

IP/CCTV LENSES

- Mega-Pixel Vari-Focal Lenses
 - Vari-Focal Lenses
 - Fixed-Focal Lenses
- Mega-Pixel Fixed-Focal Lens (for ITS)
 - Zoom Lenses
- Mega-Pixel Machine Vision Lenses
 - Machine Vision Lenses
- Accessories / Terminology Explanations



 **Caution:** Please read the instruction manual carefully before using the lens.

TAMRON *Manufacturer of precise and sophisticated optical products for a broad range of industries.*

TAMRON CO., LTD. <http://www.tamron.biz/>
1385, Hasunuma, Minuma-ku, Saitama-shi, Saitama 337-8556 JAPAN
Tel: +81-48-684-9129 Fax: +81-48-683-8594



Management on Quality and Environment
Tamron is certified with international standards: ISO 9001 for quality and ISO14001 for environmental management at its headquarters, domestic sales offices, China plant as well as three production facilities in Aomori, Japan, and is fully committed to striving for continued and sustainable improvement at all levels and facets of its business operations.

Vari-Focal lenses are constantly evolving together with Tamron, the optical equipment specialist

Tamron has consistently developed innovative Vari-Focal lenses compatible with the needs of a market that is accelerating towards increasingly sophisticated, ever more compact IP networks.

Images are all about “resolution”. High-quality products that refuse to compromise are the result of an unrelenting commitment to high resolution coupled with unsurpassed technological capabilities.

Offering high-resolution that is both durable and versatile, Tamron’s products enjoy worldwide success.



Contents	2
Products and Features	3, 4
Focal Length list	5, 6
Mega-Pixel Vari-Focal Lenses	7, 8, 9, 10, 11, 12
Vari-Focal Lenses	13, 14, 15, 16
Fixed-Focal Lenses	17, 18
Mega-Pixel Fixed-Focal Lens (for ITS)	19
Zoom Lenses	19
Mega-Pixel Machine Vision Lenses	20, 21, 22, 23, 24, 25
Machine Vision Lenses	26, 27, 28
Accessories / Terminology Explanation	29, 30

Products and Features

Mega-Pixel Vari-Focal Lenses

Ultra-high-resolution vari-focal lenses deliver maximum performance for mega-pixel cameras. Innovative optical technology provides high-resolution and high-contrast performance.

Flat-Field Mega-Pixel Lenses

Delivering uniformly ultra-high-resolution image from corner to periphery

The Tamron Flat-Field Mega-Pixel Lens Series delivers mega-pixel image quality not only in the center but also in the corners of the image field, providing the mega-pixel resolution quality needed for image cropping and enlarging, irrespective of the location of the subject on the screen. This ensures that subject faces and other relevant information can be clearly identified and distinguished, making the Tamron Flat-Field Mega-Pixel Lenses an ideal solution for high-resolution network surveillance applications. In fact all lenses of the Tamron Mega-Pixel Lens Series lineup deliver Flat-Field Mega-Pixel resolution.

Flat-Field *Mega-Pixel*



Mega-Pixel Key Technologies

These Technologies Unfold the Mega-Pixel Cameras True Powers

<M118VM413IRCS, M118VM413IR, M118VG413IRCS, M118VG413IR, M118VP413IRCS, M118VP413IR, M118VG1250IR, M118VP1250IR, M13VM288IR, M13VG288IR, M13VP288IR, M13VG2812IR, M13VG850IR, M13VP850IR, M13VG550IR, M13VM246, M13VG246, M13VM308, M13VG308, M13VM550, M13VG550, M12VM412, M12VG412 >

Each lens in Tamron's Mega-Pixel Vari-Focal Lens Series uses Aspherical elements to minimize optical aberrations and ensures high optical quality while maintaining a compact form employing innovative optical technologies. These lenses deliver high-resolution and high-contrast images that are sharp from the center to the periphery of the image field and represent the ideal solution for applications that use high-quality mega-pixel cameras.

Compensation made possible by Aspherical lens



Vari-Focal Lenses

Through the beneficial employment of aspherical elements, Tamron manufactured a superior line of Vari-Focal lenses featuring fast maximum apertures, high magnification ratios compactness and uncompromised optical quality.

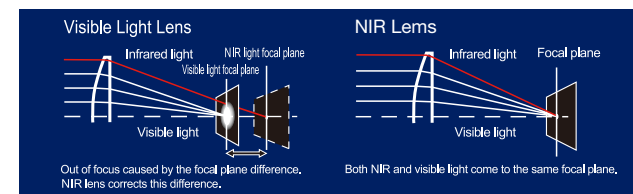
Wide Dynamic Range

The standard 3.0-8mm Vari-Focal lens for the 1/3" format, which meets the needs of the most frequent job applications, offers an impressive maximum open aperture of F/1.0 and F/360 minimum aperture. This wide dynamic range increases the versatility of this lens since it can be used in situations where light conditions are extreme or ever-changing.



Compatible NIR (Near-IR) *Only supported by NIR Lenses

The Tamron NIR lens series is designed to minimize focus shift in the NIR range by expanding chromatic aberration compensation to include both daylight and the NIR ranges. The lens therefore unfolds its power in 24-hour around-the-clock surveillance, when combined with a day/night camera.



Fixed-Focal Lenses

A complete series of 1/3" format Fixed-Focal Lenses from 2.2mm super wide angle (118.6°) to 8mm (34.5°).



Compatible NIR (Near-IR)

Tamron's 1/3" format 2.2mm, 2.8mm, 4mm, 6mm and 8mm lenses are precisely compatible with day/night cameras since their chromatic aberration compensation is expanded to the NIR range.

Zoom Lenses

Tamron's motorized zoom lenses are designed with durability and reliability in mind.



Mega-Pixel Machine Vision Lenses

Tamron's high-resolution line-up of lenses are most suitable for such applications as FA (Factory Automation), Machine Vision, etc., where high image quality is essential. Tamron has a complete line-up of lenses that are perfectly compatible with cameras featuring mega-pixel imagers.

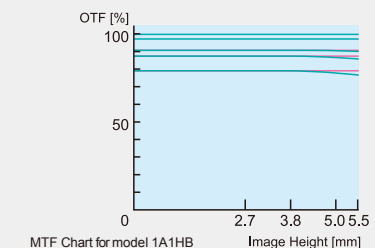


Minimized Distortion

Distortion, the most formidable enemy in image processing, is thoroughly compensated for, thereby reducing distortion in images to the absolute minimum. As a result, Tamron's High-Resolution Lenses provide stabilized high-performance in the field of precise measuring.

High-Resolution Extending to the Periphery

Various optical aberrations are compensated for to the absolute minimum in order to maintain high-resolution not only in the center of an image but also to its periphery.



Solid and Robust Mechanism

So as to endure the vibrations of FA and Machine Vision apparatus, where lenses are built in, Tamron's High-Resolution Lenses all feature solid and robust mechanisms. This makes it possible to maintain their finest initial performances even after long periods of use.

Locking Mechanisms

Each of the lenses are available with locking mechanisms for the iris and focusing controls, making their use ideal in environment suffering from significant vibrations.

Compact Design

In consideration of using the lenses with FA and Machine Vision, all of the lenses in each series provide compact chassis and the external dimensions and filter sizes are unified.

Focal Length List

		Model	page	2.2mm	2.4mm	2.8mm	5mm	8mm	12mm	50mm	100mm
Mega-Pixel Vari-Focal Lenses	5MP	M118VM413IRCS	8								
		M118VM413IR	8								
		M118VG413IRCS	8								
		M118VG413IR	9								
		M118VP413IRCS	10								
		M118VP413IR	10								
		M118VG1250IR	8								
		M118VP1250IR	10								
	3MP	M13VM288IR	8								
		M13VG288IR	9								
		M13VP288IR	10								
		M13VG2812IR	9								
	2MP	M13VG850IR	9								
		M13VP850IR	10								
	MP	M13VG550IR	9								
		M13VM246	11								
		M13VG246	12								
		M13VM308	11								
		M13VG308	12								
		M12VM412	11								
		M12VG412	12								
		M13VM550	11								
Vari-Focal Lenses		M13VG550	12								
		13VG2812ASII	16								
		13VG2811ASIR	14								
		13VM308AS	15								
		13VG308AS	16								
		13VM308ASIRII	13								
		13VG308ASIRII	14								
		12VM412ASIR	13								
		12VG412ASIR	14								
		13VM550ASII	15								
		13VG550ASII	16								
		13VM1040ASIR	13								
		13VG1040ASIR	14								
		12VM1040ASIR	13								
		12VG1040ASIR	14								
		13VM20100AS	15								
Fixed-Focal Lenses/ Fixed-Focal Lens (for ITS)		13VG20100AS	16								
		13FM22IR	17								
		13FG22IR	18								
		13FM28IR	17								
		13FG28IR	18								
		13FM04IR	17								
		13FG04IR	18								
		13FM06IR	17								
		13FG06IR	18								
		13FM08IR	17								
		13FG08IR	18								
		M118FM35-II	19								



		Model	page	2.2mm	2.4mm	2.8mm	5mm	8mm	12mm	50mm	100mm
Zoom Lenses		M118ZG36X10IRP	19								
		M118ZG36X10IRPF	19								
		M12ZG34X15IRPF	19								
Mega-Pixel Machine Vision Lenses		M111FM08	21								
		M111FM16	21								
		M111FM25	21								
		M111FM50	21								
		M112FM12	22								
		M112FM16	22								
		M112FM25	22								
		M23FM06	23								
		M23FM08	23								
		M23FM12	23								
		M23FM16	23								
		M23FM25	23								
		M23FM35	24								
		M23FM50	24								
		M118FM06	25								
		M118FM08	25								
		M118FM12	25								
		M118FM16	25								
		M118FM25	25								
		M118FM50	25								
		23FM16SP	24								
		23FM25SP	24								
		23FM50SP	24								
Machine Vision Lenses		22HA	26								
		219HB	26								
		25HA	26								
		25HB	26								
		17HD	27								
		17HF	27								
		20HA	27								
		20HC	27								
		35HB	28								
		21HA	28								
		21HC	28								
		1A1HB	28								

FFMP Flat-Field Mega-Pixel Full HD Full High Definition HD High Definition SD Standard Definition IR NIR (Near-IR)
2.5µm Supports 2.5µm Sensor 3.1µm Supports 3.1µm Sensor 3.5µm Supports 3.5µm Sensor 4.0µm Supports 4.0µm Sensor 5.86µm Supports 5.86µm Sensor

*Angle of view images are illustrative examples.

