



PHOTOVOLTAIC MODULES

Master and Fast Track Certification Programs

For PV Production Equipment Manufacturers and PV Module Manufacturers

The Master Certification Program

PV Production Equipment Manufacturers

This program is for manufacturers of end-to-end PV production equipment who produce a complete turn-key solution production line for PV modules and then supply the production line to PV module manufacturers.

The manufacturer of the PV production equipment submits basic module designs for certification to sell the production lines of the basic module designs that are essentially pre-certified to the PV module manufacturer.

This allows for more efficient PV module test programs as redundant test programs can be avoided on PV modules that are identical in construction, materials and performance.

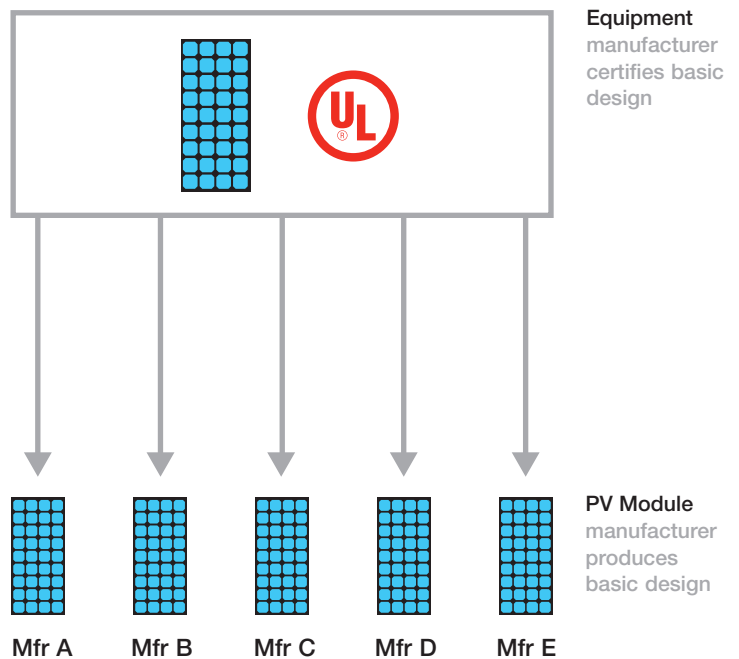
Product Types

The production lines can be for flat-plate and thin-film PV modules. These production lines may include front-end cell production in addition to the back-end module production assembly.

Applicable Standards

- UL 1703 | UL 61730
- IEC 61215 | IEC 61646 | IEC 61730

Overview of the Program



Fast Track Certification Program

PV Module Manufacturers

This part of the program addresses the photovoltaic module manufacturers, employing the identical end-to-end solution from the supplier that has a UL master certification.

1. PV module manufacturer request a quote for “Fast Track” certification under the related equipment manufacturers “Master Certification” program.
2. UL completes the review of the module construction (Bill of Materials review, for comparison with the Master Certified module) and conducts limited testing. *If no changes are made from the Master Certified module, only the Humidity Freeze Test Sequence on a sample from the installed production line is conducted, on physically, the largest-sized module to be certified.*
3. If any changes are made to the construction to customize the module design, those design changes will be evaluated in a subsequent alternate construction investigation. These changes can be submitted by either the Master Certification equipment manufacturer or the Fast Track PV module manufacturer.
4. If the product complies with all applicable requirements, UL issues a report, called the Follow-Up Service Procedure, to the manufacturer. UL must complete the first Follow-up Service inspection (also referred to as the Initial Production Inspection) before the manufacturer can ship products that bear the UL Mark; in addition quarterly audits of UL Listed products at the factory will be required by UL and conducted by local UL Field Representatives as long as the product remains certified by UL.
5. Certification continues until the manufacturer requests termination or fails to fulfill a requirement. UL must evaluate modifications to certified products before the modified product is authorized to bear the UL Mark or be considered Certified.

Note: if the PV module manufacturer supplied the original test samples for the Master Certification projects, they do not need to have the HF10 test conducted; they only need the IPI completed.

Your benefits

- **Predictable market access** – Reduced project turnaround times based on process refinement and bundling of services.
- **International recognition and acceptance** – Add value to your products globally based on reliable third-party testing and assessment determining the safety and performance of your products.
- **A global footprint** – UL’s global network of technical experts, laboratories and partnerships support you by offering certifications of the highest quality to meet your compliance needs.
- **Public safety mission globally** – Give your customers confidence in the safety and quality of products you’re supplying to them.

