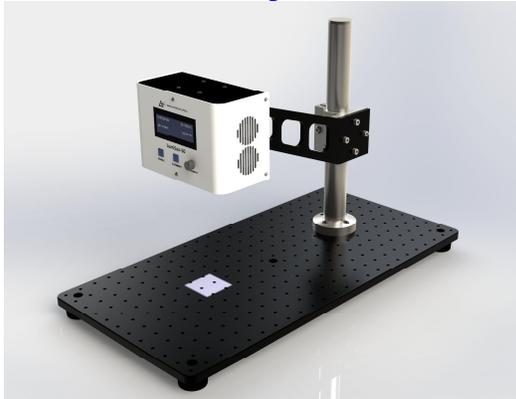


FOR IMMEDIATE RELEASE:

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Class AAA LED Solar Simulator Supports Testing and Development of Photovoltaic Devices

Woburn, MA, August 15, 2016 Innovations in Optics, Inc. introduces the LumiSun-50 high power, multi-wavelength LED Solar Simulator that meets Class AAA solar simulator requirements of IEC 60904-9 for spectral match, uniformity of irradiance, and temporal stability. Primary applications for the LumiSun-50 are terrestrial photovoltaic testing and PV research. A discount price is available for academic and research institutes in support of their efforts to improve global sustainability.

The benefits of LED based solar simulators for PV testing as compared to traditional xenon or metal-halide arc lamp based sources are numerous and significant. LEDs are more energy efficient, smaller in size and operate with consistent emission for very long lifetimes leading to low maintenance and cost of ownership. LEDs are instant-on where arc lamps need minutes to warm up. LED solar simulators can be used in multiple modes; continuous, flashed, or pulsed. LEDs are more environmentally friendly by being mercury-free, generating no ozone and emitting no harmful UV radiation. LEDs are a cool source compared to arc lamps, largely from having no infrared emission. Reduced heat simplifies system cooling mechanisms and preserves materials under irradiation.

The LumiSun-50 achieves a spatially uniform illumination field from a chip-on-board (COB), multiple-wavelength LED die array. The field of illumination is 50 x 50 mm at a working distance of 200 mm. The LumiSun-50 includes a driver/controller which individually provides constant current to each die in the COB array. Total irradiance of 1.1 sun units is provided and can be decreased to 0.1 suns. The LED light source of the LumiSun-50 is contained within an air-cooled housing that can rotate the angular beam alignment. Adjustment and setting of the optimum light path working distance is visually facilitated by a converging pair of red dot laser pointers.

Innovations in Optics, Inc. (IOI), founded in 1993 and located near Boston, offers high power LED light sources for science and industry that provide maximum photon delivery, illumination uniformity, and stable optical power. IOI's products offer system-level advantages over lasers and arc lamps in OEM equipment for many applications. LumiBright™ light engines and illumination systems feature patented and patent-pending optics which collect, direct and maximize output efficiency and uniformity. Available LED wavelengths range from UV 365 nm through the near-infrared, including broadband white and multiband options. LumiBright™ system components include thermal management devices and driver/controllers.