Triac-Dimmable LED Driver with Integrated Fast System Startup

The AL1698 is a high-performance, buck-boost, and flyback LED driver for universal input voltage, triac-dimmable LED lamp applications.

The AL1698 LED driver has a built-in, high-voltage JFET, replacing external V\text{CC} startup resistors, which provides fast system start-up time and provides users a reliable and stable V\text{CC} supply design, meeting the industry’s building specifications.

An internal 600V/2A high-voltage MOSFET simplifies external BOM and replaces an external high-voltage MOSFET.

The AL1698 dimming curve is compliant with the NEMA SSL6 standard and is applicable to a wide range of dimmers, including leading-edge and trailing-edge dimmer, achieving deep dimming down to 1%.

It is available in the SO-7 package.

### DIODES Advantage

- **The AL1698 is a high PF, high-integration, triac-dimmable LED driver.**
- **Integrated 600V/2A MOSFET Switch and High-Voltage JFET for V\text{CC} Power Supply**
  - High integration reduces PCB size and BOM cost
- **Wide Dimmer Type Compatibility**
  - Supports popular leading and trailing edge dimmers with a NEMA SSL6 compliant dimming curve
- **Supports Common-Grounding Buck-Boost/Flyback Topology**
  - Simplifies PCB board routing/layout and minimizes EMI issues
- **Robust Protection Features**
  - Provide a robust and reliable solution with undervoltage lockout (UVLO), leading-edge blanking (LEB), cycle-by-cycle overcurrent protection (OCP), output open/short protection (OVP/OSP), thermal fold-back (TFP), and overtemperature protection (OTP)

### Applications

- LED Retrofit Lamps
- Dimmable LED Drivers
- LED Lighting Luminaires
New Product Announcement

AL1698

Diodes Off-Line LED Drivers

Typical Application

Ordering Information

For more information: https://www.diodes.com/part/AL1698