |
| C1614ER(C31631) | 16 | 1.4 - 360 | C | 12.70 | 16.91 | 22.48 | 43 P=0.75 | 46.5 50.5 46.7 | 110 | VIDEO IRIS | (13) |
| B2514ER(C22526) | 25 | 1.4 - 360 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO IRIS | (13) |
| B5018ER(C25017) | 50 | 1.8 - 360 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO IRIS | (13) |

High Sensitivity Auto-Iris (F1000/2000) Lens

1 FORMAT

| | | | | | | | | | | | |
|---------------------|------|------------|---|-------|-------|-------|-----------|----------------|-----|------------|------|
| B1214E-2000(C21224) | 12.5 | 1.4 - 2000 | C | 16.21 | 21.53 | 28.51 | 43 P=0.75 | 46.5 50.5 47.5 | 140 | VIDEO IRIS | (12) |
| B2514E-2000(C22528) | 25 | 1.4 - 2000 | C | 8.23 | 10.97 | 14.62 | 43 P=0.75 | 46.5 50.5 51.8 | 140 | VIDEO IRIS | (13) |
| B5018E-1000(C25019) | 50 | 1.8 - 1000 | C | 4.13 | 5.50 | 7.32 | 49 P=0.75 | 62 51 | 230 | VIDEO IRIS | (13) |
| B7518E-1000(C27514) | 75 | 1.8 - 1000 | C | 2.76 | 3.67 | 4.90 | 49 P=0.75 | 62 70.5 | 300 | VIDEO IRIS | (13) |

| MODEL | FOCAL LENGTH [MM] | IRIS RANGE | MOUNT | HORIZONTAL ANGLE OF VIEW | | | FILTER SIZE [MM] | DIMENSIONS (D L)(W H L) [MM] | WEIGHT (G) | REMARKS | PAGE |
|-------|-------------------|------------|-------|--------------------------|------------|------------|------------------|------------------------------|------------|---------|------|
| | | | | 1/4 FORMAT | 1/3 FORMAT | 1/2 FORMAT | | | | | |

Manual Iris Vari-Focal Lens

1/4 FORMAT

| | | | | | | | | | | | |
|------------------|---------|---------|----|-------------|--|--|------------|---------|----|-------------|----|
| Q52V2212 | 2.2-4.5 | 1.2 - C | CS | 94.48-51.88 | | | | | | COMING SOON | 17 |
| Q52V2812(C40207) | 2.8-5.8 | 1.2 - C | CS | 76.22-36.40 | | | 30.5 P=0.5 | 36 43.5 | 45 | | 17 |

1/3 FORMAT

| | | | | | | | | | | | |
|------------------|-------|---------|----|-------------|-------------|--|------------|---------|----|-----------|----|
| TS2V214(C70213) | 2.8-6 | 1.4 - C | CS | 72.46-35.15 | 96.94-46.76 | | | 36 43.2 | 47 | | 18 |
| TS2V314B(C70313) | 3.5-8 | 1.4 - C | CS | 58.74-26.55 | 79.83-35.44 | | 30.5 P=0.5 | 36 43.5 | 43 | DAY&NIGHT | 18 |
| TS2V616(C70612) | 6-12 | 1.6 - C | CS | 34.92-17.21 | 47.22-22.97 | | 30.5 P=0.5 | 36 43.5 | 43 | | 18 |

Auto-Iris Vari-Focal Lens

1/4 FORMAT

| | | | | | | | | | | | |
|-------------------|---------|-----------|----|-------------|--|--|------------|----------------|----|-----------------|----|
| Q52V2212E | 2.2-4.5 | 1.2 - 200 | CS | 94.48-51.88 | | | | | | COMING SOON | 17 |
| Q52V2812E(C40205) | 2.8-5.8 | 1.2 - 200 | CS | 76.22-36.40 | | | 30.5 P=0.5 | 40.4 45.7 43.5 | 57 | VIDEO & DC IRIS | 17 |

1/3 FORMAT

| | | | | | | | | | | | |
|-------------------|---------|-----------|----|--------------|--------------|--|------------|----------------|-----|--------------------------|----|
| TS2V114E(C70100) | 1.6-3.4 | 1.4 - 64 | CS | 180.00-64.89 | 180.00-89.55 | | | 38.3 44.7 56.7 | 140 | FISH EYE, DC IRIS | 19 |
| TS2V214AE(C70220) | 2.8-6 | 1.4 - 300 | CS | 72.26-35.35 | 96.70-47.04 | | | 40.4 45.7 43.2 | 59 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS2V314BE(C70312) | 3.5-8 | 1.4 - 300 | CS | 58.74-26.55 | 79.83-35.44 | | 30.5 P=0.5 | 40.4 45.7 43.5 | 59 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS2V616AE(C70622) | 6-12 | 1.6 - 300 | CS | 34.98-17.23 | 47.37-23.01 | | 30.5 P=0.5 | 40.4 45.7 43.5 | 53 | VID & DC IRIS, DAY&NIGHT | 18 |
| TS10V518E(C70508) | 5-50 | 1.8 - 360 | CS | 37.80-4.14 | 50.00-5.52 | | | 44.5 50.8 61.5 | 140 | DC IRIS | 19 |

Manual Zoom Lens

1/3 FORMAT

| | | | | | | | | | | | |
|---------------|--------|-----------|----|------------|------------|--|-----------|-----------|-----|-----------------|----|
| TS6ZE(C70605) | 6.3-38 | 1.2 - 512 | CS | 31.26-5.59 | 41.12-7.43 | | 49 P=0.75 | 57.5 77.8 | 320 | VIDEO & DC IRIS | 20 |
|---------------|--------|-----------|----|------------|------------|--|-----------|-----------|-----|-----------------|----|

1/2 FORMAT

| | | | | | | | | | | | |
|----------------|------|-----------|---|------------|------------|------------|-----------|----------|-----|-----------------|----|
| H6Z810(C60812) | 8-48 | 1.0 - 22 | C | 24.92-4.42 | 32.99-5.86 | 43.26-7.73 | 55 P=0.75 | 57 95 | 430 | MANUAL IRIS | 20 |
| H6ZBE(C60811) | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 69 64 95 | 465 | VIDEO & DC IRIS | 20 |

2/3 FORMAT

| | | | | | | | | | | | |
|-----------------|---------|-----------|---|------------|------------|------------|-----------|-------|-----|-----------------|----|
| C6Z1218(C31204) | 12.5-75 | 1.8 - 22 | C | 16.08-2.75 | 21.40-3.66 | 28.44-4.87 | 49 P=0.75 | 51 90 | 320 | MANUAL IRIS | 20 |
| C6ZE(C31219) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 68 90 | 385 | VIDEO & DC IRIS | 20 |

Motorized Zoom Lens

1/4 FORMAT

| | | | | | | | | | | | |
|----------------|--------|-----------|----|------------|--|--|-----------|------------|-----|-----------------|----|
| Q56ZME(C40400) | 4.6-28 | 1.0 - 250 | CS | 41.64-7.50 | | | 49 P=0.75 | 65 72.8 77 | 430 | VIDEO & DC IRIS | 21 |
|----------------|--------|-----------|----|------------|--|--|-----------|------------|-----|-----------------|----|

1/3 FORMAT

| | | | | | | | | | | | |
|---------------------|--------|-----------|----|------------|------------|--|-----------|--------------|------|-----------------|----|
| TS6ZME(C70600) | 6.3-38 | 1.2 - 360 | CS | 31.26-5.59 | 41.12-7.43 | | 49 P=0.75 | 58 63.5 78 | 410 | VIDEO & DC IRIS | 22 |
| TS10ZME(C70500) | 5.8-58 | 1.2 - 360 | CS | 33.77-3.62 | 44.07-4.78 | | 49 P=0.75 | 64.6 70.3 85 | 380 | VIDEO & DC IRIS | 22 |
| TS10ZME-P(C70501)* | 5.8-58 | 1.2 - 360 | CS | 33.77-3.62 | 44.07-4.78 | | 49 P=0.75 | 64.6 70.3 85 | 430 | VIDEO & DC IRIS | 22 |
| TS15ZAME(C70624) | 6-90 | 1.2 - 430 | CS | 32.96-2.33 | 43.48-3.08 | | 62 P=0.75 | 78 88.5 119 | 760 | VIDEO & DC IRIS | 23 |
| TS15ZAME-P(C70627)* | 6-90 | 1.2 - 430 | CS | 32.96-2.33 | 43.48-3.08 | | 62 P=0.75 | 78 88.5 119 | 770 | VIDEO & DC IRIS | 23 |
| TS20ZME(C70900) | 9-180 | 1.2 - 510 | CS | 22.61-1.15 | 30.28-1.53 | | 95 P=1.0 | 116 135 216 | 2590 | VIDEO IRIS | 23 |
| TS20ZME-P(C70903)* | 9-180 | 1.2 - 510 | CS | 22.61-1.15 | 30.28-1.53 | | 95 P=1.0 | 116 135 216 | 2620 | VIDEO IRIS | 23 |

1/2 FORMAT

| | | | | | | | | | | | |
|--------------------|----------|------------|----|------------|------------|------------|-----------|---------------|------|-------------------------|----|
| HS6ZME(C60806) | 8-48 | 1.4 - 360 | CS | 24.81-4.39 | 32.78-5.82 | 42.88-7.69 | 49 P=0.75 | 58 63.5 78 | 400 | VIDEO & DC IRIS | 24 |
| H6ZBME(C60809) | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 64 74.5 97 | 530 | VIDEO & DC IRIS | 24 |
| H6ZBME-P(C60810)* | 8-48 | 1.0 - 720 | C | 24.92-4.42 | 32.98-5.86 | 43.24-7.73 | 55 P=0.75 | 64 74.5 97 | 540 | VIDEO & DC IRIS | 24 |
| HS10ZME(C60700) | 7.5-75 | 1.4 - 360 | CS | 26.15-2.83 | 34.52-3.75 | 45.05-4.95 | 58 P=0.75 | 67 75 112 | 580 | VIDEO & DC IRIS | 25 |
| H10ZME(C60701) | 7.5-75 | 1.2 - 512 | C | 26.45-2.84 | 34.94-3.77 | 45.63-4.99 | 62 P=0.75 | 70 80.5 121.5 | 715 | VIDEO & DC IRIS | 25 |
| H10ZME-P(C60702)* | 7.5-75 | 1.2 - 512 | C | 26.45-2.84 | 34.94-3.77 | 45.63-4.99 | 62 P=0.75 | 70 80.5 121.5 | 740 | VIDEO & DC IRIS | 25 |
| H15ZAME(C60826) | 8-120 | 1.6 - 1000 | C | 24.76-1.76 | 32.85-2.34 | 43.37-3.09 | 62 P=0.75 | 78 88.5 134 | 800 | VIDEO & DC IRIS | 26 |
| H15ZAME-P(C60829)* | 8-120 | 1.6 - 1000 | C | 24.76-1.76 | 32.85-2.34 | 43.37-3.09 | 62 P=0.75 | 78 88.5 134 | 810 | VIDEO & DC IRIS | 26 |
| H20ZME(C61221) | 12-240 | 1.6 - 720 | C | 17.17-0.88 | 22.95-1.17 | 30.78-1.56 | 95 P=1.0 | 116 135 216 | 2590 | VIDEO IRIS | 26 |
| H20ZME-P(C61224)* | 12-240 | 1.6 - 720 | C | 17.17-0.88 | 22.95-1.17 | 30.78-1.56 | 95 P=1.0 | 116 135 216 | 2620 | VIDEO IRIS | 26 |
| H55ZME-F(C61233) | 12 -1320 | 4.0 - 360 | C | 17.17-0.16 | 23.18-0.21 | 31.65-0.28 | 105 P=1.0 | 155 138 355 | 5400 | VIDEO IRIS, 2X EXTENDER | 27 |

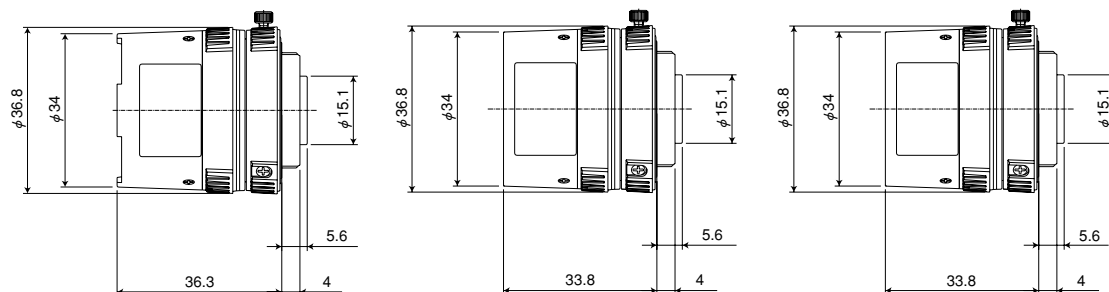
2/3 FORMAT

| | | | | | | | | | | | |
|--------------------|----------|------------|---|------------|------------|------------|-----------|-----------------|------|----------------|----|
| C6Z1218M3(C31211) | 12.5-75 | 1.8 - C | C | 16.06-2.75 | 21.40-3.66 | 28.44-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 820 | MOTORIZED IRIS | 28 |
| C6ZAME(C31220) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 620 | VIDEO IRIS | 28 |
| C6ZME-P(C31221) | 12.5-75 | 1.8 - 720 | C | 16.06-2.75 | 21.38-3.66 | 28.41-4.87 | 49 P=0.75 | 101.5 92.2 94.5 | 655 | VIDEO IRIS | 28 |
| C10ZAME(C31002) | 10.5-105 | 1.4 - 1000 | C | 18.97-2.02 | 25.24-2.68 | 33.49-3.56 | 72 P=0.75 | 121 109.5 149.5 | 1380 | VIDEO IRIS | 29 |
| C10ZAME-P(C31003)* | 10.5-105 | 1.4 - 1000 | C | 18.97-2.02 | 25.24-2.68 | 33.49-3.56 | 72 P=0.75 | 121 109.5 149.5 | 1420 | VIDEO IRIS | 29 |
| C14ZME(C31009) | 10-140 | 1.9 - 720 | C | 19.89-1.52 | 26.41-2.02 | 34.96-2.68 | 86 P=1.0 | 128 118.6 165 | 2000 | VIDEO IRIS | 29 |
| C14ZME-P(C31010)* | 10-140 | 1.9 - 720 | C | 19.89-1.52 | 26.41-2.02 | 34.96-2.68 | 86 P=1.0 | 128 118.6 165 | 2040 | VIDEO IRIS | 29 |

Manual Override option is available on the models asterisked (*)

1/4 Format Manual Iris

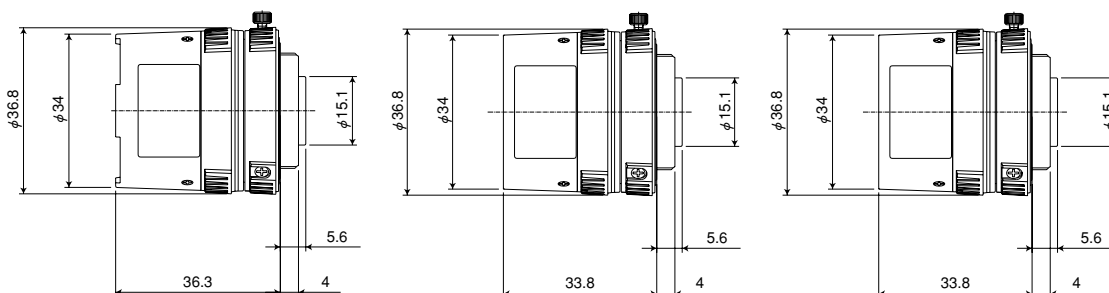
Unit: mm



| | QS210 (C40206) | QS310 (C40301) | QS610 (C40601) |
|----------------------|----------------|----------------|----------------|
| Format Size | 1/4 | 1/4 | 1/4 |
| Focal Length | 2.2mm | 3.0mm | 6.0mm |
| Max. Aperture Ratio | 1 : 1.0 | 1 : 1.0 | 1 : 1.0 |
| Iris Range | F1.0 Close | F1.0 Close | F1.0 Close |
| Horizontal 1/4 | 92.60 | 64.24 | 34.83 |
| Angle of View 1/3 | | | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.15m | 0.15m | 0.2m |
| Back Focal Length | 7.76mm | 7.75mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 44g | 40g | 37g |
| Remarks | | | |

1/3 Format Manual Iris

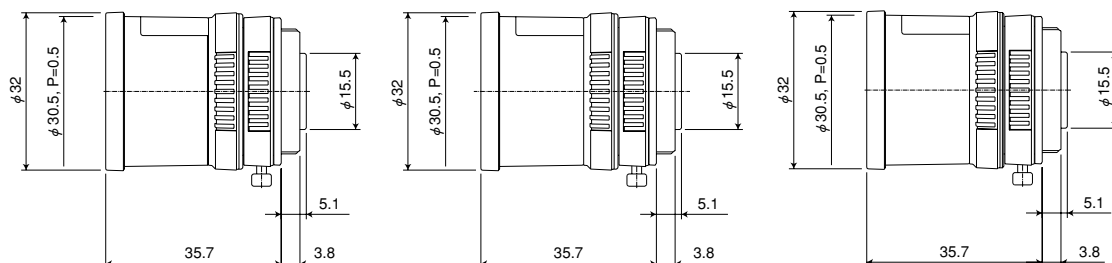
Unit: mm



| | TS212A (C70214) | TS412A (C70409) | TS812A (C70807) |
|----------------------|-----------------|-----------------|-----------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.2 Close | F1.2 Close | F1.2 Close |
| Horizontal 1/4 | 71.54 | 49.18 | 25.05 |
| Angle of View 1/3 | 94.30 | 63.89 | 33.33 |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.3m | 0.2m | 0.3m |
| Back Focal Length | 7.67mm | 8.01mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 44g | 39g | 34g |
| Remarks | | | |

1/2 Format Manual Iris

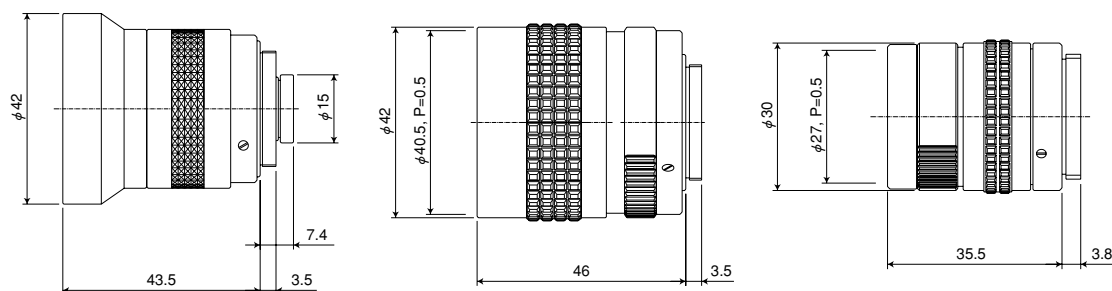
Unit: mm



| | HS316A (C60305) | HS614B (C60622) | HS1214D (C61217) |
|----------------------|-----------------|-----------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 Close | F1.4 Close | F1.4 Close |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.3m | 0.8m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 30.5mm P=0.5mm | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 34g | 32g | 26g |
| Remarks | | | |

