

Flat-Field Mega-Pixel Lens Series

Flat-Field Mega-Pixel Lens

Flat-Field IR Mega-Pixel Lens



Flat-Field IR Mega-Pixel Lens <M13VM288IR/M13VG288IR>

IR

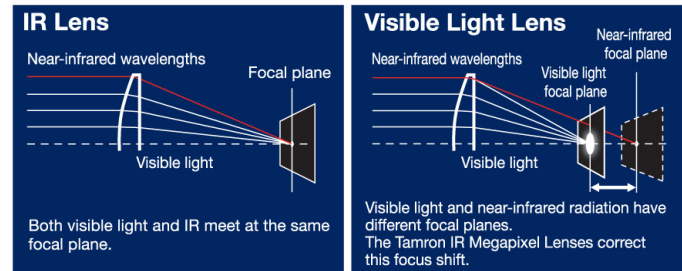
High performance at 3 Megapixel / Full HD Megapixel Resolution in the Near-Infrared Spectrum

Near-infrared radiation refracts differently from visible light, causing blurring in an image captured in the near-infrared spectrum. Tamron IR Mega-Pixel Lenses utilize cutting-edge optical design technology and advanced low-dispersion glass to converge the focal points of visible light and near-infrared radiation, providing 3 megapixel image quality 24-hours a day.

Delivering exceptional image quality and outstanding video surveillance day or night using state-of-the-art aberration correction up to the near infrared spectrum

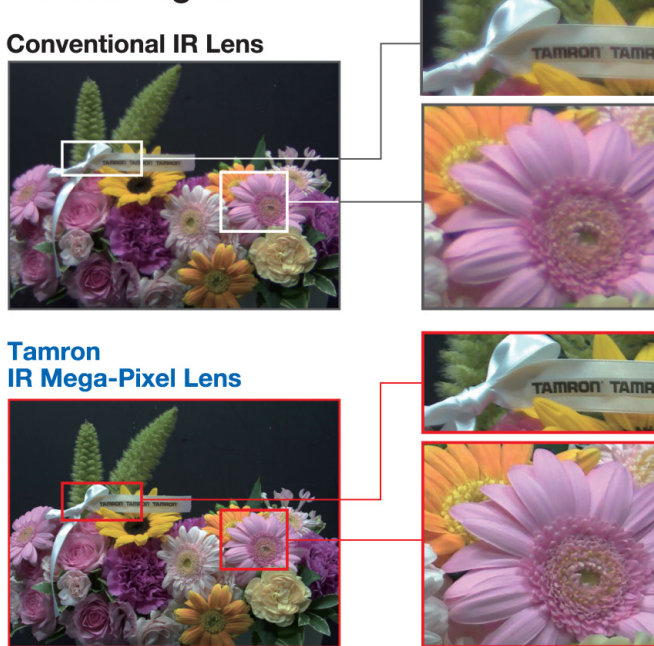
With conventional lenses, image blurring occurs in surveillance camera video footage shot under near-infrared illumination because the optimum focus point changes as a result of the difference between the refractive indices of near-infrared and visible light, which also affects their wavelengths (see figure at right). The Tamron IR Mega-Pixel Lens Series features the latest optical design formulas and low dispersion glass technologies that resolve this focus point discrepancy. This eliminates image degradation, even in black and white mode, and delivers 3 megapixel quality image video for 24 hour surveillance at any time of day regardless of the lighting conditions.

