

# Maximum Power Point Tracking for Solar Cells at Low Luminosity

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## Abstract

*In this article a system that models different Maximum Power Point Tracking (MPPT) algorithm is presented. The main reasons for using the MPPT algorithms on photovoltaic (PV) modules are searching and finding the MPP that allows those modules to operate and to produce all the power they are capable of. This paper shows the functionality of a proposed PV model and a low luminosity circuit. The MPP found by the low luminosity circuit is validated by the results of the measured MPP, using the panel and an electronic load. The MPPT algorithms were developed in C language using Keil software 8051 development tool,  $\mu$ Vision. An 8051 microcontroller maximize the output power of the PV system.*