

HF Series

# High Resolution Fixed Focal Lens for 5 Mega Pixel - 12 Mega Pixel

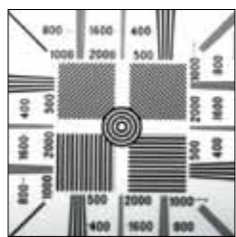
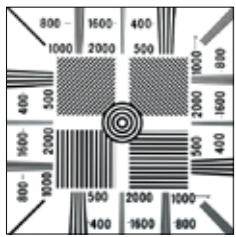
Suitable for inspection and alignment , required for high accuracy

- 5 Mega Pixel – 12 Mega Pixel sensor
- f16mm – f75mm are compatible with 1.1 inch – 1.2 inch
- Suitable for different types of sensor
- Excellent performance at macro imaging, compared with conventional Mega Pixel Fixed Focal lens
- Stable performance at different working distance by floating design
- Large aperture
- Robust design, suitable for machine vision applications

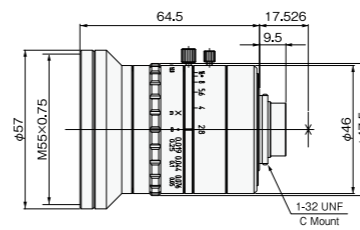
### Comparison of resolution

5-12 Mega Pixel Lens

Mega Pixel Lens

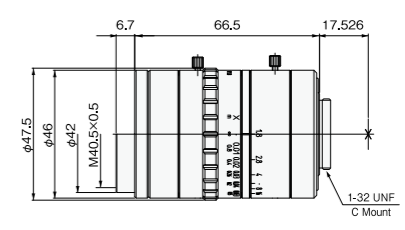


### HF0528J-2



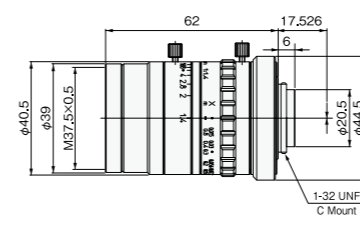
Focal length	5mm	TV distortion	0.29%
∞F No.	2.8	Filter pitch	M55 P=0.75
Range of WD	50mm - ∞	Maximum Compatible sensor	2/3
Maximum Magnification	0.076x		

### HF0818J-2



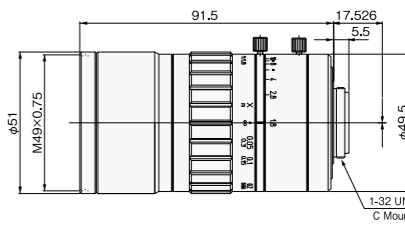
Focal length	8mm	TV distortion	0.31%
∞F No.	1.8	Filter pitch	M40.5 P=0.75
Range of WD	100mm - ∞	Maximum Compatible sensor	2/3
Maximum Magnification	0.078x		

### HF1214J-2



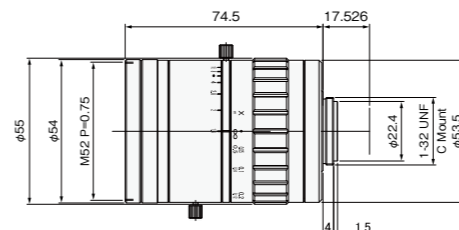
Focal length	12mm	TV distortion	-0.31%
∞F No.	1.4	Filter pitch	M37.5 P=0.5
Range of WD	100mm - ∞	Maximum Compatible sensor	2/3
Maximum Magnification	0.1x		

### HF1618V-2



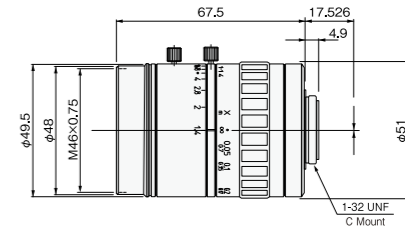
Focal length	16mm	TV distortion	-0.28%
∞F No.	1.8	Filter pitch	M49 P=0.75
Range of WD	33mm - ∞	Maximum Compatible sensor	1.1
Maximum Magnification	0.3x		

### HF2514V-2



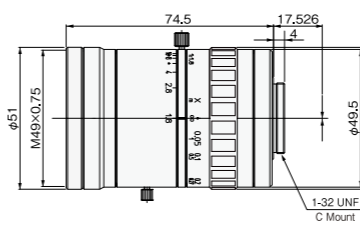
Focal length	25mm	TV distortion	-0.09%
∞F No.	1.4	Filter pitch	M52 P=0.75
Range of WD	80mm - ∞	Maximum Compatible sensor	1.1
Maximum Magnification	0.3x		

