

Anti-Shading Lens

Apo-Xenoplan 2.8/16-0002

These high-resolution, high-speed lenses are optimized for the use of 4 and 8 megapixel 1.3" sensors with micro-lenses on the sensor surface. The special optical design prevents unwanted shading on the sensor. This makes it much easier to combine a homogeneous luminance distribution with high imaging performance. The image circles are very large for C-Mount lenses. With a 1.3" sensor, the relatively short focal lengths allow a large coverage range at a short working distance. The lenses are also broadband coated and can be used in the visible range 400 – 700 nm or the near infrared range 700 – 1000 nm.



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Key Features

- Anti-shading for sensor sizes up to 1.3"(image circle 24 mm)
- Designed for 4 and 8 Mpix sensors with micro-lenses
- High resolution optics 400 - 700 nm (VIS) / 700 - 1000 nm (NIR)
- Very high MTF across the entire sensor
- Robust mechanics for industrial environment
- Compact and low weight
- Focus and iris setting lockable

Applications

- Machine Vision and other imaging applications
- 3D measurement
- Traffic
- Etc.

Technical Specifications

F# range	2,8
Focal length	16 mm
Image circle	24 mm
Transmission	400 - 1000 nm
Interface	C-Mount
Weight	240 g
Filter thread	with Filter Adapter: M49 x 0,75
Code no.	1084232

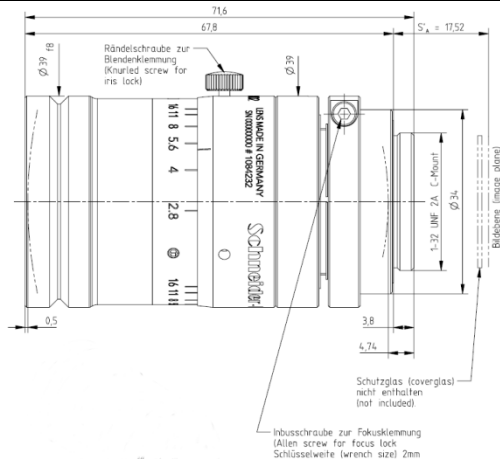
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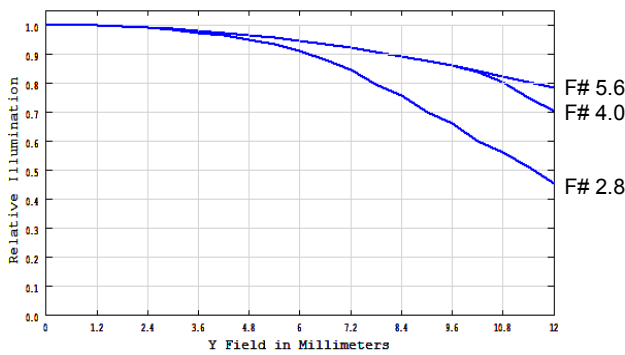
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Apo-Xenoplan 2,8/16-0002 ($\lambda = \text{nm}$)

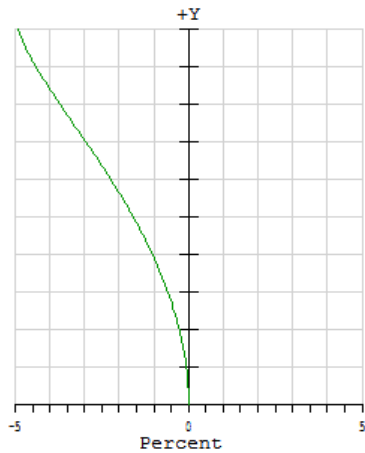
$f' = 16.4 \text{ mm}$	$\beta'_P = 3.46$
$\varnothing_{EP} = 5.7 \text{ mm}$	$s_{EP} = 17.92 \text{ mm}$
$s'_F = 18.19 \text{ mm}$	$s'_{AP} = -37.89 \text{ mm}$
$HH' = 38.67 \text{ mm}$	$\Sigma d = 66.36 \text{ mm}$



Relative Illumination

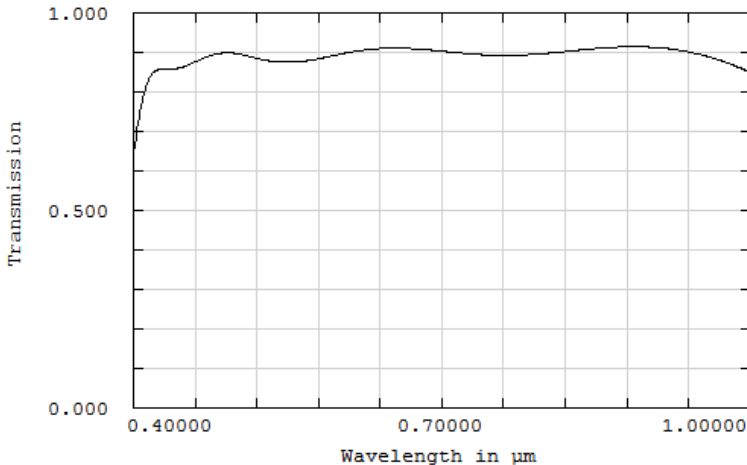
The relative illumination is shown for the given F-Numbers over the field of the sensor and referenced to the center of the sensor.

Distortion



Distortion

Distortion is shown for the given magnification of $\beta' = 0.02$. Positive values indicate pincushion distortion and negative values barrel distortion.



Transmittance

Relative spectral transmittance is shown with reference to wavelength.

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MTF with reference to image height for visible spectrum

Wavelength λ	[nm]:	430	455	505	555	605	655
Spectral weighting	[%]:	6.7	12.1	15.7	19.6	22.2	23.7
Spatial frequency R	[1/mm]:	30	60	90			
Image circle	[mm]:	24					

radial ———
 tangential - - - - -

