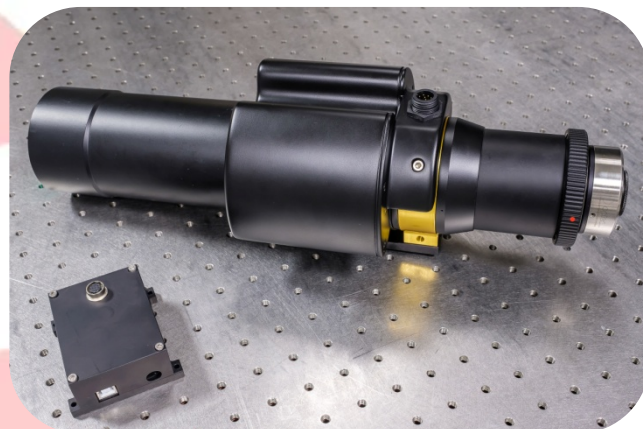


LENS OB-SWIR500/7 – P/N C0615

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

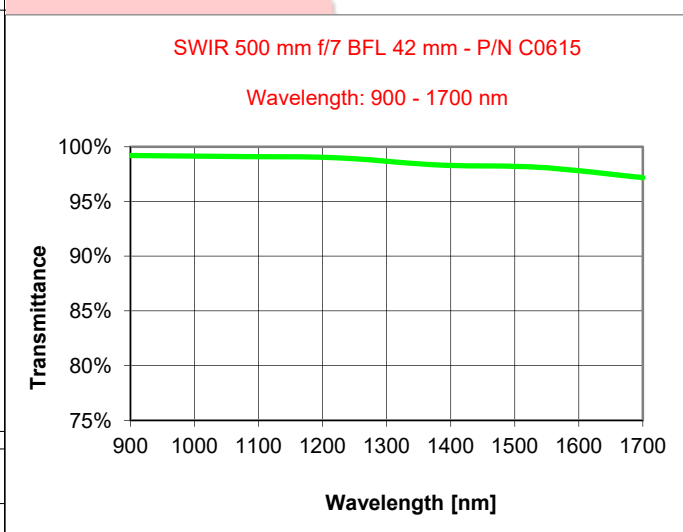
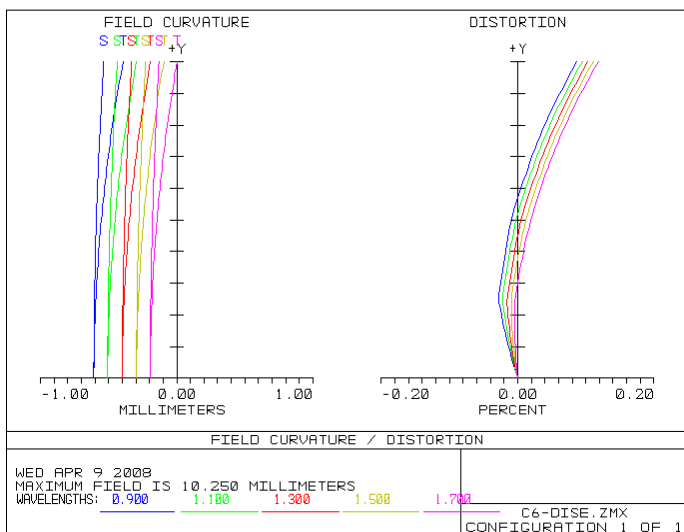
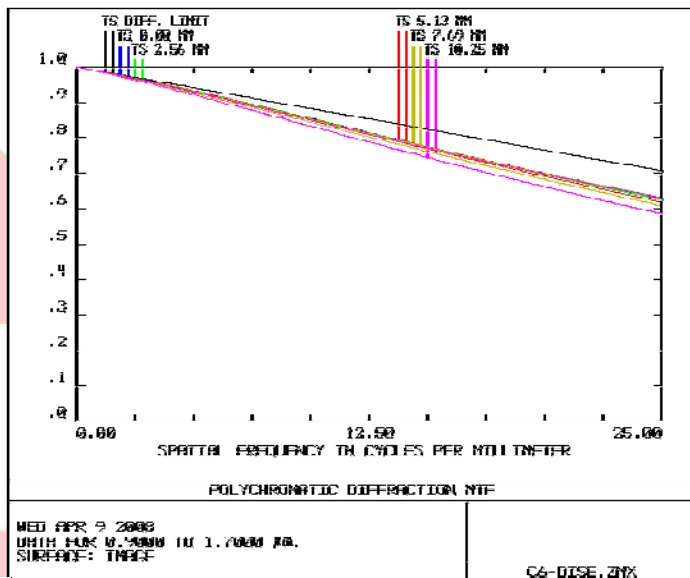
Focal length	500 mm
Image format (diagonal)	20.5 mm
F.O.V. (diagonal)	2.35 degrees
Max aperture	F/N = 7
Object format	N.A.
Min working distance	20000 mm
Zoom value	N.A.
Focus	Manual
Iris	Max F/N = 7 Min F/N = 22