### HF3514V-2



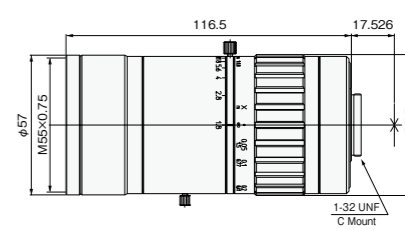
Focal length	35mm	TV distortion	-0.027%
∞F No.	1.4	Filter pitch	M46 P=0.75
Range of WD	110mm - ∞	Maximum Compatible sensor	1.1
Maximum Magnification	0.3x		

### HF5018V-2



Focal length	50mm	TV distortion	-0.01%
∞F No.	1.8	Filter pitch	M49 P=0.75
Range of WD	192mm - ∞	Maximum Compatible sensor	1.2
Maximum Magnification	0.3x		

### HF7518V-2



Focal length	75mm	TV distortion	0.00%
∞F No.	1.8	Filter pitch	M55 P=0.75
Range of WD	290mm - ∞	Maximum Compatible sensor	1.2
Maximum Magnification	0.3x		

\* Indicated specifications are design values. \*TV distortion indicates a value for 2/3 inch at minimum working distance.

HS-V Series

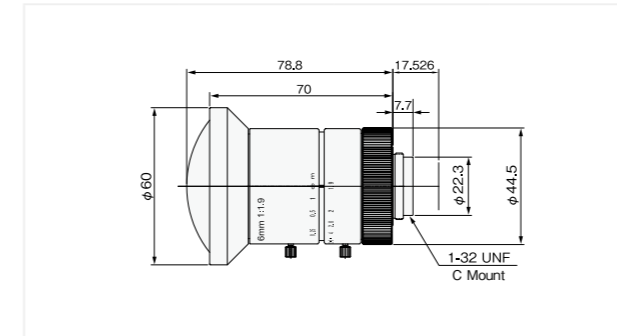
# 5 Mega Pixel - 9 Mega Pixel Fixed Focal Lens for 1 inch

5 Mega Pixel - 9 Mega Pixel sensor



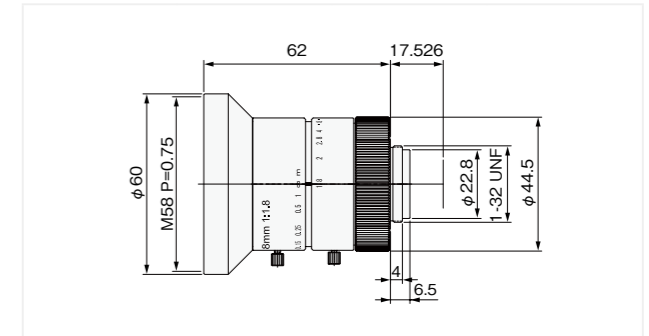
- Suitable for 5 Mega Pixel - 9 Mega Pixel sensor
- Design for 1 inch
- Stable performance at different working distance, from macro to infinity by floating design
- Robust design

HS0619V



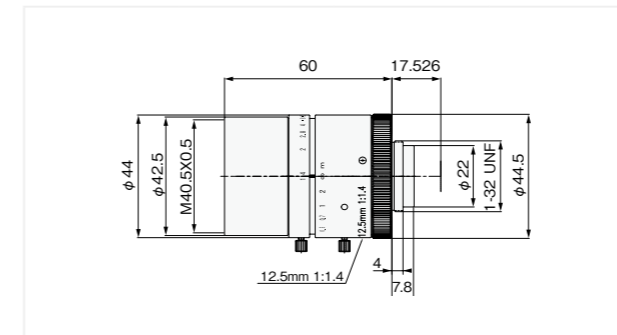
Focal length	6mm	TV distortion	0.83%
∞F No.	1.9	Angle of view(VxH)	94.7°x78.1°
Range of WD	100mm~∞	Maximum Compatible sensor	1

