

QEPVSI-b Measurement System



- A complete, tested solution for EQE measurement and characterization
- Accurate and repeatable data using an industry standard lock-in amplifier to exclude background noise
- TracQ™ Basic software for simple operation and fast data collection
- Easily adjustable spot size to accommodate various sample sizes
- Compliant to ASTM E1021-12 standard and test methods

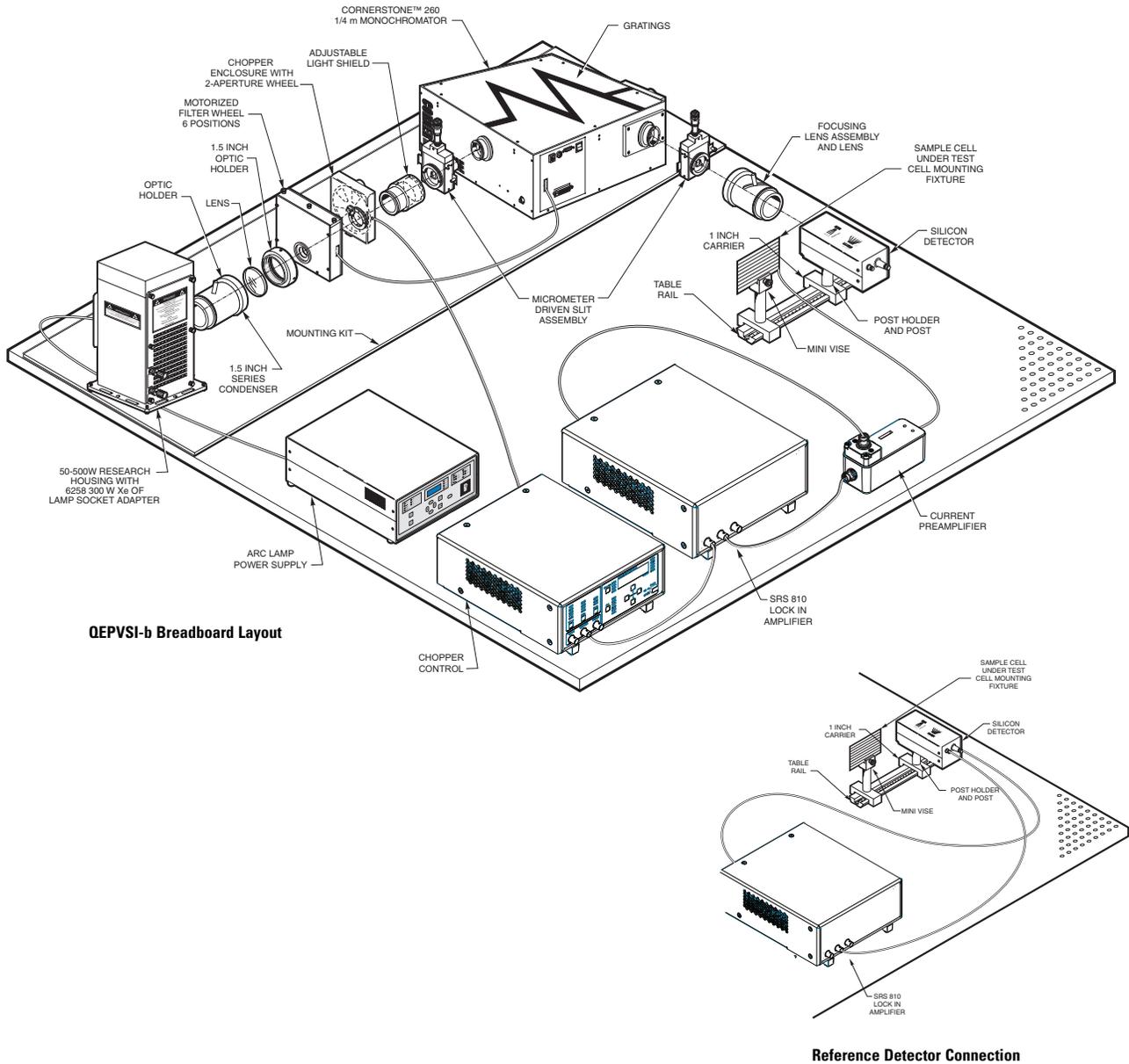
Oriel® Instruments QEPVSI-b is a preconfigured, yet flexible solution for measuring Quantum Efficiency (QE), also known as Incident Photon to Charge Carrier Efficiency (IPCE). Industry leading components ensure accuracy and repeatability. Oriel's TracQ™ Basic software provides instrument setup, control, data collection, and export.

The QEPVSI-b measurement system combines all the components needed for free space QE measurement including:

- A 300W Xenon Light Source - The light source is coupled to a monochromator to produce the scanning light.
- Automated Filter Wheel and Order Sorting Filters - An automated filter wheel, which is easily configured in TracQ™ Basic, and suitable order sorting filters are included.
- A Monochromator - The monochromator provides excellent throughput and resolution, and is controlled via USB connection through TracQ™ Basic software.
- Optics and Optomechanical Components - Basic focusing optics and optomechanical components are provided for controlling the output spot size.
- A Lock-in Amplifier and Optical Chopper - A lock-in amplifier is utilized for the sensitive optical power and current measurements. A chopper effectively blocks ambient light that can adversely affect QE results.
- Si Reference Detector - A known detector is provided for convenient on-site system calibration

The complete system is optically aligned, tested, and calibrated to simplify set up and data collection.

QEPVSI-b Measurement System



QEPVSI-b Breadboard Layout

Reference Detector Connection



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