



## Tamron SP 90mm F/2.8 VC USD MACRO 1:1 VC USD “The rebirth of a classic”

With a heritage spanning over 30 years, the Tamron 90mm Macro lens has a great Legacy, and now with the launch of the new **SP 90mm F/2.8 MACRO 1:1 Di VC USD** lens the legacy is ready for a new chapter.

The new 90mm VC USD lens inherits many of the outstanding features of its predecessor, however is now improved with an enhanced VC image stabilization with XY-Shift compensation making handheld shots even easier from infinity to Macro. The near silent USD focusing system has also been improved and fine-tuned to give outstanding speed and control, regardless of whether you are focusing at infinity, or at macro distances where the USD focusing continues to compensate for slight movements common with handholding at short distances.

The construction of the lens now includes a newly designed all-metallic barrel as part of Tamron's “New SP” design, with larger switches which are reconfigured for smoother function. Tamron have incorporated a new standard of Moisture-Proof & Dust-Resistant construction that assures even more wide-ranging opportunities for using this lens, plus Tamron's Fluorine coating which is applied to the front element to help repel water & oil, makes the front element easy to keep clean & condensation free.

This new 90mm VC USD lens will also be the first Tamron lens incorporating the facility for users to update firmware, customize autofocus positions and adjust the mechanical setup and preferences of the lens by simply attaching it to the optional TAMRON TAP-in Console and connecting it via USB to a personal computer. This TAP-in console will be released in March 2016.

The Canon and Nikon mount models will be launched simultaneously.

The launch date of the Sony\* mount model will be announced at a later date.

\*The Sony mount model does not include VC (Vibration Compensation), since the bodies of Sony DSLR cameras include built-in image stabilization functionality. The name of the Sony mount model is “SP 90mm F/2.8 Di MACRO 1:1 USD” without the VC designation.

### PRODUCT HIGHLIGHTS

#### 1. Built upon the outstanding optical performance of the legendary Tamron 90mm Macro

The new 90mm VC USD lens (Model F017) delivers excellent resolving power and remarkably soft background blur effects (*bokeh*). The advanced construction includes one LD (Low Dispersion) glass element and two XLD (eXtra Low Dispersion) glass elements. These special elements optimally compensate for on-axis and lateral chromatic aberrations from macro through to infinity. Furthermore, the optical design ensures the best imaging performance at any range by adopting the Floating System that shifts the location of a group of elements to the best possible position as the focusing group travels relative to shooting distances. From 1:1, life-size close-ups to the most distant horizon, this new 90mm Macro lens achieves outstanding image quality.

#### 2. VC enhanced with shift compensation

An accelerometer has been integrated into Tamron's highly accredited VC (Vibration Compensation) to compensate for movement on the x-y plane. In unison with a gyro sensor, the accelerometer detects and enables motion compensation for camera shake, providing maximum efficiency in image stabilization optimized for all distance ranges from infinity to macro.

#### 3. USD actuator maximized for macro photography is fast, accurate and quiet

With improved focusing speed and accuracy, the latest USD (Ultrasonic Silent Drive) focusing system quickly addresses any out-of-focus condition caused by back-and-forth camera movement (which commonly occurs during macro photography) ensuring better results when shooting at close range.

#### 4. Moisture-Proof and Dust-Resistant Construction

Special seals provide stronger protection against the intrusion of dirt, dust and moisture around switches and the boundary between the focus ring and the lens barrel. This latest advance over the Moisture-Resistant Construction used previously, provides additional protection & assures even more wide-ranging opportunities for using this lens.

#### 5. A durable Fluorine Coating on the front element repels water and fingerprints

The Fluorine Coating is a water and oil repellent coating applied to the front element surface making it much easier to keep clean & remove dust & deposits with ease.

