LENS OB-SWIR35/1.4 – P/N C0411

General Description

This family of high resolution SWIR lenses image from 0.9 – 2.3 μm making them especially well-suited for PCB inspection, special laser applications, surveillance and alignment and tracking. A high F/N and excellent transmission characteristics allow superior imaging in these wavelengths of interest.

Optical and mechanical parameters

Focal length	35 mm
Image format (diagonal)	32.8 mm
F.O.V. (diagonal)	50.2 degrees
Max aperture	F/N = 1.4
Object format	N.A.
Min working distance	3000 mm
Zoom value	N.A.
Focus	Manual
Iris	Max F/N = 1.4 Min F/N =22

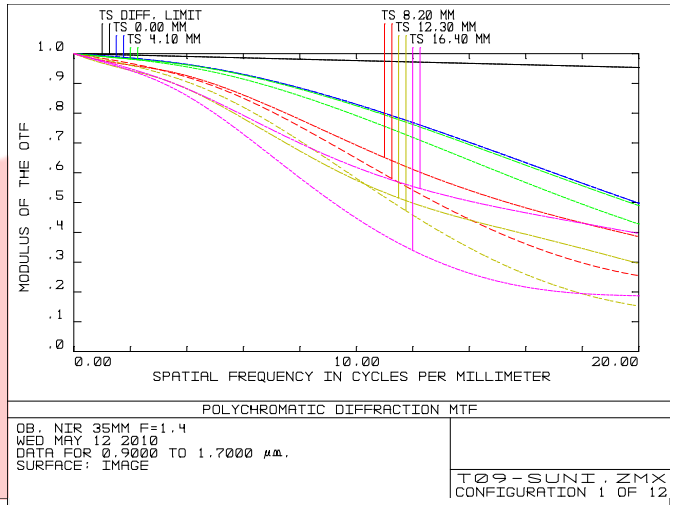
N. of elements	10
Dimensions	Dia 100 x 135 mm
Weight	1.2 Kg
Options	
Motorized focus	Upon request
Motorized iris	Upon request
Motorized zoom	N.A.
Other mount type	Upon request
Customization	Upon request

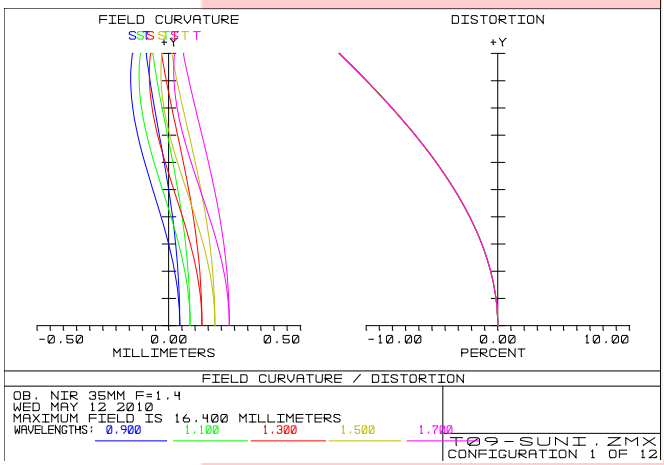
P/N	***wavelength range***	***mount type***	***note***
C0411.001	900-1700 nm	Canon FD	Without iris diaphragm
C0411.002		Nikon	
C0411.003		M42 Screw	
C0411.051		Canon FD	With iris diaphragm
C0411.052		Nikon	
C0411.053		M42 Screw	
C0411.005	1700-2300 nm	Canon FD	Without iris diaphragm
C0411.006		Nikon	
C0411.007		M42 Screw	

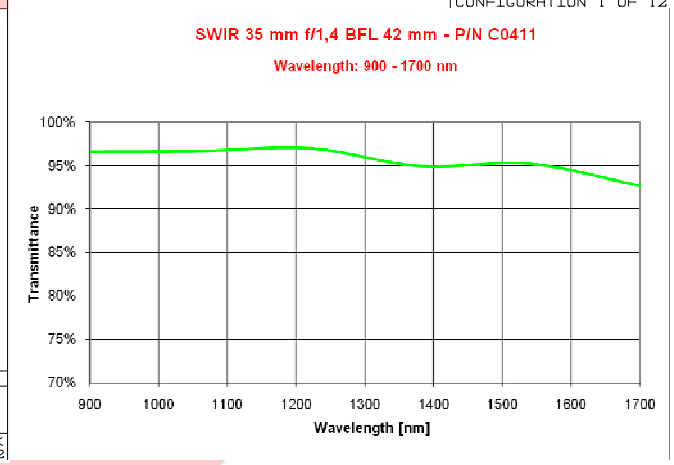
P/N	wavelength range	mount type	note
C0411.055	1700-2300 nm	Canon FD	With iris diaphragm
C0411.056		Nikon	
C0411.057		M42 Screw	
C0411.010	900-2300 nm	Canon FD	Without iris diaphragm
C0411.011		Nikon	
C0411.012		M42 Screw	
C0411.060	900-2300 nm	Canon FD	With iris diaphragm
C0411.061		Nikon	
C0411.062		M42 Screw	

