RAM Photonics

QuantoPhase™

Digital Shearing Wavefront Sensor

QuantoPhase™ wavefront sensors provide precision wavefront sensing solutions for optical metrology and laser beam characterization. Our patented wavefront sensing technology provides robust and affordable devices with customized wavelength range with the *lowest cost per resolvable sample*.

Key features:

- Amplitude + phase
- Zernike/Legendre coefficients
- Up to 512 x 512 sampling
- 100 λ dynamic range
- λ/100 precision & rms accuracy
- Real-time beam propagation

Applications:

- Wavefront measurement
- Adaptive optics
- Laser beam characterization
- Lens characterization
- Laser beam collimation
- SDK for C++/MATLAB

RAM PHOTONICS, LLC.
9985 Pacific Heights Blvd., Suite 150, San Diego CA 92121-4310 | info@ramphotonics.com | www.ramphotonics.com

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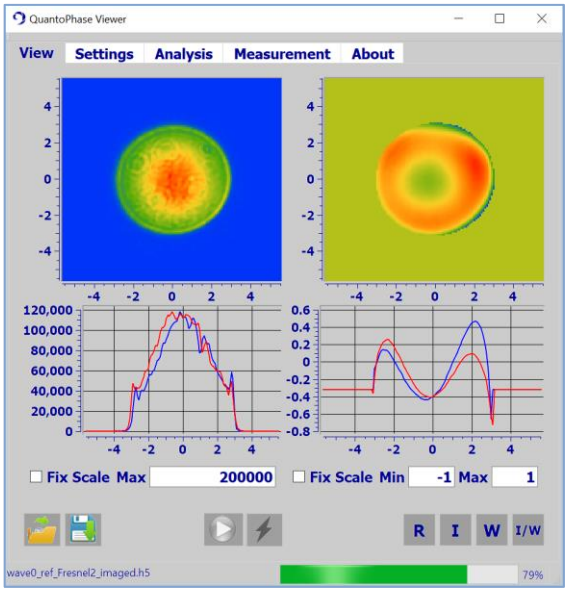
Specifications:

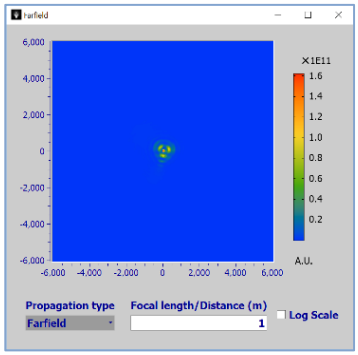
Due to our continuous improvement program, specifications are subject to change without notice.

	Standard	Options / Comment	Unit
Spatial Resolution	42	λ dependent	µm
Sampling(1)	16 x 16 to 512 x 512	User selectable	-
Precision and RMS Accuracy	λ / 100	-	–
Dynamic Range	100 λ	-	-
Operational Wavelengths(2)	532 & 1064 ± 100	Customizable	nm
Detection Area	11.3 x 11.3	-	mm^2
ROC Dynamic Range	≥ 0.03	smallest measured	m
Acquisition Rate(3)	4-10	Externally triggerable	Hz
Communications Interface	USB 3.0	-	-
Operating System	Windows 7 or 10	-	-

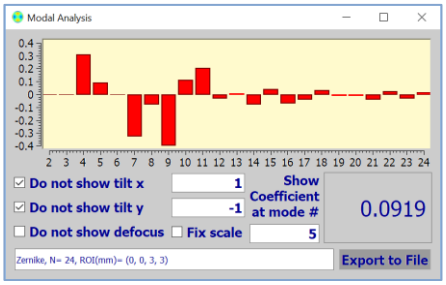
(1) Numerical sampling; Nyquist sampling matched to the physical spatial resolution is 269 x 269. See application note.
(2) Limited by silicon response (≤ 1080nm).
(3) At 128 x 128 sampling. Faster at smaller sampling. Will vary depending on user computer system.



Dual view (Intensity/wavefront) window



Beam propagation window



Modal (Zernike) analysis window

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