

LINOS®

inspec.x L 5.6/105 VIS-NIR 1x
for large format high-resolution
sensors optimized for VIS and NIR
sensitivity



inspec.x L 5.6/105 VIS-NIR 1x

The new VIS-NIR lens series from Excelitas sets standards in the field of visual and non-visual inspection. Developed for long line and large area sensors, it offers an incredibly good apochromatic design. Ultra-sharp and high-contrast images can be created at a wide range of different wavelengths from 400 to 1150nm without having to refocus. The diffraction-limited design impresses with extreme performance across the entire object field, so that optimal results can also be achieved at the edges.

The new inspec.x VIS-NIR series comes with four different lenses that are optimized for different magnifications and are equipped with the established V-groove interface.

Every version of this new series matches the Excelitas Modular Focus System and scores with flexibility and modularity.



Your Benefits

- VIS-NIR scan without refocus
- Apochromatically corrected lens from 400 to 1150nm
- Diffraction limited design
- Ultra high resolution for large area and line sensors
- Great price performance ratio



Applications

- PCB inspection
- Print inspection
- Surface inspection
- Waste inspection
- Battery inspection
- Food inspection

Key Features



- No refocusing across VIS and NIR range (apochromatic correction for 400-1150 nm)
- Perfect match with 5µm Pixel size
- Flexible mounting system for almost any image processing camera
- Full metal barrel with lockable aperture

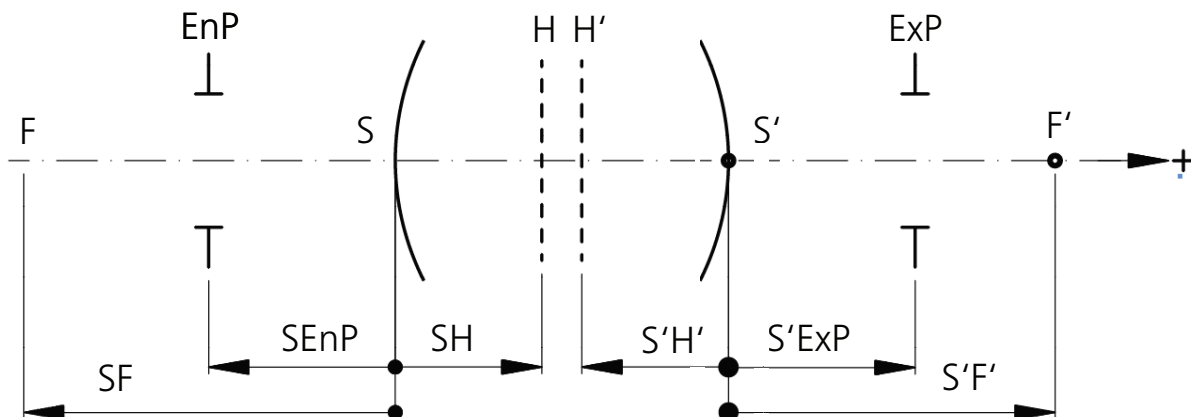
Optical data

Part No.	0703-082-000-30	
SF [mm]	-71.4	
S'F' *) [mm]	71.4	
HH' *) [mm]	-7.5	
SH *) [mm]	34.0	
S'H' [mm]	-34.0	
SEnP [mm]	34.1	
S'Exp *) [mm]	-34.0	
f-stop	ø EnP	ø ExP
5.6	18.8	18.8
8	13.2	13.2
11	9.6	9.6
16	6.6	6.6
22	4.8	4.8