Model Explanation | Tamron IP / CCTV lens model numbers are very simple. Please see the following explanation of model number nomenclature.

Model Explanation

13 VG 308 AS = 1/3" Vari-Focal Lens DC Auto Iris Aspherical Lens

Imager Size

111 = 1.1" 118 = 1/1.8"

112 = 1/1.2" 12 = 1/2"

23 = 2/3" 13 = 1/3"

Lens Type

V = Vari-Focal Lens

F = Fixed-Focal Lens

Z = Zoom Lens

Iris Type

M = Manual Iris

G = Auto Iris w/o Amplifier

P = P-Iris*

*Bi-polar type Stepping motor

Aspherical Lens

In the model numbers of some aspherical lenses, this notation may have been omitted.

M13VM 308

23FM25 SP

13FG22 IR

M118ZG 36X10 IR P F

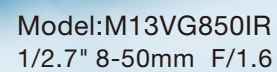
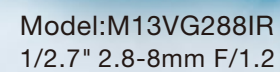
Compatible with near infrared range

Zoom magnification and widest focal length

with preset

with DeFog

The new IR-corrected Mega-Pixel lens series from Tamron features a focal length range of 2.8 to 50mm in just two lenses covering 124.3° to 6.7° horizontal field of view with use of a 1/2.7" camera. A new optical design uses glass mold aspherical lens elements and a special optical coating that ensures 3MP high resolution even under IR light and a clear image.



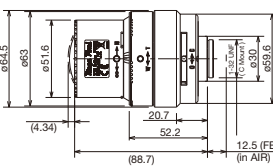
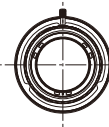
Manual Iris

M118VM413IRCS

5MP



Imager Size		1/1.8		Operation	Focus	Manual with Lock
Mount Type		CS			Zoom	Manual with Lock
Focal Length		4.0 - 13mm			Iris	Manual with Lock
Aperture Range		F/1.5 - Close		Overall Length	98mm	
Zoom Ratio		×3.2			172g	
Focus Range		0.3m - ∞		Remarks	RoHs 	
Field of View Angle (Horizontal × Vertical)	1/1.8W	105.4°×77.6°				
	1/1.8T	33.0°×24.8°				
	1/2W	91.7°×67.9°				
	1/2T	29.0°×21.8°				
	1/3W	67.9°×50.6°				
1/3T	21.8°×16.3°					



M118VM413IR

FFMP

Fully HD

— IR —

ASL

Imager Size

2/3

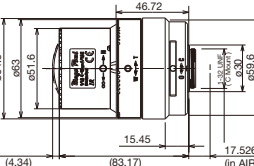
1/1.8

1/2

1/3

5MP



Imager Size	1/1.8		Operation	Focus	Manual with Lock
Mount Type	C			Zoom	Manual with Lock
Focal Length	4.0 - 13mm			Iris	Manual with Lock
Aperture Range	F/1.5 - Close		Overall Length	92mm	
Zoom Ratio	×3.2		Weight	167g	
Focus Range	0.3m - ∞				
Field of View Angle (Horizontal × Vertical)	1/1.8W	105.4°×77.6°	Remarks	RoHs 	 
	1/1.8T	33.0°×24.8°			
	1/2W	91.7°×67.9°			
	1/2T	29.0°×21.8°			
	1/3W	67.9°×50.6°			
	1/3T	21.8°×16.3°			

M13VM288IR

FFMP

Full HD

— IR —

ASL

Imager Size

2/3

1/2.7

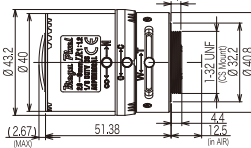
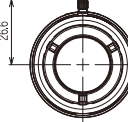
1/3

1/4

3MP



Imager Size		1/2.7		Operation	Focus	Manual with Lock
Mount Type		CS			Zoom	Manual with Lock
Focal Length		2.8 - 8mm			Iris	Manual with Lock
Aperture Range		F/1.2 - Close		Overall Length		58mm
Zoom Ratio		×2.8		Weight		61g
Focus Range		0.3m - ∞		Remarks	RoHS 	
Field of View Angle (Horizontal × Vertical)	1/2.7W	124.3°×65.2°				
	1/2.7T	43.0°×24.2°				
	1/3W	100.1°×72.9°				
	1/3T	35.8°×26.8°				
	1/4W	72.9°×53.9°				
	1/4T	26.8°×20.1°				



M118VG1250IR

5MP

Imager Size		1/1.8	Operation	Focus	Manual with Lock
Mount Type		CS		Zoom	Manual with Lock
Focal Length		12 - 50mm		Iris	DC Auto Iris
Aperture Range		F/1.4 - F/360	Operating Voltage	Open 4.0V	
Zoom Ratio		×4.1		Close 0.5V	
Focus Range		1.0m - ∞	Overall Length	84mm	
			Weight	130g	
Field of View Angle (Horizontal × Vertical)	1/1.8W	34.0°×25.5°	Remarks		
	1/1.8T	8.5°×6.4°			
	1/2W	29.9°×22.4°			
	1/2T	7.5°×5.6°			
	1/3W	22.4°×16.8°			
	1/3T	5.6°×4.2°			

M118VG413IRCS

FFMP

Full HD

— IR —

ASL

Imager Size

2/31/1.81/21/3

5MP



Imager Size	1/1.8		Operation	Focus	Manual with Lock
Mount Type	CS			Zoom	Manual with Lock
Focal Length	4.0 - 13mm			Iris	DC Auto Iris
Aperture Range	F/1.5 - Close		Operating Voltage	Open 3.0V	
Zoom Ratio	×3.2			Close 0.5V	
Focus Range	0.3m ~ ∞		Overall Length	98mm	
Field of View Angle (Horizontal × Vertical)	1/1.8W	105.4°×77.6°	Weight	172g	
	1/1.8T	33.0°×24.8°	Remarks	RoHS 	
	1/2W	91.7°×67.9°			
	1/2T	29.0°×21.8°			
	1/3W	67.9°×50.6°			
1/3T	21.8°×16.3°				

Mega-Pixel Vari-Focal Lenses

Day / Night

DC Auto Iris

M118VG413IR

FFMP Full HD

IR

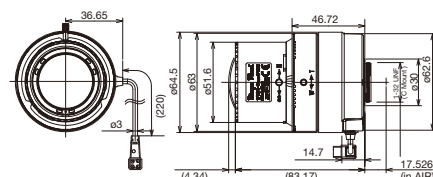
ASL

Imager Size 2/3 1/1.8 1/2 1/3

5MP



Imager Size	1/1.8	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Iris	Manual with Lock
Focal Length	4.0 - 13mm			DC Auto Iris
Aperture Range	F/1.5 - Close	Operating Voltage		Open 3.0V
Zoom Ratio	×3.2			Close 0.7V
Focus Range	0.3m - ∞	Overall Length		92mm
		Weight		167g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/1.8W	105.4°×77.6°			
1/1.8T	33.0°×24.8°			
1/2W	91.7°×67.9°			
1/2T	29.0°×21.8°			
1/3W	67.9°×50.6°			
1/3T	21.8°×16.3°			



M13VG288IR

FFMP Full HD

IR

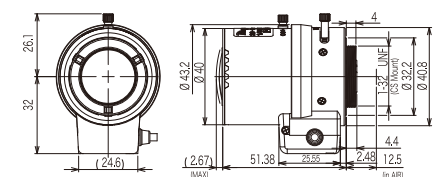
ASL

Imager Size 2/3 1/2.7 1/3 1/4

3MP



Imager Size	1/2.7	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	2.8 - 8mm			DC Auto Iris
Aperture Range	F/1.2 - 360	Operating Voltage		Open 4.0V
Zoom Ratio	×2.8			Close 0.7V
Focus Range	0.3m - ∞	Overall Length		58mm
		Weight		70g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/2.7W	124.3°×65.2°			
1/2.7T	43.0°×24.2°			
1/3W	100.1°×72.9°			
1/3T	35.8°×26.8°			
1/4W	72.9°×53.9°			
1/4T	26.8°×20.1°			



M13VG2812IR

FFMP Full HD

IR

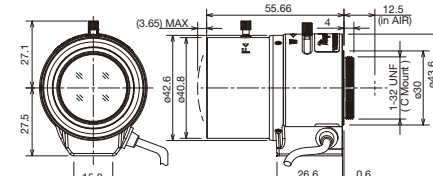
ASL

Imager Size 2/3 1/2.7 1/3 1/4

3MP



Imager Size	1/2.7	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	2.8 - 12mm			DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 4.0V
Zoom Ratio	×4.2			Close 0.5V
Focus Range	0.3m - ∞	Overall Length		72mm
		Weight		70g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/2.7W	107°×79.3°			
1/2.7T	26.4°×19.8°			
1/3W	96.8°×71.6°			
1/3T	24.0°×18.0°			
1/4W	71.6°×53.4°			
1/4T	18.0°×13.5°			



M13VG550IR

FFMP Full HD

IR

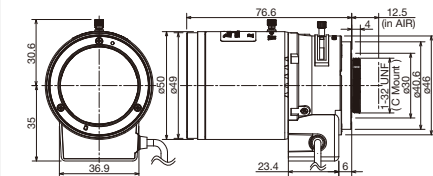
ASL

Imager Size 2/3 1/2.7 1/3 1/4

2MP



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	5 - 50mm			DC Auto Iris
Aperture Range	F/1.6 - 360	Operating Voltage		Open 4.0V
Zoom Ratio	×10			Close 0.5V
Focus Range	1.0m - ∞	Overall Length		81mm
		Weight		104g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/3W	53°×40°			
1/3T	5.6°×4.2°			
1/4W	40°×30°			
1/4T	4.2°×3.2°			



M13VG850IR

FFMP Full HD

IR

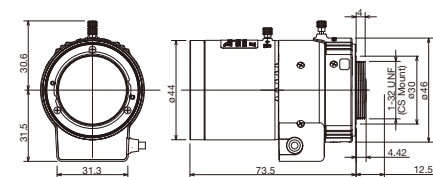
ASL

Imager Size 2/3 1/2.7 1/3 1/4

3MP



Imager Size	1/2.7	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	8 - 50mm			DC Auto Iris
Aperture Range	F/1.6 - 360	Operating Voltage		Open 4.0V
Zoom Ratio	×6.2			Close 0.5V
Focus Range	2.0m - ∞	Overall Length		78mm
		Weight		106g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/2.7W	40.2°×22.6°			
1/2.7T	6.6°×3.8°			
1/3W	33.5°×25.1°			
1/3T	5.6°×4.2°			
1/4W	25.1°×18.8°			
1/4T	4.2°×3.2°			



