LINOS



inspec.x L 5.6/105 VIS-NIR 0.5x

for large format highresolution sensors optimized for VIS and NIR sensitivity



The new VIS-NIR lens series from Exceltias 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

LINOS

Key Features

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

Mechanical accessories, including helical focus mounts, adapters and extension tubes are described @ excelitas.com/

product/linos-machine-visionaccessories



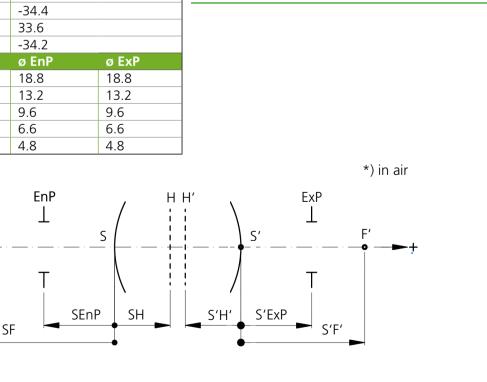
Optical data

F

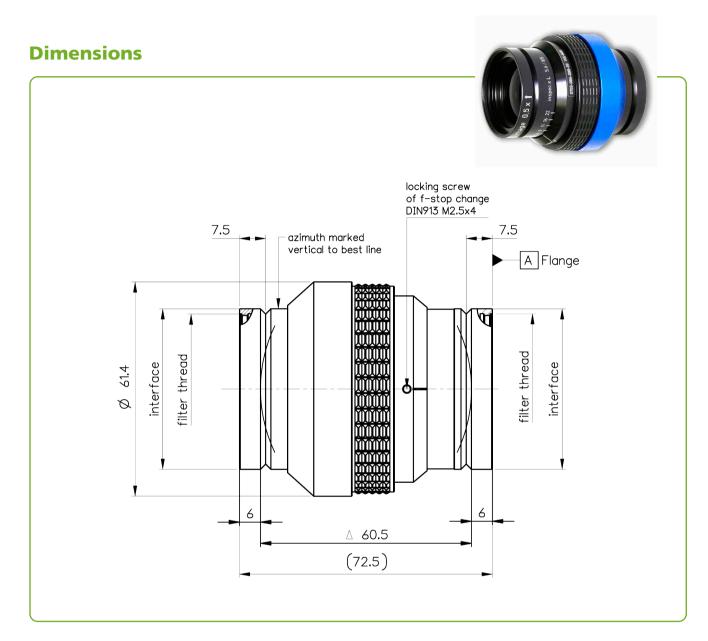
| Part No. | 0703-084-000-30 | | | | | | | |
|---------------|-----------------|-------|--|--|--|--|--|--|
| SF [mm] | -72.0 | | | | | | | |
| S'F' *) [mm] | 71.0 | | | | | | | |
| HH' *) [mm] | -7.5 | | | | | | | |
| SH *) [mm] | 33.4 | | | | | | | |
| S'H' [mm] | -34.4 | | | | | | | |
| SEnP [mm] | 33.6 | | | | | | | |
| S'Exp *) [mm] | -34.2 | | | | | | | |
| 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. | 0703-084-000-30 | | | | | |
|-------------------------------|--------------------|--|--|--|--|--|
| Focal length [mm] | 105.4 | | | | | |
| f-stop | 5.6 | | | | | |
| f-stop range | 5.6 22 | | | | | |
| f-stop lockable | yes, locking screw | | | | | |
| Numerical aperture | 0.06/0.12 | | | | | |
| (object/image) | | | | | | |
| Image circle max. [mm] | 82 | | | | | |
| Magnification optimized | 0.5 | | | | | |
| Rec. magnification range | 0.4 0.65 | | | | | |
| Rec. working distance [mm] | 228 330 | | | | | |
| Spectral range [nm] | 400 - 1150 | | | | | |
| Azimuth marked | yes | | | | | |
| Interface | V-groove ø46h7 | | | | | |
| Filter thread | M43 x 0.75 | | | | | |
| Lenght [mm] | 72.5 | | | | | |
| Diameter [mm] | 61.4 | | | | | |
| Weight [g] | 370 | | | | | |
| Storage temperature [°C] | -25 +70 | | | | | |
| Working temperature [°C] | 0 +50 | | | | | |
| Optical number | 7608-9031 | | | | | |
| Sensor cover glass (included) | 0.76mm D263 | | | | | |







