

Line Scan Lens

XENON-ZIRCONIA 3.2/92, beta' = -2.0x for use with Beam Splitter Prism (BSP)

This lens is optimized for the use with 12k pixel line scan sensors and can also be used with 16k. It is broadband coated and can be used in the spectral range of 400 – 1000 nm. The V-mount makes it easy to install and rotate into the desired azimuth position for a wide range of line scan applications.

- F#4.0 shows optimum performance and a homogenous MTF @ 50 lp/mm as well. Performance is close to diffraction limited over the whole field. At f#4.0 the lens is free of artificial vignetting.
- At F#4.0 and F#5.6 a resolution of 72 lp/mm is achievable.
- F#3.2 allows maximum light throughput (about 1.6 times more than at F#4.0 on axis) and still shows good MTF over the field. The light fall-off at F#3.2 towards the edge still grants appr. 1.4 times more light compared to F#4.0.



XENON-Zirconia
for use with BSP

Key Features

- for line scan cameras 12k (62.5mm length / pixel sizes appr. 5µm) and 16k (82mm length / pixel size appr. 5µm)
- Very high optical image quality in the large sensor range
- Vibration-insensitive for stable optical performance
- Lockable distance and aperture settings
- Industry-compatible V-mount interface
- Reliability and constant quality due to 100% quality control

Applications

- Web and surface inspections
- Quality control
- FPD inspection
- PCB inspection
- OLED inspection
- Line scan applications

Technical Specifications	XENON-ZIRCONIA 3.2/92
F# range	optimum 4.0 (3.2 – 11)
Focal length	93.3 mm
Image circle	62.5 / 82 mm
Beta'	-2.0
Object to image distance	407 mm
Transmission	400 - 1000 nm
Interface	V48-Mount
Weight	250 gr.
Filter thread	M46 x 0.75
Code no. of lens itself	1078873
Code no. of combination lens + mounted BSP	1078988

Accessories

	Code no.
Adapter V48-Mount/V70-Mount incl. focusing ring	# 1075304
Extension tube V70 5 mm	# 1072420
Extension tube V70 10 mm	# 1072421
Extension tube V70 25 mm	# 26406
Extension tube V70 50 mm	# 1054733

See picture upper right corner



Please note that this lens works only properly with a 25 mm (BK7) Beam Splitter Prism at the object side.

If a pellicle is used instead of a BSP a different lens (designed without 25 mm BK7) has to be used.

