

# Xenon-RUBY Lens

## Xenon-RUBY 2.2/10

The Xenon-Ruby lens is optimized in accordance with the sensitivity of modern image sensors up to 1 / 1.8" (9mm). This lens is the perfect trade-off between price and performance: By having a practice-oriented speed of 2.2, a very high optical performance is achieved.

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.



Xenon-RUBY 2.2/10

### Key Features

- Robust mechanics for rough industrial environment
- Compact design and low weight
- Focus and iris setting lockable
- High resolution optics
- Transmission 400 - 1000 nm (VIS - NIR)
- Designed for Sensors up to 1 / 1.8" (9mm)

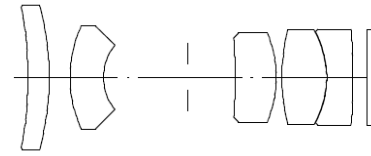
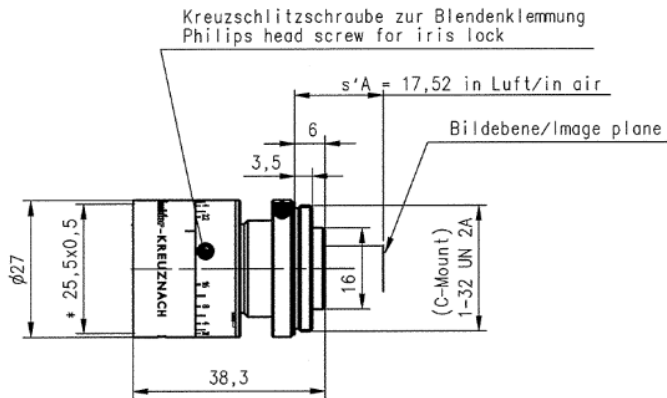
### Applications

- Traffic
- Security/Surveillance
- Machine vision and other imaging applications
- Quality control
- Surface inspection
- 2D / 3D Measurement

### Technical Specifications

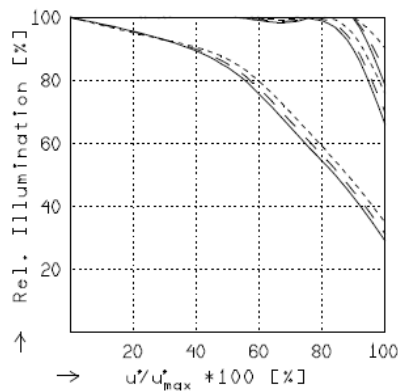
F-stop range	2.2 - 16
Focal length	10.46 mm
Image circle	9 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Filter Thread	M25.5 x 0.5
Weight	50 gr.
Code No.	1074625

# Xenon-RUBY 2.2/10



## XR 2.2/10

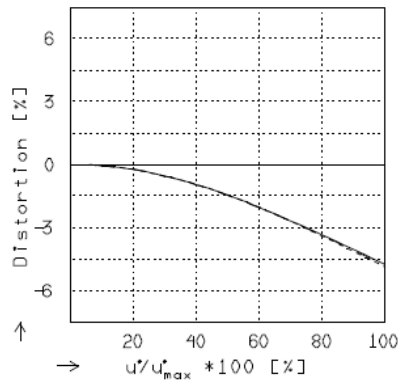
$f' = 10.5 \text{ mm}$	$\beta_p = 3.453$
$s_F = 9.2 \text{ mm}$	$s_{Ep} = 12.3 \text{ mm}$
$s_{F'} = 11.6 \text{ mm}$	$s_{Ap} = -24.6 \text{ mm}$
$HH' = 14.3 \text{ mm}$	$\Sigma d = 32.9 \text{ mm}$



