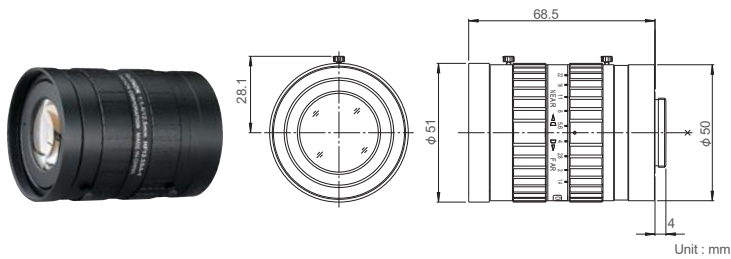


# For FA/Machine Vision Fixed Focal

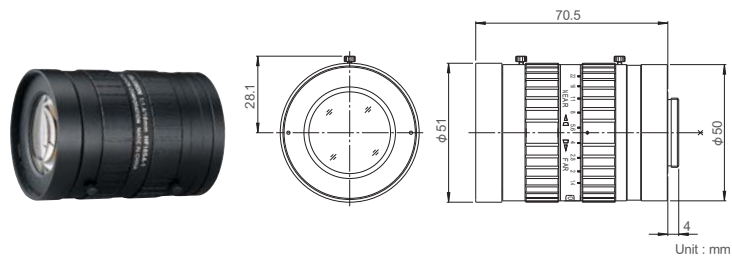
## HF12.5SA-1

FIXED 5 Mega MANUAL C-mnt METAL F1.4



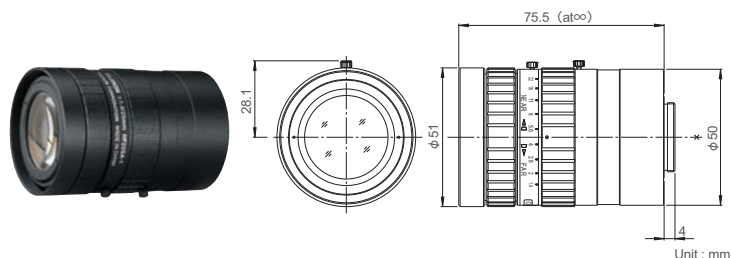
## HF16SA-1

FIXED 5 Mega MANUAL C-mnt METAL F1.4



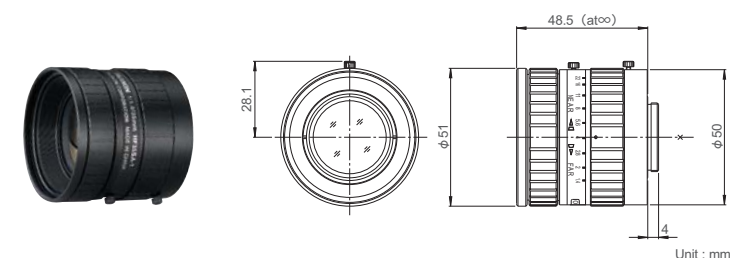
## HF25SA-1

FIXED 5 Mega MANUAL C-mnt METAL F1.4



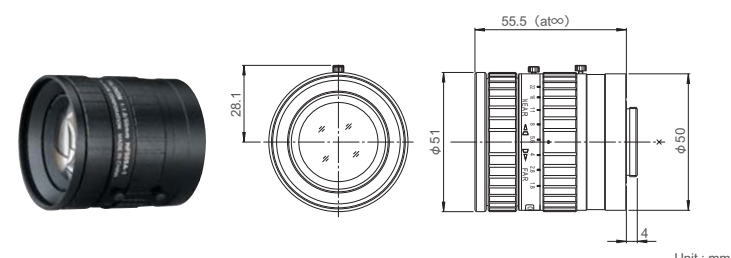
## HF35SA-1

FIXED 5 Mega MANUAL C-mnt METAL F1.4



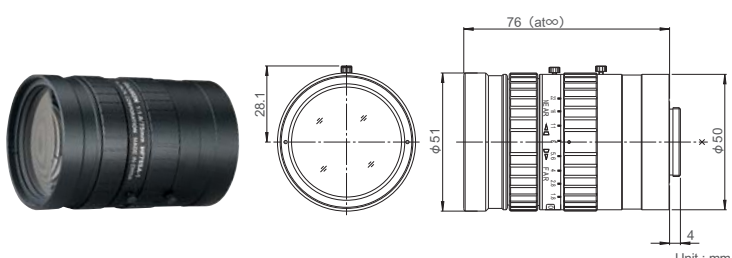
## HF50SA-1

FIXED 5 Mega MANUAL C-mnt METAL



## HF75SA-1

FIXED 5 Mega MANUAL C-mnt METAL



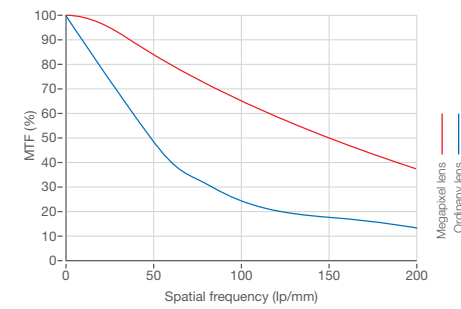
### Feature Indications

- FIXED** Fixed Focal: High performance single focal lens for the best image quality
- 5 Mega** For Megapixel Camera: For 5 Megapixel Camera
- MANUAL** Manual Iris: Manually-operated iris
- C-mnt** C Mount: Screw-in mounting commonly used in FA lenses
- F1.4** Wide Aperture Rate: Lens with the wide aperture rate, optimizing the sensitivity of cameras
- METAL** Metal Mount: Metal mounting with high accuracy and durability

- 🔒 ... With locking knob for iris and focus
- 📏 ... Using an extension tube longer than 5mm the M.O.D. will increase to 0.3m
- 📏 ... Using an extension tube longer than 5mm the M.O.D. will increase to 0.5m

