



Illumine is directly wired into the outlet when it is installed. It is made of a two part injection molded plastic plate and cover. The inner plate is where all the electronics are located. The inner plate will have the PCB board attached to it and is where the main wiring in will take place. The outer cover is purely for the aesthetics to make it look like all the other outlet covers. On the bottom of the product it has four high intensity LED bulbs which provide all of the normal area light that is needed. They are all placed on the bottom to ensure that each outlet puts out enough light to guide you through a hallway. Around each LED is a molded plastic ring (shown in picture at top right) which functions similar to a projection headlight in a car. These rings would be reflective and direct more light to the floor allowing for the LED's to be as bright as possible. Also used on each LED is a lense such as the one shown in picture number 2. In my research, I found out that using LED's in a smokey environment is best when the light is focused and not a large viewing angle. These lenses will take the light produced and focus it all to the floor in the brightest pattern. Both the ring and the lense are being used on LED products right now such as a LED headlamp.

One of the biggest reasons to use LED's is the low power consumption. The product is able to house a flat super capacitor built into the PCB board and can be charged off of the current that comes to the outlet. Since the LED's do not need nearly as much power, the capacitor will be able to power them for far longer than the normal span of the current lights using the other large bulb types such as incandescent, flourescent, halogen, or xenon.