

# SSL Testing Capabilities at LRC

The Lighting Research Center has expanded its in-house testing capabilities to test solid-state lighting (SSL) luminaires, integral lamps, and LED components and luminaires. The LRC's testing laboratory is the only university-based laboratory accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) program of the National Institute of Standards and Technology (NIST) for energy-efficient lighting product testing (NVLAP lab code: 200480-0).



## NVLAP Accreditation for SSL Testing

NVLAP provides third-party accreditation to testing and calibration laboratories and accepts applications for SSL test methods as part of the Energy-Efficient Lighting Products laboratory accreditation program. The scope of the LRC's accredited SSL testing includes:

- IES LM-79:2008 (Sec. 12): Solid State Lighting Luminaires – Color Characteristic Measurements
- IES LM-79:2008 (Sec. 9): Solid State Lighting Luminaires – Total Flux Measurements (Luminous Efficacy)
- IES LM-80:2008: Solid State Lighting Luminaires – Lumen Maintenance

In addition to accredited testing, in cases where a standard test method does not exist, the LRC has capabilities to develop individualized test methods.



## Specialized Equipment and Meters

- **Thermal characterization equipment:** thermal chambers, thermal imager, and junction temperature measurement instrumentation
- **Photometric characterization equipment:** integrating spheres, spectrometers, goniophotometers, and an in-house developed luminous flux meter
- **Electrical characterization equipment:** multimeters, power analyzers, and oscilloscopes
- **Power equipment:** Programmable ac/dc power supplies and power conditioners
- **Off-grid lighting product characterization instrumentation:** PV analyzer, battery analyzers, charge controller, and autonomous run-time testing equipment

The LRC's measurement capabilities include electrical, thermal, photometric, and colorimetric characteristics, as well as ultraviolet (UV) and infrared (IR) radiations.