HS0818V



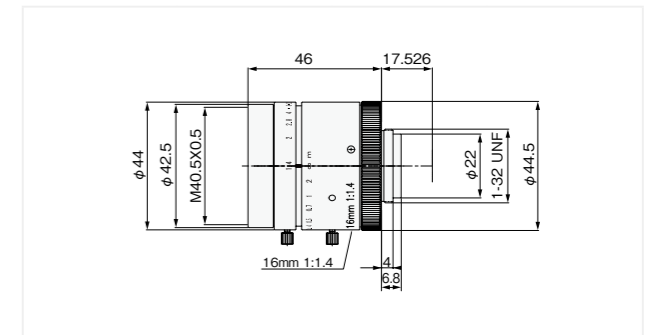
Focal length	8mm	Angle of view(VxH)	78.1°x62.1°
∞F No.	1.8	Filter pitch	M58 P=0.75
Range of WD	100mm~∞	Maximum Compatible sensor	1
TV distortion	-0.17%		

HS1214V



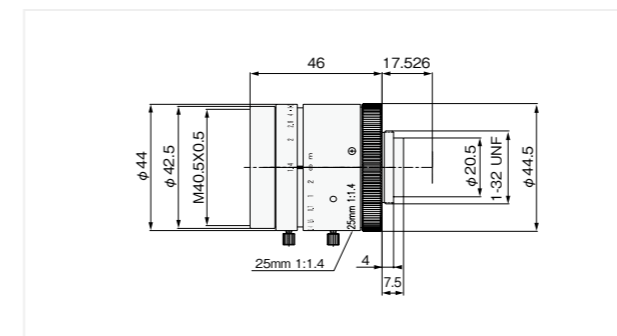
Focal length	12.5mm	Angle of view(VxH)	54.9°x42.2°
∞F No.	1.4	Filter pitch	M40.5 P=0.5
Range of WD	300mm~∞	Maximum Compatible sensor	1
TV distortion	-0.69%		

HS1614V



Focal length	16mm	Angle of view(VxH)	44.2°x33.5°
∞F No.	1.4	Filter pitch	M40.5 P=0.5
Range of WD	300mm~∞	Maximum Compatible sensor	1
TV distortion	-0.85%		

HS2514V



Focal length	25mm	Angle of view(VxH)	28.6°x21.6°
∞F No.	1.4	Filter pitch	M40.5 P=0.5
Range of WD	300mm~∞	Maximum Compatible sensor	1
TV distortion	-0.02%		

HS-J Series

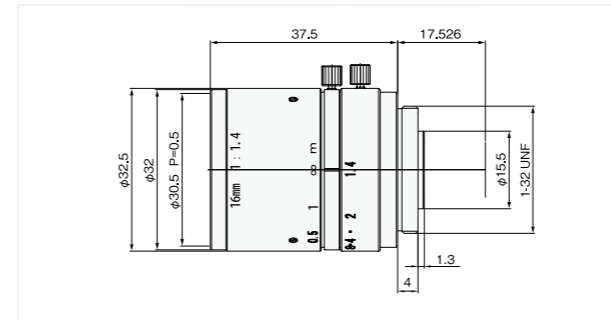
# 2 Mega Pixel Fixed Focal Lens

High resolution and large aperture, F No. 1.4 Suitable for various applications

- ▶ Excellent brightness, F No. 1.4, suitable for high speed application
- ▶ Design for 2 Mega Pixel sensor
- ▶ Stable performance from macro to infinity (∞)
- ▶ Robust design

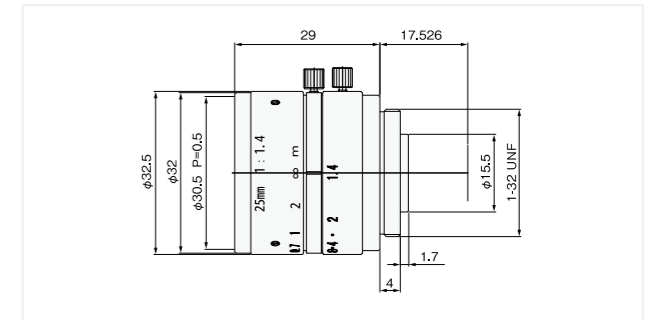


HS1614J



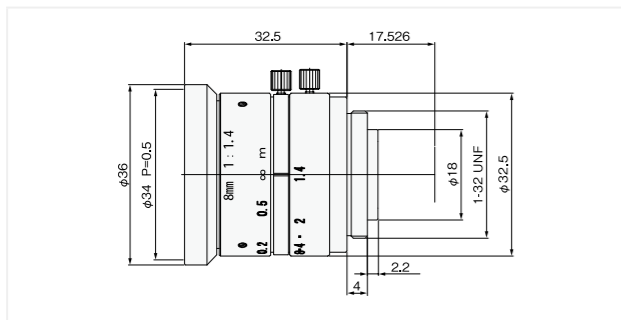
Focal length	16mm	Angle of view(VxH)	23°×30°
∞F No.	1.4	Filter pitch	M30.5 P=0.5
Range of WD	200mm - ∞	Maximum Compatible sensor	2/3
TV distortion	-0.14%		

