Anti-Shading Lens

Xenoplan 2.8/50-0902

These high-resolution, high-speed lenses are optimized for the use of 4 and 8 megapixel 1.3" sensors with micro-lenses on the sensor surface. The special optical design prevents unwanted shading on the sensor. This makes it much easier to combine a homogeneous luminance distribution with high imaging performance. The image circles are very large for C-Mount lenses. With a 1.3" sensor, the relatively short focal lengths allow a large coverage range at a short working distance. The lenses are also broadband coated and can be used in the visible range 400 – 700 nm or the near infrared range 700 – 1000 nm.

Xenoplan 2.8/50

Key Features

- Anti-shading for sensor sizes up to 1.3"(image circle 24 mm)
- Designed for 4 and 8 Mpix sensors with micro-lenses
- High resolution optics 400 - 700 nm (VIS) / 700 - 1000 nm (NIR)
- Very high MTF across the entire sensor
- Robust mechanics for industrial environment
- Compact and low weight
- Focus and iris setting lockable

Applications

- Machine Vision and other imaging applications
- 3D measurement
- Traffic
- Etc.

Technical Specifications

F-number	2.8
Focal length	50.2 mm
Image circle	24 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	135 gr.
Filter tread	M30.5 x 0.5
Code no.	1001976

Contact

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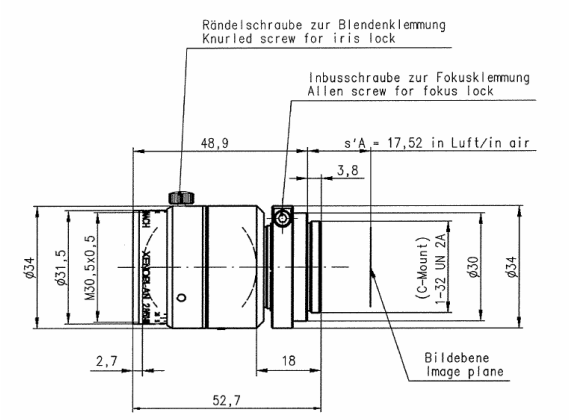
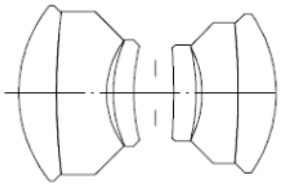
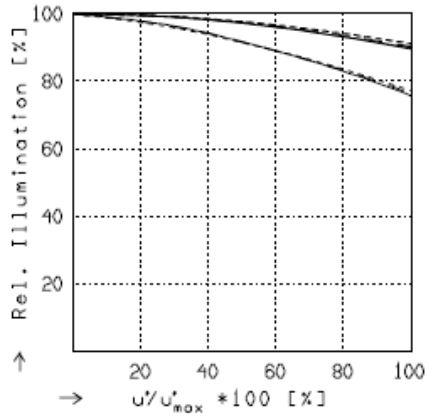
Xenoplan 2.8/50





XENOPLAN 2.8/50

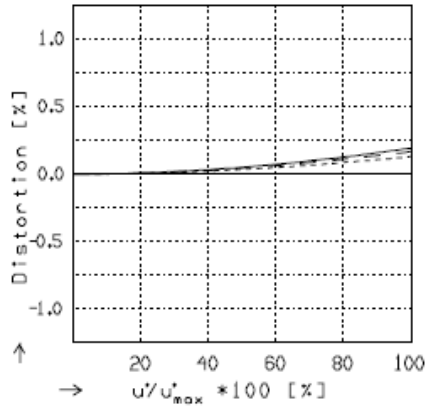
f'	=	50.2 mm	β'_P	=	0.945
s_F	=	-33.5 mm	s_{EP}	=	19.6 mm
s'_F	=	31.7 mm	s'_{AP}	=	-15.7 mm
HH'	=	-3.1 mm	Σ d	=	32.0 mm



RELATIVE ILLUMINATION

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

	f / 2.8	f / 4.0	f / 8.0
——	β' = -0.0200	u'_{max} = 11.0	00' = 2607.
— —	β' = -0.0500	u'_{max} = 11.0	00' = 1103.
-----	β' = -0.1000	u'_{max} = 11.0	00' = 604.



