



# Solutions for Educational Labs and University-Based Researchers

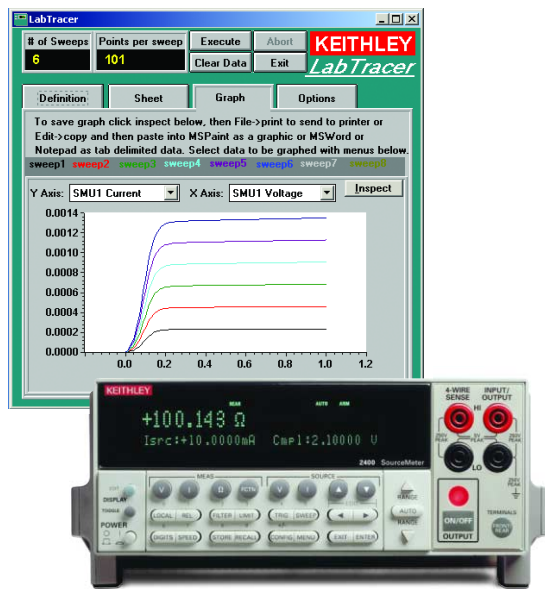
**KEITHLEY**

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# For solutions for teaching and university-based research labs, look to the leader in sensitive

For more than five decades, Keithley Instruments has provided state-of-the-art measurement solutions to universities around the world. Leading scientists use Keithley solutions for measuring voltage, current, resistance, and temperature. Our cost-effective instruments, data acquisition boards, and software tools give students hands-on experience with industry grade solutions. Furthermore, our products are backed by outstanding quality and technical support.



The **Model 2400 SourceMeter**<sup>®</sup> instrument is a compact, single-channel solution that provides tightly coupled precision voltage and current source and measure capabilities. To use the Model 2400 for I-V characterization and curve tracing, download a copy of our free LabTracer software package and the application note titled "Device Characterization Techniques Using Keithley SourceMeter Instruments and LabTracer Software" from [www.keithley.com](http://www.keithley.com).



The 6½-digit **Model 2000 DMM** lets students gain experience in using industry-grade instrumentation while it gives researchers the high accuracy their applications demand.



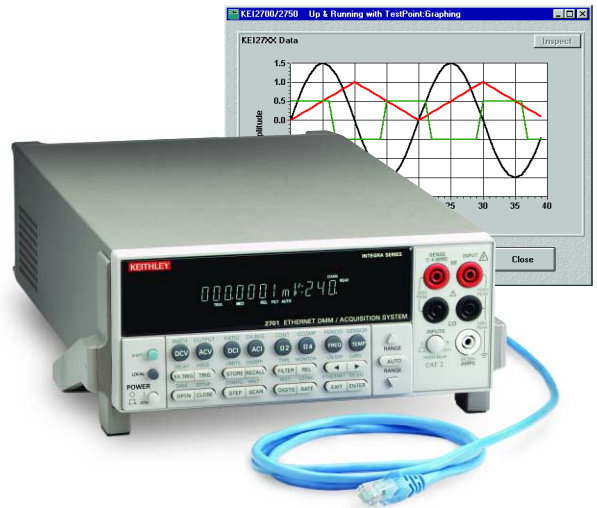
The **Model 6485 Picoammeter** can measure currents as low as 20fA with 10fA resolution. Less than 200 $\mu$ V voltage burden on the lowest ranges ensures high measurement accuracy, even in circuits with very low source voltages. To create an economical test setup for optics labs, free software is available to drive a laser with a Model 2400 while measuring detector current with the Model 6485.



The **Model 6487** adds a 500V source to the Model 6485's capabilities for voltage sweeping and Alternating Voltage Resistance measurements.



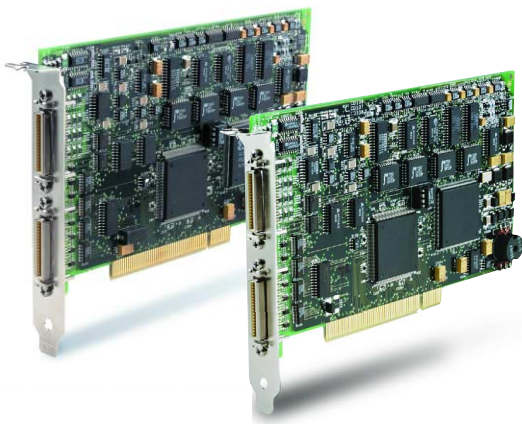
# test and measurement.



Our **Integra Series DMM/Data Acquisition Systems** combine digital multimeter and data acquisition functions into one robust, easy-to-use system. Choose from our Series 7700 plug-in modules to tailor the system for specific lab exercises. The free start-up software included provides basic data logging capabilities to get “up and running” in minutes. The **Model 2701** offers Ethernet connectivity for studying remote monitoring and control techniques.



The **Model 4200-SCS Semiconductor Characterization System** has revolutionized lab grade device characterization. The point-and-click interface simplifies the process of taking data and analyzing results. The 4200-SCS performs device characterization, real-time plotting, and analysis with high precision and sub-femtoamp resolution. The unique browser-style Project Navigator organizes tests by device type, allows access to multiple tests, and provides test sequencing.



Our popular line of **KPCI data acquisition boards** allow fast, easy setup for a broad range of student lab applications. The DriverLINX™ software included provides a simple acquisition control interface.



The **Model 6517A Electrometer/Voltage Source** makes extremely low current (down to 100aA) and high resistance (up to  $10^{17} \Omega$ ) measurements possible. It offers a built-in  $\pm 1\text{kV}$  voltage source, as well as temperature and humidity sensors. Our  $6\frac{1}{2}$ -digit **Model 6514 Programmable Electrometer** is designed for fast, yet precise measurements of low current and voltage from high impedance sources, charges, or resistances. Due to their sensitivity, these electrometers are popular in optics and materials research labs.

The **Model 6430 Sub-Femtoamp Remote SourceMeter** has

sensitivity, noise, and input resistance specifications superior to electrometers. On its 1pA range, it can measure currents with just 0.4fA p-p noise for research applications like electrically characterizing polymers and SETs.

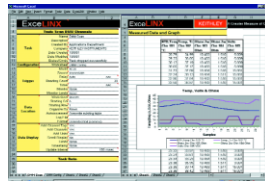


Measuring nanovolts doesn't have to mean putting up with long integration periods. The **Model 2182 Nanovoltmeter** makes low

voltage measurements fast and with low noise. A built-in Delta Mode can coordinate measurements with a reversing current source (like the one in the Model 2400) to create an economical system for precision measurements of low resistance materials or devices.



**ExceLINX** is an economical, easy-to-use add-in utility for Microsoft Excel. No programming is required—students can configure channels, set parameters, and get measurements into Excel with just a few mouse clicks.



Visit [www.keithley.com](http://www.keithley.com) for free, immediate access to more information on any of the products described in this brochure. While on our site, browse our library of example programs and software drivers, download free software, or request a copy of one of our handbooks.



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### A Greater Measure of Confidence

With more than a half-century of experience in helping people make demanding measurements, Keithley can offer its customers a greater measure of testing confidence. For more information, give us a call or visit our website. For applications assistance, call our toll-free hotline at **1-888-KEITHLEY (534-8453)** from 8:00 am to 8:00 pm ET (U.S. only). For assistance beyond these hours, send our Applications Engineering Department a facsimile (440-248-6168) or an e-mail message ([info@keithley.com](mailto:info@keithley.com)) for a prompt response.

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