N. of elements	5
Dimensions	Dia 85x 400 mm
Weight	2.4 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
C0615.001	900-1700 nm	Canon FD	Without iris diaphragm
C0615.002			With iris diaphragm
C0615.010			With motorized focus and iris
C0615.011	1700-2300 nm	Canon FD	Without iris diaphragm
C0615.012			With iris diaphragm
C0615.020			With motorized focus and iris
C0615.021	900-2300 nm	Canon FD	Without iris diaphragm
C0615.022			With iris diaphragm
C0615.030			With motorized focus and iris
C0615.003	900-1700 nm	M42	Without iris diaphragm
C0615.004			With iris diaphragm
C0615.009			With motorized focus and iris
C0615.013	1700-2300 nm	M42	Without iris diaphragm
C0615.014			With iris diaphragm
C0615.019			With motorized focus and iris
C0615.023	900-2300 nm	M42	Without iris diaphragm
C0615.024			With iris diaphragm
C0615.029			With motorized focus and iris
C0615.005	900-1700 nm	Nikon	Without iris diaphragm
C0615.006			With iris diaphragm
C0615.008			With motorized focus and iris
C0615.015	1700-2300 nm	Nikon	Without iris diaphragm
C0615.016			With iris diaphragm
C0615.018			With motorized focus and iris
C0615.025	900-2300 nm	Nikon	Without iris diaphragm
C0615.026			With iris diaphragm
C0615.028			With motorized focus and iris

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

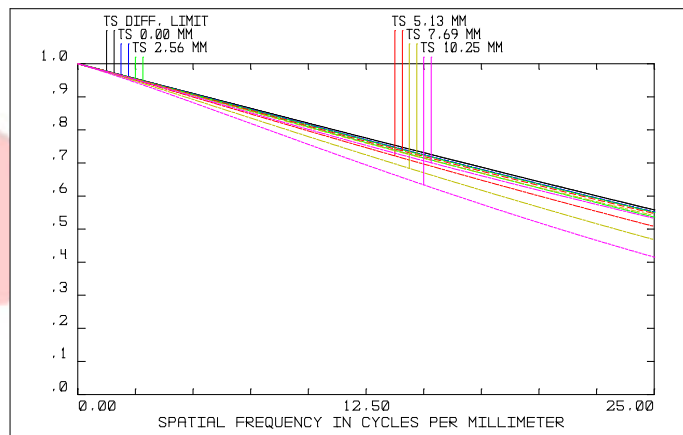
Resolution	MTF > 60%@25lp/mm
Distortion	< 0.2%
Average axial chromatic aberration	< 0.0155 mm

Glass Transmission without coating	> 97%
Antireflection Coating	R ≤ 1%
Vignetting	< 15%

