



4-Channel Constant Current LED Driver

GENERAL DESCRIPTION

The SM6704A is a 4-channel constant current LED driver that has a wide range of output current from 20mA to 180mA per channel and through an external resistor (Rext) to set the maximum sink current which gives users flexibility in controlling the light intensity of LEDs. In addition, users can precisely adjust LED brightness from 0% to 100% via OE control pin using popular pulse width modulation (PWM) signal. Low output voltage drop operation of 0.6V at 180mA allows for more power efficient designs across wider supply voltage range, the 4 LED pins are compatible with high voltage up to 50V supporting applications with long strings of LEDs. Additionally, to ensure the system reliability, the SM6704A is contained with LED string short circuit detection and thermal shutdown function to protect IC from over temperature 150°C. Also, the thermal pad enhances the power dissipation. As a result, a large amount of current can be handled safely in one package.

FEATURES

- 4-Channel constant sink current
- Constant output current invariant to load voltage change
- Maximum output current per channel up to 180mA
- Output current adjusted through an external resistor
- Excellent output current accuracy :
 - Between channels: $\pm 3\%$, and
 - Between ICs: $\pm 6\%$ (Max.)
- Protected functions:
 - Over temperature (150°C shutdown IC)
 - String short circuit detection
- Low dropout current source (0.6V at 180mA)
- LED output voltage up to 50V
- Supply voltage range from 9V to 50V
- Package SOP-8 with thermal pad

APPLICATIONS

- High-Flux LED and architectural lighting
- LCD backlight , LED signs and displays
- Automotive interior lighting

TYPICAL APPLICATION CIRCUIT

