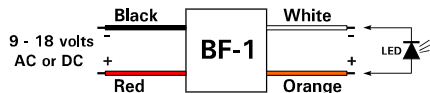


BF-1 Basic Flasher

The CIRCUITRON **BF-1** is a simple LED flasher designed to operate off a 9 - 18 volt AC or DC power supply. It may be used with any color standard Light Emitting Diode (not included) and will provide a high intensity flash about once a second. The **BF-1** will not flash incandescent lamps. Use a **BF-2** or **BF-3** for lamps. It is not necessary to use a current limiting resistor with the **BF-1**.



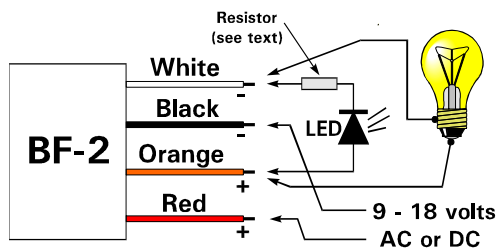
211 RocBaar Dr., Romeoville, IL 60446

EMAIL: info@Circuitron.com

BF-2 Basic Flasher

The CIRCUITRON **BF-2** will flash any incandescent lamp or LED load up to 250 ma. current draw. Flash rate is set at one flash per second. If adjustable rate and duration are desired, use a **BF-3** instead. Power to the circuit board may be AC or DC between 9 and 18 volts. The output will be DC. A suitable current limiting resistor *MUST* be used when flashing LEDs.

WIRING: Connect the RED and BLACK leads to your power source. RED is positive if using DC. Your lamp(s) or LED(s) connect to the Orange and White leads. Orange is positive. Note that if you are using an AC power source, the output to the bulbs or LEDs will be cut approximately in half by the diode on the board. You may wish to adjust your input voltage or lamp type accordingly if the lamps are too dim.

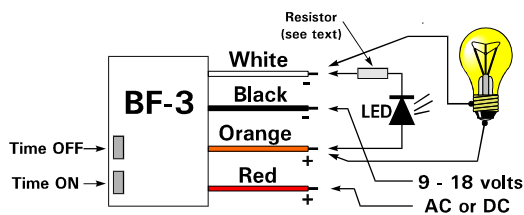


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BF-3 Basic Flasher

The CIRCUITRON **BF-3** will flash any incandescent lamp or LED load up to 250 ma. current draw. Individual controls set the ON time and the OFF time, so the **BF-3** can provide a wide range of flashing modes. Power to the circuit board may be AC or DC between 9 and 18 volts. The output will be DC. A suitable current limiting resistor *MUST* be used when flashing LEDs.

WIRING: Connect the RED and BLACK leads to your power source. RED is positive if using DC. Your lamp(s) or LED(s) connect to the Orange and White leads. Orange is positive. Note that if you are using an AC power source, the output to the bulbs or LEDs will be cut approximately in half by the diode on the board. You may wish to adjust your input voltage or lamp type accordingly if the lamps are too dim.



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ADJUSTMENTS: The two trimmer controls adjust the flash rate and duration. The trimmer closest to the corner of the board sets the "ON" time. The other trimmer sets the "OFF" time. A very wide range of adjustment from less than 0.1 second to more than 10 seconds is available on each trimmer. Clockwise rotation increases the time period. Set both at the midpoint to start.