



Plastic Optics – Imaging Specs

Three element full plastic lens for 3.0 μm UXGA (1200 x 1600)

Effective Focal Length (EFL)	Design value at 546 nm	4.9	mm
F-number	Image space F/#	3.2	-
Field of View	Horizontal 1/2 FOV	25	deg
Field of View	Diagonal 1/2 FOV	31	deg
Image Circle		6.30	mm
On-axis MTF	T and S at 40 cy/mm	80	%
On-axis MTF	T and S at 80 cy/mm	65	%
Horizontal field of view MTF	T at 40cy/mm	71	%
	S at 40 cy/mm	72	%
Horizontal field of view MTF	T at 80 cy/mm	49	%
	S at 80 cy/mm	50	%
Distortion at field	Optical Distortion	<1.0	%
Relative Illumination	At Diagonal	51	%
Chief Ray Angle		< 24	deg
Free Working Distance (FWD)	From rear element to image plane, focussed at infinity	1.7	mm
Track Length	Optical	6.3	mm
Construction	Number of elements and material	3P	
Barrel diameter	Metric thread diameter	M8x0.35	
Format	pixel of 3.0 μm	1/3"	
Storage Temperature		-40 to 85	$^{\circ}\text{C}$
Operating Temperature		-20 to 40	$^{\circ}\text{C}$

Description

This three element plastic lens has been designed for CMOS imagers of the UXGA format, with a pixel size of 3.0 μm . Choice of materials and construction enable the user to process the lens with temperatures up to 100 $^{\circ}\text{C}$.

All lens data given and the graphics are based on design data.

Design wavelength weighing factors are:

