

3 Mega-Pixel Lens

Xenoplan 1.4/23-0902

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
- 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 | 1.4 |
| Focal length | 22.5 mm |
| Image circle | 11 mm |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 94 gr. |
| Filter tread | M30.5 x 0.5 |
| Code no. | 1001917 |

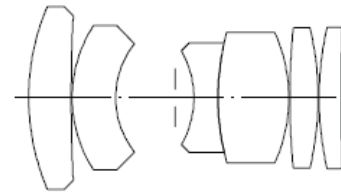
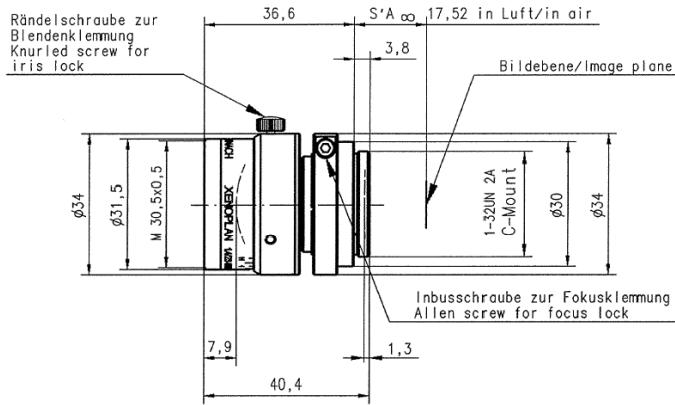
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XENOPLAN 1.4/23MM

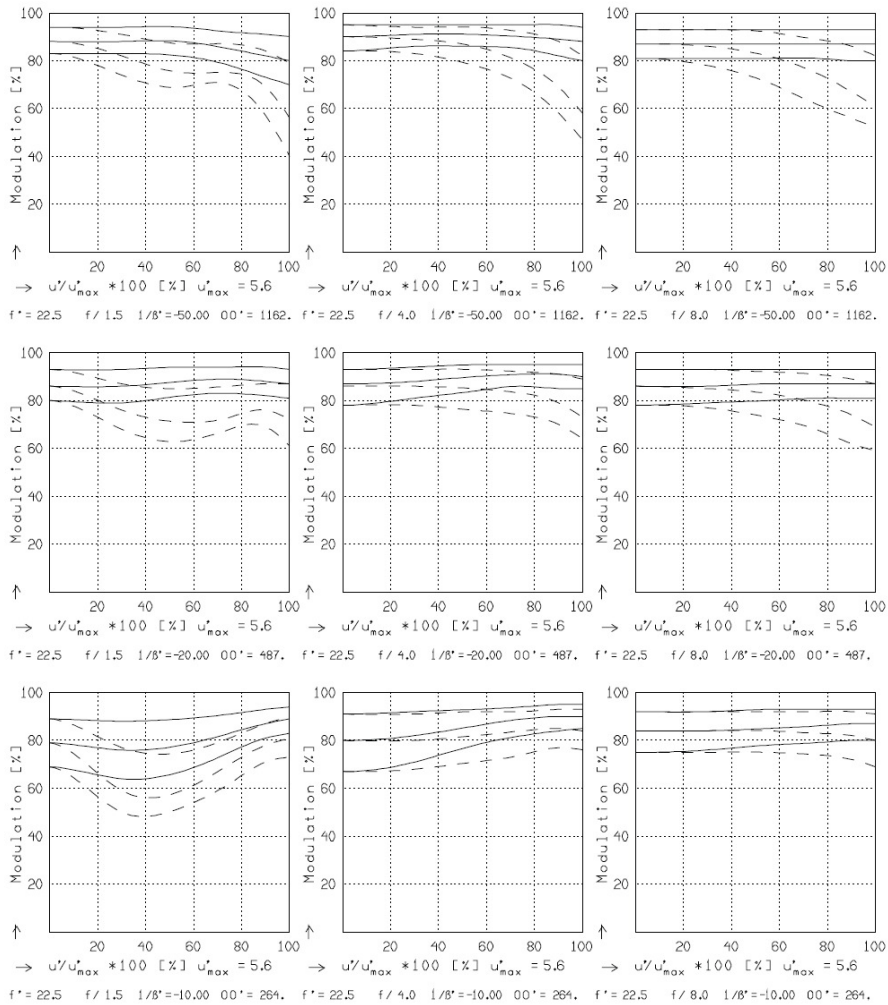
| | |
|----------------------|------------------------|
| f' = 22,5 mm | β_p = 2,271 |
| s_F = 10,2 mm | s_{EP} = 20,1 mm |
| $s_{F'}^*$ = 15,0 mm | $s_{A'P}^*$ = -36,1 mm |
| HH^* = -9,3 mm | Σd = 30,9 mm |

