

Ruggedized Lens

Cinegon 1.4/12 – Ruggedized

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.



Cinegon 1.4/12

Key Features

- High-resolution optics
- Stabilized mechanism
- Highest optical imaging performance even with smallest pixel sizes
- Broadband coating (400 - 1000 nm)
- Compact and low weight
- Vibration insensitivity for stable imaging performance, secured ring
- Focus and iris setting lockable

Applications

- 3D measurement
- Machine Vision and other imaging applications
- Traffic
- Medical
- Robot vision
- Food processing

Technical Specifications

F-number	1.4
Focal length	12.7 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	99 gr.
Option	Optical filter

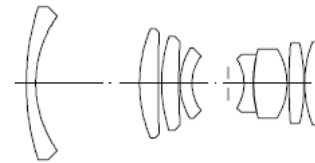
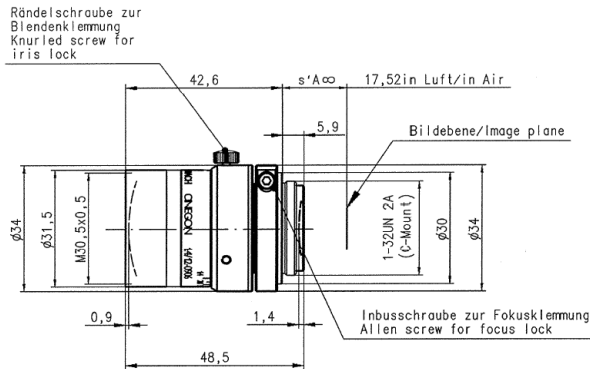
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CINEGON 1.4/12MM

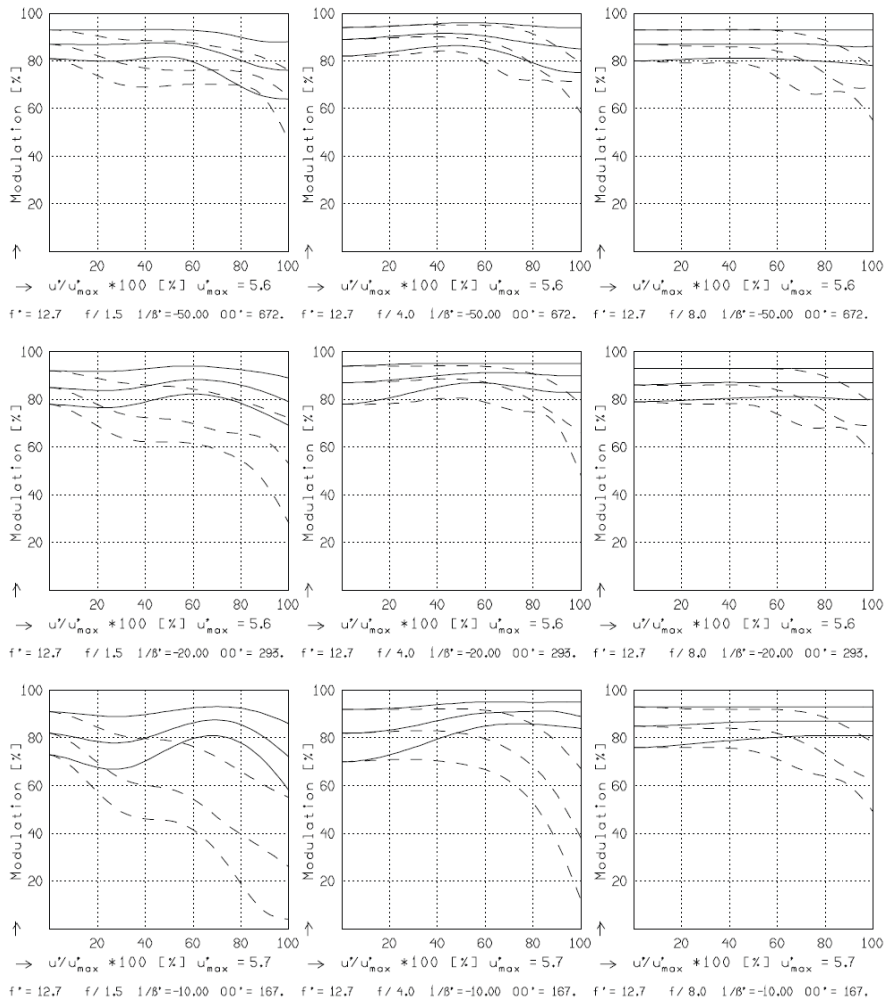
f^*	= 12.7 mm	β_p^*	= 4.217
s_F	= 20.1 mm	s_{EP}	= 23.1 mm
s_F^*	= 12.7 mm	s_{AP}^*	= -40.7 mm
HH^*	= 13.5 mm	Σd	= 46.3 mm