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XENON ZIRCONIA 3.2/92

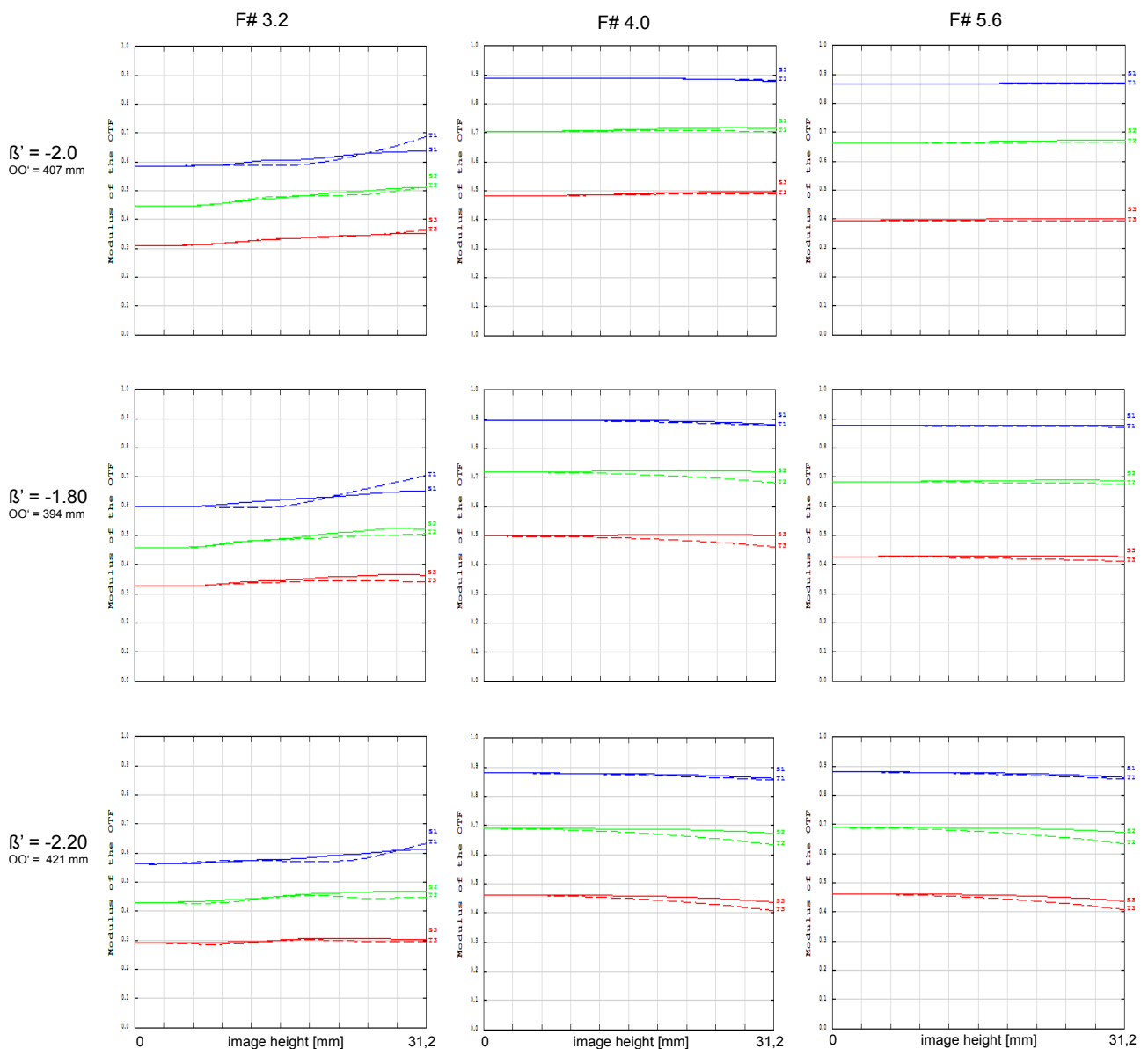
$f' =$ 93,3 mm	$\beta'_p =$ 1,02
$s_F =$ -65,8 mm	$s_{EP} =$ 26,0 mm
$s'_F =$ 54,5 mm	$s'_{AP} =$ -40,2 mm
$HH' =$ -11,9 mm	$\Sigma d =$ 54,35 mm

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MTF with reference to image height

Wavelength λ	[nm]:	425	475	525	575	625	675
Spectral weighting	[%]:	1.5	13.6	26.5	27.8	24.2	6.4
Spatial frequency R	[1/mm]:	10	25	50 (= 12K sensor)			
Image- \emptyset	[mm]:	62.5					

