

Ruggedized Lens

Cinegon 1.8/4.8 – 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.



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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	1.8
Focal length	5.0 mm
Image circle	11 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	90 gr.
Option	Optical filter

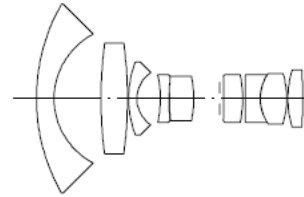
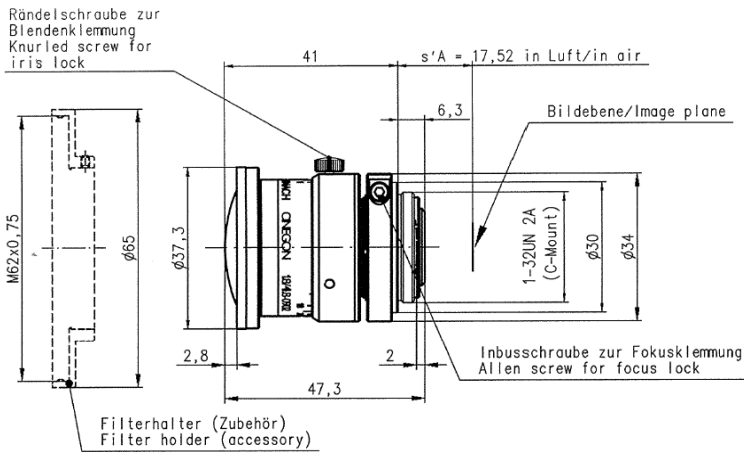
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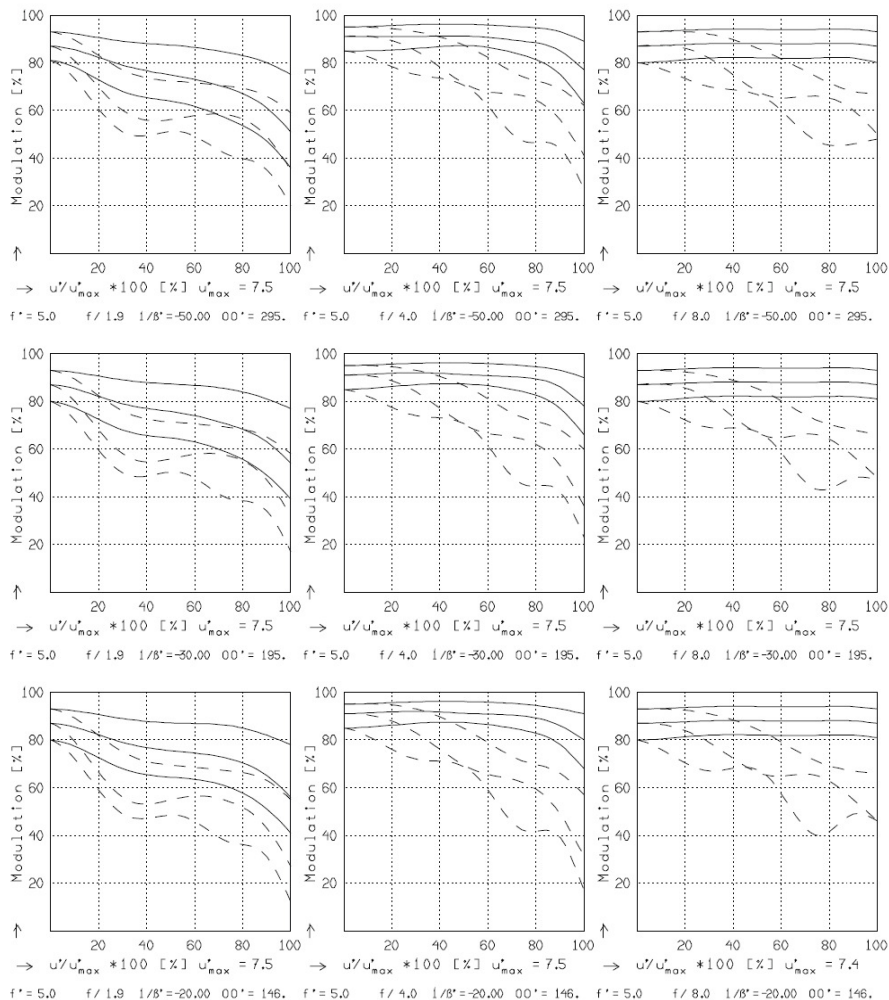
f'	=	5,0 mm	β_p'	=	6,632
s_F	=	13,2 mm	s_{EP}	=	13,9 mm
$s_{F'}$	=	13,2 mm	s_{AP}	=	-19,8 mm
HH'	=	35,4 mm	Σd	=	45,3 mm