1/2 Format Manual Iris

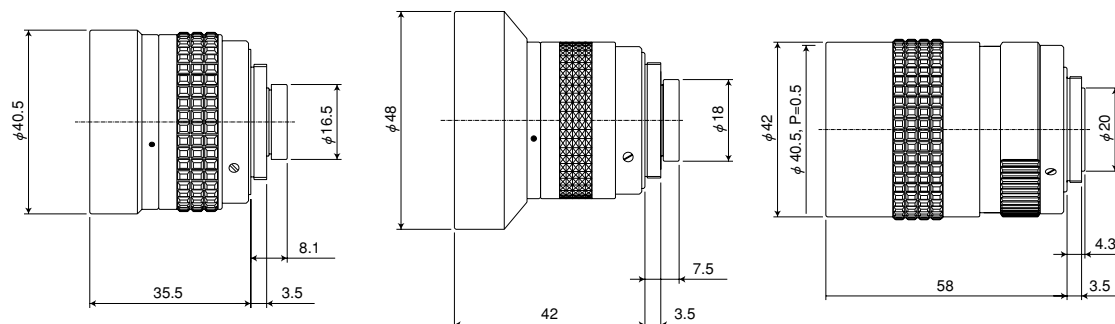
Unit: mm



| | H416 (C60402) | H612A (C60607) | H1212B (C61215) |
|----------------------|---------------|------------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 4.2mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.6 Close | F1.2 Close | F1.2 22 |
| Horizontal 1/4 | 47.87 | 32.97 | 16.93 |
| Angle of View 1/3 | 64.27 | 43.55 | 22.60 |
| (Degrees) 1/2 | 86.77 | 56.93 | 30.18 |
| Min. Object Distance | 0.2m | 0.2m | 0.2m |
| Back Focal Length | 10.42mm | 14.31mm | 13.87mm |
| Filter size | | 40.5mm P=0.5mm | 27mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 125g | 67g |
| Remarks | | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

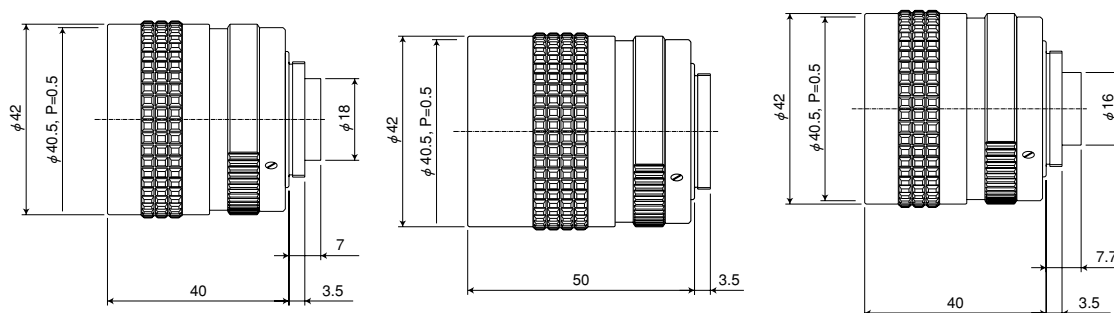
Unit: mm



| | C418DX (C30405) | B618CX-2 (C20612) | C814 (C30808) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 2/3 | 1 | 2/3 |
| Focal Length | 4.8mm | 6.5mm | 8mm |
| Max. Aperture Ratio | 1 : 1.8 | 1 : 1.8 | 1 : 1.4 |
| Iris Range | F1.8 Close | F1.8 Close | F1.4 Close |
| Horizontal 1/4 | 41.68 | 29.94 | 25.15 |
| Angle of View 1/3 | 55.11 | 39.73 | 33.31 |
| (Degrees) 1/2 | 72.37 | 52.52 | 43.88 |
| Min. Object Distance | 0.3m | 0.2m | 0.2m |
| Back Focal Length | 9.7mm | 10.19mm | 14.6mm |
| Filter size | | | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 105g | 120g | 160g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

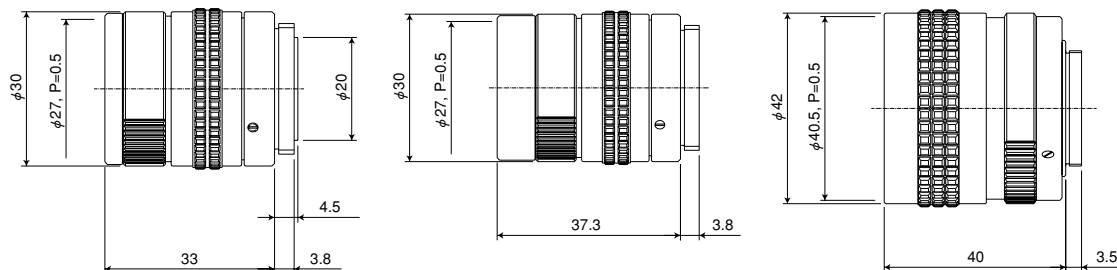
Unit: mm



| | C815B (C30811) | B1214D-2 (C21211) | B1218-2 (C21212) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 8.5mm | 12.5mm | 12.5mm |
| Max. Aperture Ratio | 1 : 1.5 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.5 Close | F1.4 Close | F1.8 Close |
| Horizontal 1/4 | 24.02 | 16.21 | 16.48 |
| Angle of View 1/3 | 31.87 | 21.53 | 21.90 |
| (Degrees) 1/2 | 42.09 | 28.51 | 29.01 |
| Min. Object Distance | 0.2m | 0.3m | 0.3m |
| Back Focal Length | 10.9mm | 14.4mm | 10.1mm |
| Filter size | 40.5mm P=0.5mm | 40.5mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 135g | 95g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

2/3, 1 Format Manual Iris

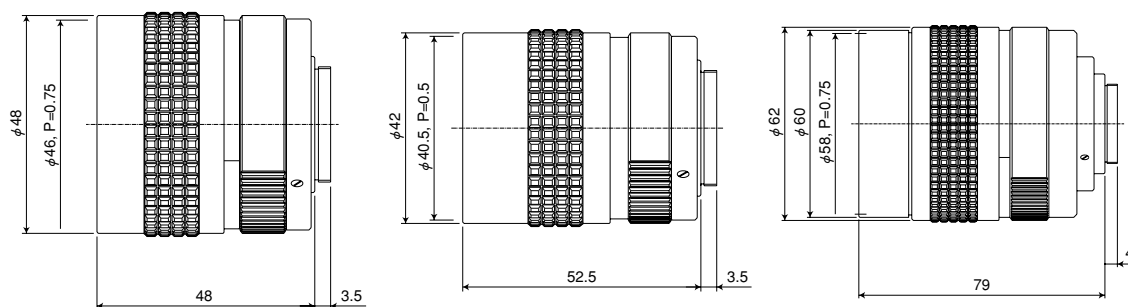
Unit: mm



| | C1614A (C31630) | B2514D (C22525) | B2518 (C22516) |
|----------------------|------------------|------------------|------------------|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 16mm | 25mm | 25mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.4 22 | F1.4 22 | F1.8 Close |
| Horizontal 1/4 | 12.70 | 8.23 | 8.23 |
| Angle of View 1/3 | 16.91 | 10.97 | 10.95 |
| (Degrees) 1/2 | 22.48 | 14.62 | 14.55 |
| Min. Object Distance | 0.3m | 0.3m | 0.6m |
| Back Focal Length | 13.2mm | 14.98mm | 14.9mm |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 58g | 76g | 87g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

1 Format Manual Iris

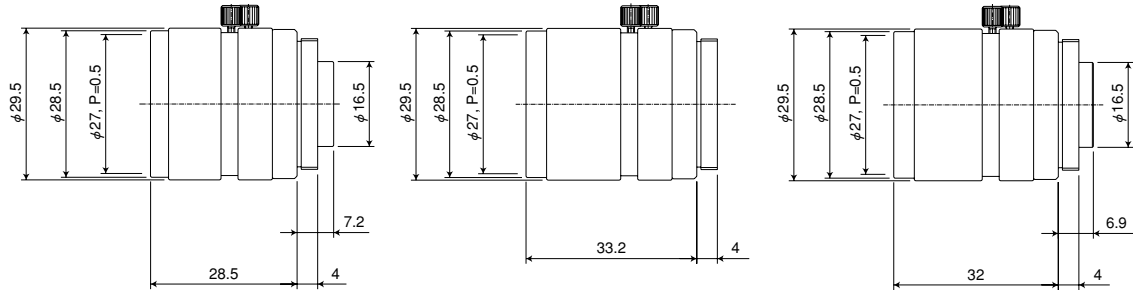
Unit: mm



| | B5014A (C25011) | B5018A-3 (C25010) | B7514C (C27509) |
|----------------------|------------------|-------------------|------------------|
| Format Size | 1 | 1 | 1 |
| Focal Length | 50mm | 50mm | 75mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.8 | 1 : 1.4 |
| Iris Range | F1.4 Close | F1.8 Close | F1.4 Close |
| Horizontal 1/4 | 4.13 | 4.13 | 2.75 |
| Angle of View 1/3 | 5.50 | 5.50 | 3.67 |
| (Degrees) 1/2 | 7.32 | 7.32 | 4.90 |
| Min. Object Distance | 1m | 1m | 1.2m |
| Back Focal Length | 18.1mm | 31.7mm | 18.5mm |
| Filter size | 46mm P=0.75mm | 40.5mm P=0.5mm | 58mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 180g | 130g | 450g |
| Remarks | Lock Screw Extra | Lock Screw Extra | Lock Screw Extra |

Manual Iris for Machine Vision

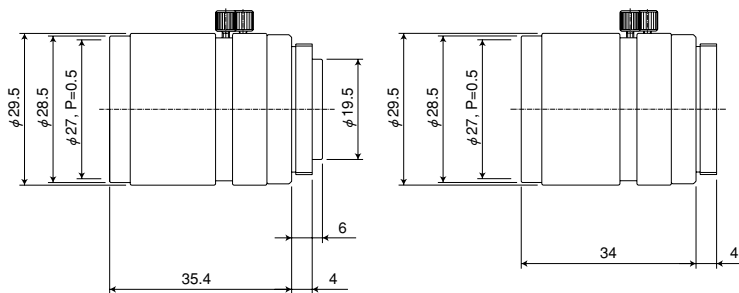
Unit: mm



| | H1214-M (C61232) | C1614-M (C31634) | C2514-M (C32500) |
|----------------------|---|---|---|
| Format Size | 1/2 | 2/3 | 2/3 |
| Focal Length | 12mm | 16mm | 25mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.4 16 | F1.4 16 | F1.4 16 |
| Horizontal 1/4 | 16.49 | 12.86 | 8.24 |
| Angle of View 1/3 | 21.88 | 17.11 | 10.97 |
| (Degrees) 1/2 | 28.91 | 22.72 | 14.60 |
| Min. Object Distance | 0.25m | 0.25m | 0.25m |
| Back Focal Length | 11.50mm | 14.61mm | 11.50mm |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | 27mm P=0.5mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 55g | 63g | 55g |
| Remarks | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application |

Manual Iris for Machine Vision

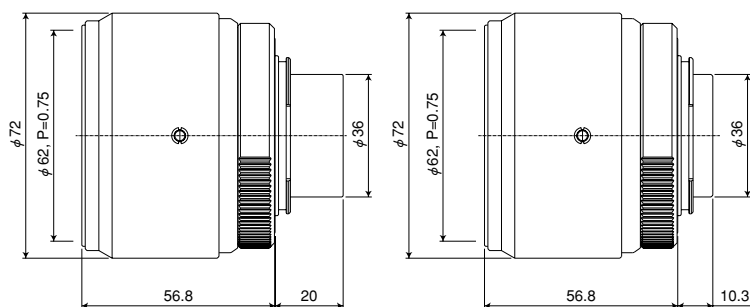
Unit: mm



| | C3516-M (C33500) | C5028-M (C35001) | |
|----------------------|---|---|--|
| Format Size | 2/3 | 2/3 | |
| Focal Length | 35mm | 50mm | |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 2.8 | |
| Iris Range | F1.6 16 | F2.8 22 | |
| Horizontal 1/4 | 6.07 | 4.12 | |
| Angle of View 1/3 | 8.09 | 5.50 | |
| (Degrees) 1/2 | 10.76 | 7.32 | |
| Min. Object Distance | 0.4m | 0.9m | |
| Back Focal Length | 11.85mm | 21.03mm | |
| Filter size | 27mm P=0.5mm | 27mm P=0.5mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 64g | 55g | |
| Remarks | Lock Screw Up to 2M pixels cameras For Close-Up application | Lock Screw Up to 2M pixels cameras For Close-Up application | |

Manual Iris for Line-Scan Cameras

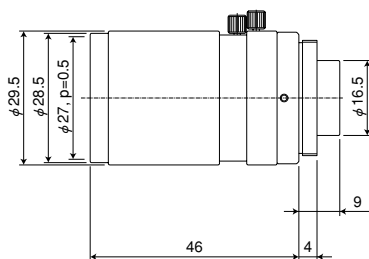
Unit: mm



| | YF3528 (C52915F) | YF5028 (C52893F) | |
|------------------------------------|--|--|--|
| Format Size | 45mm Image Circle | 45mm Image Circle | |
| Focal Length | 35mm | 50mm | |
| Max. Aperture Ratio | 1 : 2.8 | 1 : 2.8 | |
| Iris Range | F2.8 22 | F2.8 22 | |
| Horizontal Angle of View (Degrees) | 64.40 (45mm Image Format) | 47.60 (45mm Image Format) | |
| Min. Object Distance | 0.19m | 0.25m | |
| Back Focal Length | 33.22mm | 36.99mm | |
| Filter size | 62mm P=0.75mm | 62mm P=0.75mm | |
| Mount (Flange back) | F-Mount | F-Mount | |
| Weight | 440g | 440g | |
| Remarks | Lock Screw, Click-stop Iris For Close-Up application K-Mount: YK3528 (C52915K) | Lock Screw, Click-stop Iris For Close-Up application K-Mount: YK5028 (C52893K) | |

1/2 Format Manual Iris for UV (Ultraviolet) Cameras

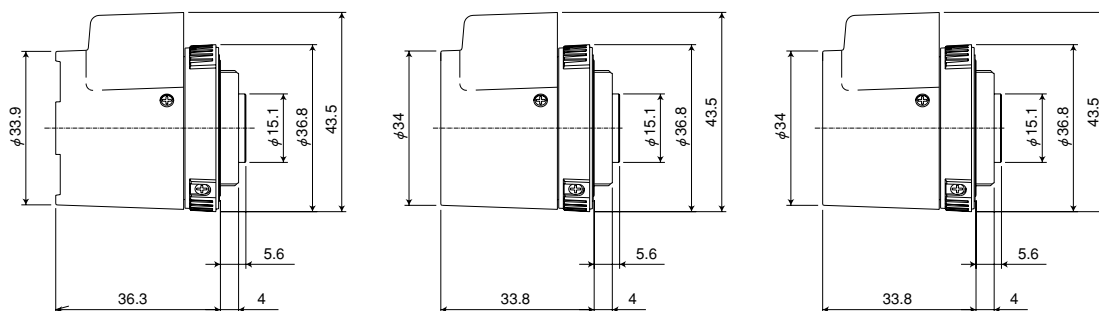
Unit: mm



| | H2520-UV (C62500) | | |
|------------------------------------|---|--|--|
| Format Size | 1/2 | | |
| Focal Length | 25mm | | |
| Max. Aperture Ratio | 1 : 2.0 | | |
| Iris Range | F2.0 16 | | |
| Horizontal Angle of View (Degrees) | 8.24 | | |
| Min. Object Distance | 0.25m | | |
| Back Focal Length | 12.01mm (330nm) | | |
| Filter size | 27mm P=0.5mm | | |
| Mount (Flange back) | C (17.526mm) | | |
| Weight | 78g | | |
| Remarks | Wave Length: 200nm more than 1,000nm (280nm 365nm for up to 2M pixels UV cameras) For Close-Up application | | |

1/4 Format Auto-Iris

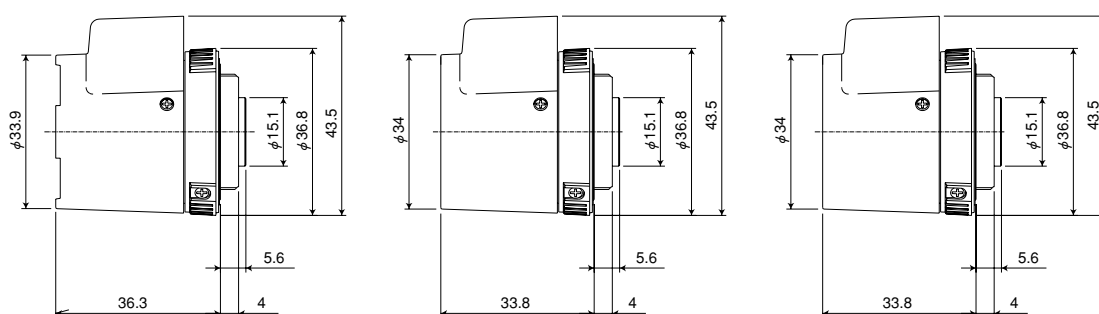
Unit: mm



| | QS210E (C40202) | QS310E (C40300) | QS610E (C40600) |
|------------------------------------|-----------------|-----------------|-----------------|
| Format Size | 1/4 | 1/4 | 1/4 |
| Focal Length | 2.2mm | 3.0mm | 6.0mm |
| Max. Aperture Ratio | 1 : 1.0 | 1 : 1.0 | 1 : 1.0 |
| Iris Range | F1.0 200 | F1.0 200 | F1.0 200 |
| Horizontal Angle of View (Degrees) | 92.60 | 64.24 | 34.83 |
| Min. Object Distance | 0.15m | 0.15m | 0.2m |
| Back Focal Length | 7.76mm | 7.75mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 54g | 50g | 47g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/3 Format Auto-Iris

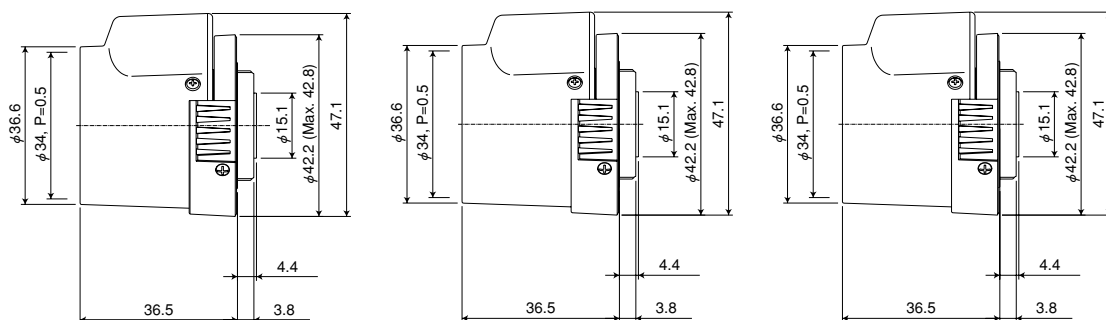
Unit: mm



| | TS212E (C70210) | TS412E (C70406) | TS812E (C70804) |
|------------------------------------|-----------------|-----------------|-----------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.2 200 | F1.2 200 | F1.2 200 |
| Horizontal Angle of View (Degrees) | 71.54 | 49.18 | 25.05 |
| Min. Object Distance | 0.3m | 0.2m | 0.2m |
| Back Focal Length | 7.67mm | 8.01mm | 7.73mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 54g | 49g | 44g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

