

Xenon-TOPAZ

XN 2,0/30-0903

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In accordance with the sensitivity of modern 1.1" CCD and CMOS sensors, the Xenon-TOPAZ lenses are designed for sensors up to 12 megapixel and broadband-coated for the spectral range of 400 – 1000 nm (VIS + NIR).

Even under production and / or extreme environmental 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.

The lens is optimized for infinity making it perfectly suited for applications with long working distance like traffic or surveillance.

The lens is also available in a version with motorized iris (P-iris).



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Key Features

- High-resolution optics for up to 12 megapixel sensors
- 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

- Traffic
- High-End Surveillance
- Robot Vision
- 3D measurement
- Machine Vision and other imaging applications
- Food processing

| Technical Specifications | Xenon-TOPAZ 2,0/30-0903 |
|--------------------------|-------------------------|
| F# range | 2.0 – 16 |
| Focal length | 30.0 mm |
| Image circle | 17.6 mm / 1.1" |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 90 g |
| Filter thread | M30.5 x 0.5 |
| Code no. | 1078946 |
| Code no. motorized | 1084646 |

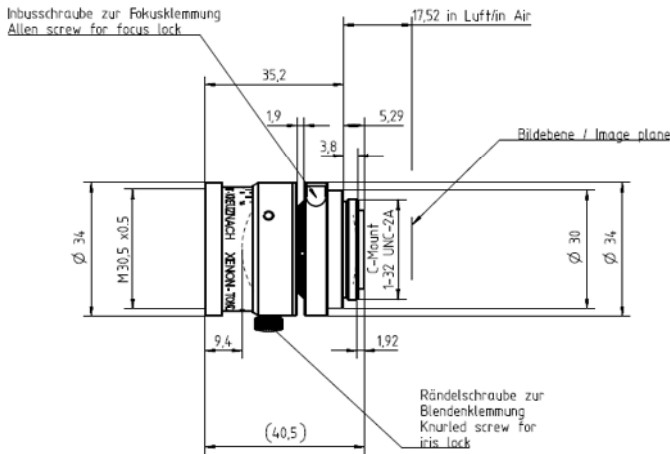
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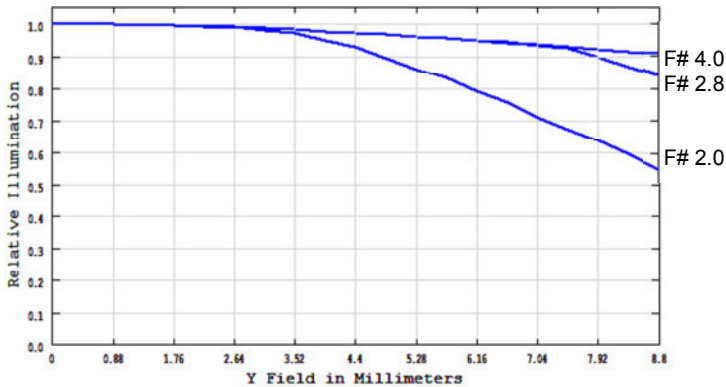
Xenon-TOPAZ 2,0/30 ($\lambda = 555 \text{ nm}$)

$f' = 30.0 \text{ mm}$ $\beta'_P = 1.37$

$\varnothing_{EP} = 15.0 \text{ mm}$ $s_{EP} = 17.05 \text{ mm}$

$s'_F = 14.1 \text{ mm}$ $s'_{AP} = -26.81 \text{ mm}$

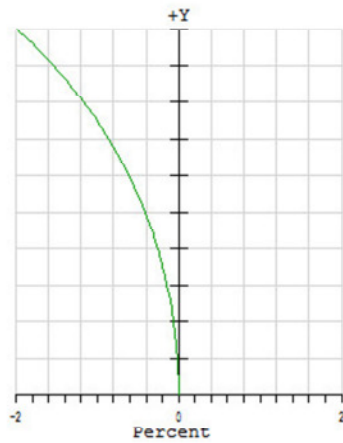
$HH' = -11.8 \text{ mm}$ $\Sigma d = 29.16 \text{ mm}$



Relative Illumination

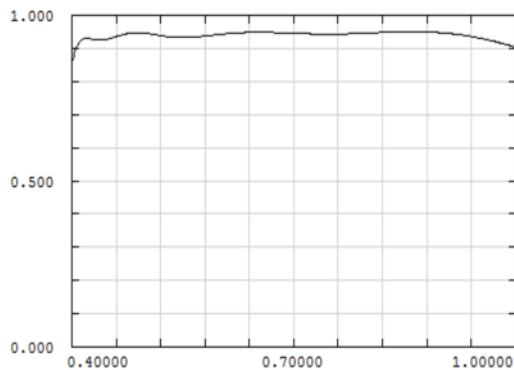
The relative illumination is shown for the given F-Numbers over the field of the sensor and referenced to the center of the sensor.

Distortion



Distortion

Distortion is shown for the given magnification of $\beta' = 0$. Positive values indicate pincushion distortion and negative values barrel distortion.



