

Macro lens

Makro-Symmar 5.6/80-0033

Unlike conventional camera lenses where the optical performance decreases as the magnification increases, Schneider-Kreuznach macro lenses have been developed and corrected exclusively for the close-up range of 1:20 to 1:1. Due to its mechanical stability and the robust V-mount interface enabling simpler adjustment of the best azimuth position, the system is exceptionally well suited to demanding, continuous industrial use.



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Key Features

- Excellent optical imaging performance when using large sensors
- Vibration-insensitive for stable optical performance
- Industry-compatible V-mount interface
- Lockable distance and aperture settings
- Infinitely adjustable aperture, guaranteed long-term stability
- 100% quality control guarantees reliability and constant quality
- Low maintenance requirements, therefore high system reliability

Applications

- Machine Vision and other imaging applications
- PCB inspection
- LCD inspection
- OLED inspection
- Solar inspection

Technical Specifications

| | |
|---------------|----------------|
| F-number | 5.6 |
| Focal length | 82.4 mm |
| Image circle | 141.2 mm |
| Magnification | -1.0 |
| Transmission | 400 - 700 nm |
| Interface | V-Mount |
| Weight | 136 gr. |
| Option | Optical filter |

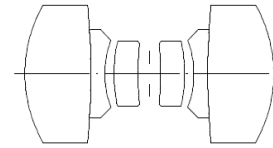
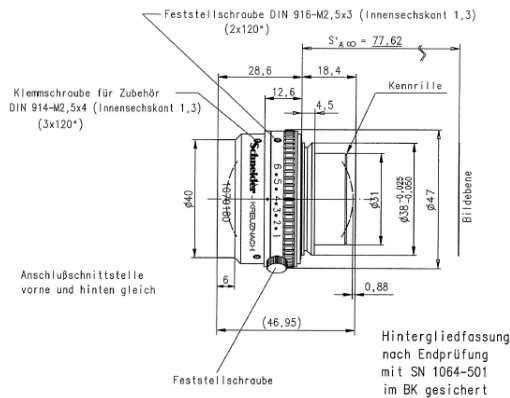
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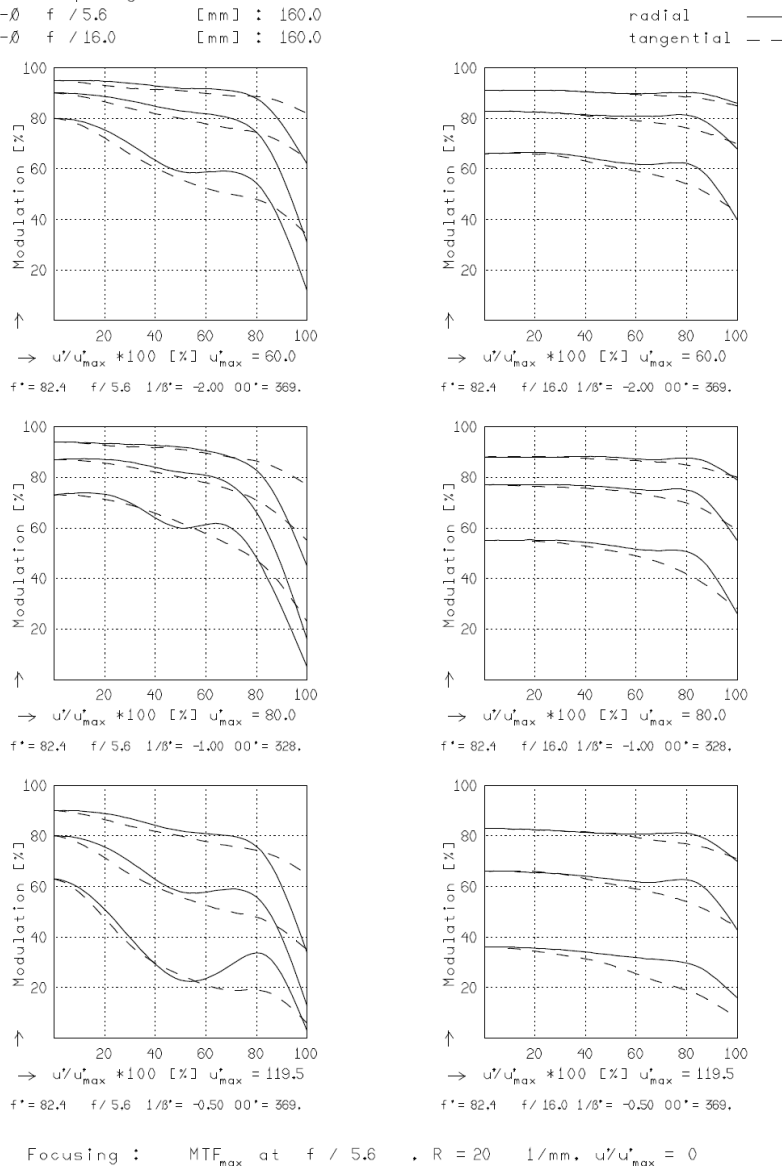
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| | |
|---------------------|-----------------------|
| f' = 82.4 mm | β'_p = 1.000 |
| s_F = -60.1 mm | s_{EP} = 22.2 mm |
| s_{F^*} = 60.1 mm | s_{AP^*} = -22.3 mm |
| HH' = -1.3 mm | Σd = 43.2 mm |

