A LOW COST EFFICIENT EMERGENCY LAMP SYSTEM

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A cost effective efficient emergency lamp system is presented in this paper. The number of conversion stages has been kept at a minimum, whereby the conversion efficiency has been improved in a cost effective way. A phase modulated full bridge arrangement with zero voltage switching was used to further enhance the system efficiency.

When the system is in normal operation it acts as a power storage device. Lead acid batteries are used as the power storage device. In case of an emergency, the battery power will be delivered to the Compact Florescent Lamps (CFL) through the inverter. The reason for using CFL is to generate an efficient light source.

Entire system has been studied using digital simulation, and the operation has been verified using a laboratory prototype. Experimental results and the simulation results with efficiency figures will be presented in the full paper.