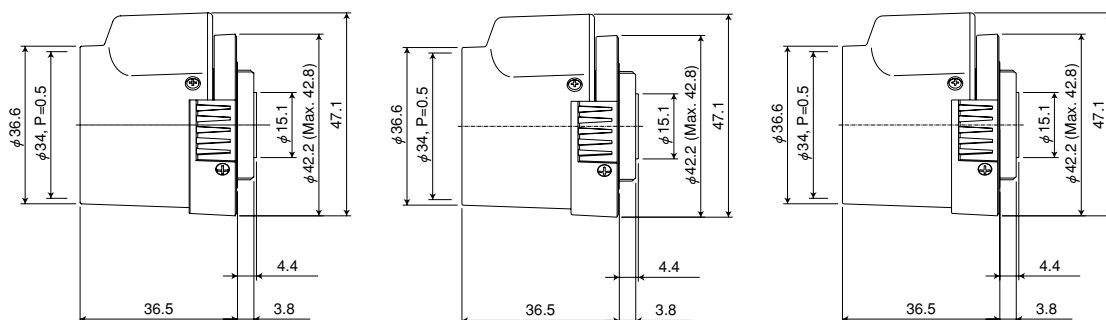
Unit: mm



| | HS316TE (C60310) | HS614TE (C60631) | HS1214TE (C61228) |
|----------------------|------------------|------------------|-------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 90 | F1.4 90 | F1.4 90 |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.2m | 0.5m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 34mm P=0.5mm | 34mm P=0.5mm | 34mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 57g | 60g | 46g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

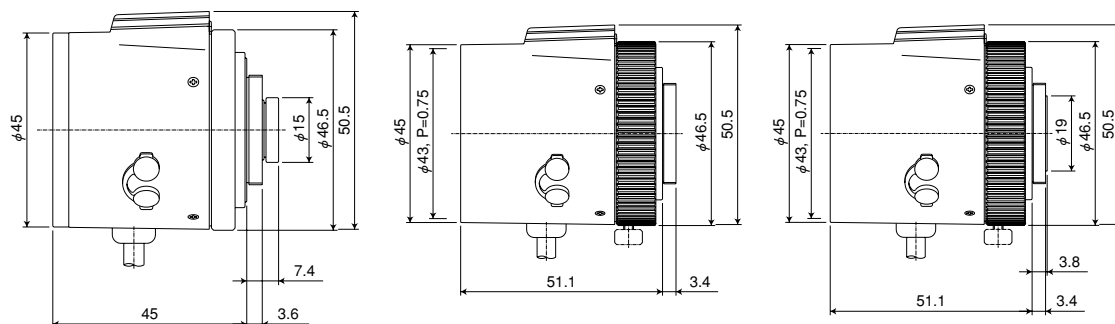
Unit: mm



| | HS316E (C60309) | HS614E (C60630) | HS1214E (C61227) |
|----------------------|-----------------|-----------------|------------------|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 3.7mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.6 300 | F1.4 300 | F1.4 300 |
| Horizontal 1/4 | 53.54 | 33.86 | 16.55 |
| Angle of View 1/3 | 71.02 | 44.55 | 22.06 |
| (Degrees) 1/2 | 93.67 | 57.81 | 29.42 |
| Min. Object Distance | 0.2m | 0.2m | 0.5m |
| Back Focal Length | 8.99mm | 10.49mm | 10.38mm |
| Filter size | 34mm P=0.5mm | 34mm P=0.5mm | 34mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 57g | 60g | 46g |
| Remarks | Video & DC Iris | Video & DC Iris | Video & DC Iris |

1/2 Format Auto-Iris

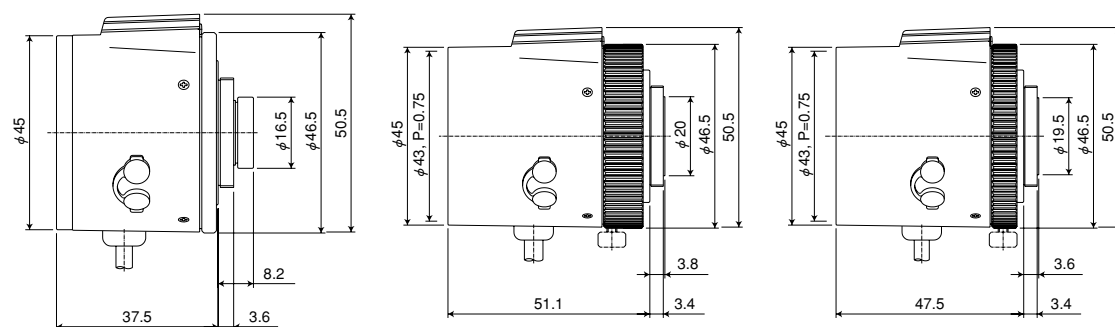
Unit: mm



| | H416E (C60405) | H612E (C60625) | H1212E (C61220) |
|----------------------|---|---|--|
| Format Size | 1/2 | 1/2 | 1/2 |
| Focal Length | 4.2mm | 6mm | 12mm |
| Max. Aperture Ratio | 1 : 1.6 | 1 : 1.2 | 1 : 1.2 |
| Iris Range | F1.6 360 | F1.2 360 | F1.2 360 |
| Horizontal 1/4 | 47.87 | 32.97 | 16.93 |
| Angle of View 1/3 | 64.27 | 43.55 | 22.60 |
| (Degrees) 1/2 | 86.77 | 56.93 | 30.18 |
| Min. Object Distance | 0.2m | 0.2m | 0.3m |
| Back Focal Length | 10.4mm | 14.3mm | 13.9mm |
| Filter size | | 43mm P=0.75mm | 43mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 135g | 140g | 140g |
| Remarks | Video & DC Iris Manual Override: H416ER (C60404) | Video & DC Iris Manual Override: H612ER (C60624) | Video & DC Iris Manual Override: H1212ER (C61219) |

2/3, 1 Format Auto-Iris

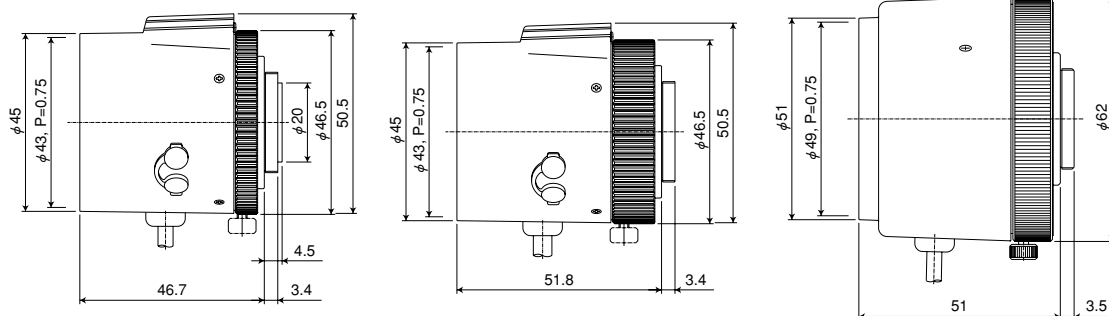
Unit: mm



| | C418E (C30407) | C814E (C30821) | B1214E (C21223) |
|----------------------|---|---|---|
| Format Size | 2/3 | 2/3 | 1 |
| Focal Length | 4.8mm | 8mm | 12.5mm |
| Max. Aperture Ratio | 1 : 1.8 | 1 : 1.4 | 1 : 1.4 |
| Iris Range | F1.8 360 | F1.4 360 | F1.4 360 |
| Horizontal 1/4 | 41.27 | 25.10 | 16.22 |
| Angle of View 1/3 | 54.57 | 33.22 | 21.55 |
| (Degrees) 1/2 | 71.65 | 43.67 | 28.54 |
| Min. Object Distance | 0.3m | 0.2m | 0.3m |
| Back Focal Length | 9.71mm | 14.5mm | 14.4mm |
| Filter size | | 43mm P=0.75mm | 43mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 120g | 140g | 140g |
| Remarks | Video & DC Iris Manual Override: C418ER (C30406) | Video & DC Iris Manual Override: C814ER (C30820) | Video & DC Iris Manual Override: B1214ER (C21221) F1.4-2000: B1214E-2000 (C21224) |

2/3, 1 Format Auto-Iris

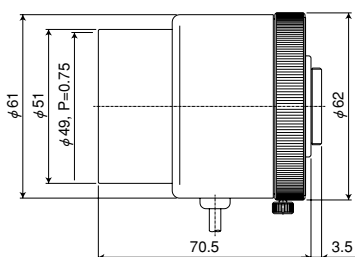
Unit: mm



| | C1614E (C31632) | B2514E (C22527) | B5018E (C25018) |
|----------------------|--|---|---|
| Format Size | 2/3 | 1 | 1 |
| Focal Length | 16mm | 25mm | 50mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.8 |
| Iris Range | F1.4 360 | F1.4 360 | F1.8 360 |
| Horizontal 1/4 | 12.72 | 8.23 | 4.13 |
| Angle of View 1/3 | 16.92 | 10.97 | 5.50 |
| (Degrees) 1/2 | 22.50 | 14.62 | 7.32 |
| Min. Object Distance | 0.5m | 0.9m | 1m |
| Back Focal Length | 13.2mm | 14.98mm | 31.7mm |
| Filter size | 43mm P=0.75mm | 43mm P=0.75mm | 49mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | C (17.526mm) |
| Weight | 110g | 140g | 230g |
| Remarks | Video & DC Iris Manual Override: C1614ER (C31631) | Video & DC Iris Manual Override: B2514ER (C22526) F1.4-2000: B2514E-2000 (C22528) | Video & DC Iris Manual Override: B5018ER (C25017) F1.8-1000: B5018E-1000 (C25019) |

1 Format Auto-Iris

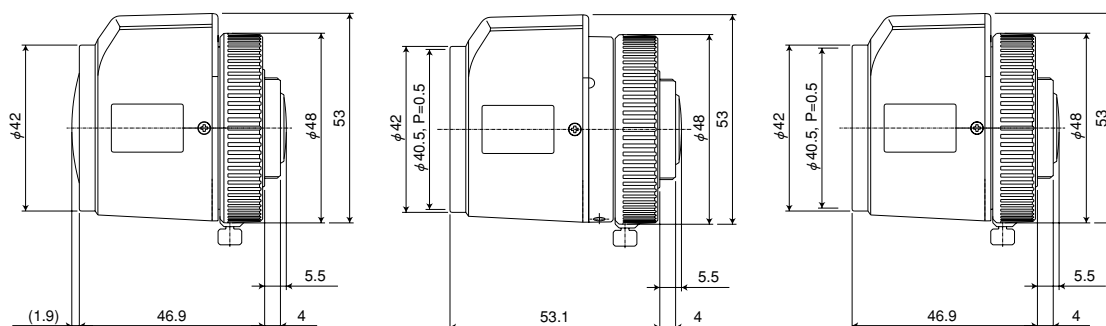
Unit: mm



| | B7518E (C27513) | | |
|----------------------|--|--|--|
| Format Size | 1 | | |
| Focal Length | 75mm | | |
| Max. Aperture Ratio | 1 : 1.8 | | |
| Iris Range | F1.8 360 | | |
| Horizontal 1/4 | 2.76 | | |
| Angle of View 1/3 | 3.67 | | |
| (Degrees) 1/2 | 4.90 | | |
| Min. Object Distance | 2.5m | | |
| Back Focal Length | 28.3mm | | |
| Filter size | 49mm P=0.75mm | | |
| Mount (Flange back) | C (17.526mm) | | |
| Weight | 300g | | |
| Remarks | Video & DC Iris F1.8-1000: B7518E-1000 (C27514) | | |

1/3 Format Ultra-High Speed Auto-Iris

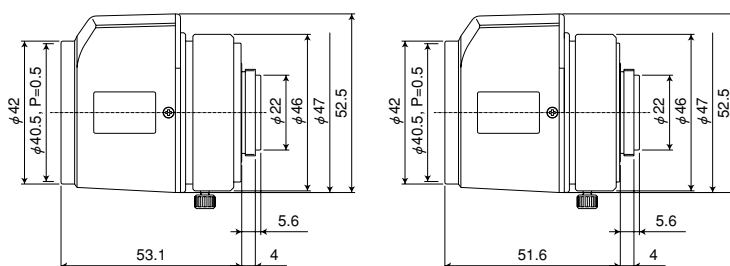
Unit: mm



| | TS209E-ASP (C70204) | TS407E-ASP (C70405) | TS807E-ASP (C70803) |
|----------------------|---------------------|---------------------|---------------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8mm | 4mm | 8mm |
| Max. Aperture Ratio | 1 : 0.95 | 1 : 0.75 | 1 : 0.75 |
| Iris Range | F0.95 180 | F0.75 180 | F0.75 180 |
| Horizontal 1/4 | 72.69 | 48.39 | 25.07 |
| Angle of View 1/3 | 98.24 | 62.55 | 33.31 |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 7.51mm | 7.51mm | 7.98mm |
| Filter size | | 40.5mm P=0.5mm | 40.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 140g | 145g | 135g |
| Remarks | DC Iris | DC Iris | DC Iris |

1/1.8 Format Mega-Pixel Auto-Iris

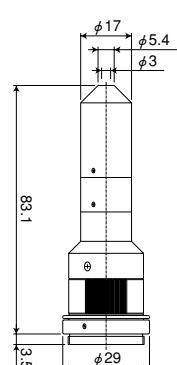
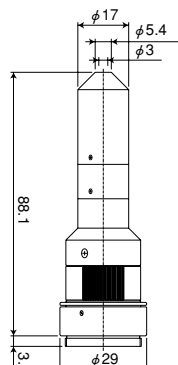
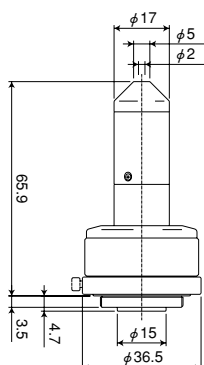
Unit: mm



| | H612E-M (C60632) | H912E-M (C60900) | |
|----------------------|--|--|--|
| Format Size | 1/1.8 | 1/1.8 | |
| Focal Length | 6mm | 9mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 200 | F1.2 200 | |
| Horizontal 1/3 | 44.23 | 29.65 | |
| Angle of View 1/2 | 58.70 | 39.38 | |
| (Degrees) 1/1.8 | 65.40 | 43.90 | |
| Min. Object Distance | 0.12m | 0.2m | |
| Back Focal Length | 12.13mm | 12.22mm | |
| Filter size | 40.5mm P=0.5mm | 40.5mm P=0.5mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 170g | 160g | |
| Remarks | Video & DC Iris Up to 3M pixels cameras | Video & DC Iris Up to 3M pixels cameras | |

1/3, 1/2 Format Manual Iris Pinhole

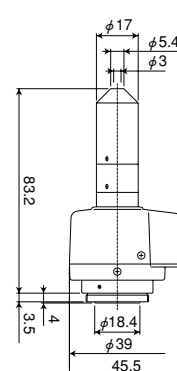
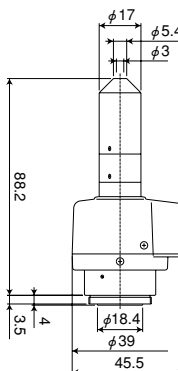
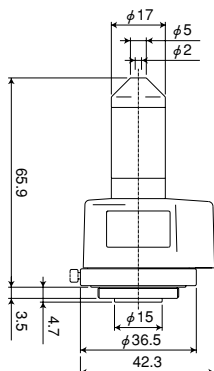
Unit: mm



| | TS420P (C70404) | HS620P (C60613) | H620P (C60612) |
|-----------------------------|------------------|------------------|------------------|
| Format Size | 1/3 | 1/2 | 1/2 |
| Focal Length | 4mm | 6.2mm | 6.2mm |
| Max. Aperture Ratio | 1 : 2.0 | 1 : 2.0 | 1 : 2.0 |
| Iris Range | F2.0 Close | F2.0 Close | F2.0 Close |
| Horizontal 1/4 | 51.24 | 32.44 | 32.44 |
| Angle of View 1/3 (Degrees) | 68.47 | 42.82 | 42.82 |
| 1/2 | | 56.12 | 56.12 |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 8.55mm | 14.23mm | 14.23mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | C (17.526mm) |
| Weight | 74g | 67g | 63g |
| Remarks | Straight pinhole | Straight pinhole | Straight pinhole |

1/3, 1/2 Format Auto-Iris Pinhole

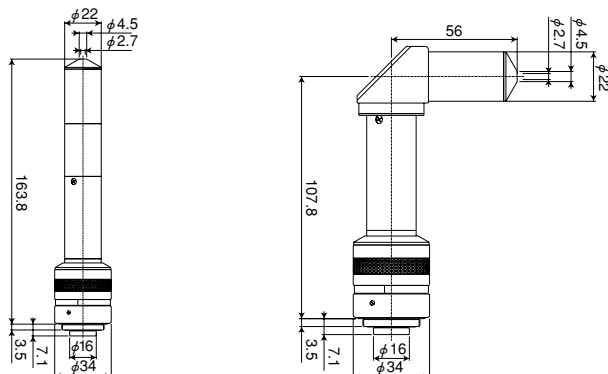
Unit: mm



| | TS420PE (C70403) | HS620PE (C60627) | H620PE (C60626) |
|-----------------------------|-----------------------------|-------------------------------------|-------------------------------------|
| Format Size | 1/3 | 1/2 | 1/2 |
| Focal Length | 4mm | 6.2mm | 6.2mm |
| Max. Aperture Ratio | 1 : 2.0 | 1 : 2.0 | 1 : 2.0 |
| Iris Range | F2.0 64 | F2.0 300 | F2.0 300 |
| Horizontal 1/4 | 51.24 | 32.44 | 32.44 |
| Angle of View 1/3 (Degrees) | 68.47 | 42.82 | 42.82 |
| 1/2 | | 56.12 | 56.12 |
| Min. Object Distance | 0.3m | 0.3m | 0.3m |
| Back Focal Length | 8.55mm | 14.23mm | 14.23mm |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | C (17.526mm) |
| Weight | 79g | 105g | 100g |
| Remarks | DC Iris Straight pinhole | Video & DC Iris Straight pinhole | Video & DC Iris Straight pinhole |

2/3 Format Manual Iris Pinhole

Unit: mm

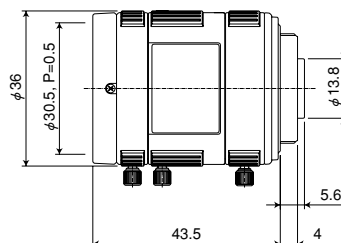


| | C934P (C30900) | C934PL (C30901) | |
|----------------------|------------------|---------------------|--|
| Format Size | 2/3 | 2/3 | |
| Focal Length | 9mm | 9mm | |
| Max. Aperture Ratio | 1 : 3.4 | 1 : 3.4 | |
| Iris Range | F3.4 22 | F3.4 22 | |
| Horizontal 1/4 | 22.30 | 22.30 | |
| Angle of View 1/3 | 29.60 | 29.60 | |
| (Degrees) 1/2 | 39.11 | 39.11 | |
| Min. Object Distance | 0.3m | 0.3m | |
| Back Focal Length | 11.8mm | 11.8mm | |
| Filter size | | | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 175g | 210g | |
| Remarks | Straight Pinhole | Right Angle Pinhole | |

