

Wiring up a doorbell using a pushbutton with integral LED

Most LEDs are intended for use with DC power supplies and applying a reverse polarity, such as one half of an AC waveform, may shorten their life. It all depends on how the peak reverse voltage compares to the reverse voltage limit of the LED (a value that is not always available in the pushbutton specification).

It is safer to provide a full wave rectified DC power supply for the LED, as shown below.

Pressing the pushbutton shorts out the LED, etc, and allows enough current to operate the solenoid. Releasing the pushbutton stops the bell ringing and the LED will light up again.