MTF, Field Curvature, Distortion and Transmission from 900 to 1700 nm

The calculated MTF values are displayed below and are verified at the maximum F/N and the best focus plane. The colored lines represent the F.O.V. starting from the center (0%) to the corner (100%).







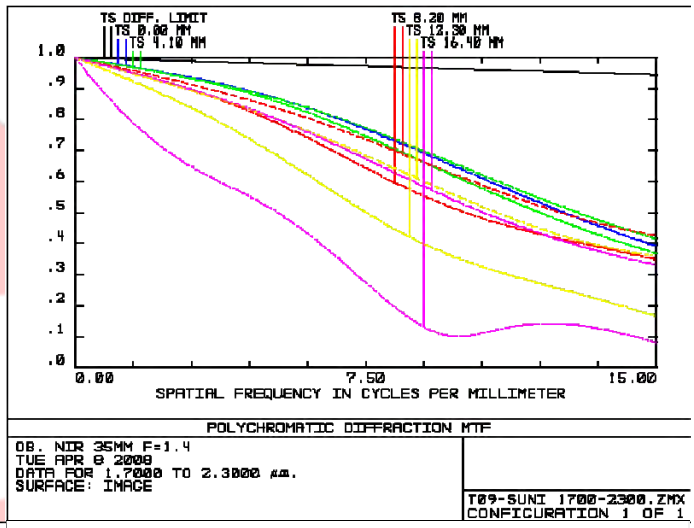
Optical parameters for wavelength range 0.9 – 1.7 µm

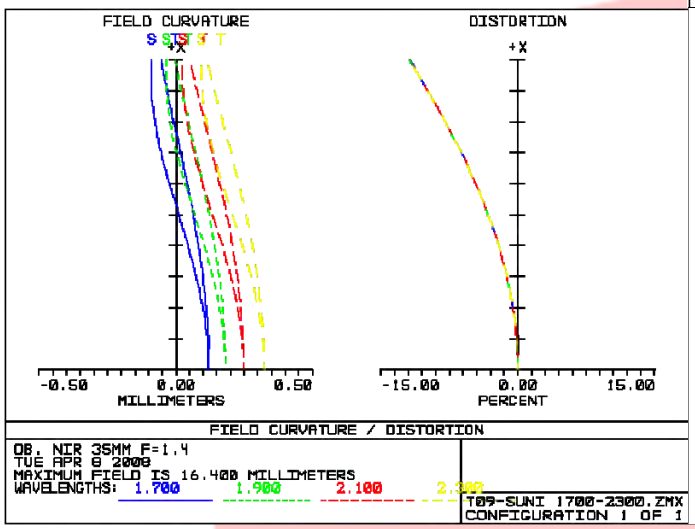
Resolution	MTF > 15%@20lp/mm
Distortion	< 12%
Average axial chromatic aberration	<0.05 mm

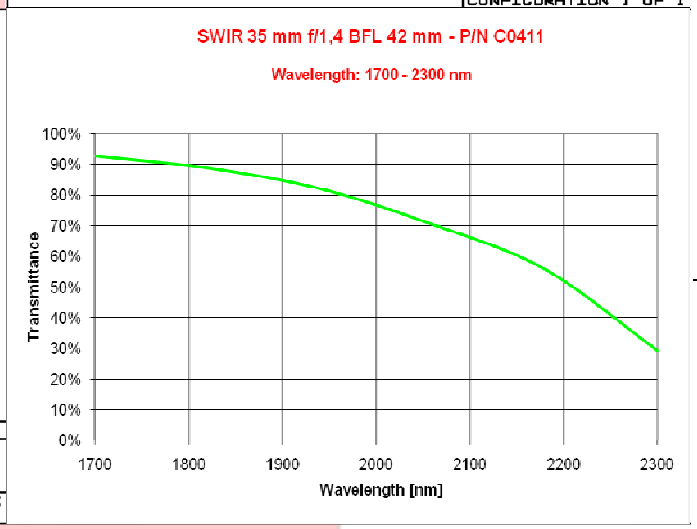
Glass Transmission without coating	> 92%
Antireflection Coating	R ≤ 0.5%
Vignetting	<22%

