3 Mega-Pixel Lens

Xenoplan 1.9/35-0901

In accordance with the sensitivity of modern 2 / 3“ CCD and CMOS sensors, the 3 megapixel lenses are corrected and broadband-coated for the spectral range of 400 – 1000 nm (VIS + NIR). Even under production and / or extreme conditions, the robust mechanical design with lockable focus and iris setting mechanism guarantees reliable continuous use in which the set optical parameters remain in place.

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Key Features

- High-resolution optics
- Highest optical imaging performance even with smallest pixel sizes
- Broadband coating (400 - 1000 nm)
- Compact and low weight
- Vibration insensitivity for stable imaging performance
- Focus and iris setting lockable

Applications

- Machine Vision and other imaging applications
- 3D measurement
- Traffic
- Medical
- Robot vision
- Food processing

Technical Specifications

F-number	1.9
Focal length	34.9 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	92 gr.
Filter thread	M30.5 x 0.5
Order no.	1001960

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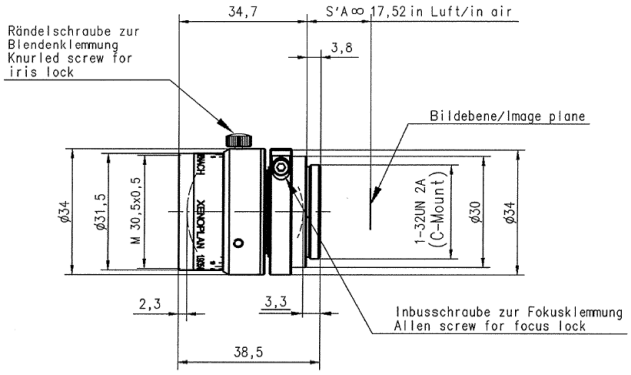
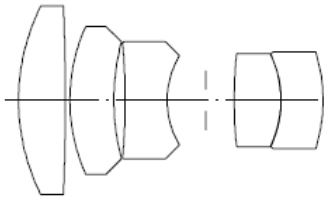
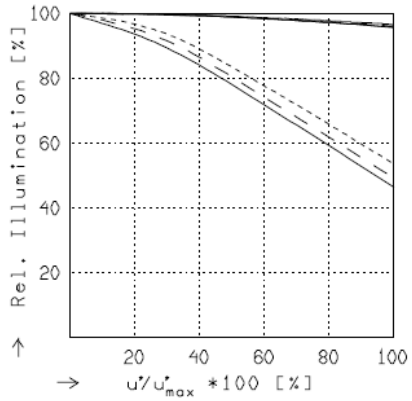




XENOPLAN 1.9/35MM

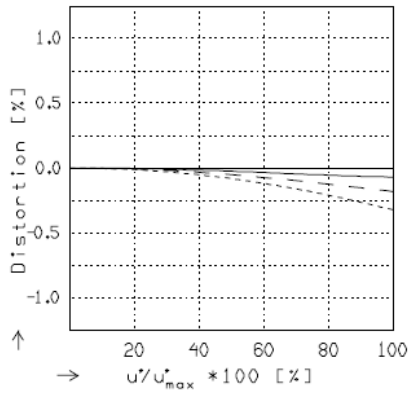
f'	=	34.9 mm	β'_P	=	0.879
s_F	=	-6.5 mm	s_{EP}	=	33.3 mm
s'_F	=	17.0 mm	s'_{AP}	=	-13.7 mm
HH'	=	-13.8 mm	Σ d	=	32.6 mm



RELATIVE ILLUMINATION

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

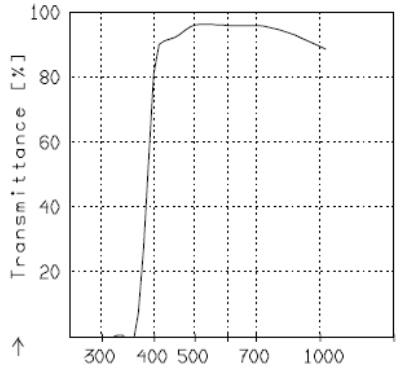
	f / 2.0	f / 4.0	f / 8.0
——	ß' = -0.0200	u'_{max} = 5.5	00' = 1803.
— —	ß' = -0.0500	u'_{max} = 5.5	00' = 756.
-----	ß' = -0.1000	u'_{max} = 5.5	00' = 409.



DISTORTION

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

——	ß' = -0.0200	u'_{max} = 5.5	00' = 1803.
— —	ß' = -0.0500	u'_{max} = 5.5	00' = 756.
-----	ß' = -0.1000	u'_{max} = 5.5	00' = 409.



