



Nexun™ One

The premium LED Based Sun Simulator

Class A+A+A+ flasher for
IV measurement





AvalonST

Nexun One^{MT} – Master your spectrum

<15%

Spectral Deviation

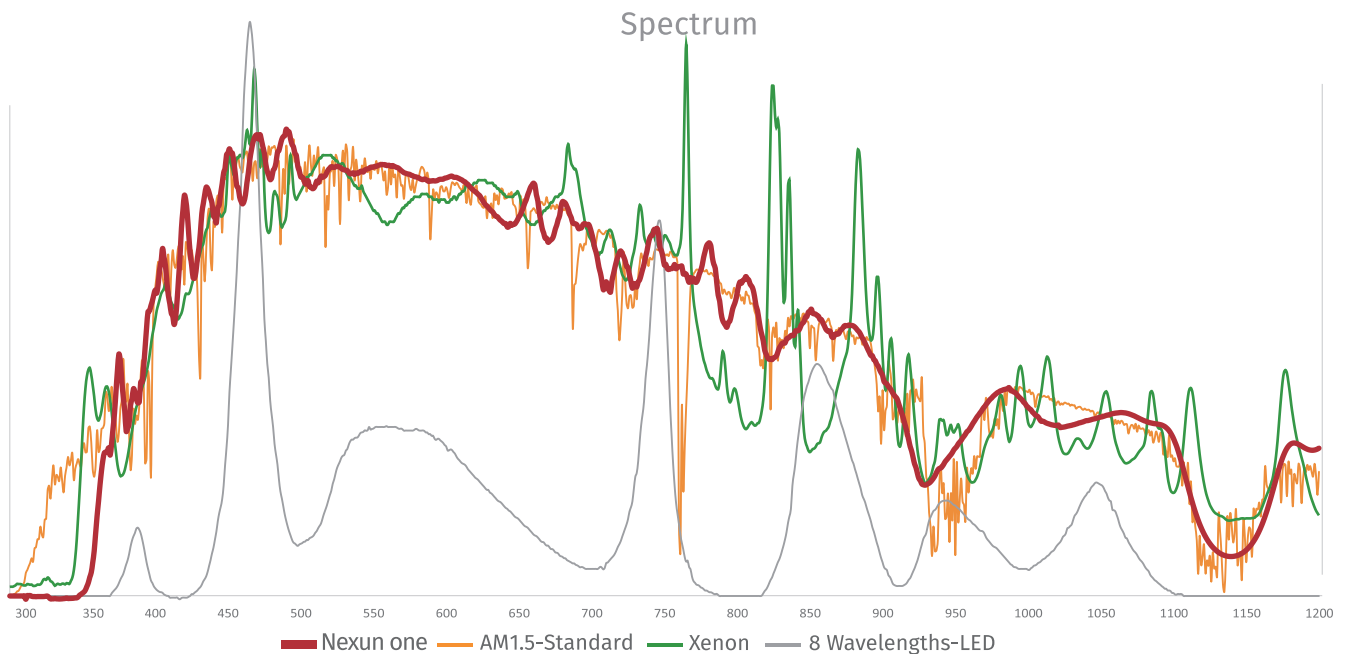
>98%

Spectral Coverage

The Nexun One^{MT} ensures that you meet the highest industry standards. Its spectrum reaches A++ for both IEC60904-9 Ed.2 and Ed.3, with a SPD lower than 15% and SPC higher than 98%. Its spectral deviation is lower than Xenon and traditional LED solar simulators.

Furthermore, you'll have full control of the testing process thanks to a modular spectrum over a flash pulse of 500ms and powerful software that provides fully programmable 1ms steps, which means you can modulate the spectrum within a single flash.

Each wavelength has been meticulously controlled to make an outstanding spectrum to beats the spectral deviation of Xenon over the range 300 to 1200 nm to fulfill the standards.



Nexun One^{MT} – Innovative Thermal Chamber

28

Heating zones
IR sensors

30

Minutes
Time cycle for 15 points

Avalon's thermal chamber enables laboratories to achieve world-leading accuracy and flexibility in their measurements thanks to its innovative design.

28 individually controlled heating zones can be pre-set for higher temperature uniformity control. Each zone has its own thermal regulation and the panel is measured for deviation through contactless IR sensors.

Four to eight PT100 sensors can be attached to the panel to further improve measurement accuracy.

The temperature starts at 15°C and can increase up to 75°C, with a non-uniformity that is better than $\pm 2\%$.

Furthermore, Nexun One^{MT} enables laboratories to save time with fully automated measurement like NMOT matrix characterization based on temperature coefficient measurements.



Nexun One^{MT} – The premium Module Tester

Nexun One^{MT} : Swiss precision – World leading results

Save time in the laboratory and production line with the Nexun One^{MT} premium module tester.

This flatbed compact LED-based hybrid solar simulator delivers twice the throughput of Xenon solar simulators and has the lowest spectral deviation on the market.

A flexible solution that measures most technologies available on the market in a single flash without the need of complex settings.

Designed for both laboratories and solar panel manufacturers, its industry-standard IEC60904-9 classification and typical measurements ensure that the Nexun One^{MT} easily integrates with your existing systems.

