

5 Mega Pixel Ruggedized Lens

Apo-Xenoplan 1.4/23 - Ruggedized

The 5 megapixel high-performance lenses of the C-Mount compact series are extremely robust and insensitive to rough ambient conditions, with the result that the lenses retain their high optical imaging performance in industrial environments. The secure locking of the iris and focus settings and the broadband coating of 400 – 1000 nm is standard for all lenses.



Apo-Xenoplan 1.4/23

Key Features

- Highest optical imaging performance even with smallest pixel sizes from 2.5 µm
- Stabilized mechanism
- Excellent MTF across the entire sensor size
- Broadband coating (400 - 1000 nm)
- Compact and low weight
- Vibration insensitivity for stable imaging performance, secured ring
- Focus and iris setting lockable

Applications

- 3D measurement
- Machine Vision and other imaging applications
- Traffic
- Medical

Technical Specifications

F-number	1.4
Focal length	22.9 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	115 gr.
Option	Optical filter

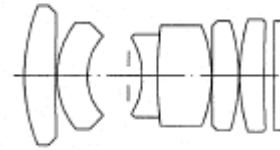
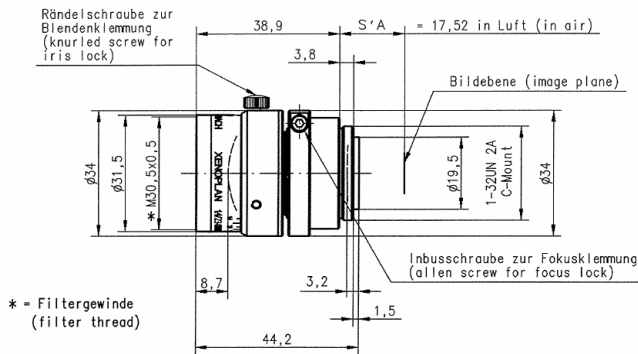
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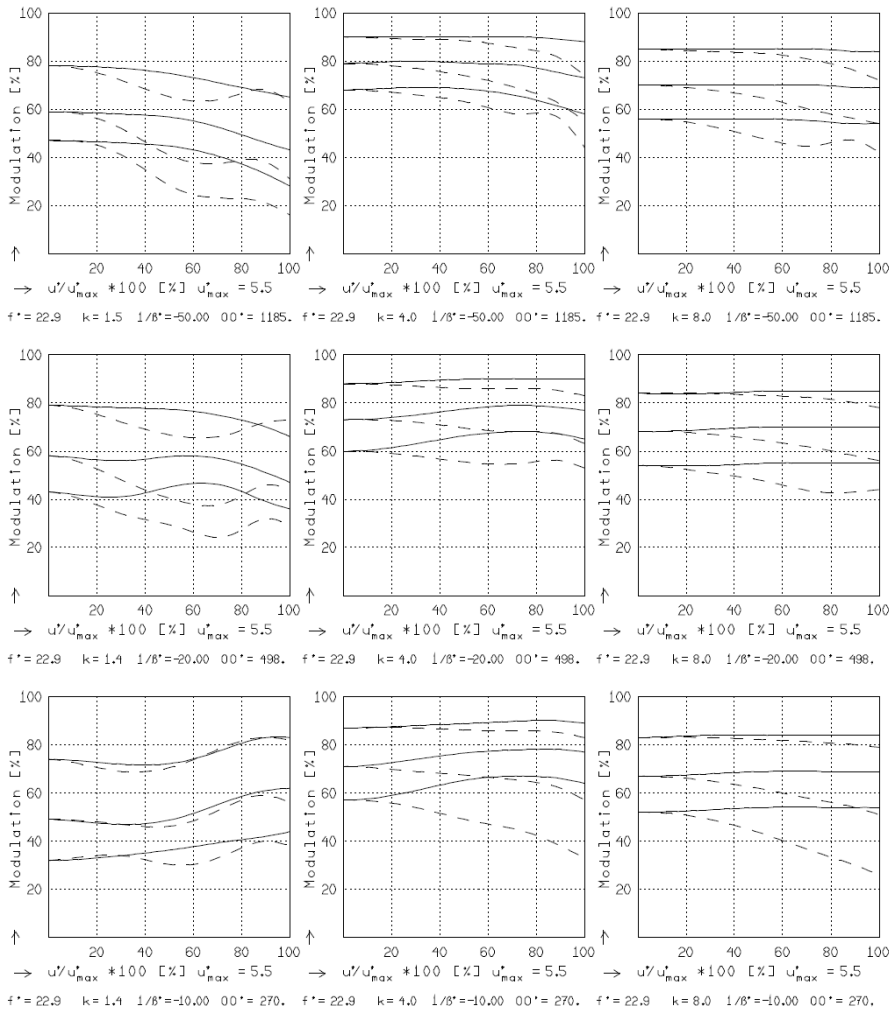
f^* = 22,9 mm	β_p = 2,409
s_f = 9,5 mm	s_{EP} = 19,1 mm
s_{f^*} = 15,5 mm	s_{AP} = -39,7 mm
HH^* = -7,7 mm	Σd = 32,3 mm

