

# Mega Pixel

## Mega-Pixel-Compatible Vari-Focal Lens Series



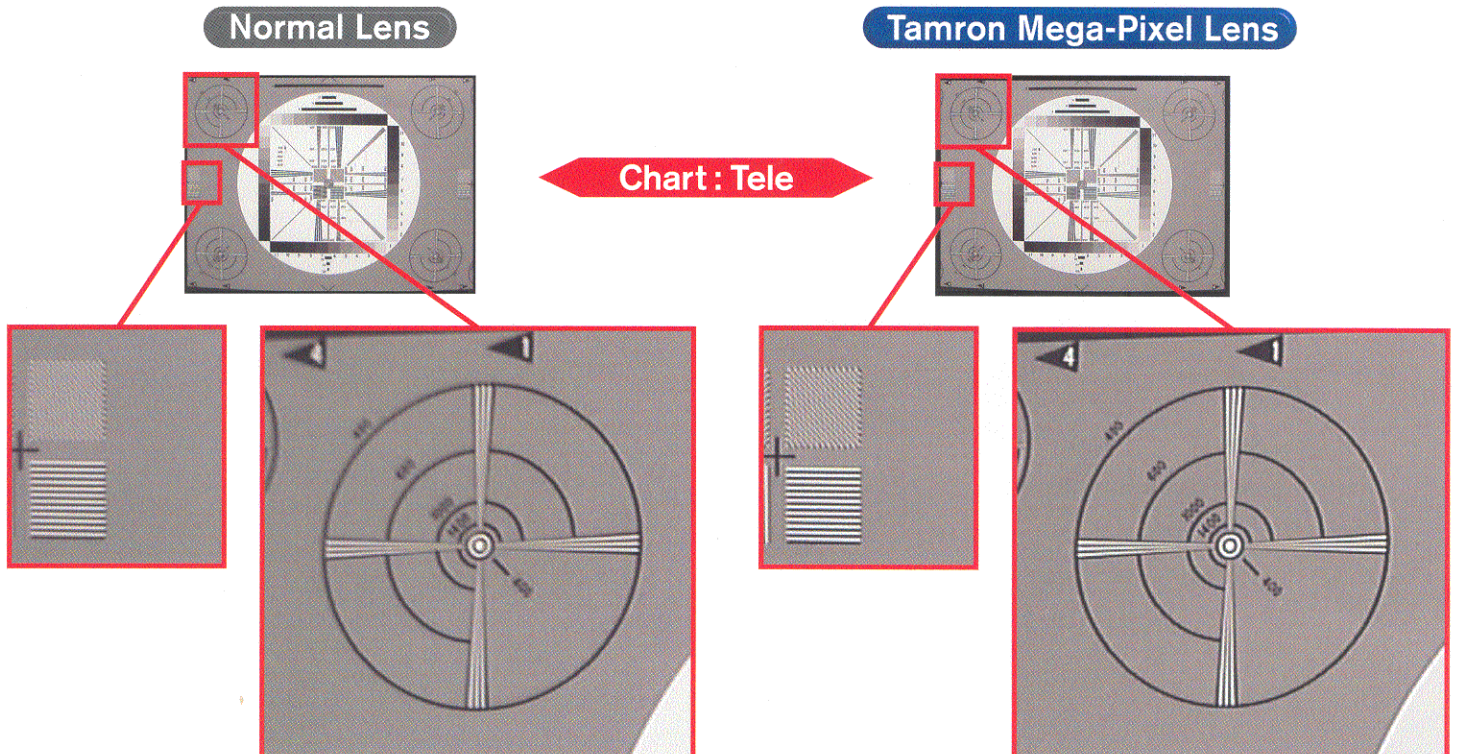
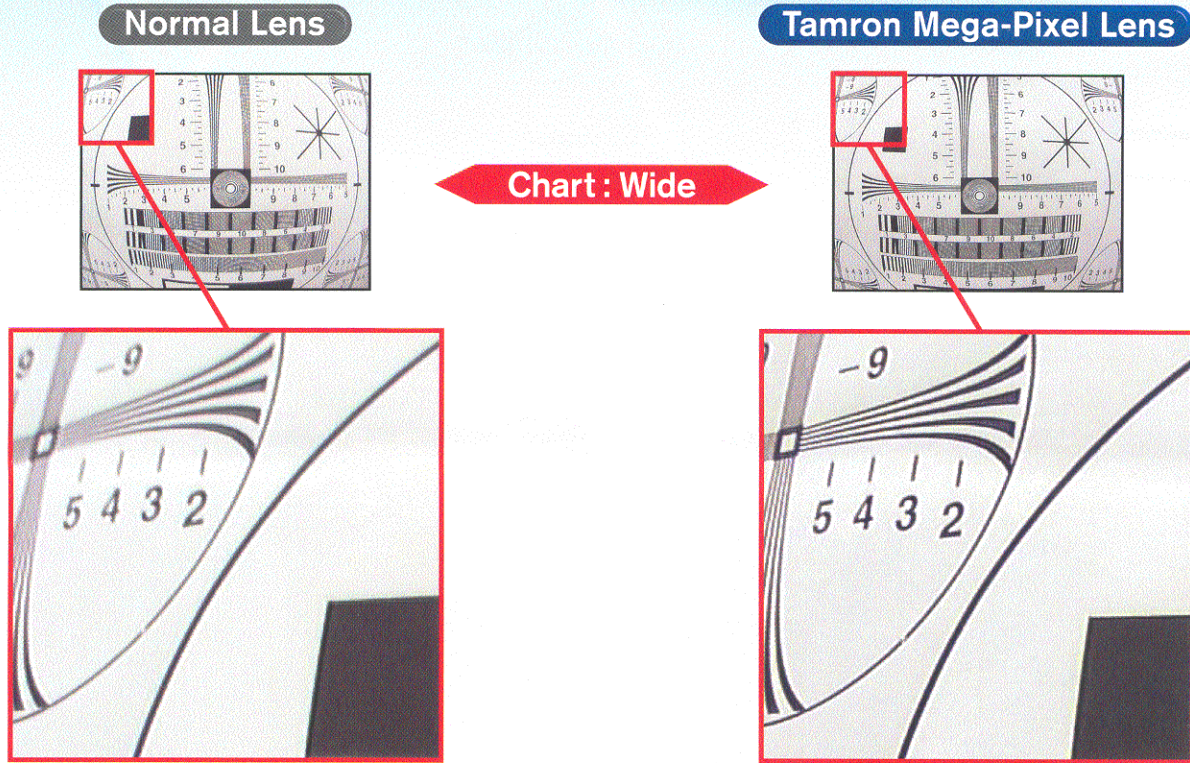
Ultra High Definition Vari-Focal Lenses Designed  
to Derive Maximum Performance from Mega-Pixel Cameras