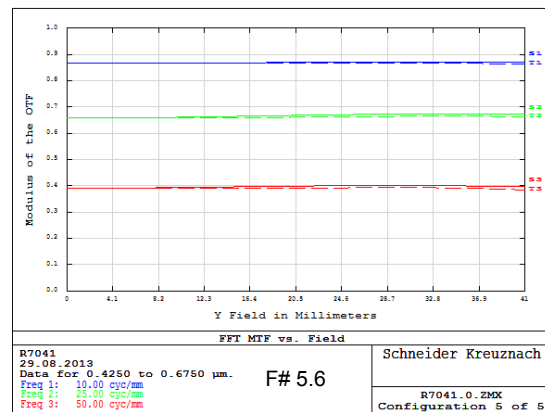
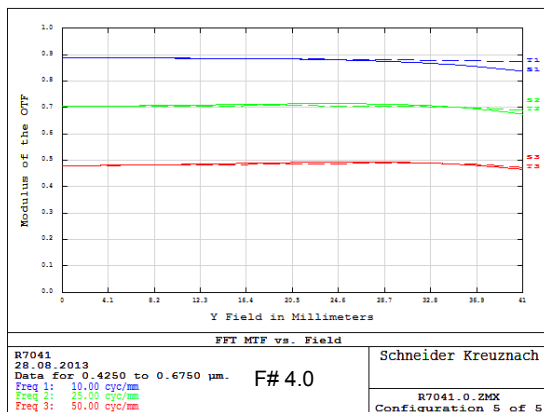
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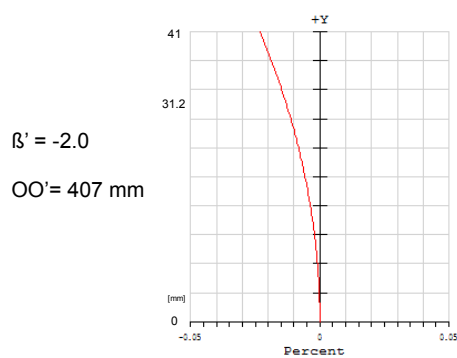
Xenon-Zirconia 3.2/92

for use with Beam Splitter

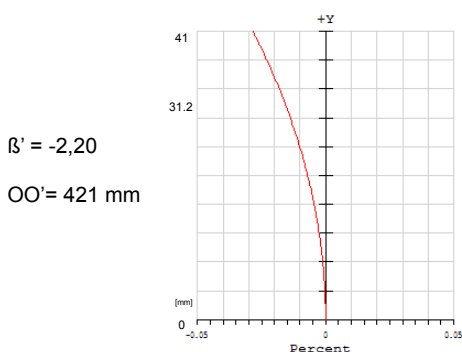
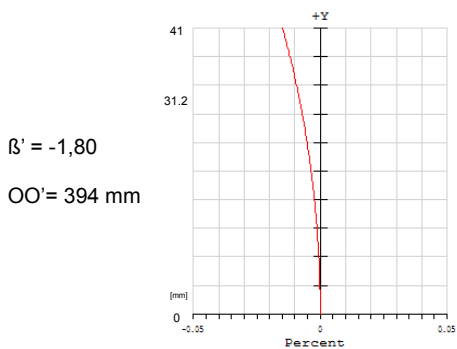
Optical quality for 16 K sensor
with 82 mm length and 5 μm pixel size



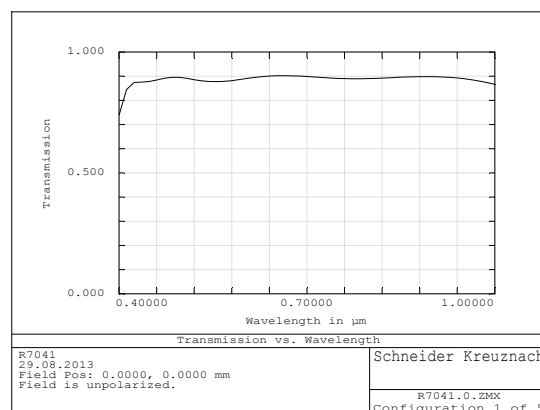
Distortion



Distortion is shown for different magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.