DISTORTION

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

——	β' = -0.0200	u'_{max} = 11.0	00' = 2607.
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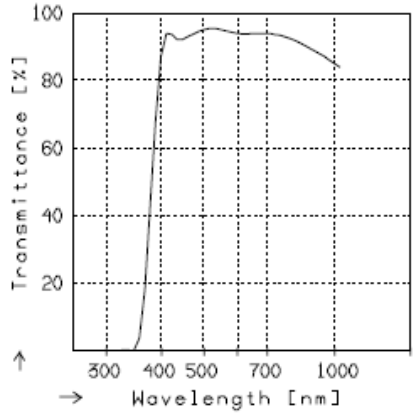
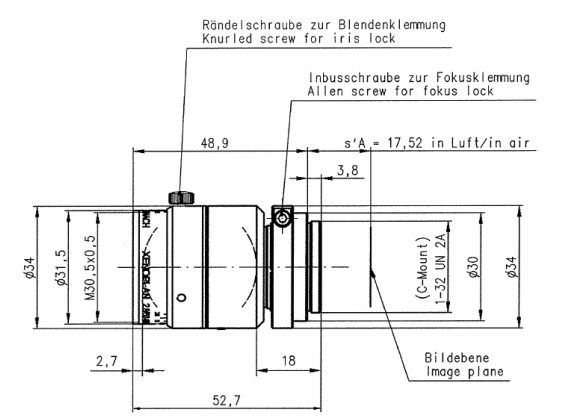
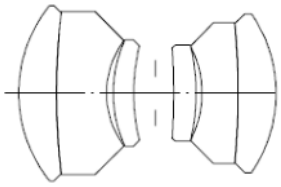


TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

Xenoplan 2.8/50





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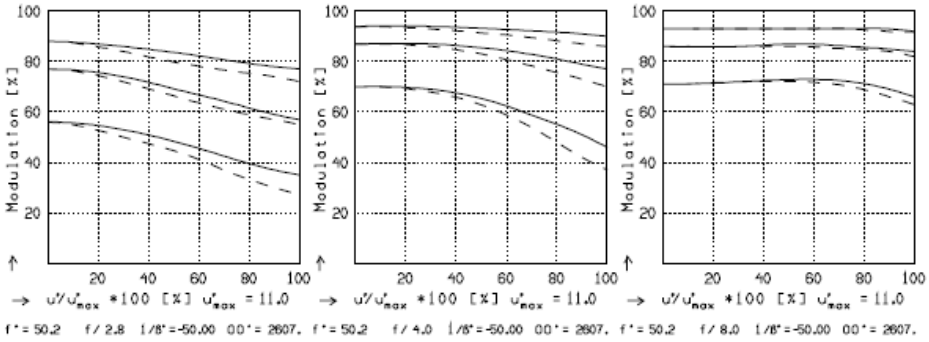
HH'	=	-3.1 mm	Σ d	=	32.0 mm

