

AN LED LIGHTING DEVICE HAVING ELASTICALLY BIASED ROTATIONAL END CAPS

Abstract

The present invention relates to an end cap for a lighting device. The end cap includes a housing. The housing has a first portion and a second portion. The first portion is adapted to be capable of being coupled to an end of a lighting device. The first portion is also in electrical connection with said lighting device. The second portion of the housing is adapted to be capable of being coupled to an electrical socket of a lighting fixture. When coupled to the electrical socket, the second portion is in electrical connection with a power supply. The end cap also includes at least two independent electrical leads in each portion of the housing. In one embodiment, a pair of electrical leads may extend from the second portion of the housing to contact at least two corresponding electrical leads that extend from the first portion of the housing. In so doing, the power supply and the lighting device will be placed in an electrical connection. The end cap also includes at least one elastic member. The elastic member is coupled to the first and second portions of the housing along a common central axis of rotation of the first and second portions. The coupling of the first and second portions of the housing to each other is such that the second portion is elastically coupled to and biased against the first portion. The elastically biased coupling of the second portion of the housing to the first portion of the housing is such that the second portion is capable of a restricted linear movement in a direction that is against the elastic bias. Further, the elastic bias coupling is also such that the second portion of the housing is capable of a rotational movement about the central axis relative to the first portion.

FIG. 1