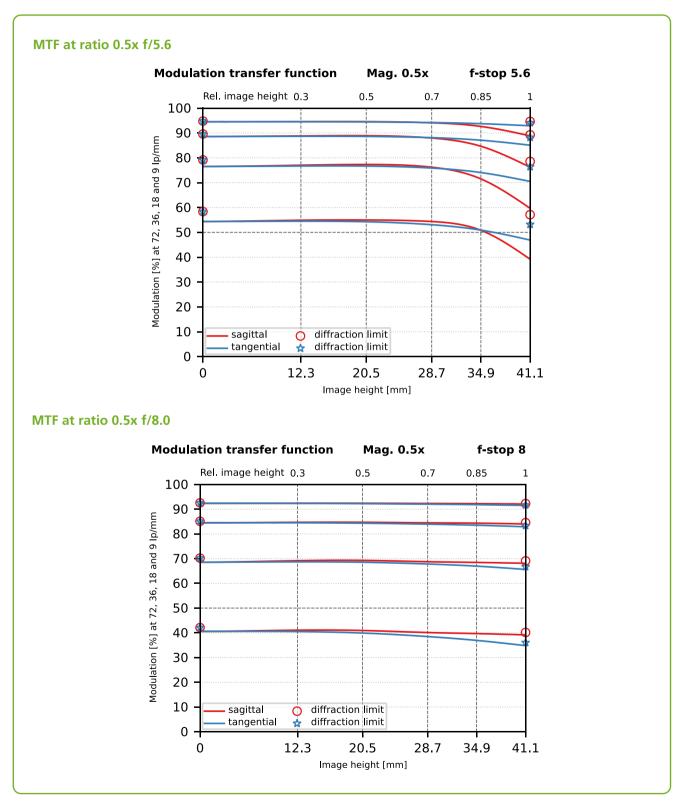


For futher information about our inspec.x L series, please scan or click the QR-Code.