A hybrid LED-based system allows full light source control, enabling advanced capabilities that can be measured within a single flash pulse of up to 500ms. These include:

- **Bypass diode checks by uniformity modulation**
- **Multi-level irradiance**
- **Spectral modulation of daylight**
- **Specific junction measurements**
- **Basic spectral response evaluation**

All of this technology comes at a competitive price, while our LED light source lifetime guarantee of 36 million flashes gives you peace of mind.

500

Millisecond
Pulse duration

>36

Millions
Flash guaranteed -
LED



Nexun One^{MT} – Key technical specs

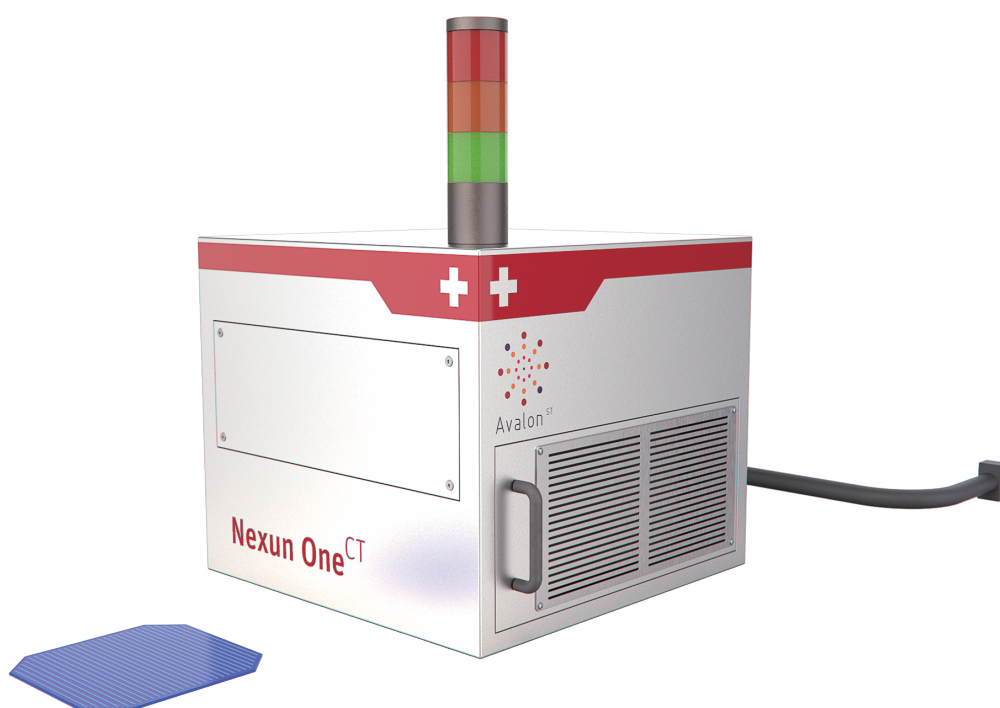
- Enjoy 32 independent channels to control the full spectrum within the range of 300 to 1200 nm.
- Thermal management of the LED ensures a stable spectrum and intensity without drift.
- The non-uniformity achieves better than class A+ over the full area 2200 x 1200 mm.
- The repeatability (2-sigma) reaches $\pm 0.05\%$ for Current, Voltage & Irradiance. • Non-linearity is below $\pm 0.02\%$ FS.



Nexun One^{CT} – Optimise your production, Today

The Nexun One^{CT} has been designed to provide solar cell manufacturers with rapid and accurate testing on the production line. It helps to maintain tight production schedules by measuring all c-Si cells technologies in a single flash, providing cycle and communication in less than a second.

Its LED light source has a lifetime of up to 120,000,000 flashes, with the first 50,000,000 covered by our guarantee.



Nexun One^{CT} – Key technical specs

- Enjoy 32 independent channels to control the full spectrum within the range of 300 to 1200 nm.
- Up to 0.5 seconds cycle time.
- Thermal management of the LED ensures a stable spectrum and intensity without drift.
- The non-uniformity achieves better than class A+ over the full test area.
- 120 million flashes LED lifetime.



AvalonST

Software - Industry's Best

AvalonST strong background in software allows the company to create advanced functionalities you've dreamed of for a long time.

- Customizable interface.
- Modular programming allows clients to develop their own functionalities within the software.
- Full data management for laboratories handling client, projects.
- Automated statistical analysis.
- Automated report generation.
- Full measurement traceability.
- Automated and customizable calibration process using reference panel or WPVS standard.
- Custom development for your needs possible in short time.

AvalonST – Vision

The spirit of AvalonST is to bring novel systems ideas to the market at a competitive price to settle the lowest uncertainty and higher precision in the market.

Your partner for a new era

AvalonST is a software and electronics company that develops premium metrology equipment for the solar industry.

Our effective combination of innovative technology and industry-leading customer service means you'll achieve industry-leading accuracy in your measurements at a competitive price. Our founding members have a combined experience of over 30 years working in the US, European and Asian markets and have managed projects at leading companies such as MeyerBurger (Pasan) and TÜV Rheinland.

As a young and dynamic new company, we launched our latest generation technology product, the Nexun One^{MT} LED-hybrid solar simulator. In addition, we are proud to announce our Nexun One^{CT} for cell manufacturers.

As the solar industry enters a new era, make sure AvalonST your partner for precise and accurate measurements for cell and module.

AvalonST, next generation of PV metrology systems.

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