

# MBJ Mobile Lab 5.0

## On-site testing of solar modules



### All in one mobile solution

The Mobile Lab provides most of the measurement and test methods needed for an objective analysis of solar modules in the field.

With this powerful device insufficient module power output as well as hidden defects like micro cracks, inactive areas, hot spots and other quality issues can be identified quickly and reliable on-site.

- I/V-curve, Hi-Res EL & Hipot
- Most compact design
- Great evaluation SW
- Easy to use
- Made in Germany



Sun Simulator	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 <sup>2</sup>	
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	± 0.2 % (absolute)	
Flash pulse duration	200 ms at 1000 W/m <sup>2</sup> / 100ms at 1200 W/m <sup>2</sup>	
Life time of LED's	> 12 million flashes at 1000 W/m <sup>2</sup>	

Electroluminescence	Standard	ECO	MAX
Camera type	NIR CMOS cameras		
Resolution	> 20 MPixel	>24 MPixel	> 30 MPixel
Power supply	up to 250 V / 12 A for EL testing		
Operation mode	Automatic image acquisition, manual judgment through operator		

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Go to product:



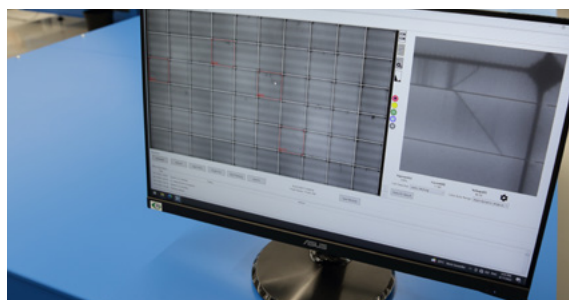
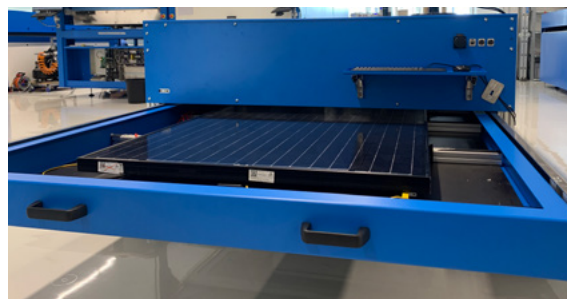
## Developed for mobile use

The MBJ Mobile Lab 5.0 combines a TÜV certified IEC 60904-9 Ed.3 A+A+A+ long-pulse LED sun simulator with a high resolution electroluminescence test into one very compact system.

The unit can be integrated into a small van, a trailer, a container or it can be used as stand-alone system. It is ideal for in-field use at installation sites. You decided on the most favorable means of transport for your measurement system.

Ease of operation: Solar modules are loaded into a module drawer, are manually electrically connected and moved to the inspection position by closing the drawer. A very short testing time per panel allows high volume on-site throughput at the highest test quality level.

The redesign has not only resulted in a much compact size but also kept the well known measure-



ment performance. Additionally it is now possible to measure modules up to a size of 2700 mm.

The system still provides all the measurement and testing procedures required for an objective, lab-like evaluation of solar modules in the field: A pre-measurement electrical connection test and a bypass diode test is also included. Optionally, a hi-potential and ground bond test can be integrated.

The high-resolution electroluminescence inspection with up to 30 MPixel resolution is also included. Hidden defects can be quickly and reliably detected.

The evaluation of the measurements and the EL image can be performed directly on site or later in the office. The measurement results are automatically stored in the proven MBJ evaluation software with database on a 17-inch notebook.

MBJ Mini Lab sizes	Standard	ECO	MAX
Min. module size	800 mm x 890 mm		
Max. module size	1060 x 2250 mm	1240 x 2400 mm	1400 x 2750 mm
Features & Options	Connection test, Diode test; Optionally: Advanced Spectrum (21 LED), HiPot and ground bond test		



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