

TAMRON®

Enhanced close-focusing performance

Ultra high resolution

Distortion minimized

Ultra High Performance Fixed-Focal Lenses for Industrial Applications Compatible with Mega Pixel Cameras



f=16mm F/1.4
Model **23FM16SP**



f=25mm F/1.4
Model **23FM25SP**



f=50mm F/2.8
Model **23FM50SP**

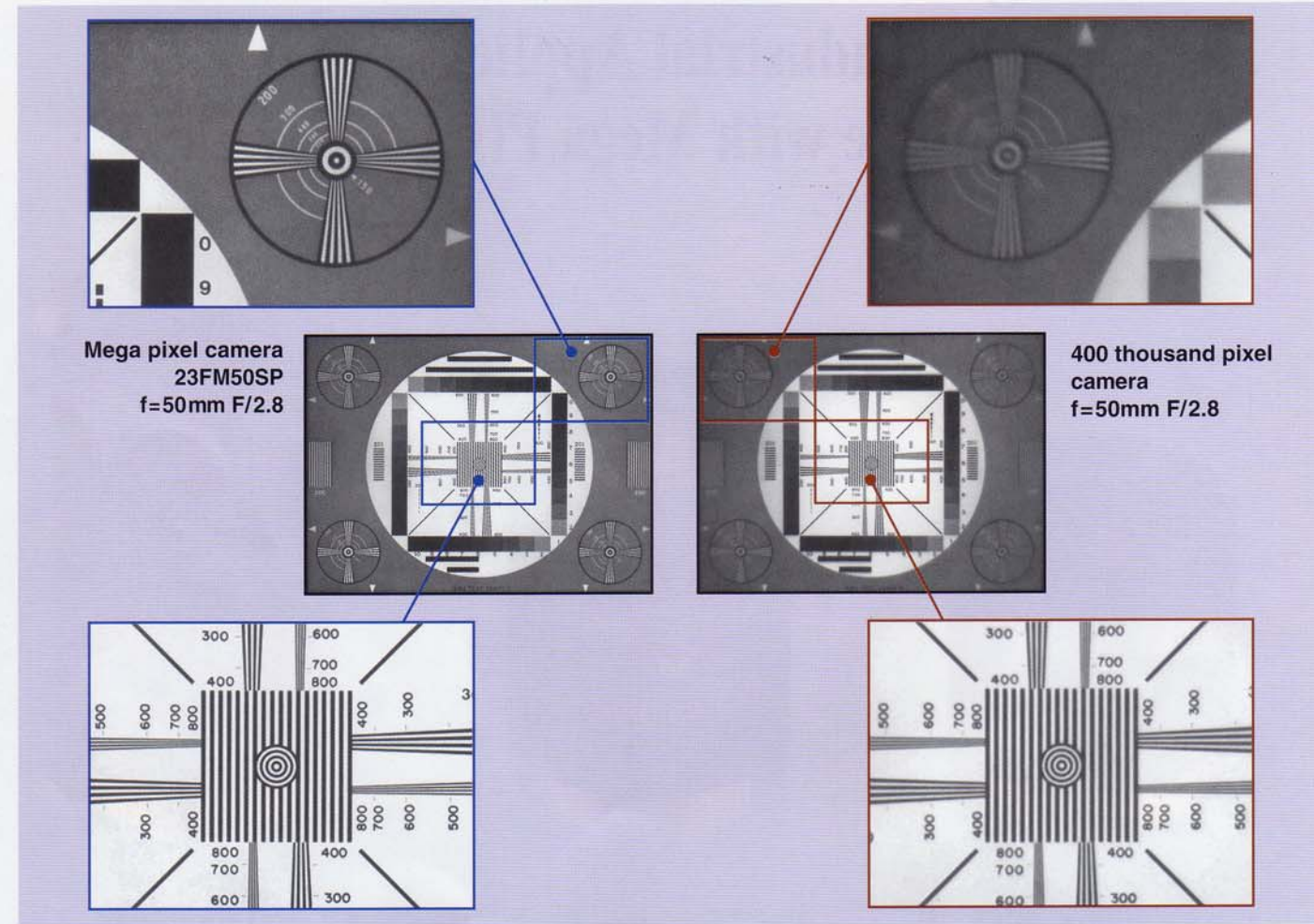
Ultra high performance image processing lenses
for FA (Factory Automation) and Machine Vision applications
requiring outstanding optical quality - performance in the periphery,
not to mention the center, is greatly enhanced.

By virtue of the latest state-of-the-art technologies packed in compact chassis, Tamron's Mega Pixel Ultra High Performance Fixed-Focal Lenses provide outstanding optical quality and enhanced performance in close-focusing situations for meet a variety of image processing applications.

Ultra high performance / Enhanced performance in close-focusing range

Performance in the close focusing range is greatly improved in order to enhance use in actual application environments. Thanks to reduced minimum object distances, the use of troublesome close-up rings can

be avoided. In addition, high optical performance that meet the needs of mega pixel cameras (cameras having 1.3 million pixels) featuring 2/3" or smaller imagers is achieved.