1/4 Format Manual Iris Vari-Focal

Unit: mm

Coming Soon

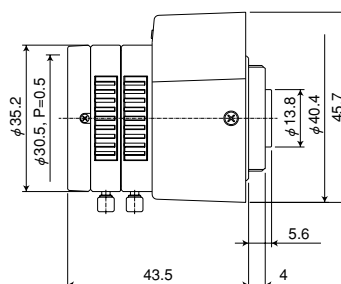


| | QS2V2212 | QS2V2812 (C40207) | |
|----------------------|-------------|-------------------|--|
| Format Size | 1/4 | 1/4 | |
| Focal Length | 2.2 4.5mm | 2.8 5.8mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 Close | F1.2 Close | |
| Horizontal 1/4 | 94.48 51.88 | 76.22 36.40 | |
| Angle of View 1/3 | | | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | | 0.3m | |
| Back Focal Length | | Min. 7.50mm | |
| Filter size | | 30.5mm P=0.5mm | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | |
| Weight | | 45g | |
| Remarks | | | |

1/4 Format Auto-Iris Vari-Focal

Unit: mm

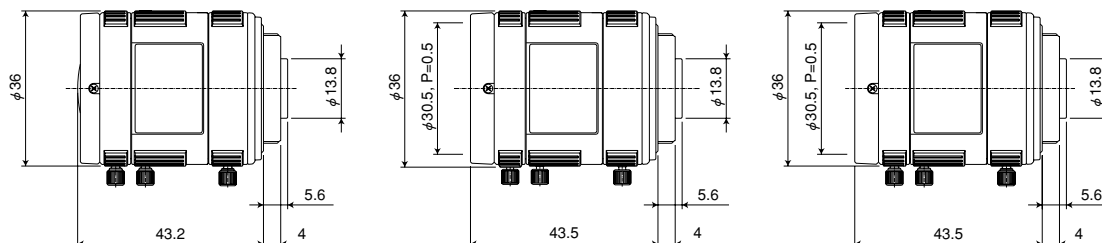
Coming Soon



| | QS2V2212E | QS2V2812E (C40205) | |
|----------------------|-------------|--------------------|--|
| Format Size | 1/4 | 1/4 | |
| Focal Length | 2.2 4.5mm | 2.8 5.8mm | |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.2 | |
| Iris Range | F1.2 200 | F1.2 200 | |
| Horizontal 1/4 | 94.48 51.88 | 76.22 36.40 | |
| Angle of View 1/3 | | | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | | 0.3m | |
| Back Focal Length | | Min. 7.50mm | |
| Filter size | | 30.5mm P=0.5mm | |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | |
| Weight | | 57g | |
| Remarks | | Video & DC Iris | |

1/3 Format Manual Iris Vari-Focal

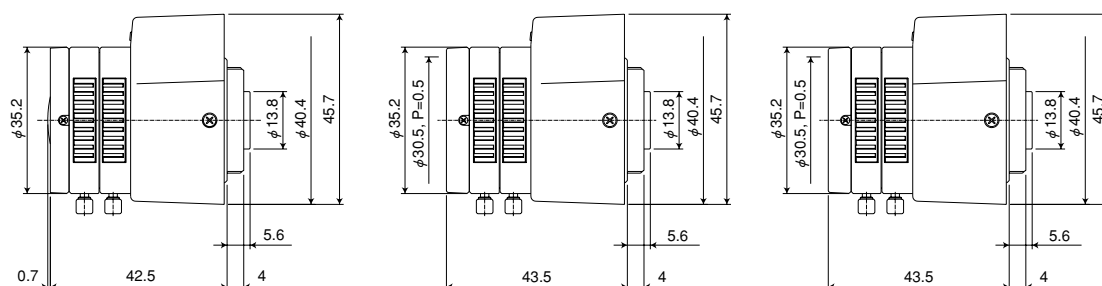
Unit: mm



| | TS2V214 (C70213) | TS2V314B (C70313) | TS2V616 (C70612) |
|-----------------------------|------------------|--------------------|------------------|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8 6mm | 3.5 8mm | 6 12mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.6 |
| Iris Range | F1.4 Close | F1.4 Close | F1.6 Close |
| Horizontal 1/4 | 72.46 35.15 | 58.74 26.55 | 34.92 17.21 |
| Angle of View 1/3 (Degrees) | 96.94 46.76 | 79.83 35.44 | 47.22 22.97 |
| Min. Object Distance | 0.3m | 0.35m | 1.0m |
| Back Focal Length | Min. 7.54mm | Min. 7.65mm | Min. 7.79mm |
| Filter size | | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 47g | 43g | 43g |
| Remarks | | Day & Night optics | |

1/3 Format Auto-Iris Vari-Focal

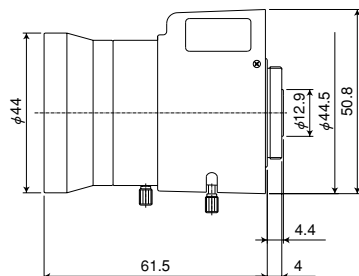
Unit: mm



| | TS2V214AE (C70220) | TS2V314BE (C70312) | TS2V616AE (C70622) |
|-----------------------------|---|---|---|
| Format Size | 1/3 | 1/3 | 1/3 |
| Focal Length | 2.8 6mm | 3.5 8mm | 6 12mm |
| Max. Aperture Ratio | 1 : 1.4 | 1 : 1.4 | 1 : 1.6 |
| Iris Range | F1.4 300 | F1.4 300 | F1.6 300 |
| Horizontal 1/4 | 72.26 35.35 | 58.74 26.55 | 34.98 17.23 |
| Angle of View 1/3 (Degrees) | 96.70 47.04 | 79.83 35.44 | 47.37 23.01 |
| Min. Object Distance | 0.3m | 0.35m | 1.0m |
| Back Focal Length | Min. 7.54mm | Min. 7.65mm | Min. 7.79mm |
| Filter size | | 30.5mm P=0.5mm | 30.5mm P=0.5mm |
| Mount (Flange back) | CS (12.5mm) | CS (12.5mm) | CS (12.5mm) |
| Weight | 59g | 59g | 53g |
| Remarks | Video Iris DC-Iris: TS2V214AED Day & Night optics | Video Iris DC-Iris: TS2V314BED Day & Night optics | Video Iris DC-Iris: TS2V616AED Day & Night optics |

1/3 Format Auto-Iris Vari-Focal

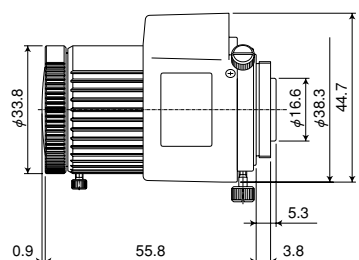
Unit: mm



| | TS10V518E (C70508) | | |
|----------------------|--------------------|------|--|
| Format Size | 1/3 | | |
| Focal Length | 5 50mm | | |
| Max. Aperture Ratio | 1 : 1.8 | | |
| Iris Range | F1.8 360 | | |
| Horizontal 1/4 | 37.80 | 4.14 | |
| Angle of View 1/3 | 50.00 | 5.52 | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.6m | | |
| Back Focal Length | Min. 7.6mm | | |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | | |
| Weight | 140g | | |
| Remarks | DC Iris | | |

1/3 Format Auto-Iris Fish-Eye Vari-Focal

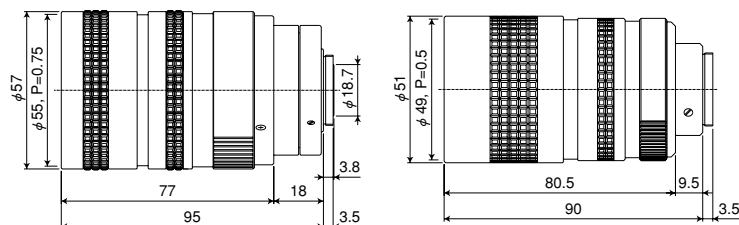
Unit: mm



| | TS2V114E (C70100) | | |
|----------------------|--------------------------|-------|--|
| Format Size | 1/3 | | |
| Focal Length | 1.6 3.4mm | | |
| Max. Aperture Ratio | 1 : 1.4 | | |
| Iris Range | F1.4 64 | | |
| Horizontal 1/4 | 180 | 64.89 | |
| Angle of View 1/3 | 180 | 89.55 | |
| (Degrees) 1/2 | | | |
| Min. Object Distance | 0.5m | | |
| Back Focal Length | 8.07mm | | |
| Filter size | | | |
| Mount (Flange back) | CS (12.5mm) | | |
| Weight | 140g | | |
| Remarks | DC Iris Fish-Eye lens | | |

1/2, 2/3 Format Manual Zoom

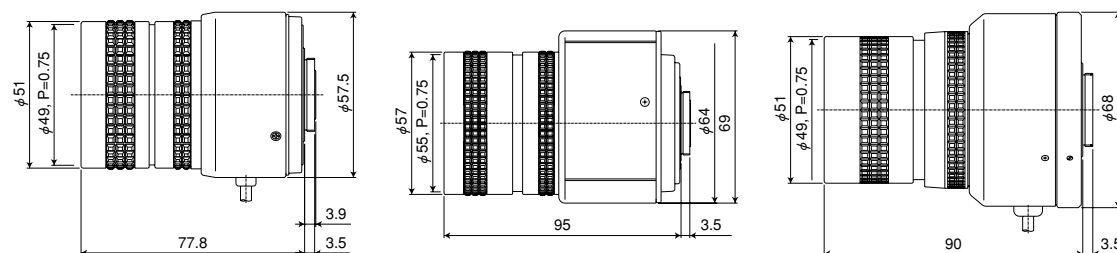
Unit: mm



| | H6Z810 (C60812) | C6Z1218 (C31204) | |
|----------------------|-------------------|--------------------------------------|--|
| Format Size | 1/2 | 2/3 | |
| Focal Length | 8 48mm | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.0 1.2 | 1 : 1.8 | |
| Iris Range | F1.0 22 | F1.8 22 | |
| Horizontal 1/4 | 24.92 4.42 | 16.08 2.75 | |
| Angle of View 1/3 | 32.99 5.86 | 21.40 3.66 | |
| (Degrees) 1/2 | 43.26 7.73 | 28.44 4.87 | |
| Min. Object Distance | 1.2m | 1.0m | |
| Back Focal Length | 13.65mm | 18.41mm | |
| Filter size | 55mm P=0.75mm | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | C (17.526mm) | |
| Weight | 430g | 320g | |
| Remarks | Lock Screws Extra | Lock Screws Extra Click-stop Iris | |

1/3, 1/2, 2/3 Format Manual Zoom (Auto-Iris)

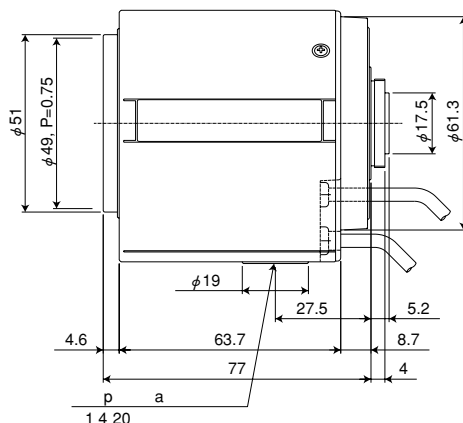
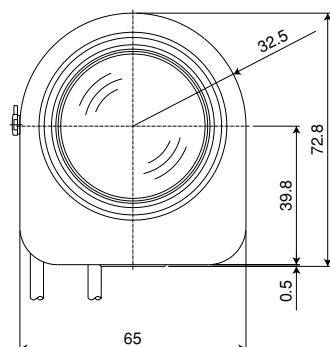
Unit: mm



| | TS6ZE (C70605) | H6ZBE (C60811) | C6ZE (C31219) |
|----------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Format Size | 1/3 | 1/2 | 2/3 |
| Focal Length | 6.3 38mm | 8 48mm | 12.5 75mm |
| Max. Aperture Ratio | 1 : 1.2 | 1 : 1.0 1.2 | 1 : 1.8 |
| Iris Range | F1.2 512 | F1.0 720 | F1.8 720 |
| Horizontal 1/4 | 31.26 5.59 | 24.92 4.42 | 16.06 2.75 |
| Angle of View 1/3 | 41.12 7.43 | 32.98 5.86 | 21.38 3.66 |
| (Degrees) 1/2 | | 43.24 7.73 | 28.41 4.87 |
| Min. Object Distance | 1.8m | 1.2m | 1.0m |
| Back Focal Length | 9.23mm | 13.65mm | 18.41mm |
| Filter size | 49mm P=0.75mm | 55mm P=0.75mm | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) | C (17.526mm) | C (17.526mm) |
| Weight | 320g | 465g | 385g |
| Remarks | Video & DC Iris Lock Screws Extra | Video & DC Iris Lock Screws Extra | Video & DC Iris Lock Screws Extra |

1/4 Format 6x Motorized Zoom

Unit: mm



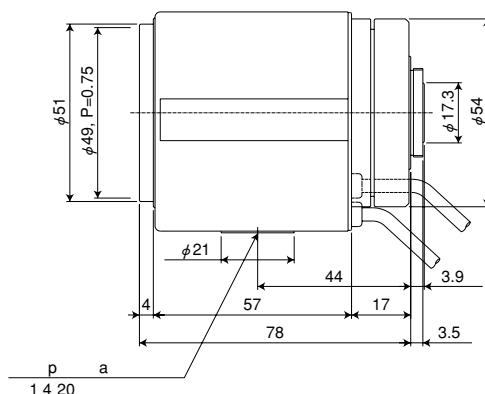
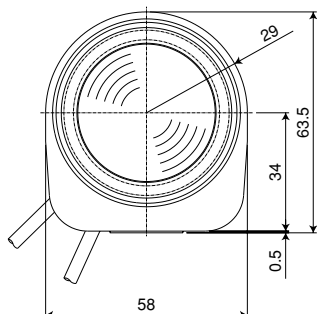
Basic Specification

| | |
|----------------------|---------------|
| Format Size | 1/4 |
| Focal Length | 4.6 28mm |
| Max. Aperture Ratio | 1 : 1.0 |
| Iris Range | F1.0 250 |
| Horizontal | 1/4 |
| Angle of View | 1/3 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 7.89mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| QS6ZME (C40400) | |
|-----------------|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 5.0 sec |
| Zoom | Motorized Approx. 4.0 sec |
| Weight | 430g |
| Remarks | |

1/3 Format 6x Motorized Zoom

Unit: mm



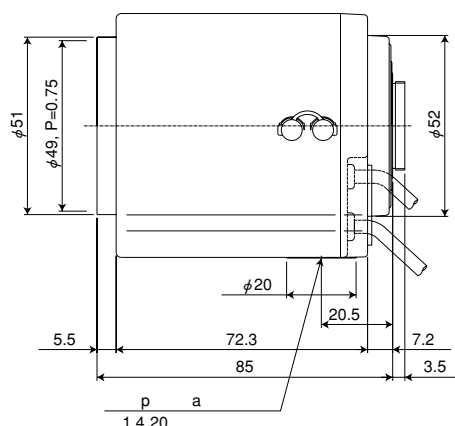
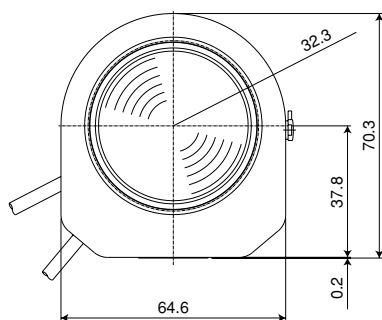
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 6.3 38mm |
| Max. Aperture Ratio | 1 : 1.2 |
| Iris Range | F1.2 360 |
| Horizontal | 1/4 31.26 5.59 |
| Angle of View | 1/3 41.12 7.43 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 9.23mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS6ZME (C70600) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized Approx. 5.0 sec | |
| Zoom | Motorized Approx. 5.0 sec | |
| Weight | 410g | |
| Remarks | | |

1/3 Format 10x Motorized Zoom

Unit: mm



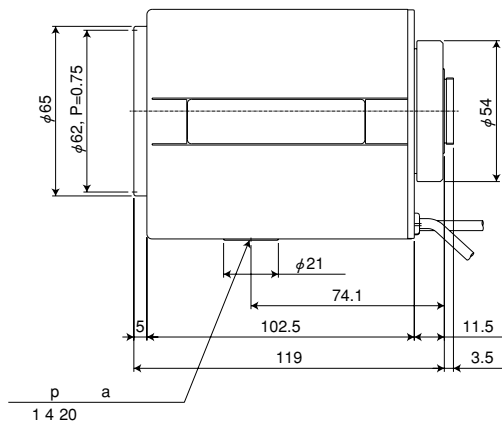
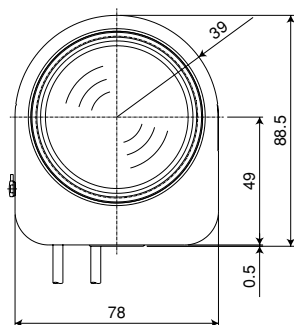
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 5.8 58mm |
| Max. Aperture Ratio | 1 : 1.2 1.7 |
| Iris Range | F1.2 360 |
| Horizontal | 1/4 33.77 3.62 |
| Angle of View | 1/3 44.07 4.78 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 8.99mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS10ZME (C70500) | TS10ZME-P (C70501) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec |
| Zoom | Motorized Approx. 6.5 sec | Motorized with Pre-Set Approx. 6.5 sec |
| Weight | 380g | 430g |
| Remarks | | Manual Override (only Video Iris) TS10ZME-F (C70506) |

1/3 Format 15x Motorized Zoom

Unit: mm



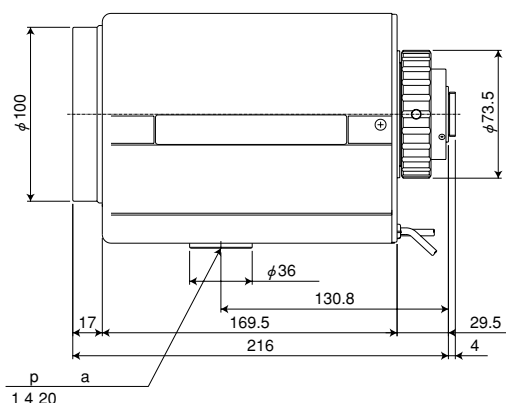
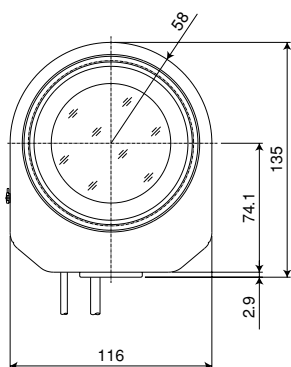
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 6.0 90mm |
| Max. Aperture Ratio | 1 : 1.2 1.8 |
| Iris Range | F1.2 430 |
| Horizontal | 1/4 32.96 2.33 |
| Angle of View | 1/3 43.48 3.08 |
| (Degrees) | 1/2 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 10.7mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS15ZAME (C70624) | TS15ZAME-P (C70627) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 760g | 770g |
| Remarks | | Manual Override (only Video Iris) TS15ZAME-F (C70625) |

