

Xenon-Zirconia 4.0/104



This lens with 0.33x magnification is optimized for the use with 12k (62.5 mm) line scan sensors with 5 μm pixel, but can also be used with 16k (82 mm) lines. It is broadband coated and can be used in the spectral range of 400 - 1000 nm.

The V-Mount makes it easy to install and rotate into the desired azimuth position for a wide range of line scan applications. Performance is practically diffraction limited over the whole field. At F/# 5.6 the lens is free of artificial vignetting. The Xenon-Zirconia lens is designed in a manner that even with fastest F-number, the full resolution, albeit with diminished contrast, is attained, needed for web and FPD inspection.

The Xenon-Zirconia lens series also lenses contains with magnification of 0.2x, 0.5x, 0.7x, 1.0x, 2.0x and 2.0x with beam splitter.



Xenon-Zirconia 4.0/104

Key features

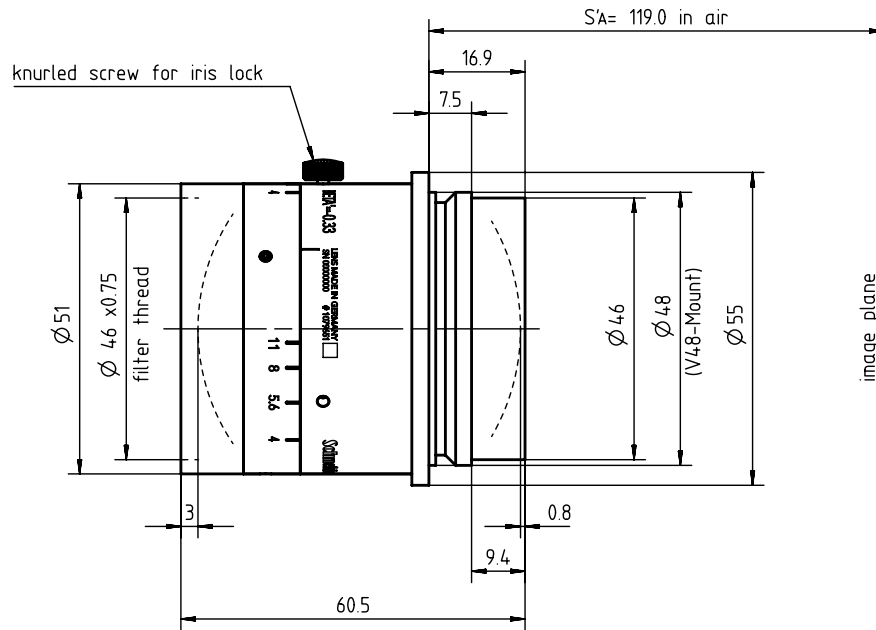
- For 12k line scan sensors with 5 μm pixel sizes
- Vibration-insensitive for stable optical performance
- Best azimuth marking
- 400 nm to 1000 nm broadband AR coating
- Lockable distance and aperture settings
- V-Mount connection

Applications

- Web and surface inspections
- Quality control
- FPD inspection
- PCB inspection
- OLED inspection
- Line scan applications

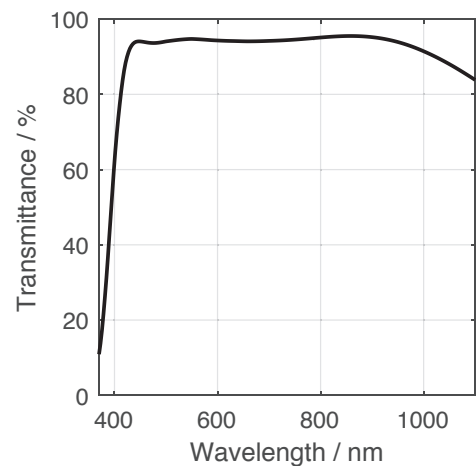
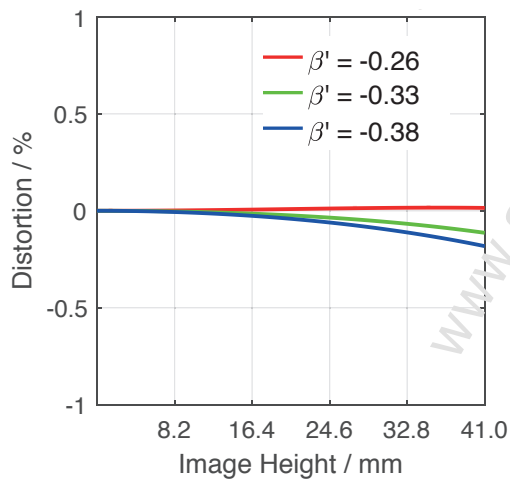
| Name | Xenon-Zirconia 4.0/104 |
|------------------------------|------------------------|
| Type | -0001 |
| Focal Length [mm] | 104 |
| Magnification | -0.33 |
| Image circle [mm] | 82 |
| Resolution [μm] | 3.5 |
| F/# range | 4 ... 11 |
| NA | 0.12 |
| Interface | V48-Mount |
| Working distance [mm] | 383 |
| AoV [°] | 33 |
| Focus control | manual |
| Transmission [nm] | 400 - 1000 |
| Filter thread [mm] | M46 x 0.75 |
| Dimensions L x D [mm] | 85.0 x 75.0 |

