

DESCRIPTION

PT16972 is a 4-Channel constant current LED driver with current-mode switching DC-DC controller. The output current range can be externally programmed for 10mA~100mA per channel. Also, the output voltage can be up to 36V. The PT16972 supports the boost, coupled-inductor boost-buck or SEPIC topologies and operates in an adjustable switching frequency between 200kHz and 2.1MHz.

High PWM dimming ratio 2500:1 can be achieved by internal fast response time 2 μ S with 200Hz PWM dimming frequency.

The PT16972 allows to detect and manage the open and shorted LED faults and to let unused channel floating. Also, the device includes output over-voltage protection, thermal shutdown protection and internal power MOSFET over-current protection. Two fault indication pins are provided to separate the failure mode.

APPLICATIONS

- Automotive Navigation LCD Panel Backlight
- Desktop and Notebook LCD Panel Backlight
- PDAs Panel Backlight

FEATURES

- 6V~36V Input Voltage
- Output Voltage Up to 36V
- Output Current Range 10mA~100mA/CH
- $\pm 1\%$ LED Current Matching at 20mA or Higher
- Programmable Frequency 200KHz~2.1MHz
- 2 μ S Minimum PWM Dimming on Time
- Support Boost, Coupled-Inductor Boost-Buck or SEPIC Topologies
- Selectable Output Channels
- Low Standby Current
- Adjustable Internal MOSFET Current Limitation and Soft-Start
- LED Open / Short Protection
- Output Over-Voltage Protection
- Thermal Shutdown Protection at 150 $^{\circ}$ C
- Two Fault Indication Pins
- TSSOP24 (173mil) with Exposed PAD Package

BLOCK DIAGRAM