1/3 Format 20x Motorized Zoom

Unit: mm



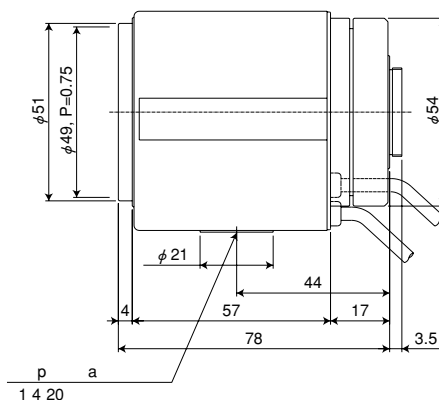
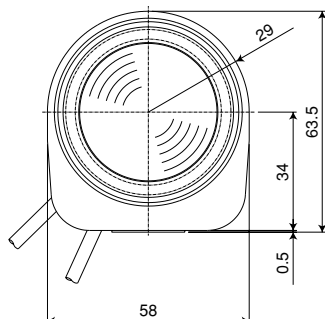
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/3 |
| Focal Length | 9 180mm |
| Max. Aperture Ratio | 1 : 1.2 2.1 |
| Iris Range | F1.2 510 |
| Horizontal | 1/4 22.61 1.15 |
| Angle of View | 1/3 30.28 1.53 |
| (Degrees) | 1/2 |
| Min. Object Distance | 2.2m |
| Back Focal Length | 14.25mm |
| Filter size | 95mm P=1.0mm |
| Mount (Flange back) | CS (12.5mm) |

| | TS20ZME (C70900) | TS20ZME-P (C70903) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Zoom | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Weight | 2590g | 2620g |
| Remarks | | Manual Override TS20ZME-F (C70901) |

1/2 Format 6x Motorized Zoom

Unit: mm



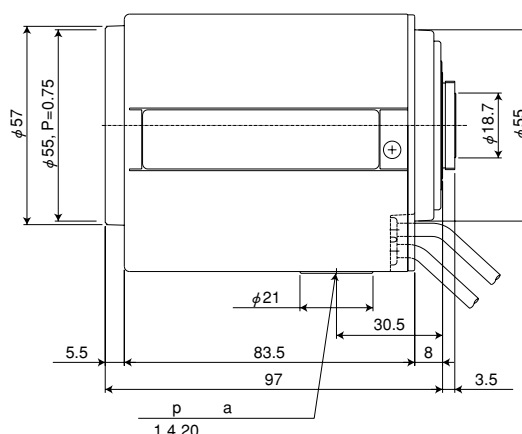
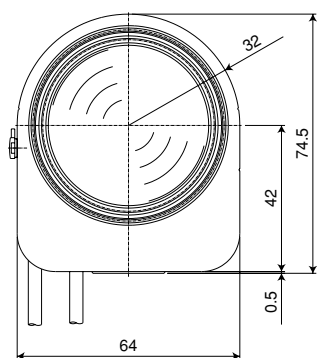
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8.0 48mm |
| Max. Aperture Ratio | 1 : 1.4 |
| Iris Range | F1.4 360 |
| Horizontal | 1/4 24.81 4.39 |
| Angle of View | 1/3 32.78 5.82 |
| (Degrees) | 1/2 42.88 7.69 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 11.6mm |
| Filter size | 49mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | HS6ZME (C60806) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.0 sec (Video Iris) | |
| Focus | Motorized Approx. 5.0 sec | |
| Zoom | Motorized Approx. 5.0 sec | |
| Weight | 400g | |
| Remarks | | |

1/2 Format 6x Motorized Zoom

Unit: mm



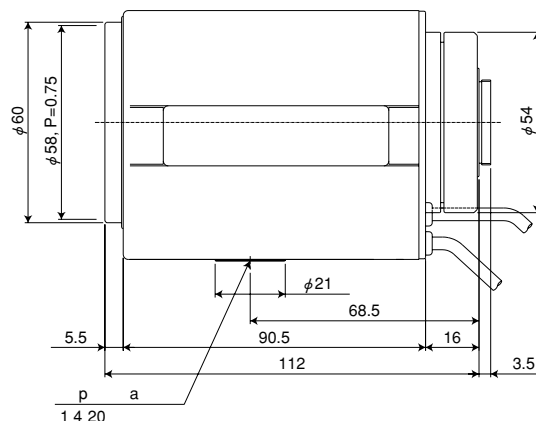
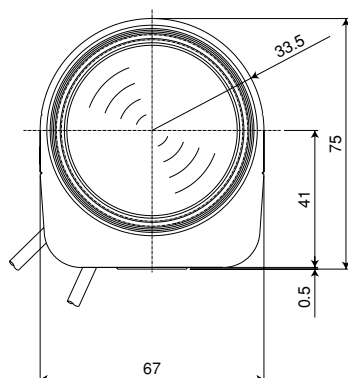
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8 48mm |
| Max. Aperture Ratio | 1 : 1.0 1.2 |
| Iris Range | F1.0 720 |
| Horizontal | 1/4 24.92 4.42 |
| Angle of View | 1/3 32.98 5.86 |
| (Degrees) | 1/2 43.24 7.73 |
| Min. Object Distance | 1.2m |
| Back Focal Length | 13.65mm |
| Filter size | 55mm P=0.75mm |
| Mount (Flange back) | C (17.256mm) |

| | H6ZBME (C60809) | H6ZBME-P (C60810) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 530g | 540g |
| Remarks | | Manual Override (only Video Iris) H6ZBME-F (C60813) |

1/2 Format 10x Motorized Zoom

Unit: mm



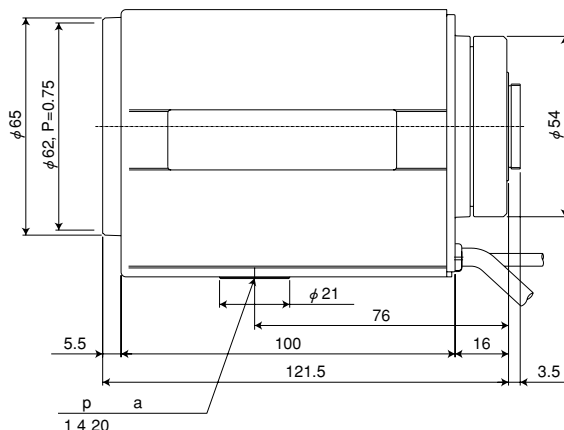
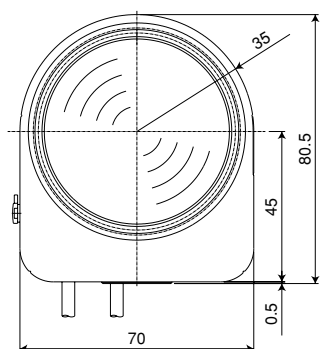
Basic Specification

| | |
|----------------------|-----------------|
| Format Size | 1/2 |
| Focal Length | 7.5 75mm |
| Max. Aperture Ratio | 1 : 1.4 1.5 |
| Iris Range | F1.4 360 |
| Horizontal | 1/4 26.15 2.83 |
| Angle of View | 1/3 34.52 3.75 |
| (Degrees) | 1/2 45.05 4.95 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 10.75mm |
| Filter size | 58.0mm P=0.75mm |
| Mount (Flange back) | CS (12.5mm) |

| | HS10ZME (C60700) | |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized Approx. 6.5 sec * | |
| Zoom | Motorized Approx. 5.5 sec ** | |
| Weight | 580g | |
| Remarks | * 6.0 sec for Type 2 ** 5.0 sec for Type 2 | |

1/2 Format 10x Motorized Zoom

Unit: mm



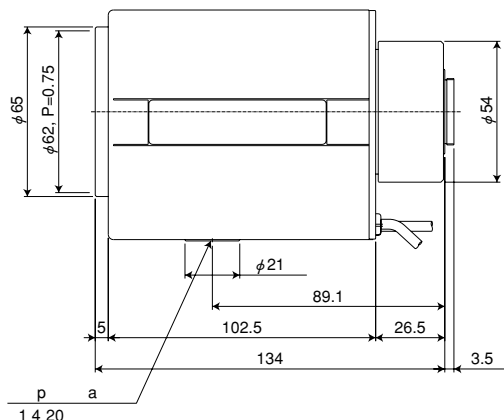
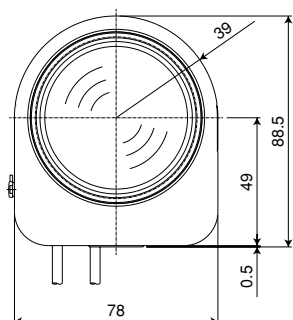
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 7.5 75mm |
| Max. Aperture Ratio | 1 : 1.2 1.5 |
| Iris Range | F1.2 512 |
| Horizontal | 1/4 26.45 2.84 |
| Angle of View | 1/3 34.94 3.77 |
| (Degrees) | 1/2 45.63 4.99 |
| Min. Object Distance | 1.8m |
| Back Focal Length | 14.52mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | H10ZME (C60701) | H10ZME-P (C60702) |
|---------|---|--|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 5.5 sec * | Motorized with Pre-Set Approx. 5.5 sec * |
| Zoom | Motorized Approx. 5.5 sec * | Motorized with Pre-Set Approx. 5.5 sec * |
| Weight | 715g | 740g |
| Remarks | * 6.0 sec for Type 1&3 | Manual Override (only Video Iris) H10ZME-F (C60704) * 6.0 sec for Type 1&3 |

1/2 Format 15x Motorized Zoom

Unit: mm



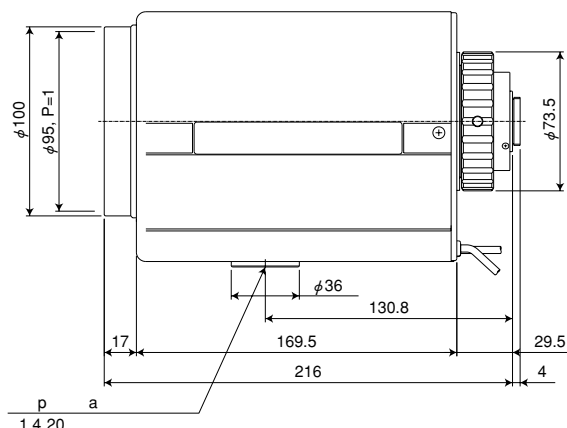
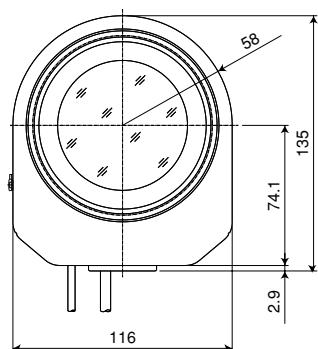
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 8 120mm |
| Max. Aperture Ratio | 1 : 1.6 2.4 |
| Iris Range | F1.6 1000 |
| Horizontal | 1/4 24.76 1.76 |
| Angle of View | 1/3 32.85 2.34 |
| (Degrees) | 1/2 43.37 3.09 |
| Min. Object Distance | 1.5m |
| Back Focal Length | 14.05mm |
| Filter size | 62mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | H15ZAME (C60826) | H15ZAME-P (C60829) |
|---------|---|---|
| Iris | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) | Auto-Iris (Video & DC Iris) Approx. 1.5 sec (Video Iris) |
| Focus | Motorized Approx. 8.0 sec | Motorized with Pre-Set Approx. 8.0 sec * |
| Zoom | Motorized Approx. 6.0 sec | Motorized with Pre-Set Approx. 6.0 sec |
| Weight | 800g | 810g |
| Remarks | | Manual Overried (only Video Iris) H15ZAME-F (C60827) * 6.0 sec for Type 1&3 |

1/2 Format 20x Motorized Zoom

Unit: mm



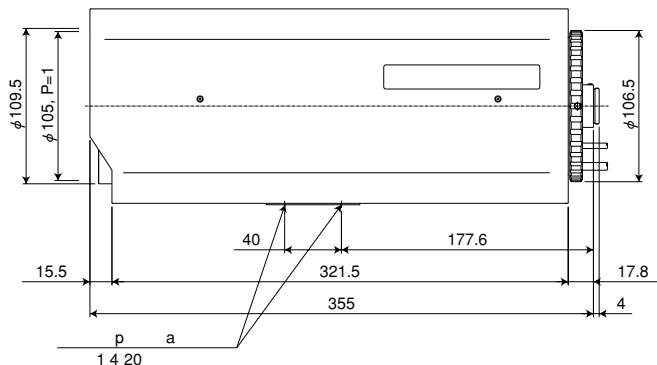
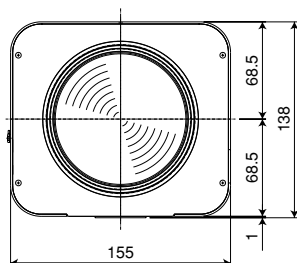
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 1/2 |
| Focal Length | 12 240mm |
| Max. Aperture Ratio | 1 : 1.6 2.8 |
| Iris Range | F1.6 720 |
| Horizontal | 1/4 17.17 0.88 |
| Angle of View | 1/3 22.95 1.17 |
| (Degrees) | 1/2 30.78 1.56 |
| Min. Object Distance | 2.8m |
| Back Focal Length | 19.82mm |
| Filter size | 95mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

| | H20ZME (C61221) | H20ZME-P (C61224) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Zoom | Motorized Approx. 10 sec | Motorized with Pre-Set Approx. 10 sec |
| Weight | 2590g | 2620g |
| Remarks | | Manual Override H20ZME-F (C61222) |

1/2 Format 55x (110x) Motorized Zoom

Unit: mm



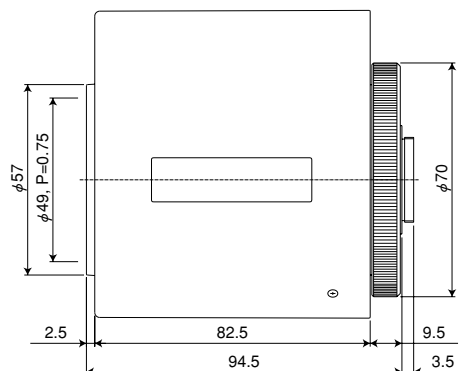
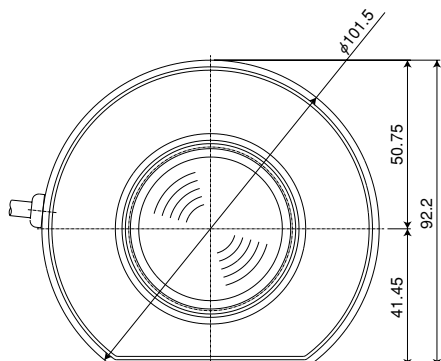
Basic Specification

| | |
|----------------------|-----------------------------|
| Format Size | 1/2 |
| Focal Length | 12 660mm (24 1320mm) |
| Max. Aperture Ratio | 1 : 4.0 14.4 |
| Iris Range | F4.0 360 |
| Horizontal | 1/4 17.17 0.31 (8.53 0.16) |
| Angle of View | 1/3 23.18 0.42 (11.40 0.21) |
| (Degrees) | 1/2 31.65 0.56 (15.27 0.28) |
| Min. Object Distance | 5m |
| Back Focal Length | 8.99mm |
| Filter size | 105mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

| H55ZME-F (C61233) | | |
|-------------------|--|--|
| Iris | Auto-Iris with Manual Override Approx. 1.5 sec (Video Iris) | |
| Focus | Motorized with Pre-Set Approx. 4.5 sec | |
| Zoom | Motorized with Pre-Set Approx. 4.5 sec | |
| Extender | Motorized Approx. 1.5 sec | |
| Weight | 5400g | |
| Remarks | Built-In 2x Extender | |

2/3 Format 6x Motorized Zoom (Motorized Iris)

Unit: mm



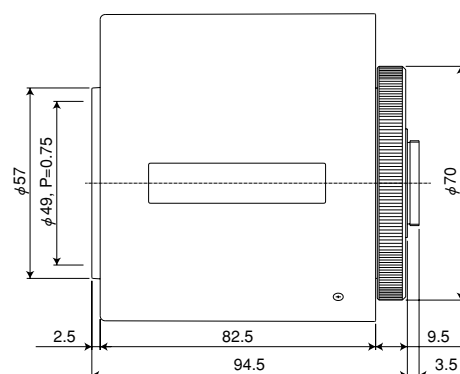
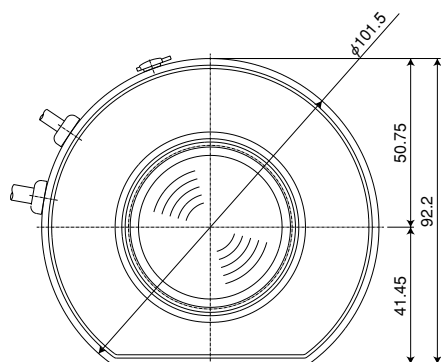
Basic Specification

| | | |
|----------------------|---------------|------------|
| Format Size | 2/3 | |
| Focal Length | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.8 | |
| Iris Range | F1.8 Close | |
| Horizontal | 1/4 | 16.06 2.75 |
| Angle of View | 1/3 | 21.40 3.66 |
| (Degrees) | 1/2 | 28.44 4.87 |
| Min. Object Distance | 1m | |
| Back Focal Length | 18.41mm | |
| Filter size | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | |

| | C6Z1218M3 (C31211) | |
|---------|--------------------------------|--|
| Iris | Motorized Approx. 4.0 sec | |
| Focus | Motorized Approx. 5.0 sec * | |
| Zoom | Motorized Approx. 5.0 sec * | |
| Weight | 820g | |
| Remarks | * 5.5 sec for Type 1 & 3 | |

2/3 Format 6x Motorized Zoom

Unit: mm



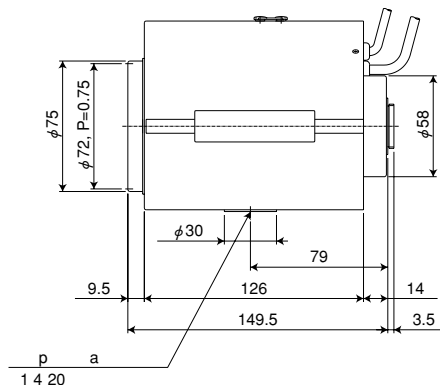
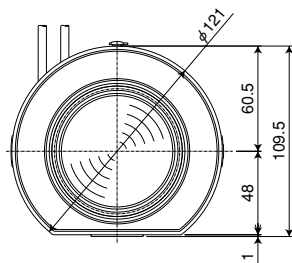
Basic Specification

| | | |
|----------------------|---------------|------------|
| Format Size | 2/3 | |
| Focal Length | 12.5 75mm | |
| Max. Aperture Ratio | 1 : 1.8 | |
| Iris Range | F1.8 720 | |
| Horizontal | 1/4 | 16.06 2.75 |
| Angle of View | 1/3 | 21.38 3.66 |
| (Degrees) | 1/2 | 28.41 4.87 |
| Min. Object Distance | 1m | |
| Back Focal Length | 18.41mm | |
| Filter size | 49mm P=0.75mm | |
| Mount (Flange back) | C (17.526mm) | |

| | C6ZAME (C31220) | C6ZME-P (C31221) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 5.0 sec * | Motorized with Pre-Set Approx. 5.0 sec * |
| Zoom | Motorized Approx. 5.0 sec * | Motorized with Pre-Set Approx. 5.0 sec * |
| Weight | 620g | 655g |
| Remarks | * 5.5 sec for Type 1 & 3 | * 5.5 sec for Type 1 |