HS2514J



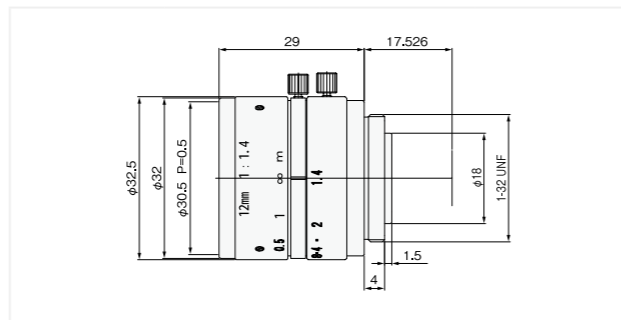
Focal length	25mm	Angle of view(VxH)	15°×19°
∞F No.	1.4	Filter pitch	M30.5 P=0.5
Range of WD	300mm - ∞	Maximum Compatible sensor	2/3
TV distortion	-0.12%		

HS0814J



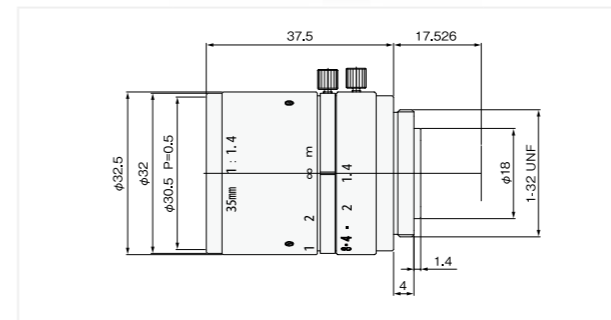
Focal length	8mm	Angle of view(VxH)	44°×56°
∞F No.	1.4	Filter pitch	M34 P=0.5
Range of WD	100mm - ∞	Maximum Compatible sensor	2/3
TV distortion	0.83%		

HS1214J



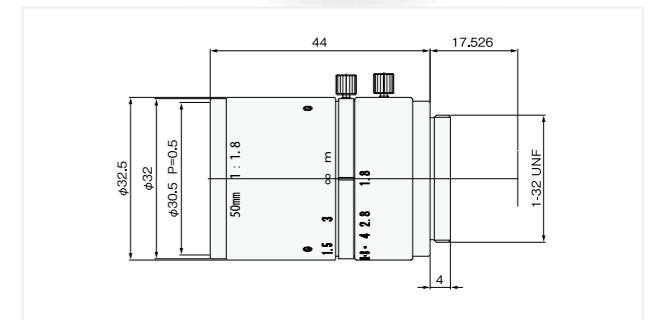
Focal length	12mm	Angle of view(VxH)	30°×39°
∞F No.	1.4	Filter pitch	M30.5 P=0.5
Range of WD	150mm - ∞	Maximum Compatible sensor	2/3
TV distortion	-0.12%		

HS3514J



Focal length	35mm	Angle of view(VxH)	11°×14°
∞F No.	1.4	Filter pitch	M30.5 P=0.5
Range of WD	300mm - ∞	Maximum Compatible sensor	2/3
TV distortion	-0.06%		

HS5018J



Focal length	50mm	Angle of view(VxH)	7.7°×10°
∞F No.	1.8	Filter pitch	M30.5 P=0.5
Range of WD	500mm - ∞	Maximum Compatible sensor	2/3
TV distortion	0.07%		

\* Indicated specifications are design values. \* TV distortion indicates a value for minimum working distance.  
\* Angle of view indicates a value for maximum compatible sensor.

\* Indicated specifications are design values. \* TV distortion indicates a value for minimum working distance.  
\* Angle of view indicates a value for maximum compatible sensor.

