

# *High Resolution Lens Series*

High Resolution Lens

High Resolution IR Lens



# High Resolution IR Vari-Focal Lens



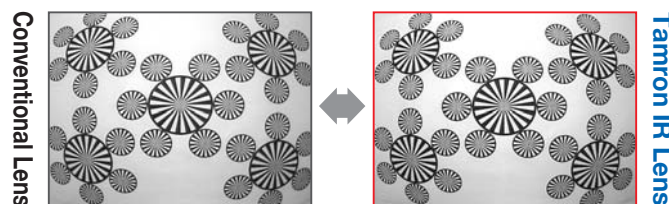
## Providing Exceptional Image Quality In The Visible And Near Infrared Spectrums

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

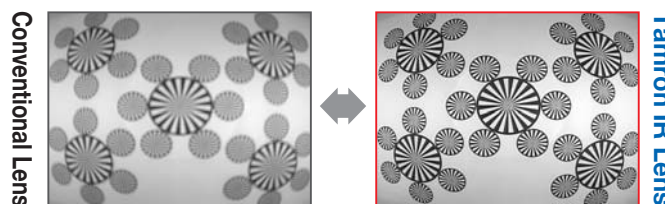
(with 850nm IR illuminator)



### Near Infrared Spectrum

(under 850nm illumination)

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



**Examples of common IR sources**  
**Suggested video camera types**

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

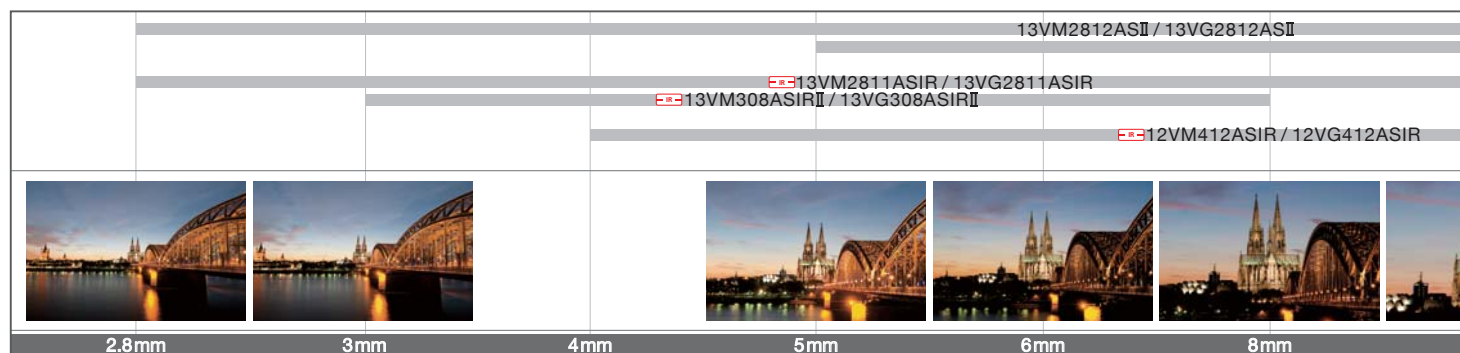
The focal point of the near infrared spectrum is corrected to match that of visible light to provide exceptional image quality over the entire range of wavelengths from visible light to near infrared.

#### 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	13VM2812ASII   13VG2812ASII		13VM550ASII   13VG550ASII		13VM20100AS   13VG20100AS		13VM2811ASIR   13VG2811ASIR		13VM308ASIRII   13VG308ASIRII		
Imager Size	1/3		1/3		1/3		1/3		1/3		
Mount	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		1.4-Close		1.0-Close		
Zoom Ratio	x4.2		x10		x5		x3.9		x2.6		
Angle of View (Horizontal X Vertical)	1/2	Wide	—		—		—		—		
		Tele	—		—		—		—		
	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	
	Zoom	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
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		



\*Angle of view images are illustrative examples.