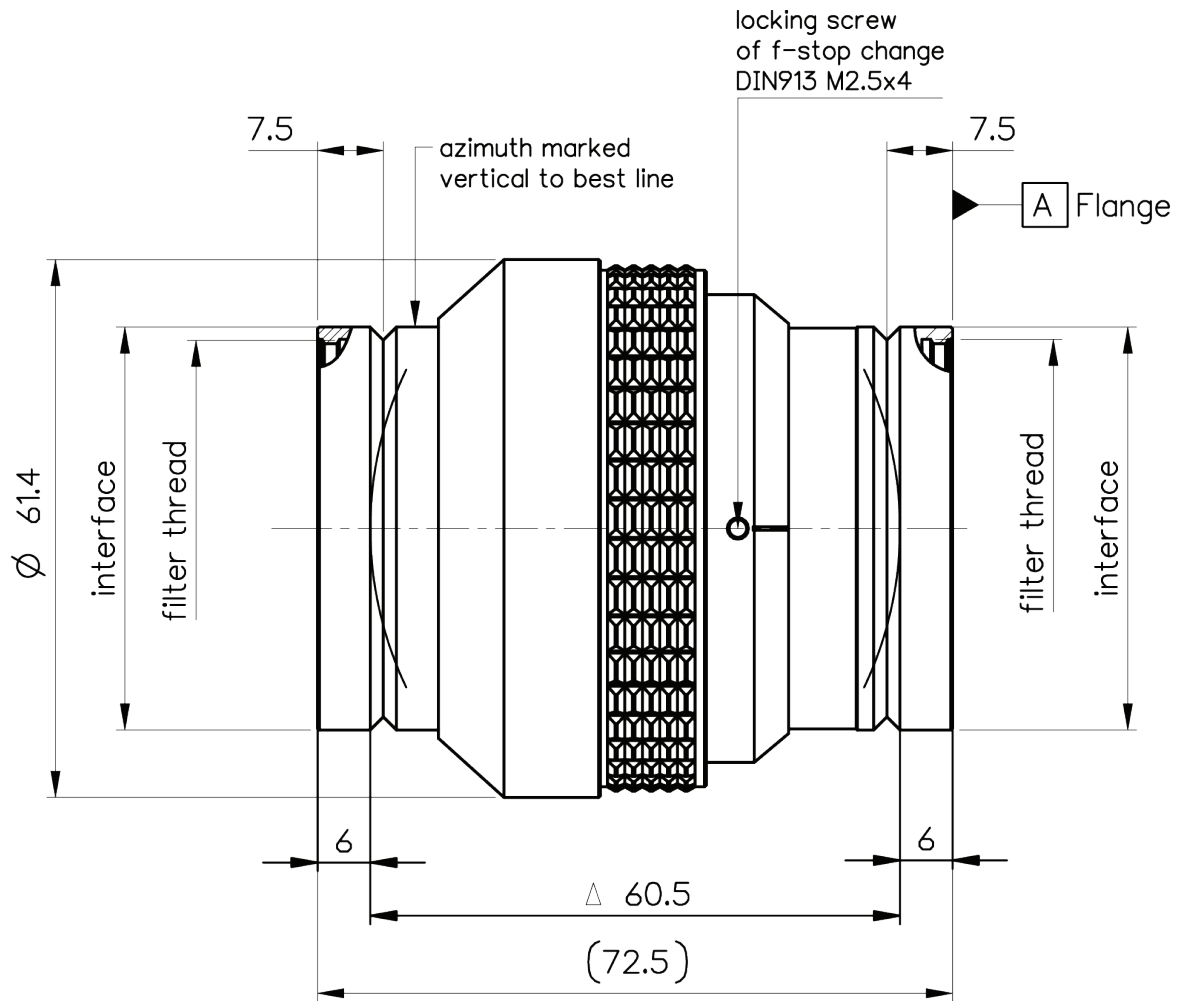
Specifications

Part No.	0703-082-000-30
focal length [mm]	105.4
f-stop	5.6
f-stop range	5.6 ... 22
f-stop lockable	yes, locking screw
Numerical aperture (object/image)	0.09/0.09
Image circle max. [mm]	82
Magnification optimized	1
Rec. magnification range	0.85 ... 1.2
Rec. working distance [mm]	153 ... 190
Spectral range [nm]	400 - 1150
Azimuth marked	yes
Interface	V-groove ø46h7
Filter thread	M43 x 0.75
Length [mm]	72.5
Diameter [mm]	61.4
Weight [g]	370
Storage temperature [°C]	-25 ... +70
Working temperature [°C]	0 ... +50
Optical number	7608-9011
Sensor cover glass (included)	0.76mm D263