■ Comparison of a Visible Light Lens and an IR Lens

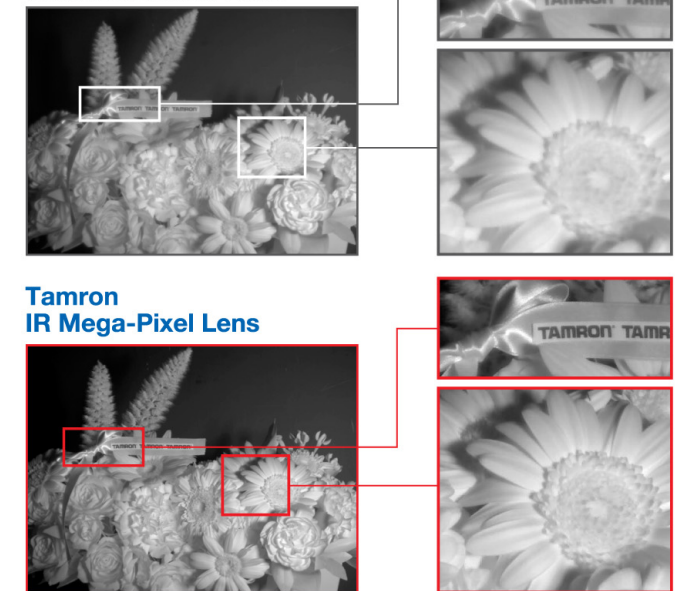


Delivering exceptional image quality in visible light and near-infrared conditions

■ Visible Light (Color mode)



■ Near Infrared Wavelengths (Black and white mode)



*All images appearing on this page taken from actual megapixel surveillance camera and CCTV lens.

Model **M13VM288IR/M13VG288IR 2.8-8mm F/1.2**

3MP

3 Megapixel quality that meets or exceeds Full HD 1080P in both the visible and near-infrared spectrums

Versatile Zoom Range from 2.8 to 8mm

With a maximum angle of view of 100.1°, this lens can image an entire room when installed in the corner.

Superb Picture Quality

Designed to minimize color aberrations, ghost and flare for top picture quality.

Designed for Compatibility with Current Camera Technology

Internal components in the vicinity of the imager are designed to minimize protrusion from the lens mount face for full compatibility with nearly all surveillance cameras on the market.

F/1.2 Fast Aperture Allows surveillance under Extreme Low-Light Conditions with Megapixel Resolution

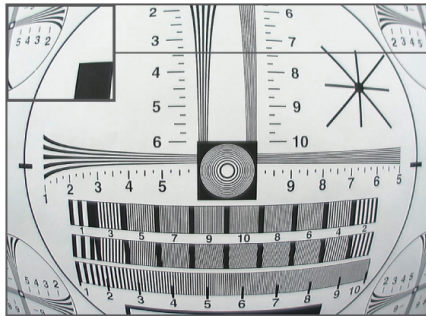
Delivering uniformly high resolution image corner to corner

The Tamron Flat-Field Mega-Pixel Lens Series delivers Megapixel image quality not only in the center but also in the corners of the image field, providing the megapixel resolution quality needed for image cropping and enlarging of image, irrespective of the location of 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 Lens an ideal solution for high-resolution network surveillance applications. In fact all lenses of Tamron Mega-Pixel Lens Series lineup deliver Flat-Field Mega-Pixel resolution.

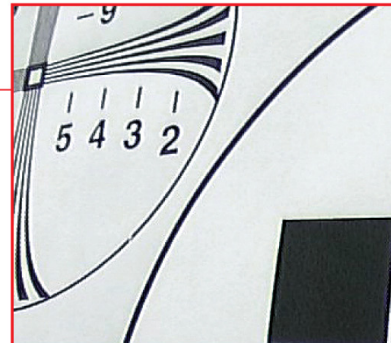
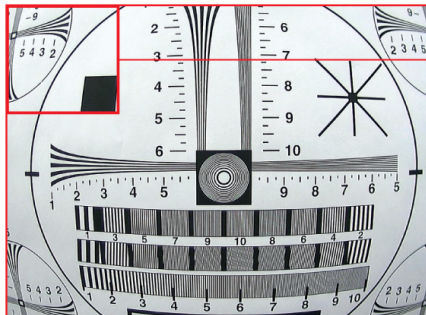
Consistent screen-wide high resolution and high contrast image quality

