

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



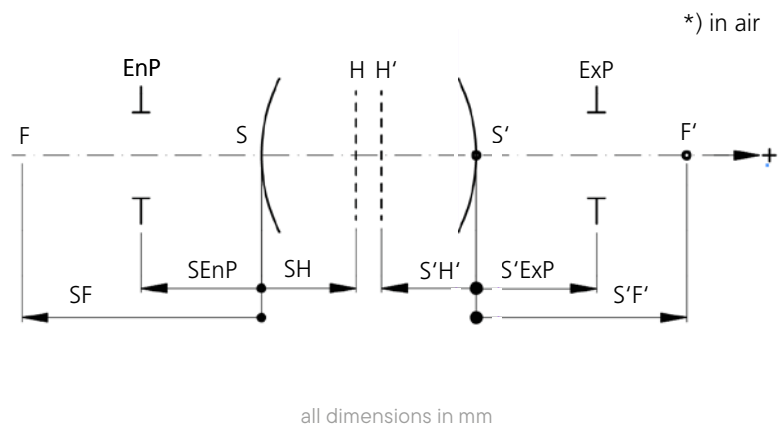
TECHNICAL SPECIFICATIONS

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

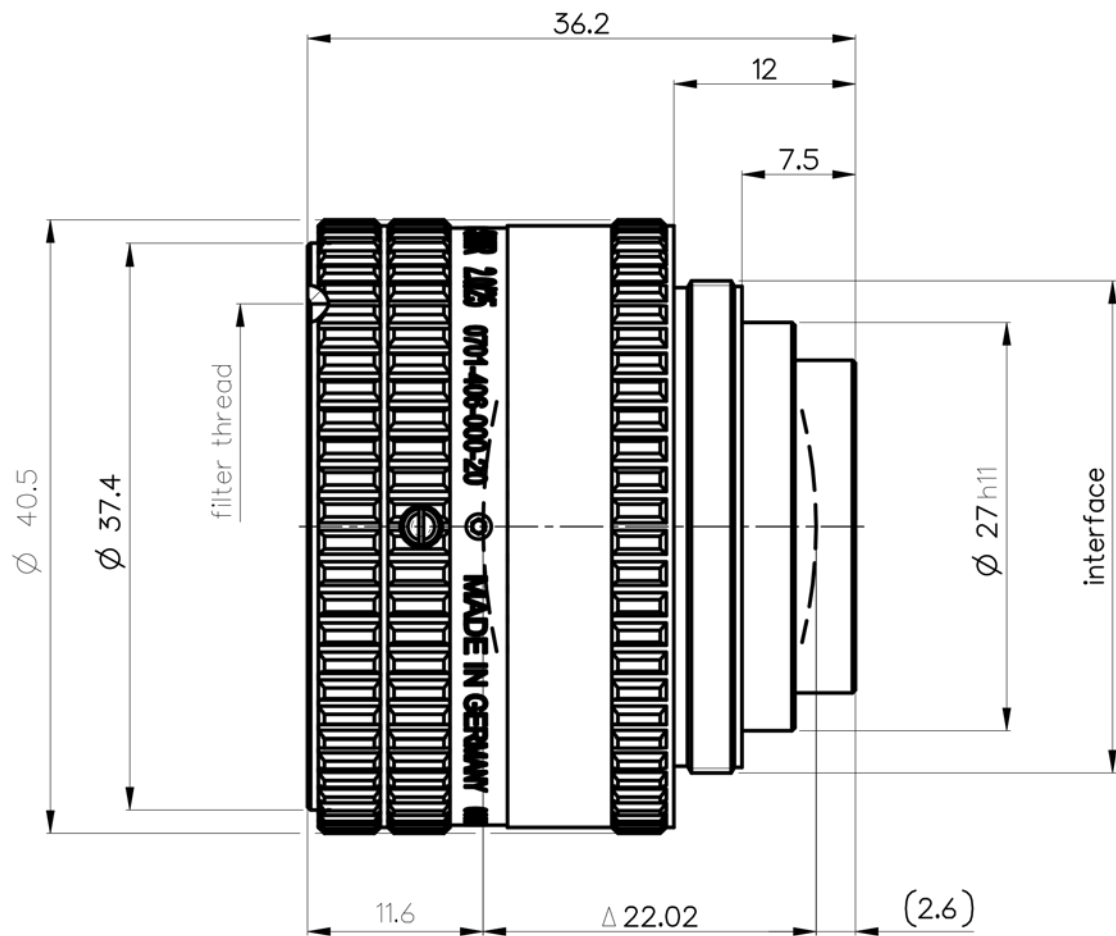
OPTICAL DATA

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	∅ EnP	∅ 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



