Apochromatic Lens OB V-SWIR F100/2.0 – P/N C1602

General Description

A new high resolution V-SWIR apochromatic lenses image from 0.4 – 1.7 μm making them especially well-suited for PCB inspection, special laser applications, surveillance & defense, alignment and tracking.

A high F/N and excellent transmission characteristics allow superior imaging in these wavelengths of interest.

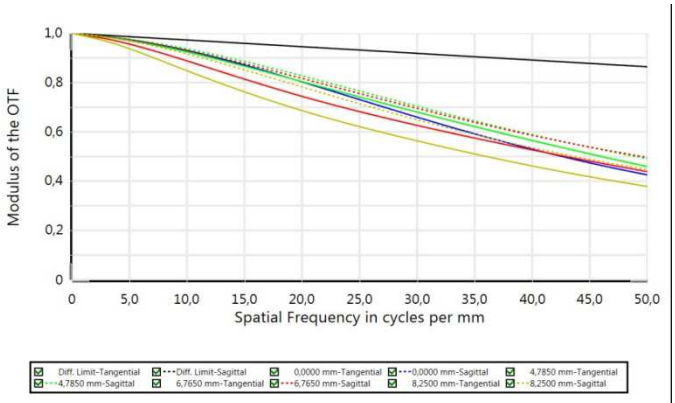
Optical and mechanical parameters	
Focal length	100 mm
Image format (diagonal)	16.6 mm
F.O.V. (diagonal)	9.43 degrees
Max aperture	F/N = 2
Object format	N.A.
Min working distance	7.5 m
Zoom value	N.A.
Focus	Manual
Iris	Max F/N = 2 Min F/N = 22

N. of elements	6
Dimensions	Dia 106 x 127 mm
Weight	1.6 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*
C1602.001	400-1700 nm	Canon FD	With iris diaphragm
C1602.002	400-1700 nm	Nikon	With iris diaphragm

MTF, Field Curvature, Distortion and Transmission from 400 to 1700 nm

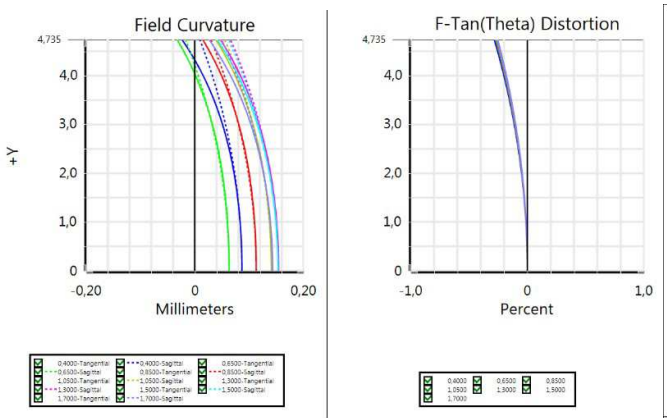
The calculated MTF values are displayed below and are verified at the maximum F/N and the best focus plane. The colored lines represent the F.O.V. starting from the center (0%) to the corner (100%).



Polychromatic Diffraction MTF

20/01/2017
Data for 0,4000 to 1,7000 µm.
Surface: Image
Legend items refer to Field positions

OPTEC S.p.A.
C1602.000.000.zmx
Configuration 1 of 1



Field Curvature / F-Tan(Theta) Distortion

20/01/2017
Maximum Field is 4,735 Degrees.
Legend items refer to Wavelengths

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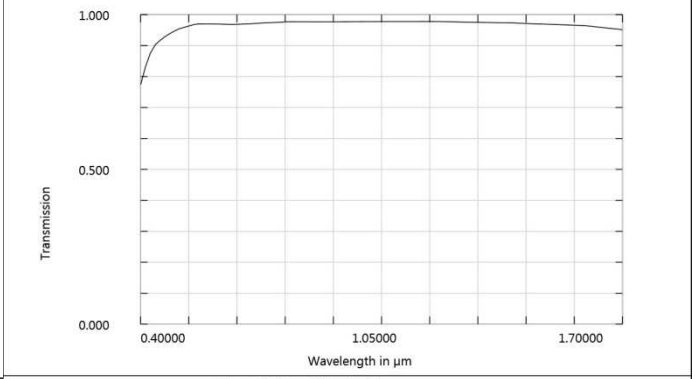
Configuration 1 of 1



Transmission vs. Wavelength

20/01/2017
Field Pos: 0.0000, 0.0000 DATA 3

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Configuration 1 of 1

Optical parameters for wavelength range 0.4 – 1.7 µm	

Resolution	MTF > 40% @ 50lp/mm
Distortion	< 0.5 %
Average axial chromatic aberration	< 0.022 mm

Glass Transmission without coating	> 95 %
Antireflection Coating	R ≤ 1 %
Vignetting	< 1 %

Outline Dimensions & Technical Notes

All the dimensions are reported to help the customer, mainly to define the interface with the cameras. More details are available upon request and technical drawings are open for the customers and their needs. The main parameters are reported in the front table and here below.