| Name | Xenon-Zirconia 4.0/104 |
|--------------------------|------------------------|
| Weight [g] | 242 |
| Storage temperature [°C] | -25 ... +70 |
| f'_{eff} [mm] | 103.76 |
| S_F [mm] | -64.33 |
| S'_F [mm] | 68.07 |
| HH' [mm] | -18.43 |
| β'_p | 1.016 |
| S_{EP} [mm] | 37.78 |
| S'_{AP} [mm] | -37.75 |
| Σd [mm] | 56.70 |
| ID | 1079651 |

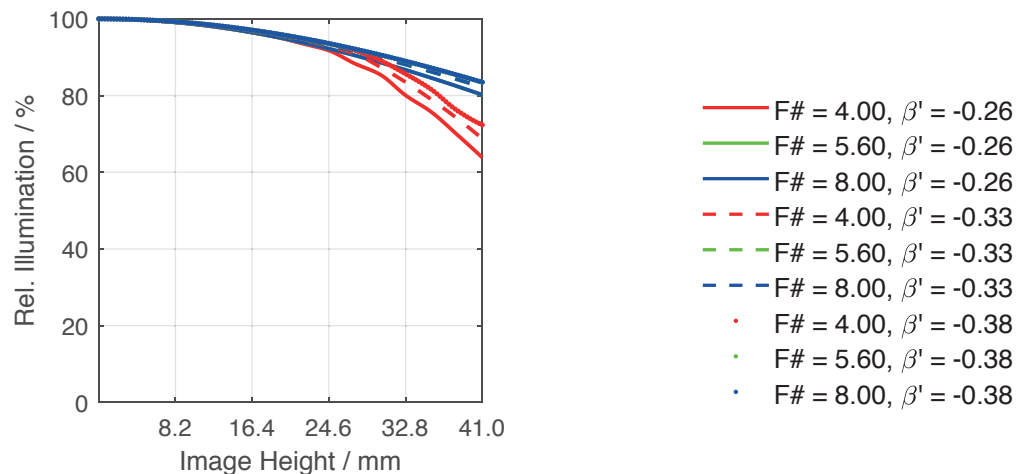


Distortion vs. Image Height

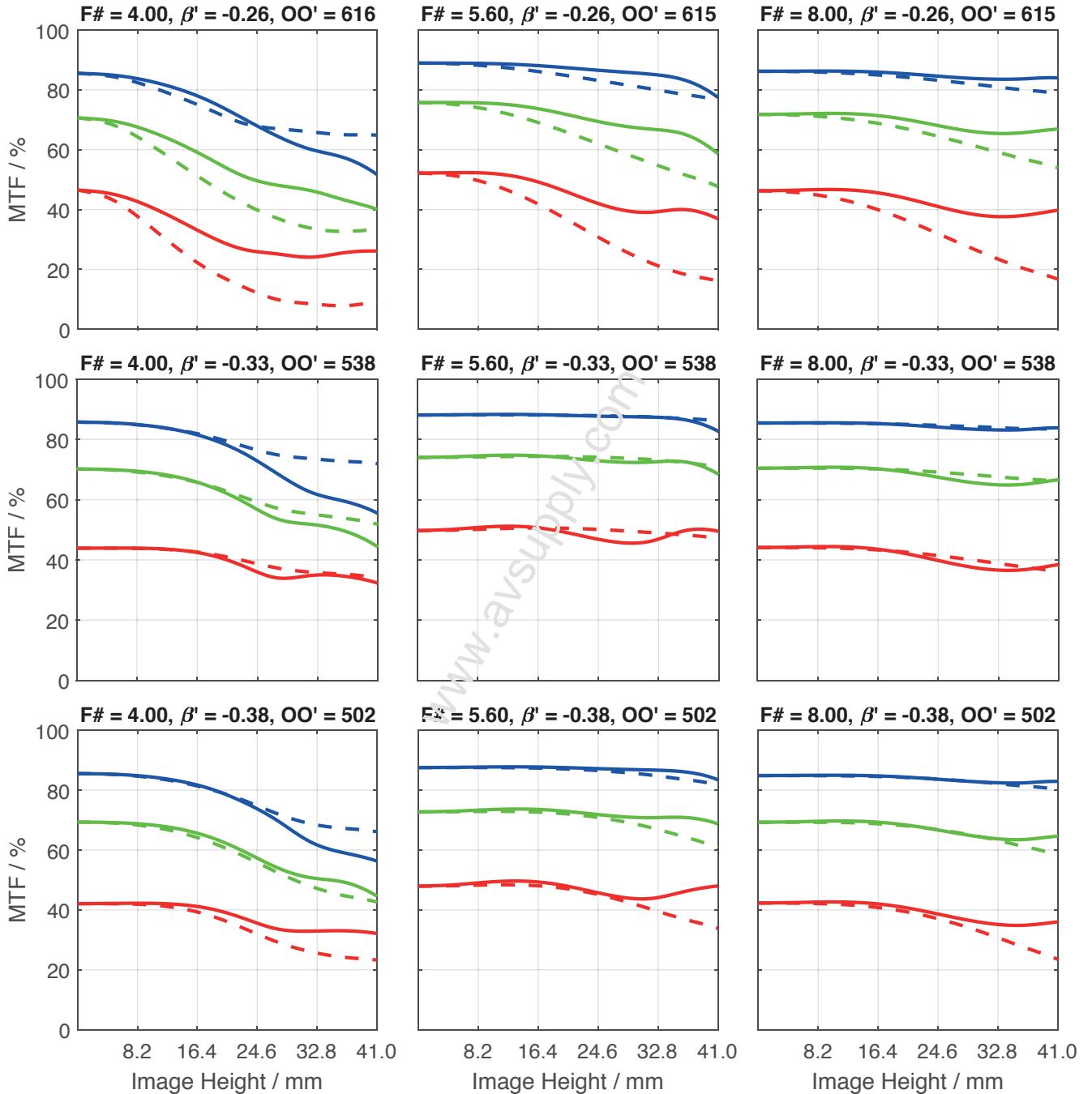
Transmittance vs. Wavelength



Relative Illumination vs. Image Height



| Spectrum Name | VIS | | | | | |
|------------------|-----|-----|-----|-----|-----|-----|
| Wavelengths [nm] | 425 | 475 | 525 | 575 | 625 | 675 |
| Weights | 8 | 16 | 23 | 22 | 19 | 13 |



- 18.0 lp/mm, tangential --- 36.0 lp/mm, tangential --- 72.0 lp/mm, tangential
- 18.0 lp/mm, radial — 36.0 lp/mm, radial — 72.0 lp/mm, radial

| Accessories | Mount | Length | ID | |
|----------------------|------------|-------------------------|---------|---------|