OUTLINE DRAWING



all dimensions in mm



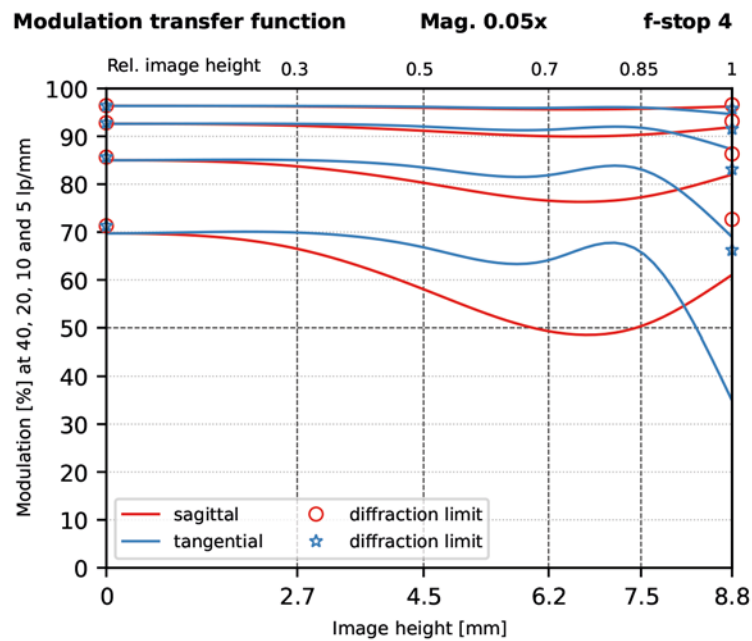
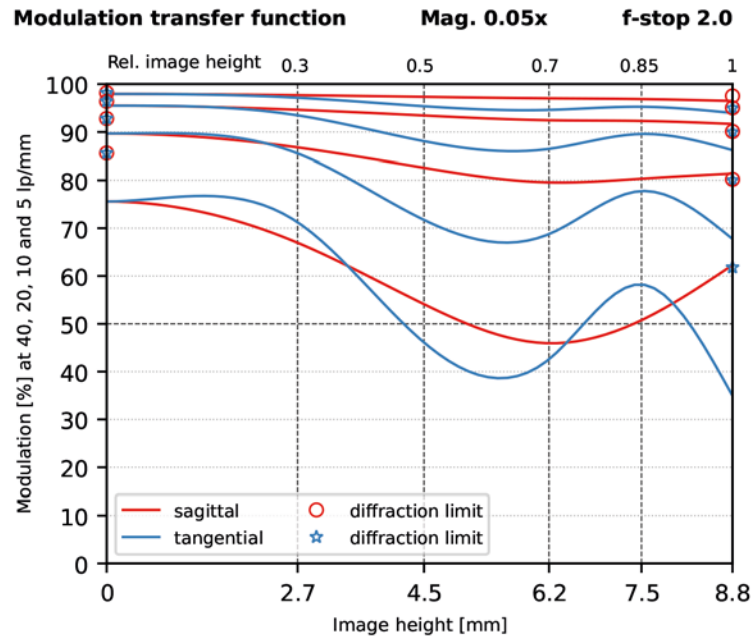
Further information about
our Rodagon series:



SPECTRAL DISTRIBUTION

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

OPTICAL PERFORMANCE

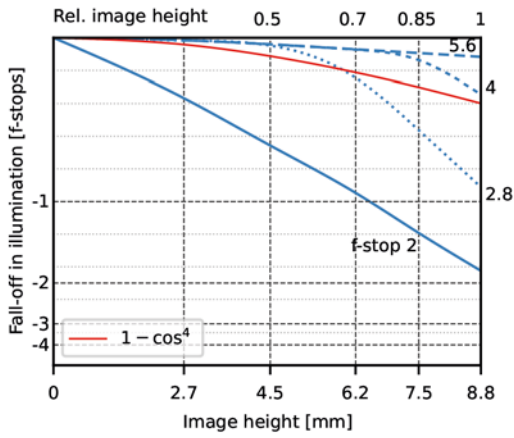


All spatial frequencies [lp/mm], image heights [mm] and magnifications are related to sensor side.

