

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)

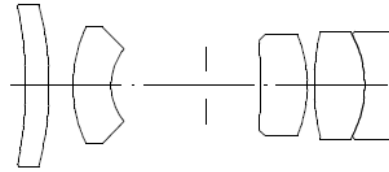
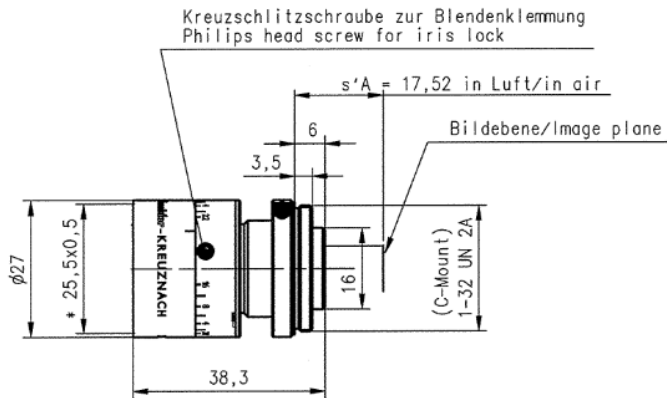
Applications

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

Technical Specifications

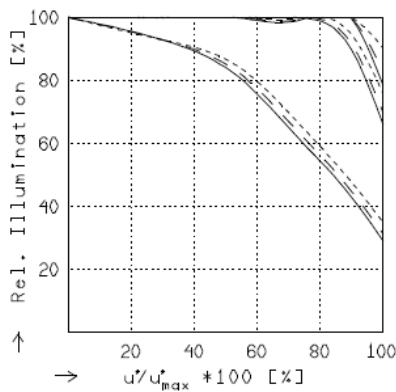
F-stop range	2.2 - 16
Focal length	10. mm
Image circle	9 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Filter Thread	M25.5 x 0.5
Weight	50 gr.
Code No.	1074625

Xenon-RUBY 2.2/10



XR 2.2/10

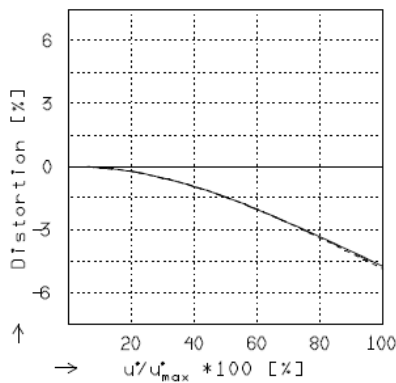
f'	= 10.5 mm	β_p	= 3.453
s_F	= 9.2 mm	s_{EP}	= 12.3 mm
$s_{F'}$	= 13.3 mm	$s_{\lambda P}$	= -22.8 mm
HH'	= 14.1 mm	Σd	= 31.0 mm



RELATIVE ILLUMINATION

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

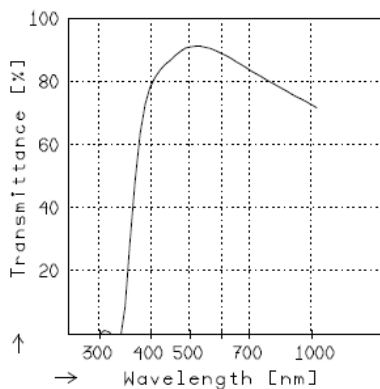
	$f / 2.3$	$f / 4.0$	$f / 5.6$
—	$\beta' = -0.0200$	$u'_{max} = 4.5$	$00' = 559.$
- -	$\beta' = -0.0500$	$u'_{max} = 4.5$	$00' = 245.$
----	$\beta' = -0.1000$	$u'_{max} = 4.5$	$00' = 141.$



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.

