TS-SPACESYSTEMS

‘N-Zone’ Solar Simulator

The next geneneration of simulators for multi-junction devices

In 2012 TS-Space Systems™ announced the ‘N-Zone’ solar simulator which builds on the success of the ‘Unisim’ series and is designed for the accurate measurement of solar cells with >4 junctions.

2≤N≤12

We work with many of the leading PV research groups around the world and our aim is to provide research tools to meet their requirements.

The ‘N-Zone’ was developed in response to the problem of accurately measuring multi-junction devices with >4 junctions.

The simulator delivers the same, world leading close-match AM0 and AM1.5 spectrum as our Unisim range but with 2-12 adjustable, fully independent spectral zones.

Quick and simple setup

With the Unisim series we made great progress in improving the ease of usability and maintenance of our simulators. The ‘N-Zone’ continues this trend and is our first fully computer controlled solar simulator.

Zone intensities and optical components can be adjusted, recorded and recalled via a central computer allowing for spectral configurations and calibration settings to be applied and checked at the click of a button.

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Fully independent spectral zones

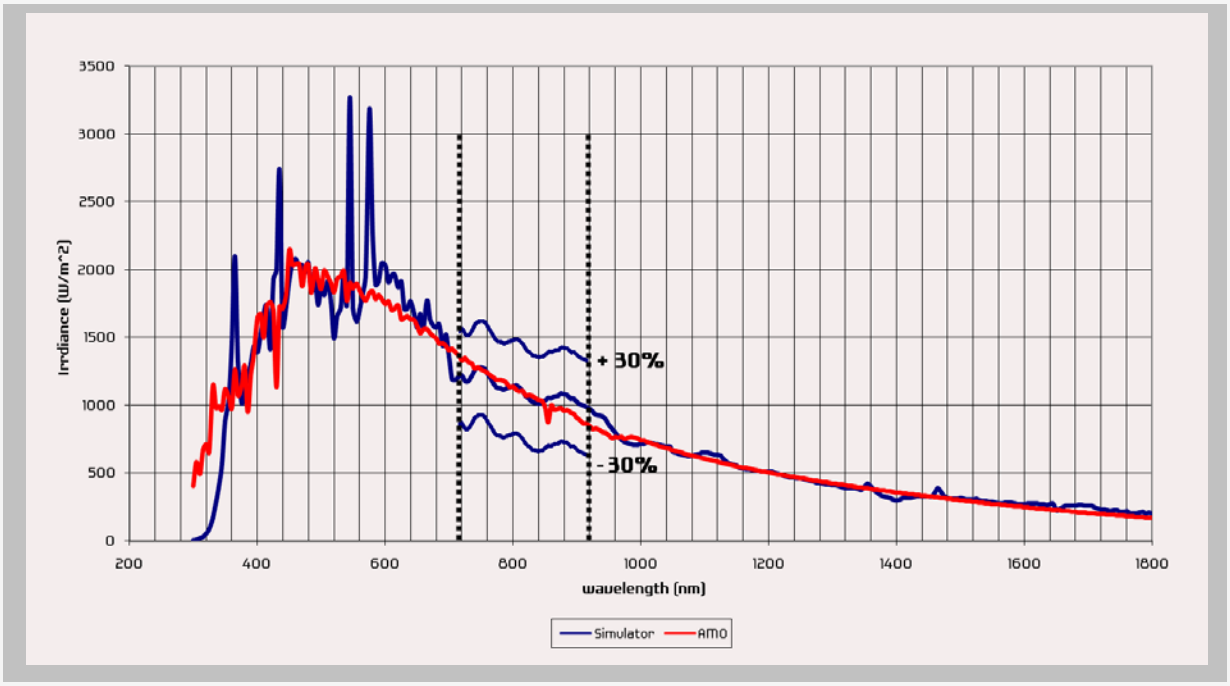
Each zone is independently adjustable. Zones are entirely separate with no impact on other zones, hence no iteration is required during set-up using reference junctions.

Each zone requires only a few minutes to set the intensity. It would take, for example, approximately 20 minutes to set a six-zone instrument.

The independent zones also allow clear demonstration of radiative coupling between junctions which is of increasing interest.

The simulator is fitted with a CCD spectrometer, integrated into the test platform, such that changes to the spectrum can be monitored in real-time and recorded during a measurement session.

Full IV test, specimen blocks and data acquisition systems can be fitted at request.



* Above is a graphical demonstration of adjusting zone 2 of the ‘N-Zone’ simulator. Unlike the Unisim simulator, there is no overlap between spectral zones.