



## SP 24-70mm F/2.8 Di

Model: A007  
 For 35mm full-frame digital SLR / 35mm film SLR cameras.  
 SP24-70mm F/2.8 Di VC USD for Canon, Nikon  
 SP 24-70mm F/2.8 Di USD for Sony

Model	A007
Focal Length	24-70mm
Maximum Aperture	F/2.8
Angle of View (diagonal)	84°04'~34°21' (with full-size SLR cameras) 60°20'~22°33' (with APS-C sized sensor digital SLR cameras)
Lens Construction	17 elements in 12 groups
Minimum Focus Distance	0.38m (15in)
Max. Magnification Ratio	1:5 (at f=70mm : MFD 0.38m)
Filter Size	φ82mm
Length*1	108.5mm (4.3in)*
Entire Length*2	116.9mm (4.6in)*
Diameter	φ88.2mm
Weight	825g (29.1oz)*
Diaphragm Blade Number	9 (rounded diaphragm)
Minimum Aperture	F/22
Standard Accessories	Flower-shaped lens hood
Compatible Mounts	For Canon, Nikon, Sony*3

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

\*Length, entire length and weight values given are for the Nikon mount.

\*1. Length is the distance between the mount face and the tip of the lens.

\*2. Entire length is the distance between the tip of the lens and the tip of the protrusion.

\*3. The Sony mount does not include VC image stabilization, as Sony digital SLR bodies include this functionality.

### A007 Lens Construction

- Hybrid Aspherical Lens
- LD elements
- XR (Extra Refractive Index) Lens
- Glass Molded Aspherical Lens



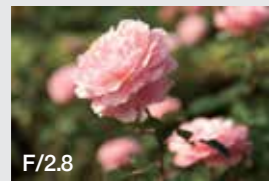
### Strengths of the F/2.8 high-speed lens.

High-speed lenses are bright, highly sensitive lenses that are able to take in a large amount of light. The high-speed Model A007 makes use of such brightness to deliver a number of different artistic advantages.

#### Extensive, gorgeous blurred effect (high-speed lens and rounded diaphragm):

As high-speed lenses produce an extensive blurred effect in the areas outside of the focused field, the photographer can greatly blur the foreground and background and thus highlight the main subject in focus, to create an image with realistic depth. In developing this lens, attention was also paid to the shape of the diaphragm blades, which affects the form of the blur. The diaphragm blades maintain a near-perfect circular shape up to two stops down from the fully open state, the position frequently used for creating the blurred effect, adopted the rounded diaphragm to enable exquisite blurred-effect images.

Blurring with a high-speed lens



Blurring with a slower-speed lens



Shape of Regular Diaphragm



Shape of Rounded Diaphragm



(Theoretical diaphragm - 8 blades case)

#### Anti-shake benefits (high-speed lens and VC (Vibration Compensation)):

Compared with slower-speed lenses, when high-speed lenses are used images may be taken at shutter speeds that are 1-2 stops faster. Moreover, Tamron's proprietary VC (Vibration Compensation) mechanism delivers anti-shake benefits of up to 4 shutter speed stops\*. The combination of VC with the benefits of the high-speed lens enables hand-held photography even in cases where it normally would not have been possible without using a tripod.

\*The compensating effects of VC will vary depending on photographer and photographic conditions.

### Full-frame sensor for ultimate versatility.

The SP 24-70mm F/2.8 Di VC USD is one of Tamron's Di (Digitally Integrated) designs. The Di Series is the mark of Tamron lenses that are format-versatile since they can be used on digital APS-C, full-frame and 35mm SLR cameras.

Full-frame digital SLR/35mm film camera



24mm



70mm

APS-C size camera





24mm (equivalent to 37mm)



70mm (equivalent to 109mm)

\* Tamron's conversion value is 1.55 x.

Di Series SP 24-70mm F/2.8    
 for Canon / Nikon / Sony

**TAMRON**  
 New eyes for industry



Drawing on the beauty of light

Focal length: 70mm Exposure: F/8 1/125 sec ISO100

SP 24-70mm F/2.8 Di VC USD  
 for Canon, Nikon

SP 24-70mm F/2.8 Di USD  
 for Sony



The world's first\* F/2.8 high-speed standard zoom lens with image stabilization. Meet the fully featured high-resolution lens you've been waiting for.

Model A007

For 35mm full-frame digital SLR / 35mm film SLR cameras, with flower-shaped lens hood.

Compatible mounts: Canon, Nikon, Sony\*\*

\* For high-speed standard zoom lens compatible with full frame size SLR cameras. Current as of April 2012. (Source: Tamron).

\*\* The Sony mount does not include VC image stabilization, as Sony digital SLR bodies include this functionality.

Di (Digitally Integrated Design) lens designed for digital APS-C, full-frame, and 35mm SLR cameras.

<http://www.tamron.in>

**Caution:** Please read the instruction manual carefully before using the lens.

A07-EG-112-M-1205-0000

**TAMRON**

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

### TAMRON INDIA PVT. LTD.

#801, 8<sup>th</sup> Floor, Time Tower, M.G. Road, Sector-28, Gurgaon, Haryana  
 Tel.: +91-124-4116812/13/14 Helpline No.: +91-9650061715  
 E-mail: [info@tamron.in](mailto:info@tamron.in) Website: [www.tamron.in](http://www.tamron.in)



**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.

Information valid as of April 2012. Information in this publication may be subject to change at any time.