### Megapixel Supporting Lens

We have realized a high resolution, compact, and lightweight lens supporting to megapixel by thoroughly reducing aberrations based on design technology cultivated from broadcast TV lenses. The chart shown at the right compares megapixel supporting lens and the MTF of an ordinary CCTV lens. As the number of TV lines increases, the disparity in MTF becomes bigger.

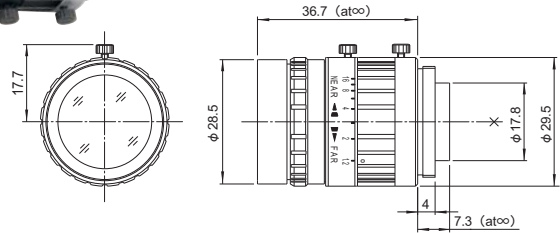


	HF12.5SA-1	HF16SA-1	HF25SA-1	HF35SA-1	HF50SA-1	HF75SA-1
Focal Length (mm)	12.5	16	25	35	50	75
Iris Range	F1.4-F22	F1.4-F22	F1.4-F22	F1.4-F22	F1.8-F22	F1.8-F22
Operation	Focus	Manual	Manual	Manual	Manual	Manual
	Iris	Manual	Manual	Manual	Manual	Manual
Angle Of View (H×V)	2/3"	38°47' × 29°35'	30°45' × 23°18'	19°58' × 15°02'	14°20' × 10°46'	10°03' × 7°33'
	1/2"	28°43' × 21°44'	22°37' × 17°04'	14°35' × 10°58'	10°27' × 7°51'	7°19' × 5°30'
	1/3"	21°44' × 16°23'	17°04' × 12°50'	10°58' × 8°14'	7°51' × 5°53'	5°30' × 4°07'
Focusing Range (From Front Of The Lens) (m)	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.2	∞ ~ 0.4	∞ ~ 0.9
	2/3"	83 × 62	69 × 51	44 × 33	50 × 38	70 × 52
Object Dimensions at M.O.D. (H×V) (mm)	1/2"	60 × 45	50 × 37	32 × 24	37 × 27	51 × 38
	1/3"	45 × 34	37 × 28	24 × 18	27 × 21	38 × 28
	1/3"	45 × 34	37 × 28	24 × 18	27 × 21	38 × 28
Back Focal Distance (in air) (mm)	16.07	17.99	22.32	14.99	17.81	24.43
Exit Pupil Position (From Image Plane) (mm)	-101	-172	-140	-37	-49	-52
Filter Thread (mm)	M49 × 0.75	M49 × 0.75	M49 × 0.75	M49 × 0.75	M49 × 0.75	M49 × 0.75
Mount	C	C	C	C	C	C
Mass (g)	295	285	315	185	240	305
Remarks	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount

# For FA/Machine Vision Fixed Focal

## DF6HA-1B

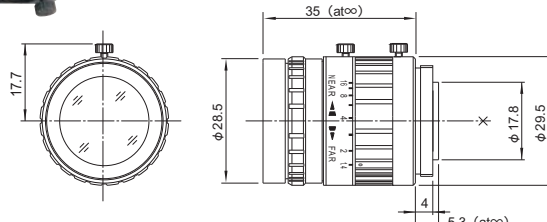
FIXED WIDE 1.5 Mega MANUAL C-MT METAL F1.2



Unit : mm

## HF9HA-1B

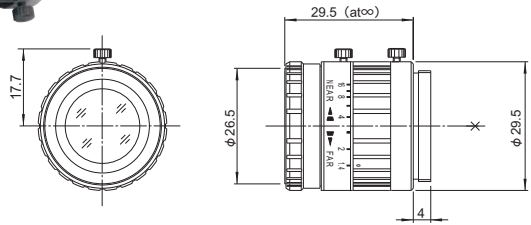
FIXED WIDE 1.5 Mega MANUAL C-MT METAL F1.4



Unit : mm

## HF12.5HA-1B

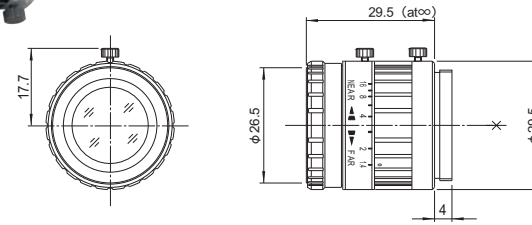
FIXED 1.5 Mega MANUAL C-MT METAL F1.4



Unit : mm

## HF16HA-1B

FIXED 1.5 Mega MANUAL C-MT METAL F1.4



Unit : mm

### Feature Indications

**FIXED**

**Fixed Focal**  
High performance single focal lens for the best image quality

**MANUAL**

**Manual Iris**  
Manually-operated iris

**C-mt**

**C Mount**  
Screw-in mounting commonly used in FA lenses

**F1.4**

**Wide Aperture Rate**  
Lens with the wide aperture rate, optimizing the sensitivity of cameras

**WIDE**

**Wide Angle**  
Wide angle lens which ensures wide field of view

**1.5 Mega**

**For Megapixel Camera**  
For 1.5 Megapixel Camera

**METAL**

**Metal Mount**  
Metal mounting with high accuracy and durability

**With locking knob for iris and focus**

### Model Explanation

Image Size	<b>H</b>	<b>F</b>	<b>9</b>	<b>HA-1</b>	<b>SA-1</b>
		Fixed Focal	Focal Length	Megapixel Support	5 megapixel
D ...1/2"	H ...2/3"	C ...1"			<b>HA-1B</b>
					1.5 megapixel

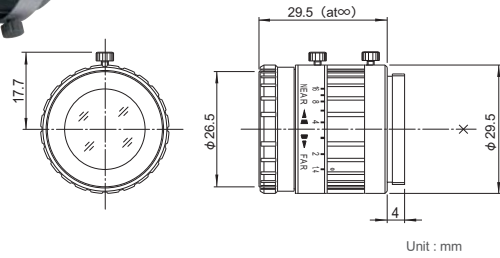
### 1.5 Megapixel

- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Focus & iris lock tab provided, supporting environments such as vibration.