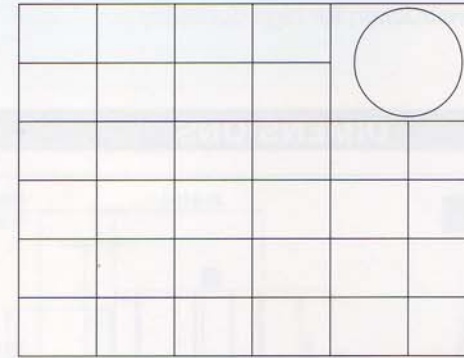
Mega pixel camera
23FM50SP
f=50mm F/2.8

400 thousand pixel camera
f=50mm F/2.8

Distortion is minimized

Distortion, an archenemy in image processing, is compensated for to the absolute minimum.

●23FM16SP:-0.1% ●23FM25SP:-0.05% ●23FM50SP:-0.01%



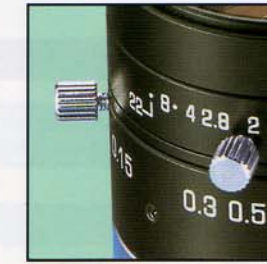
High performance, yet compact

Compact designs measuring a mere 34mm (1.3in.) in outer diameter and high optical performance are reconciled. In addition, since the three models use the same 30.5mm filter thread, common accessories can be used any time there is a change of line settings.



Lock mechanisms

Lock mechanisms, employed in conventional products and favorably received, are now added to the focus and iris control rings respectively. Disengagement of focus and iris settings are prevented even under environments where fierce vibration is applied.



23FM16SP



23FM25SP



23FM50SP

Rugged construction

The lenses feature rugged mechanical construction so that the same initial performance level can be maintained for a long period of time.

Ultra High Performance Fixed-Focal Lens Line-up for Industrial Applications



26HA



22HA



219HA/HB *Type HB comes with Focus/Iris Lock.



25HA/HB *Type HB comes with Focus/Iris Lock.

Model	26HA	22HA	219HA/HB *Type HB comes with Focus/Iris Lock.	25HA/HB *Type HB comes with Focus/Iris Lock.
Imager Size	2/3	2/3	2/3	2/3
Mount Type	C	C	C	C
Focal Length	25mm	6.5mm	8mm	12mm
Aperture Range	1.4 to Close	1.4 to Close	1.4 to 16	1.8 to 16
Angle of View (Horizontal X Vertical)	2/3": 19.9° x 15.0°, 1/2": 14.6° x 10.9°, 1/3": 10.9° x 8.2°	2/3": 71.6° x 55.5°, 1/2": 53.9° x 41.0°, 1/3": 41.0° x 31.0°	2/3": 59.3° x 45.2°, 1/2": 43.6° x 33.1°, 1/3": 33.1° x 25.0°	2/3": 40.9° x 30.8°, 1/2": 30.0° x 22.4°, 1/3": 22.4° x 16.6°
Focusing Range	0.6m to ∞	1.5m to ∞	0.26m to ∞	0.26m to ∞
Operation	Focus : Manual / Iris : Manual	Focus : — / Iris : Manual w/Lock	Focus : Manual / Iris : Manual	Focus : Manual / Iris : Manual
Filter Size	M40.5 P=0.5mm	M35.5 P=0.5mm	M25.5 P=0.5mm	M25.5 P=0.5mm
Back Focus	13.69mm	13.00mm	11.60mm	11.03mm
Weight	145g	60g	40g (HB:48g)	40g (HB:46g)
Operating Temperature	-10 to +50°C	-5 to +50°C	-10 to +45°C	-10 to +45°C



17HD/HF *Type HF comes with Focus/Iris Lock.



20HA/HC *Type HC comes with Focus/Iris Lock.



21HA/HC *Type HC comes with Focus/Iris Lock.



35HB



1A1HA/HB *Type HB comes with Focus/Iris Lock.

