

The role of climatic-design-operational parameters on combined PV/T collector performance: a critical review

ABSTRACT

PV/T technology attracted numerous researchers and professionals during the last decades. There are many review papers in the literature evaluated the R&D aspects of PV/T collectors. In fact, there are abundant of case studies discussed the parameters of climate, design and operational conditions affected the PV/T collector performance. But, a comprehensive compilation of the information of those case studies is still a missing link in the literature. Hence, this paper intended to review thoroughly the information regarding the parameters affecting the PV/T collector performance mainly and PV module performance partially. The parameters are supported with the most available R&D to measure the accurate influence of each parameter on the performance. The outcomes from the study are highlighted in lessons learned section.

Keyword: PV/T collector; Climatic-design-operational conditions; Effect of parameters and enhancement aspects; Electrical-thermal-overall efficiency; Performance compromise under different parameters