excelitas® | LINOS®

LINOS® Rodagon 2.0/25 SWIR Lens

Exceptional performance for high-performance short-wave infrared (SWIR) imaging

The new LINOS® Rodagon 2.0/25 SWIR establishes a new standard for short-wave infrared imaging. With exceptionally high transmission across the 840–1900 nm wavelength range, the lens maximizes light transmission and enables high contrast, high fidelity imaging even under low signal or high attenuation conditions. Its fast f/2.0 aperture supports bright image formation and short exposure times, making it ideal for demanding SWIR inspection and measurement tasks in the most challenging environments.

The Rodagon 2.0/25 SWIR is built for applications where precision and reliability are non-negotiable. Its optimized optical design ensures uniform imaging performance from center to edge, precisely matched to 1.1” sensors with image circles up to 18 mm. The lens is designed to eliminate any focus shift between NIR and SWIR, ensuring stable, repeatable measurement results without the need for refocusing. High native resolution enables reliable detection of even the finest structural details.

The integrated filter thread and robust mechanical construction enable seamless integration into existing system architectures. It is fully compatible with the Optem® FUSION Modular Microscopy platform to provide additional flexibility for industrial and scientific applications requiring adjustable or motorized focusing solutions.

Your Benefits

- Large image circle up to 1.1”
- No focus shift from 840-1900 nm
- Large aperture of f/2.0
- Robust design (full metal housing)
- Integrated filter thread

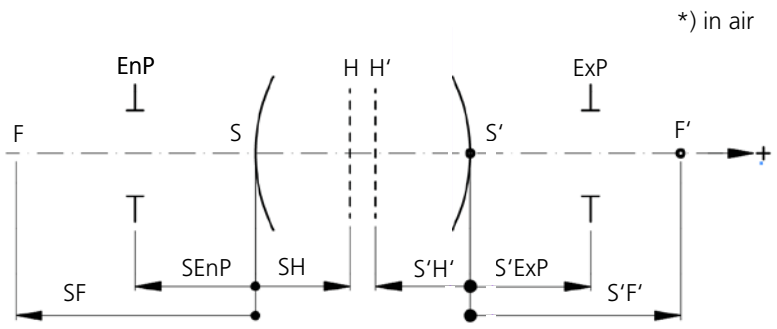
Applications

- Smart farming
- Food and agriculture
- Pharmaceuticals
- Solar cell defect inspection
- Through-silicon inspection
- Hyperspectral and multispectral imaging
- Waste sorting

TECHNICAL SPECIFICATIONS	
Part No.	**0701-406-000-20**
Focal length [mm]	25.0 @ 1400 nm
f-stop	2
f-stop range	2 ... 11
f-stop lockable	yes, click stop
Numerical aperture (object/image) @ beta = -0.05	0.0043/-0.0850
Maximum image circle [mm]	18
Magnification optimized	0.05
Recommended magnification range	0.1 ... 0.00
Recommended working distance [mm]	247 ... ∞
Spectral range [nm]	840 ... 1900
Azimuth marked	no
Interface	M32.5x0.5
Filter thread	M30.5x0.5
Length [mm]	36.2
Diameter [mm]	40.5
Weight [g]	70
Storage temperature [°C]	-25 ... +70
Working temperature [°C]	0 ... +50
Optical number	7610-9001
Design includes sensor cover glass	yes, 0.76mm D263

