

# VEO\_CS DIAMOND 2.5 × / F2.9

For TDI Line Scan

## Key Features

- Optimized for 62.5 mm line scan sensors
- High resolution over the entire field
- Resolves 2.77  $\mu\text{m}$  in object space
- With beam splitter for axial in-line illumination
- Low chromatic focal shift
- No relative illumination loss at the edge
- Best azimuth marking

## Applications

- FPD (OLED / LCD) inspection
- PCB inspection
- High resolution defect detection
- Quality assurance systems

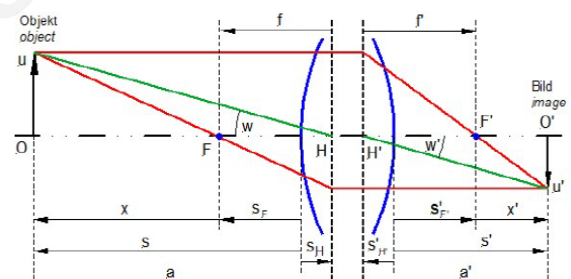


## Performance

| Parameter                        | Specification        | Remarks                   |
|----------------------------------|----------------------|---------------------------|
| Magnification range              | 2.5 (2.4 ... 2.6)    |                           |
| F/# range                        | F/2.9 ... F/5.6      | Optimum F/2.9             |
| Numerical aperture               | 0.121                |                           |
| Max. sensor size [mm]            | 62.5                 |                           |
| Infinite F/#                     | F/2.9                |                           |
| Focal length [mm]                | 105                  |                           |
| Depth of field [ $\mu\text{m}$ ] | 32.48                | @ P. CoC 10 $\mu\text{m}$ |
| Distortion                       | < 0.05%              |                           |
| Wavelength [nm]                  | 400 ... 1000         | Visible ... NIR           |
| Working distance [mm]            | 64.6 (65.6 ... 63.6) | B/S ... Object            |
| Beam splitter size               | 25 × 25 × 80         |                           |
| Total length [mm]                | 529.1 ± 2            | from Object to Sensor     |
| Interface                        | V70 mount            | 0.75 pitch                |
| Iris                             | Changeable           |                           |
| Relative illumination            | Less than 5%         |                           |
| Weight [g]                       | 1350                 |                           |

## Optical Parameters

| Contents                               | Parameter       | Value  |
|----------------------------------------|-----------------|--------|
| Chief Ray Angle (Max.) in object plane | CRA             | 4.8°   |
| Effective focal length                 | f'eff [mm]      | 105.12 |
| Front focal length                     | SF [mm]         | -23.56 |
| Back focal length                      | S'F' [mm]       | 58.27  |
| Principal plane distance               | HH' [mm]        | 13.75  |
| Pupil magnification                    | $\beta'P$       | 1.04   |
| Entrance pupil position                | SEP [mm]        | 77.80  |
| Exit pupil position                    | S'AP [mm]       | -50.76 |
| Vertex width                           | $\Sigma d$ [mm] | 142.17 |