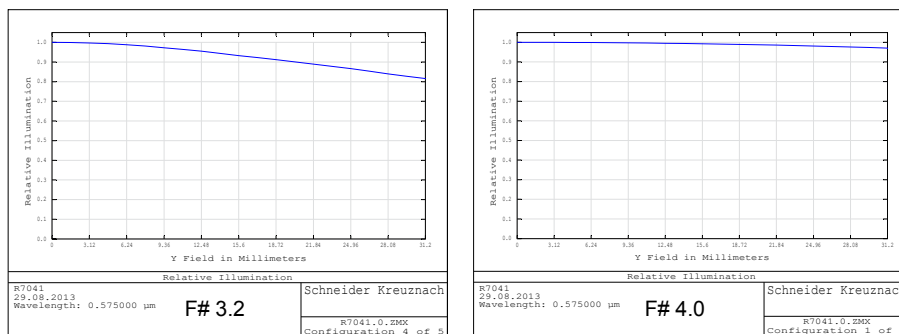
Transmission



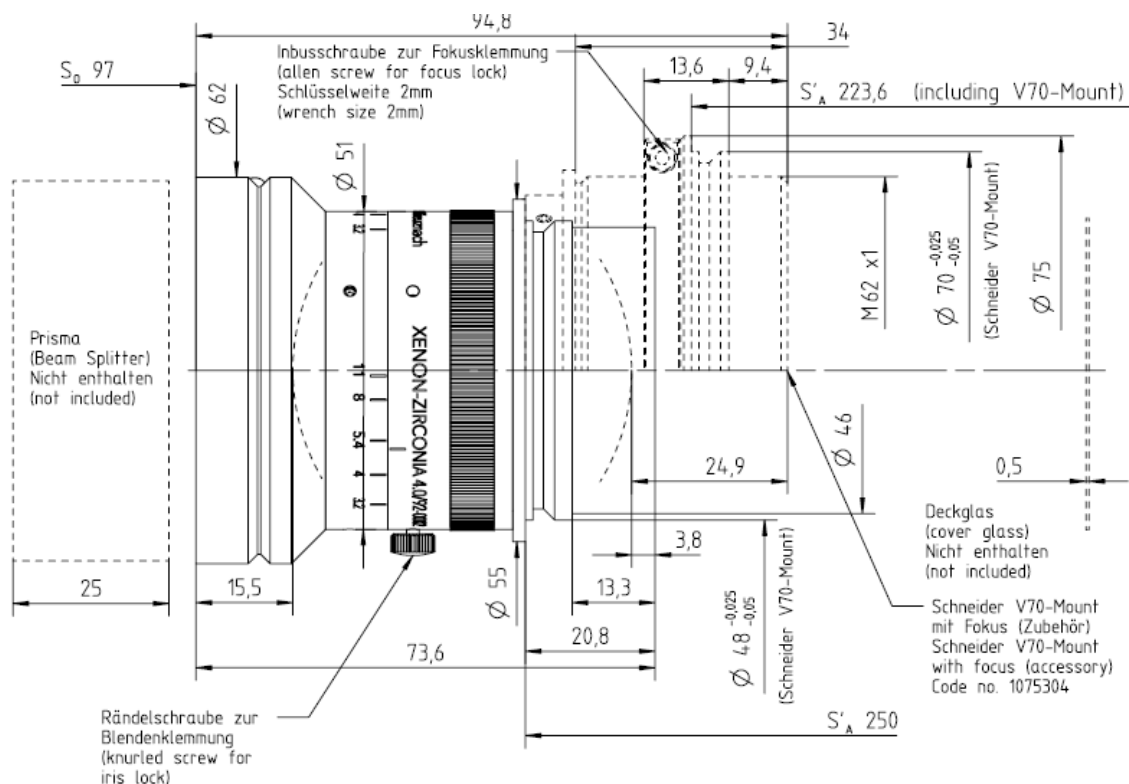
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Relative Illumination