Wavelength Weighing factor

436 nm	0.34
546 nm	1.00
573 nm	0.93
588 nm	0.79
656 nm	0.38

Delivery Specification

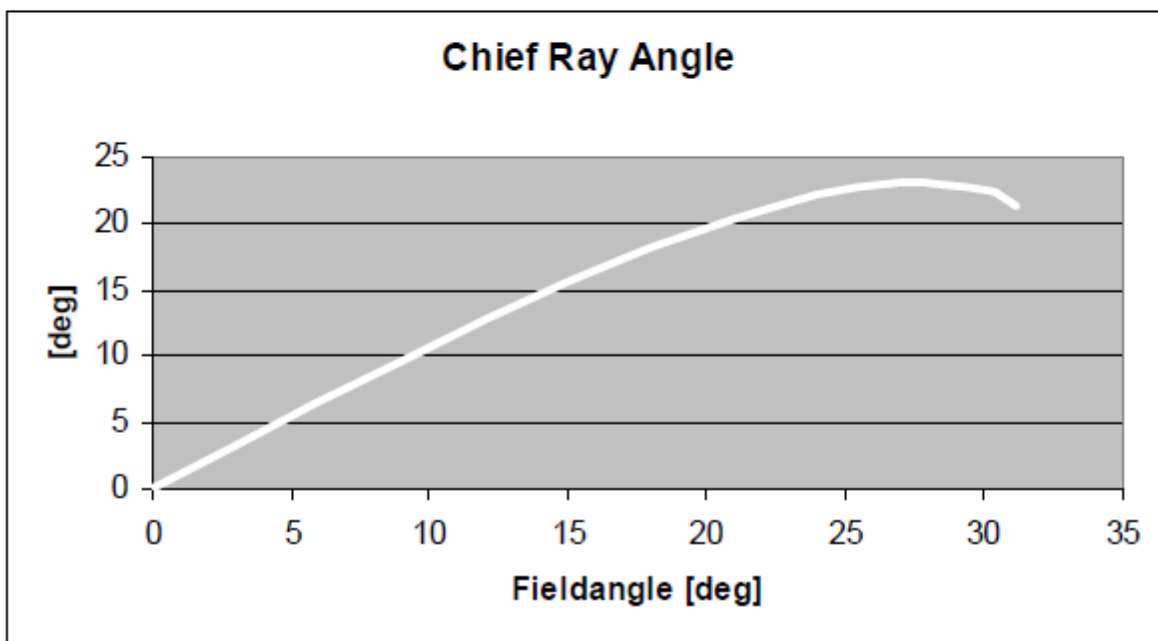
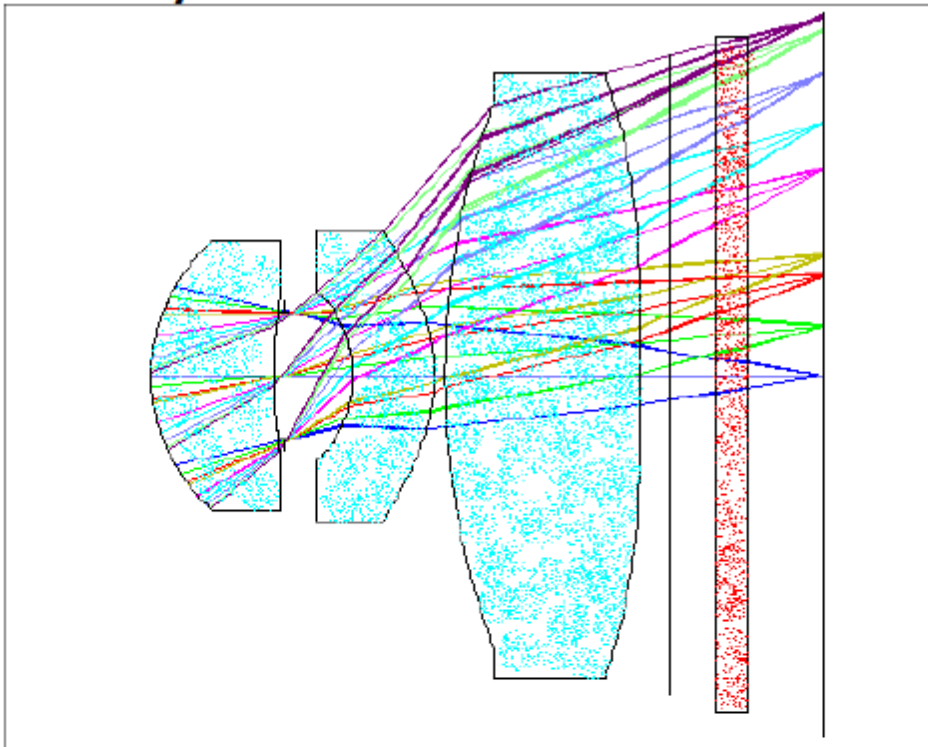
All lenses are 100% visual inspected and MTF tested on a Trioptics Proline 3 tester. We guarantee conformance to the agreed delivery specification.