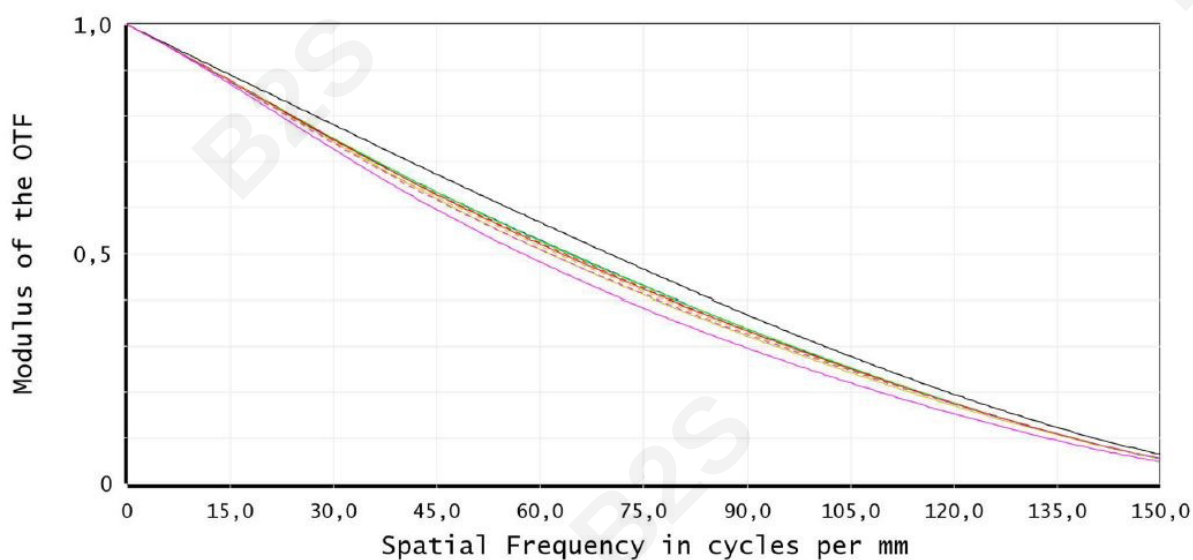
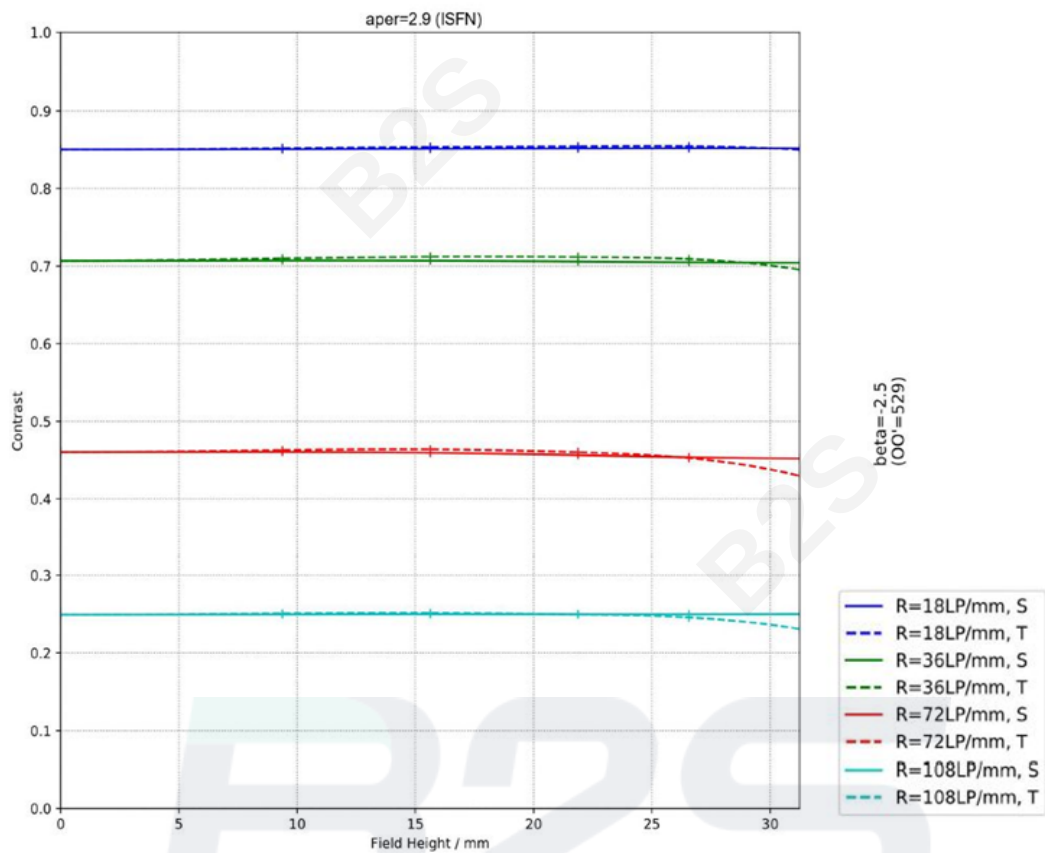
# VIEWWORKS

vision.vieworks.com

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## MTF



|                        |                      |                     |                   |
|------------------------|----------------------|---------------------|-------------------|
| Diff. Limit-Tangential | Diff. Limit-Sagittal | 0,00 mm-Tangential  | 0,00 mm-Sagittal  |
| 15,60 mm-Tangential    | 15,60 mm-Sagittal    | 22,10 mm-Tangential | 22,10 mm-Sagittal |
| 27,10 mm-Tangential    | 27,10 mm-Sagittal    | 31,25 mm-Tangential | 31,25 mm-Sagittal |