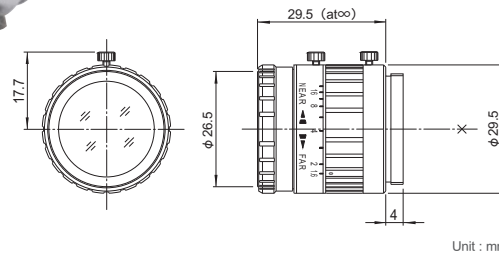
	DF6HA-1B		HF9HA-1B		HF12.5HA-1B		HF16HA-1B		
Focal Length (mm)	6		9		12.5		16		
Iris Range	F1.2~F16		F1.4~F16		F1.4~F16		F1.4~F16		
Operation	Focus	Manual		Manual		Manual		Manual	
	Iris	Manual		Manual		Manual		Manual	
Angle Of View (HxV)	1/2"	56°09' × 43°36'	2/3"	52°06' × 40°16'	2/3"	38°47' × 29°35'	2/3"	30°45' × 23°18'	
	1/3"	43°36' × 33°24'	1/2"	39°09' × 29°52'	1/2"	28°43' × 21°44'	1/2"	22°37' × 17°04'	
	1/4"	33°24' × 25°22'	1/3"	29°52' × 22°37'	1/3"	21°44' × 16°23'	1/3"	17°04' × 12°50'	
Focusing Range (From Front Of The Lens) (m)	∞ ~ 0.1		∞ ~ 0.1		∞ ~ 0.1		∞ ~ 0.1		
Object Dimensions at M.O.D. (HxV) (mm)	1/2"	122 × 92	2/3"	108 × 81	2/3"	78 × 58	2/3"	63 × 47	
	1/3"	92 × 69	1/2"	79 × 59	1/2"	57 × 42	1/2"	46 × 34	
	1/4"	69 × 52	1/3"	59 × 44	1/3"	42 × 32	1/3"	34 × 26	
Back Focal Distance (in air) (mm)	11.44		13.48		15.09		15.15		
Exit Pupil Position (From Image Plane) (mm)	-46		-28		-31		-31		
Filter Thread (mm)	M27 × 0.5		M27 × 0.5		M25.5 × 0.5		M25.5 × 0.5		
Mount	C		C		C		C		
Mass (g)	55		55		45		45		
Remarks	With Metal Mount		With Metal Mount		With Metal Mount		With Metal Mount		

# For FA/Machine Vision Fixed Focal

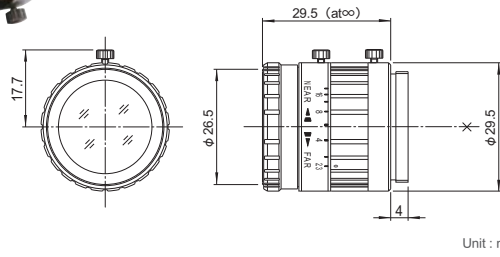
## HF25HA-1B



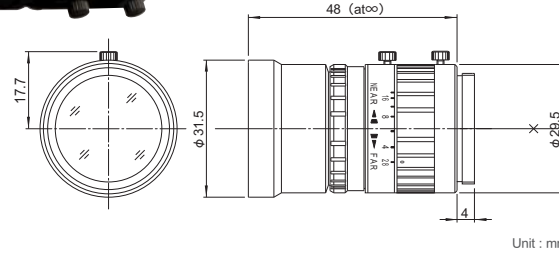
## HF35HA-1B



## HF50HA-1B



## HF75HA-1B



### Feature Indications

- FIXED** Fixed Focal  
High performance single focal lens for the best image quality
- 1.5 Mega** For Megapixel Camera  
For 1.5 Megapixel Camera
- MANUAL** Manual Iris  
Manually-operated iris
- METAL** Metal Mount  
Metal mounting with high accuracy and durability
- F1.4 F1.6** Wide Aperture Rate  
Lens with the wide aperture rate, optimizing the sensitivity of cameras
- C-mt** C Mount  
Screw-in mounting commonly used in FA lenses
- With locking knob for iris and focus