FV Series

# Mega Pixel Low Distortion Fixed Focal Lens

## Design for low distortion

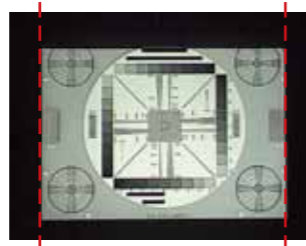
- ▶ Mega Pixel sensor
- ▶ Design for machine vision application, excellent performance at short WD, less than 500mm
- ▶ Reduce color aberration, compared with Conventional Fixed Focal Lens
- ▶ TV distortion less than 0.1% (except for f4mm)
- ▶ Possible to use for macro imaging without extension ring



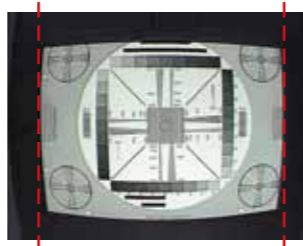
### Comparison of Distortion

- ▶ FV0420 0.9%
- ▶ Conventional f4mm lens Approx. 18%

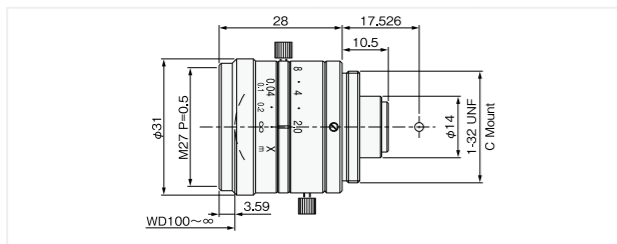
FV low distortion lens



Conventional Fixed Focal lens

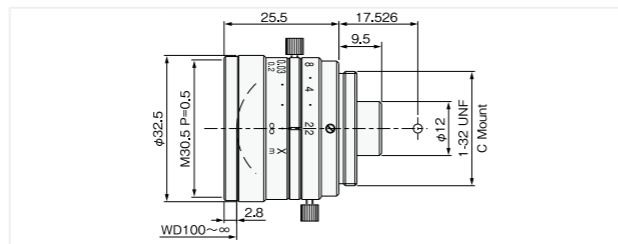


### FV0420



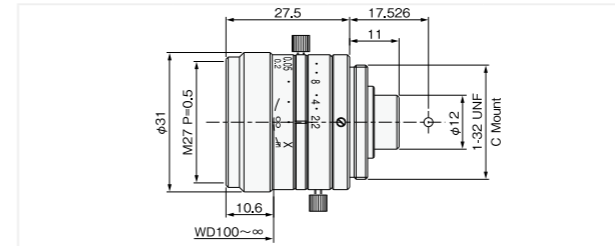
Focal length	4mm	Angle of view(VxH)	59.96°×75.14°
∞ F No.	2.0	Filter pitch	M27 P=0.5
Range of WD	0.1m - ∞	Maximum Compatible sensor	1/2
TV distortion	0.91%		

### FV0622



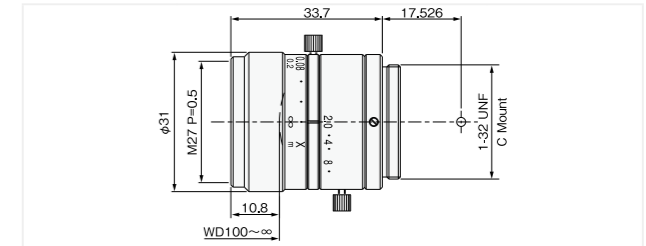
Focal length	6.5mm	Angle of view(VxH)	40.47°×52.35°
∞ F No.	2.2	Filter pitch	M30.5 P=0.5
Range of WD	0.1m - ∞	Maximum Compatible sensor	1/2
TV distortion	-0.01%		

### FV1022



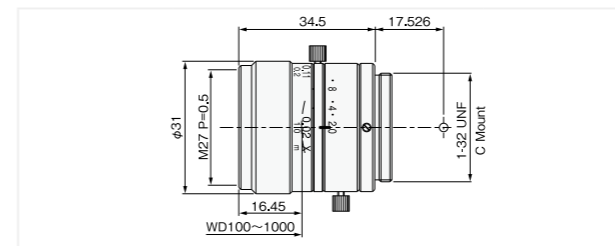
Focal length	10mm	Angle of view(VxH)	26.31°×34.61°
∞ F No.	2.2	Filter pitch	M27 P=0.5
Range of WD	0.1m - ∞	Maximum Compatible sensor	1/2
TV distortion	-0.08%		

### FV1520



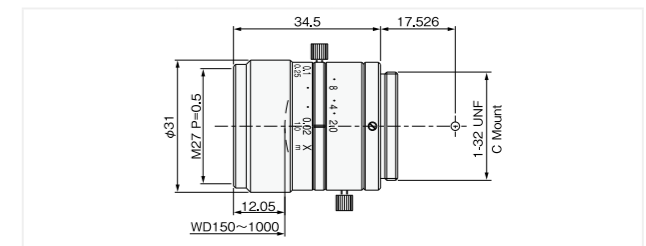
Focal length	15mm	Angle of view(VxH)	24.11°×31.79°
∞ F No.	2.0	Filter pitch	M27 P=0.5
Range of WD	0.1m - ∞	Maximum Compatible sensor	2/3
TV distortion	-0.09%		