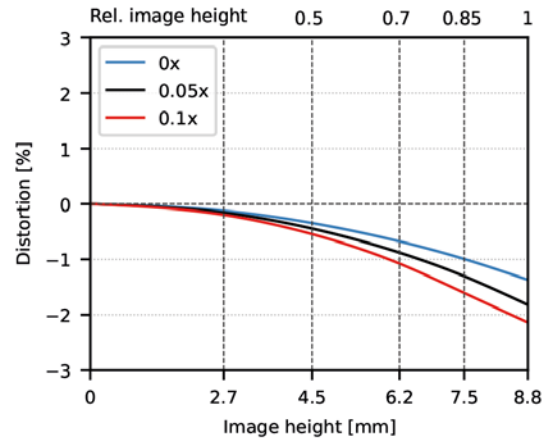


OPTICAL PERFORMANCE

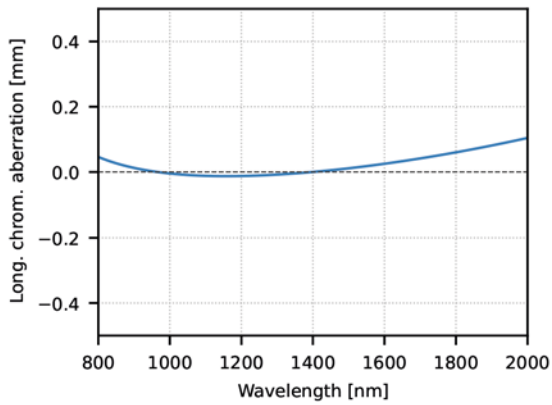
Fall-off in illumination **Mag. 0.05x**



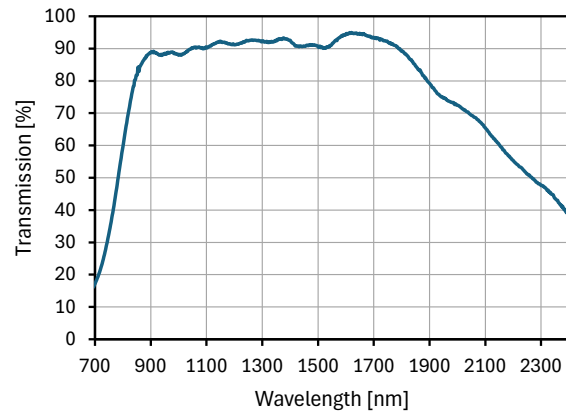
Distortion **Mag. 0x ... 0.1x**



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



Transmission - Rodagon 2.0/25 SWIR



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



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



MACHVIS

Web-based Configurator for Imaging Application



Further information about our MachVis™ System Configurator:



#	Lens Name	Remark	Focus Device	Ext	Lens EFL	Total W.D.	Free W.D.	Objct Size	Image Size	Mag Value	Mag Range	Lens To Camera	Flange F.D.	Flange F.D. Range
1	d.fine HR-M 2.8/80 0.2x		Modular Focus	0	81.0mm	575.5mm	402.7mm	90.5mm	18.1mm	-0.2x	-0.27 to -0.14	155.30mm	86.8mm	48.5-74.5mm
2	d.fine HR-M 2.8/80 0.2x		Smart Focus HR-M	1	81.0mm	575.5mm	402.7mm	90.5mm	18.1mm	-0.2x	-0.27 to -0.14	155.30mm	86.8mm	57.2-99.8mm
3	d.fine HR-M 2.8/80 0.2x		Smart Focus HR-M	2	81.0mm	575.5mm	402.7mm	90.5mm	18.1mm	-0.2x	-0.27 to -0.14	155.30mm	86.8mm	63.2-75.8mm
4	Rodagon 80		Smart Focus	1	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm
5	Rodagon 80		Smart Focus	2	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm
6	Rodagon 90		Smart Focus	3	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm
7	Rodagon 80		Smart Focus	4	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm
8	Rodagon 90 azimuth		Smart Focus	1	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm
9	Rodagon 80 azimuth		Smart Focus	2	81.1mm	581.3mm	459.8mm	90.5mm	18.1mm	-0.2x	-0.5 to -0.06	104.02mm	90.7mm	81.2-93.6mm

Solution 1 Lens: d.fine HR-M 2.8/80 0.2x [0703-146-000-20]
 (H: 30.4mm LA: 15.5mm Foc: 15.8-40.8mm CA: 0.7mm CBD: 17.5mm) Flange FD Range: 49.5-74.5mm

Component	Part No.	#	File
d.fine HR-M 2.8/80 0.2x	0703-146-000-20	1x	Download
Lens Adapter	2405-009-176-00	1x	Download
Focuser	2408-008-000-42	1x	Download
Camera Adapter	2408-009-174-00	1x	Download
Camera	8510607004	1x	Download



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