

High Resolution Lens Series

High Resolution Lens
High Resolution IR Lens



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.



High Resolution IR Vari-Focal Lenses

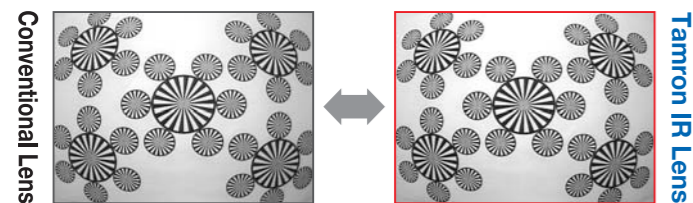


Providing Exceptional Image Quality in the Visible and Near-infrared Spectrums

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.

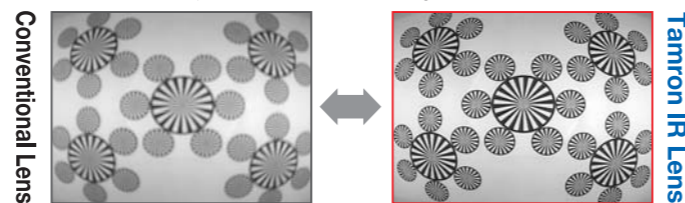
Quick Focus Comparison between Tamron IR Lenses and Conventional Lenses

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.
 - Outdoor sodium vapor street lamps
- Suggested video camera types**
- 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.

High Resolution Vari-Focal Lenses

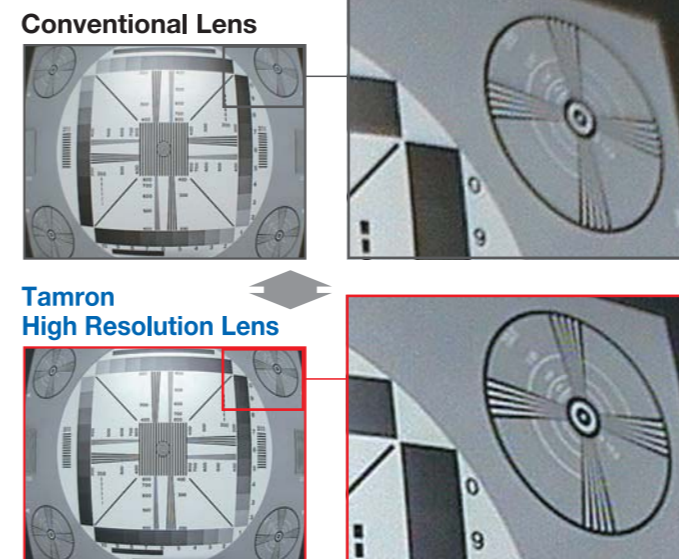
Advanced Technology for today's Digital Monitoring Systems

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



* 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

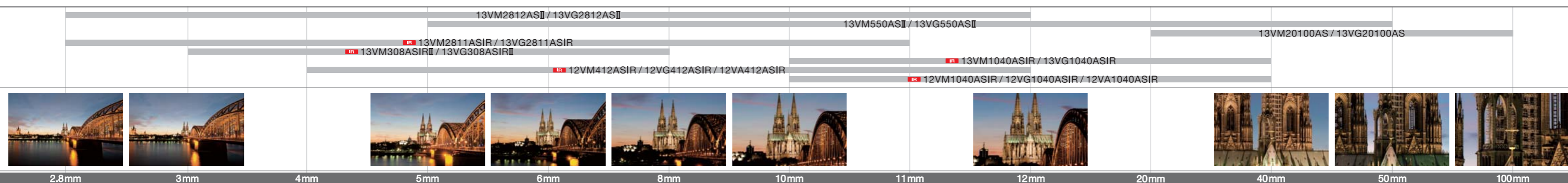
All lens components are produced using advanced, high-precision manufacturing technologies to prevent image defects such as local blur and focus shift.

Specifications and Lineup

Image																				
Model	13VM2812ASIRII	13VG2812ASIRII	13VM550ASIRII	13VG550ASIRII	13VM20100ASIRII	13VG20100ASIRII	13VM2811ASIRII	13VG2811ASIRII	13VM308ASIRII	13VG308ASIRII	13VM1040ASIRII	13VG1040ASIRII	12VM412ASIRII	12VG412ASIRII	12VA412ASIRII	12VM1040ASIRII	12VG1040ASIRII	12VA1040ASIRII		
Imager Size	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/2	1/2	1/2	1/2	1/2	1/2		
Mount	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	C	C	C	C	C	C		
Focal Length	2.8-12mm	2.8-12mm	5-50mm	5-50mm	20-100mm	20-100mm	2.8-11mm	2.8-11mm	3.0-8mm	3.0-8mm	10-40mm	10-40mm	4-12mm	4-12mm	4-12mm	10-40mm	10-40mm	10-40mm		
Aperture Range	1.4-Close	1.4-360	1.4-Close	1.4-360	1.6-Close	1.6-360	1.4-Close	1.4-360	1.0-Close	1.0-360	1.4-Close	1.4-360	1.2-Close	1.2-360	1.2-Close	1.4-Close	1.4-360	1.4-Close		
Zoom Ratio	x4.2	x4.2	x10	x10	x5	x5	x3.9	x3.9	x2.6	x2.6	x4	x4	x3	x3	x3	x4	x4	x4		
Angle of View (Horizontal x Vertical)	1/2	Wide	97.4° x 72.5°	53.6° x 40.3°	13.6° x 10.2°	97.4° x 72.4°	92.5° x 68.0°	27.6° x 20.4°	68.9° x 51.1°	27.6° x 20.4°	7.0° x 5.3°	23.4° x 17.5°	20.4° x 15.2°	51.2° x 38.2°	20.4° x 15.2°	17.6° x 13.2°	37.5° x 27.6°	37.5° x 27.6°	37.5° x 27.6°	
		Tele	24.1° x 18.1°	5.6° x 4.2°	2.8° x 2.1°	26.2° x 19.7°	35.7° x 26.8°	7.0° x 5.3°	23.4° x 17.5°	7.0° x 5.3°	23.4° x 17.5°	7.0° x 5.3°	20.4° x 15.2°	5.2° x 3.9°	17.6° x 13.2°	9.3° x 7.0°	9.3° x 7.0°	9.3° x 7.0°	9.3° x 7.0°	
	1/3	Wide	72.5° x 54.1°	40.3° x 30.1°	10.2° x 7.6°	72.4° x 54.0°	68.0° x 50.4°	20.4° x 15.2°	51.2° x 38.2°	20.4° x 15.2°	5.2° x 3.9°	17.6° x 13.2°	17.6° x 13.2°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°
		Tele	18.1° x 13.6°	4.2° x 3.1°	2.1° x 1.6°	19.7° x 14.7°	26.8° x 20.7°	5.2° x 3.9°	17.6° x 13.2°	5.2° x 3.9°	17.6° x 13.2°	5.2° x 3.9°	17.6° x 13.2°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°	5.2° x 3.9°
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	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	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	
Focusing Range	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	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	
	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	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	-20 ~ +60°C	

Fixed-Focal Lenses

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



*Angle of view images are illustrative examples.