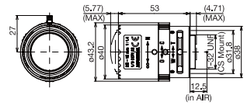
Dimensions

13VM2812ASII



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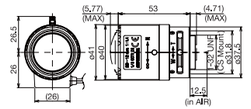

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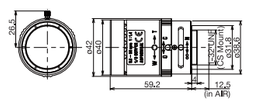

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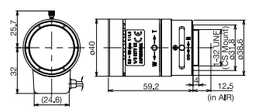

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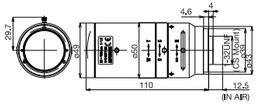

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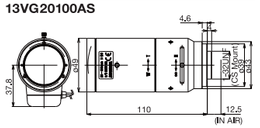

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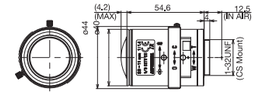

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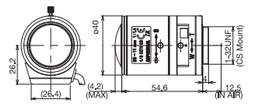

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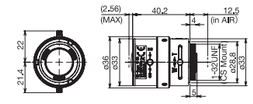

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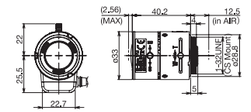

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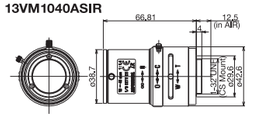

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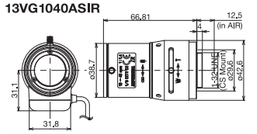

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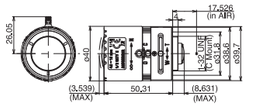

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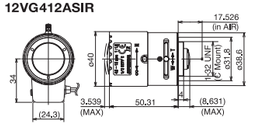

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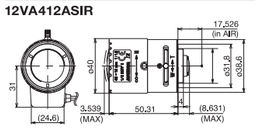

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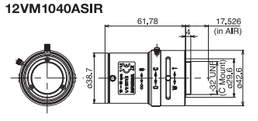

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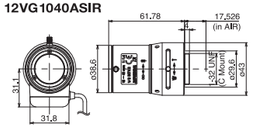

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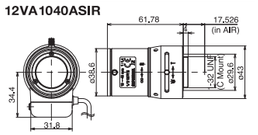

Environmental policy

Environmentally Friendly Design

Tamron employs an environmentally-friendly design approach that requires all lens componets, 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.

SIXTIETH ANNIVERSARY

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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Tel: +1-631-858-8400 Fax: +1-631-543-3963

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.

ISO9001& ISO14001 REGISTERED FIRM DNV AS REGION JAPAN

PRINTED WITH SOY INK

Specifications subject to change without notice 2010,8

HRIR-E-111-U-1008-0300

TAMRON
New eyes for industry

High Resolution Lens Series

High Resolution Lens
High Resolution IR Lens

2010.ver01 US

High Resolution IR Vari-Focal Lenses

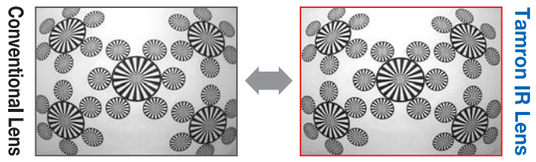
IR

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.

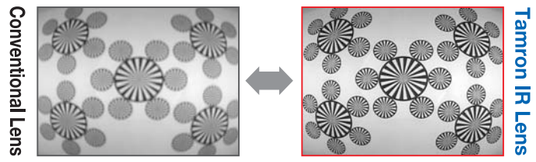
Quick Focus Comparison between Tamron IR Lenses and Conventional Lenses

■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

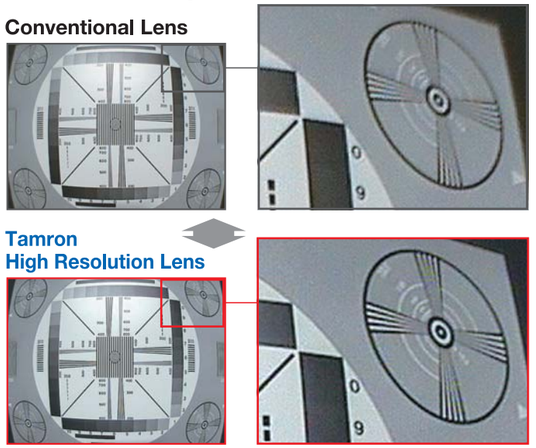
Advanced Technology for today's Digital Monitoring Systems

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.

