

Full scale LED based solar simulator for PV module testing

Publieke samenvatting / Public summary

Aanleiding

Issues to be addressed PV manufacturers are constantly pursuing reduction of PV module production costs, enabling mass scale implementation of Solar Energy. These cost savings will to a large extent be attained by development of new PV technologies. However, current solar simulators used to determine their performance can't accurately determine the characteristics of these upcoming PV technologies in a cost effective manner.

Doelstelling

The goal of this project is to develop a solar simulator based on LED technology (LEDSS). The result will be able to accurately measure the characteristics of upcoming PV technologies, while reducing the production costs by saving 50% on the testing cost of PV modules.

Korte omschrijving

Scope of the project Within this project, through industrial research, the applicants will develop the necessary knowledge on manipulating LED light. This new knowledge allows them to simulate sunlight within the IEC norm AAA-class accuracy. Through experimental development, the knowledge will be used to design the optics and electronics, thermal management and mechanics, necessary for building a full-scale prototype. After testing separate parts, the prototype will be built and tested to conclude the experimental development. Finally, the prototype will be representative of the

Projectinformatie / Project information

Projectnummer / Project number
TEUE116219

Subsidiebedrag / Grant amount
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Algemene informatie / General information

Penvoerder / Secretariat
Eternal Sun B.V.

Publicaties en materialen / Publications and attachments

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commercial version and will therefore be tested thoroughly by experts in the solar energy field. ECN will validate the capabilities and practicality, while Trina Solar and SERIS have committed to become launching partners.

Resultaat

The project will result in a full-scale LED solar simulator prototype. The prototype will show the capabilities of LED technology for solar simulation. The advantages and effectiveness will be proven and used to convince PV module manufacturers of the competitive advantage the new LEDSS can provide them with.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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