

# MBJ Mobile Lab

## Optionally integrated in a van



### 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               |  |
|-----------------------------|--|
| Spectrum / Light source     | Class A+ IEC 60904-9 Ed.3<br>LED with UV and IR extended spectrum                                    |
| Spectral coverage (SPC)     | > 94 % +/-3 %  |
| Spectral deviation (SPD)    | < 43 % +/-3 %  |
| Total irradiance            | 200 - 1000 W/m <sup>2</sup>  |
| Non uniformity              | < +/- 1 % / Class A+ IEC60904-9 Ed3  |
| Long term instability (LTI) | < +/- 1 % / Class A+ IEC60904-9 Ed3  |
| Measurement uncertainty     | 1.3 %, when using a reference module of the same module type with a measurement uncertainty of 1.1 % |
| Repeatability Pmax          | ± 0.2 % (absolute)   |
| Flash pulse duration        | 200 ms at 1000 W/m <sup>2</sup>  |
| Life time of LED's          | > 12 million flashes at 1000 W/m <sup>2</sup>  |

| Electroluminescence | ECO  | MAX         |
|---------------------|--|-------------|
| Camera type         | CMOS camera  |             |
| Resolution          | >24 MPixel   | > 30 MPixel |
| Power supply        | Up to 250 V  |             |
| Operation mode      | Fully automatic image acquisition,<br>manual judgment through operator |             |

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Go to product:



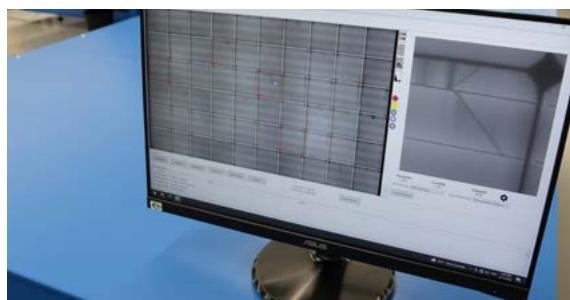
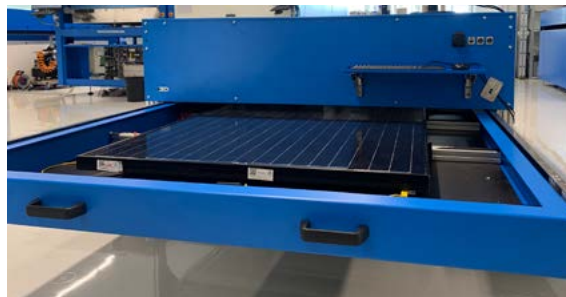
## Developed for mobile use

The MBJ Mobile Lab 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.

| MBJ Mini Lab sizes | ECO   | MAX            |
|--------------------|---|----------------|
| Min. module size   | 800 x 890 mm  |                |
| Max. module size   | 1240 x 2400 mm  | 1400 x 2700 mm |
| Features & Options | Connection test, Diode test<br>Optionally: Advanced Spectrum (21 LED), HiPot and ground bond test |                |



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