Transmittance

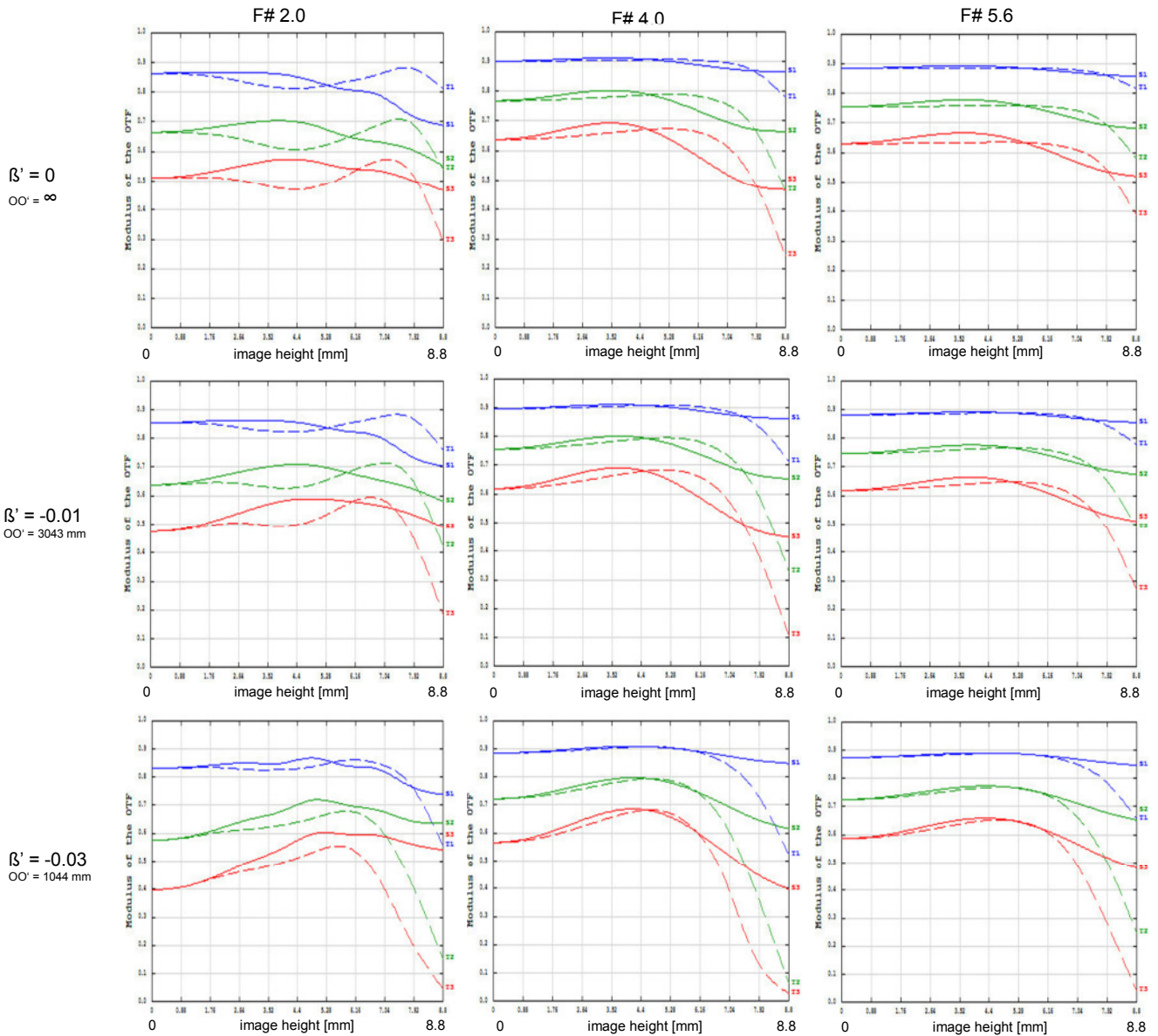
Relative spectral transmittance is shown with reference to wavelength.

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MTF with reference to image height for visible spectrum

| | | | | | | | |
|----------------------|---------|------|------|------|------|------|------|
| Wavelength λ | [nm]: | 425 | 475 | 525 | 575 | 625 | 675 |
| Spectral weighting | [%]: | 7.3 | 17.3 | 21.7 | 23.2 | 18.9 | 11.6 |
| Spatial frequency R | [1/mm]: | 25 | 50 | 75 | | | |
| Image circle | [mm]: | 17.6 | | | | | |

radial ———
 tangential - - - -



Xenon-TOPAZ 2,0/30-0903

MTF with reference to image height for NIR spectrum

| | | | | | |
|-----------------------------|------|-----|-----|-----|-----|
| Wavelength λ [nm]: | 810 | 830 | 850 | 870 | 890 |
| Spectral weighting [%]: | 0.5 | 0.9 | 1.0 | 0.9 | 0.5 |
| Spatial frequency R [1/mm]: | 25 | 50 | 75 | | |
| Image circle [mm]: | 17.6 | | | | |

radial ———
 tangential - - - -