### FV2020



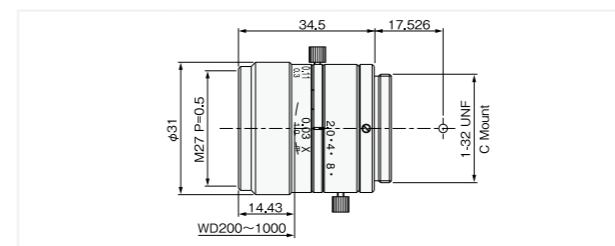
Focal length	20mm	Angle of view(VxH)	18.2°×24.11°
∞ F No.	2.0	Filter pitch	M27 P=0.5
Range of WD	0.1m - 1m	Maximum Compatible sensor	2/3
TV distortion	-0.10%		

### FV2520



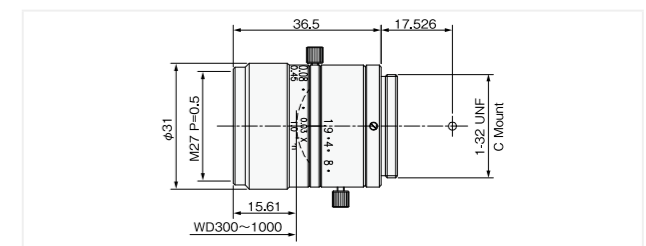
Focal length	25mm	Angle of view(VxH)	14.75°×19.58°
∞ F No.	2.0	Filter pitch	M27 P=0.5
Range of WD	0.15m - 1m	Maximum Compatible sensor	2/3
TV distortion	-0.01%		

### FV3020



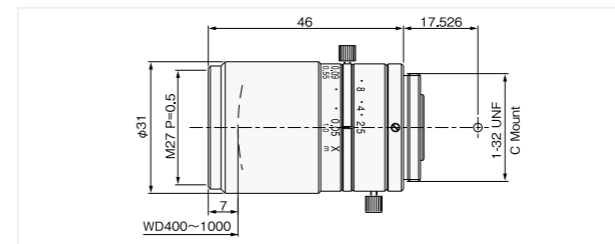
Focal length	30mm	Angle of view(VxH)	12.55°×16.69°
∞ F No.	2.0	Filter pitch	M27 P=0.5
Range of WD	0.2m - 1m	Maximum Compatible sensor	2/3
TV distortion	-0.02%		

### FV3519



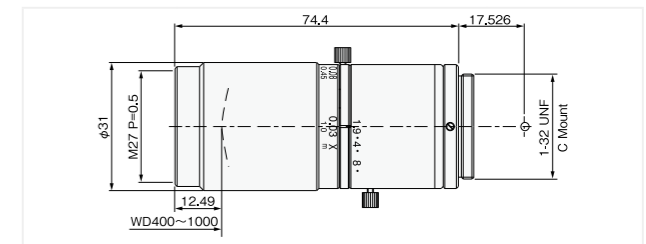
Focal length	35mm	Angle of view(VxH)	10.77°×14.32°
∞ F No.	1.9	Filter pitch	M27 P=0.5
Range of WD	0.3m - 1m	Maximum Compatible sensor	2/3
TV distortion	-0.03%		

### FV5025



Focal length	50mm	Angle of view(VxH)	7.82°×10.38°
∞ F No.	2.5	Filter pitch	M27 P=0.5
Range of WD	0.4m - 1m	Maximum Compatible sensor	2/3
TV distortion	0.03%		

### FV7538



Focal length	75mm	Angle of view(VxH)	5.11°×6.81°
∞ F No.	3.8	Filter pitch	M27 P=0.5
Range of WD	0.4m - 1m	Maximum Compatible sensor	2/3
TV distortion	-0.01%		

\* Indicated specifications are design values. \* Angle of view indicates a value for maximum compatible sensor.  
\* TV distortion indicates a value for minimum working distance.

\* Indicated specifications are design values. \* Angle of view indicates a value for maximum compatible sensor.  
\* TV distortion indicates a value for the minimum working distance.