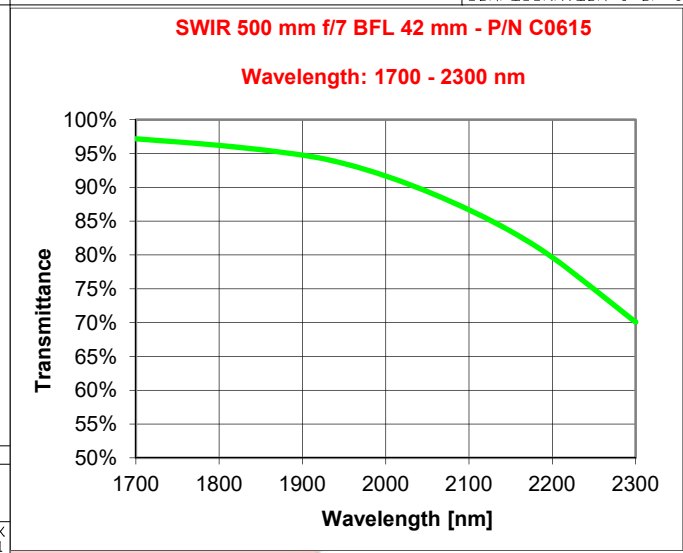
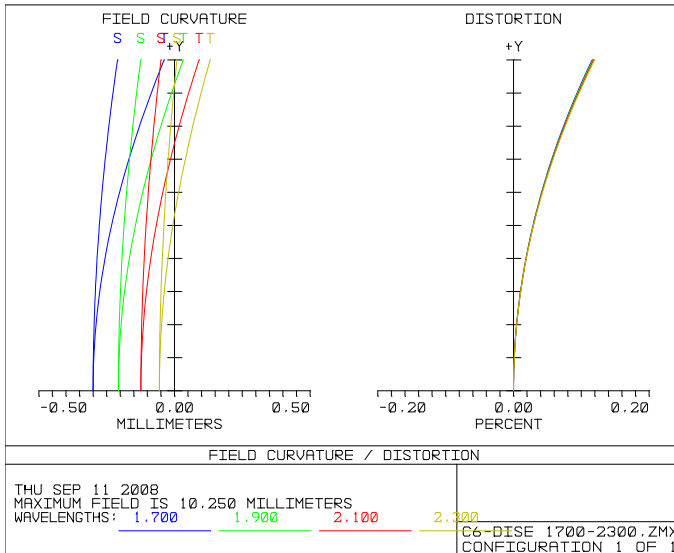
Specification are subject to change without notice

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%).



POLYCHROMATIC DIFFRACTION MTF
 THU SEP 11 2008
 DATA FOR 1.7000 TO 2.3000 μm.
 SURFACE: IMAGE
 C6-DISE 1700-2300.ZMX
 CONFIGURATION 1 OF 1



