

## Optimal Energy Consumption with Semiconductor Lamps

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**Abstract :** Using LED lamps as lighting resources with new technology in designing lighting systems has been studied in this article. In this respect a history of LED emergence, its different manufacturing methods and technologies were revised, then their structure, light production line, its application and benefits in lighting industry has been evaluated. Finally, there is a comparison between these lamps and ordinary lamps to assess light parameters as well as energy consumption using DIALux software. Considering the results of analogies LED lamps have lower consumption and more lighting yield, therefore they are more economically feasible. Color variety, longer usage lap (circa 10 years) and compatibility with DC voltages are other LED lamps perquisites.

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