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

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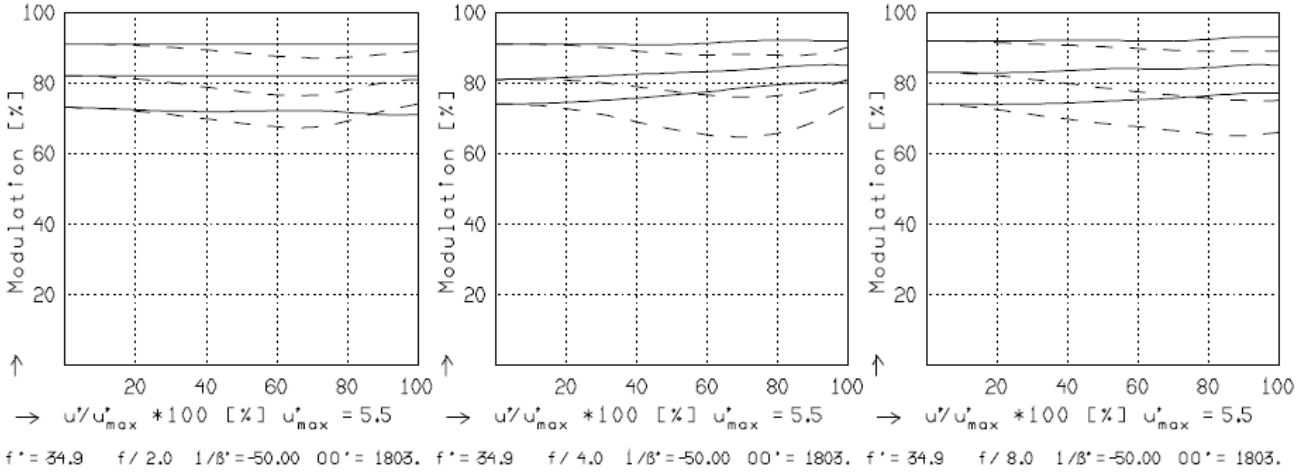
MODULATION with reference to the relative image height

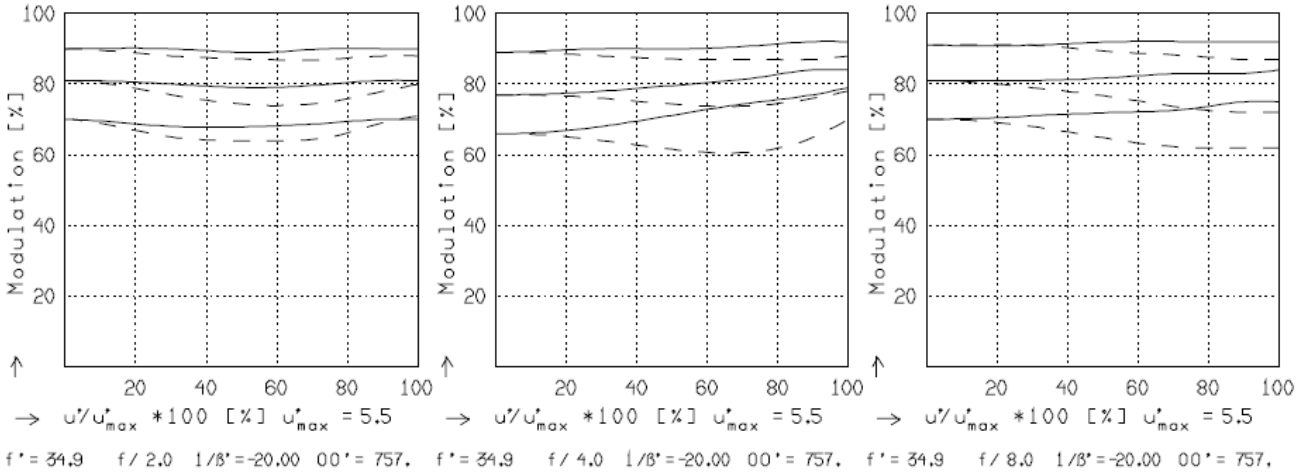
Wavelength λ [nm] :	555	655	605	505	455	405
Spectral weighting [%] :	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R [1/mm] :	10	20	30			
Format [mm X mm] :	6.6	X	8.8			
Diagonal 2u' [mm] :	11.0					

