

# 3 Mega Pixel lens

## Tele-Xenar 2.2/70

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.
Option	Optical filter

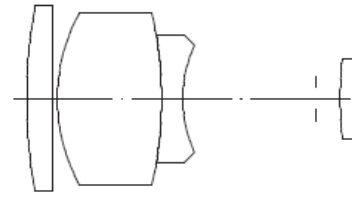
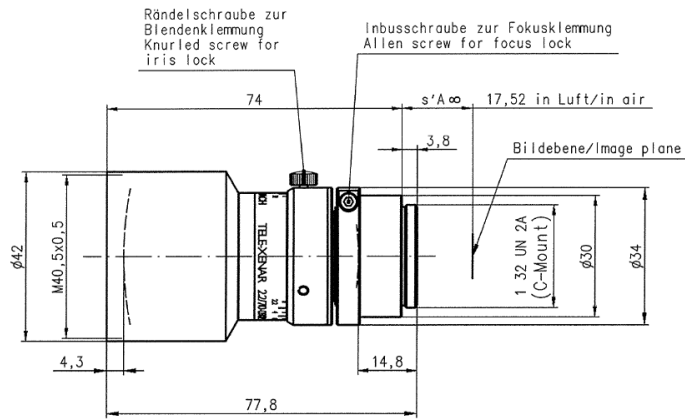
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# Tele-Xenar 2.2/70



## TXR 2.2/70

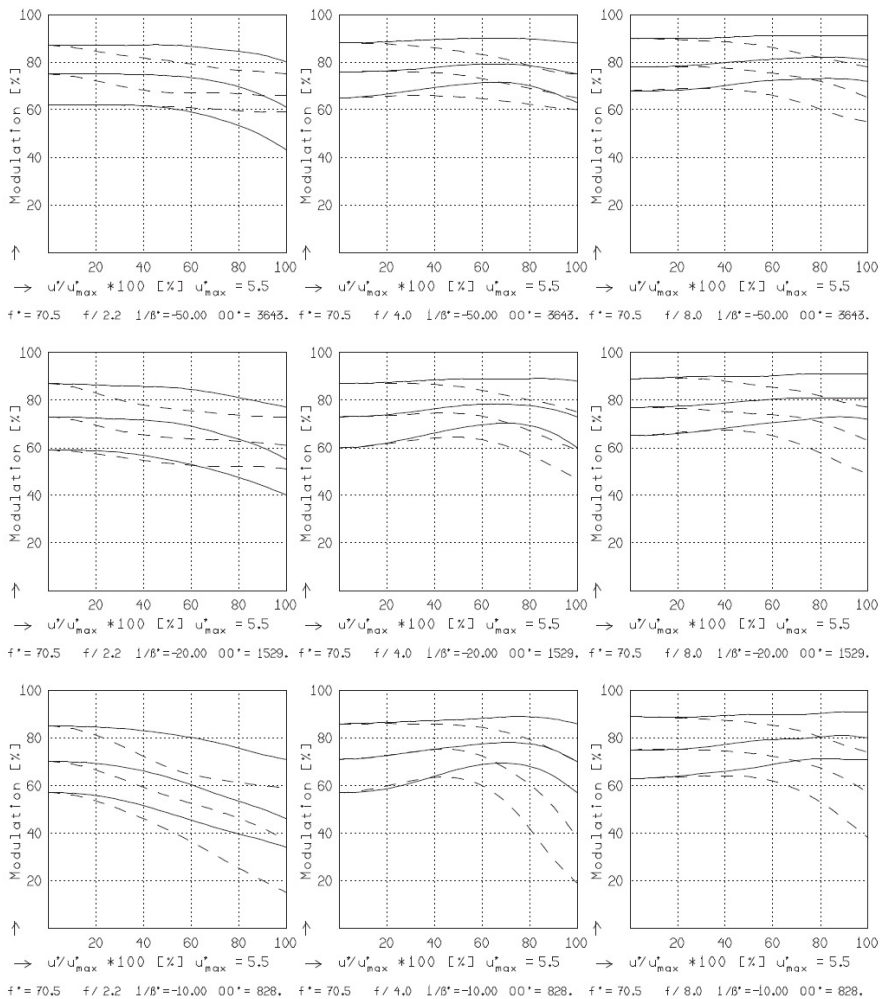
$f' = 70.5 \text{ mm}$      $\beta_p = 0.494$   
 $s_F = -27.8 \text{ mm}$      $s_{EP} = 115.0 \text{ mm}$   
 $s_{F'} = 28.5 \text{ mm}$      $s_{A'P} = -6.3 \text{ mm}$   
 $HH' = -26.0 \text{ mm}$      $\Sigma d = 58.8 \text{ mm}$

