

# SID4



## ➤ KEY FEATURES

- High transverse resolution (160x120)
- Achromaticity
- Large spectral acceptance
- Intensity profile characterization (BeamView)
- Compact and versatile (controlled by laptop, "plug'n play")
- Multi-user, multi-device interface
- Easy to implement and user friendly software
- Various acquisition mode (real time, triggered, programmed acquisition...)

**SID4** wave front sensor is an extremely compact device which combines classical interferometry advantages (sensitivity, high resolution & dynamic range measurement) with an easy implementation.

**SID4** advantages come from the 4-Wave Lateral Shearing Interferometry\* (based on the Modified Hartmann Mask Diffractive Optics) an innovative technology developed at ONERA for metrology needs.

## "A REVOLUTION IN WAVE FRONT SENSING"

**SID4** is an essential tool for laser beam characterization and find numerous applications in optical metrology.

**PHASICS** - The phase control company



# WAVE FRONT SENSOR

## ↓ SPECIFICATIONS

Aperture dimension	3.6 x 4.8 mm <sup>2</sup>
Spatial resolution	29.6 μm
Phase and intensity sampling	160 x 120 (> 19000 points)
Wavelength range	350 - 1100 nm
Accuracy (absolute/relative mode)	10 nm RMS / 3 nm RMS
Sensitivity	3 nm RMS
Dynamic	> 100 μm
Radius of curvature	20 mm (5 mm optional)
Curvature repeatability	5 · 10 <sup>-4</sup> m <sup>-1</sup>
Numerical aperture	0.1NA f/5 (0.3 NA f/1.6 optional)
Analysis rate (full resolution)	> 10 fps
Acquisition rate	60 fps
Dimensions (l x h x l)	49 x 35 x 110 mm
Weight	250 g

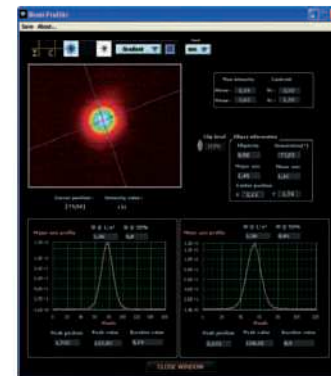
## ↓ SOFTWARE FEATURES

### Phase map interpretation modules

- Tilt
- Divergence
- Zernike polynomials
- Legendre polynomials

### Beam analysis

- Simultaneous phase and intensity maps
- M<sup>2</sup> calculation
- Strehl ratio
- Far-field analysis



*BeamView module window*

### Ergonomics

- Intuitive software
- Multi-user interface
- Automatic mask analysis adjustment

### BeamView (option)

- Complete beam analysis
- Intensity profiles
- Gaussian fit



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