# Mega-Pixel-Compatible Vari-Focal Lens Series

Tamron's ultra high definition Mega-Pixel-Compatible Vari-Focal Lens Series derives maximum performance from mega-pixel cameras to provide the best solution for your mega-pixel camera applications.

## Key Technology Supporting Mega-Pixel Compatibility



Note: Video images shown on this page were all shot using actual monitoring cameras ( Mega-Pixel-Compatible) and CCTV lenses.



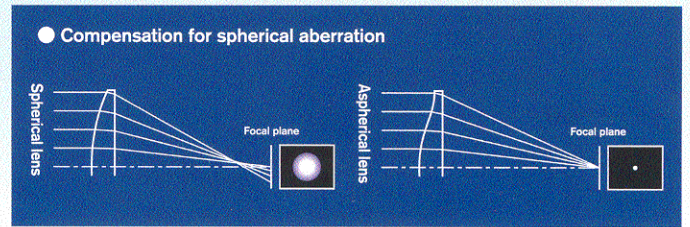
# Key Technology Supporting Mega-Pixel Compatibility

## High Quality Lens Series for Maximum Mega-Pixel Camera Performance

Each lens in Tamron's Mega-Pixel-Compatible Vari-Focal Lens Series uses hybrid aspherical elements (and special glass elements in the case of the 3.0-8mm lens) to minimize various optical aberrations and ensure high optical quality while realizing the compact design. Through the employment of innovative optical technologies, each lens delivers high-resolution and high-contrast images that are uniformly sharp from the center to the periphery.

In particular, resolution in the image corner is almost double when compared to that of conventional lenses. Each lens provides the best solution in applications with high quality mega-pixel cameras, ensuring high quality images even when images are enlarged.

## Concept diagram showing compensation for aberration by an aspherical lens



## Highly Accurate and High Quality Mechanical Construction to Achieve Maximum Performance

Each and every mechanical component boasts high accuracy and is assembled with advanced manufacturing engineering technologies. As a result, constructional problems that are likely to cause image degradation through focal point shift or lopsided blur have been eliminated.

