PRODUCT SPECIFICATIONS

ASI◆550

QED TECHNOLOGIES

Aspheric Stitching Interferometer with QIS

QED's Aspheric Stitching Interferometer (ASI) expands capabilities in optics metrology with more accurate measurements of aspheres and freeforms, without the need for costly null-optics. It delivers high-quality data with higher resolution, reduced retrace error, and the ability to handle high fringe densities and shorter radii by leveraging stitching with QED's Interferometer for Stitching (QIS).

MADE WITH QED SSI

The Stitching Advantage

- A larger field of view enables you to see more of the surface.
- Higher lateral frequency content provides a more detailed picture of the surface.
- The QIS improves accuracy by automatically calibrating systematic instrument errors.
- Enables asphere and freeform measurement capability without null optics.

QED Interferometer for Stitching

QED's QIS is the first interferometer specifically designed for stitching. It incorporates hardware and software developed to enhance the performance of QED's metrology products. The proprietary QIS coherent imaging system allows users to obtain measurements with higher fringe densities and greater contrast while reducing common errors such as retrace and magnification errors.

Customizeable Platform

The ASI offers multiple configurations to meet technician needs and expand the range of measurable optics. The QED ASI enables the measurement of a wide range of high departure optics with diameters from 300 mm to 550 mm due to the stitching capabilities of the QIS. With advanced software, such as MES Connect for ASI, you can monitor the machine status in real time through OPC UA. The revamped scratchpad interface provides a more seamless user experience.

QED METROLOGY

For more information, visit: qedtech.com

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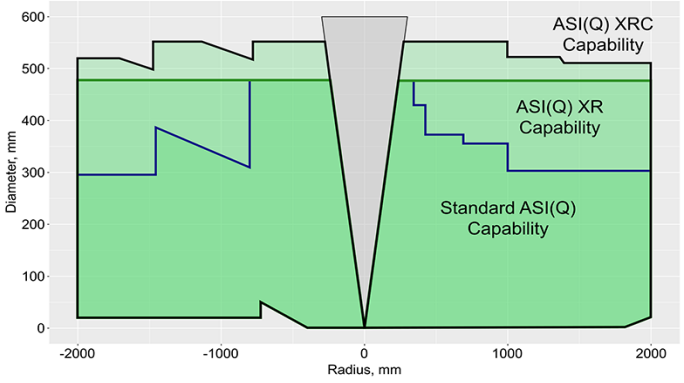
Product Specifications

header left	title right description
Machine Footprint	53” width x 80” depth (1.34 m width x 1.85 m depth)
Machine height installed	107.5” height (2.73 m height)
Total machine weight	4019 lbs. (1823 kg)
Measurement method	Subaperture Stitching Interferometry (SSI)
Machine type	6-axis, automated motion control platform
Interferometer type	QIS (QED Interferometer for stitching)
Part Fixing	25mm diameter hydro-expansion chuck with variable vaccum feed-through (0 to -40KPa), part holder included
Z-Axis travel	820mm
Test Beam Diameter	6 inches (152mm)
Orientation	Downward looking
Software	QED.NET control and analysis software

Technical Capabilities

Materials	Optical glasses, crystals, metals, ceramics, plastics
Surface finishes	Specular
Part reflectivity	1%-100% (attenuation filter required)
Part Geometries	Plano, spherical, aspheric, freeform Concave or convex up to full hemisphere (depending on transmission sphere availability)
Max aspheric departure	≤ 1000 waves (0.6 mm) typical, from best-fit-sphere (≤ 4000 waves (2.5 mm) departure from vertex sphere)
Max freeform departure	≤ 1600 waves (1 mm) typical, from best-fit-sphere
Measurements performed	Form deviation from nominal prescription Radius of curvature (with accessible cats-eye) Stitching mismatch map Reference wave error



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