

# LENS OB-SPACE – F50/1.2

## GENERAL DESCRIPTION

THIS NEW GENERATION OF HIGH PERFORMING LENSES ARE REDESIGNING THE WORLD OF SPACE READY OPTICS AT A GLOBAL LEVEL, ENSURING DETAILS NEVER SEEN BEFORE, BOTH LOOKING AT INFINITY AND AT CLOSER WORKING DISTANCES.

INTERNAL RESEARCH HAS BROUGHT IN OUR PRODUCT PORTFOLIO SPACE COMPLIANT MATERIAL AND A NEW LIST OF RAD-HARD GLASSES, ALLOWING TO OUR OPTICAL DESIGNERS NEW DEGREES OF FREEDOM IN OBTAINING BLEEDING EDGE PERFORMING SYSTEMS.

ALL OUR LENSES ARE ASSEMBLED IN ISO5 ENVIRONMENT.

## LET US BE YOUR EYES IN THE SPACE!!!

OPTICAL AND MECHANICAL PARAMETERS			
FOCAL LENGTH@10 $\mu$ M	50MM	OPTICAL LAYOUT	DIOPTRIC
F/N	1.2	FOCUS	FIXED
IMAGE FORMAT	14.2MM	N. OF ELEMENTS	3
F.O.V.	$\pm 8^\circ$	WAVELENGTH RANGE	7500-13500NM
BACK FOCAL LENGTH	12.2MM	AR COATING	R<4%@7500-13500NM
RESOLUTION	MTF>20%@35LP/MM	FLANGE FOCAL LENGTH	CUSTOMIZED
DISTORTION	<2%	DIMENSIONS	42x49x49 MM
VIGNETTING	NEGLIGIBLE	WEIGHT	0,090 KG
WORKING DISTANCE RANGE	INFINITY - 200M	QUALIFICATION LEVEL	NASA GEVS
AVERAGE TRANSMISSION	<60%	ATHERMALIZATION	7°C / 13°C
RAD HARD	30KRAD	MOTORIZED FOCUS	UPON REQUEST
SUN EXCLUSION ANGLE	$\pm 45^\circ$	OTHER MOUNT TYPE	UPON REQUEST
STRAY LIGHT	$6.5 \cdot 10^{-6}$	CAMERA INTERFACE	CUSTOM DESIGN
		CUSTOMIZATION	UPON REQUEST

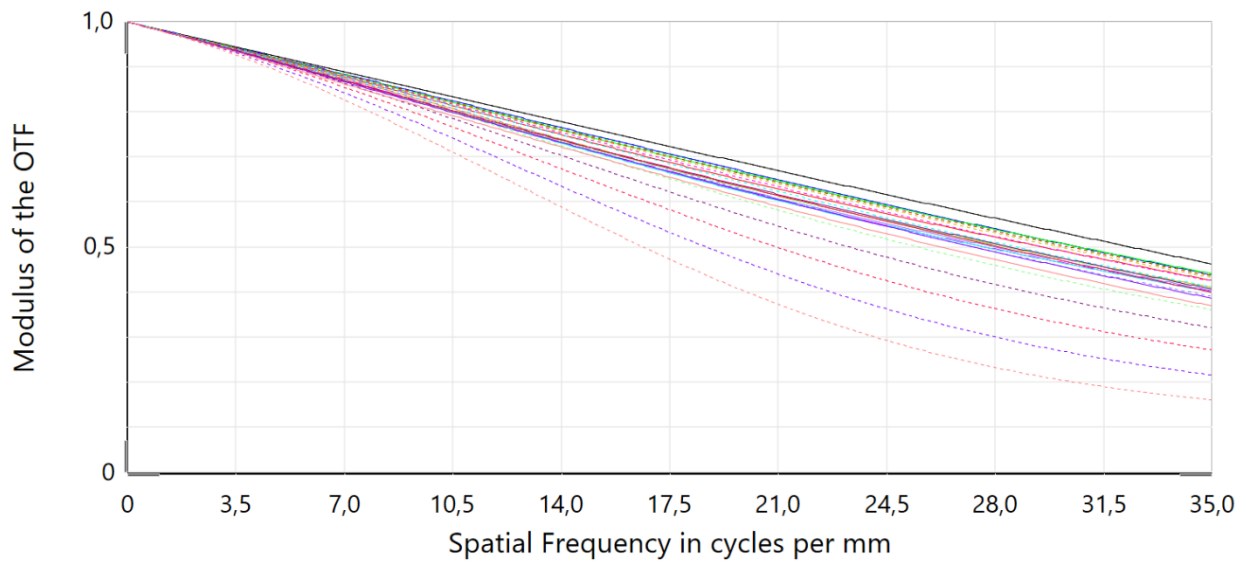
$$\text{Ground resolution} = \frac{WD \cdot \text{pixel\_size}}{\text{Focal length}}$$

$$\text{Area framed on the ground} = \frac{WD \cdot \text{sensor\_linear\_dimension}}{\text{Focal length}}$$

Where WD is the quote.

Specification are subject to change without notice

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

11/06/2019  
Data for 7,5000 to 13,5000 μm.  
Surface: Image

OPTEC S.p.A.  
Optical & Optoelectronic Systems

Legend items refer to Field positions

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Configuration 1 of 3

MORE DETAILS ARE AVAILABLE UPON REQUEST AND TECHNICAL DRAWINGS ARE OPEN FOR THE CUSTOMERS AND THEIR NEEDS.

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