## TXR 2.2/70

MODULATION with reference to the relative image height

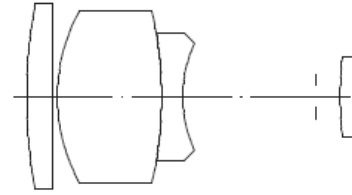
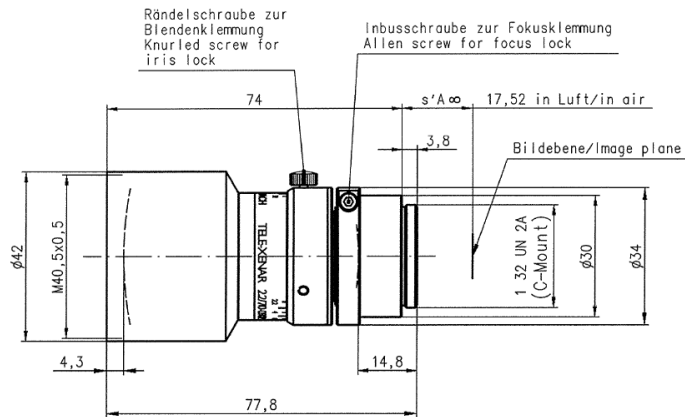
Wavelength $\lambda$	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	6.6	X	8.8			
Diagonal $2u'$	[mm]	11.0					

radial —  
 tangential - -



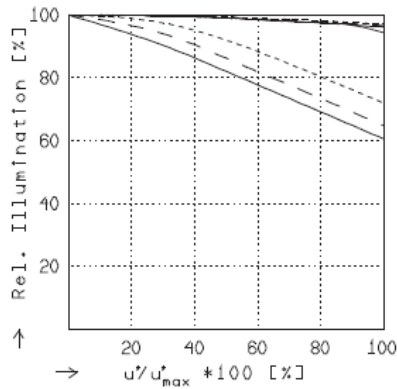
Focusing :  $MTF_{max}$  at  $f / 2.2$  ,  $R = 30$  1/mm,  $u'/u'_{max} = 0$

# Tele-Xenar 2.2/70



## TXR 2.2/70

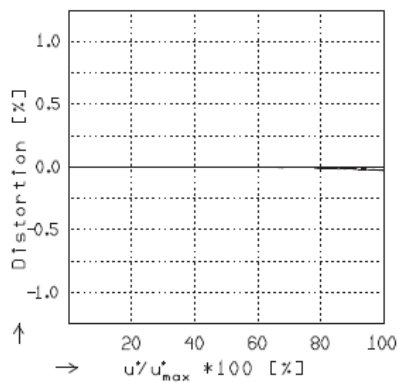
$f' = 70.5 \text{ mm}$	$\beta_p' = 0.494$
$s_F = -27.8 \text{ mm}$	$s_{EP} = 115.0 \text{ mm}$
$s_{F'} = 28.5 \text{ mm}$	$s_{AP}' = -6.3 \text{ mm}$
$HH' = -26.0 \text{ mm}$	$\Sigma d = 58.8 \text{ mm}$



## RELATIVE ILLUMINATION

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

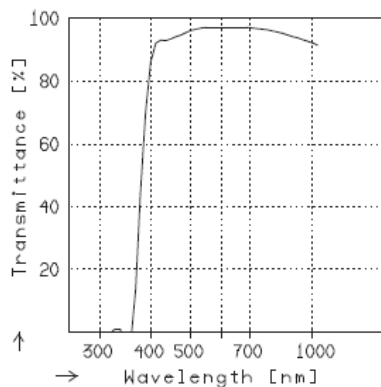
	$f / 2.2$	$f / 4.0$	$f / 8.0$
—	$\beta' = -0.0200$	$u'_{max} = 5.5$	$00' = 3642.$
- -	$\beta' = -0.0500$	$u'_{max} = 5.5$	$00' = 1529.$
----	$\beta' = -0.1000$	$u'_{max} = 5.5$	$00' = 827.$



## 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.