World Academy of Science, Engineering and Technology
International Journal of Electronics and Communication Engineering
Vol:9, No:11, 2015

An Approach on the Design of a Solar Cell Characterization Device

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Abstract : This paper presents the development of a compact, portable and easy to handle solar cell characterization device. The presented device reduces the effort and cost of single solar cell characterization to a minimum. It enables realistic characterization of cells under sunlight within minutes. In the field of photovoltaic research the common way to characterize a single solar cell or a module is, to measure the current voltage curve. With this characteristic the performance and the degradation rate can be defined which are important for the consumer or developer. The paper consists of the system design description, a summary of the measurement results and an outline for further developments.

Keywords : solar cell, photovoltaics, PV, characterization
Conference Title : ICCEEE 2015 : International Conference on Communication, Electrical and Electronics Engineering
Conference Location : Venice, Italy
Conference Dates : November 09-10, 2015