

Lenses for image circle 22 mm

Xenoplan 2.0/35-0903

These high-resolution, high-speed lenses are optimized for the use of 4 and 8 megapixel 1.3" sensors with micro-lenses on the sensor surface. The image circles are very large for C-Mount lenses. With a 1.3" sensor, the relatively short focal lengths allow a large coverage range at a short working distance. The lenses are also broadband coated and can be used in the visible range 400 – 700 nm or the near infrared range 700 – 1000 nm.



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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 | 2.0 - 16 |
| Focal length | 35.1 mm |
| Image circle | 22 mm |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 90 g |
| Filter Thread | M30.5 x 0.5 |
| Code no. | 1075451 |

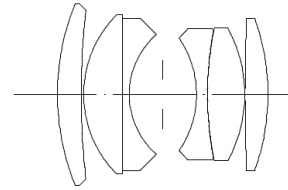
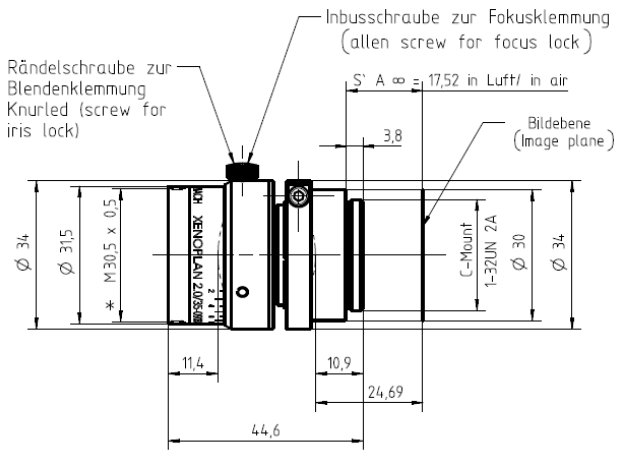
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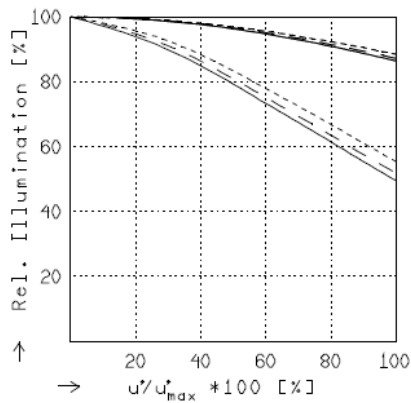
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XNP 2.0/35

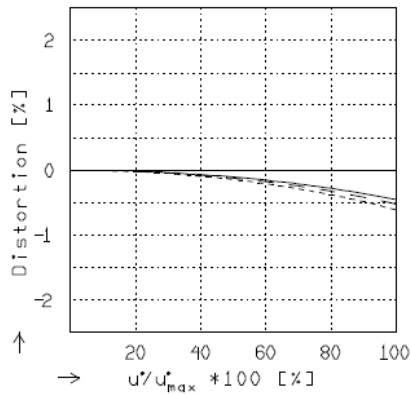
| | | | |
|----------|------------|------------|------------|
| f' | = 35.0 mm | β'_p | = 1.094 |
| s_F | = -19.5 mm | s_{EP} | = 12.5 mm |
| $s_{F'}$ | = 24.8 mm | $s_{A'P}$ | = -13.4 mm |
| HH' | = -3.5 mm | Σd | = 22.1 mm |