MV Series

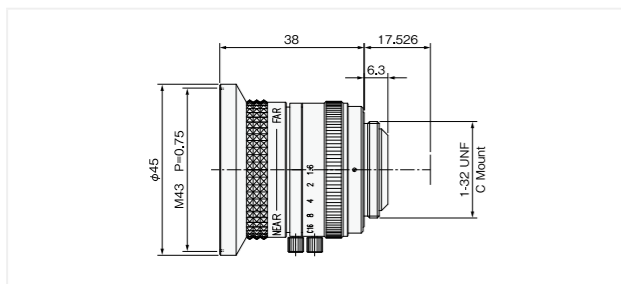
# VGA Fixed Focal Lens

Wide range of focal length is available Suitable for various applications

- ▶ Focal length f3.5mm - f100mm, 10 models are available
- ▶ Available for focus and iris lock screws
- ▶ Suitable for various applications

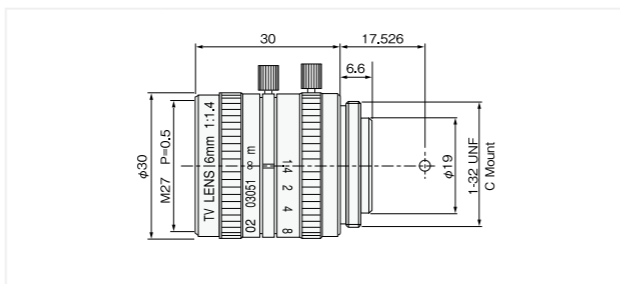


MV0316



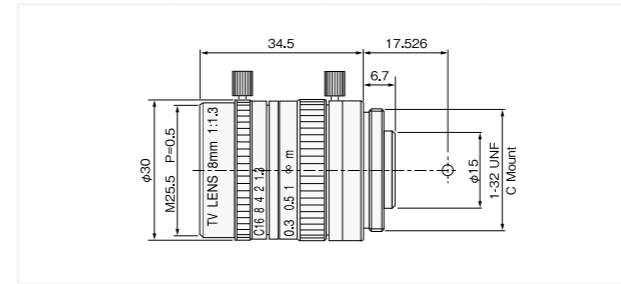
Focal length	3.5mm	Angle of view(VxH)	68.9°×84.9°
∞F No.	1.6	Filter pitch	M43 P=0.75
Range of WD	0.1m - ∞	Maximum Compatible sensor	1/2

MV0614



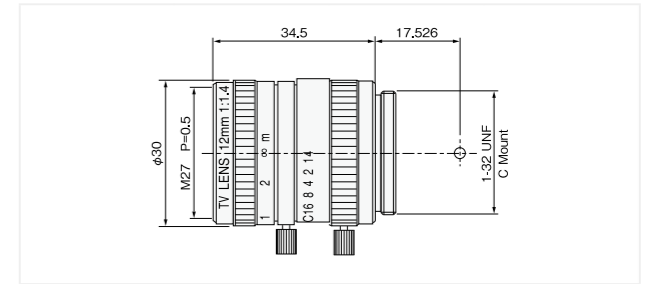
Focal length	6.0mm	Angle of view(VxH)	42.3°×54.6°
∞F No.	1.4	Filter pitch	M27 P=0.5
Range of WD	0.2m - ∞	Maximum Compatible sensor	1/2

MV0813



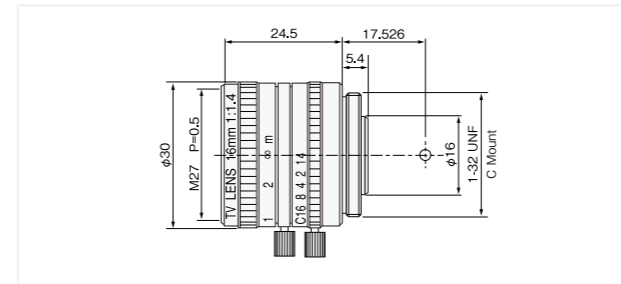
Focal length	8.0mm	Angle of view(VxH)	45°×57.8°
∞F No.	1.3	Filter pitch	M25.5 P=0.5
Range of WD	0.2m - ∞	Maximum Compatible sensor	2/3

MV1214



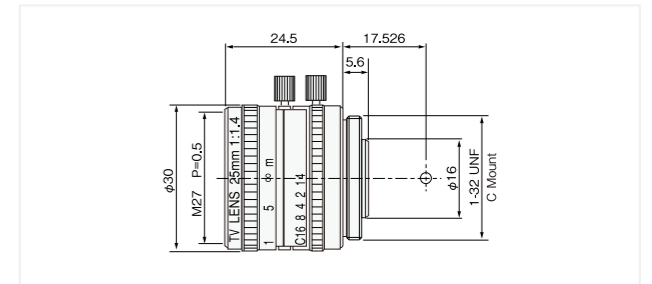
Focal length	12mm	Angle of view(VxH)	21.9°×29°
∞F No.	1.4	Filter pitch	M27 P=0.5
Range of WD	0.3m - ∞	Maximum Compatible sensor	1/2

