



**Deliverable Report**

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## Executive Summary

Eurotron offers a complete solution for the photovoltaic manufacturing process based upon backside contact cells. Eurotron's equipment is engineered to maximize PV manufacturing efficiency and offers a wide range of possibilities. The flexible equipment enables the solar industry to produce solar modules at the lowest cost per Watt and based on the most recent backside contact technology.

This report describes the module design, fabrication, characterisation and application of the first small prototypes for BIPV applications.

In the second chapter the general wishes and requirements including the unique points are listed, followed by a description of both the glass-backsheet and glass-glass module technology. Furthermore a brief explanation is given of the different modules for varying applications such as pitched roof and facades. Specific type of material and supplier information can be found in [D4.1 Specs PV laminate](#).

The third chapter starts with a description of the Eurotron's Competence Center that is used to produce all the laminates. All the process steps are mentioned step by step. Also a list of challenges that were faced during module production and associated solutions are mentioned.

In the fourth chapter the characterization of the modules is described. This starts with a short description and some examples of the electroluminescence test and IV measurement. In the next paragraph the expected output is calculated and listed for the several module dimensions, followed by a graph that shows the real measured outputs. To have a first indication on the quality of the modules, the CTM loss is calculated for the modules made during the last production run.

The fifth chapter provides a summary of the various applications where the modules are used for. A short description is given combined with some clarifying pictures.

In the risk table all possible difficulties have been listed.

This report is focussed on the back contact technology, the conventional H-pattern principle functions as fallback option. Since the main priority will be on the back contact technology, only the build-up of this technology has been described.

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[http://cordis.europa.eu/fp7/cooperation/home\\_en.html](http://cordis.europa.eu/fp7/cooperation/home_en.html)

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