MTF, Field Curvature, Distortion and Transmission from 1700 to 2300 nm

The calculated MTF values are displayed Below and are verified at the maximum F/N and the best focus plane. The colored lines represent the F.O.V. starting from the center (0%) to the corner (100%).







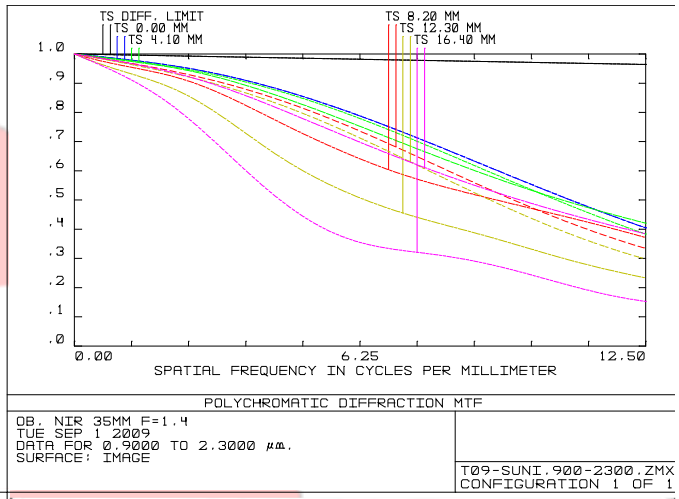
Optical parameters for wavelength range 1.7 – 2.3 µm

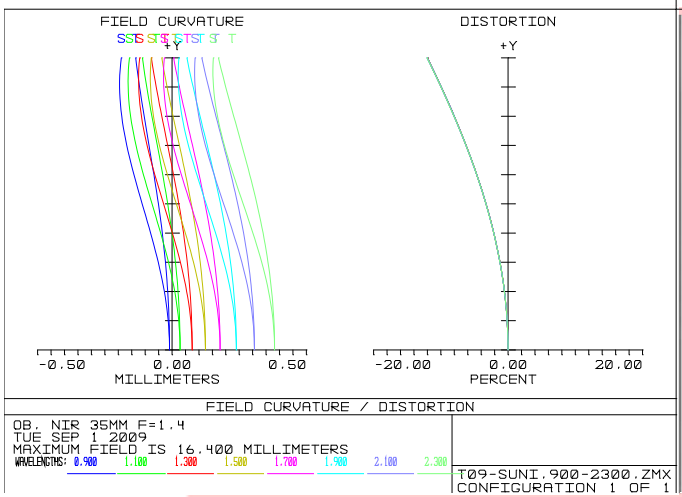
Resolution	MTF > 10%@15lp/mm
Distortion	< 13%

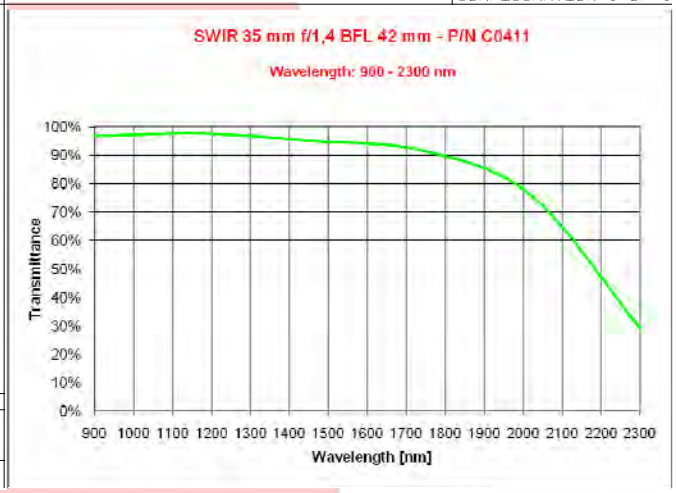
Glass Transmission without coating	> 30%
Antireflection Coating	R ≤ 0.5%

MTF, Field Curvature, Distortion and Transmission from 900 to 2300 nm

The calculated MTF values are displayed Below and are verified at the maximum F/N and the best focus plane. The colored lines represent the F.O.V. starting from the center (0%) to the corner (100%).