radial ——

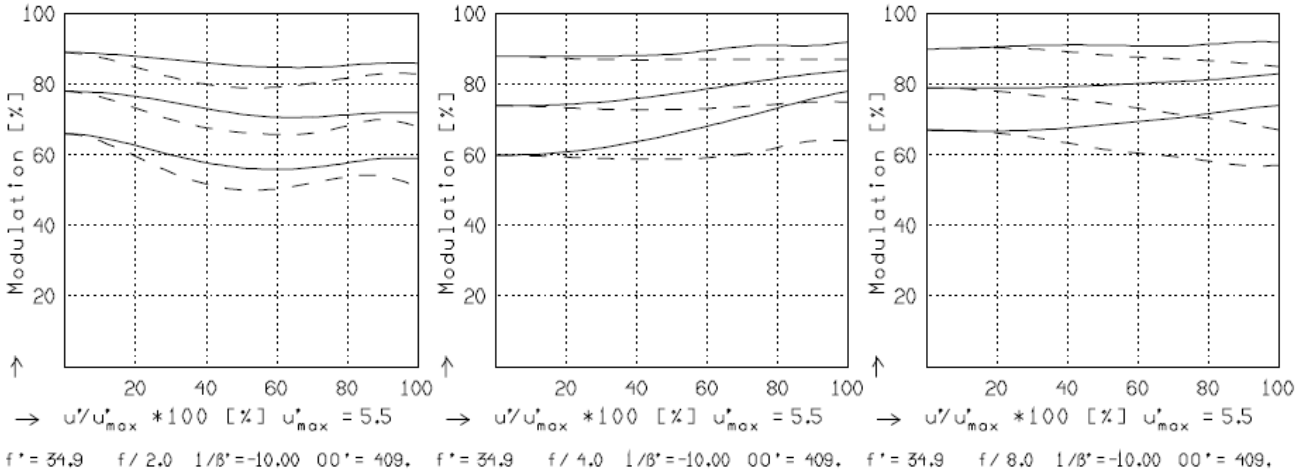
tangential — —



f' = 34.9 f/ 2.0 1/ß' = -50.00 00' = 1803. f' = 34.9 f/ 4.0 1/ß' = -50.00 00' = 1803. f' = 34.9 f/ 8.0 1/ß' = -50.00 00' = 1803.



f' = 34.9 f/ 2.0 1/ß' = -20.00 00' = 757. f' = 34.9 f/ 4.0 1/ß' = -20.00 00' = 757. f' = 34.9 f/ 8.0 1/ß' = -20.00 00' = 757.



f' = 34.9 f/ 2.0 1/ß' = -10.00 00' = 409. f' = 34.9 f/ 4.0 1/ß' = -10.00 00' = 409. f' = 34.9 f/ 8.0 1/ß' = -10.00 00' = 409.

Focusing : MTF_{max} at f / 1.9 , R = 30 1/mm, u'/u'_{max} = 0

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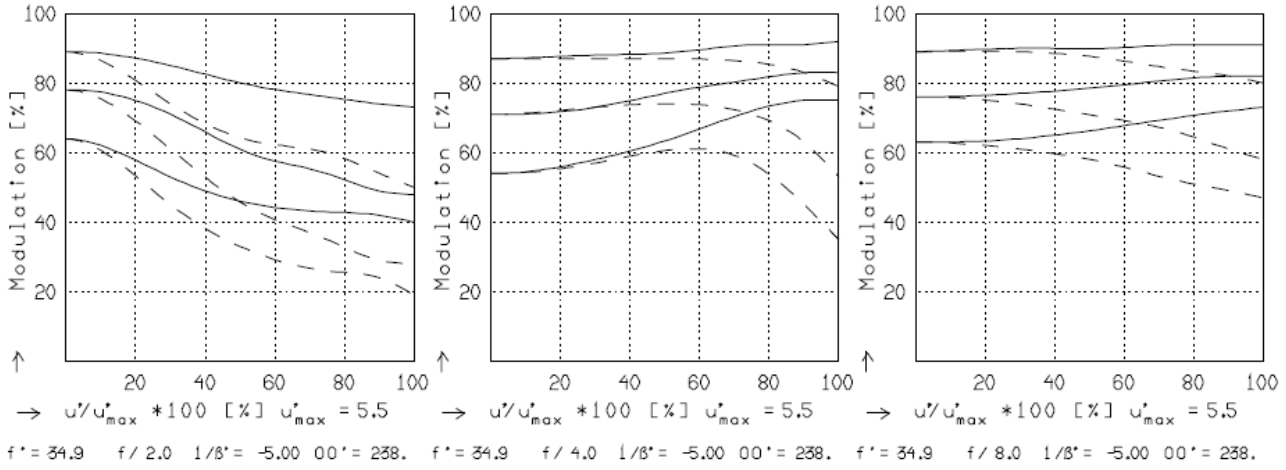
XENOPLAN 1.9/35MM

