Abstract

The project "Design, Development and thermal analysis of heat sink for unidirectional lighting fixture" specifically deals with unidirectional lighting. Current lighting practice uses
multiple light source technologies and fixture to achieve the required illumination for the various tasks. With the evaluation of LED as an attractive source of light, the lighting fixture design has been changed drastically. The older designs were based on traditional light sources such as incandescent bulbs, halogen light, metal halide, CFL, etc. All these light sources are emitting light in 360° and the fixture has been designed to reflect the maximum light in the desired direction unidirectionally or task lighting fixture design prominently involved the design of reflectors. Most common shape in parabolic reflectors LEDs emit light in the beam of 120° hence the maximum light is emitted in the forward direction. Most of the lighting requirements are satisfied due to that type of emission in the applications where concentrated light or desired pattern of light is needed, external optics are available and can be used. Here, an attempt is made to design a new LED lighting fixture to cater the needs of commercial establishments like shopping malls, jewelry showrooms, art galleries, etc.

References

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Keywords
Lighting Fixture (unidirectional)  design Software (pro-e)  modeling  Analysis Software