P-Iris*

*Bi-polar type Stepping motor

M118VP1250IR

FFMP Full HD

IR

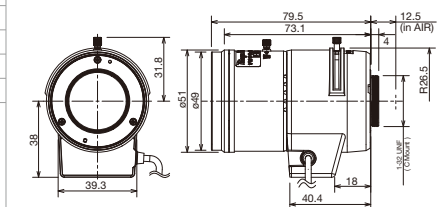
ASL

Imager Size 2/3 1/1.8 1/2 1/3

5MP



Imager Size	1/1.8	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	12 - 50mm			P-Iris
Aperture Range	F/1.4 - Close	Operating Voltage		3 - 5V
Zoom Ratio	×4.1	Overall Length		84mm
Focus Range	1.0m - ∞	Weight		128g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/1.8W	34.0°×25.5°			
1/1.8T	8.5°×6.4°			
1/2W	29.9°×22.4°			
1/2T	7.5°×5.6°			
1/3W	22.4°×16.8°			
1/3T	5.6°×4.2°			



M118VP413IRCS

FFMP Full HD

IR

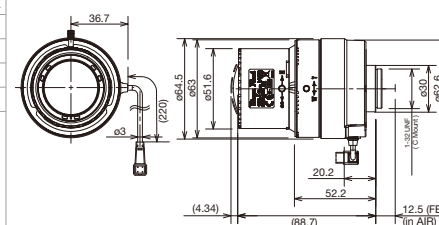
ASL

Imager Size 2/3 1/1.8 1/2 1/3

5MP



Imager Size	1/1.8	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	4.0 - 13mm			P-Iris
Aperture Range	F/1.5 - Close	Operating Voltage		3 - 5V
Zoom Ratio	×3.2	Overall Length		98mm
Focus Range	0.3m - ∞	Weight		172g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/1.8W	105.4°×77.6°			
1/1.8T	33.0°×24.8°			
1/2W	91.7°×67.9°			
1/2T	29.0°×21.8°			
1/3W	67.9°×50.6°			
1/3T	21.8°×16.3°			



M118VP413IR

FFMP Full HD

IR

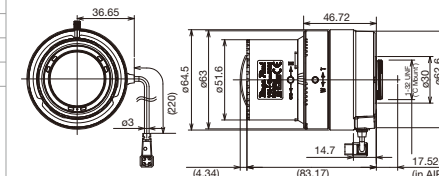
ASL

Imager Size 2/3 1/1.8 1/2 1/3

5MP



Imager Size	1/1.8	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Iris	Manual with Lock
Focal Length	4.0 - 13mm			P-Iris
Aperture Range	F/1.5 - Close	Operating Voltage		3 - 5V
Zoom Ratio	×3.2	Overall Length		92mm
Focus Range	0.3m - ∞	Weight		167g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/1.8W	105.4°×77.6°			
1/1.8T	33.0°×24.8°			
1/2W	91.7°×67.9°			
1/2T	29.0°×21.8°			
1/3W	67.9°×50.6°			
1/3T	21.8°×16.3°			



M13VP288IR

FFMP Full HD

IR

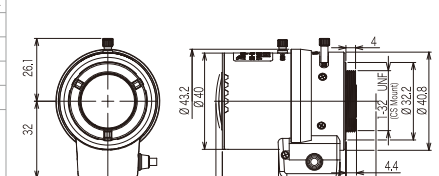
ASL

Imager Size 2/3 1/2.7 1/3 1/4

3MP



Imager Size	1/2.7	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	2.8 - 8mm			P-Iris
Aperture Range	F/1.2 - Close	Operating Voltage		3 - 5V
Zoom Ratio	×2.8	Overall Length		58mm
Focus Range	0.3m - ∞	Weight		68g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/2.7W	124.3°×65.2°			
1/2.7T	43.0°×24.2°			
1/3W	100.1°×72.9°			
1/3T	35.8°×26.8°			
1/4W	72.9°×53.9°			
1/4T	26.8°×20.1°			



M13VP850IR

FFMP Full HD

IR

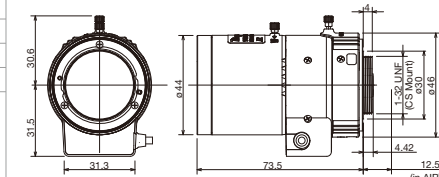
ASL

Imager Size 2/3 1/2.7 1/3 1/4

3MP



Imager Size	1/2.7	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Iris	Manual with Lock
Focal Length	8 - 50mm			P-Iris
Aperture Range	F/1.6 - Close	Operating Voltage		3 - 5V
Zoom Ratio	×6.2	Overall Length		78mm
Focus Range	2.0m - ∞	Weight		106g
Field of View Angle (Horizontal × Vertical)		Remarks		RoHS
1/2.7W	40.2°×22.6°			
1/2.7T	6.6°×3.8°			
1/3W	33.5°×25.1°			
1/3T	5.6°×4.2°			
1/4W	25.1°×18.8°			
1/4T	4.2°×3.2°			



Connecting the lens to a camera that does not support P-Iris may cause a malfunction. The lens cannot be connected to cameras that use DC auto iris or video auto iris lenses.

Mega-Pixel Vari-Focal Lenses

Manual Iris

M13VM246

FFMP

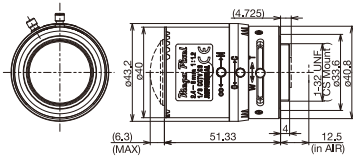
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	2.4 - 6mm		Iris	Manual with Lock
Aperture Range	F/1.2 - close	Overall Length		62mm
Zoom Ratio	×2.5	Weight		65g
Focus Range	0.3m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 111.3°×83.5° 1/3 T 47.1°×35.4° 1/4 W 83.5°×62.6° 1/4 T 35.4°×26.6°	Remarks		RoHs



M13VM308

FFMP

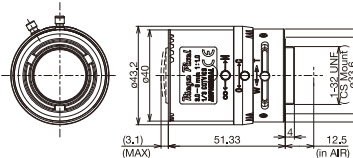
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	3.0 - 8mm		Iris	Manual with Lock
Aperture Range	F/1.0 - Close	Overall Length		58mm
Zoom Ratio	×2.6	Weight		65g
Focus Range	0.3m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 92.5°×68.2° 1/3 T 35.4°×26.5° 1/4 W 68.2°×50.6° 1/4 T 26.5°×19.9°	Remarks		RoHs



M13VM550

FFMP

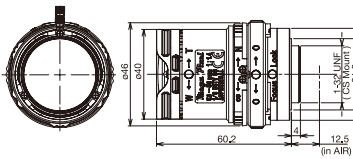
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	5 - 50mm		Iris	Manual with Lock
Aperture Range	F/1.4 - Close	Overall Length		64mm
Zoom Ratio	×10	Weight		64g
Focus Range	1m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 53.8°×40.3° 1/3 T 5.5°×4.2° 1/4 W 40.3°×30.2° 1/4 T 4.2°×3.1°	Remarks		RoHs



M12VM412

FFMP

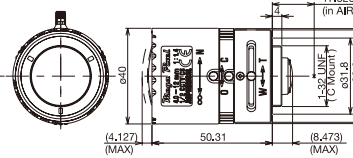
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Operation	Zoom	Manual with Lock
Focal Length	4.0 - 12mm		Iris	Manual with Lock
Aperture Range	F/1.4 - Close	Overall Length		63mm
Zoom Ratio	×3	Weight		58g
Focus Range	0.3m - ∞			
Field of View Angle (Horizontal × Vertical)	1/2 W 93.9°×68.8° 1/2 T 31.4°×23.6° 1/3 W 68.8°×51.0° 1/3 T 23.6°×17.7°	Remarks		RoHs



DC Auto Iris

M13VG246

FFMP

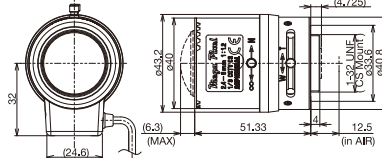
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	2.4 - 6mm		Iris	DC Auto Iris
Aperture Range	F/1.2 - 360	Operating Voltage		Open 4.0V Close 0.7V
Zoom Ratio	×2.5	Overall Length		62mm
Focus Range	0.3m - ∞	Weight		75g
Field of View Angle (Horizontal × Vertical)	1/3 W 111.3°×83.5° 1/3 T 47.1°×35.4° 1/4 W 83.5°×62.6° 1/4 T 35.4°×26.6°	Remarks		RoHs



M13VG308

FFMP

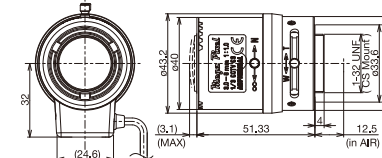
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	3.0 - 8mm		Iris	DC Auto Iris
Aperture Range	F/1.0 - 360	Operating Voltage		Open 4.0V Close 0.7V
Zoom Ratio	×2.6	Overall Length		58mm
Focus Range	0.3m - ∞	Weight		75g
Field of View Angle (Horizontal × Vertical)	1/3 W 92.5°×68.2° 1/3 T 35.4°×26.5° 1/4 W 68.2°×50.6° 1/4 T 26.5°×19.9°	Remarks		RoHs



M13VG550

FFMP

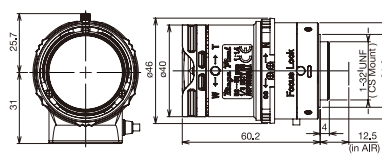
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Operation	Zoom	Manual with Lock
Focal Length	5 - 50mm		Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 4.0V Close 0.7V
Zoom Ratio	×10	Overall Length		64mm
Focus Range	1m - ∞	Weight		77g
Field of View Angle (Horizontal × Vertical)	1/3 W 53.8°×40.3° 1/3 T 5.5°×4.2° 1/4 W 40.3°×30.2° 1/4 T 4.2°×3.1°	Remarks		RoHs



