MBJ Sun Simulator
Inline

solutions to meet the needs

Production without light source change

The MBJ sun simulator inline is made for a 100 % testing of modules in the production line.

With up to 22 different LED types an almost perfect controllable 1.5 AM spectrum is achieved which is as at least as good as a Xenon spectrum.

Additional benefits are the long flash duration and a light source with no spectral shift over its live time ensuring a high and stable measurement accuracy.

- > 10 year LED lifetime
- Newest LED technology
- Outstanding spectrum
- All module sizes
- IEC 60904-9 Ed.3 certified
- Made in Germany

Technical specification	Standard spectrum	Advanced spectrum
Spectrum / Light source	Class A+ IEC 60904-9 Ed.3 LED with UV and IR extended spectrum	
No. of LED types	13	22
Spectral coverage (SPC)	> 94 %	> 98 %
Spectral deviation (SPD)	< 44 %	< 24 %
Total irradiance	200 - 1200 W/m^2	
Non uniformity	< ± 1 % (Class A+ IEC 60904-9 Ed.3 < ± 1 %)	
Long term instability (LTI)	< ± 0.5 % (Class A+ IEC 60904-9 Ed.3 < ± 1 %)	
Accuracy of Pmax	±1 % based on reference module usage	
Repeatability Pmax	< 0.1 %	
Flash pulse duration	200 ms at 1000 W/m^2 / 100 ms at 1200 W/m^2	
Load element	Passive electronic load	
Measurement options	Forward and backward sweep, high capacity measurement mode	
Life time of LED's	> 12 million flashes at 1000 W/m2	

Go to product:

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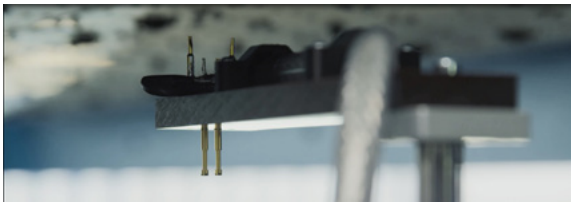
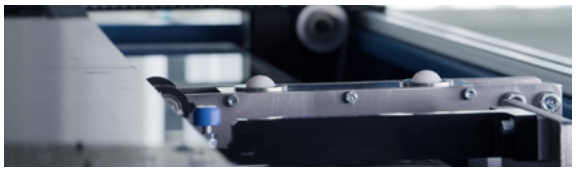
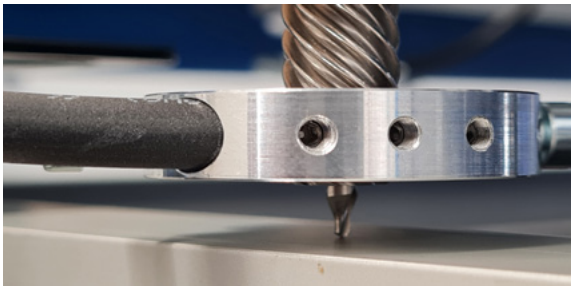
Fully automatic LED sun simulator

The MBJ LED Sun Simulator is designed for fully automatic operation. An integrated transport system and automatic contacting unit are standard resulting in a cycle time of less than 20 seconds per module. Functions such as the automatic recognition of the reference module and the interface to the upstream and downstream process are also included. For vertical communication an MES interface is available.

The latest generation of the sun simulator is certified according to IEC 60904-9 Ed.3 as triple A+. With 22 different LED types, a spectral coverage of more than 98 % of the solar spectrum is achieved. The expansion into the UV and the IR range allows precise measurement of a wide variety of module types, including thin-film, PERC and HJT based modules.







An additional support unit for glass-glass modules offers quick and reliable testing without bending the modules.

The hipot and grounding test for framed modules can optionally be integrated into the sun simulator. In combination with an MBJ electroluminescence system the most important test tasks can also be summarized in the compact MBJ Backend Solution.

We cover the requirements for different module sizes, based on the used cell sizes from M2 - G12, with our modular system structure.

Four size configurations are available as standard, please contact us if your the module sizes differ.

MBJ Sun Simulator	Standard	WIDE	ECO	MAX
Max. module size	1060 x 2250 mm	1400 x 2250 mm	1240 x 2400 mm	1400 x 2750 mm
Max. active area (A+)	1040 x 2160 mm	1360 x 2160 mm	1200 x 2320 mm	1360 x 2640 mm

Available options	Support for frameless modules, MES interface, Hipot and grounding test, operator desk with PC and label printer, light tower, UPS, additional LED unit for bi-facial modules

MBJ Solutions GmbH
Jochim-Klindt-Straße 7
DE-22926 Ahrensburg

+49 4102 778 90 10
info@mbj-solutions.com
www.mbj-solutions.com