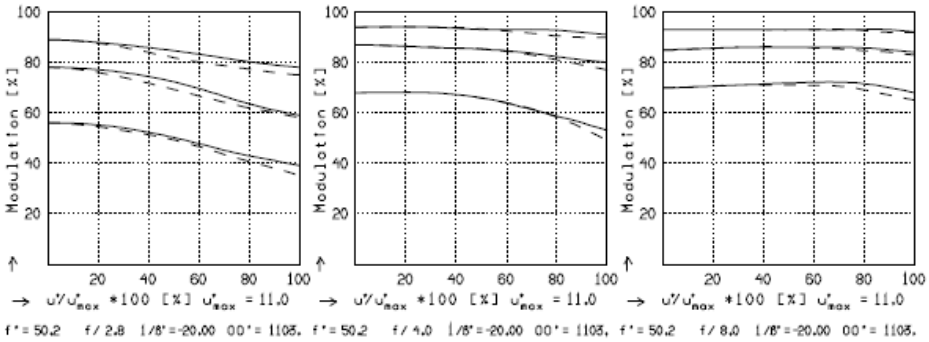
XENOPLAN 2.8/50

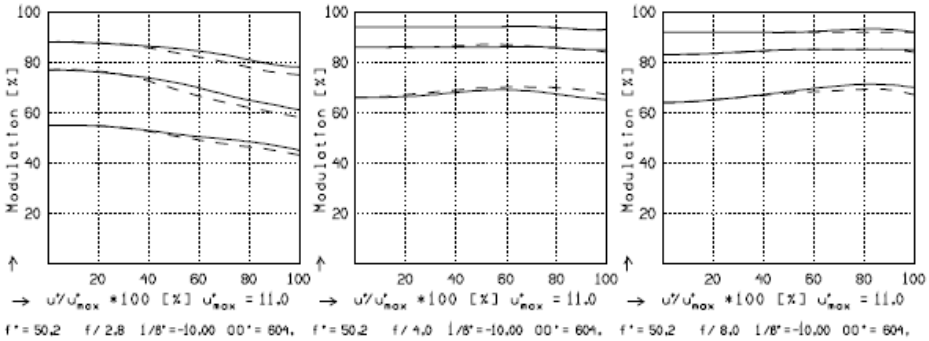
MODULATION with reference to the relative image height

Wavelength	λ [nm] :	555	655	605	505	455	405
Spectral weighting	[%] :	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R [1/mm] :		10	20	40			
Format	[mm X mm] :	15.2	X 15.2				
Diagonal 2u'	[mm] :	22.0					

radial ——
tangential — —

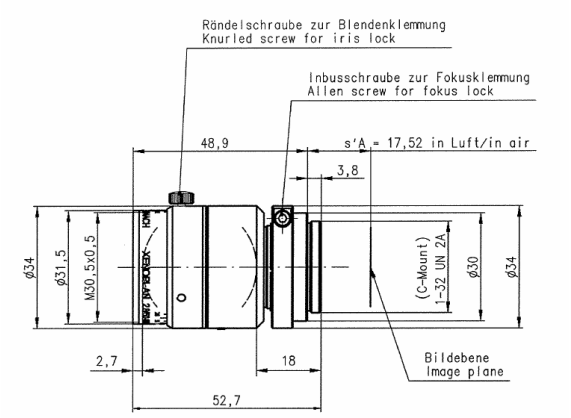


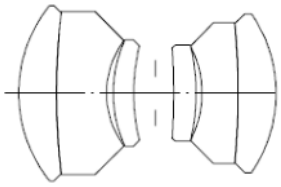




Focusing : MTF_{max} at f / 2.8 , R = 40 l/mm, u'/u'_{max} = 0

Xenoplan 2.8/50





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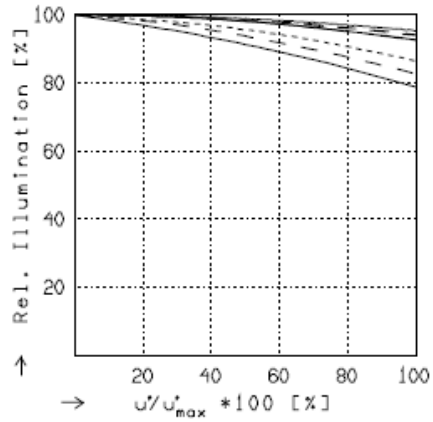

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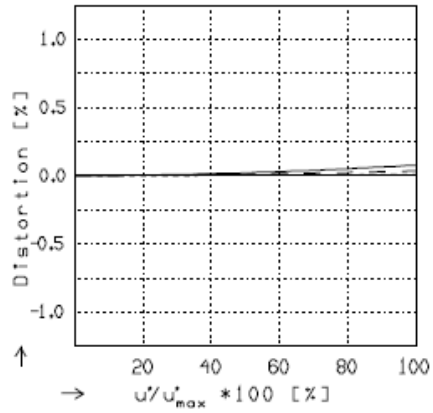
——	β' = -0.2000	u'_{max} = 11.0	00' = 358.
— —	β' = -0.3333	u'_{max} = 11.0	00' = 264.
-----	β' = -0.5000	u'_{max} = 11.0	00' = 223.