Wide Angle

Normal Lens

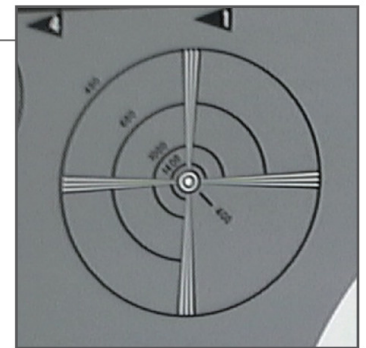
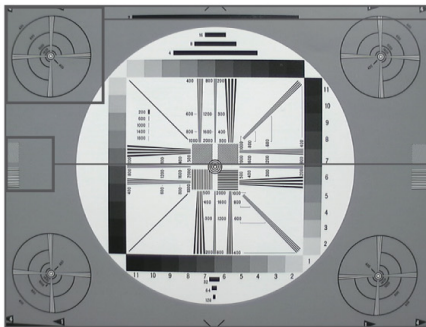


Tamron Mega-Pixel Lens

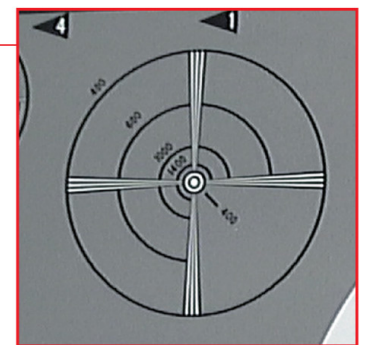
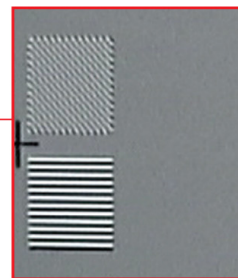
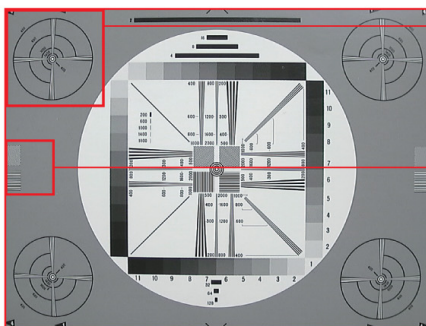


Tele Angle

Normal Lens



Tamron Mega-Pixel Lens



* Image taken at maximum aperture.

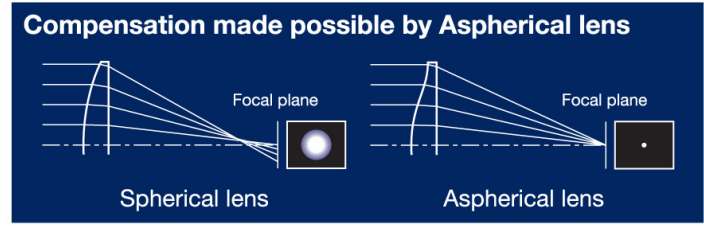
** Images shown are all shot using actual megapixel cameras and CCTV lenses.

Key Mega-pixel Technologies

Key Technologies Supporting with Megapixel Compatibility

〈M13VM246/M13VG246, M13VM288IR/M13VG288IR, M13VM308/M13VG308, M13VM550/M13VG550〉

Each lens in Tamron's Mega-Pixel Vari-Focal Lens Series uses Aspherical elements to minimize optical aberrations and ensure 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.



Wide Dynamic Range 〈M13VM308/M13VG308〉

The fast aperture of F/1.0 makes it possible to obtain vivid color images even in dim lighting conditions such as dark rooms and corridors, or in the early morning or evening hours when the ambient light would ordinarily be sufficient to capture high-quality images. A fast lens is able to gather a large amount of light, thereby enhancing the sensitivity of the camera.



