# 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

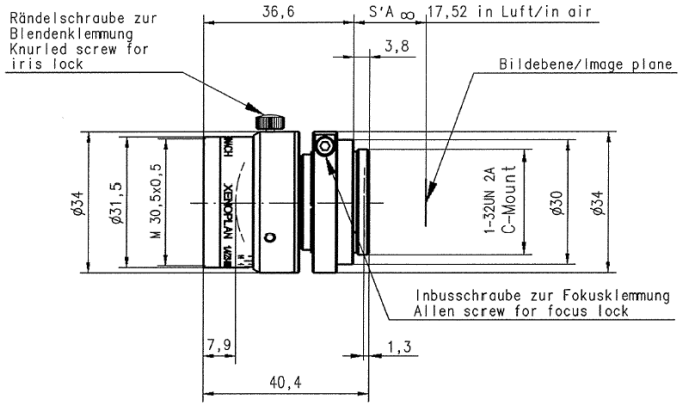
**Applications**

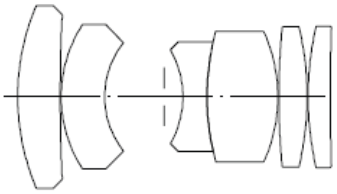
- Machine Vision and other imaging applications
- 3D measurement
- Traffic
- Medical
- Robot vision
- Food processing

**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 |

# Xenoplan 1.4/23



XENOPLAN 1.4/23MM

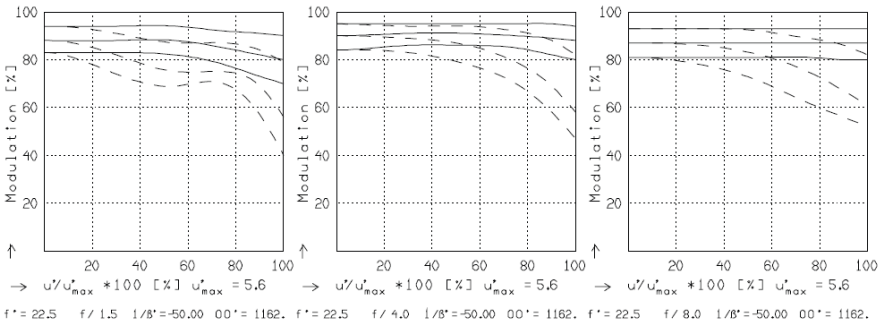
| | | | | | |
|---|---|---|---|---|---|
| $f'$ | = | 22.5 mm | $\beta'_P$ | = | 2.271 |
| $s_F$ | = | 10.2 mm | $s_{EP}$ | = | 20.1 mm |
| $s'_F$ | = | 15.0 mm | $s'_{AP}$ | = | -36.1 mm |
| HH' | = | -9.3 mm | $\Sigma$ d | = | 30.9 mm |

