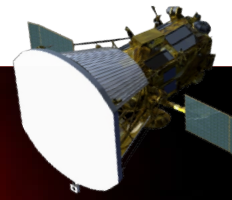


LED Solar Simulator for SmallSat & CubeSat Solar Panels

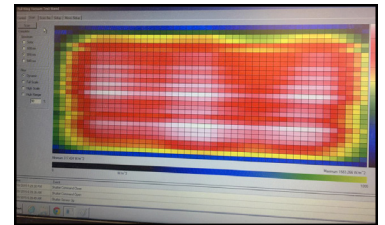
Steady State for Long Continuous Use



SolAero's LED Solar Simulator used in testing of the Parker Solar Probe Satellite Panels

Features & Characteristics

- Functional and scaleable
- Lower optical power required for higher cell currents due to efficient matching of light emission to the band gap of multi-junction cells
- Designed for multi-junction solar cells including advanced 5-junction solar cells
- Customizable wavelength distributions are available
- High degree of uniformity and long term stability
- Very large, uniform illumination areas are possible and customizable
- Intensities up to ~10 suns are available
- Rapid startup: no warmup time required

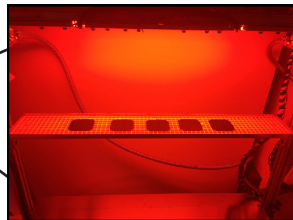


Snapshot of beam scanner output from LARGE (1.2 m²) solar simulator AFTER optimizing the intensity distribution of the LEDs.

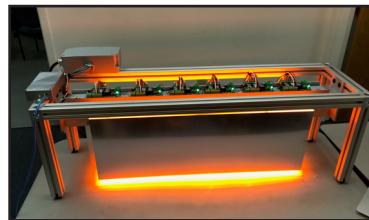
Optional Add-Ons

- A calibrated beam scanner that enables an automated measurement of the optical power uniformity
- Air or water cooled platen to maintain cell/panel temperatures during test
- Integrated vacuum chamber for high vacuum (< 10⁻⁵ torr) testing
- Integrated test automation for cells, strings and panels

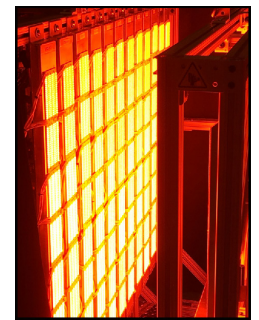
SolAero's LED Solar Simulators



Testing SolAero's High-Efficiency Solar Cells



Custom Built LED Solar Simulator



Large LED Simulator Illuminating Solar Panels