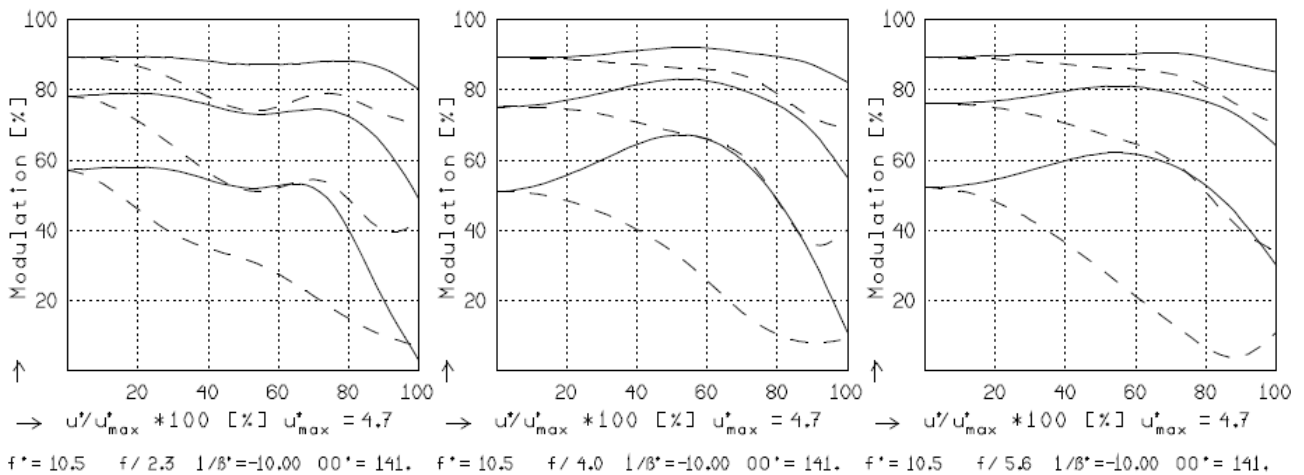
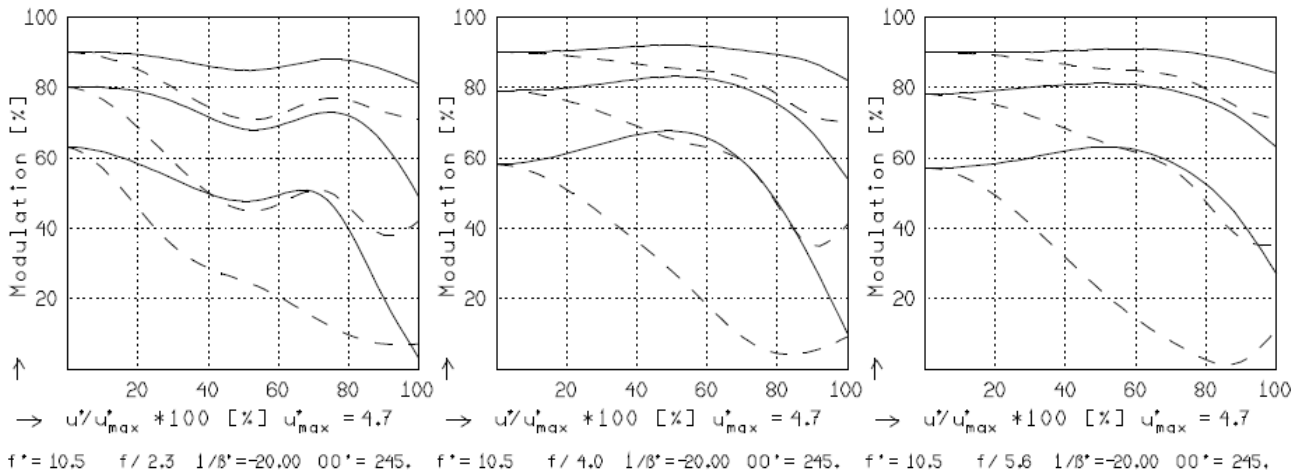
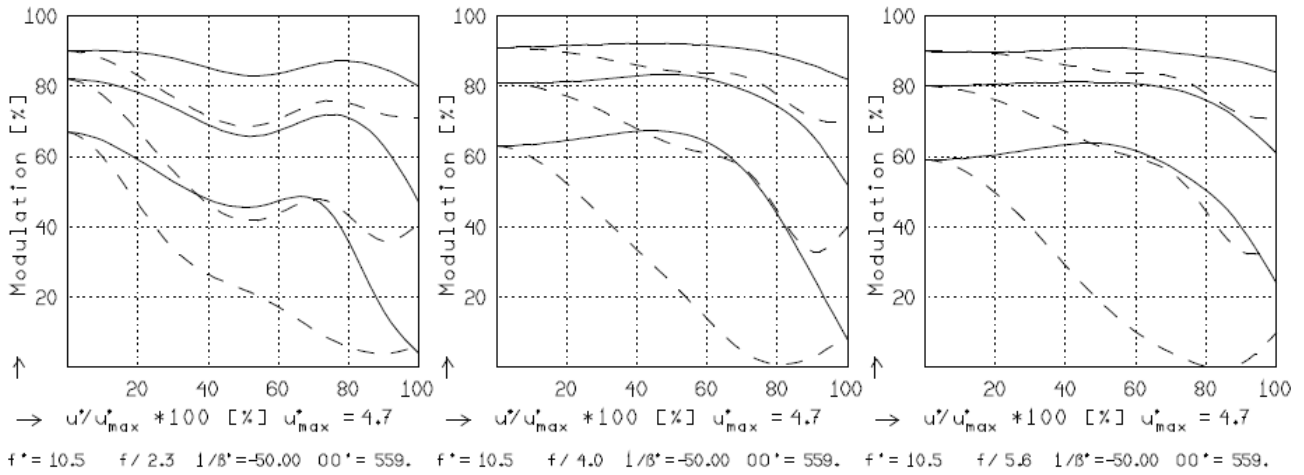
Xenon-RUBY 2.2/10

XR 2.2/10

MODULATION with reference to the relative image height

Wavelength λ	[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_{max} at $f / 2.2$, $R = 80$ 1/mm, $u'/u'_{max} = 0$