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EXTERNAL EXCITATION TO IMPROVE EFFICIENCY OF CFL

S. B. CHOUGULE AND DHANASHRI GAWALI
MIT Academy of Engineering, Alandi, Pune, India

Abstract

Energy efficient electronic and lighting systems, is a thrust area of research. The use of Compact Florescent Lamp (CFL) can be regarded as one of the simplest solutions to the major problems faced by environmentalists and governments worldwide. This is because of the fact that its use can cut energy consumption reduces dependence on coal and oil for production of power and also reduces dangerous effects like global warming. CFL has two main parts, circuit or ballast and florescent tube. Circuit of CFL consumes about 15% of total power applied, which accounts for powerloss. This paper explains a different approach to reduce the power loss. The circuit of CFL is modified and experiments carried to improve the efficiency by reducing losses within electronic circuit, shows encouraging results. This paper describes the original work and its outcome. Work is more concentrated on inverter section of CFL. Modification and external excitation of inverter section are major contributors in improving the efficiency.

Keywords: CFL, ballast, Inverter, Converter, powerloss, Energy efficiency, external excitation