

Ruggedized Lens

Xenoplan 1.4/23 - 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 1.4/23

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	22.5 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	94 gr.
Option	Optical filter

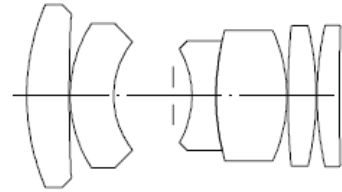
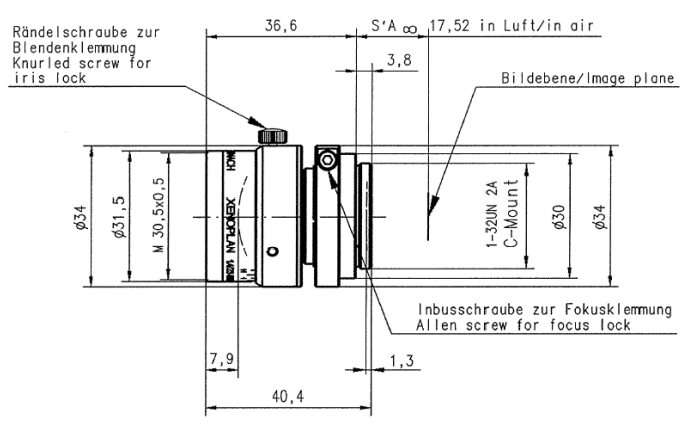
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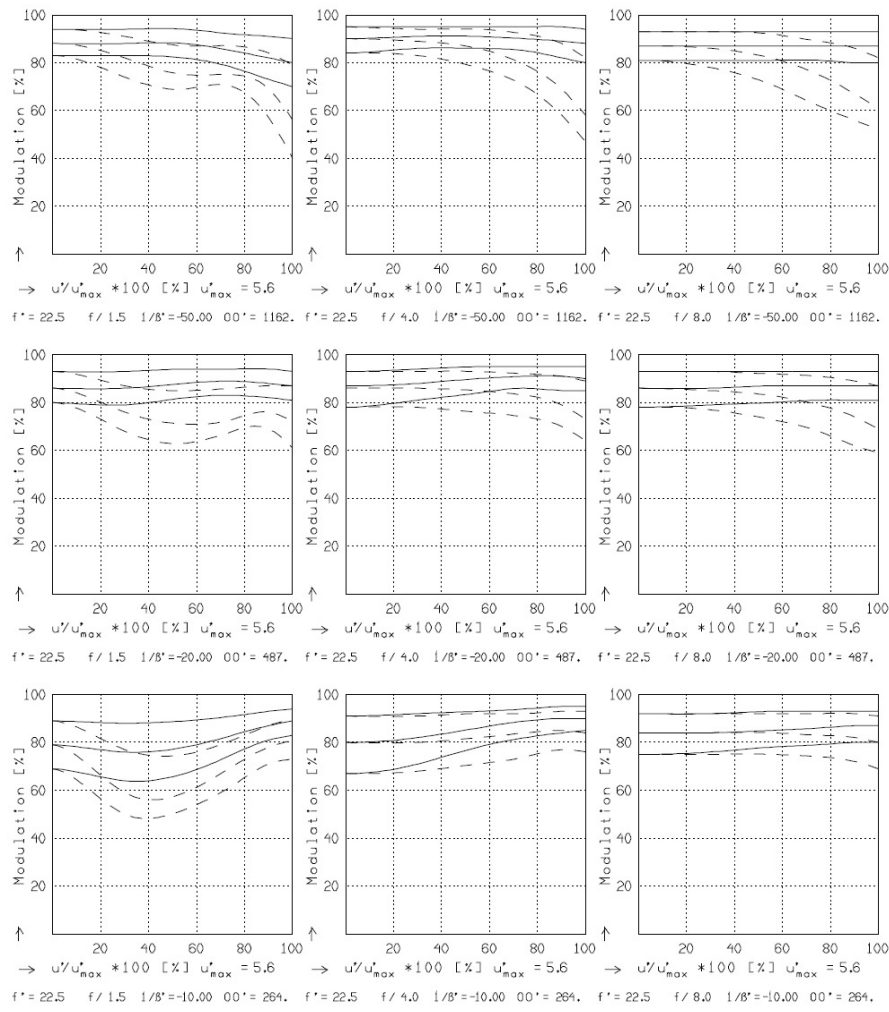


