

Lens for image circle 16 mm

Tele-Xenar 2.2/70

In accordance with the sensitivity of modern 1" CCD and CMOS sensors, the 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 small 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	16 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	200 g
Filter Thread	M40.5 x 0.5
Code no	1014593

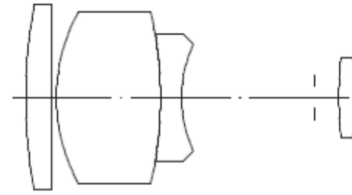
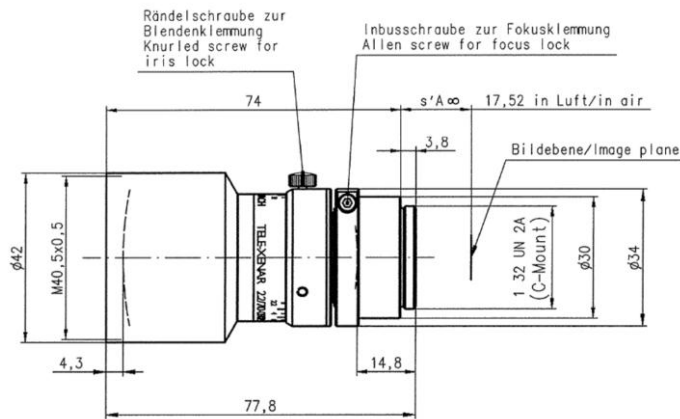
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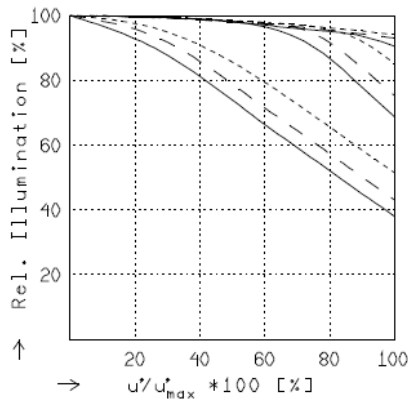
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Tele-Xenar 2.2/70



TXR 2.2/70

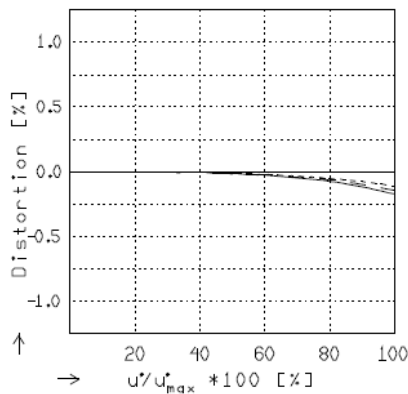
$f' = 70.5 \text{ mm}$	$\beta_p' = 0.494$
$s_F = -27.8 \text{ mm}$	$s_{EP} = 115.0 \text{ mm}$
$s_{F'} = 28.5 \text{ mm}$	$s_{AP} = -6.3 \text{ mm}$
$HH' = -26.0 \text{ mm}$	$\Sigma d = 58.8 \text{ mm}$



RELATIVE ILLUMINATION

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

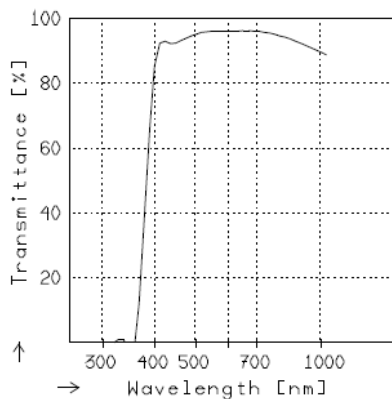
	$f / 2.2$	$f / 4.0$	$f / 8.0$
— $\beta' = -0.0200$	$u'_{max} = 8.0$	$00' = 3643.$	
- - $\beta' = -0.0500$	$u'_{max} = 8.0$	$00' = 1529.$	
- · - $\beta' = -0.1000$	$u'_{max} = 8.0$	$00' = 828.$	



DISTORTION

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

— $\beta' = -0.0200$	$u'_{max} = 8.0$	$00' = 3643.$
- - $\beta' = -0.0500$	$u'_{max} = 8.0$	$00' = 1529.$
- · - $\beta' = -0.1000$	$u'_{max} = 8.0$	$00' = 828.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

