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Tamron announces its 60th Anniversary Model: SP AF70-300mm F/4-5.6 Di VC USD (Model A005) for Nikon mount

A full-size premium telephoto zoom with Extra Low Dispersion (XLD)¹ element delivers best-in-class resolution; Tamron's own Ultrasonic Silent Drive (USD)² and Vibration Compensation (VC) make the lens fast, quiet and easy to use

Tamron Co., Ltd., and Maxwell International Australia are pleased to announce another advance in the pursuit of high-resolution images in the telephoto lens category with the development of a 70-300mm F/4-5.6 telephoto zoom lens featuring image stabilisation – VC (Vibration Compensation) and an ultrasonic autofocus drive – USD (Ultrasonic Silent Drive).

The **SP AF70-300mm F/4-5.6 Di VC USD (Model A005)** high-resolution DSLR telephoto zoom lens has been produced for the Nikon mount, with the development of compatible mounts for Canon and Sony to follow³. While this new lens is designed for digital SLR cameras, it can be used with both full-frame sensor and AF 35mm cameras for a zoom range of 70-300mm. With APS-C sensor cameras the angle of view will change the zoom range to an equivalent of 109-465mm⁴.

With superior optical performance, Tamron's own USD (Ultrasonic Silent Drive) and VC (Vibration Compensation), the **SP AF70-300mm F/4-5.6 Di VC USD (Model A005)** provides the performance of a high-end premium telephoto zoom which will appeal to a broad spectrum of photography enthusiasts.

1. XLD – Extra Low Dispersion lens is made from specialised high-grade glass that has lower dispersive properties than standard LD lenses.
2. USD – Ultrasonic Silent Drive is Tamron's proprietary ultrasonic motor drive.
3. The Sony-mount model is not equipped with the VC image stabilisation mechanism, as anti-shake functionality is included in the body of Sony digital SLR cameras. Consequently, the name of the Sony-mounted lens, **SP AF70-300mm F/4-5.6 Di USD**, does not include the VC description.
4. Tamron's conversion 1.55x.

Unparalleled optical performance in a fast-focusing, steady telephoto zoom lens

In the pursuit of achieving the most outstanding image resolution in the 70-300mm class, this lens utilises an advanced optical design featuring an LD (Low Dispersion) and an XLD (Extra Low Dispersion) lens element made from specialised materials that prevent chromatic aberration. As a result, it boasts sharper contrast and greater descriptive performance than all others in its class. It's also the first Tamron lens sporting a USD (Ultrasonic Silent Drive), Tamron's very own ultrasonic autofocus drive mechanism. This USD mechanism delivers fast focusing, making it a perfect telephoto zoom choice for photographing sports, racing and other fast-moving subjects. The lens also boasts Tamron's proprietary VC (Vibration Compensation) image stabilisation to

Specifications*

Model Number	A005
Focal Length	70-300mm
Maximum Aperture	F/4-5.6
Angle of View	34°21' to 8°15'
Lens Construction	17 elements in 12 groups
Minimum Focus Distance	1.5m (59.1in.)
Maximum Magnification Ratio	1:4 (at f=300mm: MFD 1.5m)
Filter Diameter	62mm
Overall Length	142.7mm (5.6in.)*
Maximum Diameter	81.5mm (3.2in.)*
Weight	765g (27.0oz)*
Diaphragm Blades	9 blades
Minimum Aperture	f/32-f/45
Standard Accessory	Flower-shaped Lens Hood
Compatible Mounts	Nikon, Canon, Sony**

Specifications, appearance, functionality, etc may be changed without prior notice.

* Length and weight values given are for Nikon cameras.

** The Sony mount does not include the VC functionality, as the body of Sony digital SLR cameras contains built-in image stabilisation functionality.

More information

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assist in handheld photography, not only at long focal length ranges where blurring is more common, but also under low-lit conditions, dramatically enhancing photographic freedom.

This combination of best-in-class image resolution, Ultrasonic Silent Drive and Vibration Compensation takes Tamron technology to a new level.

Main features

1. **A new optical system optimised for digital cameras achieves top resolution in the 70-300mm class with specialised glass elements**

The advanced optical design employs a sophisticated XLD (Extra Low Dispersion) lens element made from a special high-grade glass that has dispersive properties (i.e. where refraction causes the dispersion of white light into spectral

hues) even lower than standard LD lenses. The dispersive properties of the XLD lens are similar to those of fluorite; in combination with the LD elements, these make for an optimal optical design that delivers best-in-class resolution with advanced axial chromatic and magnification aberration correction - major inhibitors of image quality enhancement. The result is a lens that delivers sharp contrast and better descriptive performance throughout the entire zoom range.

2. Fast focusing USD (Ultrasonic Silent Drive), the ultrasonic autofocus drive

The lens is equipped with Tamron's first-ever USD (Ultrasonic Silent Drive). It achieves faster focusing making this telephoto lens perfect for photography of sports, motor racing and other fast-moving subjects. With advanced motor technology and newly developed software, Tamron's USD delivers precise and noiseless focusing at turbo speed.