Optical parameters for wavelength range 1.7 – 2.3 μm

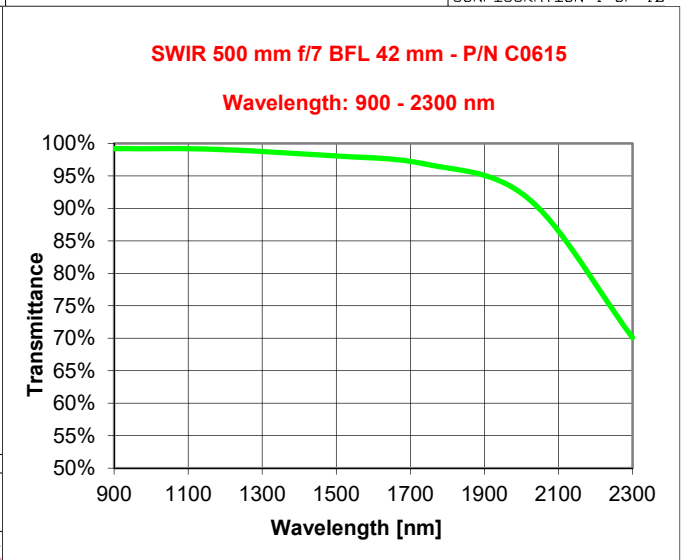
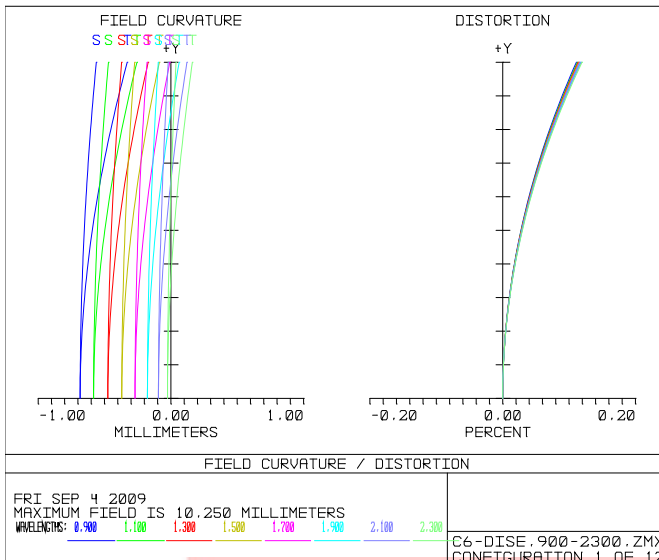
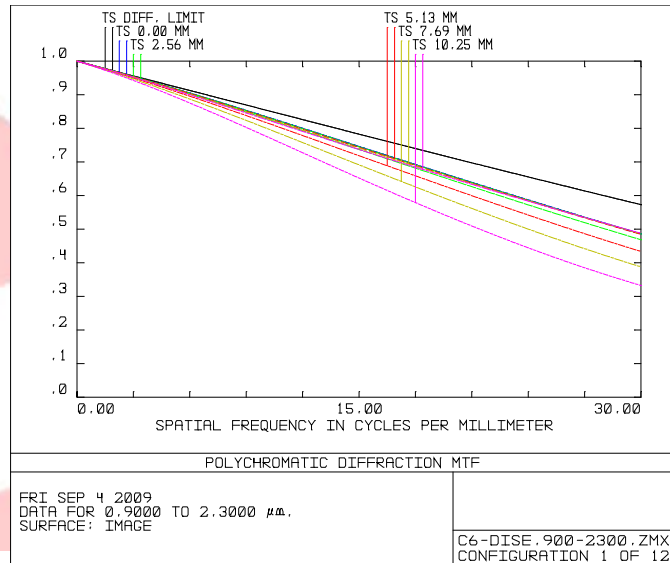
Resolution	MTF > 40%@25lp/mm
Distortion	< 0.2%

Glass Transmission without coating	> 70%
Antireflection Coating	R ≤ 1%

Specification are subject to change without notice

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 > 35% @ 30lp/mm
Distortion	< 0.2%

Glass Transmission without coating	> 70%
Antireflection Coating	R ≤ 1%

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

Specification are subject to change without notice

Electrical data & Interfaces

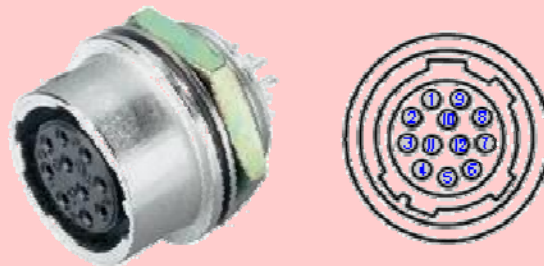
IRIS FUNCTION

Motor model	Faulhaber 1516T009SR
Motor nominal voltage	9 VDC
Motor maximum power	0.54 W
Current limit	0.19 A
Feedback	10 kOhm multi-turn potentiometer
Potentiometer model	Spectrol 533-10K ±5%
Gearhead reduction ratio	592:1

FOCUS FUNCTION

Motor model	Faulhaber 1516T009SR
Motor nominal voltage	9 VDC
Motor maximum power	0.54 W
Current limit	0.19 A
Feedback	10 kOhm multi-turn potentiometer
Potentiometer model	Spectrol 533-10K ±5%
Gearhead reduction ratio	592:1