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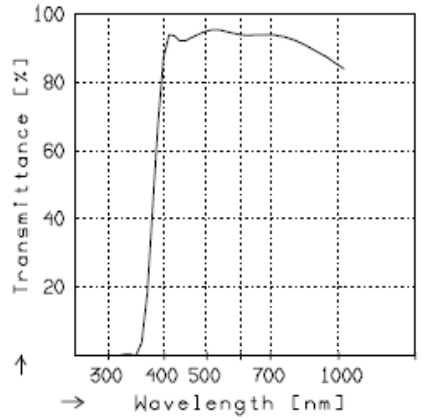

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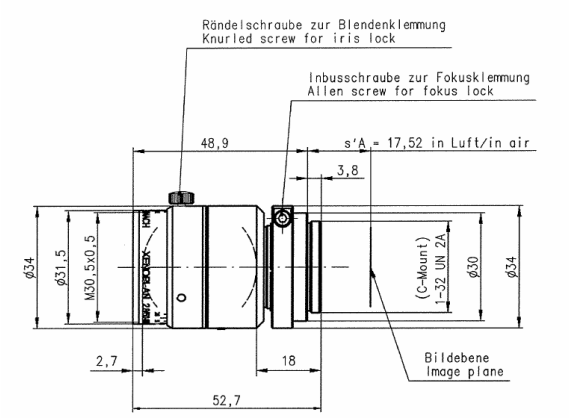
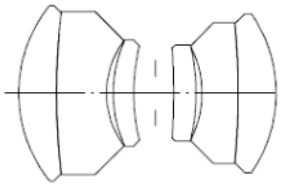
Xenoplan 2.8/50





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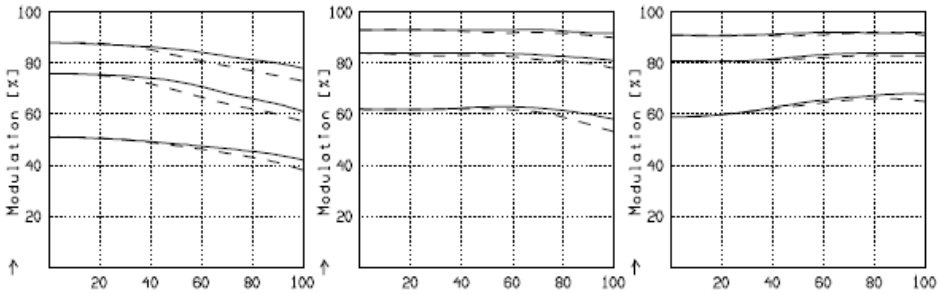

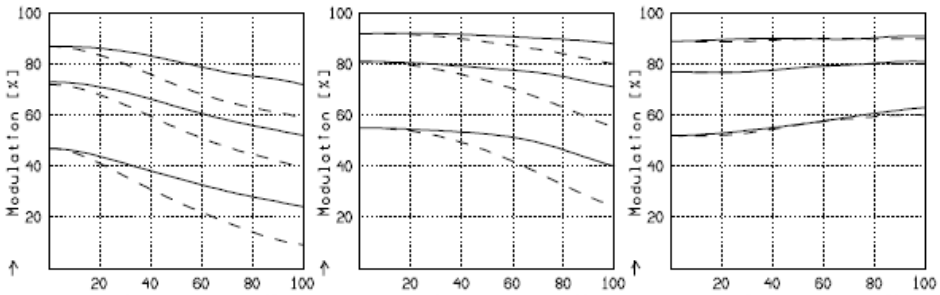

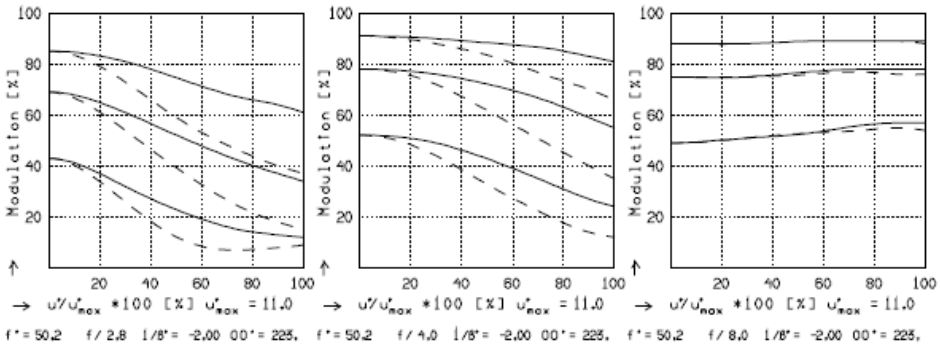

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