*) in air



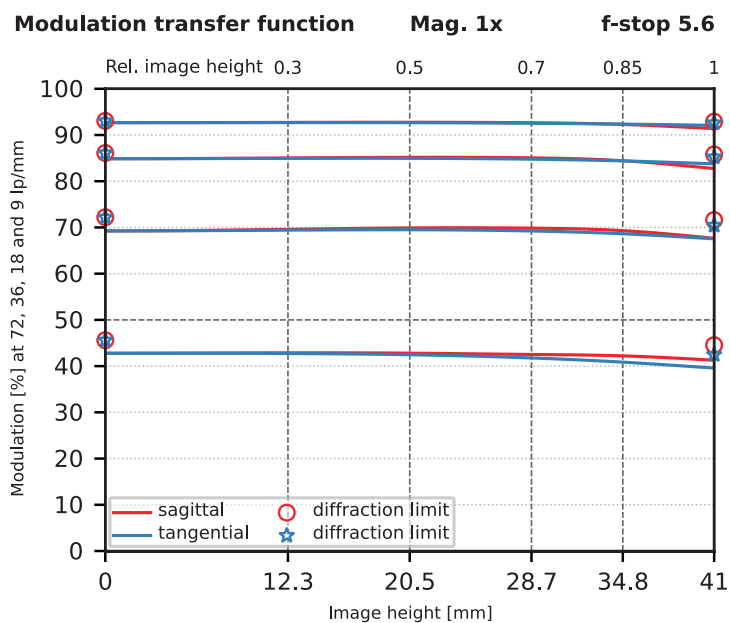
Dimensions



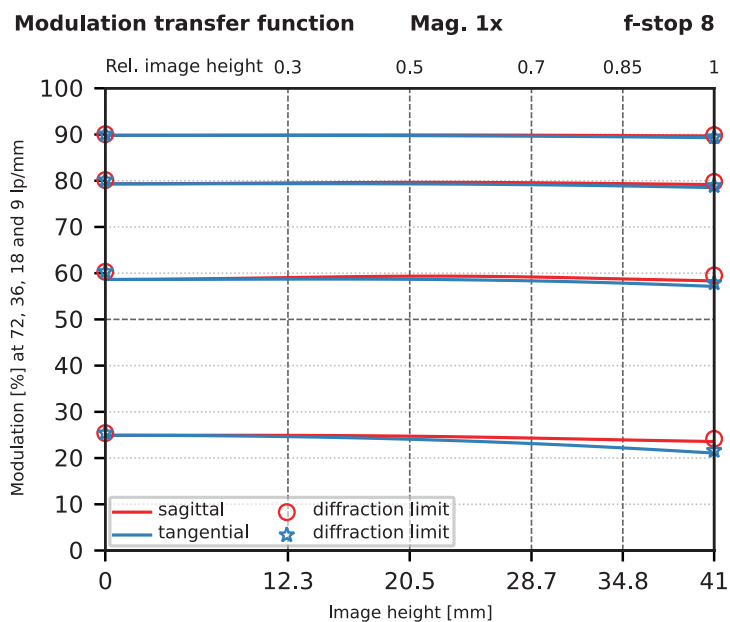
For further information about our inspection L series, please scan or click the QR-Code.