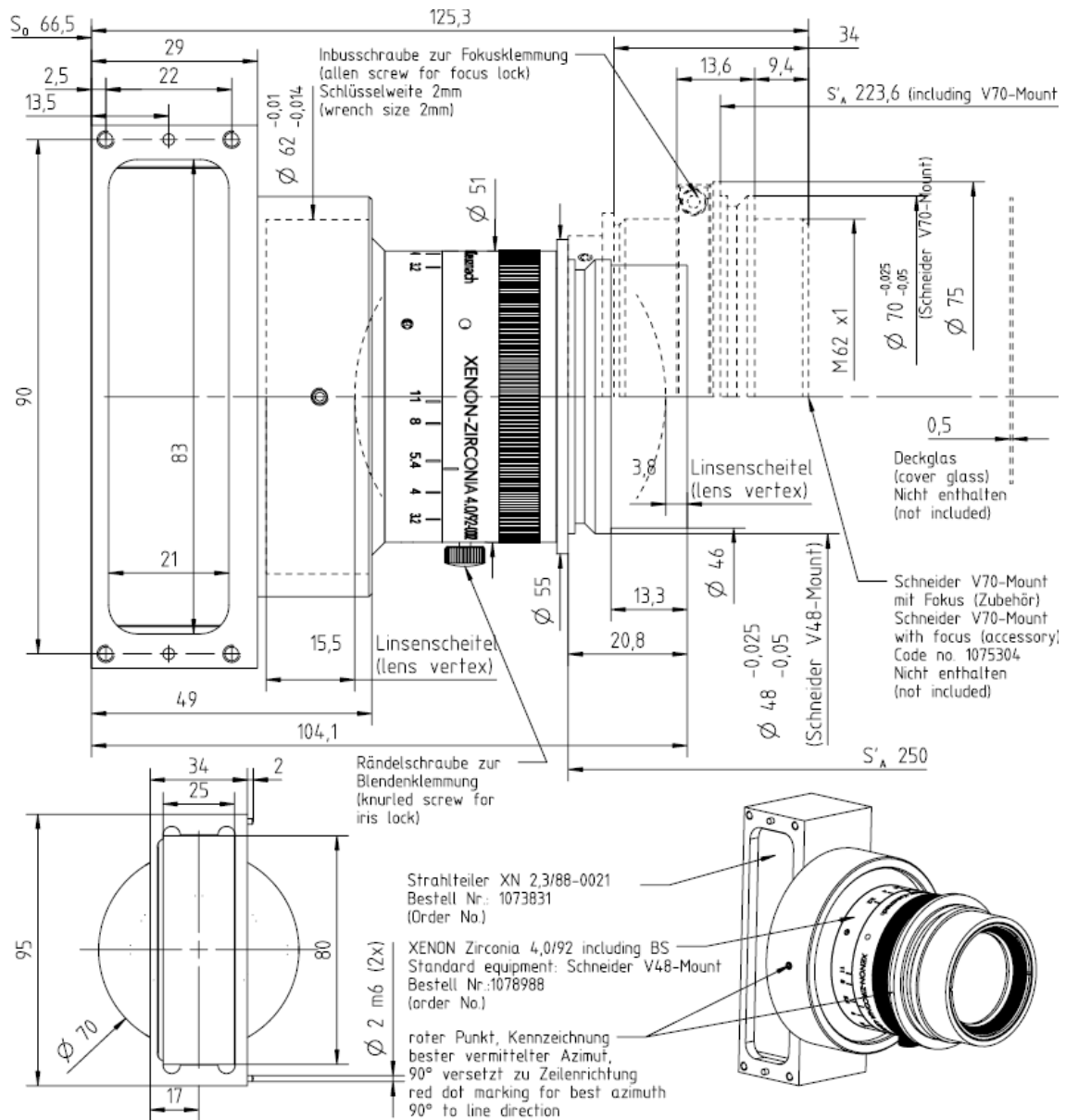
Lens XENON Zirconia 3.2/92 for use with BSP
code no. 1078873
-> no beam splitter prism mounted



Xenon-Zirconia 3.2/92

for use with Beam Splitter

Lens XENON Zirconia 4.0/92 including mounted BSP
code no. of combination 1078988



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