Specim FX17 NIRMacro lens specifications

1. Technical specifications

1.1. General information

Spectral camera	Specim FX17
Wavelength range (µm)	0.9 - 1.7
Product code	606167

1.2. Specifications with spectral camera

PARAMETER	VALUE	COMMENT
Magnification	1 : 1	
Working distance (mm)	18	Distance from the object to the first lens optical surface
Clearance (mm)	13	Distance from the object to the first lens mechanical surface
Nominal object length (mm)	12	
Entrance pupil position (mm)	191.3	From the first lens optical surface
Adjustable focus	No	
Filter thread	-	
Lens mount	Custom	
Resolution (pix)	1.6	Average over all field points and wavelengths
MTF (%) at 30 lp/mm	36	
Maximum distortion (%)	-0.4	
Minimum relative illumination (%)	94	

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

PARAMETER	A	B	COMMENT
Image width (mm)	12.0	9.6	
Effective focal length (mm)	53.7	43.1	At infinite working distance; tolerance ± 1%
Working F-number	2.1	1.7	
Average transmission (%)	79	-	
Dimensions (mm)	49 x 128	-	Diameter x Length

2. Figures

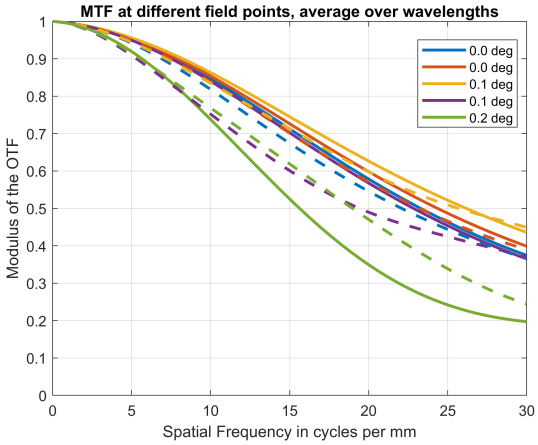

Figure 1. MTF averaged over wavelengths as a function of frequency.

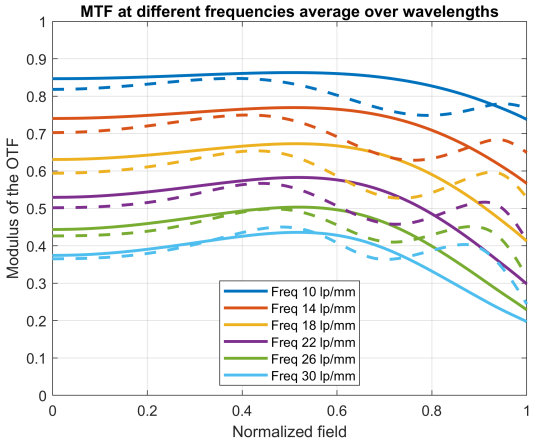

Figure 2. MTF averaged over wavelengths as a function of normalized field.

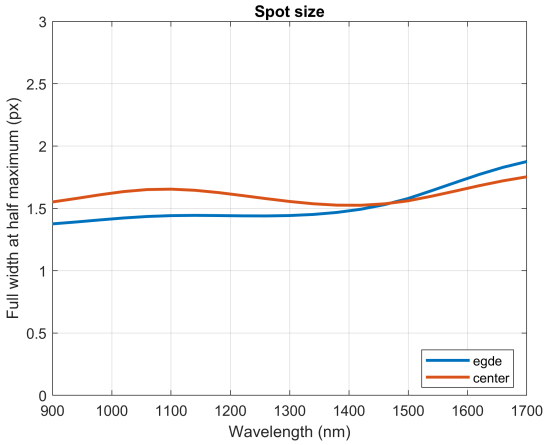

Figure 3. Full width at half maximum of the spatial spot as a fuction of wavelength.

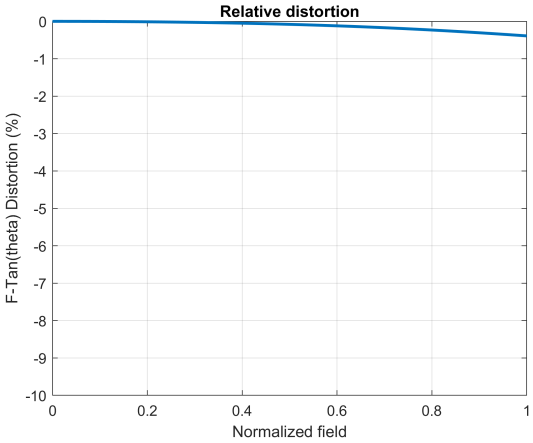

Figure 4. Relative distortion as a function of normalized field.

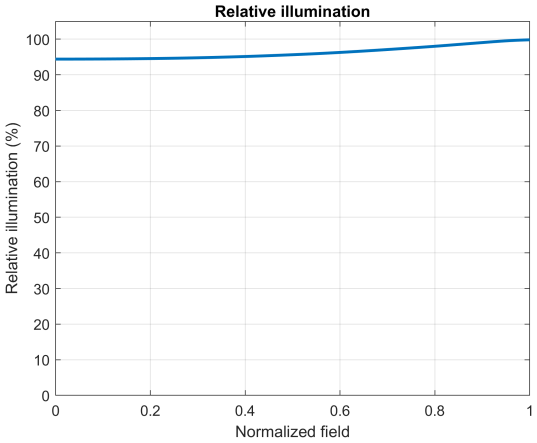

Figure 5. Relative illumination as a function of normalized field.

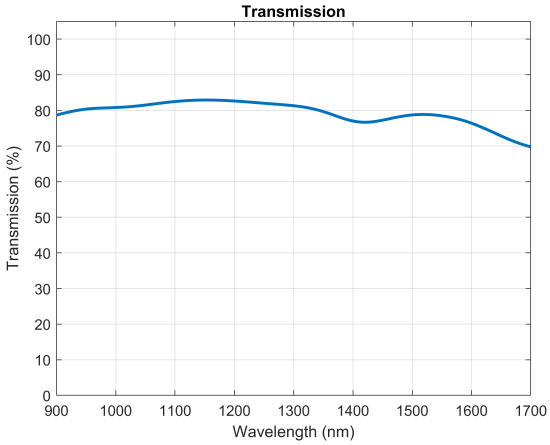

Figure 6. Transmission as a function of wavelength (lens only).

3. Object dimensions and depth of field

	NOMINAL OBJECT DIMENSIONS		
WORKING DISTANCE (MM)	ACROSS TRACK / LENGTH (MM)	ALONG TRACK / WIDTH (MM)	DEPTH OF FIELD (MM)
18	12	0.2	0.19