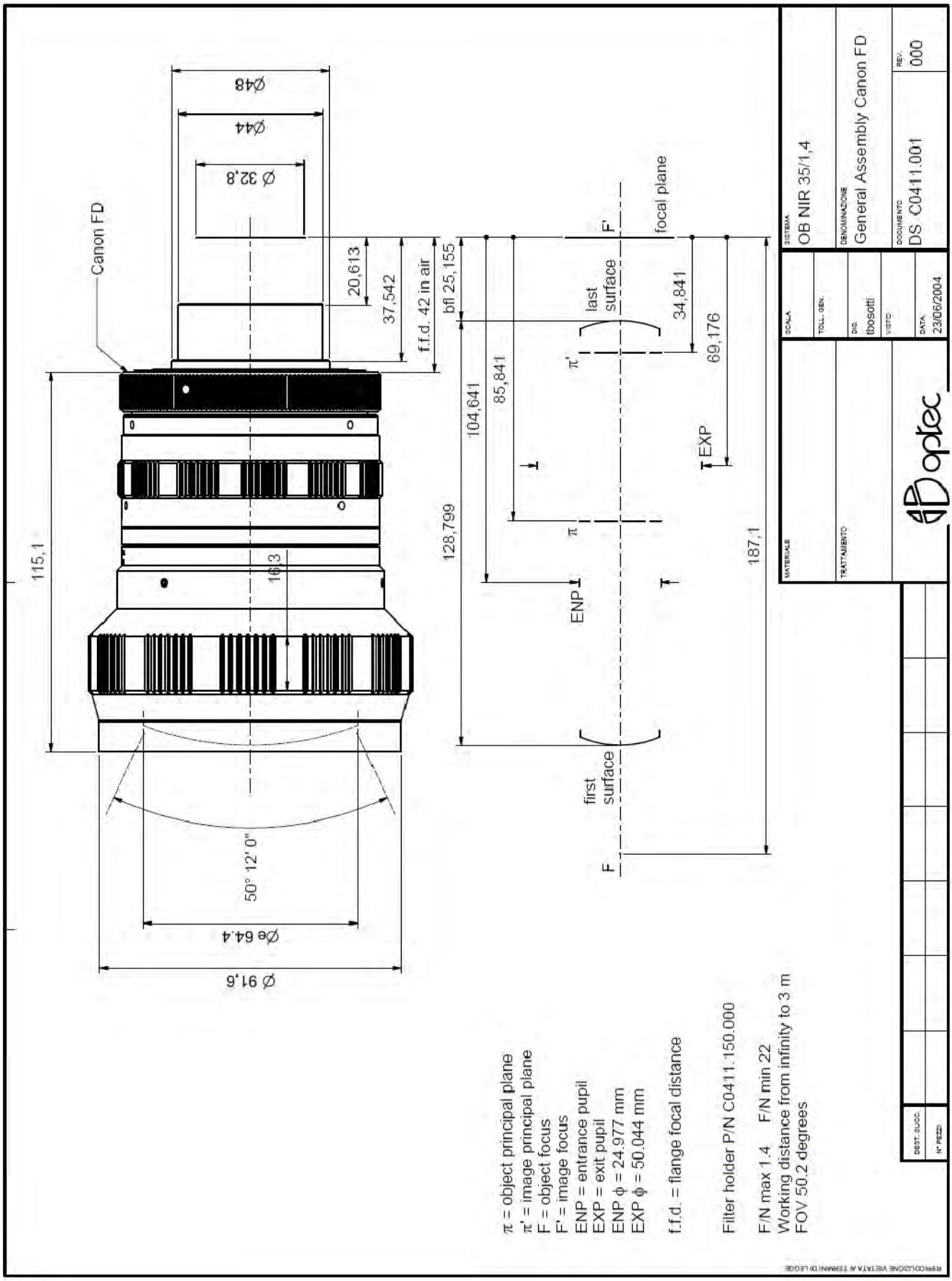


Optical parameters for wavelength range 0.9 – 2.3 µm

Resolution	MTF > 15%@12.5lp/mm
Distortion	< 20%

Glass Transmission without coating	> 30%
Antireflection Coating	R ≤ 1%

More details are available upon request and technical drawings are open for the customers and their needs.



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