

Ruggedized Lens

Xenoplan 1.4/17 – Ruggedized

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.



Xenoplan 1.4/17

Key Features

- High-resolution optics
- Stabilized mechanism
- Highest optical imaging performance even with smallest pixel sizes
- 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
- Robot vision
- Food processing

Technical Specifications

F-number	1.4
Focal length	17.6 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	85 gr.
Option	Optical filter

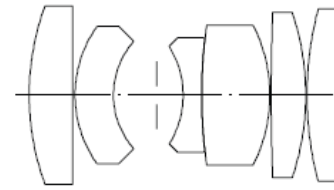
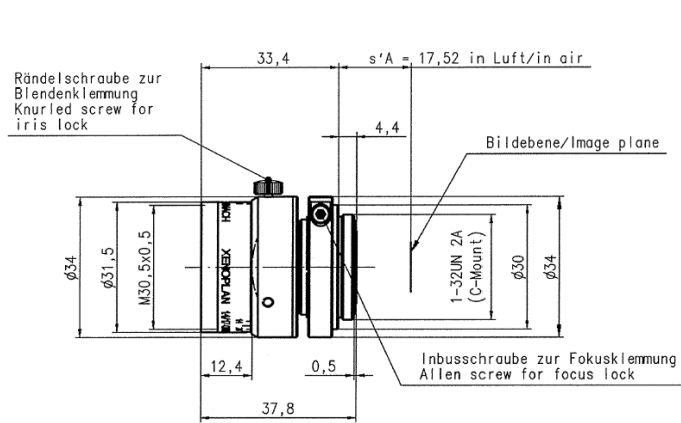
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XENOPLAN 1.4/17MM

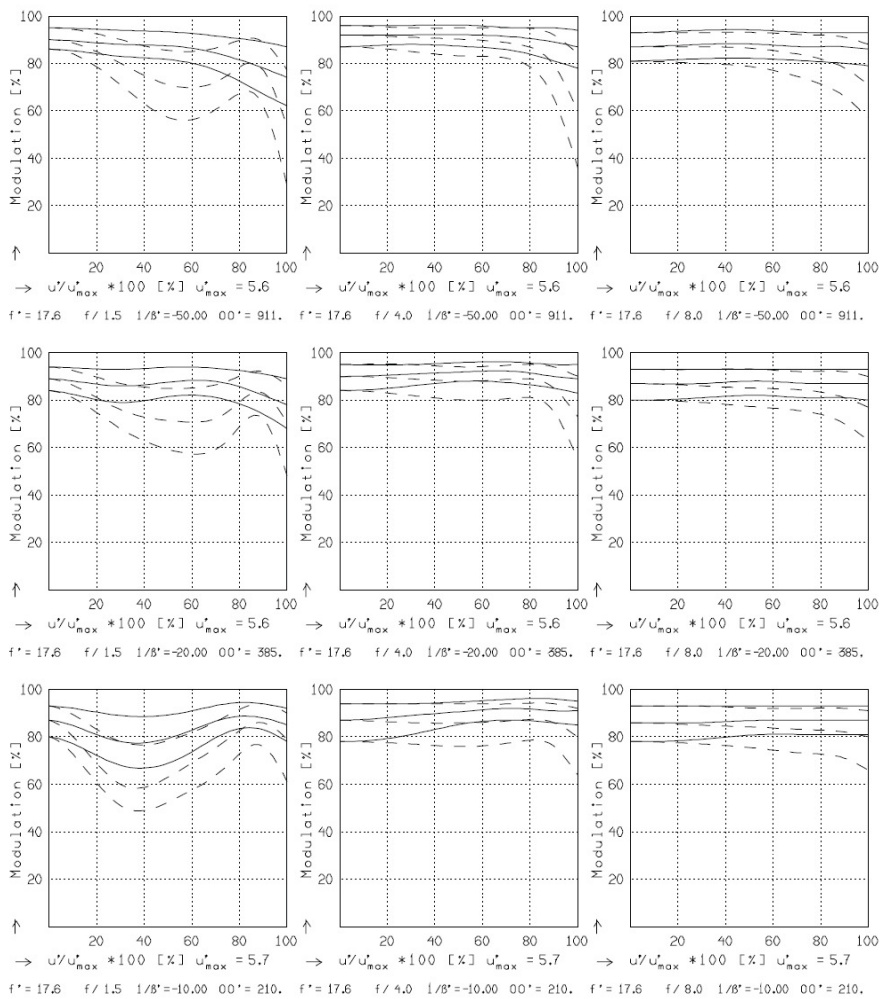
f^*	= 17,6 mm	β_p	= 2,975
s_F	= 6,1 mm	s_{EP}	= 12,0 mm
s_F^*	= 13,2 mm	s_{AP}	= -39,1 mm
HH^*	= -3,2 mm	Σd	= 24,9 mm