Model	17HD/HF *Type HF comes with Focus/Iris Lock.	20HA/HC *Type HC comes with Focus/Iris Lock.	21HA/HC *Type HC comes with Focus/Iris Lock.	35HB	1A1HA/HB *Type HB comes with Focus/Iris Lock.
Imager Size	2/3	2/3	2/3	2/3	2/3
Mount Type	C	C	C	C	C
Focal Length	16mm	25mm	50mm	35mm	75mm
Aperture Range	1.4 to 16	1.6 to 16	2.8 to 22	2.1 to 22	3.9 to 32
Angle of View (Horizontal X Vertical)	2/3": 30.9° x 23.2°, 1/2": 22.5° x 16.9°, 1/3": 16.9° x 12.7°	2/3": 20.0° x 15.0°, 1/2": 14.6° x 11.0°, 1/3": 11.0° x 8.2°	2/3": 10.0° x 7.5°, 1/2": 7.3° x 5.5°, 1/3": 5.5° x 4.1°	2/3": 14.3° x 10.8°, 1/2": 10.4° x 7.8°, 1/3": 7.8° x 5.9°	2/3": 6.9° x 5.2°, 1/2": 5.0° x 3.5°, 1/3": 3.5° x 2.5°
Focusing Range	0.29m to ∞	0.21m to ∞	0.44m to ∞	0.3m to ∞	0.5m to ∞
Operation	Focus : Manual / Iris : Manual	Focus : Manual / Iris : Manual	Focus : Manual / Iris : Manual	Focus : Manual w/Lock / Iris : Manual w/Lock	Focus : Manual / Iris : Manual
Filter Size	M25.5 P=0.5mm	M25.5 P=0.5mm	M25.5 P=0.5mm	M25.5 P=0.5mm	M25.5 P=0.5mm
Back Focus	11.85mm	11.60mm	22.10mm	15.53mm	27.12mm
Weight	50g (HF:48g)	37g (HC:40g)	50g (HC:52g)	44g	64g (HB:68g)
Operating Temperature	-5 to +50°C	-10 to +45°C (HC:-5 to +50°C)	-10 to +45°C (HC:-5 to +50°C)	-10 to +60°C	-10 to +60°C (HB:-10 to +70°C)

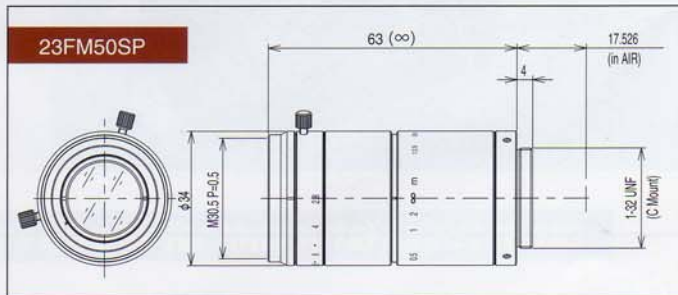
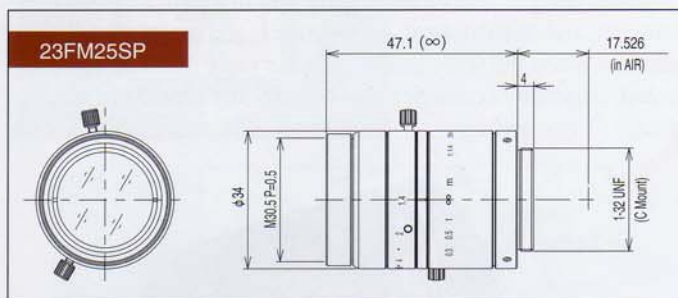
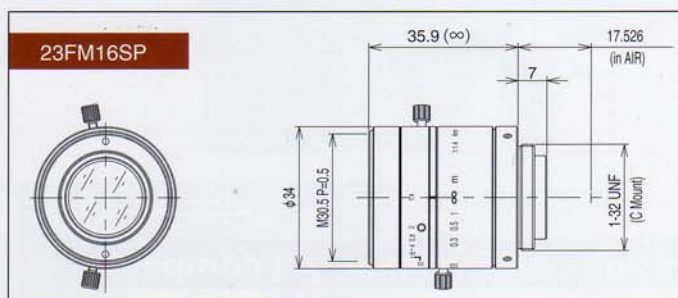
Tamron Fixed-Focal Lenses Are Ultra High Performance Lenses for FA/Image Processing Applications Requiring High Optical Quality.

- Optical performance compatible with mega pixel (1.3 million pixel) cameras
- Enhanced optical performance in the periphery, as well as the center
- Compact design and high optical performance
- Respond to the needs of a variety of image processing applications thanks to enhanced close focusing performance
- Feature lock mechanisms on both focus and iris control rings
- Rugged construction for high durability

SPECIFICATION

	23FM16SP f=16mm F/1.4	23FM25SP f=25mm F/1.4	23FM50SP f=50mm F/2.8
Imager Size	2/3"		
Mount Type	C		
Focal Length	16mm	25mm	50mm
Aperture Range	1.4-22		2.8-32
Angle of View 2/3" (Horizontal X Vertical)	30.9° x 23.4°	20.0° x 15.1°	10.1° x 7.6°
Minimum Object Distance	0.15m		0.2m
TV Distortion	-0.1%	-0.05%	-0.01%
Operation	Focus	Manual w/Lock	
	Iris	Manual w/Lock	
Filter Size	M30.5 P=0.5mm		
Back Focus (in air)	11.54mm	17.17mm	34.46mm
Weight	80g	103g	117g
Operating Temperature	-10 to +60°C		

DIMENSIONS



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

TAMRON®

Manufacturer of lenses of photographic, industrial, laboratory, video, and scientific applications.

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ISO 9001 Certified
 Tamron operates a quality management system that has been certified as conforming to ISO 9001.

ISO 14001 Certified
 Tamron operates an environmental management system that has been certified as conforming to ISO 14001.

