

# ***High Resolution Lens Series***

High Resolution Lens

High Resolution IR Lens



# High Resolution IR Vari-Focal Lens



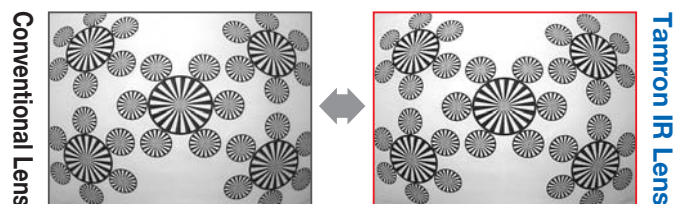
## Providing Exceptional Image Quality In The Visible And Near Infrared Spectrums

Near infrared radiation refracts differently from visible light, causing blurring in video footage captured in the near infrared spectrum. The Tamron High Resolution IR Lens Series utilizes cutting-edge optical design technology and advanced low dispersion glass to converge the focal points of visible light and near infrared radiation, providing exceptionally sharp image quality 24-hours a day.

## Quick Focus Comparison Between Tamron IR Lenses And Conventional Lenses

### Visible Light

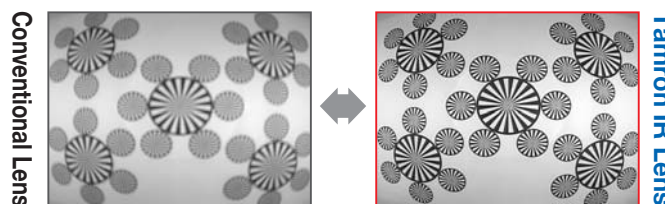
(with 850nm IR illuminator)



### Near Infrared Spectrum

(under 850nm illumination)

\* Taken at the same focus position as that used for visible light



#### Examples of common IR sources

● Halogen lamps at large construction sites, retail stores, entrance halls, etc.

#### Suggested video camera types

- Outdoor sodium vapor street lamps
- Day & night video camera
- Monochrome video camera

## Model 13VM308ASIRII / 13VG308ASIRII 3.0-8mm F/1.0

### High Resolution IR Vari-Focal Lens

#### 650TV Lines Resolution

Tamron's High Resolution IR Vari-Focal Lenses incorporate Aspherical elements and LD (Low-Dispersion) glass to provide a resolution of 650 TV lines. The resolution at the image corners has been improved by more than 50% over conventional models to provide superb image quality over the entire image field.

#### IR Correction Feature

The focal point of the near infrared spectrum is corrected to match that of visible light to provide exceptional image quality over the entire range of wavelengths from visible light to near infrared.

#### Fast Aperture of F/1.0

The fast aperture of F/1.0 enhances the overall sensitivity of Day & Night cameras, allowing operation in color mode under dimmer lighting conditions than with conventional F/1.2 and F/1.4 lenses.

## Specifications and Lineup

Image										
Model	13VM2812ASIRII   13VG2812ASIRII	13VM550ASIRII   13VG550ASIRII	13VM20100ASIRII   13VG20100ASIRII	13VM2811ASIRII   13VG2811ASIRII	13VM308ASIRII   13VG308ASIRII					
Imager Size	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
Mount	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS
Focal Length	2.8-12mm	5-50mm	20-100mm	2.8-11mm	3.0-8mm					
Aperture Range	1.4-Close	1.4-360	1.6-Close	1.6-360	1.4-Close	1.4-360	1.0-Close	1.0-360		
Zoom Ratio	x4.2	x10	x5	x3.9	x2.6					
Angle of View (Horizontal X Vertical)	1/2	Wide	—	—	—	—	—	—	—	—
	1/3	Wide	97.4° × 72.5°	53.6° × 40.3°	13.6° × 10.2°	97.4° × 72.4°	92.5° × 68.0°			
		Tele	24.1° × 18.1°	5.6° × 4.2°	2.8° × 2.1°	26.2° × 19.7°	35.7° × 26.8°			
	1/4	Wide	72.5° × 54.1°	40.3° × 30.1°	10.2° × 7.6°	72.4° × 54.0°	68.0° × 50.4°			
Tele		18.1° × 13.6°	4.2° × 3.1°	2.1° × 1.6°	19.7° × 14.7°	26.8° × 20.7°				
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	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	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	Manual w/Lock   DC Auto 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
Focusing Range	0.3m-∞	0.3m-∞	1.0m-∞	0.3m-∞	0.2m-∞					
Operating Temperature	-20 - +60°C	-20 - +60°C	-20 - +60°C	-20 - +60°C	-20 - +60°C					