MTF at ratio 1x f/5.6



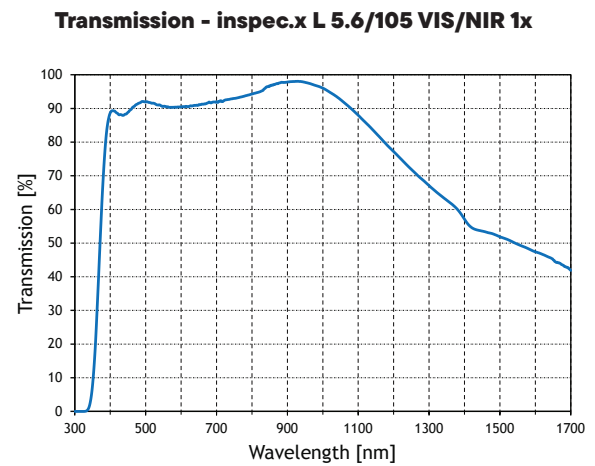
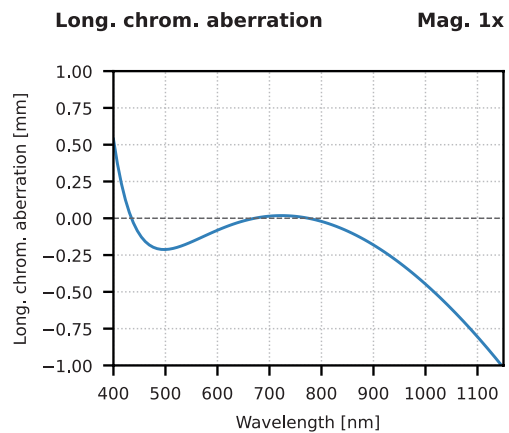
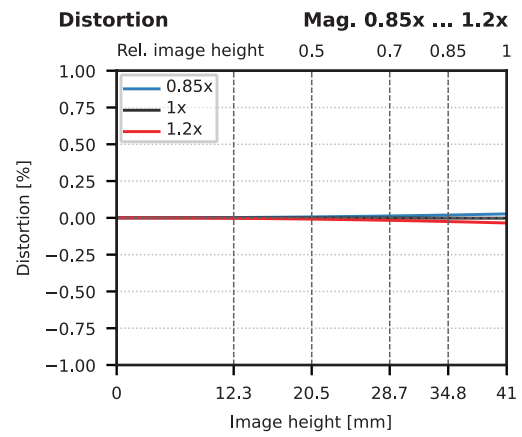
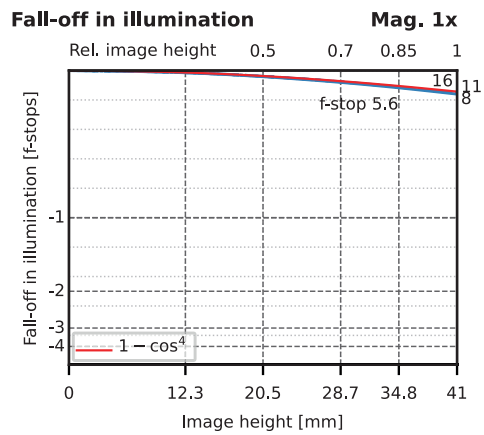
MTF at ratio 1x f/8.0



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



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Lens Selection and Configurator Software

The screenshot displays the MachVis software interface. On the left, a sidebar contains filters for Object Distance (100 mm), Object Size (45 mm), Image (sensor) size (35 mm), Standard Sensor Value (24 mm), and Camera Adapter Type (F-Mount/Nikon). The main area features a table of lens options:

#	Lens Name	Focus Device	Ext	Lens EFL	Total WD	Free WD	Object Size	Image Size	Mag. Value
	Theory			78.5mm	324.0mm	180.00mm	45.0mm	43.3mm	-0.902x
1	Apo Rodagon D 1x	Modular Focus	1	74.9mm	295.4mm	117.2mm	45.0mm	43.3mm	-0.960x
2	Apo Rodagon D 2x	Smart Focus	2	74.9mm	295.4mm	117.2mm	45.0mm	43.3mm	-0.902x

Below the table, a 'Solution 1 Lens: Apo Rodagon D 1x [0703-005-000-40]' is highlighted, showing its dimensions and a list of components: Apo Rodagon D 1x, Extension Tube (1x), Camera Adapter, Lens Adapter, and Modular Focus. The bottom navigation bar includes tabs for SPECIFICATIONS, RESULTS, SCHEMATIC SYSTEM DRAWING, COMPONENTS DRAWING, and PROJECT NOTES.



MachVis:
Access for **FREE!**



For further information about our
Lens Selection Software MachVis,
please scan or click the QR-Code.





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