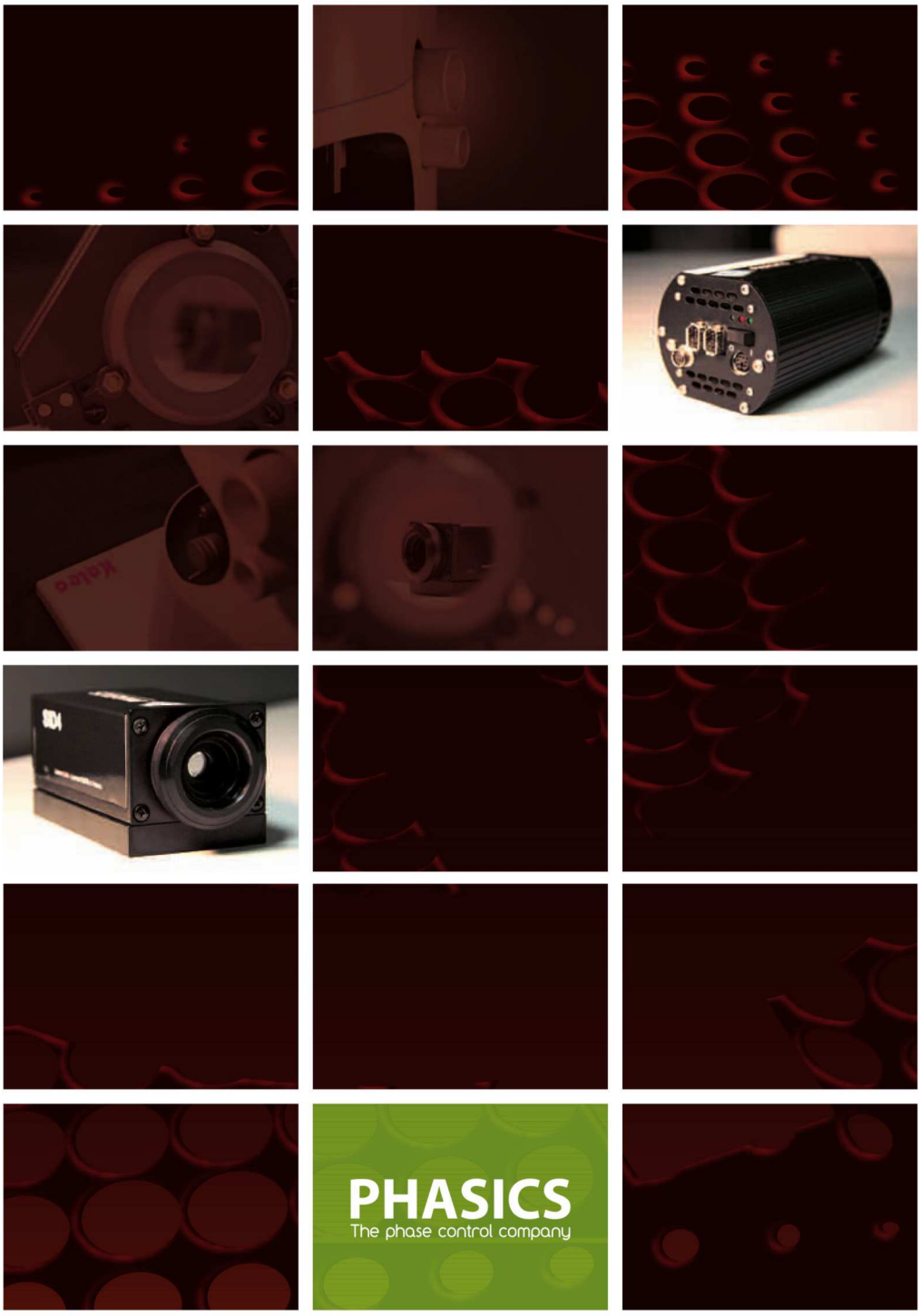
SID4



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 developped 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.

WAVE FRONT SENSOR

SPECIFICATIONS

Wavelength Range	400 - 1100 nm
Aperture Dimension	3.6 x 4.8 mm²
Spatial Resolution	29.6 µm
Phase and Intensity Sampling	160 x 120 (>19 000 points)
Resolution (Phase)	< 2 nm RMS
Accuracy	10 nm RMS
Dynamic range	> 100 µm
Radius of Curvature range (*)	6 mm to + ∞ (*)
Curvature resolution	$< 1.10^{-3}$ m^{-1}
Maximum Numerical aperture (*)	0.3 (*)
Acquisition Rate	> 100 fps
Real-time processing frequency	10 fps (full resolution)
Dimensions (WxHxL)	54 x 46 x 75.3 mm
Weight	~250 g

(*) optional software necessary

SID4 wave front sensor controlled by laptop

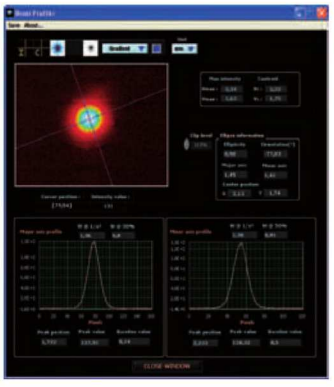
SOFTWARE FEATURES

Phase map interpretation modules

- Tilt
- Divergence
- Zernike polynomials
- Legendre polynomials

Beam analysis

- Simultaneous phase and intensity maps
- M^2 calculation
- Strehl ratio
- Far-field analysis



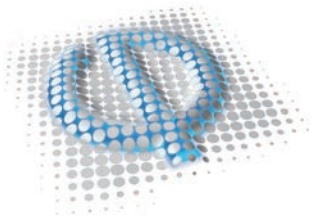
BeamView module window

Ergonomics

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

BeamView (option)

- Complete beam analysis
- Intensity profiles
- Gaussian fit



PHASICS S.A.
XTEC Bât. 404
Campus de l'Ecole Polytechnique
Route de Saclay
91128 Palaiseau - France
Tel : +33(0)1 69 33 89 99
Fax : +33(0)1 69 33 89 88
E-Mail : contact@phasics.fr
www.phasics.fr