2/3 Format 10x Motorized Zoom

Unit: mm



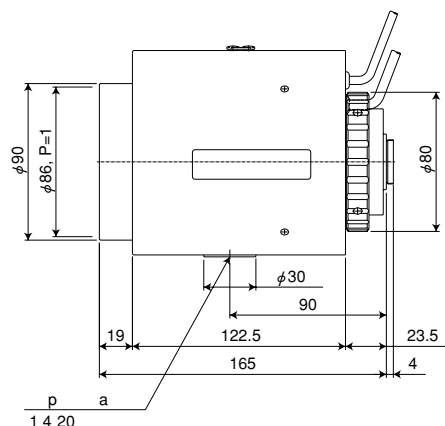
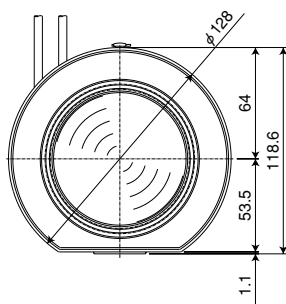
Basic Specification

| | |
|----------------------|----------------|
| Format Size | 2/3 |
| Focal Length | 10.5 105mm |
| Max. Aperture Ratio | 1 : 1.4 1.6 |
| Iris Range | F1.4 1000 |
| Horizontal | 1/4 18.97 2.02 |
| Angle of View | 1/3 25.24 2.68 |
| (Degrees) | 1/2 33.49 3.56 |
| Min. Object Distance | 1m |
| Back Focal Length | 18.49mm |
| Filter size | 72mm P=0.75mm |
| Mount (Flange back) | C (17.526mm) |

| | C10ZAME (C31002) | C10ZAME-P (C31003) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 5.5 sec | Motorized with Pre-Set Approx. 5.5 sec |
| Zoom | Motorized Approx. 5.5 sec | Motorized with Pre-Set Approx. 5.5 sec |
| Weight | 1380g | 1420g |
| Remarks | | Manual Override C10ZAME-F (C31005) |

2/3 Format 14x Motorized Zoom

Unit: mm



Basic Specification

| | |
|----------------------|----------------|
| Format Size | 2/3 |
| Focal Length | 10 140mm |
| Max. Aperture Ratio | 1 : 1.9 |
| Iris Range | F1.9 720 |
| Horizontal | 1/4 19.89 1.52 |
| Angle of View | 1/3 26.41 2.02 |
| (Degrees) | 1/2 34.96 2.68 |
| Min. Object Distance | 2.8m |
| Back Focal Length | 20.35mm |
| Filter size | 86mm P=1.0mm |
| Mount (Flange back) | C (17.526mm) |

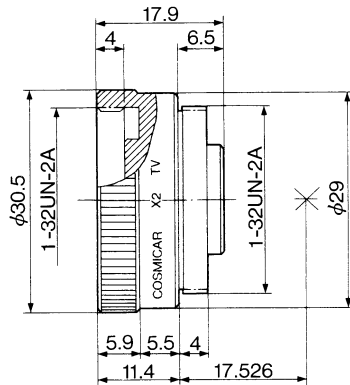
| | C14ZME (C31009) | C14ZME-P (C31010) |
|---------|---|---|
| Iris | Auto-Iris (Video Iris) Approx. 1.5 sec | Auto-Iris (Video Iris) Approx. 1.5 sec |
| Focus | Motorized Approx. 9.0 sec | Motorized with Pre-Set Approx. 9.0 sec |
| Zoom | Motorized Approx. 9.5 sec | Motorized with Pre-Set Approx. 9.5 sec |
| Weight | 2000g | 2040g |
| Remarks | | Manual Override C14ZME-F (C31012) |

Extender

Unit: mm

2x Extender for C-Mount

2-EX (C80001)

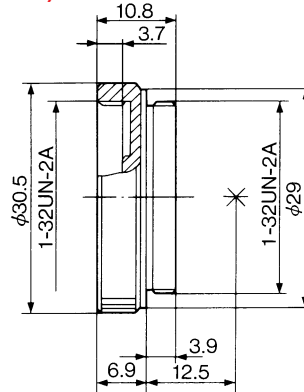


Specifications

| | 2-EX (C80001) | S2-EX (C80034) |
|-------------------------------|----------------|-----------------|
| Magnification of Focal Length | 2X | 2X |
| Flange Back Length | 17.526mm | 12.5mm |
| Weight | 40g | 27g |
| Compatibility | C mount lenses | CS mount lenses |

2x Extender for CS-Mount

S2-EX (C80034)



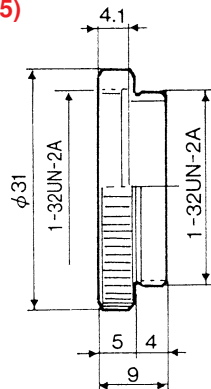
Note

- 1) According to the doubled focal length, the angle of view gets half and F No. will be double.
- 2) Minimum object distance and zoom ratio remains the same.

Mount Adapter

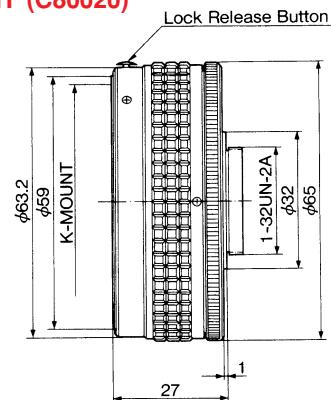
C-CS Mount Adapter (5mm Ring)

C-CS-A (C80035)



PENTAX Bayonet Mount for 35mm Photo Lens

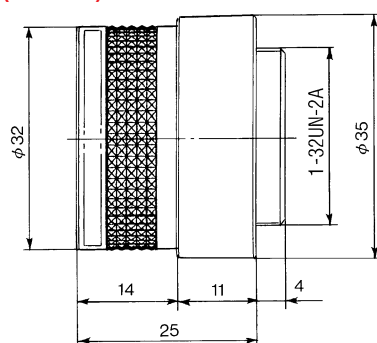
KC-MOUNT (C80020)



Dummy Lens

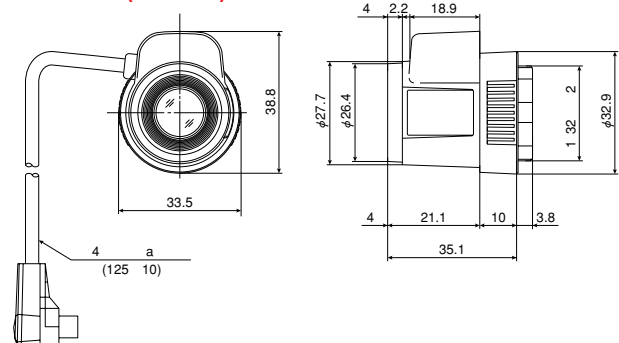
Monofocal type

DM-163 (C80039)



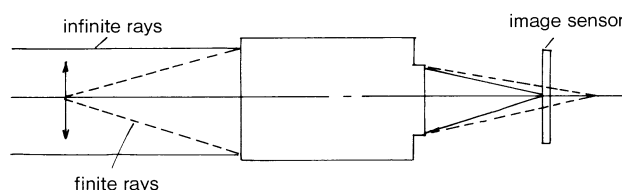
Vari-Focal type

DM-E01 (C80040)



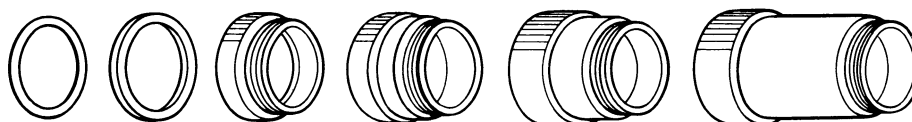
Extension Tube Set (Macro Ring)

When the rays originate from a finite object distance, the rays are condensed at a point further than the focal point, while the rays from infinite distance are condensed at the actual focal point. The focus adjustment moves the lens barrel toward the object to shift the focusing point at the image sensor. However, the amount of focusing adjustment is mechanically limited as seen by the minimum object distance. Extension Tube (Macro Ring) is inserted in between the lens and camera to shift the focus point further than the mechanical limit for close-up focus.



EX-C6 (C90100)

LENGTH 0.5mm 1.0mm 5mm 10mm 20mm 40mm

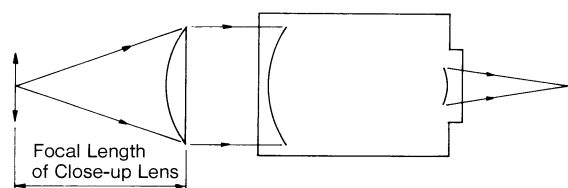


Specifications

| Maximum Diameter | | ϕ 31mm | | | | | |
|------------------|-----------|-------------|---|---|----|----|----|
| Length | Model No. | 1 | 2 | 3 | 4 | 5 | 6 |
| | : mm | 0.5 | 1 | 5 | 10 | 20 | 40 |

Close-Up Lens

The close-up lens has a positive meniscus lens as a supplementary lens. Generally, 3 types of close-up lenses are available, close-up lens No.1, 2&3. Close-up lens No.1, 2&3 have 1,000mm (1,000mm/1), 500mm (1,000mm/2), 333mm (1,000mm/3) respectively. When an object is placed at the focal point of the close-up lens, the rays from the object are converted by the close-up lens to be parallel rays against the optical axis as seen on the right.



This lens is effective when wishing to come closer to an object than the min. object distance of a lens, or taking close-up pictures of small objects.

Specifications

| Model No. | 1 | 2 | 3 |
|---------------------------|--------|-------|-------|
| Close-Up No. | No.1 | No.2 | No.3 |
| Dioptrie | 1 | 2 | 3 |
| Focusing Range (Infinity) | 1000mm | 500mm | 333mm |

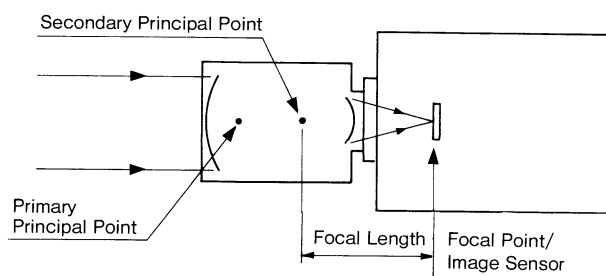
Note

Regardless of the focal length of a lens as long as focus is set to infinity, focus is obtained at a point equal to the distance from the tip of the lens to the focal length of the close-up lens.

CCTV is widely accepted as an important and valuable tool in many areas. Manual iris lenses for constant, stable lighting conditions and auto iris lenses for variable lighting conditions. Select the best suited lens for optimum performance in each application.

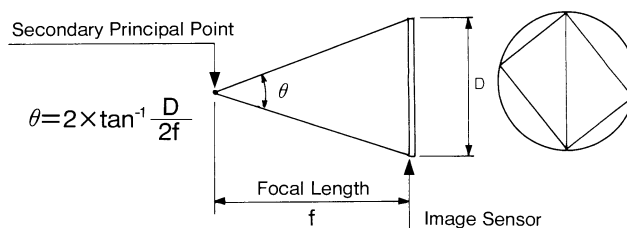
Focal Length

Rays from infinitely distant objects are condensed internally in the lens at a common point on the optical axis. The point at which the image sensor of the CCTV camera is positioned, is called a focal point. By virtue of design, lenses have 2 principal points, a primary principal point & a secondary principal point, the distance between the secondary principal point and the focal point (image sensor) determines the focal length of the lens.



Angle of View

The angle formed by the 2 lines from the secondary principal point to the image sensor is called the angle of view. Therefore, the focal length of the lens is fixed regardless of the image format size of the CCTV camera. Conversely, the angle of view varies in accordance with the image size. The focal lengths in the catalog are nominal and the angles of view calculated by the formula referring to the focal lengths are approximate.



F-Number

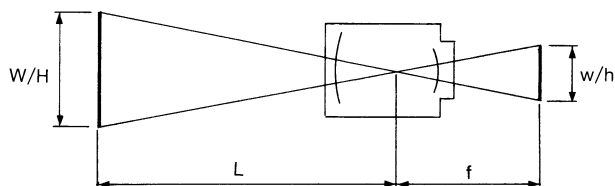
The F number is the index for the amount of light that passes through a lens. The smaller the number, the greater the amount of light. The F number is a ratio between focal length and effective aperture as follows.

$$F \text{ number} = \frac{f}{D}$$

f : focal length
D : effective diameter

Field of View

The field of view varies along with the focal length of the lens as follows.



$$\frac{w}{W} = \frac{h}{H} = \frac{f}{L}$$

W : width of object
H : height of object
w : width of format 1/2 format = 6.4mm, 1/3 format = 4.8mm,
 1/4 format = 3.6mm
h : height of format 1/2 format = 4.8mm, 1/3 format = 3.6mm,
 1/4 format = 2.7mm
f : focal length
L : object distance

Example : Full image of 4.5m-high object on a TV monitor camera :
1/3 format, Object distance : 10m

$$\begin{aligned} H &= 4.5\text{m} = 4,500\text{mm} & L &= 10\text{m} = 10,000\text{mm} \\ \frac{h}{H} &= \frac{f}{L} \rightarrow \frac{3.6}{4,500} = \frac{f}{10,000} \rightarrow f = 8\text{mm} \end{aligned}$$

Depth of Field

When an object is focused, it is typically observed that the area in front and behind the object is also in focus. The range in focus is called "depth of field". When the background is extended to infinity, the object distance (focusing distance) is called "hyper focal distance". Depth of field is calculated by using the following formula.

$$H = \frac{f^2}{C}$$

$$T1 = \frac{B(H + f)}{H \cdot B}$$

$$T2 = \frac{B(H + f)}{H \cdot B}$$

F : F No.

H : hyper focal distance

f : focal length

B : object distance (measured from image sensor)

T1 : near limit

T2 : far limit

C : circle of least confusion

1/2 format: 0.015mm, 1/3 format: 0.011mm,

1/4 format: 0.008mm

Depth of field increases when:

focal length is shorter

F-number is larger (F/1.4 F/5.6)

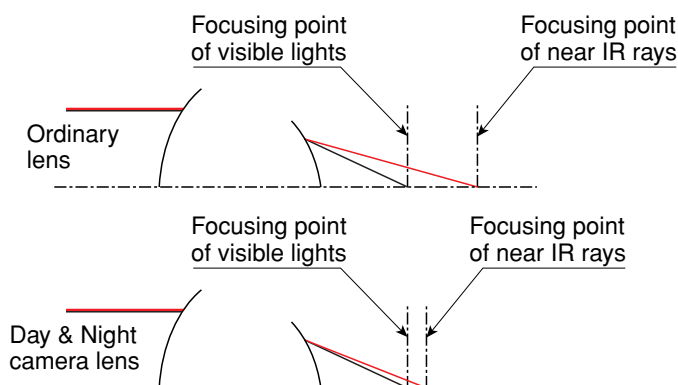
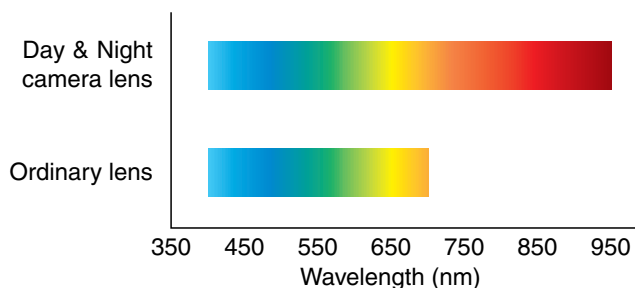
Object distance is longer

Day & Night Lens

Ordinary lenses are designed and chromatic aberration corrected in visible lights wave-lengths range from 400nm to 700nm.

The Day & Night camera lenses are designed to make all light rays from visible to near IR rays directed to the CCD in the camera at the same focusing point.

Chromatic aberration correction range



Meaning Day & Night camera lenses do not require the focus to be readjusted even when the lighting conditions have changed from daytime sun light to night-time, under near IR illuminators conditions.

Connection For Auto-Iris

| Wiring Diagram | Model |
|----------------|--|
| | DC Iris Monofocal and Varifocal Lenses |
| | DC Iris (with shield) Zoom Lenses |
| | Video Iris CS-Mount Monofocal Lenses CS-Mount Zoom Lenses (Except TS6ZE) H620PE |
| | Video Iris (with LEVEL Remote) C-Mount Monofocal Lenses (Except H620PE) C-Mount Zoom Lenses TS6ZE |
| | Manual Override Lenses |

Colour of leads is subject to change.

Wiring Diagram for Motorized Zoom Lens

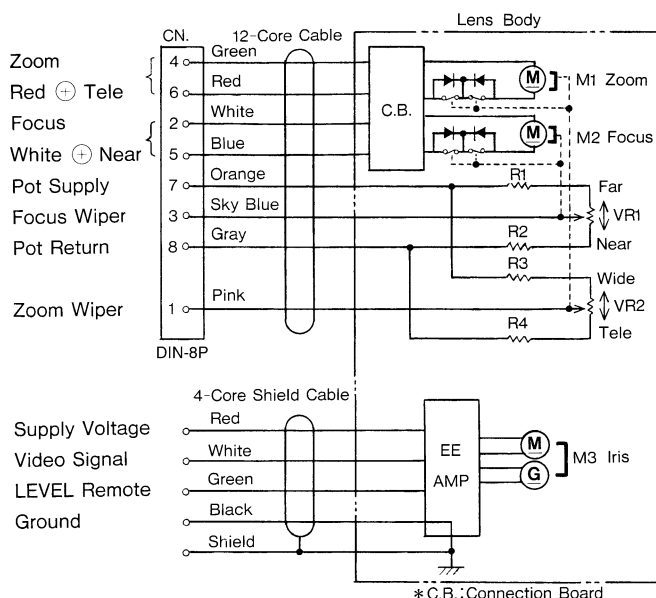
| Auto-Iris & Motorized Zoom Lenses | 3M Zoom Lenses |
|---|----------------|
| <p>TYPE 1 (DC6V) TYPE 5 (DC12V)</p> | |
| <p>TYPE 2 (DC 12V)</p> | |
| <p>TYPE 3 (DC 6V)</p> | |

Yellow and Black lead wires are for Remote Control ALC, and they are not connected to the connector, as shown in diagram.
Please note some lenses have no function of ALC Remote.
NFU : Noise Filter Unit.

