

Line Scan Lens

XENON-ZIRCONIA 3.3/92, beta' = -0.2x

This lens is optimized for the use with 12k pixel line scan sensors. 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#5.6 shows optimum performance and a homogenous MTF @ 72 lp/mm as well. Performance is practically diffraction limited over the whole field. At f#5.6 the lens is free of artificial vignetting.
- F#3.3 allows maximum light throughput (3 times more than at F#5.6 on axis) and still shows good MTF over the field. The light fall-off at F#3.3 towards the edge still grants appr. 1.5 times more light compared to F#5.6.



XENON-Zirconia

Key Features

- for 12k line scan cameras (62.5mm length / pixel sizes 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

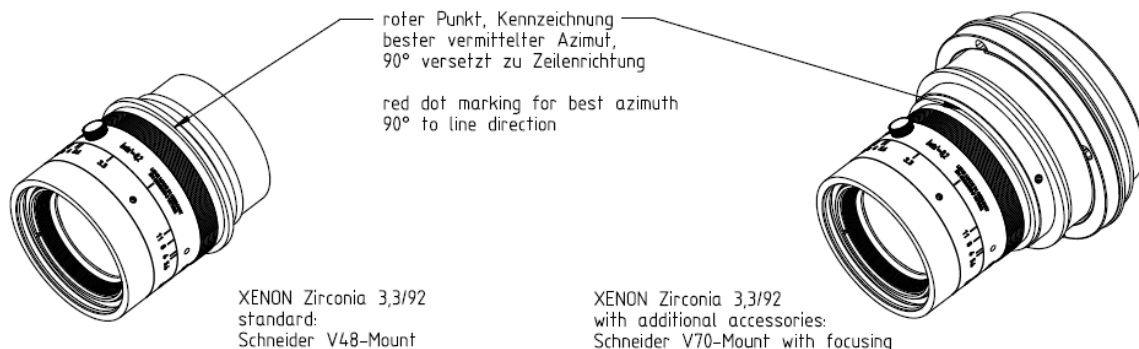
Applications

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

Technical Specifications	XENON-ZIRCONIA 3.3/92
F# range	optimum 5.6 (3.3 – 11)
Focal length	92 mm
Image circle	62.5 mm
Beta'	-0.2
Object to image distance	644 mm
Transmission	400 - 1000 nm
Interface	V48-Mount
Weight	246 gr.
Filter thread	M46 x 0.75
Code no.	1073622

Accessories

	Code no.
Adapter V48-Mount/V70-Mount incl. focusing ring	# 1075304
Adapter V70 / M72x0.75 10 mm	# 1072419
Extension tube M72x0.75 5 mm	# 1072420
Extension tube M72x0.75 10 mm	# 1072421
Extension tube M72x0.75 25 mm	# 26406
Extension tube M72x0.75 50 mm	# 1054733



