

3 Mega-Pixel Lens

Tele-Xenar 2.2/70-0902

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.



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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 | 2.2 |
| Focal length | 70.5 mm |
| Image circle | 11 mm |
| Transmission | 400 - 1000 nm |
| Interface | C-Mount |
| Weight | 200 gr. |
| Filter tread | M40.5 x 0.5 |
| Code no. | 1014593 |

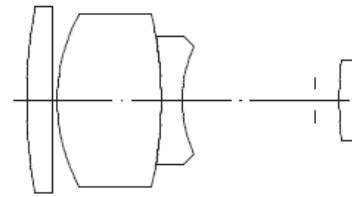
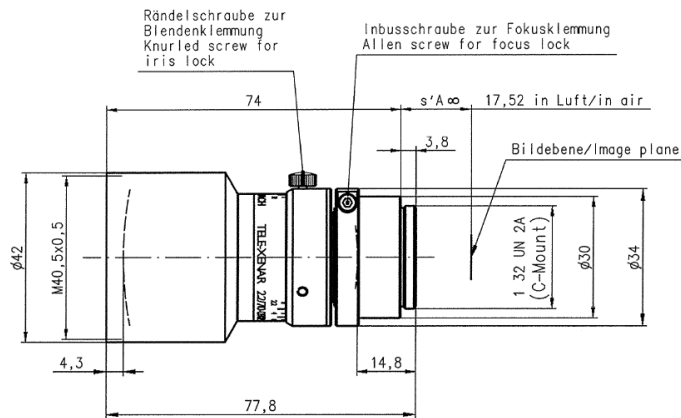
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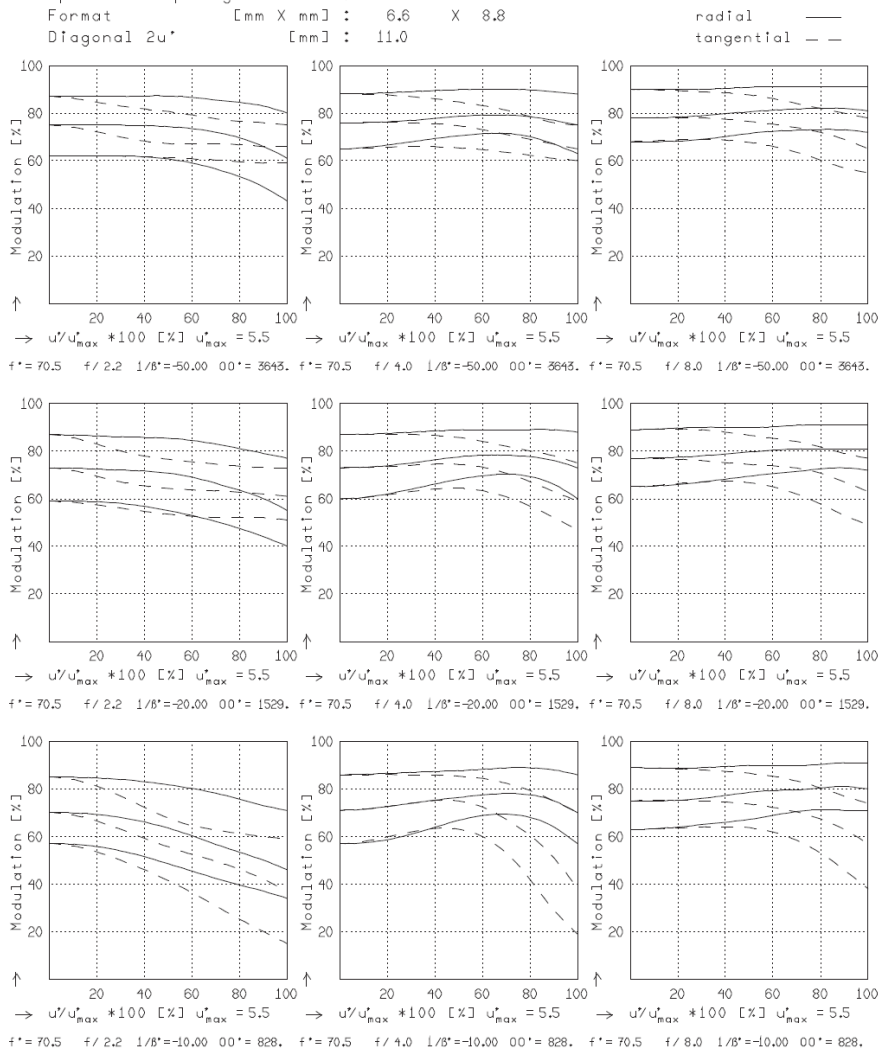
TXR 2.2/70