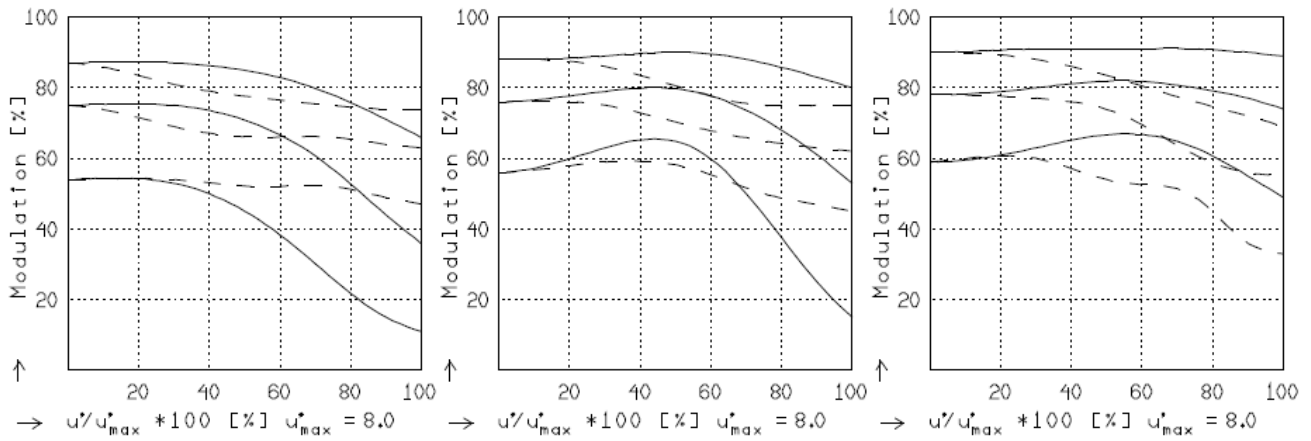
Tele-Xenar 2.2/70

TXR 2.2/70

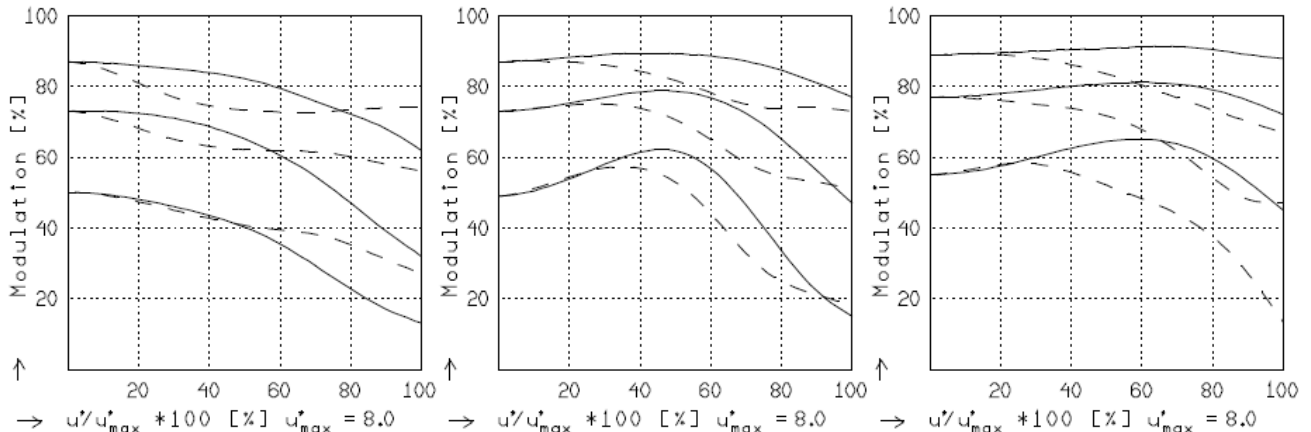
MODULATION with reference to the relative image height

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	40			
Format	[mm X mm]	9.6	12.8				
Diagonal $2u^*$	[mm]	16.0					

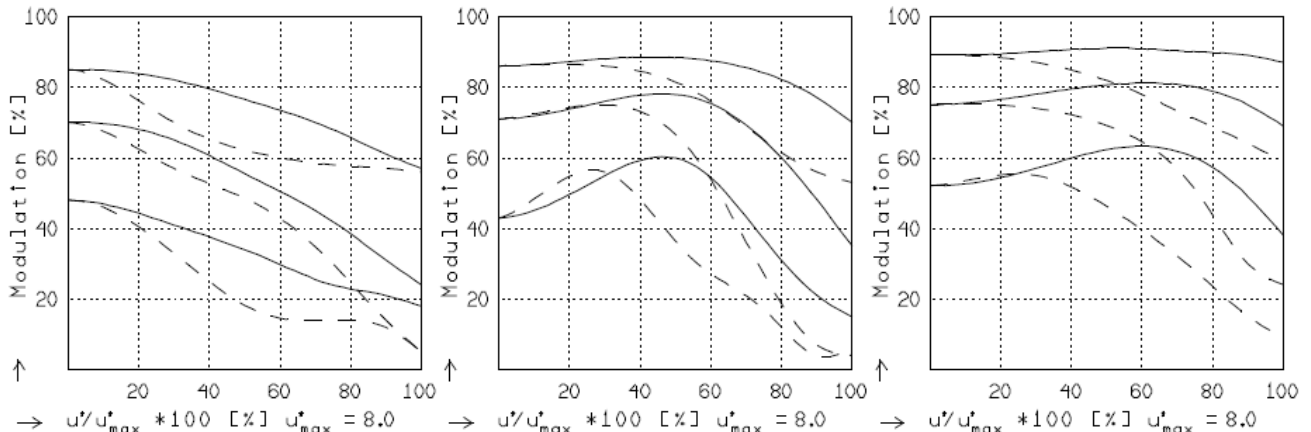
radial —
tangential - -



$f' = 70.5$ $f / 2.2$ $1/\beta' = -50.00$ $00' = 3643.$ $f' = 70.5$ $f / 4.0$ $1/\beta' = -50.00$ $00' = 3643.$ $f' = 70.5$ $f / 8.0$ $1/\beta' = -50.00$ $00' = 3643.$



$f' = 70.5$ $f / 2.2$ $1/\beta' = -20.00$ $00' = 1529.$ $f' = 70.5$ $f / 4.0$ $1/\beta' = -20.00$ $00' = 1529.$ $f' = 70.5$ $f / 8.0$ $1/\beta' = -20.00$ $00' = 1529.$



$f' = 70.5$ $f / 2.2$ $1/\beta' = -10.00$ $00' = 828.$ $f' = 70.5$ $f / 4.0$ $1/\beta' = -10.00$ $00' = 828.$ $f' = 70.5$ $f / 8.0$ $1/\beta' = -10.00$ $00' = 828.$

Focusing : MTF_{max} at $f / 2.2$ \ast $R = 40$ $1/mm$ \ast $u'/u_{max} = 0$