

PPMS[®] Optix

PPMS Optix is a flexible, modular optical platform that provides “turn-key” measurements and custom built experiments. It is the ideal platform for combining photonics, quantum electronics, optics with electro-transport, and magneto-optic materials characterization measurements at cryogenic temperatures and in magnetic fields of ± 16 T. The optical breadboard allows a wide range of configurable experimental space seamlessly integrated onto the PPMS. Various light sources, opto-mechanical and imaging components can be easily mounted and coupled to the cryogenic and magnetic field environment of the sample space. By integrating the Optix option onto a PPMS system, users can perform multiple measurements in a single sweep by combining Quantum Design’s existing measurement options with new optical possibilities.

Optional laser light sources (such as Raman or a Xenon Arc lamp) are available for providing the necessary source for excitation beams for optical and spectroscopy experiments. An integrated compact imaging spectrograph and CCD camera controlled directly from the MultiVu system software is also available to automatically collect spectra and sample images as a function of temperature and magnetic field.



Figure 1: VersaLab with Optix breadboard

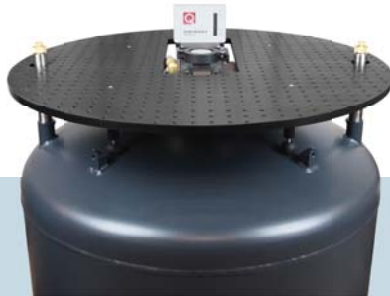


Figure 2: High capacity dewar for PPMS with Optix breadboard.

Optical Breadboard

- Black anodized aluminum 0.5” thick
- 1 inch grid of 1/4” – 20 mounting holes (Imperial or metric board options)

Applications

- Spectroscopy
- Electrical, Thermal and Magnetometry Measurements
- High Pressure Measurements
- Fiber optics measurements
- Free optics studies

Compatible Measurement Options

- Optical Multi-Function Probe
- Imaging Spectrograph
- Raman Spectroscopy
- Magneto-Optic
- FMR Spectroscopy
- VSM (standard, large bore and oven up to 1000 K available)
- Electrical Transport Option
- Heat Capacity
- EOP/MFP
- DC Resistivity
- Horizontal Sample Rotator
- Torque Magnetometry
- Thermal Transport Option
- ACMS II (AC Susceptibility)
- High Pressure

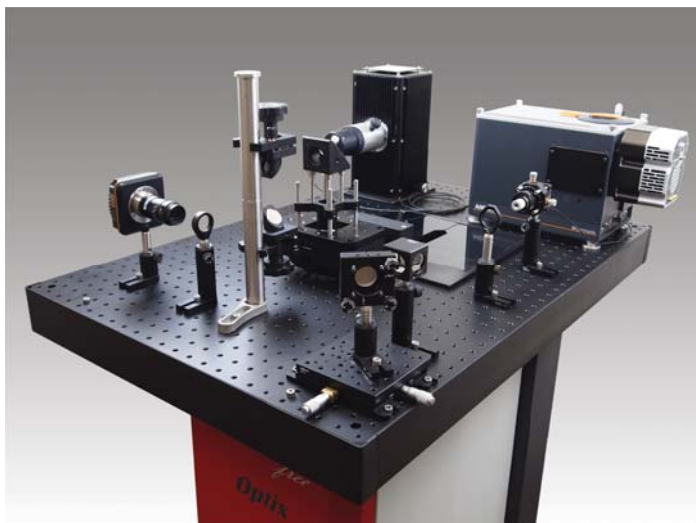


Figure 3: PPMS Optix option on a VersaLab™ displaying its capability to set up external optical experiments in order to direct a laser beam down an Optical Multi-Function Probe (OMFP).



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