XENOPLAN 1.4/23MM

MODULATION with reference to the relative image height

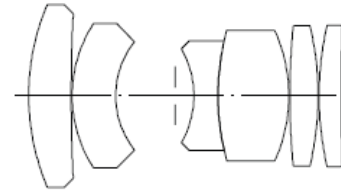
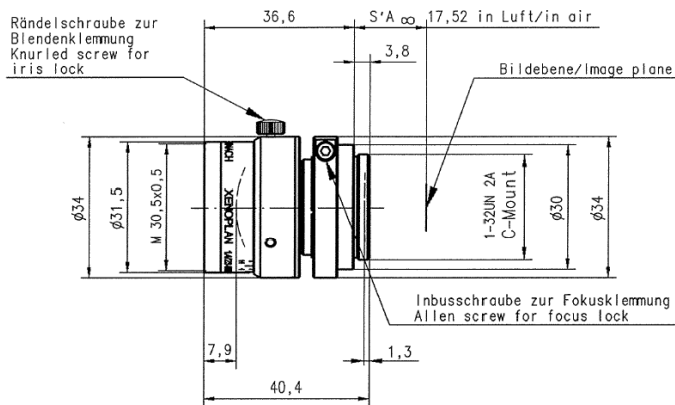
| | | | | | | |
|------------------------------|------|------|------|------|------|-----|
| Wavelength λ [nm] : | 555 | 655 | 605 | 505 | 455 | 405 |
| Spectral weighting [%] : | 19,6 | 23,7 | 22,2 | 15,7 | 12,1 | 6,7 |
| Spatial frequency R [1/mm] : | 10 | 20 | 30 | | | |
| Format [mm X mm] : | 6,6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

radial —
tangential - -



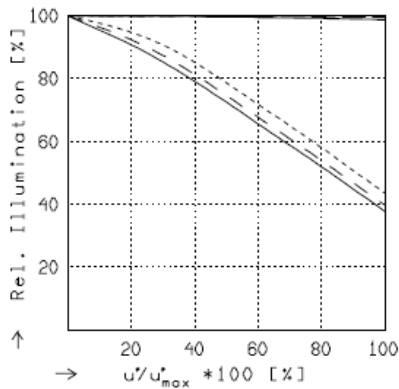
Focusing : MTF_{max} at $f / 1,4$, $R = 30$ 1/mm, $u'/u'_{max} = 0$

Xenoplan 1.4/23



XENOPLAN 1.4/23MM

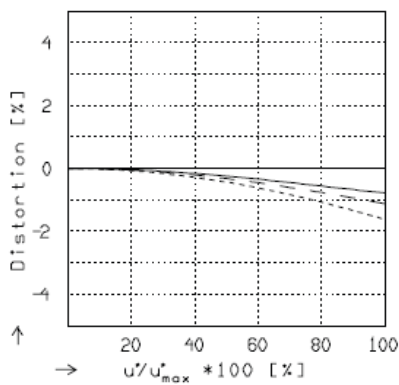
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|--------------------|----------------------|
| f' = 22.5 mm | β'_p = 2.271 |
| s_F = 10.2 mm | s_{EP} = 20.1 mm |
| $s_{F'}$ = 15.0 mm | s'_{AP} = -36.1 mm |
| HH' = -9.3 mm | Σd = 30.9 mm |



RELATIVE ILLUMINATION

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

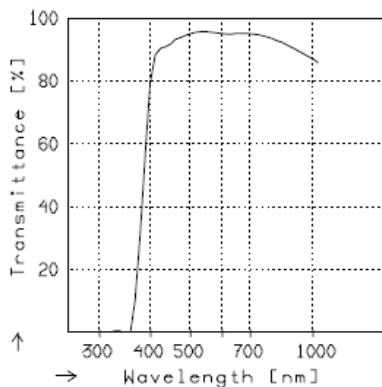
| | $f / 1.5$ | $f / 4.0$ | $f / 8.0$ |
|--------------------------|------------------|---------------|-----------|
| — $\beta' = -0.0200$ | $u'_{max} = 5.5$ | $00' = 1162.$ | |
| - - $\beta' = -0.0500$ | $u'_{max} = 5.5$ | $00' = 487.$ | |
| - · - $\beta' = -0.1000$ | $u'_{max} = 5.5$ | $00' = 263.$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



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.