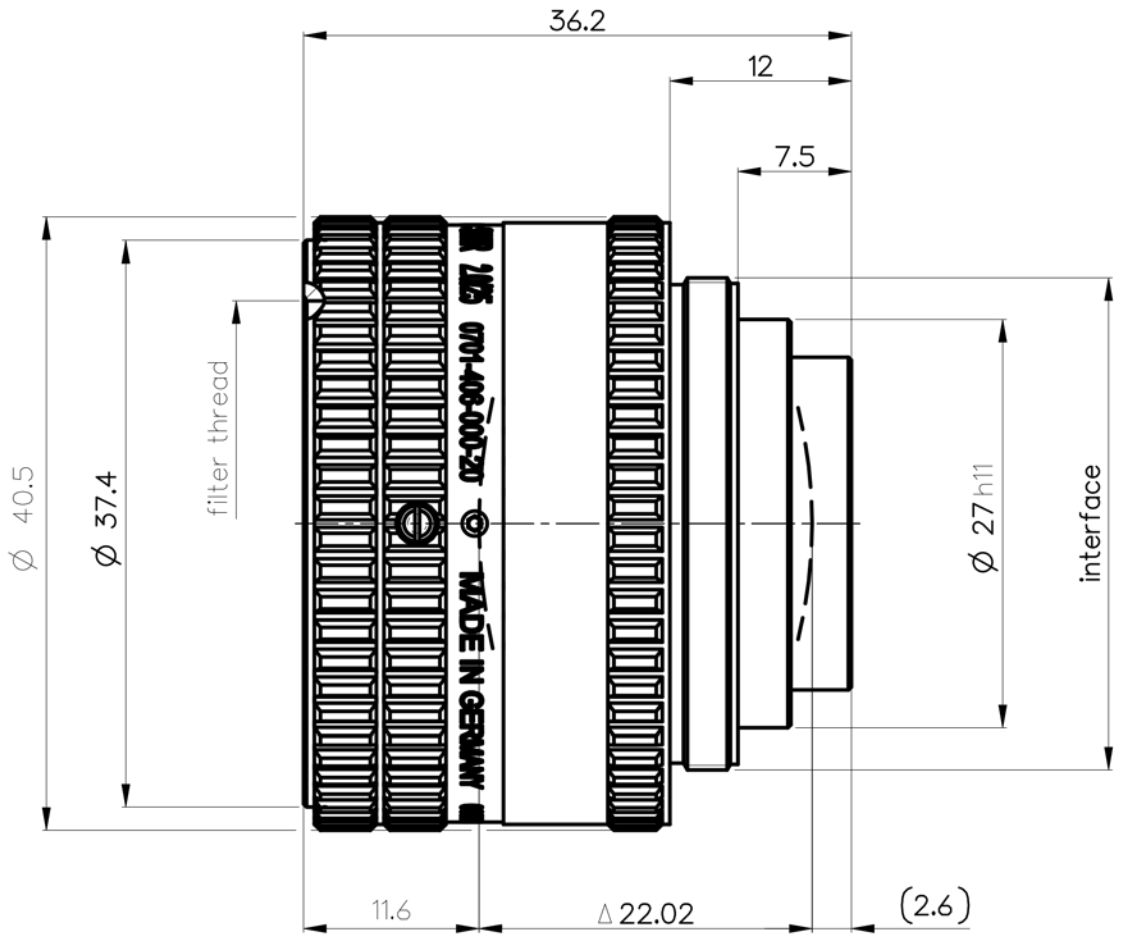
OPTICAL DATA		
Part No.	**0703-406-000-20**	
SF [mm]	-8.2	
S'F' *) [mm]	17.8	
HH' *) [mm]	-2.0	
SH *) [mm]	16.8	
S'H' [mm]	-7.2	
SEnP [mm]	11.9	
S'Exp *) [mm]	-13.3	
f-stop	**ø EnP**	**ø ExP**
2	12.5	15.5
2.8	8.9	11.1
4	6.3	7.8
5.6	4.5	5.5
8	3.1	3.9
11	2.3	2.8