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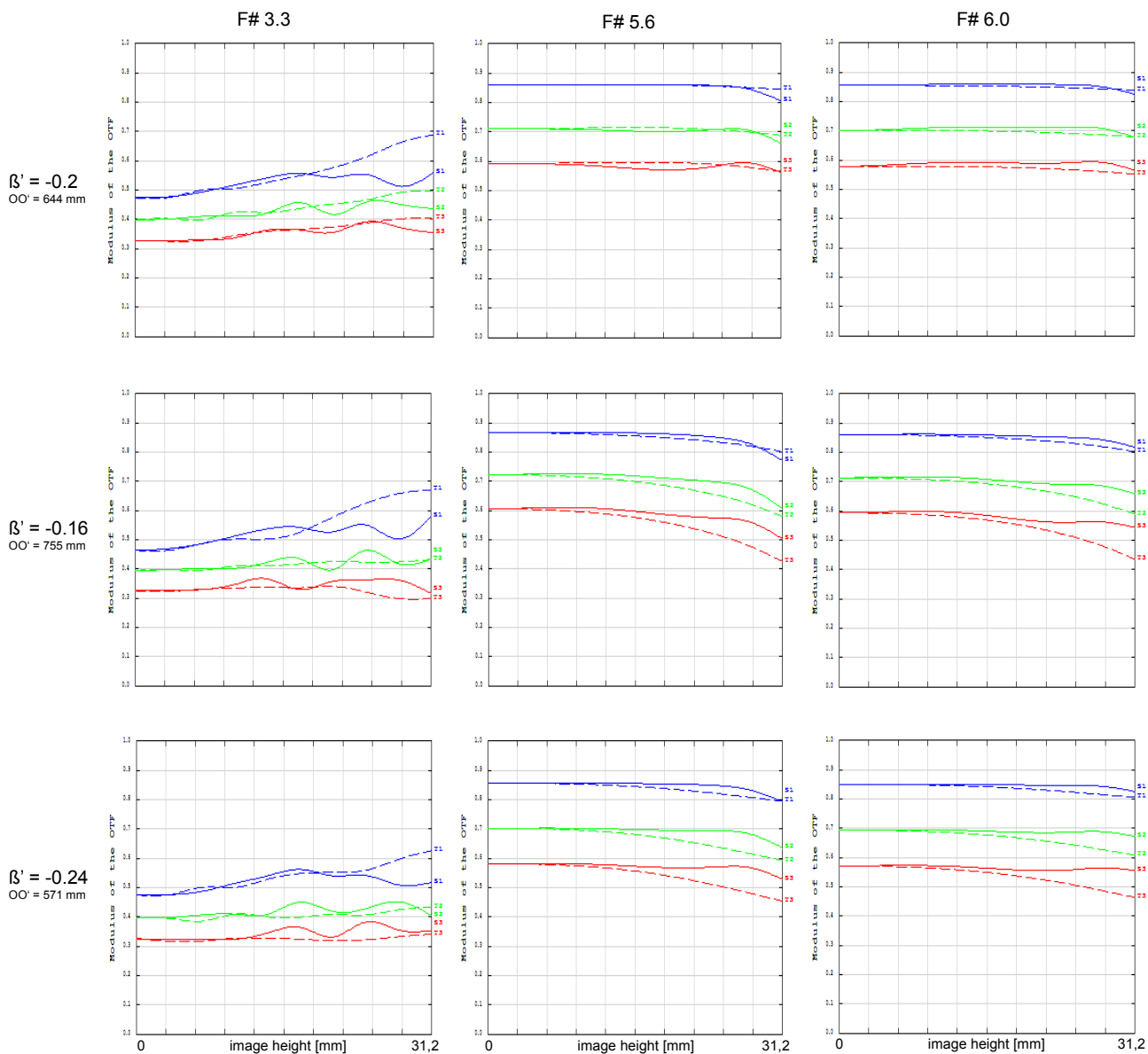
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$f = 91,9 \text{ mm}$ $\beta'_P = 1,08$
 $s_F = -51,7 \text{ mm}$ $s_{EP} = 33,6 \text{ mm}$
 $s'_F = 62,4 \text{ mm}$ $s'_{AP} = -36,8 \text{ mm}$
 $HH' = -17,3 \text{ mm}$ $\Sigma d = 52,54 \text{ mm}$

