DESCRIPTION

PT6901 is an open loop current mode control high brightness LED driver IC. PT6901 can be programmed to operate in either constant frequency or constant off-time mode. The frequency can be programmable set as 30KHz~300KHz. The PT6901 is ideally suited for buck LED drivers. It exports PWM signal to control the external MOS. The PT6901 supply voltage input range is from 8V to 12V, and the output current can be programmed between a few milliamps and up to more than 1.0A. PT6901 can drive a single or multiple series LEDs, and provide reliability constant current output by detecting LED peak current.

The functions of linear and PWM dimming are included. PT6901 provides a low-frequency PWM dimming input that can accept an external control signal with a duty cycle of 0~100% and a frequency between 100Hz and a few KHz. Output current to LED string can be programmed to any value between 0 to its maximum value at the PWM dimming control input of PT6901. Also, a 0~240mV linear dimming input can be used for linear dimming of the LED current.

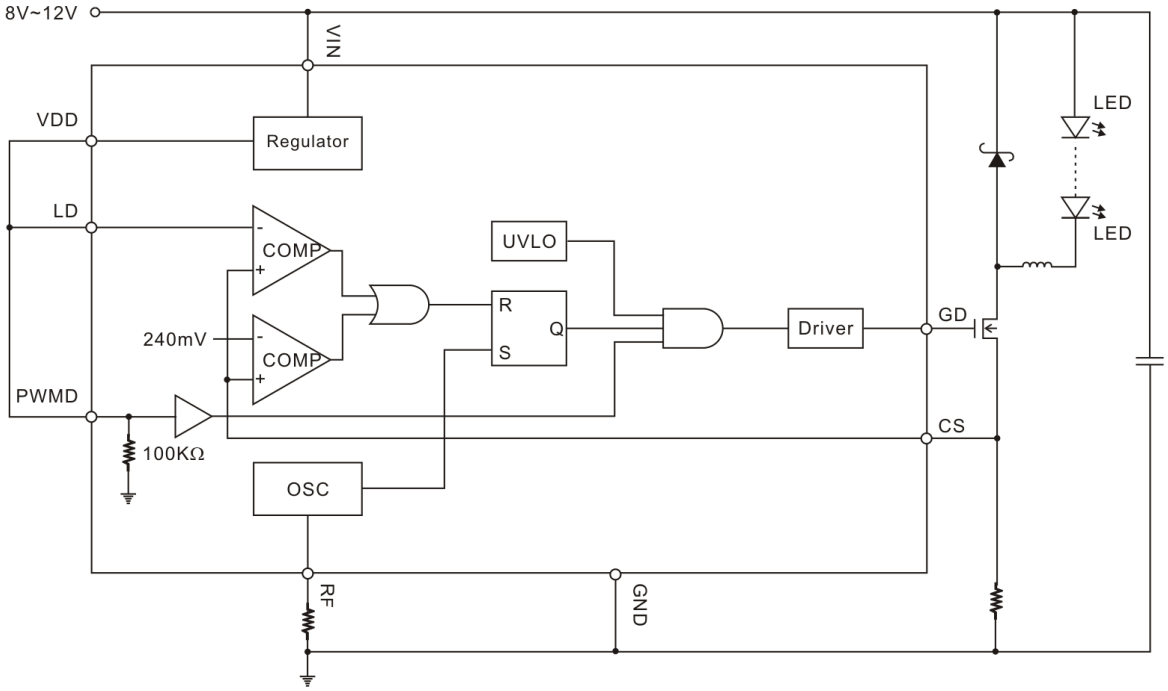
FEATURES

- Constant-current driver
- >85% Efficiency
- Constant frequency or constant off-time operation
- 8V to 12V input range
- LED string from one to hundreds diodes
- Applications from a few mA to more than 1A LED driver
- PWM low-frequency dimming and linear dimming