Schematic diagramm



all dimensions in mm

OUTLINE DRAWING



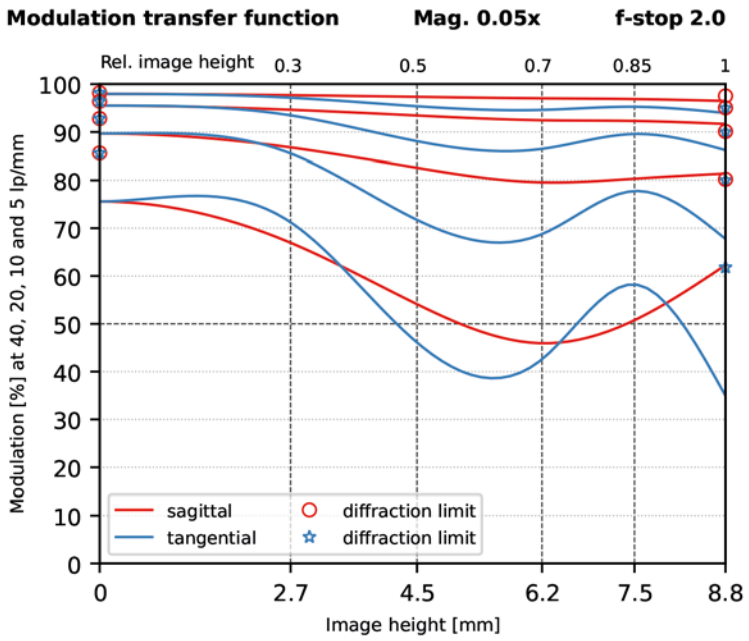
all dimensions in mm

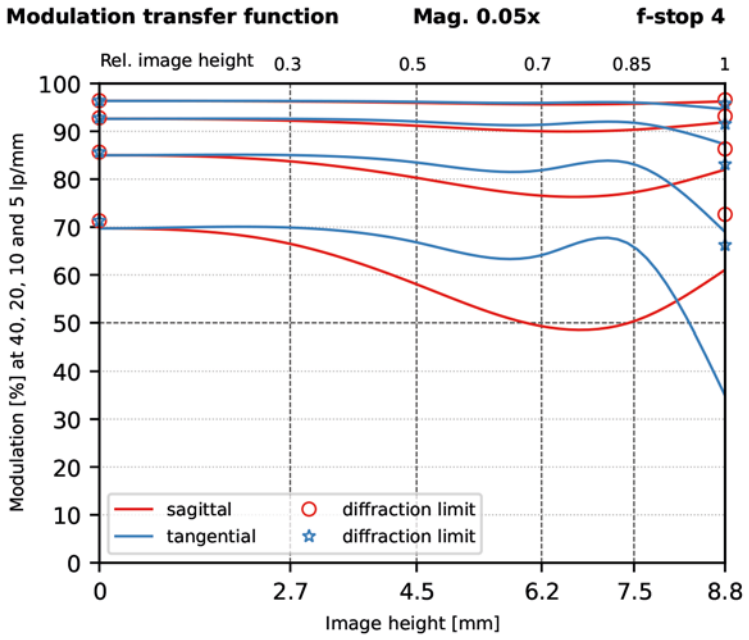
Further information about our Rodagon series:

SPECTRAL DISTRIBUTION

Wavelength [nm]	900	1000	1100	1200	1300	1400	1500	1600	1700	1800
Weigth [%]	0	50	90	100	100	100	100	90	50	0

OPTICAL PERFORMANCE

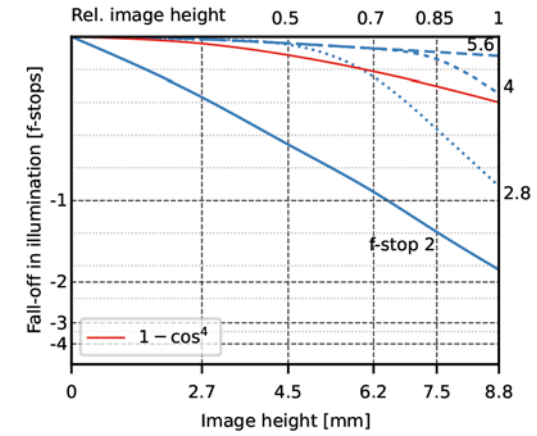




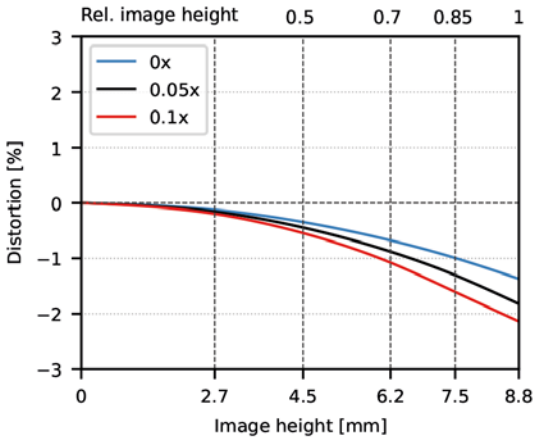
All spatial frequencies [lp/mm], image heights [mm] and magnifications are related to sensor side.

OPTICAL PERFORMANCE

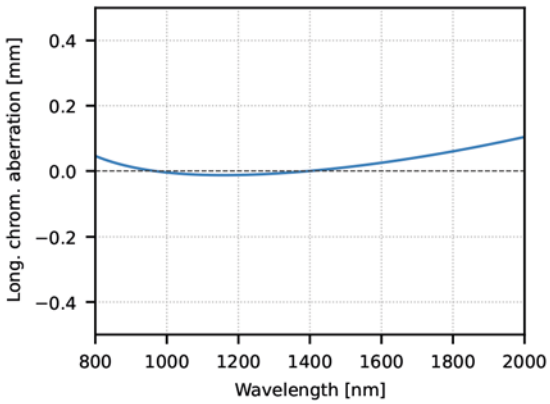
Fall-off in illumination **Mag. 0.05x**



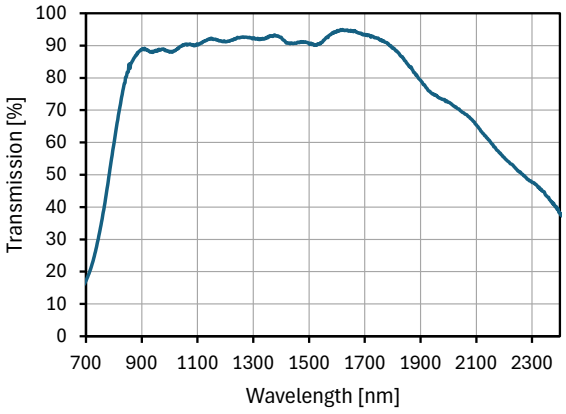
Distortion **Mag. 0x ... 0.1x**



Long. chrom. aberration **Mag. 0.05x**



Transmission - Rodagon 2.0/25 SWIR



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Mechanical accessories, including helical focus mounts, adapters and extension tubes:

MACHVIS

Web-based Configurator for Imaging Application

ACCESS FOR FREE!

Further information about our MachVis™ System Configurator:

excelitas®

excelitas.com
inspection@excelitas.com

For a complete listing of our global offices, visit www.excelitas.com/locations

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