

AccuFiz[®] SIS

4D Technology

Surface Isolation Source

The Surface Isolation Source is an optional, external laser source that enables measurement of plane-parallel optics with 4D's AccuFiz[®] visible wavelength laser interferometers.

Plane-parallel optics are transparent components with parallel faces, or optical systems with two or more parallel surfaces. Measuring plane-parallel optics with a laser interferometer can be challenging, as the parallel surfaces all contribute interference fringes, making measurement extremely difficult or impossible.

The SIS module provides a second source that excludes all but the surface of interest, making it straightforward to measure flat, transparent optics with physical thickness as small as 150 microns. In a single setup both the front and back surfaces of an optic can be measured, without repositioning. Transmitted wavefront error and homogeneity can then be obtained from a combination of measurements. Optical thickness can also be determined, using a precision linear stage with a position indicator.

The adjustable path match mechanism provides additional flexibility, letting the operator dial in any surface that is 88 to 112 millimeters in front of the aperture.

When the SIS module is installed the system can be used with either source. For example, you can use the SIS to measure the flat side of a plano-convex optic, then switch to the internal source and add a reference sphere to measure the spherical side.

Physical Specifications

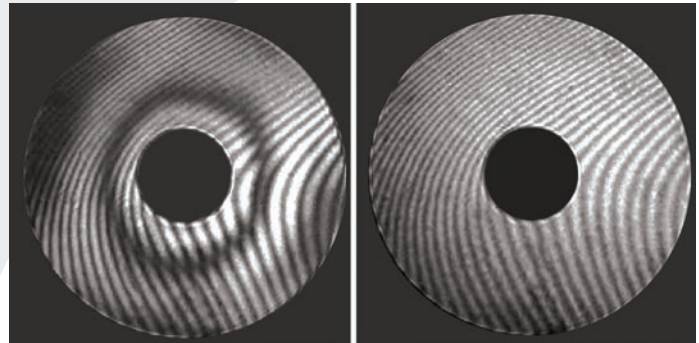
Optical Configuration	Fiber coupled source
Compatible AccuFiz Models	4 & 6 in (100 & 150 mm) visible wavelength models
Source	635-640 nm diode
Physical Envelope	17.8 x 38.1 x 12.1 cm (7.0 x 15 x 4.75 in)
Weight	<3.9 kg (8.5 lbs)
Power Consumption	< 24 Watts
Temperature Range	Operational: 16–27° C (60–80° F), non-condensing Storage: -1–38° C (30–100° F), non-condensing

Performance

Output Power	1 – 3 mW
Coherence length	FWHM 100-300 μ m
Sample Reflectivity	1 to 100% (attenuation required)

Warranty

One year, limited, standard; extendable



With Standard Source

With Surface Isolation Source



AccuFiz Fizeau Interferometer
with Surface Isolation Source



Surface Isolation Source

All specifications subject to change without notice. AccuFiz is a trademark of 4D Technology Corporation. 12.16.16 © 4D Technology Corporation.