RELATIVE ILLUMINATION

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

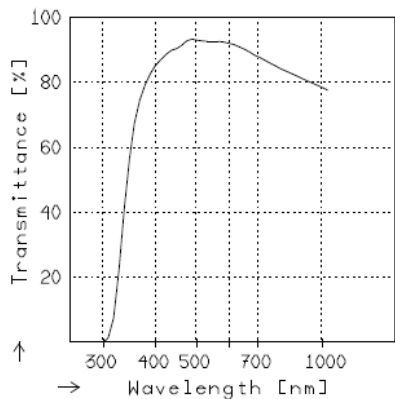
| | $f / 2.0$ | $f / 4.0$ | $f / 8.0$ |
|------|--------------------|-------------------|---------------|
| — | $\beta' = -0.0200$ | $u'_{max} = 11.0$ | $00' = 1816.$ |
| - - | $\beta' = -0.0500$ | $u'_{max} = 10.9$ | $00' = 768.$ |
| ---- | $\beta' = -0.1000$ | $u'_{max} = 10.9$ | $00' = 420.$ |



DISTORTION

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

| | | | |
|------|--------------------|-------------------|---------------|
| — | $\beta' = -0.0200$ | $u'_{max} = 10.9$ | $00' = 1816.$ |
| - - | $\beta' = -0.0500$ | $u'_{max} = 10.9$ | $00' = 768.$ |
| ---- | $\beta' = -0.1000$ | $u'_{max} = 10.9$ | $00' = 420.$ |



