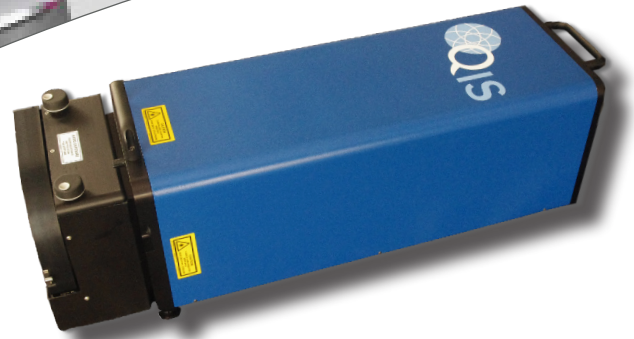


QIS / QED Interferometer for Stitching

PRODUCT BULLETIN



QED Interferometer for Stitching (QIS)

QIS is the first interferometer specifically designed for stitching. QIS brings more capability than ever to QED's metrology systems.

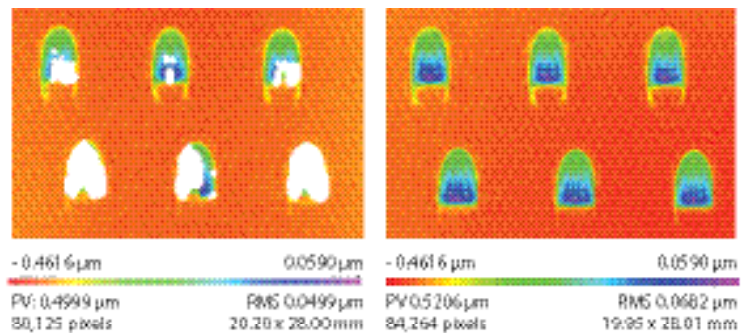
QED's QIS incorporates hardware and software features designed to enhance the performance of QED's metrology products. The proprietary QIS coherent imaging system allows the user to obtain measurements with higher fringe densities and greater contrast. The advanced optical design of QIS reduces common errors, such as retrace and magnification errors. In addition, the greater focus travel provided by QIS allows for the measurement of parts with shorter radii than possible with a general purpose interferometer. QIS was also designed using the same software platform, QED.NET, as QED's Q-flex™ MRF™ systems, which enables seamless communications between systems. The new 1920 x 1920 pixel, high-resolution camera allows for improved spot measurement capability. This means that you can more accurately characterize the MRF removal function, enabling you to make better manufacturing process decisions and achieve convergence faster and with more accuracy.

These features result in ease of use, efficient processing, increased accuracy and expanded capabilities. QIS is available on the ASI™(Q) platform, or as a field upgrade to existing ASI, SSI-A and SSI platforms.

Measure More, Polish Better.

- Higher fringe density
- Higher fringe contrast
- More slope measurement
- No pixel scale errors
- Greater focus travel
- Integrated software platform

QIS for MRF Spot Metrology



Improved spot measurement with new **high resolution** camera.

QIS is the interferometer designed, engineered and built by QED Technologies. It is optimized for stitching and gives customers the ability to measure more parts, with improved accuracy, speed and ease of use.

Designed, Engineered & Built by QED



Specifically designed for stitching, the QIS is only available for use with QED'S metrology platforms.

The Stitching Advantage

Stitching technology has four major advantages over standard interferometry:

- Larger field of view—you can see “more” of the surface
- Higher lateral spatial frequencies—you can see a better picture of the surface
- Improved accuracy—you can feel confident in the quality of your results because the unit automatically calibrates systematic instrument errors
- Aspheric measurements—you can measure aspheres without null lenses

The “Q” Advantage

QED’s ASI(Q) metrology system is powered by QIS, the QED interferometer for stitching that is completely designed, engineered and built by QED. Combined with robust QED.NET software, you have the advantage of a metrology powerhouse that:

- Is optimized for stitching
- Can measure more parts
- Lets you say “yes” to more complex projects
- Enables you to better qualify MRF removal function

QED innovation and ingenuity gives you the “Q” advantage and brings new, expanded capabilities and versatility to your QED metrology systems. QIS is available on the ASI(Q) platform, or as a field upgrade to existing ASI, SSI-Aand SSI platforms.

QIS system Overview*

Interferometer Type	Phase shifting Fizeau interferometer optimized for stitching
Measurement Capability	Metrology of optical surface figure. Supports measurement of high slope errors, short radius surfaces, transmitted wavefront measurements. Measures high fringe density with high contrast. Reduced retrace error. Optimized for stitching.
Test Beam Diameter	6 inches (152 mm)
Part reflectivity	1% - 100% (attenuation filter required)
Laser Source **	Frequency stabilized HeNe
Laser Wavelength	633 nm
Coherence Length	≥ 100 m
Camera Resolution	1920 x 1920 pixels
Camera Frame Rate	40 FPS
Acquisition Time	≤ 300 ms
Pupil Focus Range	±10 m
Magnification	1x, fixed, digital zoom included
Fringe Resolution	~ 800 fringes
Alignment System	Simultaneously viewable alignment and fringe screens
Alignment FOV	±2 degrees
Reference Optics	Standard bayonet mounted transmission elements
Software	QED.NET control and analysis software Includes .dat file export / import capability.
Physical Envelope (LWH)	36.3 x 12.1 x 12.1 in. (90.7 x 30.3 x 30.3 cm)
Weight	101 lbs. (46kg)

* Specifications are subject to change without notice.

**Laser Product Safety Rating is Class I

Additional information and Equipment

Reference the ASI(Q) document MKT1051 for additional information.



Get in touch

We would love to hear from you! For more information, please visit us at www.qedmrf.com or contact us directly.

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