Tamron's USD works with the high-frequency ultrasonic vibrations that are produced by a ring called a 'stator'. Energy from the vibrations is used to rotate an attached metallic ring known as the 'rotor'. Piezoelectric ceramic is a material that produces ultrasonic vibrations when voltage of a specific frequency is applied is arranged in a ring formation on the stator. This electrode configuration of piezoelectric ceramic causes two ultrasonic vibrations to occur in the stator. By effectively combining these two ultrasonic vibrations, it is possible to convert the energy from the vibrations that produce simple motion into energy known as 'deflective travelling waves', which move around the circumference of the ring. The friction between these deflective travelling waves created on the metallic surface of the stator and the surface of the rotor produces force, causing the rotor to rotate. Attached to the rotor is the focusing lens, which is given a fast, smooth autofocus movement.

3. Equipped with Tamron's VC (Vibration Compensation) image stabilisation

The **SP AF70-300mm F/4-5.6 Di VC USD (Model A005)** employs Tamron's renowned image stabilisation mechanism - the VC (Vibration Compensation) seen in both the **AF18-270mm F/3.5-6.3 Di II VC LD Aspherical [IF] MACRO (Model B003)** and **SP AF17-50mm F/2.8 XR Di II VC (Model B005)**. With VC, the photographer has the freedom to shoot at a shutter speed that is an extra four stops slower without having to worry about image blurring. This makes handheld capture of evening, night and interior shots much more spontaneous, as a sharp image can be obtained more easily without having to mount the camera on a tripod.

Tamron's VC mechanism employs three driving coils which activate the shake-compensating VC lens group electromagnetically via three steel balls. The VC lens elements are held in place only by contact with the steel balls, achieving smooth movement with minimal friction. This provides a stable viewfinder image with excellent tracking performance that eliminates the blur from camera shake for cleaner, crisper shots.

4. Full-time manual focus at your fingertips

Autofocus has many benefits but sometimes the photographer needs the control of manual focus. Full-time manual offers

just that: the crossover from auto-focus to manual focus by simply adjusting the focus ring, allowing the photographer to make adjustments on the fly. This feature helps the lens produce impressive results even in telephoto situations where the depth of field is shallow.

5. Internal focusing provides better balance and consistent length

When focusing, the internal elements of the lens move and the lens' external size does not change. This offers better balance and easier telephoto shots. Moreover, the barrel is not subject to stray light entering from external helicoids that can adversely affect image quality. And because the external elements do not move, it makes it easier to utilise filters such as polarisers and the supplied flower-shape lens hood to control the amounts and angles of light entering the lens.

6. Enjoyable photography for a wide range of enthusiasts using all types of SLRs

With a full-frame digital or 35mm SLR, portrait and medium telephoto shots can be achieved on the wider 70mm end of the range and spectacular telephoto shots at the longer 300mm. When using an APS-C sensor camera the angle of view narrows, giving it the equivalent range of 109-465mm* for bold ultra-telephoto shots. And with its maximum magnification ratio 1:4, the lens can be used to explore the realm of semi-macro photography.

Focal length range for digital SLR cameras with full-size sensors, 35mm film format SLR cameras	Focal length range with converted angle of view for digital SLR cameras with APS-C size sensors*
70mm	109mm
200mm	310mm
300mm	465mm

* Approximate equivalent angle of view at Tamron's conversion value of 1.55x.

7. Uncompromising countermeasures to reduce ghosting and flare

Digital photography requires extreme precision, which is why Tamron incorporates new BBAR (Broad-Band Anti Reflection) multilayer coatings that reduce reflection into the lens elements. This ensures excellent performance in all photographic conditions and enhances light transmission on both long and short wavelengths. Also, Tamron applies internal surface coatings on cemented surfaces of lens elements to make images sharper with better colour balance and reproduction.

8. Simple yet attractive exterior design

For this lens Tamron has adopted a streamlined silhouette to ensure that this lens looks good with a variety of SLR cameras. The subtle texture of the paint gives a well-crafted finish to the exterior.

9. Flower-shaped hood with excellent stray light shielding properties as a supplied accessory

The Flower-shaped Lens Hood is designed to block out damaging light rays, ensuring clear, sharp images.

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About TAMRON Co., Ltd.

'New Eyes for Industry' is Tamron's slogan, as the company is a leading manufacturer of a comprehensive range of original optical products that contribute to many different industries. These include interchangeable lenses for SLR cameras, both digital and film; digital compact camera lenses; video camera lenses; CCTV camera lenses; automotive lenses; lenses for mobile phone cameras; and ultra-precision optical components.

Celebrating its 60th anniversary with the release of the **SP AF70-300mm F4-5.6 Di VC USD (Model A005)**, Tamron continues to exercise its rich creativity and leading-edge technical prowess to make advances into a diversity of industrial fields.

For more information on Tamron Co., Ltd. please visit the company's website at www.tamron.com