M12VG412

FFMP

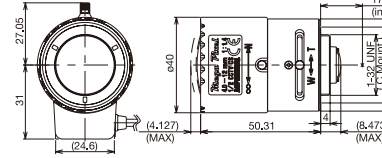
HD

ASL

Imager Size 2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Operation	Zoom	Manual with Lock
Focal Length	4.0 - 12mm		Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 3.0V Close 0.5V
Zoom Ratio	×3	Overall Length		63mm
Focus Range	0.3m - ∞	Weight		69g
Field of View Angle (Horizontal × Vertical)	1/2 W 93.9°×68.8° 1/2 T 31.4°×23.6° 1/3 W 68.8°×51.0° 1/3 T 23.6°×17.7°	Remarks		RoHs



Vari-Focal Lenses Day / Night

Manual Iris

13VM308ASIRII

SD

IR

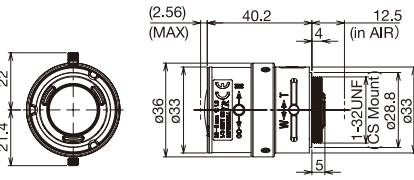
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	3.0 - 8mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.0 - Close	Overall Length		47mm
Zoom Ratio	×2.6	Weight		38g
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 92.5°×68.0° 1/3 T 35.7°×26.8° 1/4 W 68.0°×50.4° 1/4 T 26.8°×20.1°	Remarks		RoHs



13VM1040ASIR

SD

IR

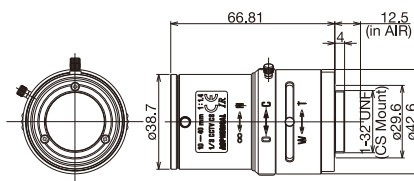
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	10 - 40mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.4 - Close	Overall Length		71mm
Zoom Ratio	×4	Weight		80g
Focus Range	0.5m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 27.6°×20.4° 1/3 T 7.0°×5.3° 1/4 W 20.4°×15.2° 1/4 T 5.2°×3.9°	Remarks		RoHs



12VM412ASIR

SD

IR

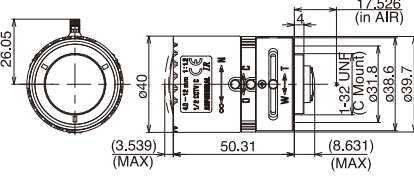
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Zoom	Manual with Lock
Focal Length	4.0 - 12mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.2 - Close	Overall Length		62mm
Zoom Ratio	×3	Weight		58g
Focus Range	0.3m - ∞			
Field of View Angle (Horizontal × Vertical)	1/2 W 93.7°×68.9° 1/2 T 31.2°×23.4° 1/3 W 68.9°×51.1° 1/3 T 23.4°×17.5°	Remarks		RoHs



12VM1040ASIR

SD

IR

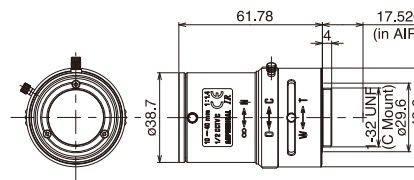
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Zoom	Manual with Lock
Focal Length	10 - 40mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.4 - Close	Overall Length		66mm
Zoom Ratio	×4	Weight		77g
Focus Range	0.5m - ∞			
Field of View Angle (Horizontal × Vertical)	1/2 W 37.5°×27.6° 1/2 T 9.3°×7.0° 1/3 W 27.6°×20.4° 1/3 T 7.0°×5.3°	Remarks		RoHs



DC Auto Iris

13VG2811ASIR

SD

IR

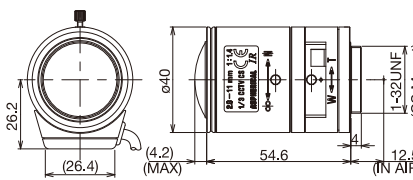
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	2.8 - 11mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 4.0V Close 0.5V
Zoom Ratio	×3.9	Overall Length		63mm
Focus Range	0.3m - ∞	Weight		79g
Field of View Angle (Horizontal × Vertical)	1/3 W 97.4°×72.4° 1/3 T 26.2°×19.7° 1/4 W 72.4°×54.0° 1/4 T 19.7°×14.7°	Remarks		RoHs



13VG308ASIRII

SD

IR

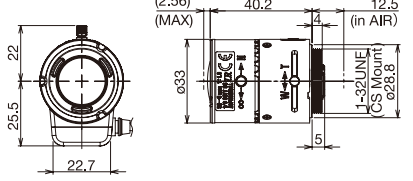
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	3.0 - 8mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.0 - 360	Operating Voltage		Open 3.0V Close 0.7V
Zoom Ratio	×2.6	Overall Length		48mm
Focus Range	0.2m - ∞	Weight		45g
Field of View Angle (Horizontal × Vertical)	1/3 W 92.5°×68.0° 1/3 T 35.7°×26.8° 1/4 W 68.0°×50.4° 1/4 T 26.8°×20.1°	Remarks		RoHs



13VG1040ASIR

SD

IR

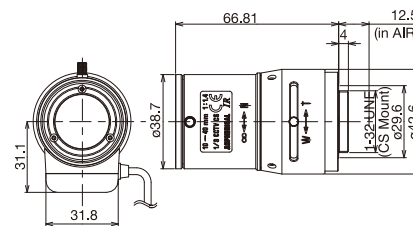
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	10 - 40mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 3.0V Close 0.5V
Zoom Ratio	×4	Overall Length		71mm
Focus Range	0.5m - ∞	Weight		89g
Field of View Angle (Horizontal × Vertical)	1/3 W 27.6°×20.4° 1/3 T 7.0°×5.3° 1/4 W 20.4°×15.2° 1/4 T 5.2°×3.9°	Remarks		RoHs



12VG412ASIR

SD

IR

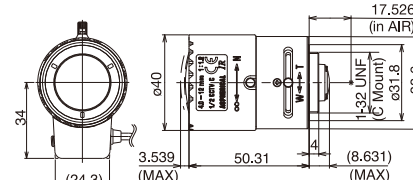
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Zoom	Manual with Lock
Focal Length	4.0 - 12mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.2 - 360	Operating Voltage		Open 3.0V Close 0.5V
Zoom Ratio	×3	Overall Length		62mm
Focus Range	0.3m - ∞	Weight		68g
Field of View Angle (Horizontal × Vertical)	1/2 W 93.7°×68.9° 1/2 T 31.2°×23.4° 1/3 W 68.9°×51.1° 1/3 T 23.4°×17.5°	Remarks		RoHs



12VG1040ASIR

SD

IR

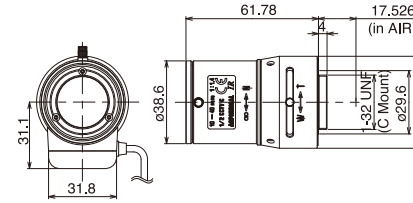
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/2	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Zoom	Manual with Lock
Focal Length	10 - 40mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage		Open 3.0V Close 0.5V
Zoom Ratio	×4	Overall Length		66mm
Focus Range	0.5m - ∞	Weight		87g
Field of View Angle (Horizontal × Vertical)	1/2 W 37.5°×27.6° 1/2 T 9.3°×7.0° 1/3 W 27.6°×20.4° 1/3 T 7.0°×5.3°	Remarks		RoHs



Vari-Focal Lenses

Manual Iris

13VM308AS

SD

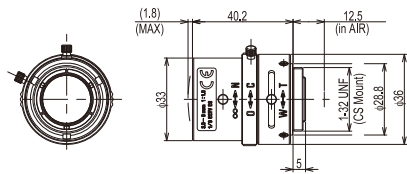
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	3.0 - 8mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.0 - Close	Overall Length	47mm	
Zoom Ratio	×2.6	Weight	39g	
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 91.0°×66.6° 1/3 T 35.9°×26.9° 1/4 W 66.6°×49.3° 1/4 T 26.9°×20.1°	Remarks	RoHs	



13VM550ASII

SD

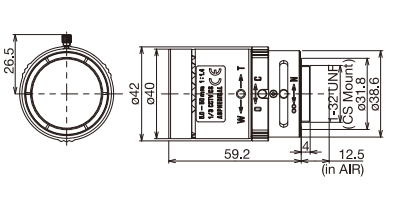
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	5 - 50mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.4 - Close	Overall Length	63mm	
Zoom Ratio	×10	Weight	75g	
Focus Range	1.0m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 53.6°×40.3° 1/3 T 5.6°×4.2° 1/4 W 40.3°×30.1° 1/4 T 4.2°×3.1°	Remarks	RoHs	



13VM20100AS

SD

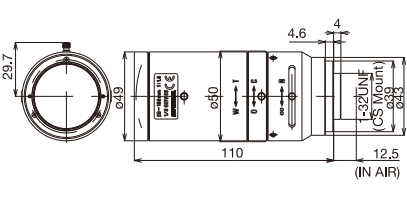
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	20 - 100mm	Iris	Iris	Manual with Lock
Aperture Range	F/1.6 - Close	Overall Length	114mm	
Zoom Ratio	×5	Weight	148g	
Focus Range	1.0m - ∞			
Field of View Angle (Horizontal × Vertical)	1/3 W 13.6°×10.2° 1/3 T 2.8°×2.1° 1/4 W 10.2°×7.6° 1/4 T 2.1°×1.6°	Remarks	RoHs	



DC Auto Iris

13VG2812ASII

SD

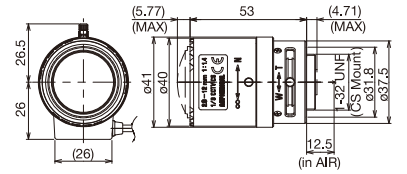
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	2.8 - 12mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage	Open 3.3V Close 0.7V	
Zoom Ratio	×4.2	Overall Length	64mm	
Focus Range	0.3m - ∞	Weight	71g	
Field of View Angle (Horizontal × Vertical)	1/3 W 97.4°×72.5° 1/3 T 24.1°×18.1° 1/4 W 72.5°×54.1° 1/4 T 18.1°×13.6°	Remarks	RoHs	



13VG308AS

SD

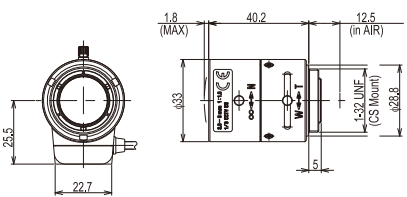
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	3.0 - 8mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.0 - 360	Operating Voltage	Open 4.0V Close 0.7V	
Zoom Ratio	×2.6	Overall Length	47mm	
Focus Range	0.2m - ∞	Weight	46g	
Field of View Angle (Horizontal × Vertical)	1/3 W 91.0°×66.6° 1/3 T 35.9°×26.9° 1/4 W 66.6°×49.3° 1/4 T 26.9°×20.1°	Remarks	RoHs	