## RELATIVE ILLUMINATION

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

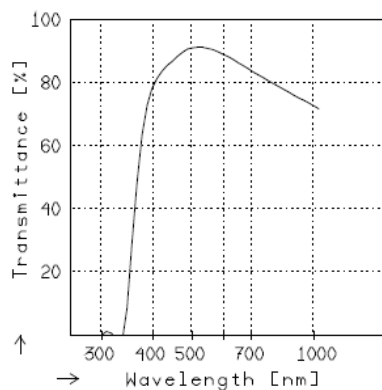
$f / 2.3$	$f / 4.0$	$f / 5.6$
— $\beta' = -0.0200$	$u'_{max} = 4.5$	$00' = 559.$
- - $\beta' = -0.0500$	$u'_{max} = 4.5$	$00' = 245.$
.... $\beta' = -0.1000$	$u'_{max} = 4.5$	$00' = 141.$



## DISTORTION

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

— $\beta' = -0.0200$	$u'_{max} = 4.5$	$00' = 559.$
- - $\beta' = -0.0500$	$u'_{max} = 4.5$	$00' = 245.$
.... $\beta' = -0.1000$	$u'_{max} = 4.5$	$00' = 141.$



## TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.

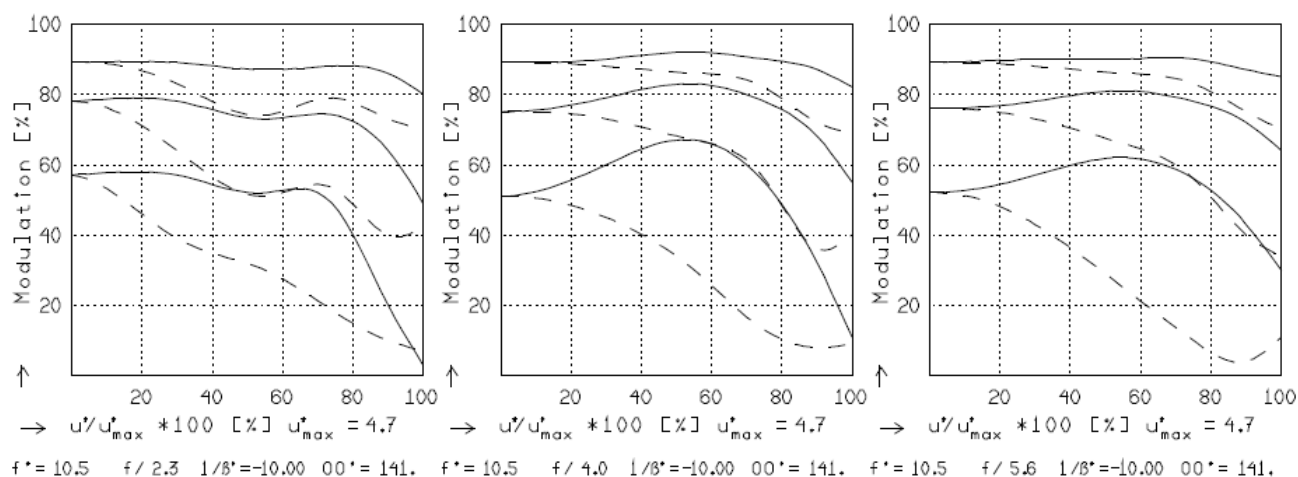
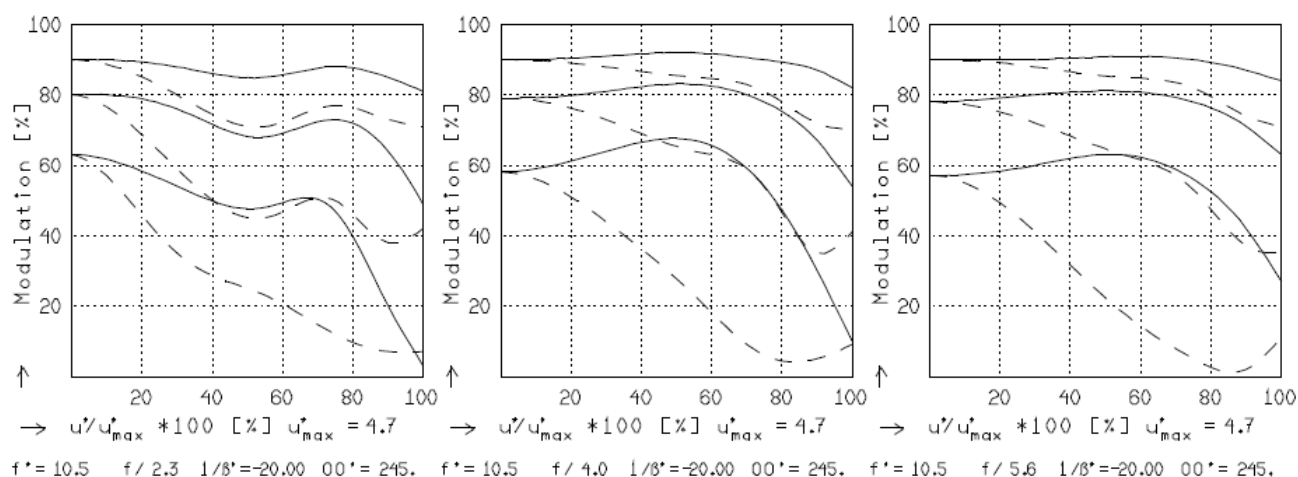
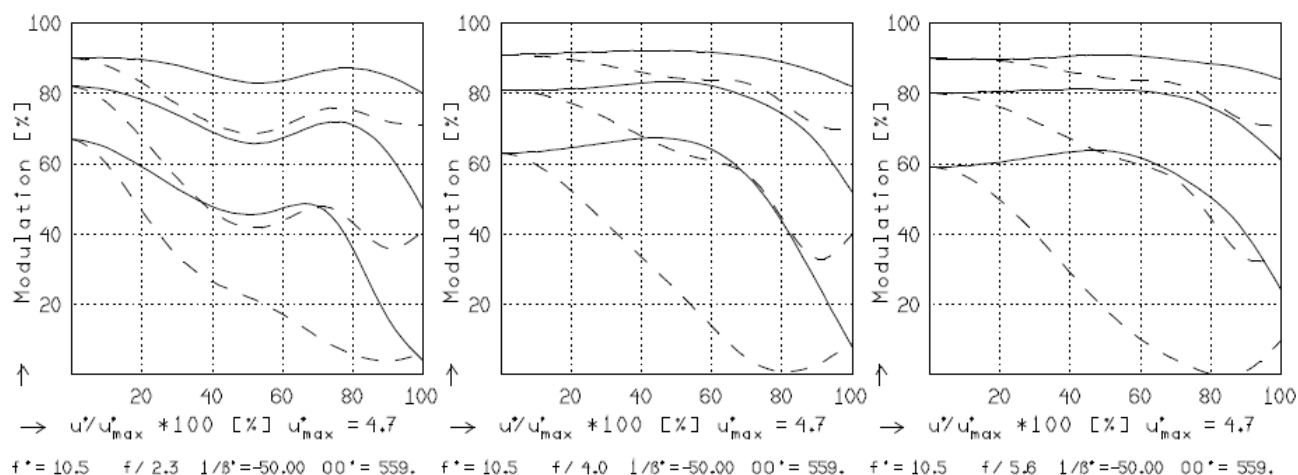
# Xenon-RUBY 2.2/10

XR 2.2/10

MODULATION with reference to the relative image height

Wavelength $\lambda$	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19.8	23.7	22.2	15.7	12.1	6.7
Spatial frequency R	[1/mm]	20	40	80			
Format	[mm X mm]	0.0	9.0				
Diagonal $2u'$	[mm]	9.0					

radial —  
tangential - -



Focusing :    MTF<sub>max</sub> at    $f / 2.2$    •    $R = 80$    1/mm •    $u'/u_{\max} = 0$