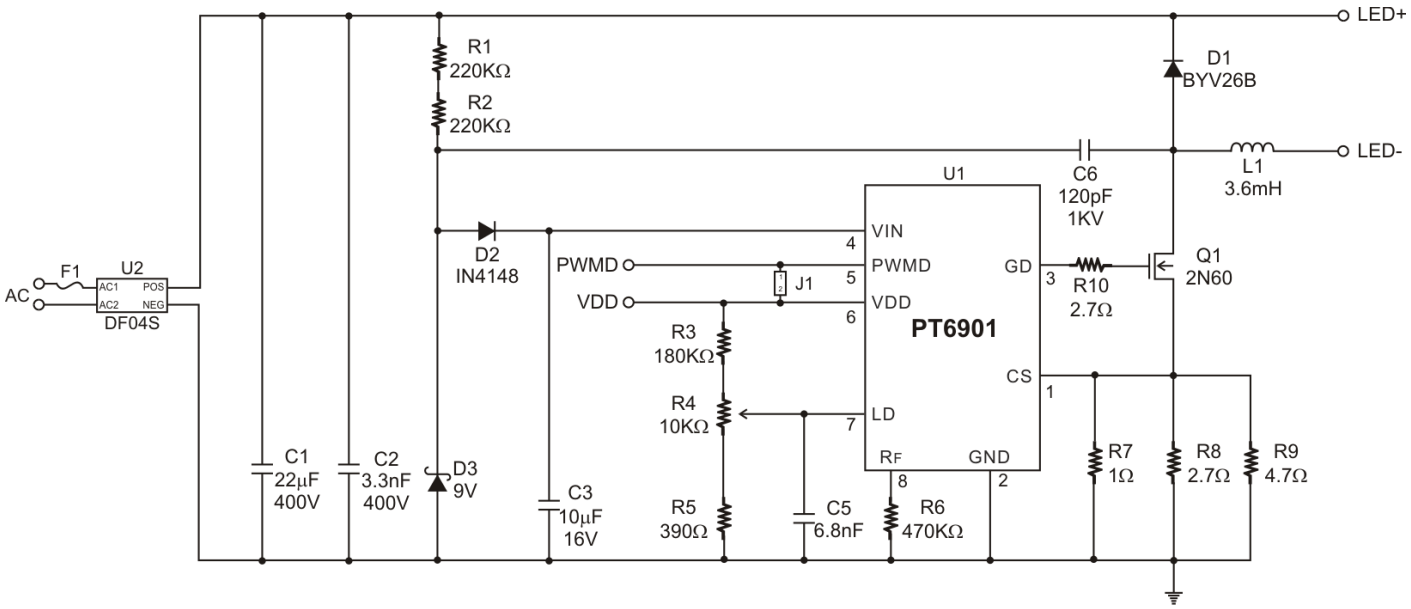
APPLICATIONS

- DC/DC or AC/DC LED driver
- Backlight LED driver
- Constant-Current driver
- Charger

BLOCK DIAGRAM



TYPICAL APPLICATION

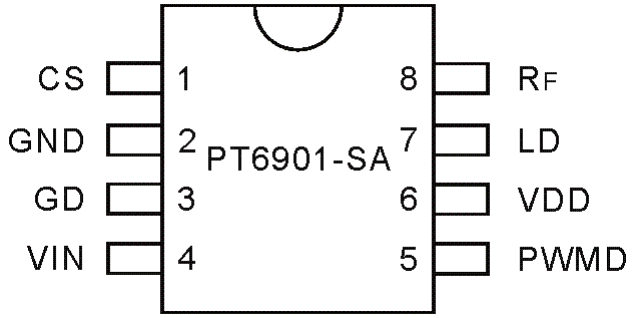


Typical 220V AC application for a string of 6 HB LEDs

ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT6901-SA	8 Pins, SOP, 150MIL	PT6901-SA

PIN CONFIGURATION



PIN DESCRIPTION

Pin Name	Description	Pin No.
CS	Senses LED string current with an external sense resistor. When the voltage of CS pin exceeds the lower of either the internal 240mV or the voltage of LD pin, the GD output goes low.	1
GND	IC Ground.	2
GD	IC output drives the gate of external MOSFET.	3
VIN	Input supply voltage 8V-12V DC.	4
PWMD	Low frequency PWM dimming pin, also enable pin. When PWMD pin is floating or is pulled to GND, IC operates in shut-down mode. When PWMD pin is pulled to high, IC operates normally.	5
VDD	Internal regulated voltage. The voltage acts as power supply of internal control circuit, also provides a supply voltage for external circuit. The current source capability is limited less than 10mA.	6
LD	Linear dimming. If the voltage at the LD pin is less than 240mV, the LD pin voltage sets the current sense threshold.	7
RF	Oscillator frequency control. The PT6901 operates in constant frequency mode when a resistor is connected between RF and GND. The PT6901 operates in constant off-time mode when a resistor is connected between RF and GD.	8

IMPORTANT NOTICE

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