

MBJ EL String

Inline or Lab



Production without light source change

The MBJ EL String family provides electroluminescence inspection systems for stand-alone use or as fully integrated high speed inline system integrated in the layup process.

The unique multi-camera approach reduces the inspection time in inline systems to less than 5 sec, which is very important for fully automated layup systems.

- Inspection system for production, service and the lab
- Fast image acquisition through multi-camera concept
- High resolution
- Low investment cost
- Made in Germany



Technical specification EL String	Inline	Lab	Lab with linear axis
String size	M6, M10 and M12 cells, full, half cut cells, third cut cells		
Max. String length	1,400 mm		2,120 mm
Camera type: Cooled CMOS cameras	5 MPixel		
No. of cameras	4		1 Mounted on a linear axis
Resolution	220 µm/ Pixel	180 µm/ Pixel	
Image acquisition time	< 1 sec.		< 6 sec.

MBJ EL String - Inline/Lab

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MBJ EL String - Inline

The MBJ EL String - Inline is a high speed and high resolution inline electroluminescence inspection system. Placed next to the stringer the strings will be presented to system by the handling robot before placing them on the module glass. The multiple camera approach allows cycle times below 3 seconds.

An innovative automatic image processing software based on a neural networks and Deep Learning leads to reliable inspection results. The advantage of this technology is the easy implementation of new defect types, the very good detection rates and the high reproducibility.

2D-measurement and edge inspection are available as options. The integration into the layup system ensures a direct feedback to the stringing process.

EL STRING INLINE



EL STRING LAB



MBJ EL String - Lab

The MBJ EL String - Lab is a stand-alone electroluminescence inspection system, designed to inspect solar strings randomly after the stringing process check the quality after repairing of strings.

Like the MBJ EL String - Inline, the lab system acquires an image of each single solar cell, based on the electroluminescence technology. Using the EL technology for the human eye invisible defects such as micro cracks, finger defects and soldering problems can be visualized.

The system comes with semiautomatic image processing software. This software evaluates the cell image and presents these results to the operator. Final decision about IO/NIO is performed by the operator.



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