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

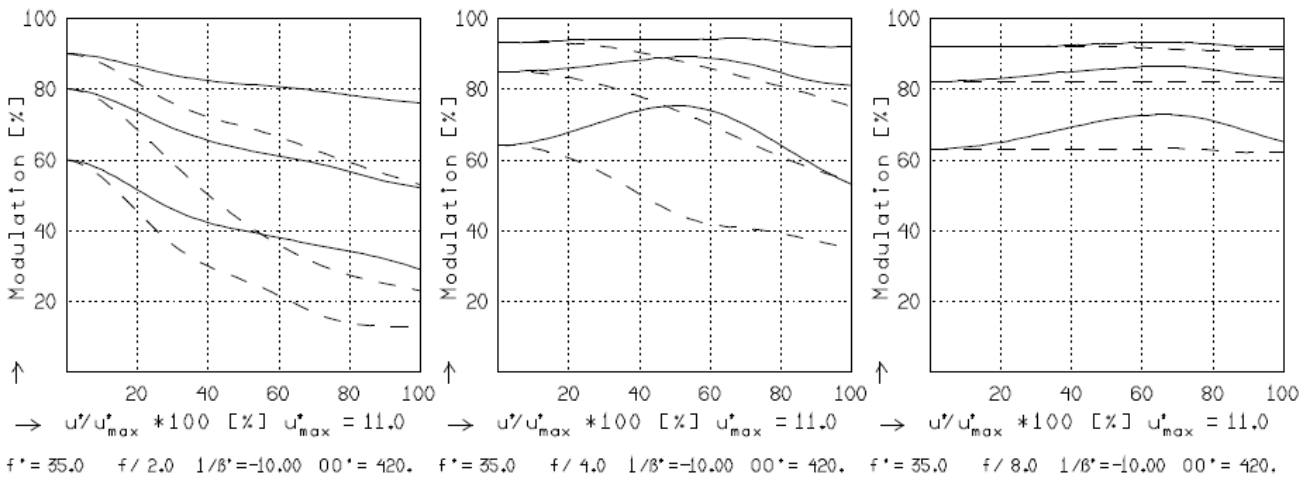
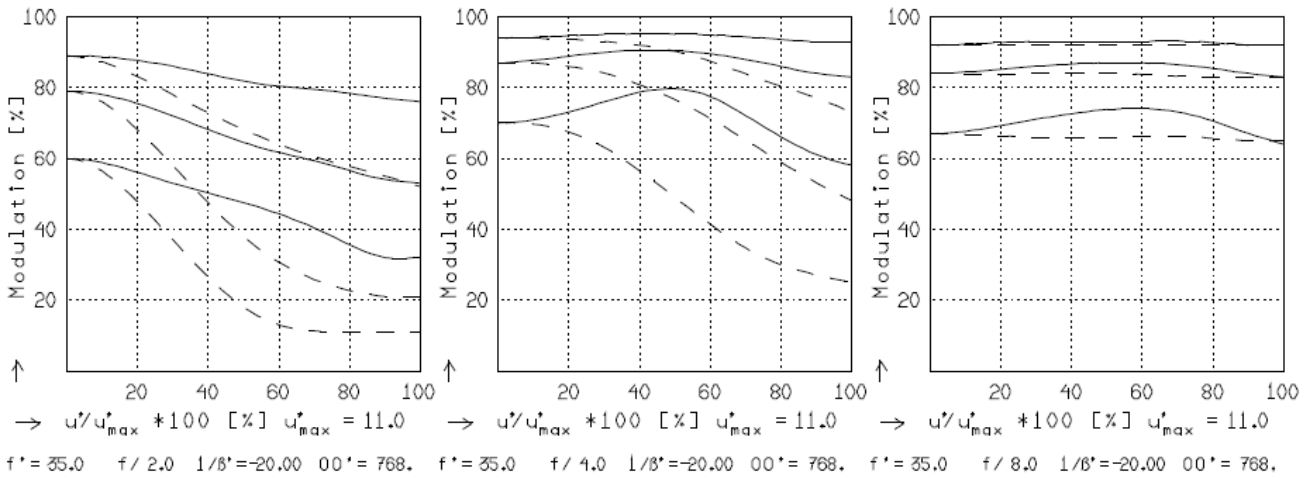
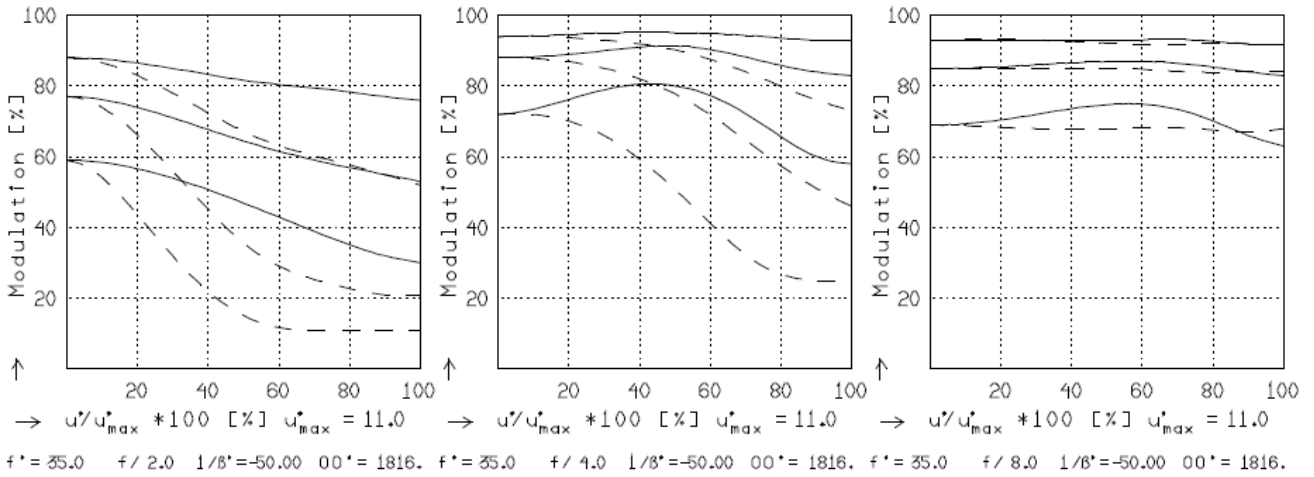
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MODULATION with reference to the relative image height

| | | | | | | | |
|----------------------|-----------|------|------|------|------|------|-----|
| Wavelength λ | [nm] | 546 | 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 | 40 | | | |
| Format | [mm X mm] | 0.0 | 22.0 | | | | |
| Diagonal $2u^*$ | [mm] | 22.0 | | | | | |

radial —
tangential - -



Focusing : MTF_{max} at $f / 2.0$, $R = 40$ 1/mm, $u'/u'_{max} = 0$