


*World-first
With 

LWIR (Long-Wavelength Infrared) 3X Zoom Lens with Standard M34 P0.5 Screw-in Mount

*As of Dec. 2014, according to research by Tamron  : Vibration Compensation



35-105mm F/1.0 [Model LQZ3X3510V]

High-quality Image Capture under Harsh Surveillance Environments

Substantial improvement has been achieved in the LWIR light transmittance, providing high-quality image by reducing gain noise. The lens features F/1.0 fast aperture throughout the entire focal length range. With a proprietary optical design, Tamron has successfully realized 3X zoom while reducing the number of elements down to 4-group/4-lens. Germanium has been deployed to raise the infrared light transmittance. This enables crisp and clear image reproduction even under a harsh surveillance condition in which a thermal profile of the scene has minimal contrast, effectively preventing image degradation due to the gain noise.

Pursuit of Easy and General Use

Introduction of a Widely Adopted Lens Mount

The new lens comes with a M34 P0.5 screw-in mount, which is widely adopted in LWIR cameras.



Introduction of a General-use Communication-protocol Conversion Board (Optional)

For the lens control, the asynchronous serial communication protocol is supported by a newly-designed communication-protocol conversion board. (Optional accessory: SY004)



Optical Vibration Compensation (VC) Mechanism

Tamron's proprietary VC mechanism, widely renowned in photographic interchangeable lenses, has been optimized for specific vibration frequency range and high durability required for LWIR lens applications. These technologies minimize false alarms caused by the camera vibration which is perceived as objects in motion, and substantially improve the accuracy of the motion detection feature.

Automatic Flange Back (FB) Focal Distance Adjustment

Software incorporated in the lens adjusts the FB position, and minimizes zoom focus drift after lens integration. The FB adjustment can be easily performed in 3 simple steps using the FB adjustment GUI software.

Active Athermal Mechanism

A new active athermal mechanism compensates for the focus drift at all focusing distances by built-in thermo couplers and the control software. This new innovative feature ensures high-quality image capture under harsh surveillance environments undergoing large fluctuations in temperature.

Quick Focus Operation Achieved by Electric Drive Zoom and Focus

The Internal Focus system with stepping motor drive mechanism ensures smooth, high-speed and high-accuracy zoom and focus performance for intrusion protection and other applications.

35-105mm F/1.0

[Model LQZ3X3510V]

Model		LQZ3X3510V		
Imager Size	VGA(640x512) 17μm	QVGA(320x240) 23.5μm		
Optical Specs	Spectral Wave Length	8-14μm		
	Focal Length	35-105mm		
	F Number	F/1.0		
	Zoom Ratio	3X		
	Flange Back Focal Distance	10.17mm (Barrel rear edge to image plane)		
	Back Focal Distance (in air)	WIDE: 33.04mm		
		TELE: 30.84mm		
	Effective Image Circle Dia.	≥φ14.5mm		
	FOV (H)	WIDE: 17.95°	WIDE: 12.36°	
		TELE: 5.9°	TELE: 4.10°	
Focusing System	Internal focusing system			
MOD (Minimum Object Distance)	WIDE: 2.0m			
	TELE: 5.0m			
Max. Object Distance (Detection)	WIDE: 1013m	WIDE: 740m		
	TELE: 3083m (Note1)	TELE: 2232m (Note1)		

Mechanical	Max. Barrel Dia. x Length	φ120mm x 161mm	
	Weight	1725g	
	Optical Image Stabilization		YES
	Optical Zoom	Motorized	
	Focus Control	Motorized	
	Active Athermalization	YES	
	Mount	threaded, M34xP0.5	
Electronic/Electric	Power Supply	For Logic Board	+3.3V
		For Motor Drive	+5.0V
	Power Consumption	≤1.0A	
Communication	SPI interface		
	*Conversion to Serial communication is available by using an optional accessory board.		
Reliability	Operating Temp.(Performance)	-10°C~50°C (no condensation)	
	Operating Temp.(Function)	-20°C~60°C (no condensation)	
	Operating Humidity	20~90%RH (no condensation)	
	Water & Dust Proof	N/A	
	Front Element Coating	AR coating	

(Note 1) The max. object distance (detection) is a theoretical value calculated for seeing human sized objects based on Johnson's criteria. It is not an actual measured value.

* Product specifications are subject to change without notice.

* Custom-made lenses are available according to customers' requested design/manufacturing specifications. Please feel free to inquire.

TAMRON

Manufacturer of precise and sophisticated optical products for a broad range of industries.

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● The content of this catalog is current as of January 2015.

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Based on ISO9001 and ISO14001, Tamron produces superior products in accordance with the ISO9001 and ISO14001 standards while holding the environment and workers in the highest regard.