SPECIM

A Konica Minolta Company

Specim FX50 FOV24 lens specifications

1. Technical specifications

1.1. General information

Spectral camera	Specim FX50
Wavelength range (µm)	3.0 - 5.0
Product code	06FOB10010

1.2. Specifications with spectral camera

PARAMETER	VALUE	COMMENT
Nominal working distance (mm)	1000	Working distance used for all specifications
Field of view (deg)	25	Nominal value
Entrance pupil position (mm)	25.6	From the first lens surface
Working distance (mm)	300 - ∞	Distance from the object to the first lens surface
Minimum object length (mm)	131	Object length at minimum working distance
Adjustable focus	Yes	Focus can be adjusted and locked
Filter thread	M30 x 0.35	
Lens mount	Custom	
Resolution (pix)	1.6	Average over all field points and wavelengths
MTF (%) at 30 lp/mm	41	
Maximum distortion (%)	-0.0	

1.3. Specifications for lens only (A) and lens with spectral camera (B)

PARAMETER	A	B	COMMENT
Image width (mm)	19.2	9.6	
Effective focal length (mm)	43.1	21.6	At infinite working distance; tolerance ± 1%
Working F-number	4.1	2.0	

All specification values given above are valid at the nominal working distance if not stated otherwise.
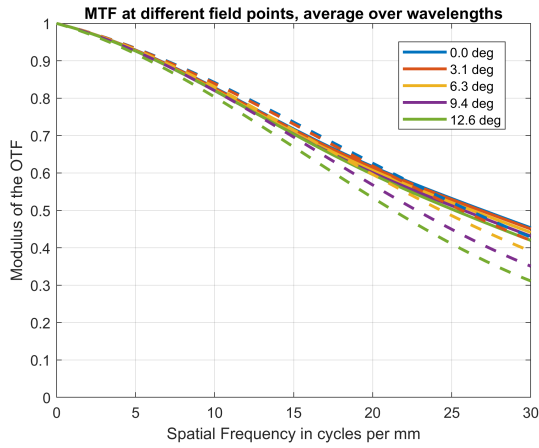
2. Figures

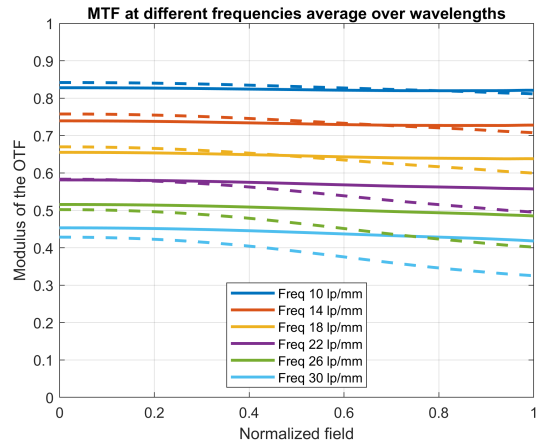Figure 1. MTF averaged over wavelengths as a function of frequency.

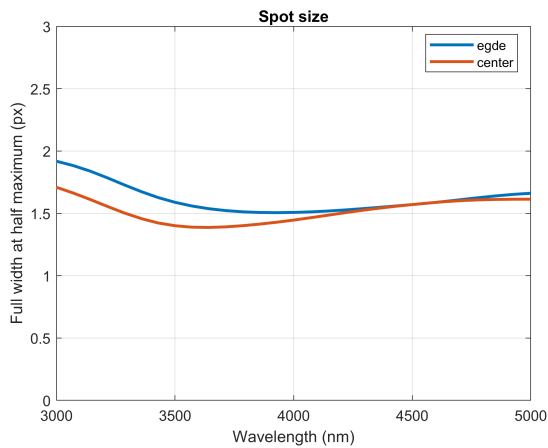Figure 2. MTF averaged over wavelengths as a function of normalized field.

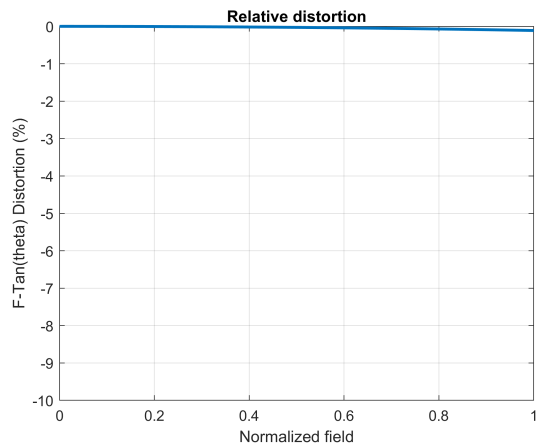Figure 3. Full width at half maximum of the spatial spot as a fuction of wavelength.

Figure 4. Relative distortion as a function of normalized field.

All specification values given above are valid at the nominal working distance if not stated otherwise.

Specim reserves the right to change, modify, or remove content or spefication at any time or for any reason at our sole discretion without prior notice.

2

3. Object dimensions and depth of field at different working distances

WORKING DISTANCE (CM)	NOMINAL OBJECT DIMENSIONS		DEPTH OF FIELD (MM)
	ACROSS TRACK / LENGTH (MM)	ALONG TRACK / WIDTH (MM)	
30	131	0.7	13
40	175	0.9	22
50	220	1.2	34
60	264	1.4	49
70	309	1.6	66
80	354	1.8	86
90	398	2.0	110
100	443	2.3	130
150	665	3.4	300
200	888	4.5	540
300	1330	6.7	1200
500	2230	11.1	3700