



Complete Ophthalmic Analysis System Wavefront Aberrometer



The leader in optical wavefront metrology introduces the standard in ophthalmic wavefront measurement – the *Complete Ophthalmic Analysis System (COAS)*.

A “complete” analysis of the refractive path of the eye is now available to doctors for both eye health and refractive surgery applications. This information provides surgeons with the information needed to achieve superior results for their patients. Faster, more accurate refractions are now possible with immediate feedback on higher order aberrations, quantitative pupil size, and the ability to track patient ophthalmic performance in a quantitative manner. Applications of this information to eye-health monitoring/screening make doctors more efficient while simultaneously providing a new dimension in health care.

AMO WaveFront Sciences *Complete Ophthalmic Analysis System* is based upon the proven performance of the *Complete Light Analysis System (CLAS – 2D)*. *CLAS – 2D* defined the standard in laser and optics wavefront metrology with comprehensive software, patented sensors, and the highest performance wavefront sensing available in the world.

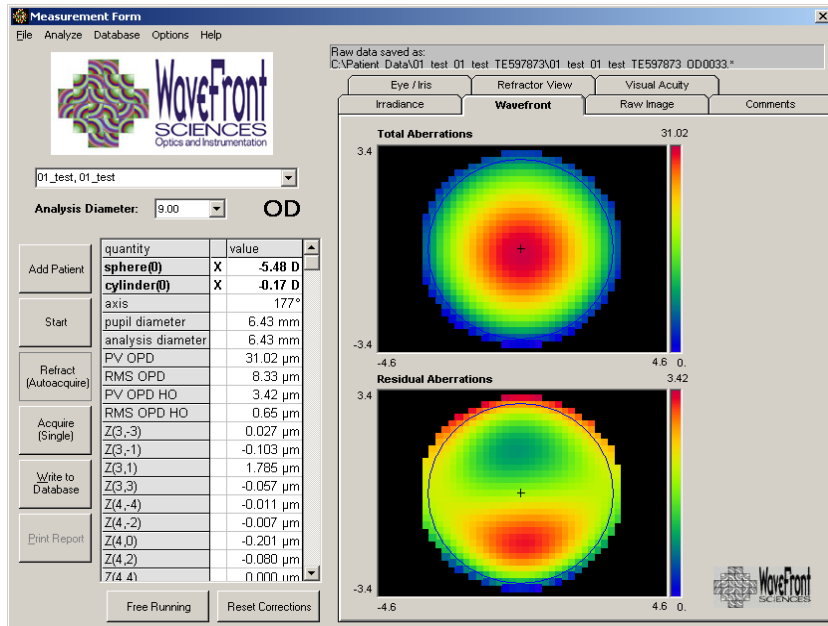
COAS provides a complete analysis of the aberrations of the entire eye. Real time measurements offer the ability to analyze

aberrations in many different forms, including displays of cylinder, higher order aberrations, Zernike polynomials, pupil size, high resolution wavefront maps, powermaps, gradient maps, Modulation Transfer Function (MTF), Point Spread Function (PSF), and Visual Acuity Simulation.

Optional database management allows doctors to make comparisons and animations of patient wavefront measurements pre- and post-surgery, to monitor the healing process, and to average measurements over time.

The *COAS* Wavefront Analyzer is an advanced system for acquiring data to diagnose the visual functions of the eye. The unit performs a complete analysis of the eye’s optical path based on advanced wavefront sensing technology.

AMO WaveFront Sciences Precision Aberrometers			
Specification	Measurement Unit	COAS	COAS-HD 2800
Array Resolution (effective lenslet pitch)	Microns	210	158
Samples in pupil diameter of:	Unit		
7.0 mm		872	1541
9.5 mm		N/A	2837
Maximum Measurable Pupil Diameter	Millimeters	7.2	9.5
Sphere Range	Diopters	-17 to +7	-17 to +8
Accuracy	Diopters	±0.15D in the range: -14 to +7D ±0.5D in the range: -17 to -14D	±0.15D in the range: -15 to +8D ±0.5D in the range: -17 to -15D
Cylinder Range	Diopters	±3.0	±5.0
Accuracy	Diopters	better than 0.05 using test lenses	better than 0.05 using test lenses
Axis Accuracy	Degrees	±2 degrees	±2 degrees
Wavefront Accuracy	Microns	0.05 RMS	0.05 RMS
Repeatability			
Sphere	Diopters	0.02 scan to scan using test lenses	0.02 scan to scan using test lenses
Cylinder	Diopters	0.02 scan to scan using test lenses	0.02 scan to scan using test lenses
Visual Stimulus	Diopters	fogged at 1.5D	fogged at 1.5D



Standard COAS Wavefront Measurement

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