

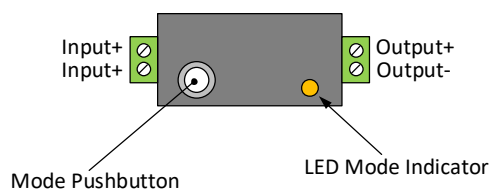
Overview

The Flicker 3.0 is an advanced special effects pattern generator and dimmer designed specifically for LEDs and low voltage incandescent and halogen bulbs. A single pushbutton allows the user to cycle through a wide array of output light patterns including ember, candle, and flame flicker modes, flashing and strobe effects, as well as simulated neon and electrical fixture flicker. Steady state brightness modes are also available. Internal memory allows the device to resume the previously selected output mode in the event power is lost to the device. This is also useful for permanent installations where a single operating mode is required continuously.

Features

- For use with LEDs (dimnable types)
- Incandescent and halogen lights
- Single button operation
- Onboard LED mirrors output mode
- Memory saves mode during power loss
- True non-repeating random algorithms
- Operating Voltage: 7VDC to 16VDC
- Max. Load Current: 3A (5A optional)
- Reverse Voltage Protection
- Flange mount for easy installation
- Removable terminal blocks

Connection Diagram



Operation

Using the Flicker 3.0 controller is extremely simple. Simply connect your light source as shown in the previous diagram and use the pushbutton to cycle through the various modes. Each press of the pushbutton will advance the operational mode by one. After all modes have been cycled through,

the unit will enter OFF mode. In this mode, the output to the LED driver is disabled.

If the event you do not have an external light connected, there is an onboard LED which will illuminate and reflect the specific mode that is chosen.

Onboard LED Status

There is an onboard amber LED that mirrors the output modulation. This is useful for setting the mode without having an output connected, or if the output light is located in an area that is separate from where the controller is located.

OFF Mode Considerations for Battery Powered Controllers

When the unit is in OFF mode, the output driver is disabled, however, the microprocessor inside is still in a quiescent state which is consuming a minute amount of power. If you are using a battery source, it is recommended to use an external switch to disconnect power from the controller when not in use.

Discrete LEDs and Current Limiting Resistors

The output driver of the Flicker 3.0 is not current regulated, therefore if you plan on using discrete LEDs, you will need to use the proper current limiting resistors with your discrete LEDs. Current limiting resistors should be utilized to ensure the maximum continuous current is not exceeded per the LED datasheet.

Please note, that LED bulbs and other commercially packaged LEDs that are labeled for 12V or 24V use, already have the proper current limiting resistors installed.

Output Current Capability

The output driver stage of the Flicker 3.0 controller uses a high power, ultra-efficient N-channel switching MOSFET utilizing advanced Pulse Width Modulation (PWM) technology. The maximum output capability of the Flicker 3.0 is 3.0A. This is the highest output current of any flicker controller module available on the market today. The Flicker 1.0 can drive any number of LEDs or lights so long as the maximum output current is not exceeded.

It is important to note that because there are so many different operational modes which exhibit a wide range of current waveforms, that there is no active current limiting on the output. It would be impossible to design an economical current limiting circuit that could protect the controller over all the different operational modes without adding significant cost to the controller. Therefore, it is very



important that the customer use LEDs and lights that do not exceed the 3A output current rating.

For maximum reliability and in environments where the temperature exceeds 30deg, we recommend derating the unit to 3A maximum current.

Enhanced Current Output Option

The Flicker 3.0 is available in an enhanced high current output option that is capable of supporting lights with up to 5A of output current. Please visit our website for purchasing.

Custom Pattern Programming

Even though the number of operating modes in our Flicker 3.0 is quite impressive, customers sometimes do have a unique light pattern that they need for a specific application. We do offer custom pattern programming for the Flicker 3.0 units.

One of the features of the Flicker 3.0 unit is that it comes with a removable processor. This allows the customer to upgrade the unit to a custom pattern mode at anytime without having to purchase a new Flicker 3.0 unit or sending the unit back. Please contact our sales department for more information and pricing.

Mode Map

