

**Tokina**

# ***SUPER TELE PHOTO***

Amazing 50X Motorized Zoom Lens



# Technical Information

Motorized Zoom Lens is one of the most complicated products among various kind of optical products.

While having been engaged in development and manufacture of zoom lenses for the broadcasting services, Tokina has tried to establish an essential method in the approach for developing optical products, which is neither based on superficially clever style nor aiming at easily achieved mass-production. In doing so, Tokina has worked hard for cultivating the most refined techniques and has accumulated a vast amount of valuable know-how in this area.

The surveying activity using long focal-distance lens is not an application that is very special in nature for sophisticated surveillance and border patrol but one that is widely used in the whole world.

From such an analysis, Tokina set out the aim of producing a "standard" lens for the long focal-distance surveillance application by ourselves. The goal was to offer it to the users to allow them to build the surveying system at a more reasonable cost. Tokina has now succeeded to develop this lens, which has literally accomplished this purpose.

## ● High magnification and long focal length

This model features high magnification of 50X and long focal length of 1000mm at telephoto(2X Ext.) with compact body of 124(W) x 108(H) x 300(L)mm and light weight of 3.2kg.

These features offer outstanding advantages to your applications.

## ■ Different angle field of View

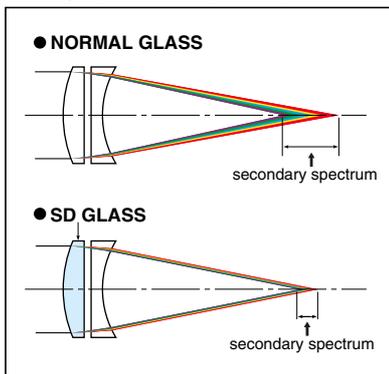


# Sofisticated Tokina's designing and manufacturing technologies are incorporated with compact and light weight body.

## ● Superapochromat using the SD glass

Expensive super low dispersion glass which has been used for TV Broadcast lenses is used in the frontal part of the lens to eliminate in an ideal manner the secondary aberration occurring at the telephoto side.

### ■ SD(Super Low Dispersion)GLASS



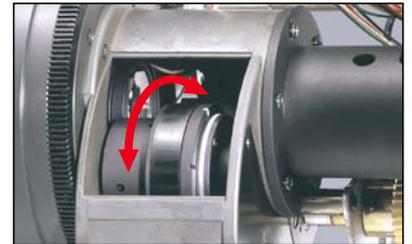
## ● Employment of the internal cam system

The system allows the cam grooves to be cut by an easier gradient. This will permit at the same time the strength of the cam barrel to be increased relative to that of the conventional system. An increase of precision in the direction of the optical axis has made it possible for an ideal optical performance to be achieved at a value almost identical with that of the design. With a decrease of the load to the zooming and focusing motors, the overall durability has significantly enhanced.



## ● Remote extender

Tokina employed the extender system which has been used for TV broadcast zoom lenses in contrast to conventional extenders attached to the rear end of a lens, this extender has been incorporated into its optical system itself from the designing stage to ensure that an optimal extender most appropriate for the lens should be developed. Moreover, use of a motorized system for moving of the extender has allowed it to be remotely controlled.



## ● High resolution suitable for 3CCD cameras

The progress in the use of 3CCD cameras is remarkable in recent years. Provided with a high resolving power, the lens will allow you to fully utilize the camera's performance to obtain images in bright colors with high resolution.

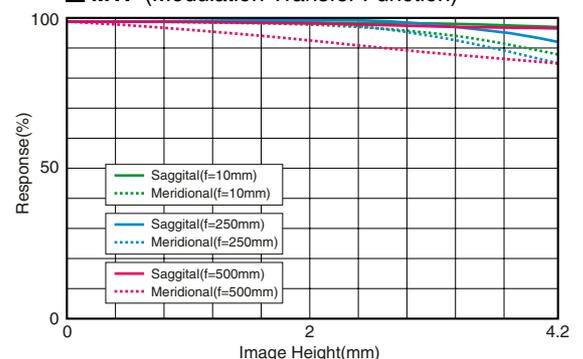
## ● Triplet compensator

Tokina has solved the problem of a deterioration of the center performance at around halfway of the zooming range with this compensator. The deterioration is a characteristic commonly observed in telescopic lenses with a high magnifying power. A result of the Tokina's advanced optical technologies, the compensator prevents the deterioration from occurring and achieves a high resolution over the entire zooming range.