## Multiple-Layer Coatings

Multicoating is applied to lens surfaces to minimize the phenomena of ghosting and flare in backlit situations. The result is consistent high contrast and excellent image quality even in such conditions.



## Covers Wide Range from 2.4mm Ultra Wide-angle to 50mm Telephoto



2.4mm (Horizontal angle of view 111.3°)



8mm (Horizontal angle of view 35.4°)



50mm (Horizontal angle of view 5.5°)

Tamron's Mega-Pixel-Compatible Vari-Focal Lens Series covers a wide range of angles of view from 2.4mm ultra wide-angle, 8mm standard focal length and even 50mm ultra telephoto in order to satisfy all needs. Each lens features a lightweight and compact design to fit almost all surveillance applications.

## Lock Mechanism for Each Control Ring

Each control ring (zooming, focusing and iris-control\*) has a lock mechanism. Setting displacement after installation can be avoided since each ring can be independently locked. (\*Manual iris only)

## Slip-Mount Mechanism

Each lens is equipped with a slip-mount mechanism that allows position adjustment by rotating the lens after it is mounted on a camera. This facilitates setting the auto-iris meter portion of the lens to a correct position around the lens.

## Environmentally-Friendly Design

Environmentally-friendly designs are used, including the employment of design approaches that do not use substances in optical glass materials, sealing and packaging that impact the environment. In addition, each Tamron factory implements environmental assessment when procuring materials and components in order to ensure non-use of environmentally destructive substances.

## Wide Dynamic Range [M13VM308/M13VG308]

M13VM308/M13VG308 is a fast lens boasting the maximum aperture of F/1.0. The extremely fast maximum aperture enhances the sensitivity of surveillance cameras, making it possible to obtain vivid color images even in dimly-lit conditions such as dark rooms, corridors, or during surveillance in early morning or evening hours when sufficient light is not available.

The fast lens is especially useful for cameras equipped with low sensitivity image sensors since it enhances light intensity. Note: Images are for illustrative purposes only.



F/1.4



F/1.0

● When the F/1.4 lens, giving the camera a minimum working brightness of 1.0 Lux, was replaced by the F/1.0 lens, the minimum working brightness improved to 0.5 Lux, doubling the camera's sensitivity.

# Mega-Pixel-Compatible Vari-Focal Lens Line-Up

Covers from an ultra wide angle of 111°

**1/3 2.4-6mm F/1.2**



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Large-aperture F/1.0 brightness

**1/3 3.0-8mm F/1.0**



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Vari-Focal range from standard 5mm up to 50mm ultra telephoto range

**1/3 5-50mm F/1.4**



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Lens designed for compatibility with 1/2-format Image Sensor

**1/2 4-12mm F/1.4**



Mega Pixel



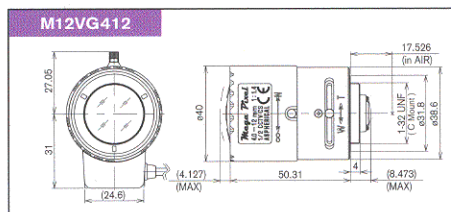
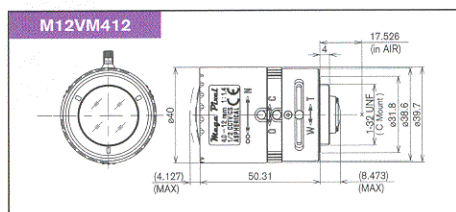
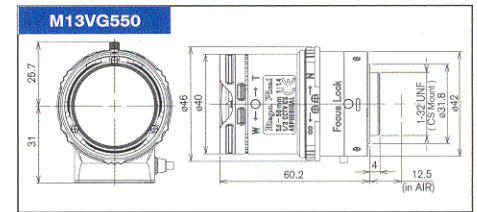
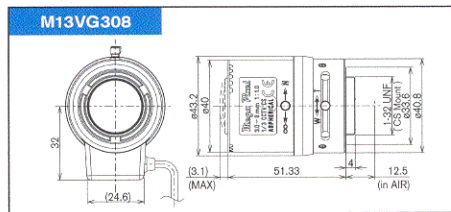
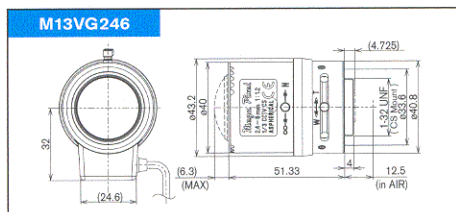
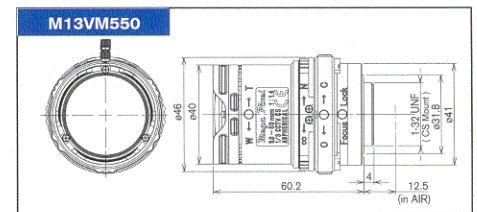
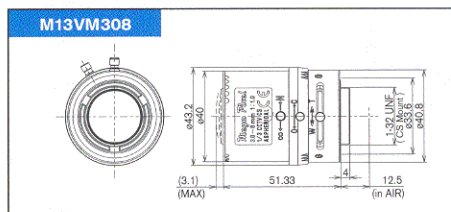
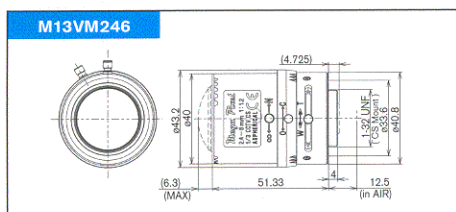