MV1614



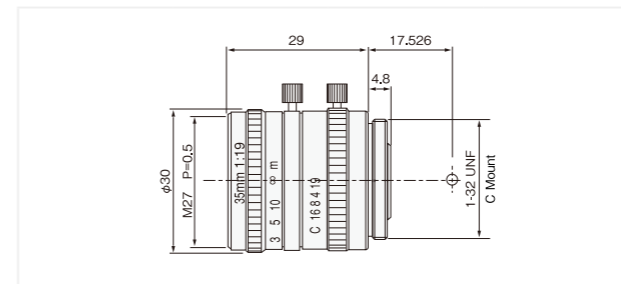
Focal length	16mm	Angle of view(VxH)	23°×30.4°
∞F No.	1.4	Filter pitch	M27 P=0.5
Range of WD	0.4m - ∞	Maximum Compatible sensor	2/3

MV2514



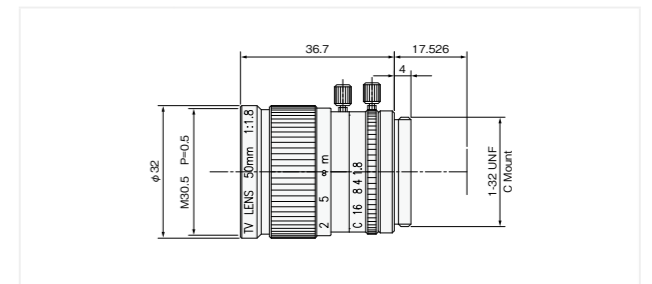
Focal length	25mm	Angle of view(VxH)	21.6°×28.5°
∞F No.	1.4	Filter pitch	M27 P=0.5
Range of WD	0.5m - ∞	Maximum Compatible sensor	2/3

MV3519



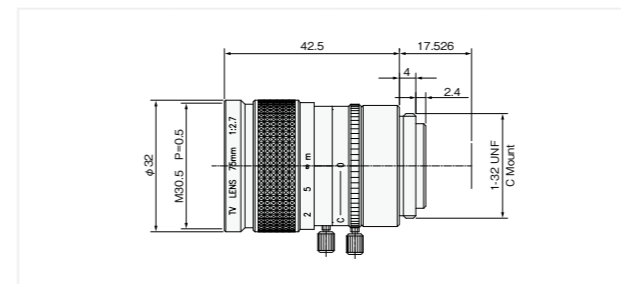
Focal length	35mm	Angle of view(VxH)	10.8°×14.4°
∞F No.	1.9	Filter pitch	M27 P=0.5
Range of WD	0.5m - ∞	Maximum Compatible sensor	2/3

MV5018



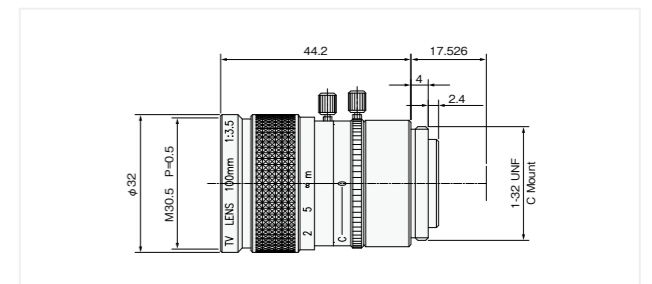
Focal length	50mm	Angle of view(VxH)	7.9°×10.5°
∞F No.	1.8	Filter pitch	M30.5 P=0.5
Range of WD	1m - ∞	Maximum Compatible sensor	2/3

MV7527



Focal length	75mm	Angle of view(VxH)	4.9°×6.5°
∞F No.	2.7	Filter pitch	M30.5 P=0.5
Range of WD	1m - ∞	Maximum Compatible sensor	2/3

MV10035



Focal length	100mm	Angle of view(VxH)	3.8°×5.1°
∞F No.	3.5	Filter pitch	M30.5 P=0.5
Range of WD	1m - ∞	Maximum Compatible sensor	2/3

\* Indicated specifications are design values. \* Angle of view indicates a value for maximum compatible sensor.

\* Indicated specifications are design values. \* Angle of view indicates a value for maximum compatible sensor.