13VG550ASII

SD

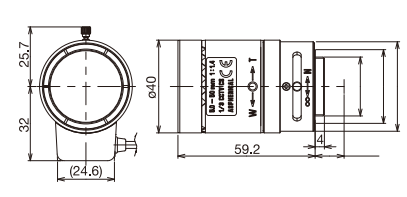
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	5 - 50mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.4 - 360	Operating Voltage	Open 4.0V Close 0.7V	
Zoom Ratio	×10	Overall Length	63mm	
Focus Range	1.0m - ∞	Weight	84g	
Field of View Angle (Horizontal × Vertical)	1/3 W 53.6°×40.3° 1/3 T 5.6°×4.2° 1/4 W 40.3°×30.1° 1/4 T 4.2°×3.1°	Remarks	RoHs	



13VG20100AS

SD

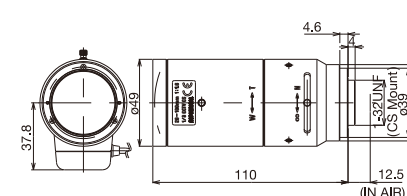
ASL

Imager Size

2/3 1/2 1/3 1/4



Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS	Zoom	Zoom	Manual with Lock
Focal Length	20 - 100mm	Iris	Iris	DC Auto Iris
Aperture Range	F/1.6 - 360	Operating Voltage	Open 4.0V Close 0.5V	
Zoom Ratio	×5	Overall Length	114mm	
Focus Range	1.0m - ∞	Weight	156g	
Field of View Angle (Horizontal × Vertical)	1/3 W 13.6°×10.2° 1/3 T 2.8°×2.1° 1/4 W 10.2°×7.6° 1/4 T 2.1°×1.6°	Remarks	RoHs	



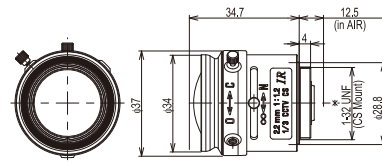
Fixed-Focal Lenses Day / Night

Manual Iris

13FM22IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

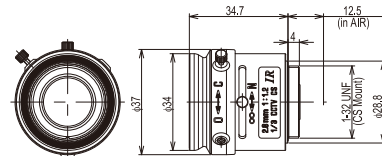
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	Manual with Lock
Focal Length	2.2mm	Overall Length		42mm
Aperture Range	F/1.2 - Close	Weight		41g
Focus Range	0.1m - ∞			
Field of View Angle (Horizontal° Vertical)	1/3 118.6°×90.0° 1/4 90.0°×67.9°	Remarks		RoHS



13FM28IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

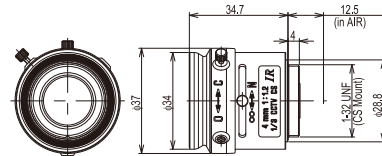
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	Manual with Lock
Focal Length	2.8mm	Overall Length		39mm
Aperture Range	F/1.2 - Close	Weight		36g
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal° Vertical)	1/3 93.2°×70.7° 1/4 70.7°×53.4°	Remarks		RoHS



13FM04IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

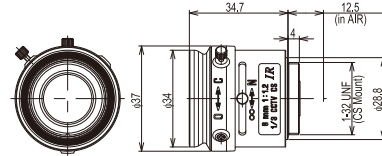
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	Manual with Lock
Focal Length	4mm	Overall Length		39mm
Aperture Range	F/1.2 - Close	Weight		33g
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal° Vertical)	1/3 65.6°×49.7° 1/4 49.7°×37.4°	Remarks		RoHS



13FM06IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

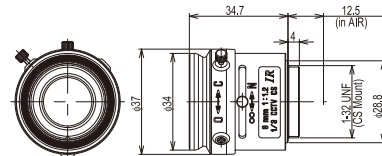
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	Manual with Lock
Focal Length	6mm	Overall Length		39mm
Aperture Range	F/1.2 - Close	Weight		30g
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal° Vertical)	1/3 46.5°×34.6° 1/4 34.6°×25.9°	Remarks		RoHS



13FM08IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	Manual with Lock
Focal Length	8mm	Overall Length		39mm
Aperture Range	F/1.2 - Close	Weight		35g
Focus Range	0.2m - ∞			
Field of View Angle (Horizontal° Vertical)	1/3 34.5°×25.7° 1/4 25.7°×19.2°	Remarks		RoHS

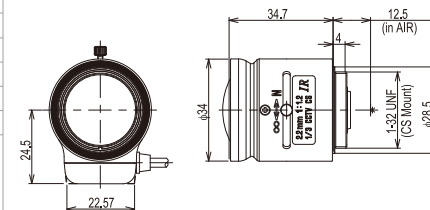


DC Auto Iris

13FG22IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

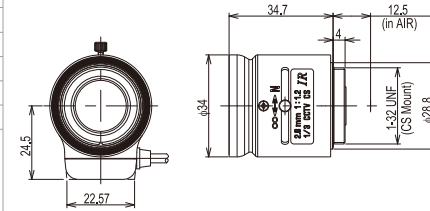
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	DC Auto Iris
Focal Length	2.2mm	Operating Voltage		Open 2.5V Close 0.5V
Aperture Range	F/1.2 - 360	Overall Length		42mm
Focus Range	0.1m - ∞	Weight		49g
Field of View Angle (Horizontal° Vertical)	1/3 118.6°×90.0° 1/4 90.0°×67.9°	Remarks		RoHS



13FG28IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

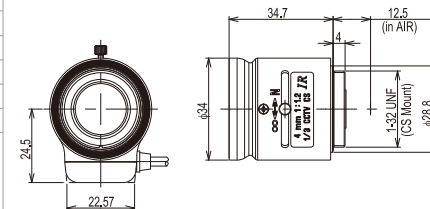
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	DC Auto Iris
Focal Length	2.8mm	Operating Voltage		Open 2.5V Close 0.5V
Aperture Range	F/1.2 - 360	Overall Length		39mm
Focus Range	0.2m - ∞	Weight		44g
Field of View Angle (Horizontal° Vertical)	1/3 93.2°×70.7° 1/4 70.7°×53.4°	Remarks		RoHS



13FG04IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

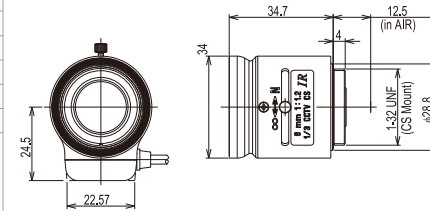
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	DC Auto Iris
Focal Length	4mm	Operating Voltage		Open 2.5V Close 0.5V
Aperture Range	F/1.2 - 360	Overall Length		39mm
Focus Range	0.2m - ∞	Weight		40g
Field of View Angle (Horizontal° Vertical)	1/3 65.6°×49.7° 1/4 49.7°×37.4°	Remarks		RoHS



13FG06IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

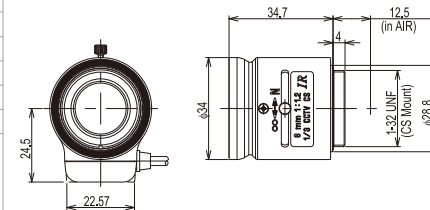
Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	DC Auto Iris
Focal Length	6mm	Operating Voltage		Open 2.5V Close 0.5V
Aperture Range	F/1.2 - 360	Overall Length		39mm
Focus Range	0.2m - ∞	Weight		38g
Field of View Angle (Horizontal° Vertical)	1/3 46.5°×34.6° 1/4 34.6°×25.9°	Remarks		RoHS



13FG08IR

SD ☒ IR ☐ Imager Size 2/3 1/2 1/3 1/4

Imager Size	1/3	Operation	Focus	Manual with Lock
Mount Type	CS		Iris	DC Auto Iris
Focal Length	8mm	Operating Voltage		Open 2.5V Close 0.5V
Aperture Range	F/1.2 - 360	Overall Length		39mm
Focus Range	0.2m - ∞	Weight		43g
Field of View Angle (Horizontal° Vertical)	1/3 34.5°×25.7° 1/4 25.7°×19.2°	Remarks		RoHS



Mega-Pixel Fixed-Focal Lens (for ITS*)

* ITS=Intelligent Transport Systems

M118FM35-II

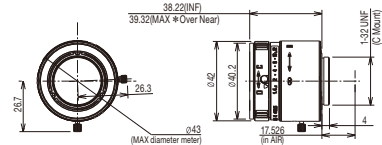
FFMP

3.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	1/1.8	Operation	Focus	Manual with Lock
Mount Type	C	Zoom	Manual with Lock	
Focal Length	35mm	Filter Size	M30.5 P=0.5mm	
Aperture Range	F/1.4 - 22	Overall Length	43mm	
Focus Range	2m - ∞	Weight	82g	
Field of View Angle (Horizontal × Vertical)	1/1.8 11.94°×8.95° 1/2 10.5°×7.87° 1/3 7.87°×5.9°	Remarks	RoHS	



Zoom Lenses Day / Night

DC Auto Iris

M118ZG36X10IRP

FFMP

Full HD

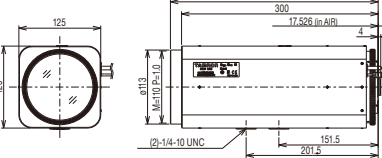
IR

Imager Size 2/3 1/1.8 1/2 1/3

2MP



Imager Size	1/1.8	Operation	Focus	Motorized
Mount Type	C	Zoom	Motorized	
Focal Length	10 - 360mm	Iris	DC Auto Iris	
Aperture Range	F/1.6 - 16	Operating Voltage	Open 4.0V (MAX 6.0V)	
Zoom Ratio	×36	Close 0V		
Focus Range	6.0m - ∞	Overall Length	321mm	
Weight	5kg	Remarks	RoHS	
Field of View Angle (Horizontal × Vertical)	1/1.8 W 39.6°×29.7° 1/1.8 T 1.15°×0.84° 1/2 W 35.5°×27.0° 1/2 T 1.02°×0.76° 1/3 W 27.0°×20.4° 1/3 T 0.76°×0.57°			