■ F/1.4

■ F/1.0

F/1.0 lens has two times light gathering power compared to F/1.4 making a 1 lux camera sensitivity into a 0.5 lux sensitivity.

Multiple-Layer Coatings

Multi-coating is applied to internal and external lens surfaces to minimize ghosting and flare in backlit situations. The result is consistently sharp contrast and excellent image quality even in unfavorable lighting conditions.



Slip-Mount Mechanism

Each lens is equipped with a slip-mount mechanism that allows rotational adjustment of the lens after it is mounted on a camera. This allows optimal positioning of the auto-iris actuator and cable during installation.

Compact Design

Mega-pixel resolution is achieved while maintaining the compactness of conventional lenses.

Locking Mechanism for Each Control Ring

Each control ring for zoom, focus, and iris size* can be independently locked to prevent setting displacement after installation. (*Manual iris only)

Precision Manufacturing

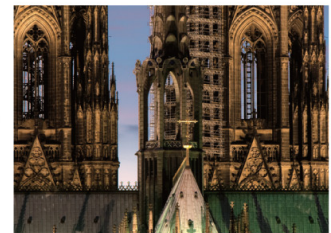
Each component in our Flat-Field Mega-Pixel lenses is produced and assembled using the most advanced precision manufacturing techniques to prevent image degradation due to local blur and focus shift.

Diverse Optical Lineup

The Tamron Flat-Field Mega-Pixel Lens Series includes a broad range of lenses that offer the ideal solution for a variety of high-resolution network surveillance applications from single camera use situations such as monitoring a building entrance or elevator lobby, to remote external surveillance applications such as outdoor security, traffic monitoring, or surveillance of large retail stores. This extensive lineup includes 2.4mm ultra wide angle, 8mm standard focal length, and 50mm ultra telephoto lenses, accommodating a wide range of applications.



■ 2.4mm
(111.3° horizontal angle of view)



■ 50mm
(5.5° horizontal angle of view)

Specification and Lineup











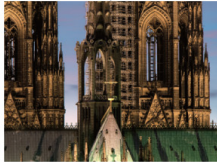
Image	IR 3MP		MP		MP		
							
Model	M13VM288IR	M13VG288IR	M13VM246	M13VG246	M13VM308	M13VG308	
Imager Size	1/3		1/3		1/3		
Mount	CS		CS		CS		
Focal Length	2.8-8mm		2.4-6mm		3.0-8mm		
Aperture Range	1.2-Close	1.2-360	1.2-Close	1.2-360	1.0-Close	1.0-360	
Zoom Ratio	x2.9		x2.5		x2.6		
Angle of View (Horizontal X Vertical)	1/3	Wide	100.1° × 72.9°		92.5° × 68.2°		
		Tele	35.8° × 26.9°		35.4° × 26.5°		
	1/4	Wide	72.8° × 53.9°		68.2° × 50.6°		
		Tele	26.8° × 20.1°		26.5° × 19.9°		
Operation	Focus	Manual w/Lock		Manual w/Lock		Manual w/Lock	
	Zoom	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
Focusing Range	0.3m-∞		0.3m-∞		0.3m-∞		
Operating Temperature	-20 - +60°C		-20 - +60°C		-20 - +60°C		

