

## Fixed-Focal Lenses for Machine Vision use: Full 6-Mega-pixel Resolution for 1/1.7" Imagers in a Compact Size of $\phi 29\text{mm}$

- 1/1.7" 6 mm F/2.4 (Model : M117FM06)    ■ 1/1.7" 8mm F/2.4 (Model : M117FM08)
- 1/1.7" 12mm F/2.4 (Model : M117FM12)    ■ 1/1.7" 16mm F/2.4 (Model : M117FM16)
- 1/1.7" 25mm F/2.4 (Model : M117FM25)    ■ 1/1.7" 35mm F/2.4 (Model : M117FM35)
- 1/1.7" 50mm F/2.8 (Model : M117FM50)

NEW



For

**IMX537** 1/1.8" 5mega

**IMX547** 1/1.8" 5mega

**IMX567** 1/1.8" 5mega

2.74 $\mu\text{m}$

For

**IMX178** 1/1.8" 6mega

2.4 $\mu\text{m}$

### Main Features

- > Unrivalled High Contrast and High Resolution in the Industry**

  - The new lenses are compatible with 1/1.7" 2.4 $\mu\text{m}$  pixel-pitch 6-mega (max) pixel imagers, while assuring the highest resolution and contrast in  $\phi 29\text{mm}$  machine-vision lenses.  
(\*  $\phi 29\text{mm}$ : Excluding the objective-end of the lens)

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- > Industry-leading Low Distortion (TV Distortion)**

  - Tamron's state-of-the-art optics technology achieves drastic improvement in TV distortion compared with previous models.

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- > High-Quality Imaging in Close-up Shooting Distance**

  - The new lens provides high-quality imaging in commonly used close-up distances.

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- > Rugged Mechanical Design for Anti-Vibration and Shock**

  - Newly designed mechanism improves anti-vibration and shock performance compared with previous models. Even under a severe machine-vision setup with as much as max 10G vibrations and shocks, the new mechanism limits optical (image) deflection within 10 $\mu\text{m}$ .  
\*Vibration frequency 10-60Hz (amplitude 0.75mm), vibration frequency 60-200Hz (acceleration 100m/s<sup>2</sup>), and number of cycles: 50 cycles.

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- > A Commonly used Setscrew is Included as a Standard Accessory**

  - A lock-screw used in previous models can be replaced with an embedding-type setscrew, reducing the diameter of the lens barrel for further compact installation.

Model	M117FM06	M117FM08	M117FM12	M117FM16
Imager Size	1/1.7"			
Mount Type	C			
Focal Length	6mm	8mm	12mm	16mm
Aperture Range	F/2.4 ~ F/16			
Field of View Angle (H × V)	1/1.7"	65.0°×50.5°	52.2°×39.5°	34.3°×25.9°
	1/1.8"	64.2°×44.9°	50.9°×35.1°	33.7°×22.9°
Focusing Range	0.1m ~ ∞			
Operation	Focus	Manual w/Lock		
	Iris	Manual w/Lock		
Filter Size	M34 P=0.5mm	M30.5 P=0.5mm	M27 P=0.5mm	
Wave Length	Visible Light			
TV Distortion	-1.02% *	-0.85% *	-0.42% *	-0.1% *
Weight	50g	48g	40g	40g
Operating Temperature	-20°C ~ +60°C			

Model	M117FM25	M117FM35	M117FM50
Imager Size	1/1.7"		
Mount Type	C		
Focal Length	25mm	35mm	50mm
Aperture Range	F/2.4 ~ F/16		F/2.8 ~ F/16
Field of View Angle (H × V)	1/1.7"	17.4°×13.1°	12.6°×9.5°
	1/1.8"	17.1°×11.5°	12.4°×8.4°
Focusing Range	0.1m ~ ∞		0.2m ~ ∞
Operation	Focus	Manual w/Lock	
	Iris	Manual w/Lock	
Filter Size	M27 P=0.5mm		
Wave Length	Visible Light		
TV Distortion	-0.1% *	-0.06% *	-0.01% *
Weight	45g	65g	60g
Operating Temperature	-20°C ~ +60°C		

\* Design Value

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Tamron is certified with international standards: ISO 9001 for quality and ISO14001 for environmental management at its headquarters, domestic sales offices, China plant as well as production facilities in Aomori, Japan, and is fully committed to striving for continued and sustainable improvement at all levels and facets of its business operations.