# High Resolution Vari-Focal Lens

## Advanced Technology For Today's Digital Monitoring Systems

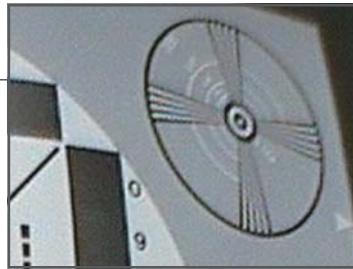
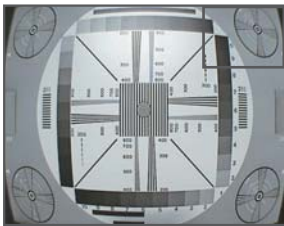
With the advance of high resolution cameras and the rapid digitization of recording systems, there is a growing demand for CCTV camera lenses that can provide high resolution across the entire screen. As a leading manufacturer of integrated optics, Tamron now offers a lineup of High Resolution Vari-Focal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

### 650 TV Line Resolution

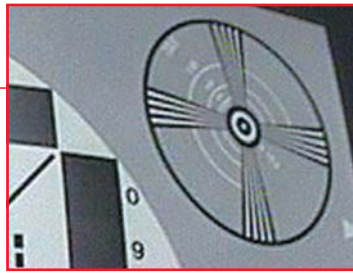
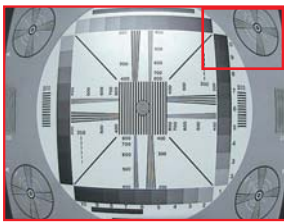
Tamron's devotion to image quality is evident in the exceptional image resolution. Our High Resolution Vari-Focal Lenses provide a resolution of 650 TV lines over the full range of aperture sizes.

### 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.

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	

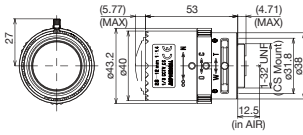
### Fixed-Focal Lenses

	Manual Iris	DC Auto Iris			
Manual Iris	Model	Imager Size	Focal Length	Aperture Range	Mount
	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
DC Auto Iris	Model	Imager Size	Focal Length	Aperture Range	Mount
	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

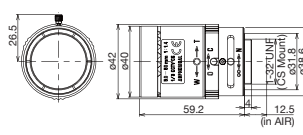
13VM550ASII / 13VG550ASII		13VM1040ASIR / 13VG1040ASIR		12VM1040ASIR / 12VG1040ASIR		13VM20100AS / 13VG20100AS	
10mm		11mm		12mm		20mm	
40mm		50mm		100mm			

# Dimensions

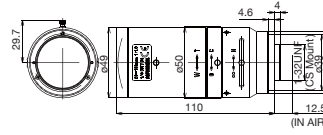
13VM2812ASII



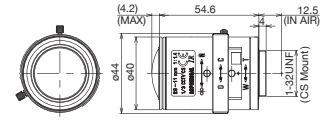
13VM550ASII



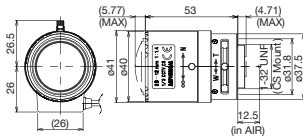
13VM20100AS



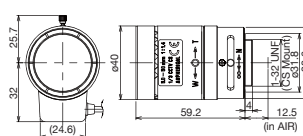
13VM2811ASIR



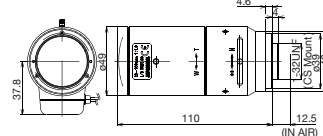
13VG2812ASII



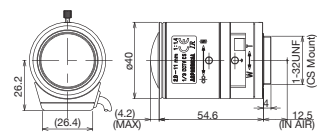
13VG550ASII



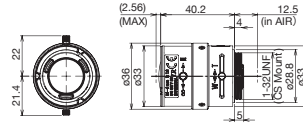
13VG20100AS



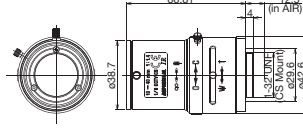
13VG2811ASIR



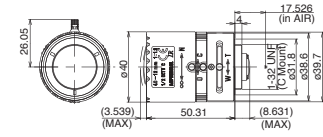
13VM308ASIRII



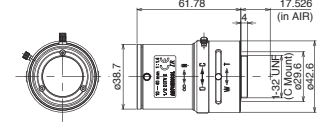
13VM1040ASIR



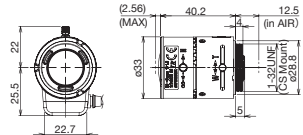
12VM412ASIR



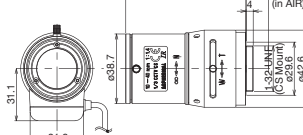
12VM1040ASIR



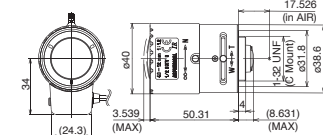
13VG308ASIRII



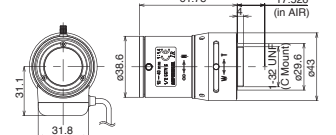
13VG1040ASIR



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.