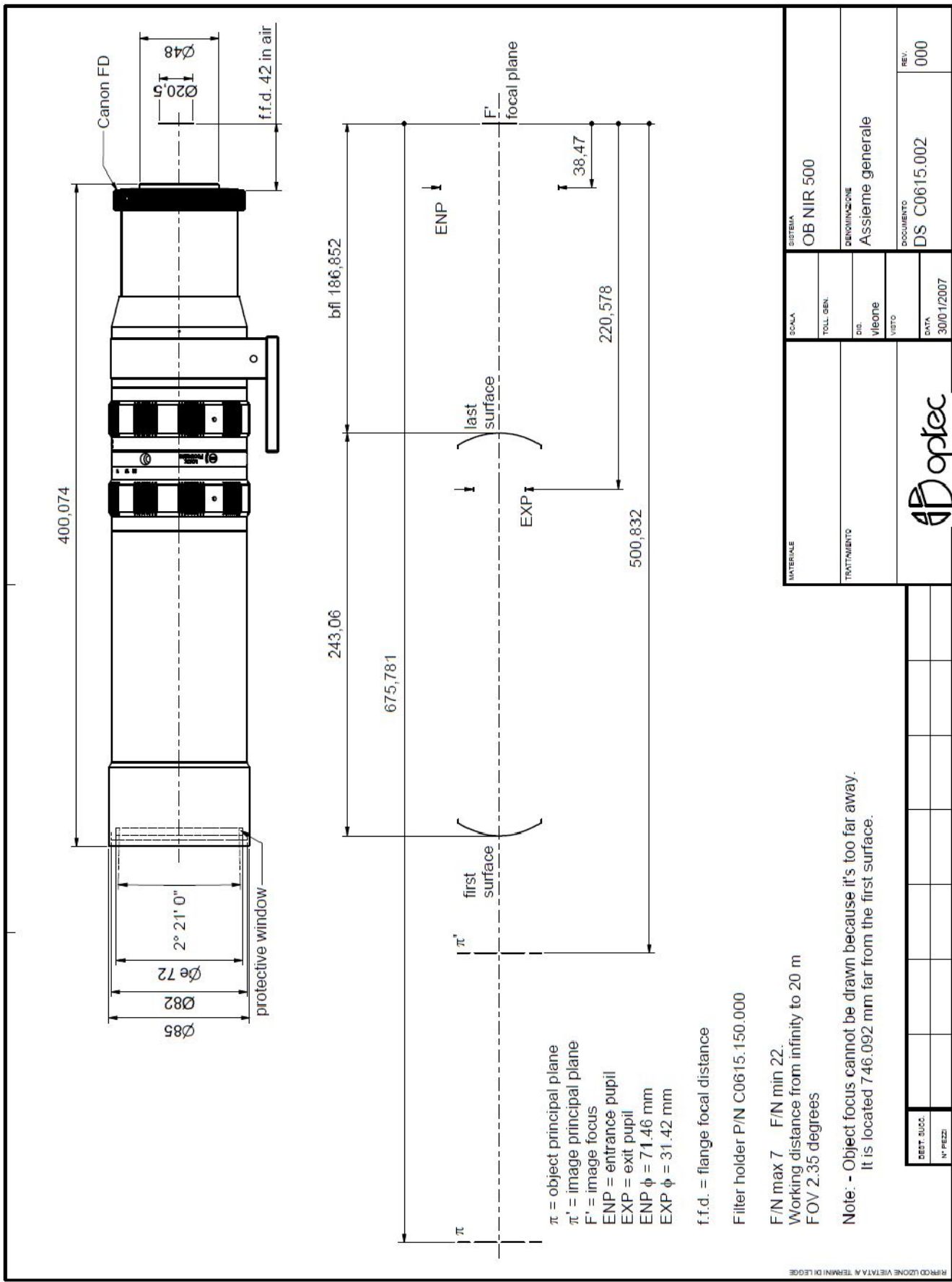
Hirose HR10A-10P-12P connector Pin list



PIN	MOTORIZED IRIS & FOCUS
1	Vcc
2	Gnd
3	Analog Focus position
4	Analog Iris position
5	Identification resistor #1
6	Identification resistor #2
7	Focus Motor +
8	Focus Motor –
9	Iris Motor +
10	Iris Motor –

Every shipped motorized lens will be provided with potentiometers values of end positions for both focus and iris motor

Specification are subject to change without notice



Specification are subject to change without notice