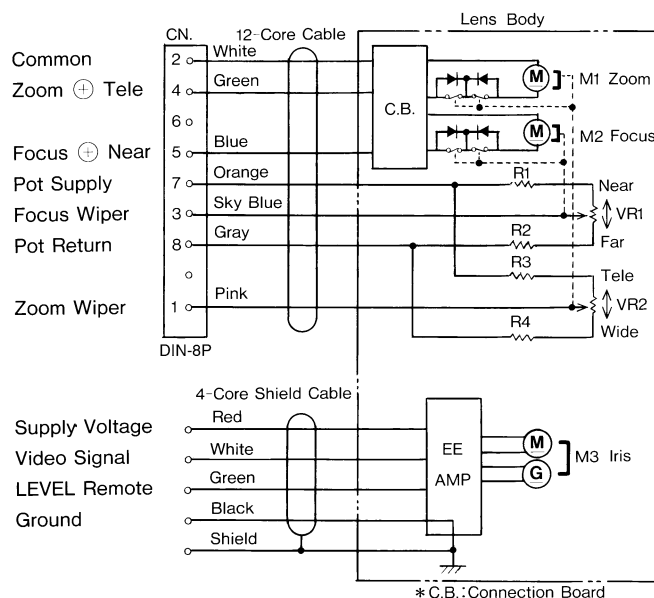
Wiring Diagram for P type zoom lenses

Motorized Zoom and Focus with Pre-set, Auto-Iris

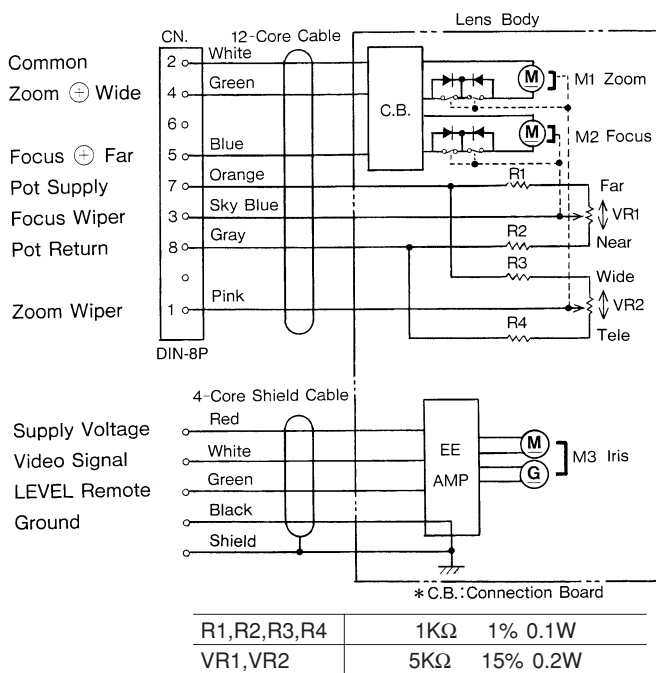
TYPE 1 (DC6V) / TYPE 5 (DC12V)



TYPE 2 (DC 12V)



TYPE 3 (DC 6V)

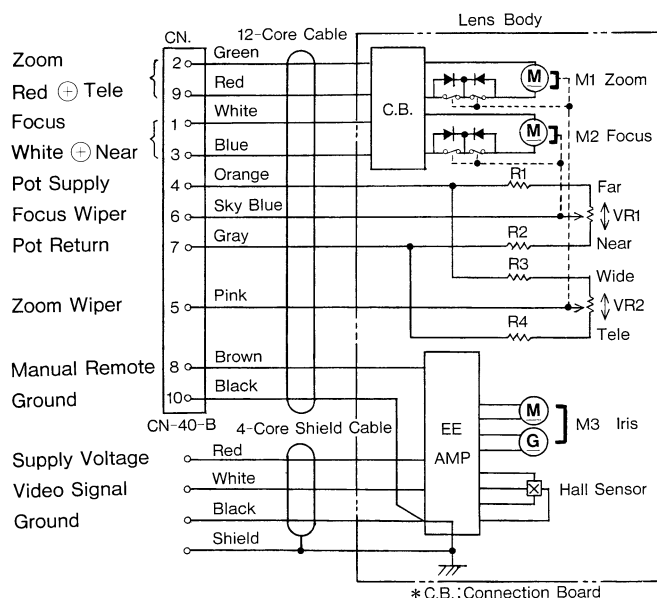


Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for F type zoom lenses

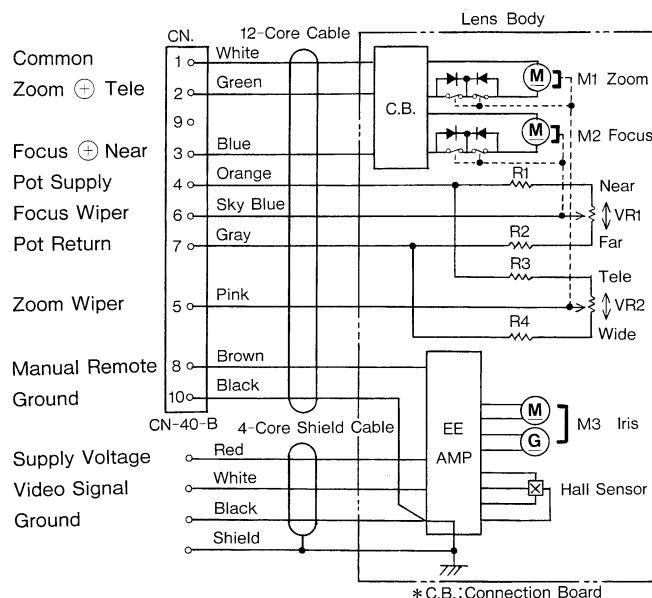
Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override

TYPE 1 (DC6V) / TYPE 5 (DC12V)



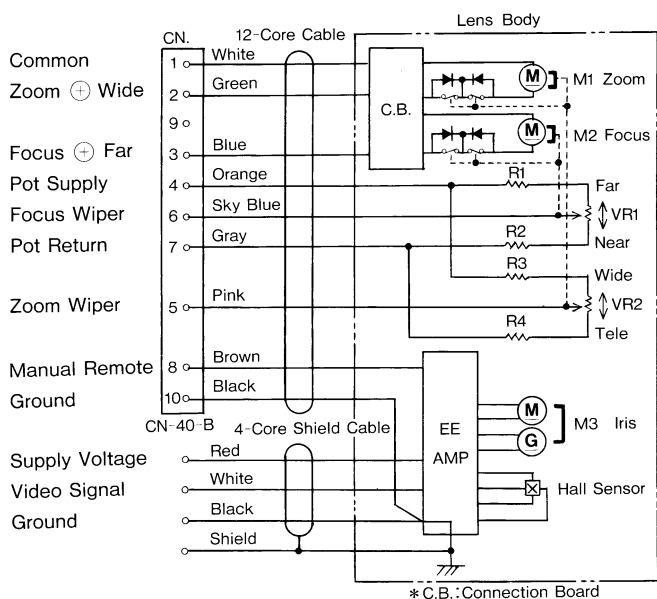
| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

TYPE 2 (DC 12V)



| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

TYPE 3 (DC 6V)



| | | | |
|-------------|-------------|-----|------|
| R1,R2,R3,R4 | 1K Ω | 1% | 0.1W |
| VR1,VR2 | 5K Ω | 15% | 0.2W |

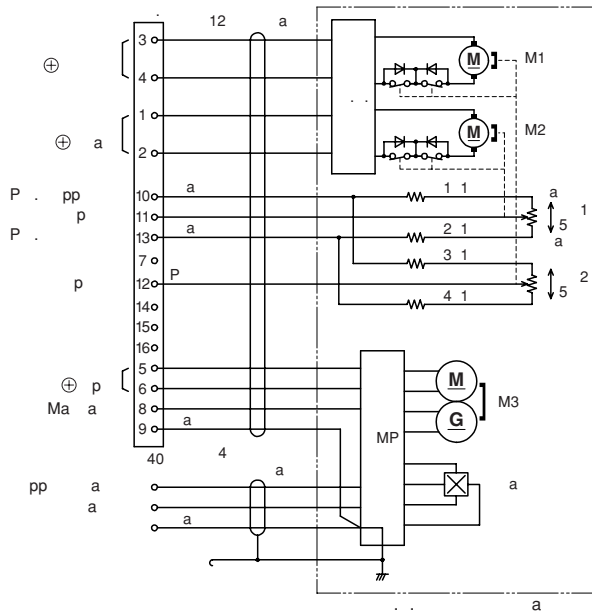
Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for F type zoom lenses (with D/A converter)

Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override

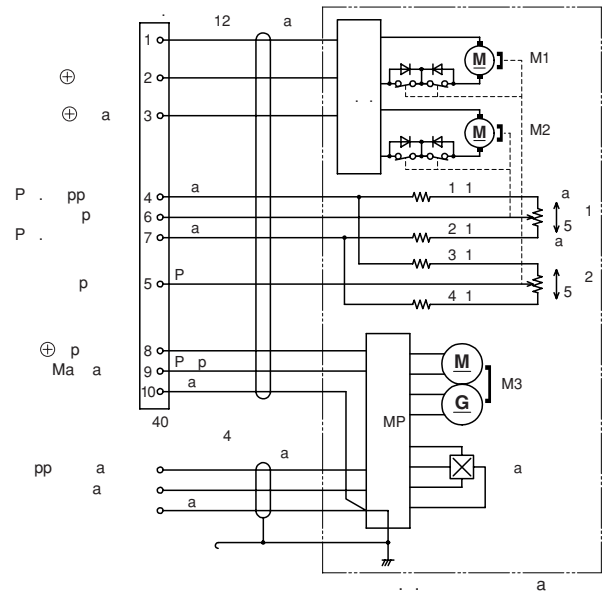
*D/A converter is option for F type zoom lenses.

TYPE 1 (DC6V) / TYPE 5 (DC12V)



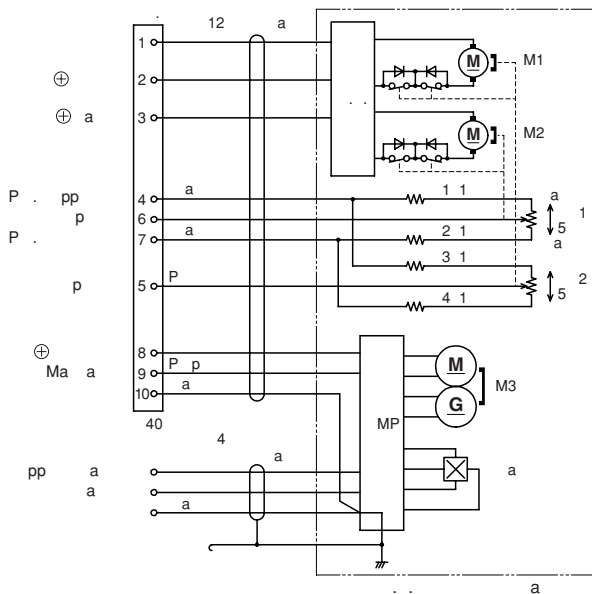
| | | |
|-------------|-----|----------|
| R1,R2,R3,R4 | 1KΩ | 1% 0.1W |
| VR1,VR2 | 5KΩ | 15% 0.2W |

TYPE 2 (DC 12V)



| | | |
|-------------|-----|----------|
| R1,R2,R3,R4 | 1KΩ | 1% 0.1W |
| VR1,VR2 | 5KΩ | 15% 0.2W |

TYPE 3 (DC 6V)



| | | |
|-------------|-----|----------|
| R1,R2,R3,R4 | 1KΩ | 1% 0.1W |
| VR1,VR2 | 5KΩ | 15% 0.2W |

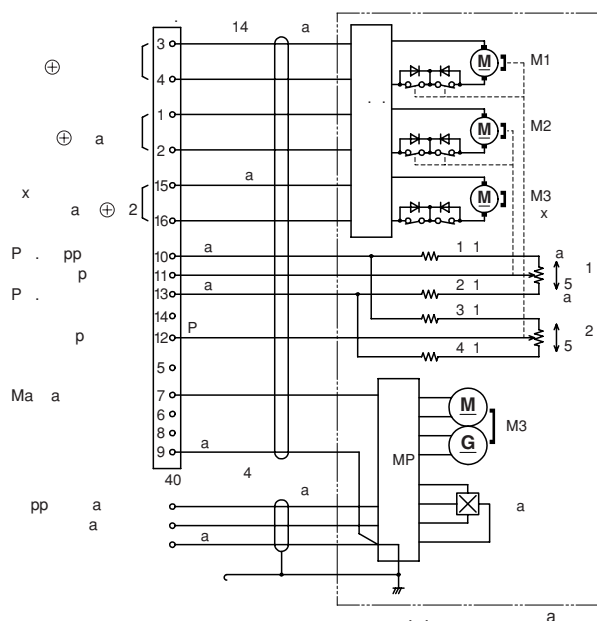
Kindly note some lenses have different diagram. Please contact us to clarify it.

Wiring Diagram for H55ZME-F (Built-In 2x Extender)

Motorized Zoom and Focus with Pre-set, Auto-Iris with Manual Override
Built-In Motorized 2x Extender

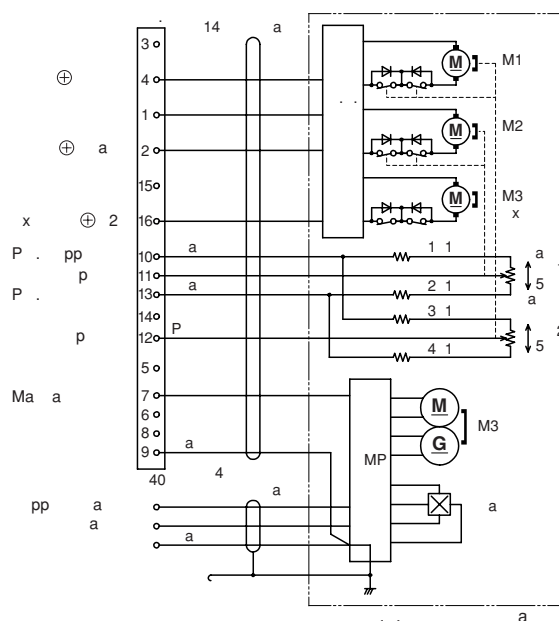
Without D/A Converter type

TYPE 5 (DC12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

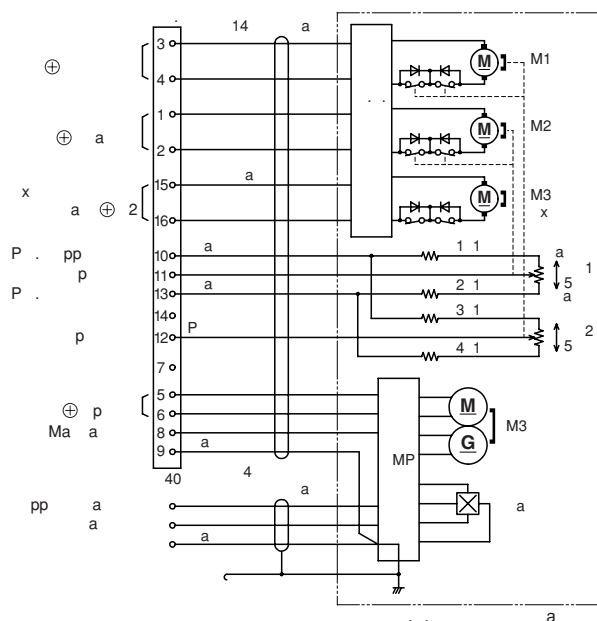
TYPE 2 (DC 12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

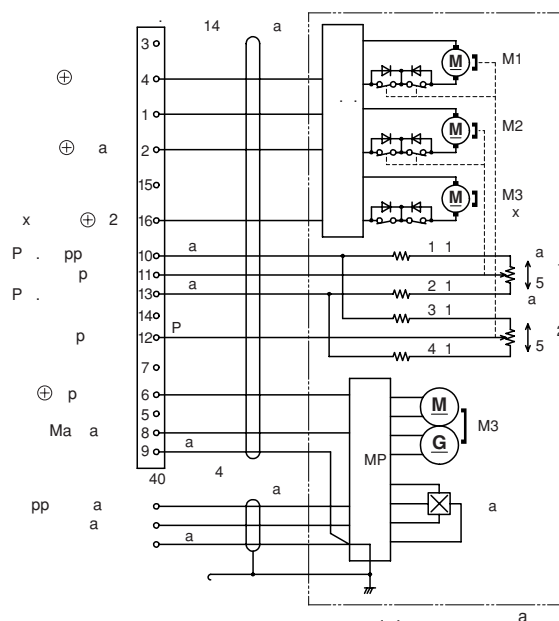
With D/A Converter type

TYPE 5 (DC12V)



| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

TYPE 2 (DC 12V)

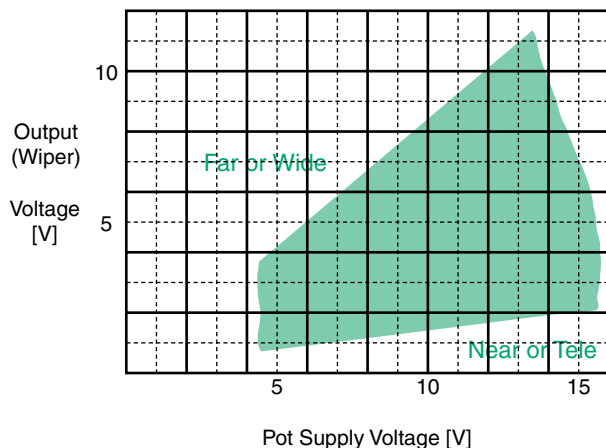


| | | |
|-------------|-------------|----------|
| R1,R2,R3,R4 | 1K Ω | 1% 0.1W |
| VR1,VR2 | 5K Ω | 15% 0.2W |

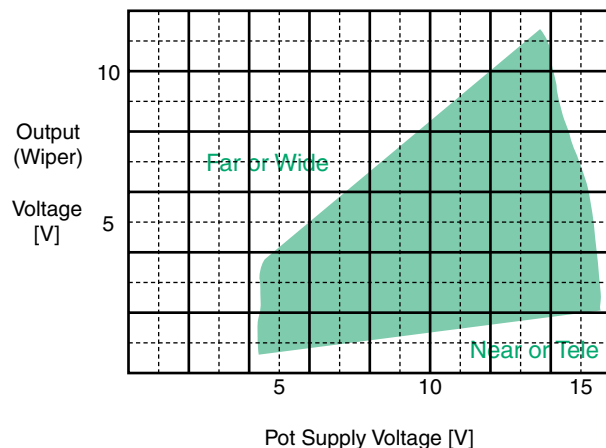
Kindly note some lenses have different diagram. Please contact us to clarify it.

Pot (Pre-Set) Supply Output range Characteristics

TYPE 1 & 3

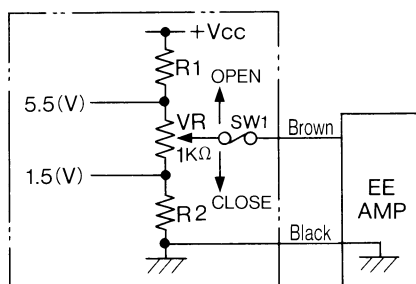


TYPE 2 & 5



Manual Override (without D/A Converter)

Manual Override and ALC can be controlled remotely as per the following schematic diagrams.



Manual Override

| | |
|----------------|---------------|
| SW1(Switch) | IRIS MODE |
| Open or Ground | Auto |
| Close | Manual Remote |

Vcc represents supply voltage from a lens controller.

Temperature Range

1) Definition

1. Applicable Temperature Range

This is the range in which a lens is specified to operate, as stated in the catalog. Additionally, the lens will not draw more current and operate at a faster speed than the rating indicated in the catalog.