## SPECIFICATIONS

Model	M13VM246	M13VG246	M13VM308	M13VG308	M13VM550	M13VG550	M12VM412	M12VG412		
Imager Size	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/2		
Mount	CS	CS	CS	CS	CS	CS	C	C		
Focal Length	2.4-6mm	2.4-6mm	3.0-8mm	3.0-8mm	5-50mm	5-50mm	4.0-12mm	4.0-12mm		
Aperture Range	1.2-Close	1.2-360	1.0-Close	1.0-360	1.4-Close	1.4-360	1.4-Close	1.4-360		
Zoom Ratio	x2.5	x2.5	x2.6	x2.6	x10	x10	x3	x3		
Angle of View (Horizontal X Vertical)	1/3	Wide	111.3° x 83.5°	111.3° x 83.5°	92.5° x 68.2°	92.5° x 68.2°	53.8° x 40.3°	53.8° x 40.3°	93.9° x 68.8°	93.9° x 68.8°
		Tele	47.1° x 35.4°	47.1° x 35.4°	35.4° x 26.5°	35.4° x 26.5°	5.5° x 4.2°	5.5° x 4.2°	31.4° x 23.6°	31.4° x 23.6°
	1/4	Wide	83.5° x 62.6°	83.5° x 62.6°	68.2° x 50.6°	68.2° x 50.6°	40.3° x 30.2°	40.3° x 30.2°	100.5° x 73.4°	100.5° x 73.4°
		Tele	35.4° x 26.6°	35.4° x 26.6°	26.5° x 19.9°	26.5° x 19.9°	4.2° x 3.1°	4.2° x 3.1°	33.4° x 25.1°	33.4° x 25.1°
Operation	Focus	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	
	Zoom	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	Manual w/Lock	
	Iris	Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris	
Focus Range	0.3m-∞	0.3m-∞	0.3m-∞	0.3m-∞	1m-∞	1m-∞	0.3m-∞	0.3m-∞		
Iris Coil Resistance	-	Drive 190Ω, Cont 465Ω	-	Drive 190Ω, Cont 465Ω	-	Drive 190Ω, Cont 700Ω	-	Drive 190Ω, Cont 465Ω		
Iris Operating Voltage	-	Open 4.0V, Close 0.7V	-	Open 4.0V, Close 0.7V	-	Open 4.0V, Close 0.7V	-	Open 3.0V, Close 0.5V		
Back Focus (in air)	Wide 7.84 -Tele 13.72mm	Wide 7.84 -Tele 13.72mm	Wide 8.31 -Tele 14.92mm	Wide 8.31 -Tele 14.92mm	Wide 10.28 -Tele 11.01mm	Wide 10.28 -Tele 11.01mm	Wide 9.05 -Tele 18.90mm	Wide 9.05 -Tele 18.90mm		
Weight	65g	75g	64g	74g	64g	77g	58g	69g		
Operating Temperature	-20-+60°C	-20-+60°C	-20-+60°C	-20-+60°C	-20-+60°C	-20-+60°C	-20-+60°C	-20-+60°C		

\*Specifications subject to change without notice.

## DIMENSIONS



**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.*



**Quality Assurance Activities:** At Tamron, quality management activities are performed in compliance with ISO9001:2000 not only to assure product quality but to enhance customer satisfaction.

**Environmental Protection:** We recognize the significance of our social responsibilities. Tamron promotes corporate activities that protect the earth's environment through the establishment of a quality assurance system that is compliant with ISO14001.

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