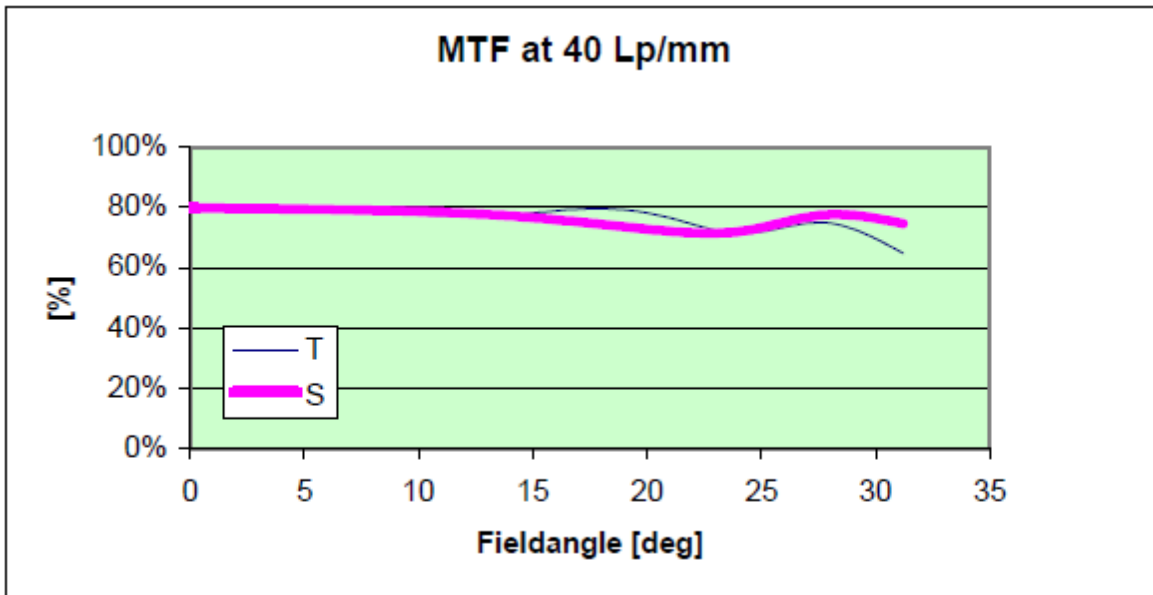
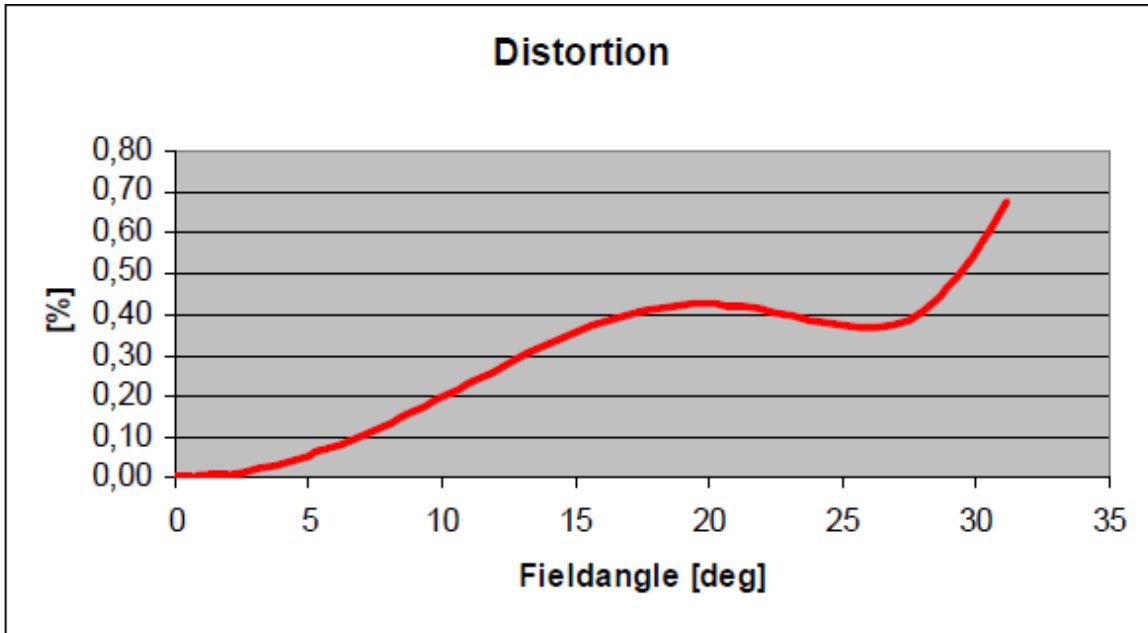
Manufacturing and assembly of the lenses take place under cleanroom conditions, class 100k and better.

Package is in antistatic cleanroom compatible materials, tape and reel, tube or tray-package.