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MODULATION als Funktion der relativen Bildgröße

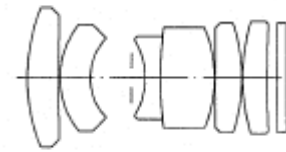
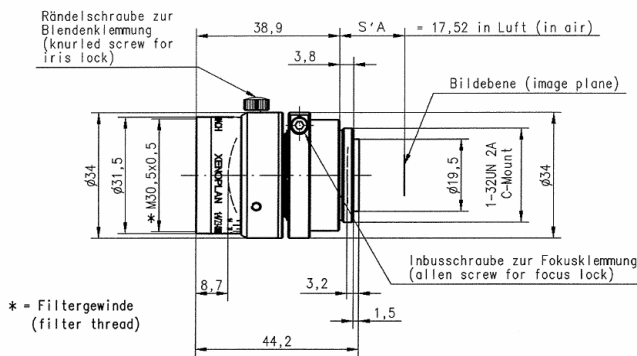
Wellenlänge λ [nm] :	555	655	605	505	455	405
Spektrale Gewichtung [%] :	19,6	23,7	22,2	15,7	12,1	6,7
Ortsfrequenz R [1/mm] :	25	50	75			
Format [mm X mm] :	6,6	8,8				
Diagonale $2u'$ [mm] :	11,0					

radial —
tangential - -



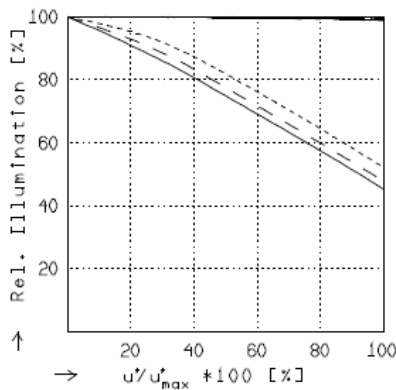
Fokussierung MTF_{max} bei $k = 1,4$. $R = 75$ 1/mm. $u'/u'_{max} = 0$

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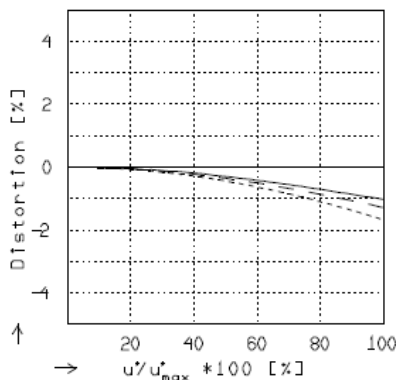
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RELATIVE ILLUMINATION

The relative illumination is shown for the given focal distances or magnifications.

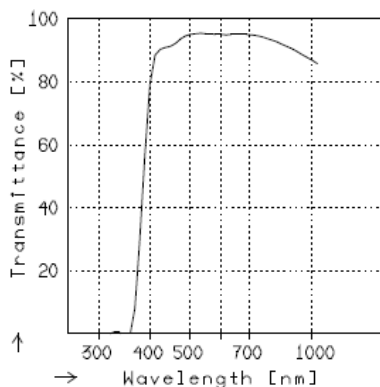
	$f / 1.5$	$f / 4.0$	$f / 8.0$
— $\beta^* = -0.0200$	$u_{max}^* = 5.4$	$00^* = 1184.$	
- - $\beta^* = -0.0500$	$u_{max}^* = 5.4$	$00^* = 498,$	
... $\beta^* = -0.1000$	$u_{max}^* = 5.4$	$00^* = 270,$	



DISTORTION

Distortion is shown for the given focal distances or magnifications. Positive values indicate pincushion distortion and negative values barrel distortion.

— $\beta^* = -0.0200$	$u_{max}^* = 5.4$	$00^* = 1184.$
- - $\beta^* = -0.0500$	$u_{max}^* = 5.4$	$00^* = 498.$
... $\beta^* = -0.1000$	$u_{max}^* = 5.4$	$00^* = 270.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.