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MODULATION with reference to the relative image height

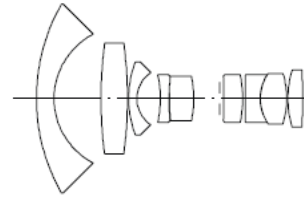
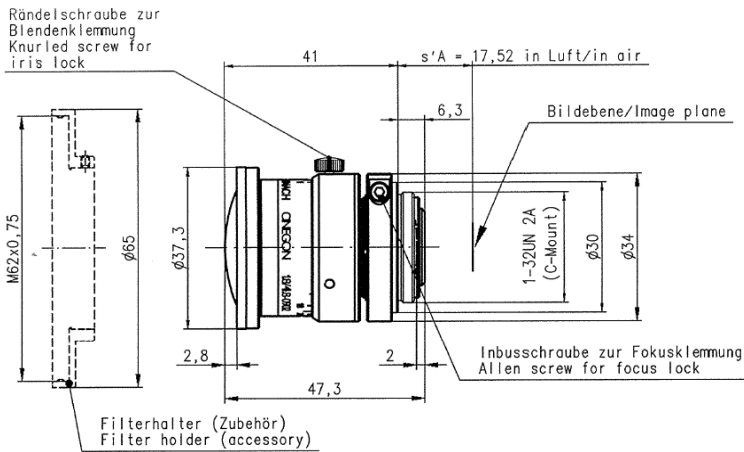
Wavelength λ	[nm]	555	655	605	505	455	405
Spectral weighting	[%]	19,4	23,2	21,7	15,4	11,8	8,5
Spatial frequency R	[1/mm]	10	20	30			
Format	[mm X mm]	6,6	X	8,8			
Diagonal $2u'$	[mm]	11,0					

radial —
tangential - -



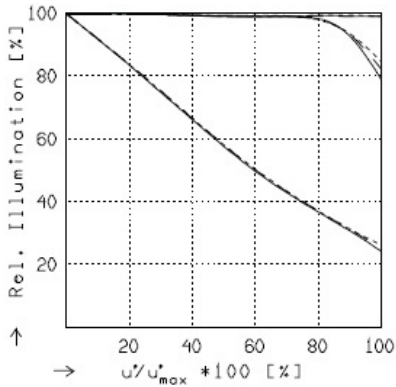
Focusing : MTF_{max} at $f / 1,8$, $R = 30$ 1/mm, $u'/u'_{max} = 0$

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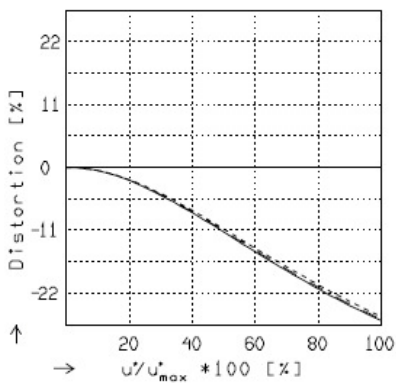
$f' = 5,0$ mm	$\beta_p' = 6,632$
$s_F = 13,2$ mm	$s_{FP} = 13,9$ mm
$s_{F'} = 13,2$ mm	$s_{AP} = -19,8$ mm
$HH' = 35,4$ mm	$\Sigma d = 45,3$ mm



RELATIVE ILLUMINATION

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

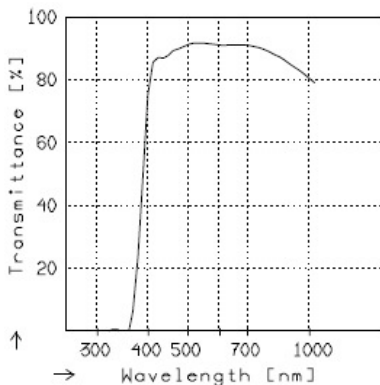
$f / 1.9$	$f / 4.0$	$f / 8.0$
— $\beta_p' = -0.0200$	$u_{max}' = 5.5$	$00' = 294.$
- - $\beta_p' = -0.0333$	$u_{max}' = 5.5$	$00' = 195.$
.... $\beta_p' = -0.0500$	$u_{max}' = 5.5$	$00' = 145.$



DISTORTION

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

— $\beta_p' = -0.0200$	$u_{max}' = 5.5$	$00' = 294.$
- - $\beta_p' = -0.0333$	$u_{max}' = 5.5$	$00' = 195.$
.... $\beta_p' = -0.0500$	$u_{max}' = 5.5$	$00' = 145.$



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.