$f' = 70.5 \text{ mm}$ $\beta_p^* = 0.494$
 $s_F = -27.8 \text{ mm}$ $s_{EP} = 115.0 \text{ mm}$
 $s_{F'} = 28.5 \text{ mm}$ $s_{AP} = -6.3 \text{ mm}$
 $HH' = -26.0 \text{ mm}$ $\Sigma d = 58.8 \text{ mm}$

TXR 2.2/70

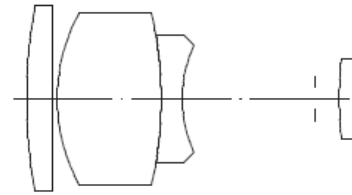
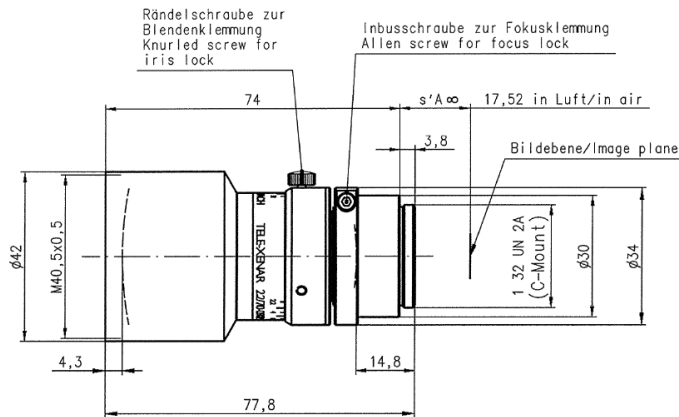
MODULATION with reference to the relative image height

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



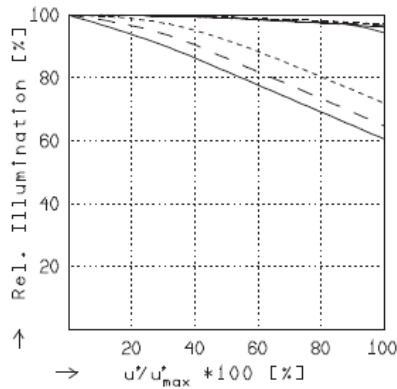
Focusing : MTF_{max} at $f / 2.2$, $R = 30$ 1/mm. $u'/u'_{max} = 0$

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TXR 2.2/70

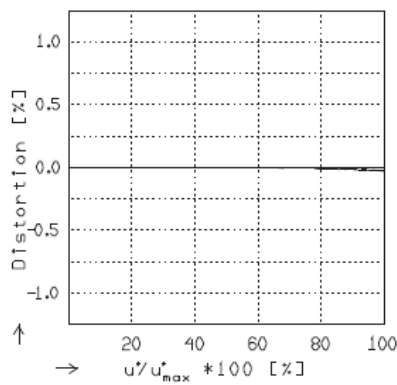
| | |
|-------------------|----------------------|
| $f' = 70.5$ mm | $\beta_p^* = 0.494$ |
| $s_f = -27.8$ mm | $s_{EP} = 115.0$ mm |
| $s_f^* = 28.5$ mm | $s_{AP}^* = -6.3$ mm |
| $HH^* = -26.0$ mm | $\Sigma d = 58.8$ mm |



RELATIVE ILLUMINATION

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

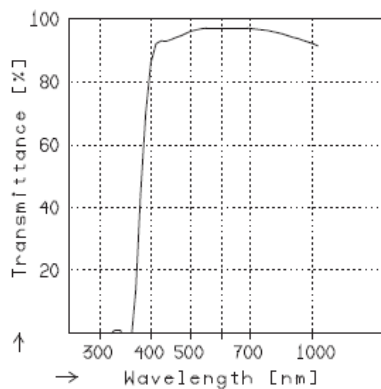
| | $f / 2.2$ | $f / 4.0$ | $f / 8.0$ |
|---------|---------------------|-------------------|---------------|
| — | $\beta^* = -0.0200$ | $u_{max}^* = 5.5$ | $00' = 3642.$ |
| - - | $\beta^* = -0.0500$ | $u_{max}^* = 5.5$ | $00' = 1529.$ |
| - - - - | $\beta^* = -0.1000$ | $u_{max}^* = 5.5$ | $00' = 827.$ |



DISTORTION

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

| | | | |
|---------|---------------------|-------------------|---------------|
| — | $\beta^* = -0.0200$ | $u_{max}^* = 5.5$ | $00' = 3642.$ |
| - - | $\beta^* = -0.0500$ | $u_{max}^* = 5.5$ | $00' = 1529.$ |
| - - - - | $\beta^* = -0.1000$ | $u_{max}^* = 5.5$ | $00' = 827.$ |



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.