

A high-performance stand-alone solar pv power system for led lighting

In the present article an innovative street lighting system with solar PV and battery as the source of electricity was monitored and analyzed considering a case study installed in ...

DOI: 10.1155/2013/573919 Corpus ID: 73067112; A High-Performance Stand-Alone Solar PV Power System for LED Lighting @article{Vieira2013AHS, title={A High-Performance Stand ...

Stand Alone PV System A Stand Alone Solar System. An off-grid or stand alone PV system is made up of a number of individual photovoltaic modules (or panels) usually of 12 volts with power outputs of between 50 and 100+ watts each. ...

The present study developed a high-efficiency charge/discharge controller for stand-alone solar LED lighting system by incorporating an nMPPO (near-maximum-power ...

The present study developed a high-performance solar PV power technology for the LED lighting of a solar home system. The nMPPO (near-Maximum-Power- Point- Operation) design is ...

accuracy and less cost. To improve the output power of solar PV panel a low cost DC/DC closed loop boost converter is designed. The load used is high brightness white LED ...

The present study developed a high-performance charge/discharge controller for stand-alone solar LED lighting system by incorporating an nMPPO system design, a PWM battery charge ...

A High-Performance Stand-Alone Solar PV Power System for LED Lighting JoséAntónioBarrosVieira1 andAlexandreManuelMota2 ... PV power LED lighting system ...

MATLAB Simulink model of Standalone PV system 5 RESULT AND DISCUSSION The photovoltaic panel has an open circuit voltage V_{OC} of 21V, I_{sh} of 2A and of 28Watt power.

For high-efficiency lighting, the LED is directly driven by battery using a PWM discharge control to eliminate a DC/DC converter. Two solar-powered LED lighting systems (50W and 100W LED) ...

The present study investigates the design of the solar-powered LED roadway lighting using high-power LED luminaire (100 W) and estimates the installation cost for a 10 km highway with 2 lanes ...

New improvements and real result of a stand-alone photovoltaic power system for LED lighting that was developed previously is presented and the balance of energy is studied ...

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For the generation of electricity in far flung area at reasonable price, sizing of the power supply system plays an important role. Photovoltaic systems and some other renewable ...

This work proposes an intelligent, economic, and efficient system to control a stand alone photovoltaic lighting system. It presents improvements in charging algorithm, in ...

A high-performance stand-alone solar PV power system for LED lighting. ... Implementation of a Stand-Alone Photovoltaic Lighting System with MPPT Battery Charging and LED Current Control José António Barros Vieira1, Alexandre ...

The use of MPPT increases the system cost and decrease the reliability. Huang et at. [4] developed a near-maximum-power-point-operation (nMPPO) design of photovoltaic ...

Hussein Mohammed Ridha analyzed the performance of stand-alone PV/B system with lead acid batteries, AGM batteries, and lithium-ion batteries, respectively [81]. Based on ...

Today"s solar street LED lights are able to provide reliable, quality lighting both in developing and developed countries, thereby reducing light poverty and the economic and environmental costs of e...

This paper presents a novel high-performance standalone photovoltaic (PV) lighting system which can provide functional illumination based on high power White LE

The interest in solar photovoltaic (PV) assisted street lighting systems stems from the fact that they are sustainable and environmentally friendly compared to conventional ...

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