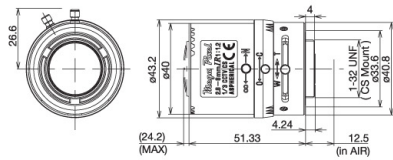
Image	MP		MP			
						
Model	M13VM550	M13VG550	M12VM412	M12VG412		
Imager Size	1/3		1/2			
Mount	CS		C			
Focal Length	5-50mm		4.0-12mm			
Aperture Range	1.4-Close	1.4-360	1.4-Close	1.4-360		
Zoom Ratio	x10		x3			
Angle of View (Horizontal X Vertical)	1/2	Wide	—		93.9° × 68.8°	
		Tele	—		31.4° × 23.6°	
	1/3	Wide	53.8° × 40.3°		68.8° × 51.0°	
		Tele	5.5° × 4.2°		23.6° × 17.7°	
1/4	Wide	40.3° × 30.2°		50.9° × 37.9°		
	Tele	4.2° × 3.1°		17.7° × 13.3°		
Operation	Focus	Manual w/Lock		Manual w/Lock		
	Zoom	Manual w/Lock		Manual w/Lock		
	Iris	Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris	
Focusing Range	1m-∞		0.3m-∞			
Operating Temperature	-20 - +60°C		-20 - +60°C			

		IR M13VM288IR / M13VG288IR			
		M13VM246 / M13VG246			
			M13VM308 / M13VG308		
				M13VM550 / M13VG550	
					M12VM412 / M12VG412
					
2.4mm	2.8mm	5mm	8mm	12mm	50mm

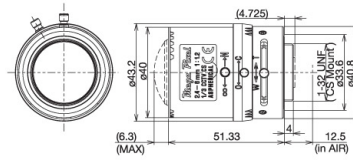
*Angle of view images are illustrative examples.

Dimensions

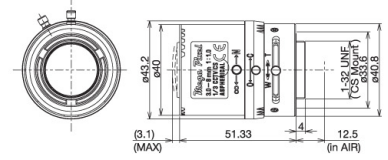
M13VM288IR



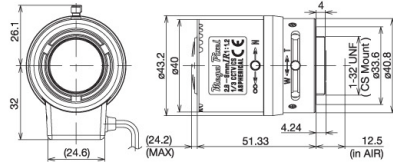
M13VM246



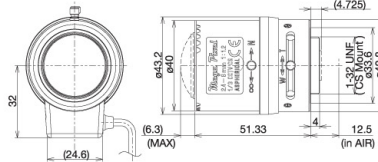
M13VM308



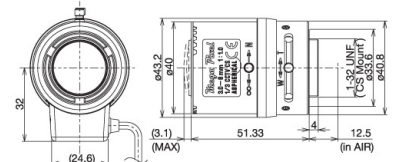
M13VG288IR



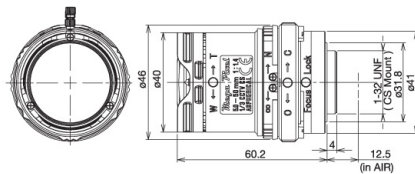
M13VG246



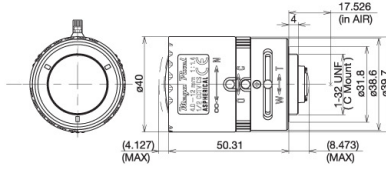
M13VG308



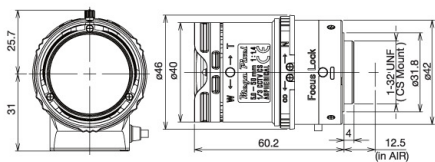
M13VM550



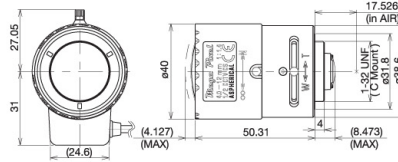
M12VM412



M13VG550



M12VG412



Environmental policy

Environmentally Friendly Design

Tamron employs an environmentally-friendly design approach that requires all lens components, as well as packing materials and all peripheral elements to be free from any substances that could have an adverse impact on our environment. All of Tamron's manufacturing plants implement thorough environmental assessments when procuring materials and components to ensure that no such harmful substances are used.

Strict Chemical Substances Management System

Tamron has established a strict internal regime to monitor all chemical substances used to manufacture our lenses, and is fully compliant with RoHS, REACH and WEEE. We will continue our efforts to develop safe products that bring our customers peace of mind in addition to our high standard of quality.



Tamron will mark its 60th anniversary in November 2010.

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.

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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.