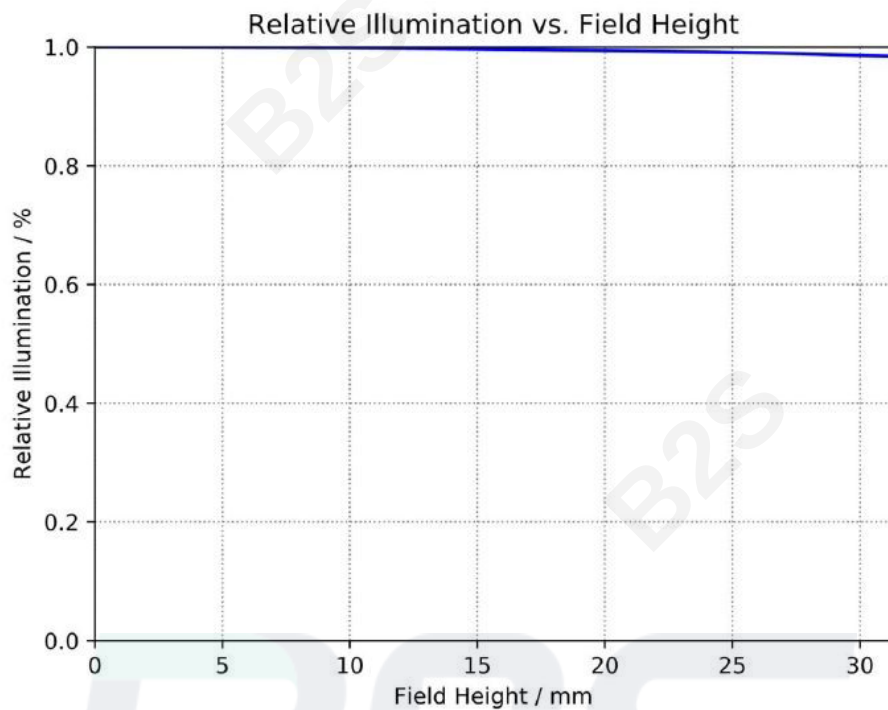
### Polychromatic Diffraction MTF

Data for 0.4360 to 0.6450  $\mu\text{m}$

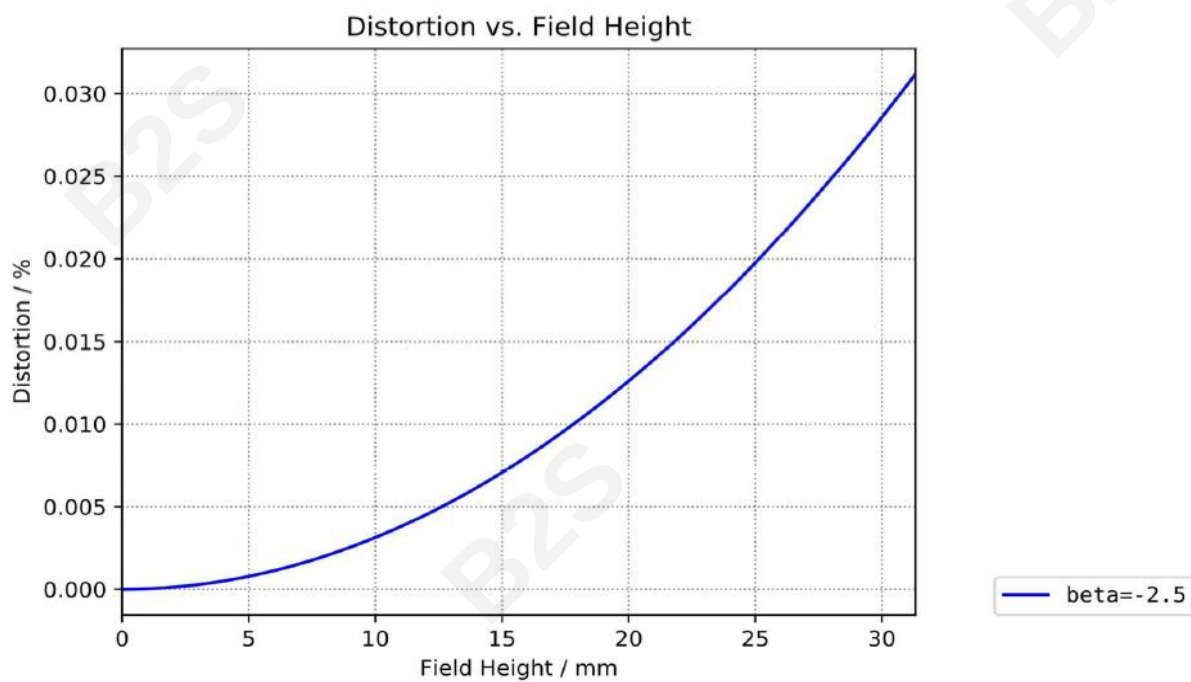
Surface: Image (image level)

Legend items refer to Field positions

## Relative Illumination



## Distortion



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## Dimensions

Unit: mm