CINEGON 1.4/12MM

MODULATION with reference to the relative image height

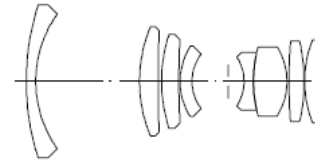
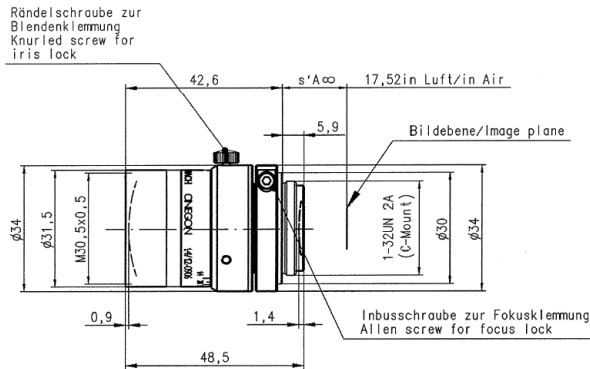
Wavelength λ	[nm]	555	655	605	555	455	405
Spectral weighting	[%]	19.6	23.7	22.2	15.7	12.1	6.7
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	6.6	X	8.8			
Diagonal $2u'$	[mm]	11.0					

radial —
tangential - -



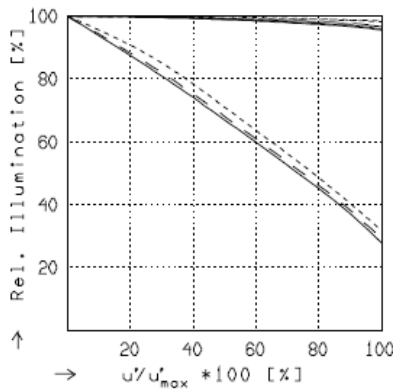
Focusing : MTF_{max} at f / 1.4 . R = 30 1/mm. $u'/u'_{max} = 0$

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CINEGON 1.4/12MM

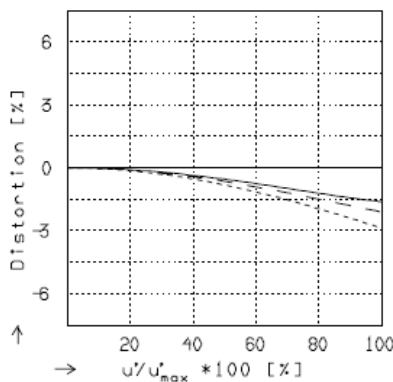
$f' = 12.7 \text{ mm}$	$\beta_p = 4.217$
$s_F = 20.1 \text{ mm}$	$s_{EP} = 23.1 \text{ mm}$
$s_{F'} = 12.7 \text{ mm}$	$s_{AP} = -40.7 \text{ mm}$
$HH' = 13.5 \text{ mm}$	$\Sigma d = 46.3 \text{ mm}$



RELATIVE ILLUMINATION

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

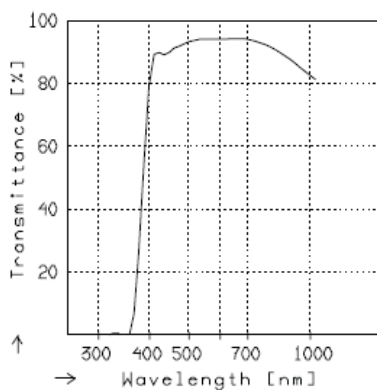
	$f / 1.5$	$f / 4.0$	$f / 8.0$
— $\beta' = -0.0200$	$u'_{max} = 5.5$	$00' = 672.$	
- - $\beta' = -0.0500$	$u'_{max} = 5.5$	$00' = 293.$	
- · - $\beta' = -0.1000$	$u'_{max} = 5.5$	$00' = 167.$	



DISTORTION

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

— $\beta' = -0.0200$	$u'_{max} = 5.4$	$00' = 672.$
- - $\beta' = -0.0500$	$u'_{max} = 5.5$	$00' = 293.$
- · - $\beta' = -0.1000$	$u'_{max} = 5.5$	$00' = 167.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.