LINOS

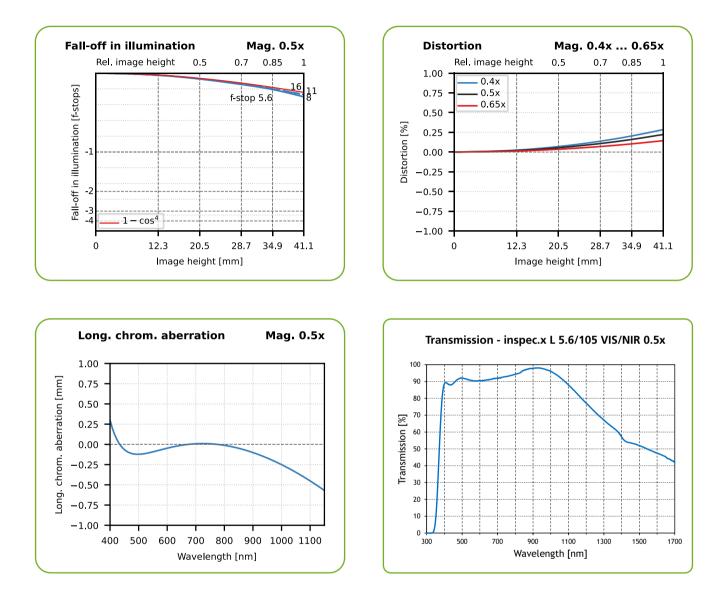
Optical Performance



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

4





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



MachVis

Lens Selection and Configurator Software

| | | xcelitas.com/machvis/#/ | | | | | ि 🗰 | G ⊊ G LENS | | e Synchronisier PARTS | | | | | | |
|---------------------------|------------------------|--|--|----------------|-----------------|---------------------|-----------|-----------------|---------------|--------------------------|----------------------------------|--|--|--|---|------------------|
| TECHNOLOGIES | MachVis [®] O | InLine | | | | | FILE | S LENS | ES 🔐 | PARTS | | Sector Prove | | | _ | |
| Object Distance | | # Lens Name | Focus Device | Ext | Lens EFL | Total W.D. | Free W.D. | Object Size | Image Size | Mag Value | | 1 Laichean | Renalt Face Code | 35 | 100 For 10 | |
| Free Working Distance | • | _ | | | | | | | | | Frankolog Salaron | | ENLINE! Ibu | Million T More | Etilan States Bar | 900 40 900 40 |
| 160 | mm | Theory | | | 78.5mm | 314.0mm | 160.00mm | 45.0mm | 43.3mm | -0.962x | Operation | A Aprilia | 1930 Bolder have | i Alimi | Etime Giller Jahr | - |
| | | 1 Apo Rodagon D 1x 🔓 | Modular Focus | 1 | 74.9mm | 285.4mm | 117.2mm | 45.0mm | 43.3mm | -0.962x | Olyma Burr ProgN | Ingrad 1 to Approx 1 | n III Bear Awai | r mjen f tithen | Numero calabora calabora | |
| Object Size | | 2 Apo Rodagon D 1x | Smart Focus | 2 | 74.9mm | 285.4mm | 117.2mm | 45.0mm | 43.3mm | -0.962x | - | nn y Apriliague B Apriliague | n 105 Millioner - Bodow Poose In 105 - Smart Poose | f 105.5mm | 873 han 206,200 28,300 875 han 106,2000 28,30 | |
| Object Size | - | | | | | | | | | | Inaja janur) das 38 och 008 | | A 100 kel meter Baser Paters | 5 108.5mm | Riji Sana Kali, Joon 18, See | en 13 |
| | | | | | | | | | | | Burded Smort Value | nn Soldios 2 Lanix Regor 24 Statements Sound of S Regorates 10 1001-000-00 | 147-55 (2022-208-000-51) dem Frec 15-54 (dem Fréc 15 Free 000-37 Million) (F Demoise Table (2x) 1484-000-123-00 | anga Ath Range M A 102 Para Cartana Adapter Jana Da 106 00 | rappet bette | |
| Full Diameter | · | | | | | | | | | | An Common Allayter Type | | | 1. * | ngorae di Milito Ank-Or an Anghari perte nome | |
| 45 | mm | | | | | | | | | | Creat Creating (set) 37305 | | | II . | nentar tube - 2400-000-02 Nuel - Dello 201-02 | |
| • | | | | | | | | | | | | | Lans Alastan Radular Per Sell-arti-Lan-ati Sell-arti-Lan-ati | | initian/biol | |
| Image (sensor) size | | | | | | | | | | | - Ingenerations (| ante: entre | or an | erate an erate a | | |
| 35mm | - | | | | | | | | | | | | SAMS | UNG | | - |
| Standard Sensor Value | | Solution 1 Lens: Apo Rodagon D 1 H: 12.9mm LA:3.7mm Ext:60.0mm Foc:15.8 | | | | 7 | | | | | Summary | | | | | |
| Full Height 24 | mm | 1. 12.0000 EA.S.7000 EA.60.0000 POC.16.8 | 40.8mm CA.0.7mm CBD.46.8mm | I Flange FD Ra | nge. 126.7-161. | | | | | | | | | | | _ |
| Full Width 36 | mm | Apo Rodagon D 1x 0703-005-000-40 | Extension Tube [1x] 2408-009-123-00 | | | Adapter 9-142-00 | | | | | | | | | 27 | |
| Camera Adapter Type | | | n | | | h | | | | | | | 6 | - | E MACHNER | Rodator |
| F-Mount/Nikon | • | | | Modu | | 11 | | | | | | | | | 0 (0122-014-000-20) test (2-014-000-20) 47 mar (0.4.1 mm 1.4.0 mm (1.4.1 mm) | |
| | | | | ar F | - +- | e | | | | | | | 1000 112 | MACHVIS Don Denillar Oten EDen | A stranger to the | n. |
| Camera Body Depth 48,5 | mm | | | Medular-Focus | | h i | | | | | | | 500 Apr | on 40 Proligon N 90 - Smart Foous | | - |
| | | └ ═ ╩╸┝╯ ╟ | | | | μ | | | | | | | 200 C | arb Passa Decor Breat/Assa Lore 301 40 (res | | almon Table 21- |
| | | Lens Ad | | Modular Po | | | | | | | | | 1 | 16.3. Free 6.3. Inn 400 Jan | Accessed Accessed to All | * 7m |
| | | 2408-009 | 118-00 | 2408-009-00 | 0-42 | | | | | | | | 203 | nt too mage box ool sbow oon tog forge o dour ood | nam tala nan tala nam tala | - |
| | | | | | | | | | | | | | 40 | n 651-635 Di Carara Farga 7.0 Dinn 2015en | 1.00 | |



Europe +49 (0) 89 255 458 0

North America +1 (800) 429 0257

Asia/Pacific +65 64 99 7777 Inspection@excelitas.com www.qioptiq-shop.com

www.excelitas.com

© 2024 Qioptiq Photonics GmbH & Co. KG. All rights reserved. Qioptiq reserves the right to change this document and the technical data contained herein at anytime without notice and disclaims liability for editorial, pictorial and typographical inaccuracies. O_IO_DS-inspec.x_L_5.6/105_VIS-NIR_0.5x_EN_2024-09