MODULATION with reference to the relative image height

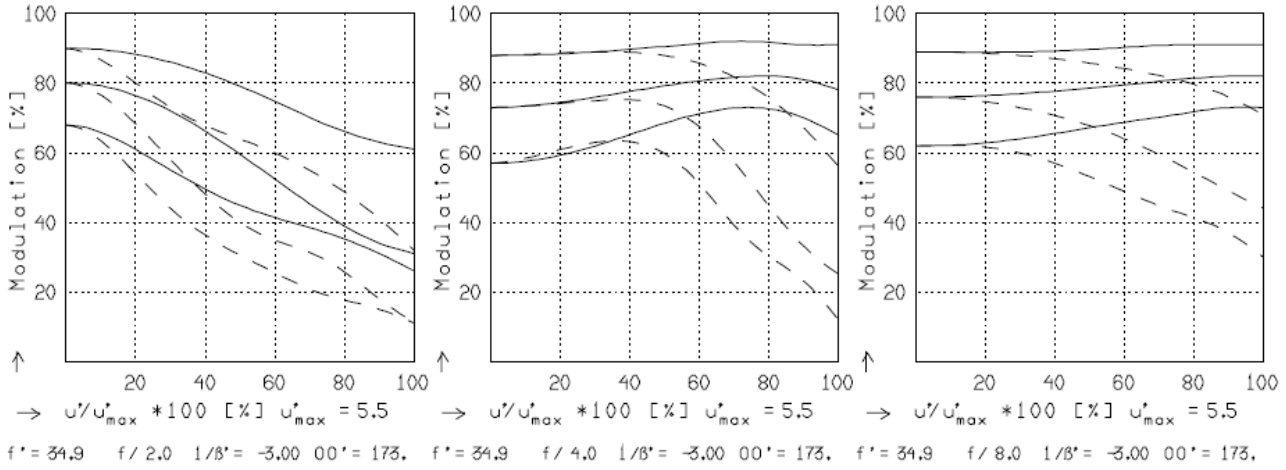
Wavelength λ [nm] :	555	655	605	505	455	405
Spectral weighting [%] :	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R [1/mm] :	10	20	30			
Format [mm X mm] :	6.6	X	8.8			
Diagonal 2u' [mm] :	11.0					

radial ——

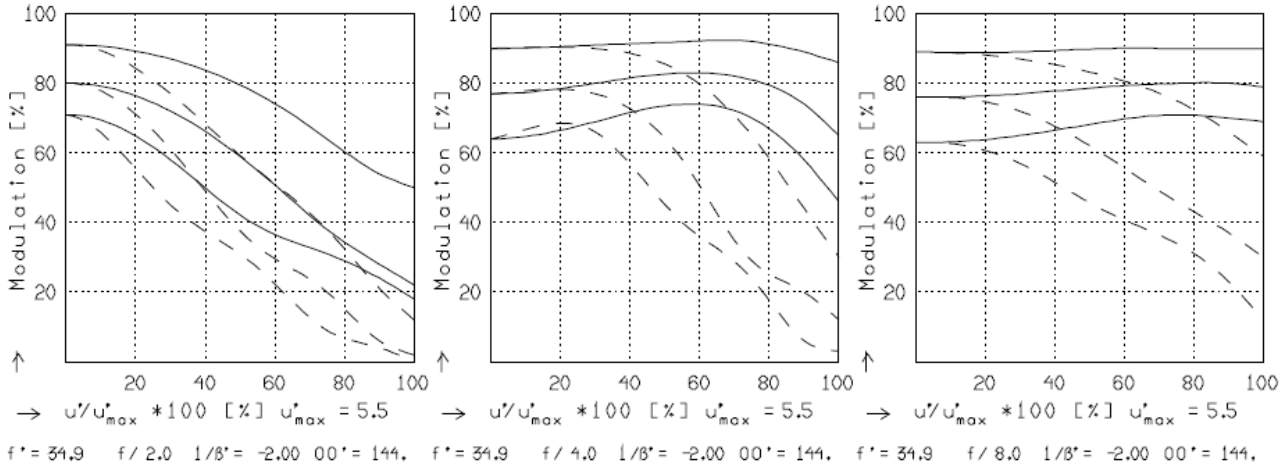
tangential — —



f' = 34.9 f/ 2.0 1/ß' = -5.00 00' = 238. f' = 34.9 f/ 4.0 1/ß' = -5.00 00' = 238. f' = 34.9 f/ 8.0 1/ß' = -5.00 00' = 238.



f' = 34.9 f/ 2.0 1/ß' = -3.00 00' = 173. f' = 34.9 f/ 4.0 1/ß' = -3.00 00' = 173. f' = 34.9 f/ 8.0 1/ß' = -3.00 00' = 173.



f' = 34.9 f/ 2.0 1/ß' = -2.00 00' = 144. f' = 34.9 f/ 4.0 1/ß' = -2.00 00' = 144. f' = 34.9 f/ 8.0 1/ß' = -2.00 00' = 144.

Focusing : MTF_{max} at f / 1.9 , R = 30 1/mm, u'/u'_{max} = 0