

# AccuFiz® SWIR

4D Technology

## 1.55 $\mu\text{m}$ Infrared Fizeau Interferometer

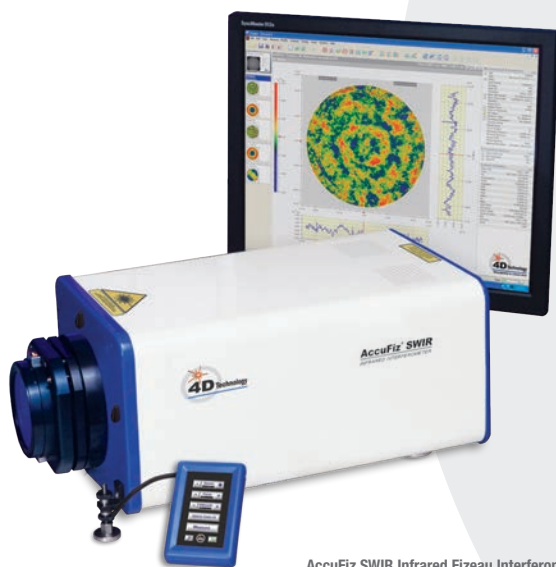
### Accurate IR Measurement

The compact, lightweight AccuFiz® SWIR laser interferometer operates at a wavelength of 1.55  $\mu\text{m}$  for accurate measurement of polished and ground optics and metal surfaces. With simple controls and a built-in alignment system, the AccuFiz is ideal for measuring concave, convex and afocal IR components, as well as IR telescopes and lens systems.

With diffraction-limited imaging the AccuFiz provides unparalleled accuracy, particularly at mid-spatial frequencies, letting you measure polishing artifacts that other interferometers miss.

The AccuFiz is loaded with standard features, such as a touch-screen remote, fully motorized controls and tool-free height adjustment. Smart Zoom™ ensures accurate lateral resolution at all zoom settings. Optional Dynamic Interferometry® lets you measure in challenging environments such as production floors and clean rooms, and over long measurement distances, all without vibration isolation.

The Extended Source capability allows you to minimize measurement artifacts such as diffraction rings for extremely low measurement noise. An optional motorized tip/tilt mount provides remote controlled alignment.



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### Industry Leading Analysis, Standard

4Sight wavefront analysis software, included with every AccuFiz, features excellent ease of use and a short learning curve. The Measurement Screen puts all common measurement controls in one place, while the Measurement Flow lets you visualize the entire measurement process. 2D and 3D displays, filtering options and masking tools make it easy to highlight surface shape and texture. Zernike, Seidel, geometric and diffraction analyses are easy to perform. Comprehensive data sharing capabilities let you read, write, save and print most file types.

### Best Value

The AccuFiz product line offers a range of laser sources, aperture sizes, mounting configurations and accessories, providing flexibility for a wide range of applications and budgets. Rugged construction, user-friendly 4Sight™ software, and quality in every detail make the AccuFiz your new best choice for optics verification.

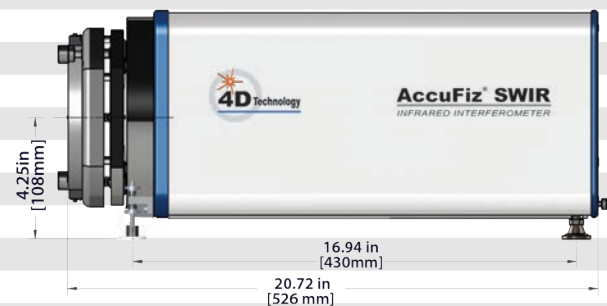
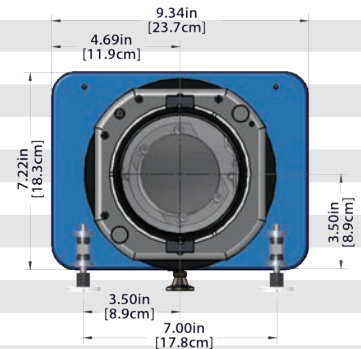
## FEATURES

- Compact and Lightweight
- 1550 nm Stabilized Source
- Temporal Phase Shifting and Dynamic Operation
- High Accuracy and Resolution
- Smart Zoom with Pan, for Accuracy at All Zoom Settings
- Extended Source for Extremely Low Noise
- Handheld Touch Screen Remote Control
- Simple to Use, Short Learning Curve

# AccuFiz® SWIR

## Specifications

Description	AccuFiz SWIR
Optical Configuration	Fizeau interferometer system
Acquisition Mode	Temporal Phase Shifting, optional Dynamic Measurement
Laser Source	1.55 $\mu\text{m}$ stabilized laser
Aperture Size	4 in (100 mm)
Output Beam	Collimated, circular polarization
Reference Optics	Bayonet mounted
Zoom	10X with pan, accurate at all zoom settings
Pupil Focus Range	Motorized, $\pm 2$ m at all zoom settings
Alignment	Twin spot
Camera	> 500 x 500 pixels, 12-bit > 30 frames/sec display
Handheld Controller	Remote control of focus and zoom, pan, source diameter, measurement
Computer System	High performance PC with dual monitors
Operating System	Windows 7®
System Software	4Sight™ Analysis Software Reference generation, subtraction, data averaging, masking 2D and 3D surface maps Zernike / Seidel / Slope / Geometric / Fourier Analysis Fiducial aided data set mapping Absolute Sphere, 3-Flat calibration HDF4 / HDF5 data format standard, other files supported including opd, map, dat, hdf, int, csv and txt Upgrades free during warranty period
Physical Envelope	51.4 x 23.8 x 20.3 cm (20.2 x 9.4 x 8.0 in)
Mounting Configurations	Horizontal or vertical (look-down)
Optical Axis	4.25 in (10.8 cm)
Weight	<13.6 kg (30 lbs)
Power Consumption	< 750 Watts
Temperature Range	Operational: 16–27° C (60–80° F), non-condensing Storage: -1–38° C (30–100° F), non-condensing



AccuFiz SWIR Dimensions

### System Performance

Sample Reflectivity	1 to 100% (attenuation required)
RMS Repeatability	< 0.0001 waves RMS* < 0.00005 waves RMS* with Extended Source
RMS Precision	0.001 waves RMS** 0.0005 waves RMS** with Extended Source
Uncalibrated Accuracy	< Reference flat or sphere limited (typically $\lambda/20$ )

**Warranty** One Year, limited, on-site system installation and operator training

All specifications subject to change without notice.

\* One sigma for RMS of 10 data sets of calibration mirror, each data set being an average of 16 measurements

\*\* Mean standard deviation of 10 Difference Surface maps, each map being an average of 16 measurements

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INVISIBLE LASER RADIATION.  
AVOID EXPOSURE TO BEAM.  
CLASS 3B LASER PRODUCT  
<30mW at 1550nm

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