### Model Explanation

Image Size	<b>H</b>	<b>F</b>	<b>25</b>	<b>HA-1</b>	<b>SA-1</b> 5 megapixel
<b>D</b> ...1/2" <b>H</b> ...2/3" <b>C</b> ...1"	Fixed Focal	Focal Length	Megapixel Support	<b>HA-1B</b> 1.5 megapixel	

### 1.5 Megapixel

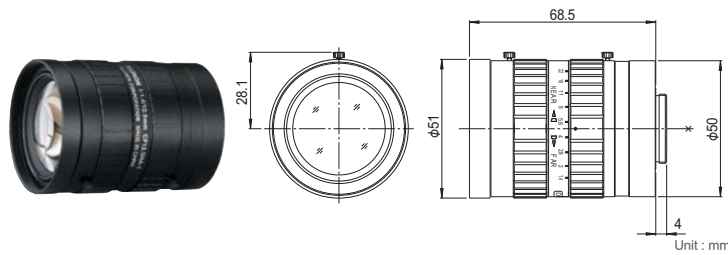
- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Focus & iris lock tab provided, supporting environments such as vibration.

	HF25HA-1B	HF35HA-1B	HF50HA-1B	HF75HA-1B
Focal Length (mm)	25	35	50	75
Iris Range	F1.4-F16	F1.6-F22	F2.3-F22	F2.8-F22
Operation	Focus	Manual	Manual	Manual
	Iris	Manual	Manual	Manual
Angle Of View (H×V)	2/3"	19°58' × 15°02'	14°20' × 10°46'	10°03' × 7°33'
	1/2"	14°35' × 10°58'	10°27' × 7°51'	7°19' × 5°30'
	1/3"	10°58' × 8°14'	7°51' × 5°53'	5°30' × 4°07'
Focusing Range (From Front Of The Lens) (m)	∞ ~ 0.15	∞ ~ 0.25	∞ ~ 0.5	∞ ~ 1.1
Object Dimensions at M.O.D. (H×V) (mm)	2/3"	53 × 40	59 × 44	77 × 57
	1/2"	38 × 29	43 × 32	56 × 42
	1/3"	29 × 22	32 × 24	42 × 31
Back Focal Distance (in air) (mm)	14.58	15.03	15.26	15.74
Exit Pupil Position (From Image Plane) (mm)	-32	-27	-25	-27
Filter Thread (mm)	M25.5 × 0.5	M25.5 × 0.5	M25.5 × 0.5	M30.5 × 0.5
Mount	C	C	C	C
Mass (g)	45	45	45	55
Remarks	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount

# For FA/Machine Vision Fixed Focal

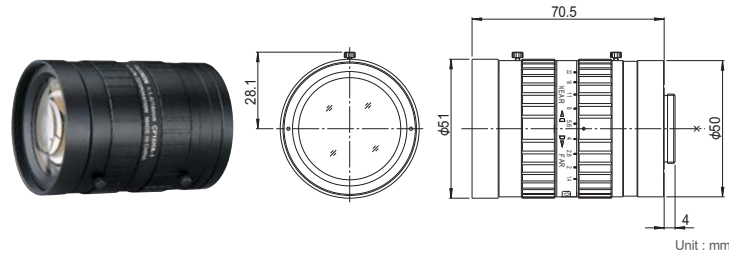
## CF12.5HA-1

FIXED 1.5 Mega MANUAL C-mt METAL F1.4



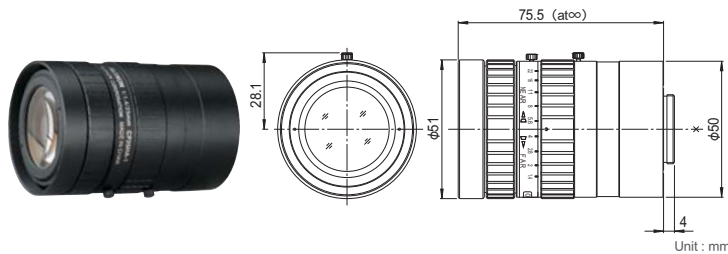
## CF16HA-1

FIXED 1.5 Mega MANUAL C-mt METAL F1.4



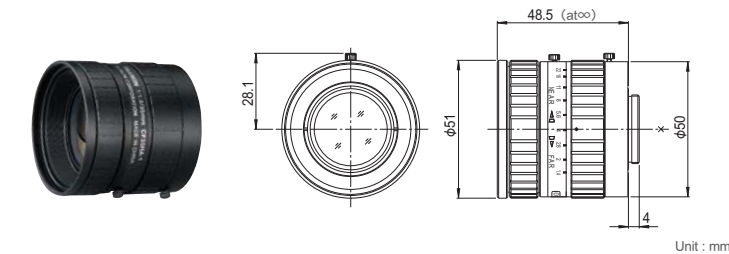
## CF25HA-1

FIXED 1.5 Mega MANUAL C-mt METAL F1.4



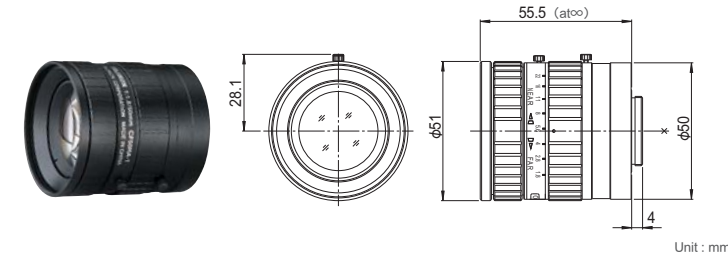
## CF35HA-1

FIXED 1.5 Mega MANUAL C-mt METAL F1.4



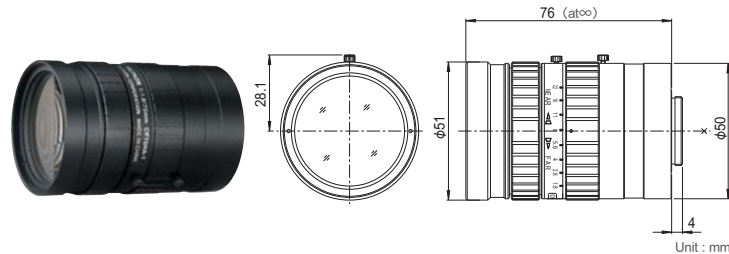
## CF50HA-1

FIXED 1.5 Mega MANUAL C-mt METAL



## CF75HA-1

FIXED 1.5 Mega MANUAL C-mt METAL



## Feature Indications

- FIXED** Fixed Focal  
High performance single focal lens for the best image quality
  - 1.5 Mega** For Megapixel Camera  
For 1.5 Megapixel Camera
  - MANUAL** Manual Iris  
Manually-operated iris
  - C-mt** C Mount  
Screw-in mounting commonly used in FA lenses
  - F1.4** Wide Aperture Rate  
Lens with the wide aperture rate, optimizing the sensitivity of cameras
  - METAL** Metal Mount  
Metal mounting with high accuracy and durability
- 🔒 ... With locking knob for iris and focus  
📏 ... Using an extension tube longer than 5mm the M.O.D. will increase to 0.3m  
📏 ... Using an extension tube longer than 5mm the M.O.D. will increase to 0.5m

## Model Explanation

Image Size	<b>C</b>	<b>F</b>	<b>12.5</b>	<b>HA-1</b>	<b>SA-1</b> 5 megapixel
	<b>D</b> ...1/2" <b>H</b> ...2/3" <b>C</b> ...1"	Fixed Focal	Focal Length	Megapixel Support	<b>HA-1B</b> 1.5 megapixel

## 1.5 Megapixel

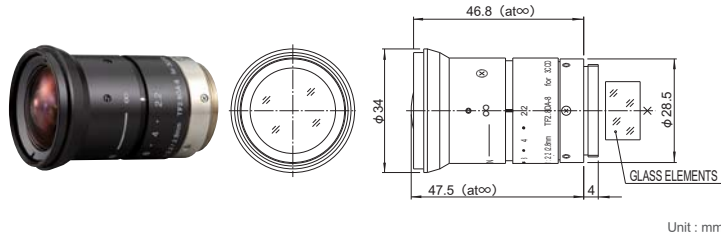
- High-resolution design, providing support for up to 1.5 megapixel camera resolution.
- Low-distortion design achieving accurate image input.
- Focus & iris lock tab provided, supporting environments such as vibration.

