

Machine Vision Camera Lens

FUJINON CF-ZA-1S series

4D
High Resolution

Anti
Shock & Vibration

HRI
Optical Design



3.45 μ m
pixel pitch*1

*1 max, 2.5 μ m pixel pitch

1.0" ~ 1.1"
Best for IMX253 / 255

Compact
Diameter 39mm

	CF8ZA-1S	CF12ZA-1S	CF16ZA-1S	CF25ZA-1S	CF35ZA-1S	CF50ZA-1S
Focal length (mm)	8mm	12mm	16mm	25mm	35mm	50mm
Iris range (F. no)	F1.8-F16			F2.4-F16		
Angle of view	85.7° × 67.5°	62.5° × 47.8°	47.3° × 36.1°	32.9° × 24.8°	23.0° × 17.3°	16.6° × 12.5°
Working Distance*2	∞ - 0.1m			∞ - 0.2m		
Operation of focus	Manual					
Operation of iris	Manual					
Filter thread (mm)	M52×0.75	M37.5×0.5				
Mount	C-mount					
Weight (approx.) (g)		180		170	165	155
Sensor size (max.)	1.1"					
Chief Ray Angle(°)	4.5		4.9	2.7	4.5	4.8
TV distortion [%]	-4.81	-2.82	-0.80	-0.83	-0.32	-0.17
Dimension (mm)	Φ54×67	Φ39×67.6		Φ39×67.3		Φ39×68

*2 From front of lens barre

For more information, please check the special website.
Note: You can download the specification sheet and the drawing data.

Fujinon machine vision 

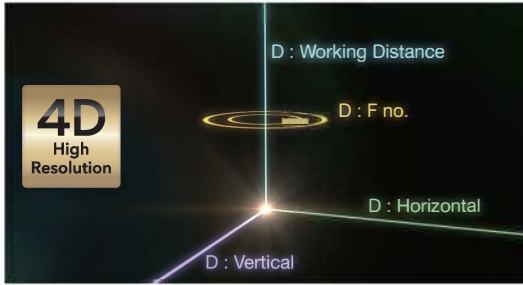
URL: <http://mvlens.fujifilm.com/en/>

CF-ZA-1S Main Function

Function 1 4D High Resolution

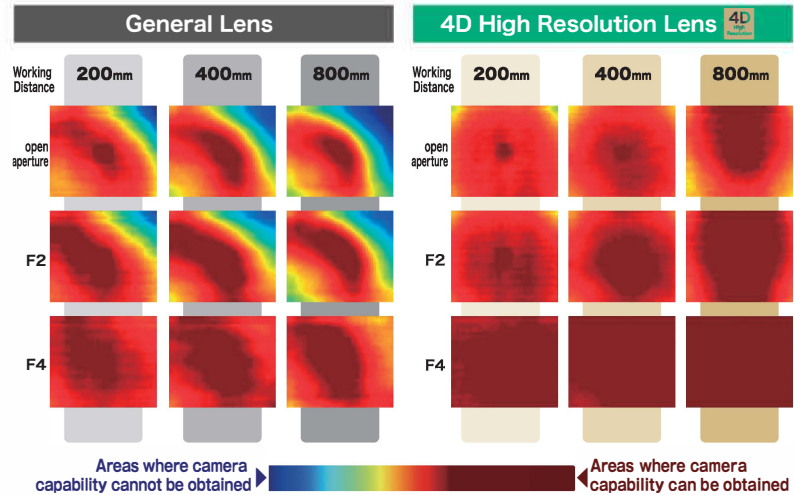
4D
High Resolution

Maintain the high resolution from center to corner even when the working distance and F-value are changed.



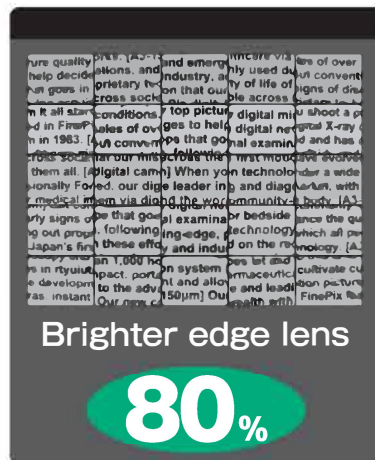
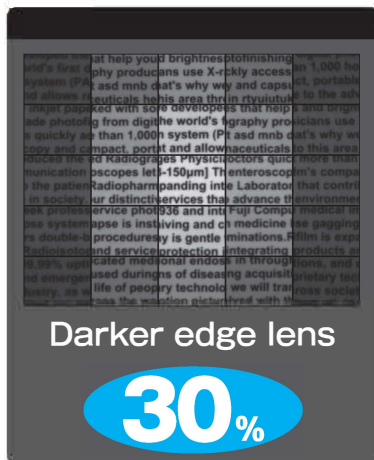
- 2D : Vertical / Horizontal of screen (Center to Corner)
- 1D : Working Distance
- 1D : F:No

FUJINON 4D High Resolution Corresponds to every installation environment.



Function 2 HRI (High Relative Illumination) Optical Design

HRI
Optical Design



- This lens achieves a high relative illumination of 90% or more.
- Achieves a high relative illumination of 80% or more.(Final image through CMOS sensor) That was achieved by making the CRA (Chief Ray Angle) less than 5 degrees from our original optical design.
- CH-ZA series are bright lenses from the center to the corner. Therefore, correction of the peripheral light intensity is unnecessary in all applications. Moreover, it prevents false recognition of noise caused by electronic correction. They are ideal for efficient and reliable inspection applications. that noise caused by correction is generated. It is ideal for efficient and reliable inspection applications.

Function 3 Anti Shock & Vibration

Anti Shock & Vibration

- Less than 10um optical axis shift under 10G shock.
- By passing IEC 60068-2-6 test, the resolution is maintained.
- "Focus" and "Iris" can be adjusted even though the lenses still meet the Anti Shock and Vibration requirements.

Detail information for Anti Shock & Vibration, Please check the special website



Function 4 Individual Quality Control

The FUJINON lens factory has developed its own inspection system and quantify lens performance. Each lens is given a serial number and its performance is recorded for individual quality control.

