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Saitama City, Japan

Announcing the development of the Tamron AF18-270mm Di II VC ultra high-power zoom lens

A technological breakthrough—world's longest-range 15x zoom DSLR lens has exclusive built-in Vibration Compensation mechanism optimised for consumer digital SLR cameras

Tamron Co., Ltd., under the leadership of Mr. Morio Ono, President, has announced the development of a unique ultra high power zoom lens for digital SLRs. The **Tamron AF18-270mm F/3.5-6.3 Di II VC LD Aspherical (IF) MACRO (Model B003)**, is the first digital SLR lens in the world that delivers a remarkable zoom ratio of 15x (28–419mm equivalent) while also featuring a highly effective Vibration Compensation (VC) system for clearer images. Designed exclusively for digital SLR cameras with APS-C sized image sensors, the new Tamron lens delivers outstanding image quality over its entire zoom range and its exclusive VC anti-shake system facilitates sharp and clear handheld photography even at the longest telephoto settings.

With its vast zoom range, the **Tamron AF18-270mm F/3.5-6.3 Di II VC** lens enables the user to cover virtually any photographic subject from wide angle to ultra telephoto, simply by zooming the lens to the required position. It covers angles of view equivalent to 28mm to 419mm when converted to 35mm film format. In addition, this breakthrough lens is equipped with Tamron's exclusive, proprietary tri-axial Vibration Compensation (VC) mechanism, eliminating or substantially reducing the effects of handheld camera shake. As a result, the user can enjoy the convenience of handheld photography in virtually any situation, from shooting candid images, to covering sporting events, to news photography, without worrying about camera shake having an adverse effect on image quality.

The new lens will be made available in Canon and Nikon mounts. The price and launch date of the new lens will be announced at a later date.

Note: Di II (Digitally integrated) lenses employ optical systems designed for exclusive use on digital SLR cameras equipped with smaller sized (APS-C sized) image sensors. Di II lenses are not designed for use with 35mm film cameras or digital SLR cameras with image sensors larger than 24mm x 16mm. (Reference to "APS-C sized image sensors" is omitted from the rest of body text in this media information release.)

(continued overleaf)

Print-resolution image at <http://highres.maxwell.com.au/tamron>



Specifications

Model Name	B003
Focal Length	18-270mm (28-419mm equivalent)
Maximum Aperture	F/3.5-6.3
Angle of View	75°33' (equivalent angles of view when converted to 35mm)
Lens Construction	18 elements in 13 groups
Minimum Focus Distance	0.49m/19.3" (over the entire zoom range)
Maximum Magnification Ratio	1:3.5 (at f=270mm and 0.49m MFD)
Filter Diameter	72mm
Overall Length	101.0mm (3.8")*
Maximum Diameter	79.6mm
Weight	TBA
Diaphragm Blade	7 blades
Minimum Aperture	F/22
Standard Accessory	Flower-shaped lens hood
Mount	For Canon and Nikon

*Dimensions are those of a Nikon-mount version of this lens.

The cosmetic design, specifications and performance are subject to change without notice.

Development Background

Since launching in 1992 the Tamron AF28-200mm F/3.8-5.6 (Model 71D), a lens highly acclaimed as the first high-power SLR zoom lens suitable for practical use, Tamron has continued to develop innovative zoom lenses as the “pioneer in high power zoom lenses”. With the AF18-200mm F/3.5-6.3 XI Di II (Model A14), Tamron achieved an 11.1X zoom power for the first time in a zoom lens exclusively designed for digital SLR cameras. Tamron developed telephoto range further to 13.9X with the AF18-250mm F/3.5-6.3 Di II (Model A18), a lens that has gained wide popularity for its all-in-one capability for those photographers seeking light weight, small size but broad capability in multiple shooting situations.

Tamron’s engineers faced the even more formidable challenge of finding solutions for the problem of “handheld camera shake” while expanding the telephoto range even further. Now they have developed the AF18-270mm F/3.5-6.3 Di II VC, the world’s first DSLR 15x zoom.

The newly developed lens enables the user to cover an extremely wide angle-of-view range equivalent to a 28mm-419mm lens in the 35mm format. Tamron’s exclusive VC capability provides maximum compensation performance at all focal lengths and corrects shake so effectively that up to 4 slower shutter speeds can be used without loss of image sharpness. The VC system enables the user to enjoy the full benefits of ultra-tele photography comfortably. By providing remarkably stable viewfinder images as well, framing the shot has never been simpler at extreme telephoto lengths. In short, this unique VC image stabilisation system delivers the maximum potential built into the world’s longest-ratio zoom lens—15x.

Tamron was able achieve all these remarkable accomplishments thanks to its advanced optical/mechanical design technologies and production know-how accumulated over 16 years as the pioneer in high power zoom lens design. Tamron’s commitment to ongoing research and development is also evidenced by continued breakthroughs in its traditional goals of lightness and compactness. As a result the new Tamron AF18-270mm Di II VC delivers all the functionality and performance you expect from the latest Tamron ultra high power zoom, a lens that exemplifies our time-honoured concept of “One great lens covering everything from wide angle to telephoto”.

Main Features in Detail

1. World’s first and greatest zoom ratio of 15x, covering 28-419mm 35mm-equivalent angle of view

Going back to the basic concept of “one lens covering everything from wide angle to telephoto,” engineers at Tamron

took up the difficult task of expanding the zoom range of their high power zoom lenses even further. Their unstinting efforts to extend the telephoto end beyond previous limits, while also retaining the wide-angle end at 18mm, has borne fruit as an ultra high-power zoom lens that is exclusively designed for DSLR cameras and boasts the largest zoom range, at 15x, for the first time in the world.