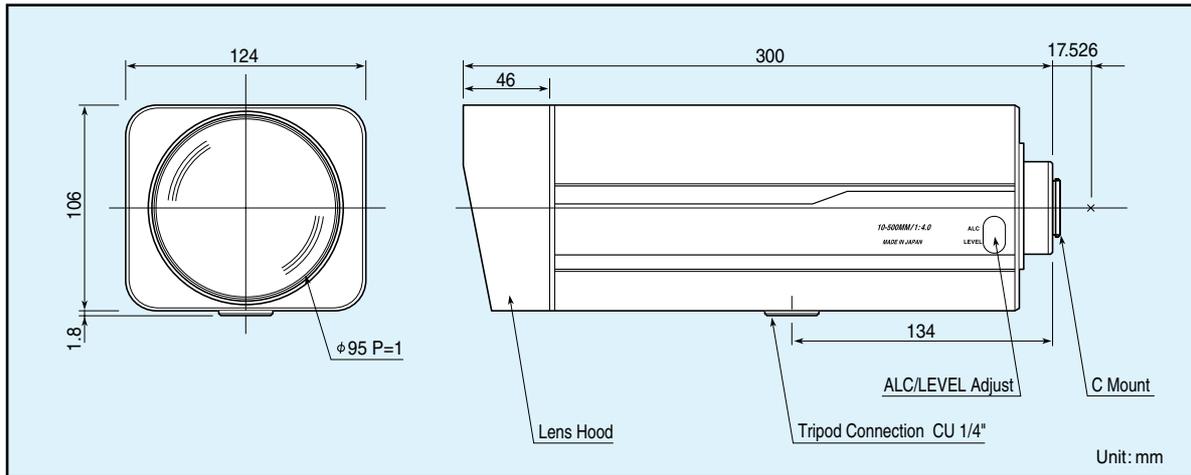


**TM50Z1040**  
**(10-500mm 1:4.0)**

### ■ MTF (Modulation Transfer Function)



## ● Dimensions



## ● General Specifications

Model No.		TM50Z1040AI (AI-2)	
Format		1/2 inch	
Focal Length		10-500mm/20-1000mm(with Extender)	
Zoom Ratio		50x	
Iris Range		F4.0-125(360)* <sup>1</sup> /F8.0-250(720)* <sup>1</sup> (with Extender)	
Angle field of View (H x V)		35.5° x 27.0°(10mm) 18.2° x 13.7°(20mm) 0.7° x 0.6°(500mm) 0.4° x 0.3°(1000mm)	
Filter Screw Size		M95 P=1mm	
Dimensions		124mm x 106mm x 300mm	
Weight		3.2Kg	
Mount		C Mount F.B=17.526mm(in air)	
Operation	Iris (Auto)	Metering Method	Continuously Adjustment(Peak-Average)
		Input Voltage	DC8 ~ 16V(Max.40mA)
		Input Signal	V or VS Signal
		Iris Accuracy	±15% at Image Signal
		Sensitivity Adjustment	0.5 ~ 1.0Vp-p at Video
		Respond Speed	Approx. 4sec.
		Input Impedance	High Impedance
	Zoom (Motorized)	Control Voltage	DC12V(Max.120mA)
		Mortorization Speed	Approx. 6Sec.
		Potentio Meter	5K
	Focus (Motorized)	Control Voltage	DC12V(Max.120mA)
		Motorization Speed	Approx. 7Sec.
	Extender (Motorized)	Potentio Meter	5K
		Control Voltage	DC12V(Max. 50mA)
		Motorization Speed	2Sec.
Operating Temperature		-10 ~ +50°C	

\*1ND360 is available

Specifications are subject to change without notice.

Distributed by

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