	13VM2812ASIRII / 13VG2812ASIRII		13VM2811ASIRII / 13VG2811ASIRII		13VM308ASIRII / 13VG308ASIRII		12VM412ASIRII / 12VG412ASIRII	
	2.8mm	3mm	4mm	5mm	6mm	8mm		

\*Angle of view images are illustrative examples.

# High Resolution Vari-Focal Lens

## Advanced Technology For Today's Digital Monitoring Systems

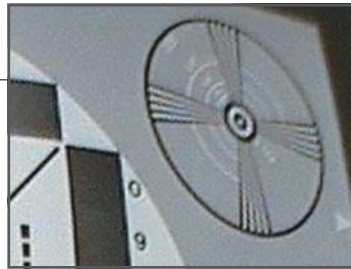
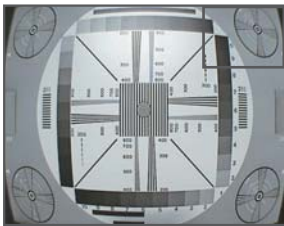
With the advance of high resolution cameras and the rapid digitization of recording systems, there is a growing demand for CCTV camera lenses that can provide high resolution across the entire screen. As a leading manufacturer of integrated optics, Tamron now offers a lineup of High Resolution Vari-Focal Lenses that meet today's demand for image resolution, while maintaining a compact and easy-to-install design.

### 650 TV Line Resolution

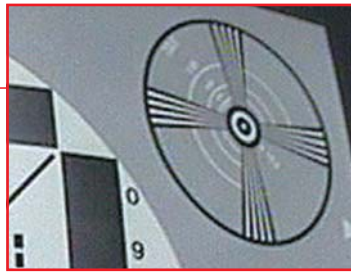
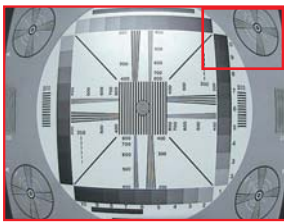
Tamron's devotion to image quality is evident in the exceptional image resolution. Our High Resolution Vari-Focal Lenses provide a resolution of 650 TV lines over the full range of aperture sizes.

### Comparison Of Image Quality At Maximum Aperture

#### Conventional Lens



#### Tamron High Resolution Lens



\* Comparison of images taken at maximum aperture using an EIAJ standard test chart

### Multiple-Layer Coatings

Multi-coating is applied to key lens surfaces to minimize ghosting and flare. The result is consistently sharp contrast and excellent image quality.



### Locking Mechanism For Each Control Ring

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

### Slip-Mount Mechanism

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

### Precision Manufacturing

All lens components are produced using advanced, high-precision manufacturing technologies to prevent image defects such as local blur and focus shift.

IR		IR		IR	
13VM1040ASIR   13VG1040ASIR		12VM412ASIR   12VG412ASIR		12VM1040ASIR   12VG1040ASIR	
1/3		1/2		1/2	
CS		C		C	
10-40mm		4-12mm		10-40mm	
1.4-Close	1.4-360	1.2-Close	1.2-360	1.4-Close	1.4-360
x4		x3		x4	
—		93.6° × 68.9°		37.5° × 27.6°	
—		31.2° × 23.4°		9.3° × 7.0°	
27.6° × 20.4°		68.9° × 51.1°		27.6° × 20.4°	
7.0° × 5.3°		23.4° × 17.5°		7.0° × 5.3°	
20.4° × 15.2°		51.2° × 38.2°		20.4° × 15.2°	
5.2° × 3.9°		17.6° × 13.2°		5.2° × 3.9°	
Manual w/Lock		Manual w/Lock		Manual w/Lock	
Manual w/Lock		Manual w/Lock		Manual w/Lock	
Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris	Manual w/Lock	DC Auto Iris
0.5m-∞		0.3m-∞		0.5m-∞	
-20 - +60°C		-20 - +60°C		-20 - +60°C	

