

Solar Base LED Schlooring Display

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Abstract: *The development of solar energy and the LED display, the superiority of the combination of them and software design of the system are discussed in this paper. Hardware design and software design are the key elements of this paper. Solar control circuit, LED display control circuit, etc are described, charge and discharge of the battery and output of the battery is controlled by Arduino IDE. The design of software provides driver to the related hardware circuit. The result of the experiment have achieved anticipate defects and met the design requirements. The aim of this paper is to design a textual display system, based on a light emitting diode (LED) dot matrix array powered by solar energy. The paper involves taking the device from an initial concept, through a design phase, to constructing a prototype of the product. The system consists of the display unit, which is powered from a photovoltaic (PV) module and a solar sealed lead acid battery.. The self-contained nature of the intended design will allow the display to be mounted almost anywhere it is needed. Therefore, the main purpose of this paper is to utilize the solar energy and a rechargeable battery to power a universal self-contained characters display unit. This display unit is useful for creating attention-getting messages, location identifiers such as maps and address identification display modules.*

Keywords: Solar cells, microcontroller, moving message unit, PV sizing and charge controller

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