M118ZG36X10IRPF

FFMP

Full HD

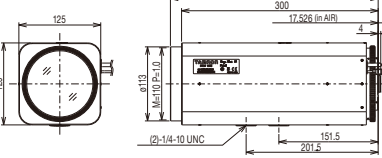
IR

Imager Size 2/3 1/1.8 1/2 1/3

2MP



Imager Size	1/1.8	Operation	Focus	Motorized
Mount Type	C	Zoom	Motorized	
Focal Length	10 - 360mm	Iris	DC Auto Iris	
Aperture Range	F/1.6 - 16	Operating Voltage	Open 4.0V (MAX 6.0V)	
Zoom Ratio	×36	Close 0V		
Focus Range	6.0m - ∞	Overall Length	321mm	
Weight	5kg	Remarks	RoHS	
Field of View Angle (Horizontal × Vertical)	1/1.8 W 39.6°×29.7° 1/1.8 T 1.15°×0.84° 1/2 W 35.5°×27.0° 1/2 T 1.02°×0.76° 1/3 W 27.0°×20.4° 1/3 T 0.76°×0.57°			



M12ZG34X15IRPF

FFMP

Full HD

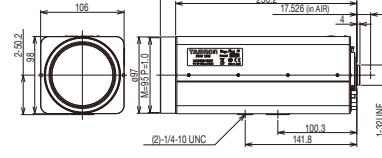
IR

Imager Size 2/3 1/1.8 1/2 1/3

2MP



Imager Size	1/2	Operation	Focus	Motorized
Mount Type	C	Zoom	Motorized	
Focal Length	15 - 510mm	Iris	DC Auto Iris	
Aperture Range	F/3.0 - 6.4	Operating Voltage	Open 5.0V (MAX 6.0V)	
Zoom Ratio	×34	Close 0V		
Focus Range	4.0m - ∞	Overall Length	254mm	
Weight	2.3kg	Remarks	RoHS	
Field of View Angle (Horizontal × Vertical)	1/2 W 24.1°×18.2° 1/2 T 0.72°×0.54° 1/3 W 18.2°×13.7° 1/3 T 0.54°×0.40°			



New

Full 5-mega-pixel resolution for 1/1.2" large imagers
Industry's most compact solution employing
a largest-diameter 29mm lens

Full 5-mega-pixel resolution optimized for both 1/1.2" and 2/3" imagers
Industry's most compact* body and leading-edge
optical performance employing a largest diameter 29mm lens.
Newly released are three models to address the requirement of
short-distance high-resolution for machine vision; an unrivalled
advantage of choice to empower production and inspection equipment.
The product portfolio will consist of a total of 7 models,
of which four additional models will be announced shortly.

*In machine-vision lenses that are compatible with a 1/1.2" imager and 5-mega-pixel resolution
(survey by Tamron, effective as of November, 2016)

Compatible with
IMX174/IMX249 (1/1.2" 2.4-mega-pixel), IMX250/IMX264 (2/3" 5-mega-pixel)



Model:M112FM12
1/1.2" 12mm F/2.0

Model:M112FM16
1/1.2" 16mm F/2.0

Model:M112FM25
1/1.2" 25mm F/1.8

Mega-Pixel Machine Vision Lenses

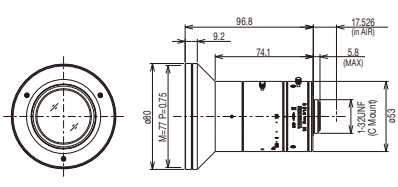
M111FM08

FFMP

3.1μm

Imager Size 1.1/1 1 2/3

	Imager Size		1.1	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		8mm	Filter Size		M77 P=0.75mm
	Aperture Range		F/1.8 - 22	Overall Length		103mm
	Focus Range		0.3m - ∞	Weight		490g
	Field of View Angle (Horizontal - Vertical)	1.1	(1:1)	76.0°×76.0°	Remarks	
		(4:3)	83.5°×66.7°			
1		(1:1)	71.2°×71.2°			
		(4:3)	78.4°×62.2°			
2/3			57.8°×44.9°			



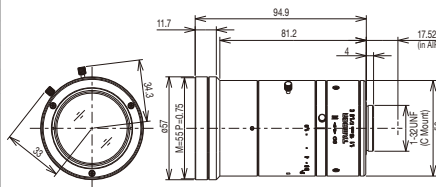
M111FM16

FFMP

3.1μm

Imager Size 1.1/1 1 2/3

	Imager Size		1.1	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		16mm	Filter Size		M55 P=0.75mm
	Aperture Range		F/1.8 - 22	Overall Length		99mm
	Focus Range		0.3m - ∞	Weight		385g
	Field of View Angle (Horizontal - Vertical)	1.1	(1:1)	42.6°×42.6°	Remarks	
		(4:3)	47.7°×36.5°			
1		(1:1)	39.4°×39.4°			
		(4:3)	44.2°×33.7°			
2/3			31.0°×23.4°			



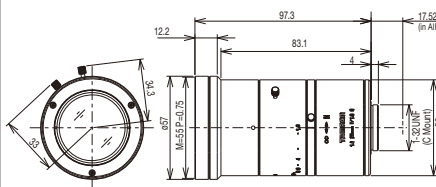
M111FM25

FFMP

3.1μm

Imager Size 1.1/1 1 2/3

	Imager Size		1.1	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		25mm	Filter Size		M55 P=0.75mm
	Aperture Range		F/1.8 - 22	Overall Length		102mm
	Focus Range		0.3m - ∞	Weight		415g
	Field of View Angle (Horizontal - Vertical)	1.1	(1:1)	27.6°×27.6°	Remarks	
		(4:3)	31.1°×23.6°			
1		(1:1)	25.5°×25.5°			
		(4:3)	28.7°×21.7°			
2/3			20.0°×15.0°			



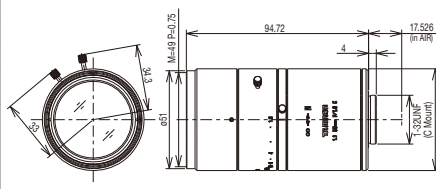
M111FM50

FFMP

3.1μm

Imager Size 1.1/1 1 2/3

	Imager Size		1.1	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		50mm	Filter Size		M49 P=0.75mm
	Aperture Range		F/1.8 - 22	Overall Length		99mm
	Focus Range		0.4m - ∞	Weight		415g
	Field of View Angle (Horizontal - Vertical)	1.1	(1:1)	14.1°×14.1°	Remarks	
		(4:3)	15.9°×11.9°			
1		(1:1)	12.9°×12.9°			
		(4:3)	14.6°×11.0°			
2/3			10.1°×7.6°			



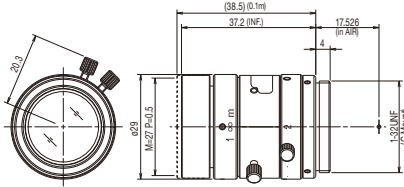
M112FM12

FFMP

5.86μm

Imager Size 1.1/1 1/1.2 2/3

	Imager Size		1/1.2	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		12mm	Filter Size		M27 P=0.5mm
	Aperture Range		F/2.0 - 16	Overall Length		43mm
	Focus Range		0.1m - ∞	Weight		64g
	Field of View Angle (Horizontal - Vertical)	1/1.2	(4:3)	49.2°×37.6°	Remarks	
		(16:9)	53.2°×30.6°			
2/3		(4:3)	40.9°×31.1°			
		(16:9)	44.4°×25.5°			



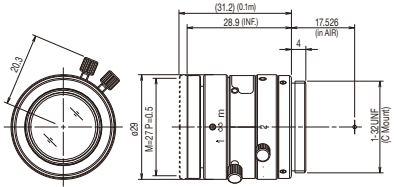
M112FM16

FFMP

5.86μm

Imager Size 1.1/1 1/1.2 2/3

	Imager Size		1/1.2	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		16mm	Filter Size		M27 P=0.5mm
	Aperture Range		F/2.0 - 16	Overall Length		36mm
	Focus Range		0.1m - ∞	Weight		51g
	Field of View Angle (Horizontal - Vertical)	1/1.2	(4:3)	37.4°×28.4°	Remarks	
		(16:9)	40.5°×22.3°			
2/3		(4:3)	31.0°×23.4°			
		(16:9)	33.7°×19.2°			



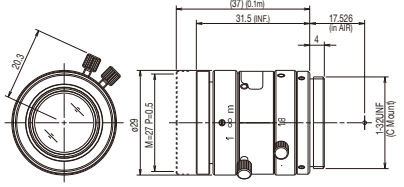
M112FM25

FFMP

5.86μm

Imager Size 1.1/1 1/1.2 2/3

	Imager Size		1/1.2	Operation	Focus	Manual with Lock
	Mount Type		C		Iris	Manual with Lock
	Focal Length		25mm	Filter Size		M27 P=0.5mm
	Aperture Range		F/1.8 - 16	Overall Length		41mm
	Focus Range		0.1m - ∞	Weight		54g
	Field of View Angle (Horizontal - Vertical)	1/1.2	(4:3)	24.1°×18.2°	Remarks	
		(16:9)	26.2°×15.0°			
2/3		(4:3)	19.9°×15.0°			
		(16:9)	21.7°×12.3°			



Mega-Pixel Machine Vision Lenses

M23FM06

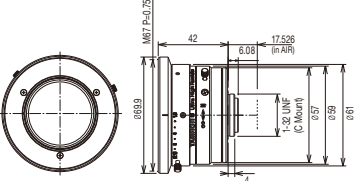
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	6mm	Filter Size		M67 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		48mm
Focus Range	0.1m - ∞	Weight		240g
Field of View Angle (Horizontal × Vertical)	2/3 74.3°×58.4° 1/2 56.8°×43.6° 1/3 43.6°×33.1°	Remarks		RoHs



M23FM08

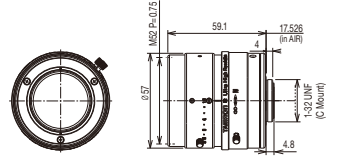
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	8mm	Filter Size		M52 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		64mm
Focus Range	0.1m - ∞	Weight		280g
Field of View Angle (Horizontal × Vertical)	2/3 58.5°×45.1° 1/2 43.8°×33.3° 1/3 33.3°×25.2°	Remarks		RoHs