| Ext. Tube | V48 | 10 mm | 1072661 | |
| | V48 | 25 mm | 1072651 | |
| | V48 | 50 mm | 1072662 | |
| | M72 x 0.75 | 5 mm | 1072420 | |
| | M72 x 0.75 | 10 mm | 1072421 | |
| | M72 x 0.75 | 25 mm | 26406 | |
| | M72 x 0.75 | 50 mm | 1054733 | |
| | M72 x 0.75 | 100 mm | 1079483 | |
| | M90 x 1 | 10 mm | 1084875 | |
| | M90 x 1 | 25 mm | 1084876 | |
| | M90 x 1 | 50 mm | 1084877 | |
| | M90 x 1 | 100 mm | 1084878 | |
| | M95 x 1 | 10 mm | 1077290 | |
| | M95 x 1 | 25 mm | 1062892 | |
| | M95 x 1 | 50 mm | 1062893 | |
| | M95 x 1 | 100 mm | 1062894 | |
| | Adapter | V 48 / C-Mount | 8.5 mm | 1072650 |
| | | V48 / V70 with focusing | 10 mm | 1075304 |
| V70 / M72 x 0.75 | | - | 1075304 | |
| M72 x 0.75 / M95 x 1 | | 4 mm | 1077013 | |
| M72 x 0.75 / M90 x 1 | | - | 1084879 | |
| M95 x 1 / M90 x 1 | | - | 1084889 | |
| V 48 / M 42 x 1 | | 8.5 mm | 1072660 | |
| V 48 / M 42 x 0.75 | | 8.5 mm | 1072652 | |
| V 48 / M 58 x 0.75 | | 10 mm | 1072659 | |