The LumiSun-50 is a high power, multi-wavelength LED solar simulator that meets IEC 60904-9 Class AAA for spectral match, uniformity of irradiance, and temporal stability. Primary applications for the LumiSun-50 are terrestrial photovoltaic testing and PV research.

The LumiSun-50 achieves a spatially uniform illumination field by combining our chip-on-board (COB) LED technology with efficient, non-imaging, homogenizing optics and a precision re-imaging lens system. The field of illumination is 50 x 50 mm at a working distance of 183 mm. The LumiSun-50 includes a driver/controller which individually provides constant current to each die in the COB array.

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.

Features and Benefits:
- IEC Class AAA
- 50 x 50 mm illumination area
- Irradiance levels from 0.1 to 1.1 suns
- Variable beam output direction
- Instant on
- Long LED lifetime
- Low power, low heat
- Mercury and ozone free

Included Components:
- LumiSun-50 LED Solar Simulator
- Driver/controller
- Cables
- Variable height adjustment mount
- Optical breadboard baseplate

Specifications:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar simulator class</td>
<td>AAA</td>
<td>IEC 60904-9 2007</td>
</tr>
<tr>
<td>Illumination area</td>
<td>2 inches x 2 inches (50 mm x 50 mm)</td>
<td>At working distance</td>
</tr>
<tr>
<td>Working distance</td>
<td>183 mm</td>
<td>Beam aperture to test surface</td>
</tr>
<tr>
<td>Total irradiance</td>
<td>1.1 suns</td>
<td>Dimmable to 0.1 suns</td>
</tr>
<tr>
<td>Dimensions</td>
<td>177W x 125H x 92D (mm)</td>
<td>Without mounting hardware</td>
</tr>
<tr>
<td>Weight</td>
<td>2 Kg</td>
<td>Without mounting hardware</td>
</tr>
<tr>
<td>Power input</td>
<td>Universal AC</td>
<td>&lt;200W power consumption</td>
</tr>
<tr>
<td>Lifetime (Hours)</td>
<td>10,000 Hours</td>
<td>Typical</td>
</tr>
</tbody>
</table>
LUMISUN-50 CLASS AAA LED SOLAR SIMULATOR

CLASS A SPECTRAL MATCH

% Total Irradiance

Wavelength (nm)

- Class A Lower Limit
- LumiSun-50
- Class A Upper Limit

DIMENSIONS

VALUES SHOWN ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE

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