M23FM12

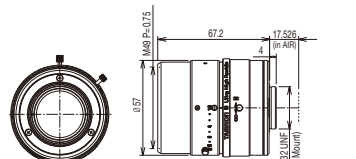
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	12mm	Filter Size		M49 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		71mm
Focus Range	0.1m - ∞	Weight		333g
Field of View Angle (Horizontal × Vertical)	2/3 40.5°×30.9° 1/2 30.0°×22.7° 1/3 22.7°×17.1°	Remarks		RoHs



M23FM16

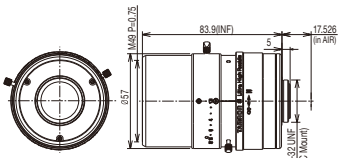
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	16mm	Filter Size		M49 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		89mm
Focus Range	0.1m - ∞	Weight		358g
Field of View Angle (Horizontal × Vertical)	2/3 30.1°×22.8° 1/2 22.1°×16.6° 1/3 16.6°×12.5°	Remarks		RoHs



M23FM25

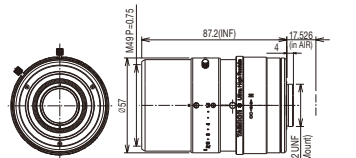
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	25mm	Filter Size		M49 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		91mm
Focus Range	0.1m - ∞	Weight		380g
Field of View Angle (Horizontal × Vertical)	2/3 20.0°×15.1° 1/2 14.6°×11.0° 1/3 11.0°×8.2°	Remarks		RoHs



M23FM35

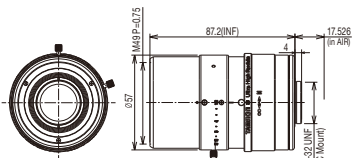
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	35mm	Filter Size		M49 P=0.75mm
Aperture Range	F/1.8 - 22	Overall Length		91mm
Focus Range	0.15m - ∞	Weight		388g
Field of View Angle (Horizontal × Vertical)	2/3 14.4°×10.8° 1/2 10.5°×7.8° 1/3 7.8°×5.9°	Remarks		RoHs



M23FM50

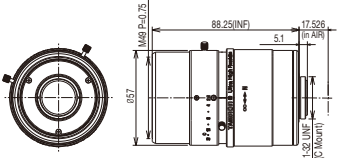
FFMP

2.5μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	50mm	Filter Size		M49 P=0.75mm
Aperture Range	F/2.8 - 32	Overall Length		93mm
Focus Range	0.15m - ∞	Weight		374g
Field of View Angle (Horizontal × Vertical)	2/3 10.1°×7.6° 1/2 7.3°×5.5° 1/3 5.5°×4.1°	Remarks		RoHs



23FM16SP

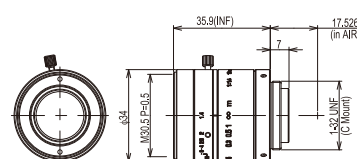
FFMP

4.0μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	16mm	Filter Size		M30.5 P=0.5mm
Aperture Range	F/1.4 - 22	Overall Length		43mm
Focus Range	0.15m - ∞	Weight		80g
Field of View Angle (Horizontal × Vertical)	2/3 30.9°×23.4° 1/2 22.7°×17.1° 1/3 17.1°×12.9°	Remarks		RoHs



23FM25SP

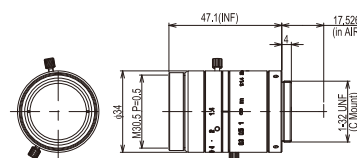
FFMP

4.0μm

Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	25mm	Filter Size		M30.5 P=0.5mm
Aperture Range	F/1.4 - 22	Overall Length		51mm
Focus Range	0.15m - ∞	Weight		103g
Field of View Angle (Horizontal × Vertical)	2/3 20.0°×15.1° 1/2 14.6°×11.0° 1/3 11.0°×8.2°	Remarks		RoHs



23FM50SP

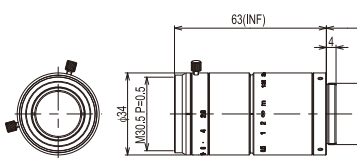
FFMP

4.0μm

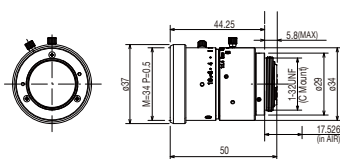
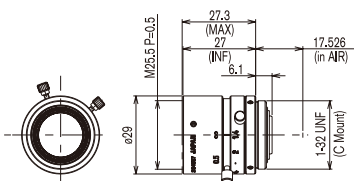
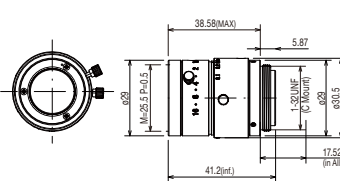
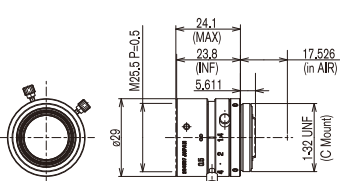
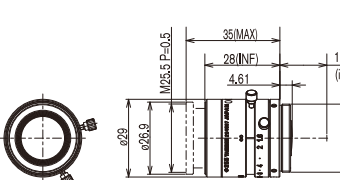
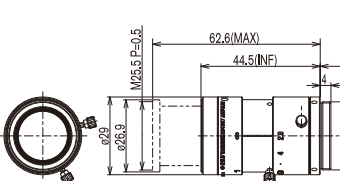
Imager Size 2/3 1/1.8 1/2 1/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	50mm	Filter Size		M30.5 P=0.5mm
Aperture Range	F/2.8 - 32	Overall Length		67mm
Focus Range	0.2m - ∞	Weight		117g
Field of View Angle (Horizontal × Vertical)	2/3 10.1°×7.6° 1/2 7.3°×5.5° 1/3 5.5°×4.1°	Remarks		RoHs



Mega-Pixel Machine Vision Lenses

M118FM06						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	6mm	Filter Size	M34 P=0.5mm					
	Aperture Range	F/1.4 - 16	Overall Length	50mm					
	Focus Range	0.1m - ∞	Weight	86g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 66.1°×50.8° 1/2 58.9°×44.9° 1/3 44.9°×34.0°	Remarks	RoHs					
M118FM08						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	8mm	Filter Size	M25.5 P=0.5mm					
	Aperture Range	F/1.4 - 16	Overall Length	33mm					
	Focus Range	0.1m - ∞	Weight	44g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 50.8°×38.6° 1/2 45.0°×34.0° 1/3 34.0°×25.6°	Remarks	RoHs					
M118FM12						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	12mm	Filter Size	M25.5 P=0.5mm					
	Aperture Range	F/1.4 - 16	Overall Length	45mm					
	Focus Range	0.1m - ∞	Weight	57g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 34.2°×25.8° 1/2 30.2°×22.7° 1/3 22.7°×17.1°	Remarks	RoHs					
M118FM16						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	16mm	Filter Size	M25.5 P=0.5mm					
	Aperture Range	F/1.4 - 16	Overall Length	30mm					
	Focus Range	0.1m - ∞	Weight	39g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 25.9°×19.5° 1/2 22.8°×17.1° 1/3 17.1°×12.9°	Remarks	RoHs					
M118FM25						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	25mm	Filter Size	M25.5 P=0.5mm					
	Aperture Range	F/1.6 - 16	Overall Length	40mm					
	Focus Range	0.1m - ∞	Weight	39g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 16.6°×12.5° 1/2 14.6°×11.0° 1/3 11.0°×8.2°	Remarks	RoHs					
M118FM50						FFMP	4.0μm	Imager Size 2/3 1/1.8 1/2 1/4	
	Imager Size	1/1.8	Operation	Focus	Manual with Lock				
	Mount Type	C		Iris	Manual with Lock				
	Focal Length	50mm	Filter Size	M25.5 P=0.5mm					
	Aperture Range	F/2.8 - 22	Overall Length	67mm					
	Focus Range	0.2m - ∞	Weight	52g					
	Field of View Angle (Horizontal° Vertical)	1/1.8 8.3°×6.2° 1/2 7.3°×5.5° 1/3 5.5°×4.1°	Remarks	RoHs					

Machine Vision Lenses

22HA

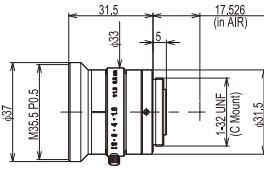
SD

Imager Size

2/31/1.81/21/4



Imager Size	2/3	Operation	Focus	-
Mount Type	C		Iris	Manual with Lock
Focal Length	6.5mm		Filter Size	M35.5 P=0.5mm
Aperture Range	F/1.8 - Close		Overall Length	37mm
Focus Range	1.5m - ∞		Weight	60g
Field of View Angle (Horizontal° Vertical)	2/3	Remarks	RoHs	
	1/2			
	1/3			



219HB

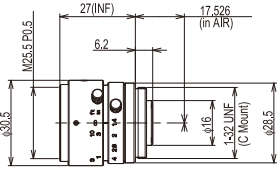
SD

Imager Size

2/31/1.81/21/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	8mm		Filter Size	M25.5 P=0.5mm
Aperture Range	F/1.4 - 16		Overall Length	33mm
Focus Range	0.26m - ∞		Weight	48g
Field of View Angle (Horizontal° Vertical)	2/3	Remarks	RoHs	
	1/2			
	1/3			



25HA

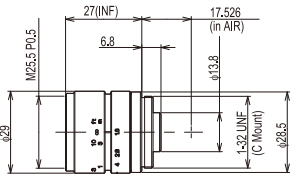
SD

Imager Size

2/31/1.81/21/4



Imager Size	2/3	Operation	Focus	Manual
Mount Type	C		Iris	Manual with Lock
Focal Length	12mm		Filter Size	M25.5 P=0.5mm
Aperture Range	F/1.8 - 16		Overall Length	34mm
Focus Range	0.26m - ∞		Weight	40g
Field of View Angle (Horizontal° Vertical)	2/3	Remarks	RoHs	
	1/2			
	1/3			



25HB

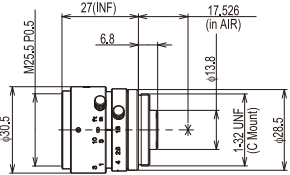
SD

Imager Size

2/31/1.81/21/4



Imager Size	2/3	Operation	Focus	Manual with Lock
Mount Type	C		Iris	Manual with Lock
Focal Length	12mm		Filter Size	M25.5 P=0.5mm
Aperture Range	F/1.8 - 16		Overall Length	34mm
Focus Range	0.26m - ∞		Weight	46g
Field of View Angle (Horizontal° Vertical)	2/3	Remarks	RoHs	
	1/2			
	1/3			