XENOPLAN 1.4/23MM

f'	= 22.5 mm	β'_p	= 2.271
s_F	= 10.2 mm	s_{EP}	= 20.1 mm
s'_F	= 15.0 mm	s'_{AP}	= -36.1 mm
HH'	= -9.3 mm	Σd	= 30.9 mm

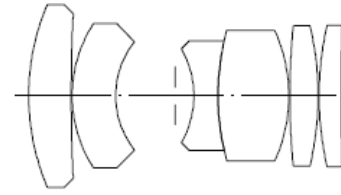
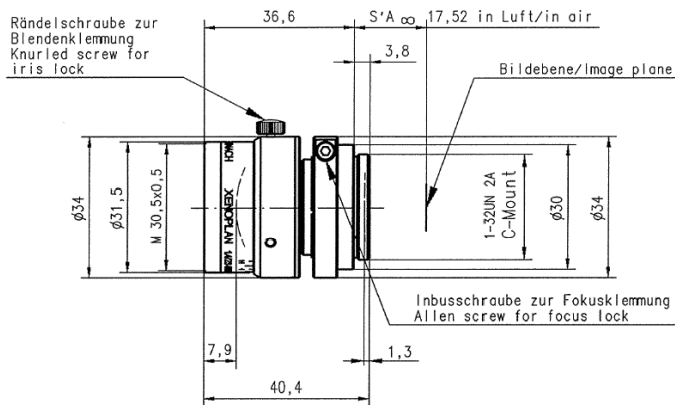
XENOPLAN 1.4/23MM
MODULATION with reference to the relative image height

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					



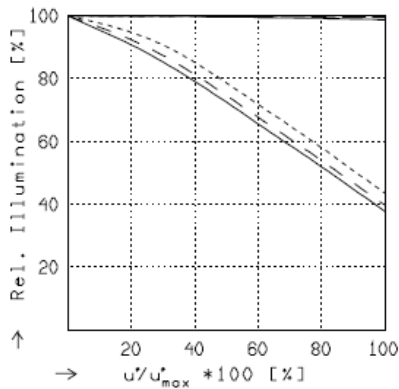
Focusing : MTF_{max} at $f / 1.4$, $R = 30$ 1/mm, $u'/u'_{max} = 0$

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XENOPLAN 1.4/23MM

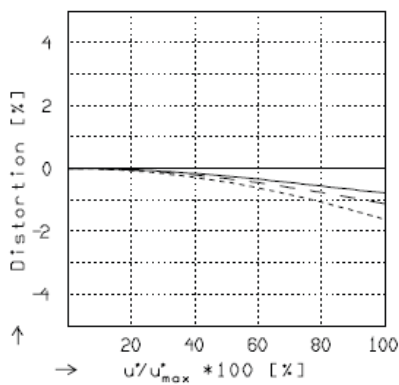
$f' = 22,5 \text{ mm}$	$\beta'_p = 2,271$
$s_F = 10,2 \text{ mm}$	$s_{EP} = 20,1 \text{ mm}$
$s_{F'} = 15,0 \text{ mm}$	$s'_{AP} = -36,1 \text{ mm}$
$HH' = -9,3 \text{ mm}$	$\Sigma d = 30,9 \text{ mm}$



RELATIVE ILLUMINATION

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

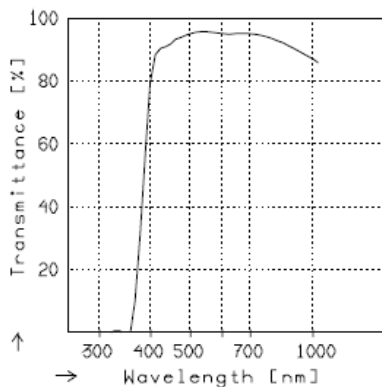
	$f / 1.5$	$f / 4.0$	$f / 8.0$
— $\beta' = -0.0200$	$u_{max}' = 5.5$	$00' = 1162.$	
- - $\beta' = -0.0500$	$u_{max}' = 5.5$	$00' = 487.$	
... $\beta' = -0.1000$	$u_{max}' = 5.5$	$00' = 263.$	



DISTORTION

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

— $\beta' = -0.0200$	$u_{max}' = 5.5$	$00' = 1162.$
- - $\beta' = -0.0500$	$u_{max}' = 5.5$	$00' = 487.$
... $\beta' = -0.1000$	$u_{max}' = 5.5$	$00' = 263.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.