2. Tamron’s original VC mechanism for effective shake-free hand-held photography: how the system works

Tamron’s proprietary VC (Vibration Compensation) mechanism was first seen in the **AF28-300mm F/3.5-6.3 Di VC (Model A20)**. It demonstrated its powerful compensation effect, employing a tri-axial system designed to let three coils drive a compensator lens electromagnetically via three steel balls. Since the compensator lens is supported on rolling steel balls with very low friction, follow-up performance is also enhanced, resulting in stabilised viewfinder images. Since the mechanism is designed to allow parallel shifting of the compensator lens solely by means of electrical control, the mechanical construction is simpler and more compact, resulting in the smallest lightest DSLR lens possible.

3. Designing a high power, compact zoom lens with VC mechanism: Optical design optimisation meets optimum power distribution

In developing such a long-range zoom lens, Tamron’s optical designers pursued the optimum distribution of power within the overall optical system based on the optical design know-how Tamron accumulated over 16 years since the introduction of the first compact AF28-200mm in 1992. The resulting optical system uses two LD (Low Dispersion) glass elements and three aspherical elements in order to effectively compensate for various optical aberrations, such as astigmatism. Yet this design allows the first optical group to be small enough in diameter to achieve the overall goal of a compact lens that also incorporates a handheld-shake compensation mechanism.

Note: In order to achieve such a high 15x zoom ratio, the optical system does not use any XR (extra dispersion glass) element. Instead, compactness is achieved through optimisation of the power distribution within the whole optical system.

4. Minimum focusing distance of 0.49m over the entire zoom range for maximum magnification ratio of 1:3.5

The AF18-270mm Di II VC allows close focusing down to 0.49 metre (20 inches) from the subject, over the entire zoom range, even though it also includes VC capability. The maximum magnification ratio of 1:3.5 at its 270mm telephoto end results in class-leading capability in high power zoom lenses designed for digital SLR cameras.

5. Optical system optimised for digital SLR cameras by taking incident rays of light reaching the image sensor into consideration

In order to effectively compensate for changes in light patterns entering the lens while zooming, the zoom lens employs an innovative optical system designed to converge the angles of rays of light entering from the centre to the periphery of the lens. The light rays thus reach the image sensor within a defined circle that assures high imaging performance and reduces light falloff.

6. High-resolution performance

As a lens exclusively designed for digital SLR cameras, this zoom lens delivers high resolution and contrast performance for outstanding image quality with sufficient flatness of the field under an extremely wide range of photographic conditions.

7. Thorough countermeasures, including advanced internal surface coatings, prevent ghosting and flare

Tamron employs multi-layer coatings in order to reduce reflections on lens surfaces as well as internal surface coatings (coatings on the cemented surfaces of lens elements) in order to minimise reflections from the sensor itself within the mirror box, a problem inherent to all digital SLR cameras.

8. World’s first and greatest zoom power of 15X plus built-in VC mechanism achieved along with a remarkably slim maximum diameter of under 80mm

Designing a lens with the world’s first and greatest zoom ratio of 15X inevitably entailed a larger travel distance of the components within the optical systems. But Tamron has successfully accommodated the optics as well as the special VC mechanism in a remarkably compact and slim package, by employing mechanical design technology only learned from unmatched experience in high power zoom development. The result: a slim design measuring less than 80mm in diameter despite the fact that it is an ultra high-power zoom lens that incorporates a VC mechanism. Production engineering this unique zoom lens meant incorporating complex optical/mechanical components, and Tamron’s engineers had to employ innovative manufacturing techniques including methods of further enhancing accuracy, reducing weight, and increasing the strength of many components.

Note: Metal mounts are used in both Canon-mount and Nikon-mount lenses.

9. Zoom-lock mechanism for carrying convenience

The lens has a built-in zoom lock mechanism to prevent its barrel from sliding forward or down when the lens is being carried on the camera.

10. Flower-shaped lens hood as a standard accessory

The lens is supplied with a flower-shaped lens hood as a standard accessory. It is designed to efficiently cut harmful light entering at angles other than intended angles at all four corners of the frame. This ensures clear, flare-free images.

11. New outer design matches the newest generation high-power zoom lens in the digital era

- (a) The lens employs a new outer design that is more refined and smoother in its overall contours by minimising concavity, convexity, and variations in profile in order to match the latest digital SLR cameras.
- (b) A gold-coloured metal ring is placed at a key portion of the lens as used in other Di II lenses. The “TAMRON” logo, placed in the centre portion of the lens, enhances visibility of the brand while refining the overall design.
- (c) Delicate matte finish is added to the black paint over the lens barrel in order to enhance the high quality appearance of the lens.
- (d) The textured rubber pattern of the zoom and focus control rings has been improved again to a more pronounced, easy to grasp design, compared to conventional rubber patterns. It provides better feel and touch in manipulating the lens.

“The world’s longest zoom range” and “world’s first” are statements that apply to interchangeable lens exclusively designed for digital SLR cameras equipped with APS-C sized image sensors, as of June 2008, according to Tamron’s survey.

Tamron’s conversion value is 1.55x.

A format covered by an APS-C sized image sensor is smaller than that of 35mm format film. Therefore, this lens is capable of filling the frame by capturing an area that is almost the same as an area covered by a lens designed for the 35mm format and providing the maximum magnification ratio of 1:2.3.

Product name

AF18-270mm F/3.5-6.3 Di II VC LD Aspherical (IF) MACRO (Model B003)

Mounts available

Canon and Nikon

Availability in Australia

TBA

Expected market price including GST

TBA

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Maxwell International Australia Pty Limited

For further information or images please contact:

Tracey Leitch, Impressions Marketing Communications

phone: (02) 9969 2042 | mobile: 0415 290 023

email: tracey@impressionsmc.com.au