	CF12.5HA-1	CF16HA-1	CF25HA-1	CF35HA-1	CF50HA-1	CF75HA-1
Focal Length (mm)	12.5	16	25	35	50	75
Iris Range	F1.4-F22	F1.4-F22	F1.4-F22	F1.4-F22	F1.8-F22	F1.8-F22
Operation	Focus	Manual	Manual	Manual	Manual	Manual
	Iris	Manual	Manual	Manual	Manual	Manual
Angle Of View (HxV)	1"	54°13' x 42°01'	43°36' x 33°24'	28°43' x 21°44'	20°43' x 15°37'	14°35' x 10°58'
	2/3"	38°47' x 29°35'	30°45' x 23°18'	19°58' x 15°02'	14°20' x 10°46'	10°03' x 7°33'
	1/2"	28°43' x 21°44'	22°37' x 17°04'	14°35' x 10°58'	10°27' x 7°51'	7°19' x 5°30'
Focusing Range (From Front Of The Lens) (m)	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.2	∞ ~ 0.4	∞ ~ 0.9
Object Dimensions at M.O.D. (HxV) (mm)	1"	120 x 90	100 x 75	65 x 48	73 x 55	101 x 76
	2/3"	83 x 62	69 x 51	44 x 33	50 x 38	70 x 52
	1/2"	60 x 45	50 x 37	32 x 24	37 x 27	51 x 38
Back Focal Distance (in air) (mm)	16.07	17.99	22.32	14.99	17.81	24.43
Exit Pupil Position (From Image Plane) (mm)	-101	-172	-140	-37	-49	-52
Filter Thread (mm)	M49 x 0.75	M49 x 0.75	M49 x 0.75	M49 x 0.75	M49 x 0.75	M49 x 0.75
Mount	C	C	C	C	C	C
Mass (g)	290	280	310	180	235	300
Remarks	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount

# For FA/Machine Vision 3CCD Camera

## TF2.8DA-8

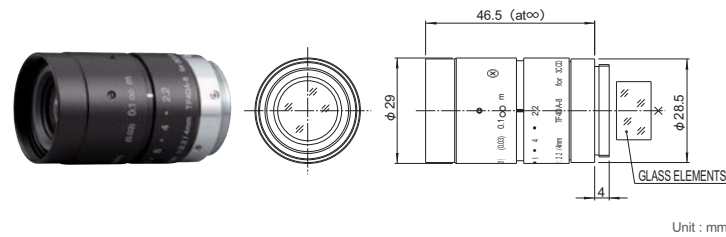
FIXED WIDE 3CCD MANUAL C-mt METAL



Unit : mm

## TF4DA-8

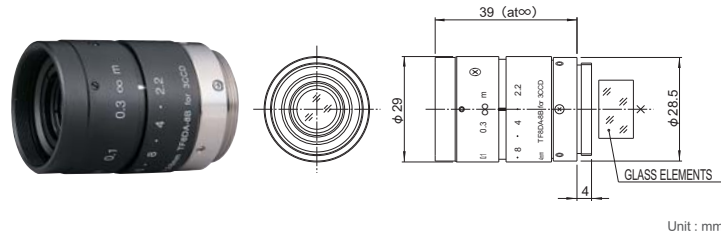
FIXED 3CCD MANUAL C-mt METAL



Unit : mm

## TF8DA-8B

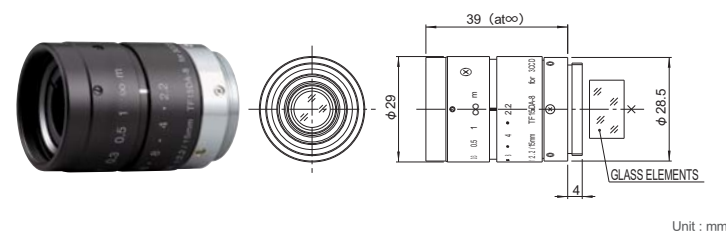
FIXED 3CCD MANUAL C-mt METAL



Unit : mm

## TF15DA-8

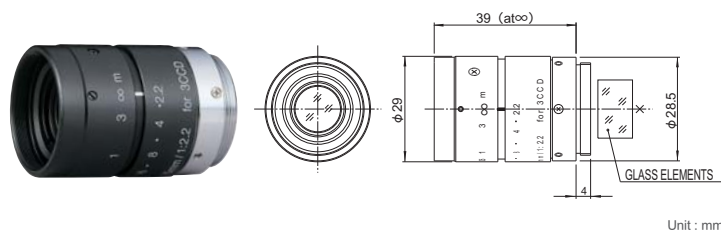
FIXED 3CCD MANUAL C-mt METAL



Unit : mm

## TF25DA-8B

FIXED 3CCD MANUAL C-mt METAL



Unit : mm

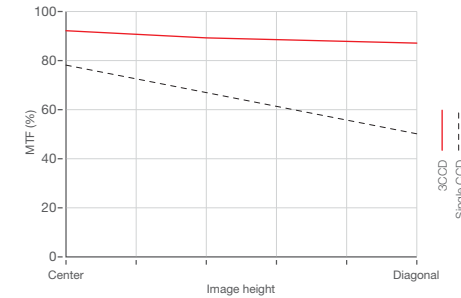
### Feature Indications

- FIXED** Fixed Focal  
High performance single focal lens for the best image quality
- WIDE** Wide Angle  
Wide angle lens which ensures wide field of view
- MANUAL** Manual Iris  
Manually-operated iris
- 3CCD** For 3CCD Camera  
Lens exclusively for 3CCD cameras for the optimum color reproduction and high resolution of 3CCD cameras
- C-mt** C Mount  
Screw-in mounting commonly used in FA lenses
- METAL** Metal Mount  
Metal mounting with high accuracy and durability

With locking knob for iris and focus

### 3CCD Camera Lens

3CCD cameras have thicker glass between the lens and the CCD than single CCD cameras because they have three CCDs to correspond with the red, blue and green colors separated in the prism. Fujinon 3CCD lenses are designed to optimally match with 3CCD cameras. The chart shown at the right explains the difference in MTF when a 3CCD lens and a single CCD lens is mounted on a 3CCD camera.



	TF2.8DA-8	TF4DA-8	TF8DA-8B	TF15DA-8	TF25DA-8B
Focal Length (mm)	2.8	4	8	15	25
Iris Range	F2.2-F16-Close	F2.2-F16-Close	F2.2-F16-Close	F2.2-F16-Close	F2.2-F16-Close
Operation	Focus	Manual	Manual	Manual	Manual
	Iris	Manual	Manual	Manual	Manual
Angle Of View (HxV)	1/3" 89°08' x 69°20'	61°56' x 48°27'	33°24' x 25°22'	18°11' x 13°41'	10°58' x 8°14'
Focusing Range (From Front Of The Lens) (m)	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.1	∞ ~ 0.2
Object Dimensions at M.O.D. (HxV) (mm)	1/3" 218 x 153	131 x 98	66 x 50	36 x 27	42 x 32
Back Focal Distance (in air) (mm)	14.49	14.61	14.83	16.32	15.12
Exit Pupil Position (From Image Plane) (mm)	98	88	-176	-89	-120
Filter Thread (mm)	-	M27 x 0.5	M25.5 x 0.5	M25.5 x 0.5	M25.5 x 0.5
Mount	C	C	C	C	C
Mass (g)	75	70	60	60	60
Remarks	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount	With Metal Mount