XENON Zirconia 3.3/92 MTF with reference to image height

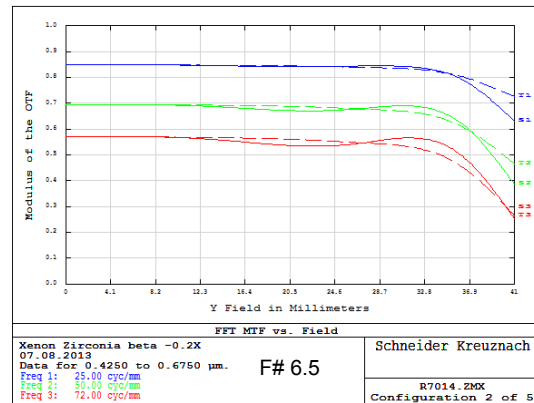
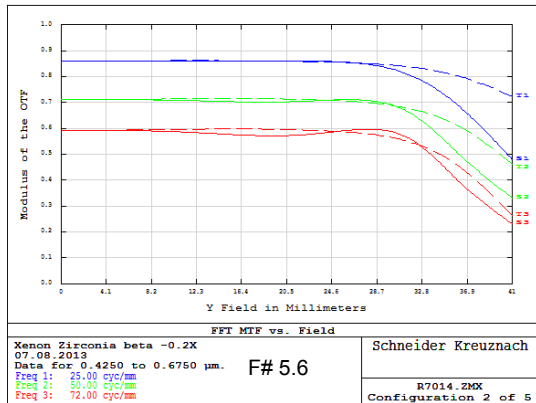
Wavelength λ	[nm]:	425	475	525	575	625	675	
Spectral weighting	[%]:	1.5	13.6	26.5	27.8	24.2	6.4	
Spatial frequency R	[1/mm]:	25	50	72 (= 12K sensor)				
Image- \emptyset	[mm]:	62.5						

radial ———
 tangential - - - -



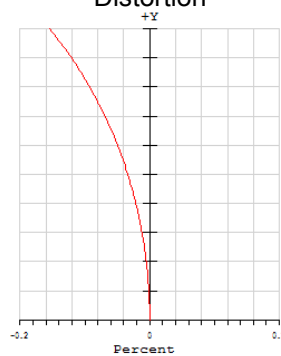
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Optical quality for 16 K sensor
with 82 mm length and 5 μm pixel size



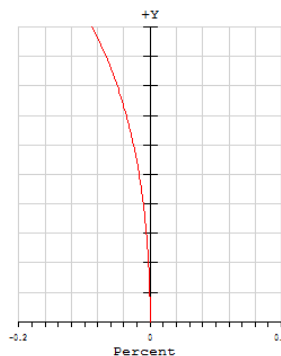
Distortion

$\beta' = -0.2$
 $OO' = 644 \text{ mm}$

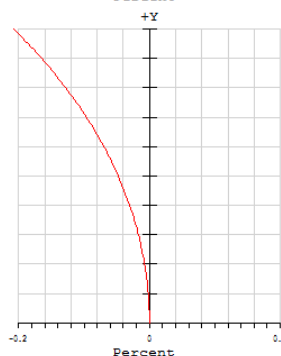


Distortion is shown for different magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

$\beta' = -0.16$
 $OO' = 755 \text{ mm}$

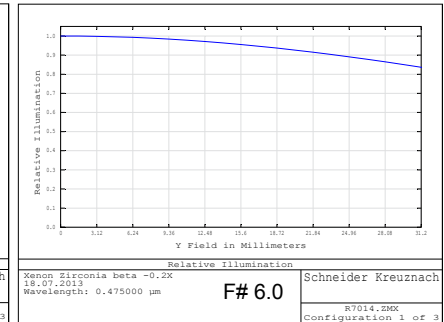
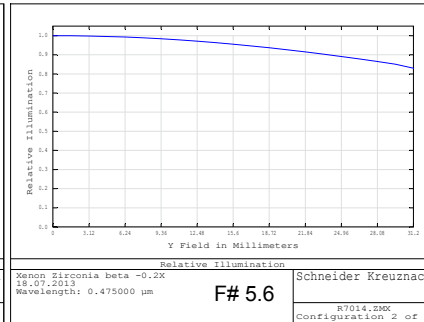
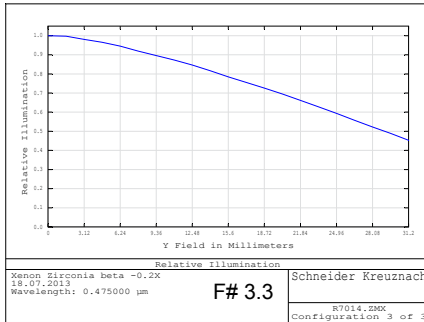


$\beta' = -0.24$
 $OO' = 571 \text{ mm}$



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Relative Illumination



Transmission