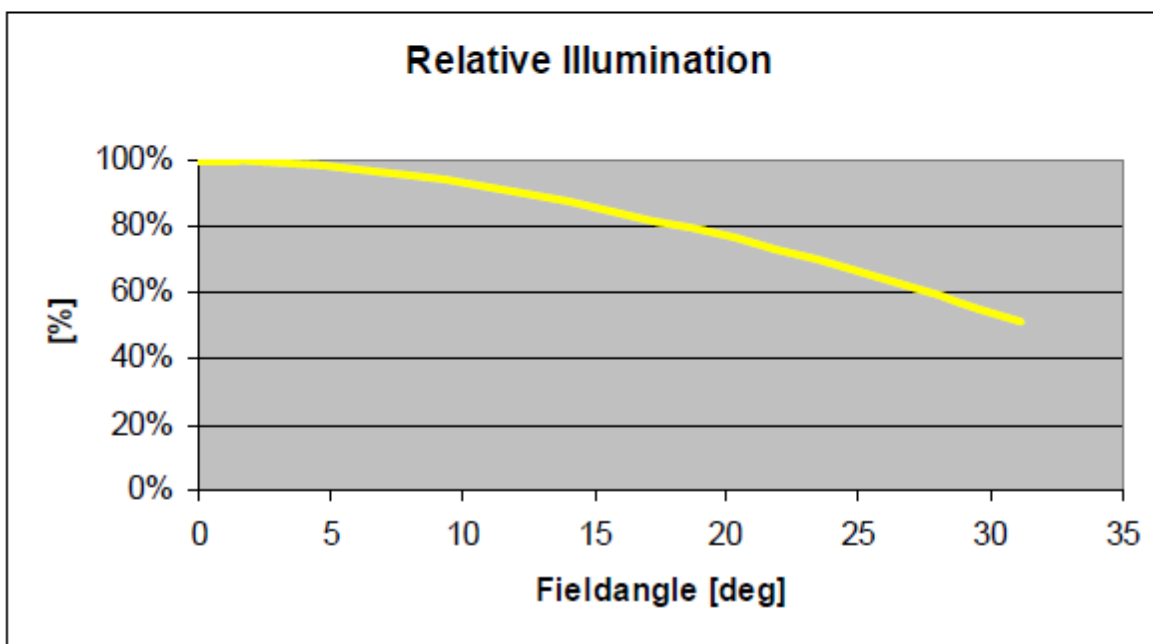
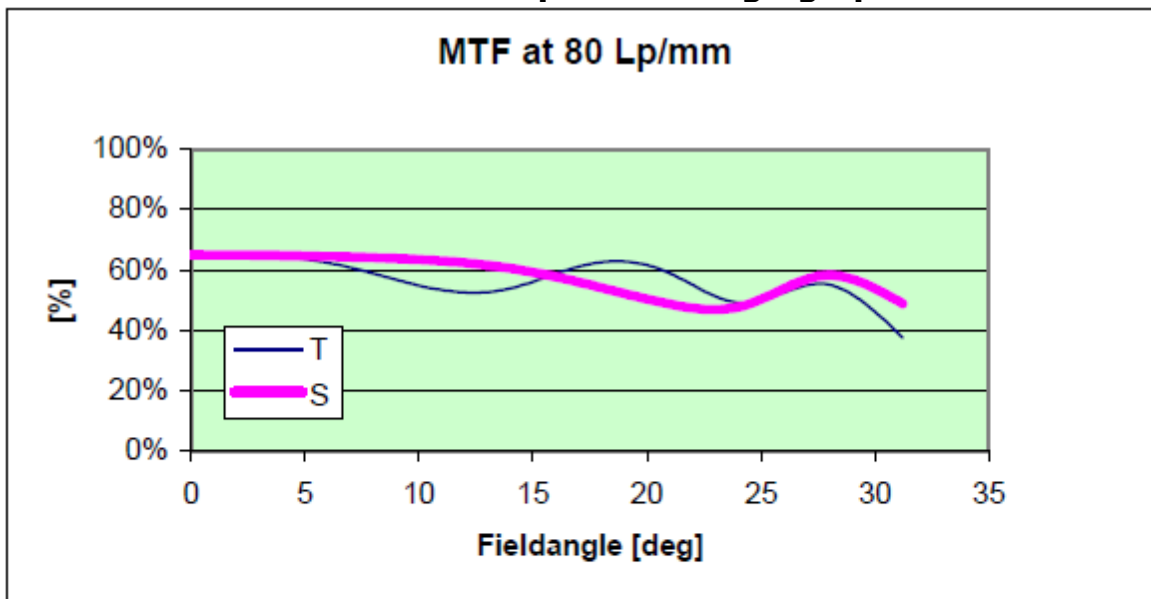
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Lens Layout





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Mechanical layout

Features for gripping the barrel while focussing to be added per customer specification.