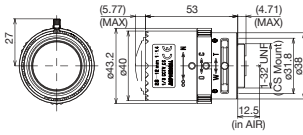
### Fixed-Focal Lenses

		Manual Iris	DC Auto Iris			
IR	Model	Imager Size	Focal Length	Aperture Range	Mount	
Manual Iris	13FM22IR	1/3	2.2mm	1.2-Close	CS	
	13FM28IR	1/3	2.8mm	1.2-Close	CS	
	13FM04IR	1/3	4mm	1.2-Close	CS	
	13FM06IR	1/3	6mm	1.2-Close	CS	
	13FM08IR	1/3	8mm	1.2-Close	CS	
IR	Model	Imager Size	Focal Length	Aperture Range	Mount	
DC Auto Iris	13FG22IR	1/3	2.2mm	1.2-360	CS	
	13FG28IR	1/3	2.8mm	1.2-360	CS	
	13FG04IR	1/3	4mm	1.2-360	CS	
	13FG06IR	1/3	6mm	1.2-360	CS	
	13FG08IR	1/3	8mm	1.2-360	CS	

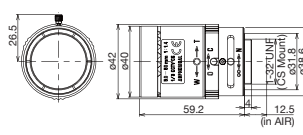
13VM550ASII / 13VG550ASII		13VM20100AS / 13VG20100AS			
IR 13VM1040ASIR / 13VG1040ASIR					
IR 12VM1040ASIR / 12VG1040ASIR					
10mm	11mm	12mm	20mm	40mm	50mm
				100mm	

# Dimensions

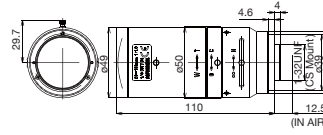
13VM2812ASII



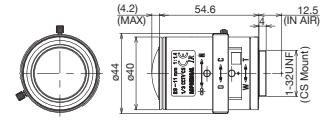
13VM550ASII



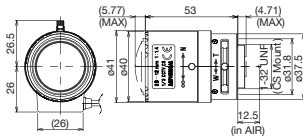
13VM20100AS



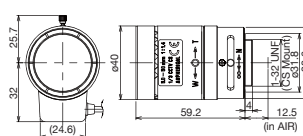
13VM2811ASIR



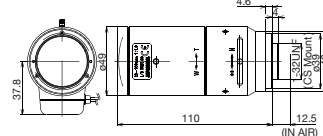
13VG2812ASII



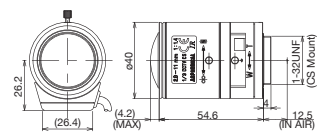
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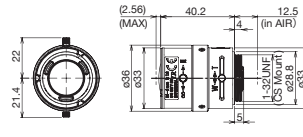
13VG20100AS



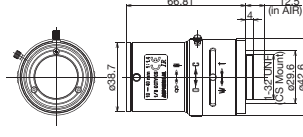
13VG2811ASIR



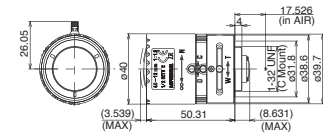
13VM308ASIRII



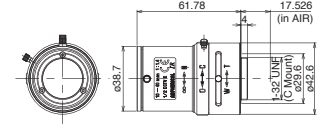
13VM1040ASIR



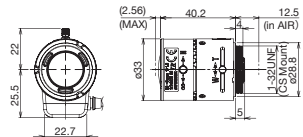
12VM412ASIR



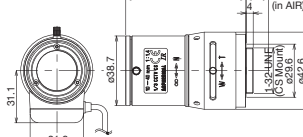
12VM1040ASIR



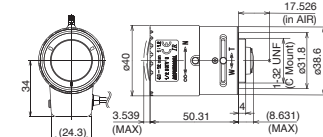
13VG308ASIRII



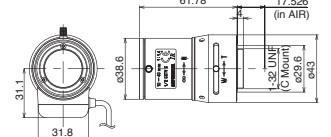
13VG1040ASIR



12VG412ASIR



12VG1040ASIR



## 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.

**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.co.jp/cctv>

1385, Hasunuma, Minuma-ku, Saitama-shi, Saitama 337-8556 JAPAN

Tel: +81-48-684-9129 Fax: +81-48-683-8594 E-mail: tokki@tamron.co.jp



**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.