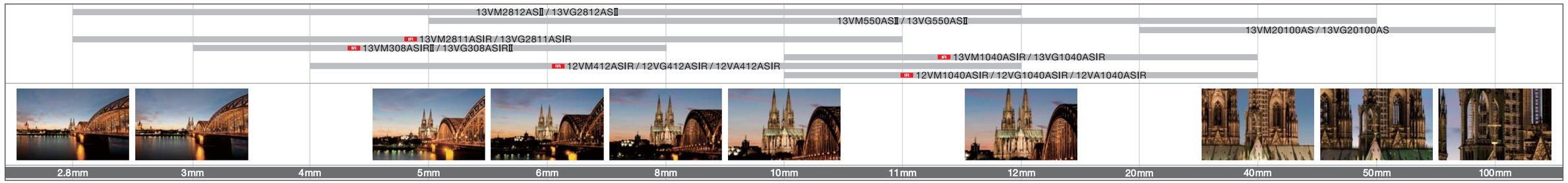
Specifications and Lineup

Image						IR 	IR 	IR 	IR 	IR 
Model			13VM2812ASⅡ / 13VG2812ASⅡ	13VM550ASⅡ / 13VG550ASⅡ	13VM20100AS / 13VG20100AS	13VM2811ASIR / 13VG2811ASIR	13VM308ASIRⅡ / 13VG308ASIRⅡ	13VM1040ASIR / 13VG1040ASIR	12VM412ASIR / 12VG412ASIR / 12VA412ASIR	12VM1040ASIR / 12VG1040ASIR / 12VA1040ASIR
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			2.8-12mm	5-50mm	20-100mm	2.8-11mm	3.0-8mm	10-40mm	4-12mm	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	1.4-Close / 1.4-360
Zoom Ratio			×4.2	×10	×5	×3.9	×2.6	×4	×3	×4
Angle of Veiw (Horizontal × Vertical)	1/2	Wide	—	—	—	—	—	—	93.6°×68.9°	37.5°×27.6°
		Tele	—	—	—	—	—	—	31.2°×23.4°	9.3°×7.0°
	1/3	Wide	97.4°×72.5°	53.6°×40.3°	13.6°×10.2°	97.4°×72.4°	92.5°×68.0°	27.6°×20.4°	68.9°×51.1°	27.6°×20.4°
		Tele	24.1°×18.1°	5.6°×4.2°	2.8°×2.1°	26.2°×19.7°	35.7°×26.8°	7.0°×5.3°	23.4°×17.5°	7.0°×5.3°
	1/4	Wide	72.5°×54.1°	40.3°×30.1°	10.2°×7.6°	72.4°×54.0°	68.0°×50.4°	20.4°×15.2°	51.2°×38.2°	20.4°×15.2°
		Tele	18.1°×13.6°	4.2°×3.1°	2.1°×1.6°	19.7°×14.7°	26.8°×20.7°	5.2°×3.9°	17.6°×13.2°	5.2°×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
	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	Manual w/Lock / DC Auto Iris	Manual w/Lock / DC Auto Iris	Manual w/Lock / DC Auto Iris / Video Auto Iris	Manual w/Lock / DC Auto Iris / Video Auto Iris
Focusing Range			0.3m-∞	0.3m-∞	1.0m-∞	0.3m-∞	0.2m-∞	0.5m-∞	0.3m-∞	0.5m-∞
Operating Temperature			-20 - +60℃	-20 - +60℃	-20 - +60℃	-20 - +60℃	-20 - +60℃	-20 - +60℃	-20 - +60℃	-20 - +60℃

Fixed-Focal Lenses

	Model	Imager Size	Focal Length	Aperture Range	Mount
IR 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

	Model	Imager Size	Focal Length	Aperture Range	Mount
IR 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



*Angle of view images are illustrative examples.