Machine Vision Lenses

17HD



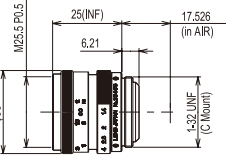
Imager Size	2/3
Mount Type	C
Focal Length	16mm
Aperture Range	F/1.4 - 16
Focus Range	0.29m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 30.9°×23.2° 1/2 22.5°×16.9° 1/3 16.9°×12.7°

Operation	Focus Iris	Manual
Filter Size	M25.5 P=0.5mm	
Overall Length	31mm	
Weight	50g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





17HF



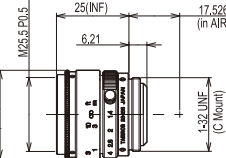
Imager Size	2/3
Mount Type	C
Focal Length	16mm
Aperture Range	F/1.4 - 16
Focus Range	0.29m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 30.9°×23.2° 1/2 22.5°×16.9° 1/3 16.9°×12.7°

Operation	Focus Iris	Manual with Lock
Filter Size	M25.5 P=0.5mm	
Overall Length	31mm	
Weight	48g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





20HA



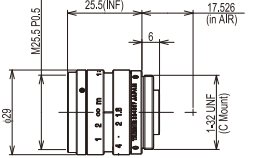
Imager Size	2/3
Mount Type	C
Focal Length	25mm
Aperture Range	F/1.6 - 16
Focus Range	0.21m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 20.0°×15.0° 1/2 14.6°×11.0° 1/3 11.0°×8.2°

Operation	Focus Iris	Manual
Filter Size	M25.5 P=0.5mm	
Overall Length	32mm	
Weight	37g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





20HC



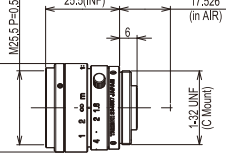
Imager Size	2/3
Mount Type	C
Focal Length	25mm
Aperture Range	F/1.6 - 16
Focus Range	0.21m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 20.0°×15.0° 1/2 14.6°×11.0° 1/3 11.0°×8.2°

Operation	Focus Iris	Manual with Lock
Filter Size	M25.5 P=0.5mm	
Overall Length	32mm	
Weight	40g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





35HB



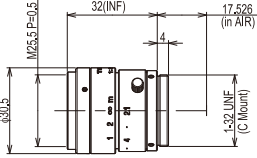
Imager Size	2/3
Mount Type	C
Focal Length	35mm
Aperture Range	F/2.1 - 22
Focus Range	0.3m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 14.3°×10.8° 1/2 10.4°×7.8° 1/3 7.8°×5.9°

Operation	Focus Iris	Manual with Lock
Filter Size	M25.5 P=0.5mm	
Overall Length	36mm	
Weight	44g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





21HA



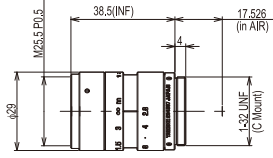
Imager Size	2/3
Mount Type	C
Focal Length	50mm
Aperture Range	F/2.8 - 22
Focus Range	0.44m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 10.0°×7.5° 1/2 7.3°×5.5° 1/3 5.5°×4.1°

Operation	Focus Iris	Manual
Filter Size	M25.5 P=0.5mm	
Overall Length	43mm	
Weight	50g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





21HC



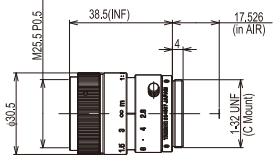
Imager Size	2/3
Mount Type	C
Focal Length	50mm
Aperture Range	F/2.8 - 22
Focus Range	0.44m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 10.0°×7.5° 1/2 7.3°×5.5° 1/3 5.5°×4.1°

Operation	Focus Iris	Manual with Lock
Filter Size	M25.5 P=0.5mm	
Overall Length	43mm	
Weight	52g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





1A1HB



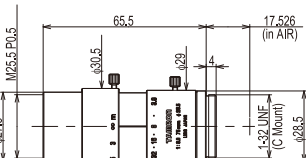
Imager Size	2/3
Mount Type	C
Focal Length	75mm
Aperture Range	F/3.9 - 32
Focus Range	0.5m - ∞
Field of View Angle (Horizontal° Vertical)	2/3 6.9°×5.2° 1/2 5.0°×3.5° 1/3 3.5°×2.5°

Operation	Focus Iris	Manual with Lock
Filter Size	M25.5 P=0.5mm	
Overall Length	70mm	
Weight	68g	

SD

Imager Size 2/3 1/1.8 1/2 1/4





Accessories

Special Accessories for Machine Vision Lenses

Extension Ring	MR-SET	7 Sets (0.5mm, 1mm, 2mm, 5mm, 10mm, 20mm, 40mm)
Filter for Protection	25.5-NO	Ø25.5mm
	30.5-NO	Ø30.5mm
	35.5-NO	Ø35.5mm
Polarizer Filter	25.5-PL	Ø25.5mm
	30.5-PL	Ø30.5mm
	35.5-PL	Ø35.5mm

Special Accessories for Security Lenses

C-CS Convert Adapter	C-CS Adapter
----------------------	--------------

Remarks

Imager Size	1.1" 1/1.2" 2/3" 1/1.8" 1/2" 1/3" 1/4"
-------------	---

- 1.1" lenses can also be used with 1.1", 1/1.2", 2/3", 1/1.8", 1/2", 1/2.5", 1/2.7", 1/2.8", 1/3" & 1/4" Imager cameras.
- 1/1.2" lenses can also be used with 2/3", 1/1.8", 1/2", 1/2.5", 1/2.7", 1/2.8", 1/3" & 1/4" Imager cameras.
- 2/3" lenses can also be used with 1/1.8", 1/2", 1/2.5", 1/2.7", 1/2.8", 1/3" & 1/4" Imager cameras.
- 1/1.8" lenses can also be used with 1/2", 1/2.5", 1/2.7", 1/2.8", 1/3" & 1/4" Imager cameras.
- 1/2" lenses can also be used with 1/2.5", 1/2.7", 1/2.8", 1/3" & 1/4" Imager cameras.
- 1/3" lenses can also be used with 1/4" Imager cameras.
- When you fit C-Mount lenses with CS-Mount cameras, please use the C-CS adapter.
- The "Field of View Angle" in the data sheets shows the data when the lens is used with a camera with the indicated imager size. When other cameras with different imager sizes are used, please refer to the following datum:

1.1" Lens	1/1.2" Camera	0.77× against the Specified Angle of View
	2/3" Camera	0.63× against the Specified Angle of View
	1/2" Camera	0.46× against the Specified Angle of View
	1/3" Camera	0.34× against the Specified Angle of View
	1/4" Camera	0.26× against the Specified Angle of View
1/1.2" Lens	2/3" Camera	0.82× against the Specified Angle of View
	1/2" Camera	0.6× against the Specified Angle of View
	1/3" Camera	0.45× against the Specified Angle of View
	1/4" Camera	0.34× against the Specified Angle of View

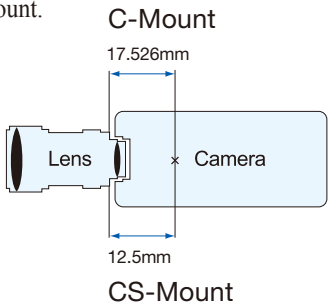
2/3" Lens	1/2" Camera	0.73× against the Specified Angle of View
	1/3" Camera	0.55× against the Specified Angle of View
	1/4" Camera	0.41× against the Specified Angle of View
1/1.8" Lens	1/2" Camera	0.89× against the Specified Angle of View
	1/3" Camera	0.67× against the Specified Angle of View
1/2" Lens	1/3" Camera	0.75× against the Specified Angle of View
	1/4" Camera	0.56× against the Specified Angle of View
1/3" Lens	1/4" Camera	0.75× against the Specified Angle of View

Terminology Explanation

Mount Type

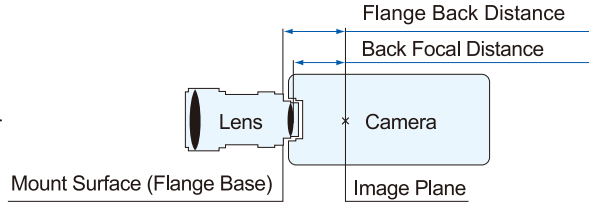
Correspond to the standard mount type of the camera which may be either C-Mount or CS-Mount. The characteristics are as follows.

Flange Back Distance	C-Mount	17.526mm
	CS-Mount	12.5mm



Flange Back Distance & Back Focal Distance

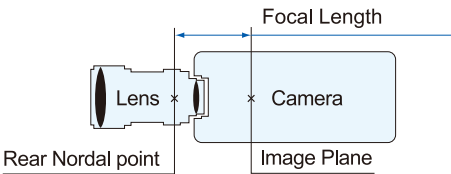
- Flange Back Distance: Distance between the mechanical rear end of the mount surface and the image plane.
- Back Focal Distance: Distance between the physical end of the lens element (side closest to the camera) and the image plane.



Focal Length

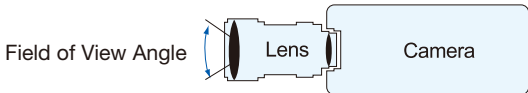
Distance between the rear nodal point and the focal point (Image Plane) on the optical axis.

*The smaller number, the wider the field of view angle.
The bigger number, the narrower the field of view angle.



Field of View Angle

Angle of the captured image as it relates to the given image size. Field-of-view angle will vary, even when using the same lens, depending on the imager size of the camera in use. Details can be found in this catalog.



Aperture Range

The F-number is used to indicate the speed of the lens from full open aperture to minimum aperture. The F-number is calculated using the following formula:

$$F/No. = \frac{\text{Focal Length}}{\text{Effective Diameter of the lens}}$$

*Smaller F-numbers equal faster/brighter lenses.

Focusing Range

Indicate the shooting range from the Minimum Object Distance (MOD) to infinity. Generally, the range is measured from the physical end of the lens to the object.

About the Tamron IP / CCTV Lens WEB SITE <http://www.tamron.biz/>

- Latest news concerning new IP/CCTV lens models and trading shows.
- Download the catalog (PDF), specification sheets (PDF).
- Get technical information and news about discontinued products.