



COMMERCIAL LABORATORY SERVICES FOR SOLAR

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NEW COMMERCIAL LABORATORY SERVICE OFFERINGS

At UL, we understand the growing pressure companies in the solar industry face to shorten product development cycles and increase speed to market. This is added to the already difficult task of managing brand image and minimizing reputational risks.

Outsourcing testing to a trusted partner can help decrease cost, streamline operations and succeed in the face of today's business challenges. UL now offers commercial laboratory services for the solar industry designed to meet the needs of laboratory directors and quality/compliance managers who are responsible for testing laboratories used for research, new product development, product performance, reliability or quality evaluations. We offer:



- Electrical, environmental, chemical and mechanical testing
- Laboratory equipment calibration
- Laboratory equipment automation, development and leasing
- Laboratory advisory service and laboratory training
- Performance based services (PAN file creation & IAM testing)

By choosing UL as your partner, you'll get access to a team that surpasses all others in the industry.

WHAT SETS UL APART?

- Globally recognized market leader in testing, inspection and certification
- Long-standing relationships with manufacturers, retailers and other stakeholders across the supply chain
- Worldwide network of 131 testing facilities located in 39 countries
- State-of-the-art testing equipment supports a wide range of product categories
- Thousands of experts who average nearly 10 years of experience



ELECTRICAL, ENVIRONMENTAL AND MECHANICAL TESTING

UL employs an exacting testing process driven by more than a century of trusted technical knowledge. Our experts partner with you to help ensure that products meet proprietary specifications as well as the expectations of retailers and consumers.

We can conduct standardized testing, or we can custom-tailor testing to meet your needs in order to assess:

- Performance
- Reliability
- Quality
- R&D needs

Electrical Testing

Learn the limits of your products in certain environments; help ensure they meet stringent regulatory requirements and standards; and address market demand for quality, reliability and performance.

Environmental Testing

When designing a product, it is difficult to determine how that product may perform in the real world. UL's environmental testing measures product performance under specific environmental conditions, such as humidity or extreme temperatures. The electrical performance and reliability of products under set conditions is measured, and we provide a report of the findings to help you reduce your own costs for maintaining the required laboratory space and equipment.

Mechanical Testing

Determine whether your product's mechanical strength will function as intended for a given period of time under a particular set of conditions. Tests include vibration, shock, freefall drop, compression, and impact hammer assessments.

PERFORMANCE BASED TESTING

Demonstrate PV module product performance, as it relates to PAN file creation and Incident Angle Modifier (IAM) testing, by working with UL to obtain measurable performance data. PAN files describe requirements for evaluating PV module performance in terms of power (watts) rating over a range of irradiances and temperatures which serves as the basis for PV system performance forecasting models. IAM testing provides the variance in output performance based on the sun's position in relation to the PV panel.



LABORATORY EQUIPMENT CALIBRATION

It is important for manufacturers to have confidence in the accuracy of inspection, measuring and test results. Using calibrated Inspection, Measuring, and Test Equipment (IMTE) is critical in the system of controls used to produce quality products and trusted results.

UL's position as the trusted leader in product testing allows us to provide the guidance and expertise necessary to ensure your equipment is accurately calibrated to national, traceable standards.

- Temperature and humidity
- AC/DC voltage
- AC/DC current
- Wattage meter
- Resistance
- Time
- Dimension
- Weight
- Pressure

LABORATORY EQUIPMENT AUTOMATION, DEVELOPMENT AND LEASING

Work with UL experts to develop a project management plan for the necessary design, fabrication, programming, installation, set-up and operation of laboratory equipment. Or consider an equipment lease to gain access to specialty equipment that meets your specific testing needs.

LABORATORY ADVISORY AND TRAINING

Learn best practices for building a high-functioning laboratory environment that is set up properly for various ambient and environmental conditions.

Safety skills are crucial around any laboratory. Utilize UL's technical experts to train laboratory staff who are working in a testing environment to address topics such as equipment safety, test preparation, troubleshooting common problems, implementing best practices in order to achieve the most accurate test results, and more.



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