Focal length: 24mm Exposure: F/4 1/60 sec ISO100

## Play with light as you explore the subtle aspects of beauty. An all-new, high-speed standard zoom lens with image stabilization.

Photographic artists have been waiting for a full-featured, constant-aperture zoom lens. The wait is over. The A007 is a high-quality, highly functional, high-speed standard zoom lens covering the 24–70mm focal range\*1. It includes both Tamron's proprietary VC (Vibration Compensation) image stabilization to reduce shake and its USD (Ultrasonic Silent Drive) motor, enabling speedy, silent autofocus. This SP (Super Performance) series lens makes full use of specialized glass elements in its lens layout, designed with top priority on image quality, including three LD elements and two XR (Extra Refractive Index) glasses. Tamron has minimized all types of chromatic aberration in the A007, making it a lens at the top of its class whether you use it on a digital APS-C, full-frame, or 35mm SLR camera. The A007's F/2.8 aperture enables a balance between brilliant resolution and beautiful soft blur effects. This ideal lens makes full use of Tamron's rounded diaphragm\*2 and the uncontrived, artistic blur that it provides. It is also Tamron's first lens to feature our new moisture-resistant construction. Portraits. Landscapes. Studio shoots. This is the lens for them all. Capture the finest details of your images in precisely the way you have always wanted to. Extend your art to the limits of your inspiration with the A007.

\*1 With SLR cameras corresponding to APS-C, the angle of view based on 35mm equivalent focal length will range from 37mm to 109mm.

\*2 This rounded diaphragm retains a nearly circular shape even when taken two stops down from its fully open state.

## Technologies for Top-flight Definition, Ease of Use.

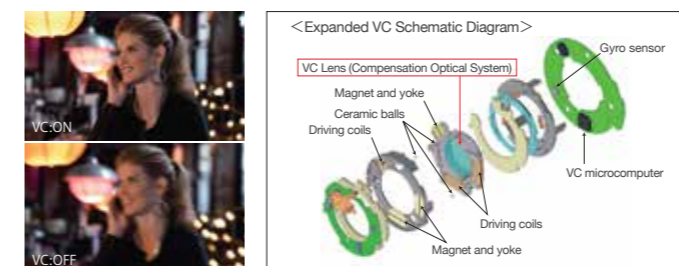
### The world's first\*1 F/2.8 high-speed standard zoom lens with image stabilization. An all new VC (Vibration Compensation).

This F/2.8 high-speed lens is equipped with a VC (Vibration Compensation) system that provides a stable image that seems virtually pasted onto the viewfinder. Even under low-light conditions, handheld shooting without concern for camera shake is made possible. Tamron's VC is a three-coil system, whereby three driving coils activate the shake-compensating VC lens group electromagnetically via three ceramic balls. The VC lens elements are held in place only by contact with the ceramic balls, achieving smooth movement with little friction. This provides a stable viewfinder image with excellent tracking performance.

Tamron's original VC image stabilization mechanism utilized a moving magnet system whereby a heavy magnet was positioned near the moving VC lens element. In the new VC unit the positions of the magnet and the coil are reversed, because of this the VC optical lens element is attached to the coil. The new VC mechanism employs a moving coil mechanism with a lightweight coil, and the lighter coil reduces the load on the drive system. Thus, the lighter, more compact new VC unit contributes to the lens's overall light weight and compact size.

\* VC is also available in the 17-50mm[B005], 18-200mm[B011], 18-270mm[B008], 28-300mm[A20], and 70-300mm[A005] models.

\*1 For high-speed standard zoom lens compatible with full frame size SLR cameras. Current as of April 2012. (Source: Tamron).



Focal length: 64mm Exposure: F/2.8 1/30 sec  
With VC, the photographer can shoot at a shutter speed up to four stops slower.



Focal length: 70mm Exposure: F/2.8  
Aperture fully opened 1/160 sec ISO100



Focal length: 70mm Exposure: F/5.6 1/15 sec ISO400

### Full-time manual focus makes fine tuning easy.

All Tamron lenses have high autofocus precision and are designed to capture subjects easily in almost any situation, yet sometimes a photographer wants to fine tune and make adjustments on the fly. The integration of full time manual focus offers just that: instead of fumbling with switches, photographers can switch from autofocus to manual focus by simply adjusting the focus ring. This feature helps the lens produce impressive results even in telephoto situations where the depth of field is narrow.

### Fast, accurate, quiet focusing.

In the ultrasonic motor, a piezoelectric element arranged in a ring formation generates ultrasonic vibrations in a metallic ring stator, and the vibration energy is used to rotate a metallic ring rotor that is attached to the stator. The rotation energy is in turn transferred from the metallic ring rotor to operate the focus lens. The result is a lens featuring low noise and high-torque, highly responsive, speedy focusing.



<Built-in USD>

### A Tamron First: Moisture-resistant construction.

Moisture-resistant construction is added to help keep water from penetrating the lens. It's ideal for outdoor photography.



<Moisture-resistant construction diagram>