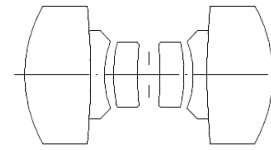
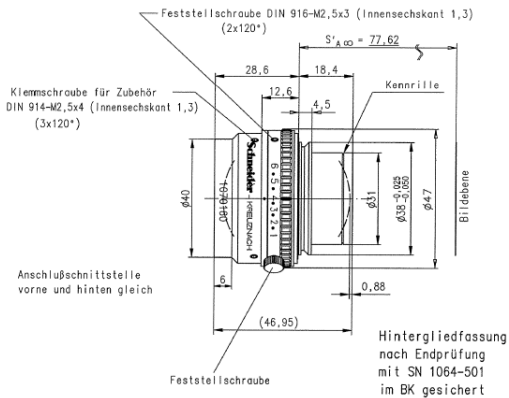
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MODULATION with reference to the relative image height

| | | | | | | |
|------------------------------------|-------|------|------|------|------|-----|
| Wavelength λ [nm] : | 546 | 644 | 588 | 480 | 436 | 405 |
| Spectral weighting [%] : | 24.6 | 18.6 | 22.1 | 12.4 | 15.2 | 7.1 |
| Spatial frequency R [1/mm] : | 5 | 10 | 20 | | | |
| Image- \emptyset f / 5.6 [mm] : | 160.0 | | | | | |
| Image- \emptyset f / 16.0 [mm] : | 160.0 | | | | | |

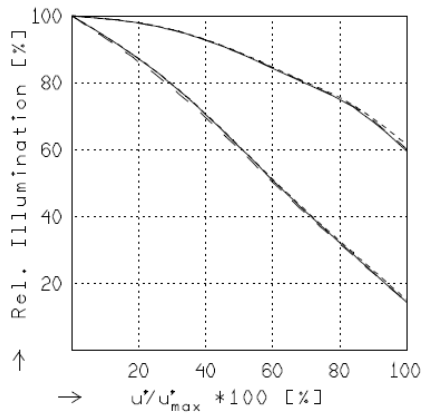


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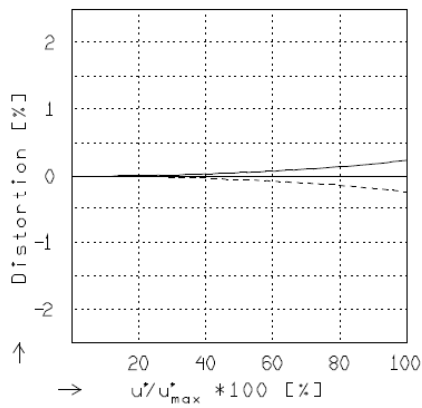


RELATIVE ILLUMINATION

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

$$f / 5.6 \quad f / 16.0$$

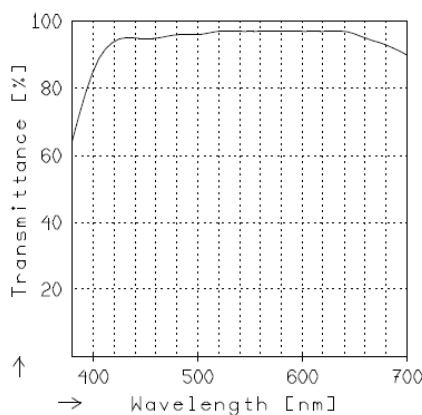
| | | |
|---------------------------|--------------------|---------------|
| — $\beta^* = -0.5000$ | $u'_{max} = 60.1$ | $00^* = 369.$ |
| - - $\beta^* = -1.0000$ | $u'_{max} = 80.0$ | $00^* = 328.$ |
| - - - $\beta^* = -2.0000$ | $u'_{max} = 119.2$ | $00^* = 369.$ |



DISTORTION

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

| | | |
|---------------------------|--------------------|---------------|
| — $\beta^* = -0.5000$ | $u'_{max} = 59.9$ | $00^* = 369.$ |
| - - $\beta^* = -1.0000$ | $u'_{max} = 79.8$ | $00^* = 328.$ |
| - - - $\beta^* = -2.0000$ | $u'_{max} = 119.2$ | $00^* = 369.$ |



TRANSMITTANCE

Relative spectral transmittance is shown with reference to wavelength.