

Development of the High-precision Multidirectional Auto Tracking System for Concentrating Photovoltaics (CPV)

Funding source: Innovation and Technology Fund

Funding amount: \$1.5 Million

Period: Mar 2013- Aug 2014

Project Abstract:

Conventional Photovoltaic can only be considered as a low return and therefore many countries started to cut the subsidies. Based on concentrating photovoltaic technology, Concentrating Photovoltaic (CPV) uses a new type of materials and structures and the power generation efficiency can be a multiple of that of the traditional solar panels. The condenser lens can concentrate a certain region of sunshine to a small photovoltaic panels, and a slight angle deviation between the sun and the condenser lens can result in great influence of the convergence point and thus cause enormous impact on the efficiency of CPV power generation system, so high-precision auto-tracking solar concentrator system is an essential part of the CPV power generation system. The project aims to develop a high-precision multidirectional auto tracking system for CPV power generation with the high performance in auto solar tracking and an integrated system. The system is fully tested and optimized for a commercial viable product.

Technologies and Features of the Product Development:

- High-precision multi-dimensional auto solar tracking control system
- High-precision Auto Tracking Control Method



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