## 6. Advanced coating technology reduces flare and ghosting

Two advanced coating technologies, both providing outstanding anti-reflection performance, are applied to critical element surfaces for maximum light transmission. eBAND (Extended Bandwidth & Angular-Dependency) Coating boasts outstanding anti-reflection performance across nearly the entire range of visible rays, and BBAR (Broad-Band Anti-Reflection) Coating utilizes traditional multi-layered, anti-reflection technology. This combination virtually eliminates extraneous reflections and substantially reduces ghosting and flare which enables the lens to achieve flawless, crystal clear images.

## 7. Use of circular aperture to achieve beautiful, rounded blur effects (*bokeh*)

The 9-blade diaphragm retains a nearly perfect circular opening when stopped down by just two stops, creating beautiful circular highlight blur (*bokeh*) for pinpoints of light in the out of focus background. In combination with the optical design, spectacular background blur effects can be achieved.

## 8. Focusing options perfectly suited to a macro lens

The new 90mm macro has a focus limiter that makes it possible to shorten the time for accurately focusing on a subject when the working range is known. The lens also features an Internal Focusing system, so the overall length of the lens never changes, not even when focusing. As a result, the user is assured of a comfortable working distance of at least 139 mm (5.5 in.) from the front of the lens. In addition, the lens is equipped with a Full-time Manual Focus override mechanism which makes it possible to flexibly choose focal points. Even with the AF driving system in action, it is possible to instantaneously override it to make manual fine focusing adjustments without switching the AF-MF mode back and forth.

## 9. Compatibility with TAMRON TAP-in Console

You can update firmware, customize autofocus positions and adjust the mechanical setup and preferences of the 90mm lens by simply attaching it to the TAMRON TAP-in Console and connecting it via USB to a personal computer. (The TAP-in Console is an optional accessory that will be released in March.)

## 10. Digital image editing software optimized for Tamron lenses

Included in the new 90mm macro package is SILKYPIX Developer Studio, a popular RAW conversion and editing program preloaded with correction menus for various aberrations based on the optical data that pertains exclusively to Tamron's SP Series lenses. In addition, lens profile information has been supplied to Adobe Systems, Inc. to facilitate selecting the precise lens data required for more sophisticated adjustments in RAW processing when using Adobe Photoshop and Lightroom.

## NEW SP Design Concept

Beginning with the SP 35mm and SP 45mm, Tamron has utilized a new design concept to enhance the outstanding performance provided by the SP Series lenses. Our attention to every engineering detail has resulted in the most advanced optical and electro-mechanical designs being incorporated in SP Series lenses, creating a new benchmark for high performance and visual elegance. The design philosophy embraces the importance of comfortable, ergonomic operation and positive tactile feedback, crucial factors in all types of photography. The newly designed all-metallic barrel features an embedded concave ring at the base of the lens—for a firm hold and comfort necessary for a steady shot. Switches are larger and reconfigured for smoother function and the typeface has been redesigned for intuitive legibility.

Focal Length	: 90mm
Maximum Aperture	: F/2.8
Angle of View (diagonal)	: 27°2' (for full-frame format) : 17°37' (for APS-C format)
Optical Construction	: 14 elements in 11 groups
Minimum Object Distance	: 0.3m
Maximum Magnification Ratio	: 1:1
Filter Size	: $\phi$ 62mm
Maximum Diameter	: $\phi$ 79mm
Length*	: for Canon 117.1mm. for Nikon 114.6mm
Weight	: for Canon 610g. for Nikon 600g
Aperture Blades	: 9 (circular diaphragm)
Minimum Aperture	: F/32
Image Stabilization Performance	: 3.5 stops (For Canon : EOS-5D MarkIII is used / For Nikon : D810 is used)
Standard Accessories	: Lens hood, Lens caps
Compatible Mounts	: Canon, Nikon, Sony**

\* Length is the distance from the front tip of the lens to the lens mount face.

\*\* The Sony mount version does not include VC since Sony digital SLR bodies incorporate built-in image stabilization functionality.