

Dutch Solar Design

What is DSD-PV?

A Dutch Solar Design Photovoltaic (DSD-PV) module combines renewable energy with endless aesthetic possibilities.

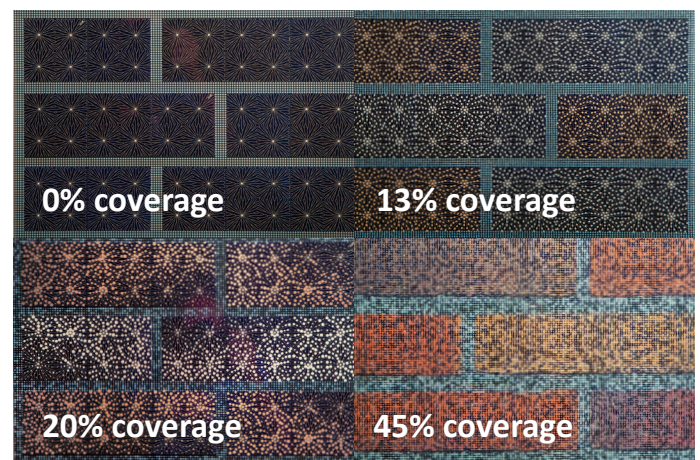
The need for a more sustainable built environment is urgent and requires cost-efficient, smart and integrated solutions. We envision a (very near) future in which the built environment is efficient *and* friendly, smart *and* accessible, high-tech *and* attractive. In order to get there, we developed this multipurpose DSD-PV product for architects, engineers, advisors and real estate developers.



The surfaces of the buildings and environments we live and work in represent enormous potential. Incorporating customized DSD-PV modules in any architectural design adds a novel functionality to facades: generating renewable energy without compromising creative freedom and artistic expression.

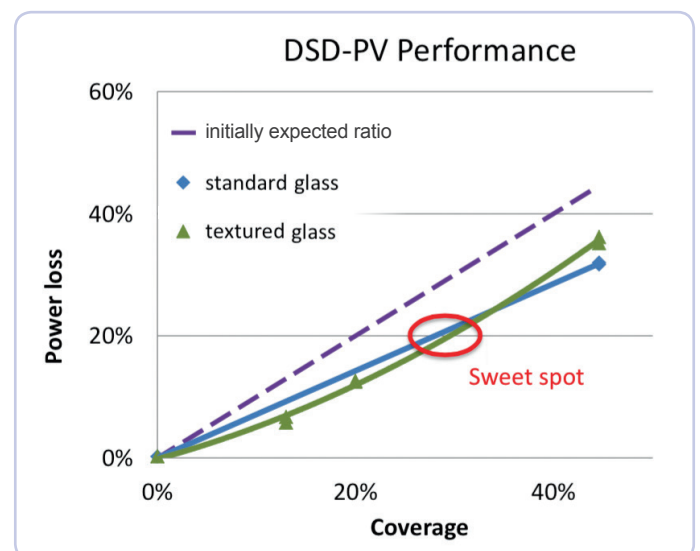
How does it work?

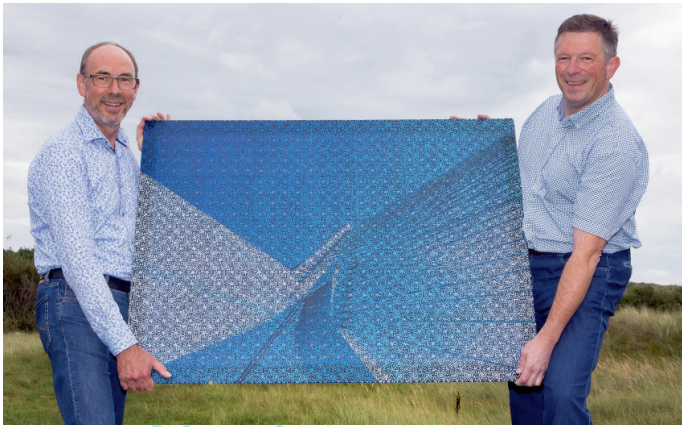
We developed a technique to integrate a full colour, durable print into a facade panel with integrated PV-cells (with MWT back contact technology). The desired image or design is processed by algorithms which negotiate an optimum between minimal surface coverage and maximal visual impact.



Images above: testing the 'brick pattern' series.

Chart below: surface coverage in relation to power loss, with an indicated visual 'sweet spot' at 25-35% coverage.





Who developed DSD-PV?

The DSD-PV product has been developed by a consortium. Every partner brings their unique expertise to the table, motivated by a shared dream to realize sustainable buildings without compromising creative freedom and appealing aesthetics.

The consortium consists of the following parties:



ECN manages the Dutch Solar Design project (RVO TEUE116142) and contributes with developing back contact metal wrap through (MWT) production technology, integration into building elements, optimization of performance versus design and studying reliability of the full colour design solar panels.
www.ecn.nl



UNStudio designs with the future in mind. We are architects with a focus on research and innovation, and have extensive knowledge on BIPV from multiple (realized) projects. For DSD-PV we designed software which allows the application of a range of designs, where the balance between module efficiency and aesthetics is negotiated by algorithms.
www.unstudio.com



TS Visuals is a large format printing specialist on different hard substrates like metal, glass, steel, wood and plastics. In the Dutch Solar Design project we combine innovative printing solutions and surface protection to achieve optimal balance between decoration and performance.
www.tsvisuals.nl



DIG focused on 'humanizing technology': how can it connect to what people want and how they operate? We spoke with a wide range of relevant parties to map out their underlying needs, and translated insights into recommendations regarding the (further) development of the product.
www.designinnovationgroup.nl



Aldowa realizes dreams. Aldowa is a proud developer of metal facades with over 40 years of experience. Together with our partners we realize striking landmarks using innovative solutions. From design all through to final installation, we take care of the complete process. Aldowa, leave your mark.
www.aldowa.nl



Hogeschool van Amsterdam

The research group Urban Technology of the **Amsterdam University of Applied Sciences** works with researchers and students on the design and prototyping of the multi-functional facade elements for low energy renovation of apartments and utility buildings.
www.hva.nl/urban-technology

Contact us!

If you are interested in this product and want to know more about its possibilities: visit us at www.dsd-pv.nl and email us at info@dsd-pv.nl

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