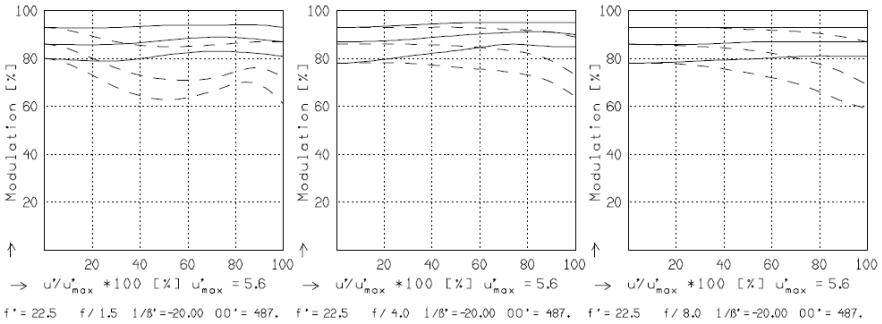
XENOPLAN 1.4/23MM

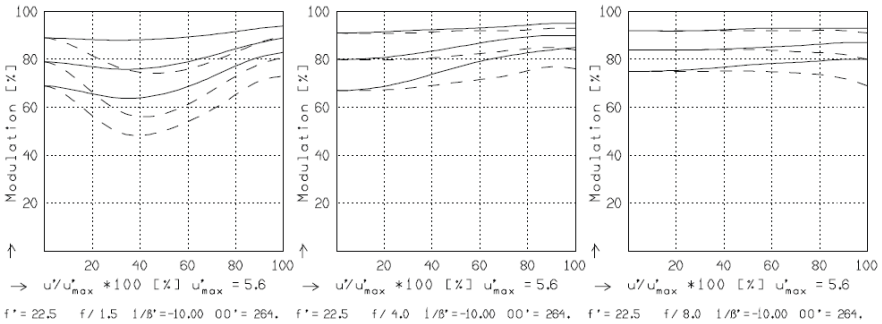
MODULATION with reference to the relative image height

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 — —

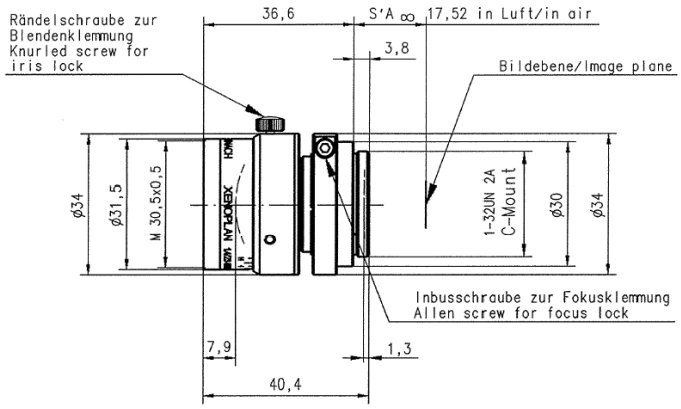


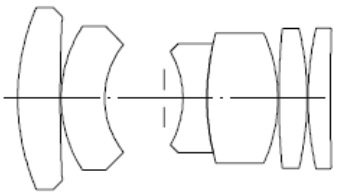




Focusing : $MTF_{max}$ at f / 1.4 , R = 30 1/mm, $u'/u'_{max}$ = 0

# Xenoplan 1.4/23



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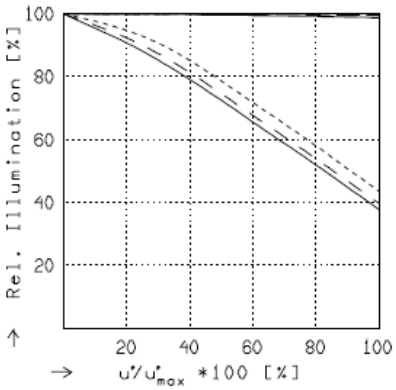
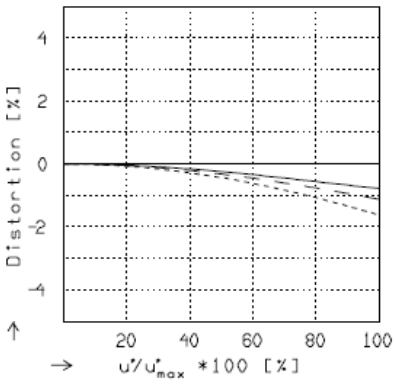



## RELATIVE ILLUMINATION

The relativ 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 | $\omega'$ = 1162. |
| — — | $\beta'$ = -0.0500 | $u'_{max}$ = 5.5 | $\omega'$ = 487. |
| ----- | $\beta'$ = -0.1000 | $u'_{max}$ = 5.5 | $\omega'$ = 263. |




## DISTORTION

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

| | | | |
|---|---|---|---|
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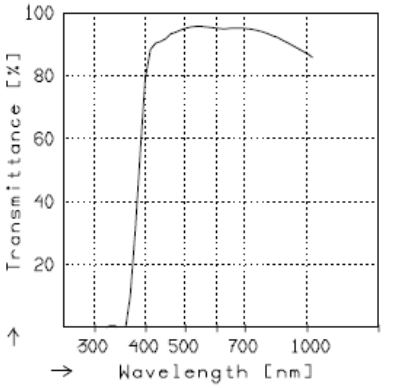


## TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.