2. Operation Temperature Range

This is the range that a lens operates in at an acceptable speed, drawing slightly more current than the rating that is indicated in the catalog., however, the lens will maintain its quality, performance and reliability characteristics.

2) Temperature Range

| | Applicable Temperature Range | | Operation Temperature Range | |
|-----------------------------|------------------------------|----|-----------------------------|----|
| Fixed Focal Auto-Iris | 20 | 50 | 30 | 70 |
| QS6Z, TS6Z, HS6Z, C6Z, C14Z | 10 | 50 | 20 | 70 |
| Other Zoom Lenses | 10 | 50 | 30 | 70 |

ANGLES OF VIEW

UNIT: Degrees

| Model | For 1/4 Format | | | For 1/3 Format | | | For 1/2 Format | | | For 2/3 Format | | |
|------------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|----------------------|---------------------|-------------------|
| | Diagonal 4.5mm | Horizontal 3.6mm | Vertical 2.7mm | Diagonal 6.0mm | Horizontal 4.8mm | Vertical 3.6mm | Diagonal 8.0mm | Horizontal 6.4mm | Vertical 4.8mm | Diagonal 10.991mm | Horizontal 8.8mm | Vertical 6.6mm |
| 2.2mm F1.0 QS210* | 114.06 | 92.60 | 70.12 | | | | | | | | | |
| 2.8mm F0.95 TS209E-ASP | 91.76 | 72.69 | 54.13 | 125.16 | 98.24 | 72.69 | | | | | | |
| 2.8mm F1.2 TS212* | 88.60 | 71.54 | 54.11 | 117.79 | 94.30 | 71.54 | | | | | | |
| 3mm F1.0 QS310* | 77.92 | 64.24 | 49.11 | | | | | | | | | |
| 3.7mm F1.6 HS316* | 66.68 | 53.54 | 40.26 | 88.09 | 71.02 | 53.54 | | | 71.02 | | | |
| 4mm F0.75 TS407E-ASP | 59.17 | 48.39 | 36.86 | 74.61 | 62.55 | 48.39 | | | | | | |
| 4mm F1.2 TS412* | 60.35 | 49.18 | 37.36 | 76.71 | 63.89 | 49.18 | | | | | | |
| 4mm F2.0 TS420P* | 64.14 | 51.24 | 38.39 | 86.17 | 68.47 | 51.24 | | | | | | |
| 4.2mm F1.6 H416* | 60.14 | 47.87 | 35.76 | 81.05 | 64.27 | 47.87 | 110.22 | 86.77 | 64.27 | | | |
| 4.8mm F1.8 C418DX | 51.78 | 41.68 | 31.40 | 68.14 | 55.11 | 41.68 | 88.66 | 72.37 | 55.11 | 115.94 | 96.36 | 74.46 |
| 4.8mm F1.8 C418E | 51.27 | 41.27 | 31.10 | 67.46 | 54.57 | 41.27 | 87.77 | 71.65 | 54.57 | 114.78 | 95.40 | 73.72 |
| 6mm F1.0 QS610* | 43.24 | 34.83 | 26.23 | | | | | | | | | |
| 6mm F1.2 H612E-M | 41.50 | 33.26 | 24.99 | 55.11 | 44.23 | 33.26 | 72.89 | 58.70 | 44.23 | | | |
| 6mm F1.2 H612* | 40.93 | 32.97 | 24.84 | 53.68 | 43.55 | 32.97 | 68.89 | 56.93 | 43.55 | | | |
| 6mm F1.4 HS614* | 41.92 | 33.86 | 25.57 | 54.64 | 44.55 | 33.86 | 69.27 | 57.81 | 44.55 | | | |
| 6.2mm F2.0 HS/H620P* | 40.26 | 32.44 | 24.46 | 52.86 | 42.82 | 32.44 | 68.66 | 56.12 | 42.82 | | | |
| 6.5mm F1.8 B618CX-2 | 37.29 | 29.94 | 22.51 | 49.35 | 39.73 | 29.94 | 64.91 | 52.52 | 39.73 | 86.66 | 70.92 | 54.09 |
| 8mm F0.75 TS807E-ASP | 31.27 | 25.07 | 18.81 | 41.17 | 33.31 | 25.07 | | | | | | |
| 8mm F1.2 TS812* | 31.27 | 25.05 | 18.80 | 41.33 | 33.33 | 25.05 | | | | | | |
| 8mm F1.4 C814 | 31.29 | 25.15 | 18.93 | 41.28 | 33.31 | 25.15 | 53.92 | 43.88 | 33.31 | 70.50 | 58.67 | 45.17 |
| 8mm F1.4 C814E | 31.21 | 25.10 | 18.91 | 41.11 | 33.22 | 25.10 | 53.57 | 43.67 | 33.22 | 70.08 | 58.25 | 44.94 |
| 8.5mm F1.5 C815B | 29.92 | 24.02 | 18.07 | 39.57 | 31.87 | 24.02 | 51.85 | 42.09 | 31.87 | 67.87 | 56.49 | 43.34 |
| 9mm F1.2 H912E-M | 27.81 | 22.28 | 16.73 | 36.96 | 29.65 | 22.28 | 48.97 | 39.38 | 29.65 | | | |
| 9mm F3.4 C934P* | 27.79 | 22.30 | 16.77 | 36.76 | 29.60 | 22.30 | 48.25 | 39.11 | 29.60 | 63.79 | 52.63 | 40.28 |
| 12mm F1.2 H1212* | 21.18 | 16.93 | 12.70 | 28.28 | 22.60 | 16.93 | 37.83 | 30.18 | 22.60 | | | |
| 12mm F1.4 H1214-M | 20.54 | 16.49 | 12.40 | 27.17 | 21.88 | 16.49 | 35.69 | 28.91 | 21.88 | | | |
| 12mm F1.4 HS1214* | 20.68 | 16.55 | 12.41 | 27.58 | 22.06 | 16.55 | 36.78 | 29.42 | 22.06 | | | |
| 12.5mm F1.4 B1214D-2 | 20.21 | 16.21 | 12.19 | 26.78 | 21.53 | 16.21 | 35.32 | 28.51 | 21.53 | 47.48 | 38.65 | 29.37 |
| 12.5mm F1.4 B1214E | 20.22 | 16.22 | 12.19 | 26.80 | 21.55 | 16.22 | 35.35 | 28.54 | 21.55 | 47.55 | 38.69 | 29.40 |
| 12.5mm F1.8 B1218-2 | 20.55 | 16.48 | 12.38 | 27.25 | 21.90 | 16.48 | 35.98 | 29.01 | 21.90 | 48.49 | 39.39 | 29.89 |
| 16mm F1.4 C1614A | 15.86 | 12.70 | 9.54 | 21.09 | 16.91 | 12.70 | 27.99 | 22.48 | 16.91 | 38.19 | 30.72 | 23.17 |
| 16mm F1.4 C1614-M | 16.05 | 12.86 | 9.66 | 21.32 | 17.11 | 12.86 | 28.25 | 22.72 | 17.11 | 38.28 | 30.97 | 23.41 |
| 16mm F1.4 C1614E | 15.87 | 12.72 | 9.55 | 21.11 | 16.92 | 12.72 | 28.02 | 22.50 | 16.92 | 38.26 | 30.76 | 23.19 |
| 25mm F1.4 B2514D | 10.29 | 8.23 | 6.17 | 13.71 | 10.97 | 8.23 | 18.27 | 14.62 | 10.97 | 25.10 | 20.10 | 15.08 |
| 25mm F1.4 C2514-M | 10.29 | 8.24 | 6.18 | 13.70 | 10.97 | 8.24 | 18.21 | 14.60 | 10.97 | 24.89 | 20.00 | 15.05 |
| 25mm F1.4 B2514E | 10.29 | 8.23 | 6.17 | 13.71 | 10.97 | 8.23 | 18.27 | 14.62 | 10.97 | 25.09 | 20.09 | 15.08 |
| 25mm F1.8 B2518 | 10.27 | 8.23 | 6.18 | 13.66 | 10.95 | 8.23 | 18.11 | 14.55 | 10.95 | 24.64 | 19.87 | 15.00 |
| 25mm F2.0 H2520-UVM | 10.30 | 8.24 | 6.18 | 13.71 | 10.98 | 8.24 | 18.24 | 14.62 | 10.98 | | | |
| 35mm F1.6 C3516-M | 7.58 | 6.07 | 4.55 | 10.10 | 8.09 | 6.07 | 13.43 | 10.76 | 8.09 | 18.39 | 14.76 | 11.10 |
| 50mm F1.4 B5014A | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.52 | 10.04 | 7.55 |
| 50mm F1.8 B5018A-3 | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.51 | 10.04 | 7.55 |
| 50mm F1.8 B5018E | 5.16 | 4.13 | 3.10 | 6.87 | 5.50 | 4.13 | 9.14 | 7.32 | 5.50 | 12.51 | 10.04 | 7.55 |
| 50mm F2.8 C5028-M | 5.15 | 4.12 | 3.09 | 6.86 | 5.50 | 4.12 | 9.14 | 7.32 | 5.50 | 12.53 | 10.05 | 7.55 |
| 75mm F1.4 B7514C | 3.44 | 2.75 | 2.06 | 4.59 | 3.67 | 2.75 | 6.13 | 4.90 | 3.67 | 8.45 | 6.75 | 5.05 |
| 75mm F1.8 B7518E | 3.44 | 2.76 | 2.07 | 4.59 | 3.67 | 2.76 | 6.12 | 4.90 | 3.67 | 8.40 | 6.73 | 5.05 |

ANGLES OF VIEW

UNIT: Degrees

| Model | For 1/4 Format | | | For 1/3 Format | | | For 1/2 Format | | | For 2/3 Format | | |
|------------------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|-------------------|---------------------|-------------------|----------------------|---------------------|-------------------|
| | Diagonal 4.5mm | Horizontal 3.6mm | Vertical 2.7mm | Diagonal 6.0mm | Horizontal 4.8mm | Vertical 3.6mm | Diagonal 8.0mm | Horizontal 6.4mm | Vertical 4.8mm | Diagonal 10.991mm | Horizontal 8.8mm | Vertical 6.6mm |
| 1.6-3.4mm F1.4 TS2V114E | 180-83.10 | 180-64.89 | 107.98-47.84 | 180-118.31 | 180-89.55 | 180-64.89 | | | | | | |
| 2.2-4.5mm F1.2 QS2V2212* | 120.00-65.09 | 94.48-51.88 | 69.94-38.80 | | | | | | | | | |
| 2.8-5.8mm F1.2 QS2V2812* | 98.48-45.67 | 76.22-36.40 | 55.85-27.23 | | | | | | | | | |
| 2.8-6mm F1.4 TS2V214 | 90.80-43.85 | 72.46-35.15 | 54.24-26.40 | 121.71-58.26 | 96.94-46.76 | 72.46-35.15 | | | | | | |
| 2.8-6mm F1.4 TS2V214AE | 90.54-44.13 | 72.26-35.35 | 54.08-26.54 | 121.44-58.68 | 96.70-47.04 | 72.26-35.35 | | | | | | |
| 3.5-8mm F1.4 TS2V314B | 74.45-33.22 | 58.74-26.55 | 43.57-19.90 | 102.34-44.37 | 79.83-35.44 | 58.74-26.55 | | | | | | |
| 3.5-8mm F1.4 TS2V314BE | 74.45-33.22 | 58.74-26.55 | 43.57-19.90 | 102.35-44.37 | 79.83-35.44 | 58.74-26.55 | | | | | | |
| 6-12mm F1.6 TS2V616 | 44.09-21.53 | 34.92-17.21 | 26.01-12.90 | 60.26-28.76 | 47.22-22.97 | 34.92-17.21 | | | | | | |
| 6-12mm F1.6 TS2V616AE | 44.21-21.56 | 34.98-17.23 | 26.03-12.91 | 60.62-28.85 | 47.37-23.01 | 34.97-17.23 | | | | | | |
| 5-50mm F1.8 TS10V518E | 47.25-5.18 | 37.80-4.14 | 28.35-3.11 | 63.00-6.90 | 50.00-5.52 | 37.80-4.14 | | | | | | |
| 4.6-28mm F1.0 QS6ZME* | 50.83-9.30 | 41.64-7.50 | 31.71-5.66 | | | | | | | | | |
| 6.3-38mm F1.2 TS6ZE | 38.70-6.97 | 31.26-5.59 | 23.60-4.20 | 50.39-9.23 | 41.12-7.43 | 31.26-5.59 | | | | | | |
| 5.8-58mm F1.2 TS10ZME* | 41.57-4.49 | 33.77-3.62 | 25.61-2.73 | 53.35-5.88 | 44.07-4.78 | 33.77-3.62 | | | | | | |
| 6-90mm F1.2 TS15ZAME* | 40.89-2.90 | 32.96-2.33 | 24.86-1.76 | 53.59-3.80 | 43.48-3.08 | 32.96-2.33 | | | | | | |
| 9-180mm F1.2 TS20ZME* | 28.35-1.43 | 22.61-1.15 | 16.93-0.87 | 38.16-1.90 | 30.28-1.53 | 22.61-1.15 | | | | | | |
| 8-48mm F1.0 H6Z810 | 30.99-5.50 | 24.92-4.42 | 18.76-3.33 | 40.75-7.27 | 32.99-5.86 | 24.92-4.42 | 52.74-9.52 | 43.26-7.73 | 32.99-5.86 | | | |
| 8-48mm F1.0 H6Z8* | 30.98-5.50 | 24.92-4.42 | 18.76-3.33 | 40.74-7.27 | 32.98-5.86 | 24.92-4.42 | 52.72-9.51 | 43.24-7.73 | 32.98-5.86 | | | |
| 8-48mm F1.4 HS6ZME | 30.81-5.46 | 24.81-4.39 | 18.70-3.30 | 40.42-7.23 | 32.78-5.82 | 24.81-4.39 | 52.07-9.48 | 42.88-7.69 | 32.78-5.82 | | | |
| 7.5-75mm F1.4 HS10ZME | 32.46-3.52 | 26.15-2.83 | 19.71-2.12 | 42.50-4.65 | 34.52-3.75 | 26.15-2.83 | 54.03-6.09 | 45.05-4.95 | 34.52-3.75 | | | |
| 7.5-75mm F1.2 H10ZME* | 32.85-3.54 | 26.45-2.84 | 19.93-2.13 | 43.04-4.69 | 34.94-3.77 | 26.45-2.84 | 55.25-6.18 | 45.63-4.99 | 34.94-3.77 | | | |
| 8-120mm F1.6 H15ZAME* | 30.84-2.19 | 24.76-1.76 | 18.62-1.32 | 40.78-2.90 | 32.85-2.34 | 24.76-1.76 | 53.64-3.81 | 43.37-3.09 | 32.85-2.34 | | | |
| 12-240mm F1.6 H20ZME* | 21.50-1.10 | 17.17-0.88 | 12.86-0.66 | 28.81-1.46 | 22.95-1.17 | 17.17-0.88 | 38.89-1.94 | 30.78-1.56 | 22.95-1.17 | | | |
| 12-660mm F4 H55ZME-F | 21.65-0.39 | 17.17-0.31 | 12.79-0.23 | 29.47-0.52 | 23.18-0.42 | 17.17-0.31 | 40.84-0.69 | 31.65-0.56 | 23.18-0.42 | | | |
| 24-1320mm F8 H55ZME(with 2X) | 10.68-0.20 | 8.53-0.16 | 6.39-0.12 | 14.29-0.26 | 11.40-0.21 | 8.53-0.16 | 19.20-0.35 | 15.27-0.28 | 11.40-0.21 | | | |
| 12.5-75mm F1.8 C6Z1218 | 20.07-3.43 | 16.08-2.75 | 12.07-2.06 | 26.69-4.57 | 21.40-3.66 | 16.08-2.75 | 35.39-6.07 | 28.44-4.87 | 21.40-3.66 | 48.08-8.30 | 38.82-6.67 | 29.32-5.02 |
| 12.5-75mm F1.8 C6ZE | 20.05-3.43 | 16.06-2.75 | 12.06-2.06 | 26.66-4.57 | 21.38-3.66 | 16.06-2.75 | 35.35-6.07 | 28.41-4.87 | 21.38-3.66 | 48.03-8.30 | 38.78-6.67 | 29.29-5.02 |
| 12.5-75mm F1.8 C6Z1218M3 | 20.07-3.43 | 16.08-2.75 | 12.07-2.06 | 26.69-4.57 | 21.40-3.66 | 16.08-2.75 | 35.39-6.07 | 28.44-4.87 | 21.40-3.66 | 48.08-8.30 | 38.82-6.67 | 29.32-5.02 |
| 12.5-75mm F1.8 C6ZAME* | 20.05-3.43 | 16.06-2.75 | 12.06-2.06 | 26.66-4.57 | 21.38-3.66 | 16.06-2.75 | 35.35-6.07 | 28.41-4.87 | 21.38-3.66 | 48.03-8.30 | 38.78-6.67 | 29.29-5.02 |
| 10.5-105mm F1.4 C10ZAME* | 23.68-2.52 | 18.97-2.02 | 14.25-1.51 | 31.44-3.34 | 25.24-2.68 | 18.97-2.02 | 41.56-4.42 | 33.49-3.56 | 25.24-2.68 | 56.05-5.98 | 45.52-4.84 | 34.51-3.67 |
| 10-140mm F1.9 C14ZME* | 24.79-1.90 | 19.89-1.52 | 14.95-1.14 | 32.84-2.52 | 26.41-2.02 | 19.89-1.52 | 43.35-3.33 | 34.96-2.68 | 26.41-2.02 | 59.12-4.49 | 47.49-3.64 | 36.02-2.76 |

For 1 Format

| Model | For 1 Format | | |
|----------------------|----------------------|----------------------|---------------------|
| | Diagonal 15.875mm | Horizontal 12.7mm | Vertical 9.525mm |
| 6.5mm F1.8 B618CX-2 | 116.08 | 97.88 | 76.21 |
| 12.5mm F1.4 B1214D-2 | 65.08 | 53.95 | 41.59 |
| 12.5mm F1.4 B1214E | 65.22 | 54.04 | 41.64 |
| 12.5mm F1.8 B1218-2 | 66.71 | 55.18 | 42.42 |
| 25mm F1.4 B2514D | 36.10 | 28.95 | 21.74 |
| 25mm F1.4 B2514E | 36.08 | 28.94 | 21.73 |
| 25mm F1.8 B2518 | 34.79 | 28.24 | 21.44 |
| 50mm F1.4 B5014A | 17.93 | 14.41 | 10.85 |
| 50mm F1.8 B5018A-3 | 17.89 | 14.40 | 10.85 |
| 50mm F1.8 B5018E | 17.89 | 14.40 | 10.85 |
| 75mm F1.4 B7514C | 12.30 | 9.78 | 7.30 |
| 75mm F1.8 B7518E | 12.10 | 9.69 | 7.28 |

For 1/1.8 Format

| Model | For 1/1.8 Format | | |
|------------------|--------------------|----------------------|--------------------|
| | Diagonal 8.94mm | Horizontal 7.15mm | Vertical 5.36mm |
| 6mm F1.2 H612E-M | 81.00 | 65.40 | 49.30 |
| 9mm F1.2 H912E-M | 54.40 | 43.90 | 33.10 |