XENOPLAN 1.4/17MM

MODULATION with reference to the relative image height

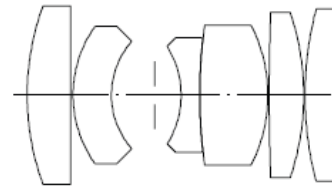
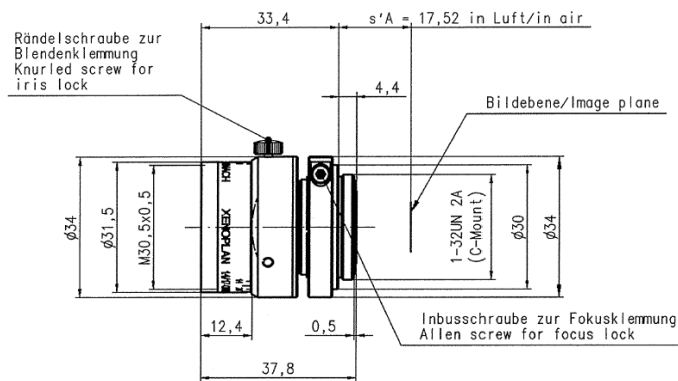
Wavelength λ	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19,6	23,7	22,2	15,7	12,1	6,7
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	6,6	X	8,8			
Diagonal $2u'$	[mm]	11,0					

radial —
tangential - -



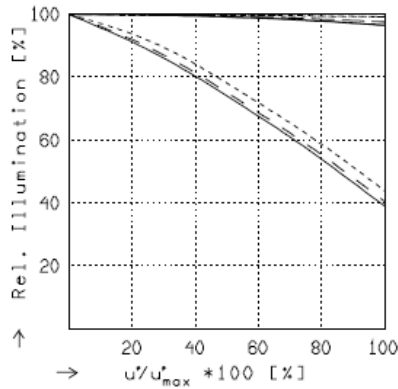
Focusing : MTF_{max} at $f / 1.4$, $R = 30$ 1/mm. $u'/u'_{max} = 0$

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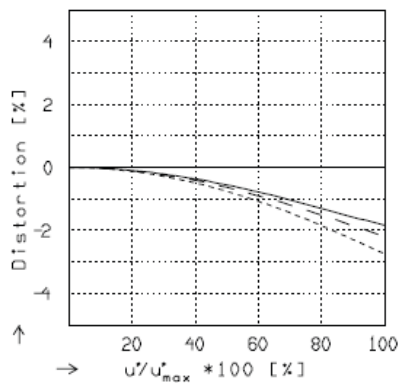
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RELATIVE ILLUMINATION

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

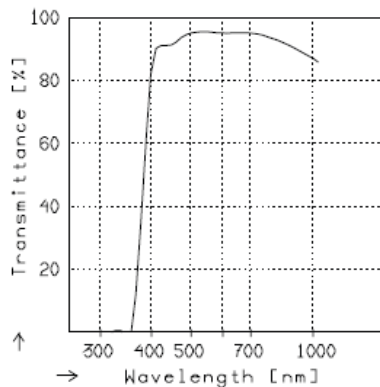
	$f / 1.5$	$f / 4.0$	$f / 8.0$
—	$\beta' = -0.0200$	$u_{max}^* = 5.5$	$00' = 911.$
- -	$\beta' = -0.0500$	$u_{max}^* = 5.5$	$00' = 384.$
- - -	$\beta' = -0.1000$	$u_{max}^* = 5.5$	$00' = 209.$



DISTORTION

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

—	$\beta' = -0.0200$	$u_{max}^* = 5.5$	$00' = 911.$
- -	$\beta' = -0.0500$	$u_{max}^* = 5.5$	$00' = 384.$
- - -	$\beta' = -0.1000$	$u_{max}^* = 5.5$	$00' = 209.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.