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## High Precision PSR Constant Current LED Driver with PWM Dimming

### FEATURES

- Dimming support
- Built-in 700V power NPN
- PSR constant current control without secondary sense and feedback circuit
- Patents of demagnetization sensing and self power-supply technology
- Ultra low operating current for high efficiency
- Universal input voltage
- $\pm 3\%$  LED current accuracy
- Programmable precision OVP voltage for best LED open circuit protection
- LED short circuit protection
- Patent of CS resistor short circuit protection
- VCC under-voltage protection
- Over temperature compensation
- Available in SOP8 and DIP8 packages

### APPLICATIONS

- Isolated solid state lighting
- GU10/E27 LED bulb, spot light
- Other LED lighting

### DESCRIPTION

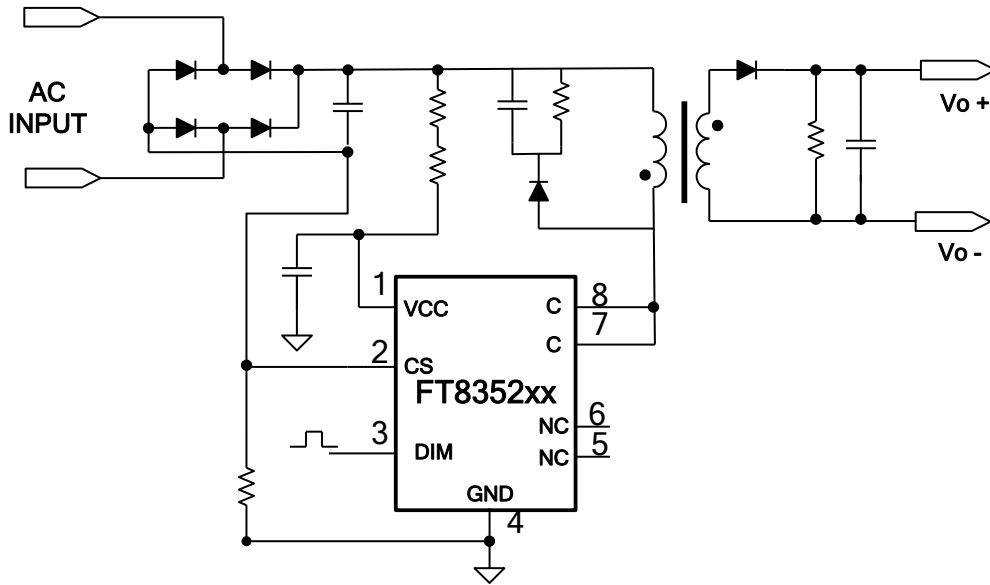
FT8352x is a high precision primary-side feedback and regulation constant current driver for LED lighting applications. It operates in inductor current discontinuous conduction mode (DCM) and is especially suitable for flyback converter under universal input. Under universal input voltage from 85V to 265V, the system output power is recommended from 3W to 24W respectively of different internal power switch. The FT8352x utilizing DIM pin setup to achieve PWM dimming;

The FT8352x integrates a 700V power NPN and eliminates secondary sense and feedback circuit. The loop compensation components are also removed while maintaining stability over all operating conditions. It uses a source drive architecture and patent demagnetization sensing technology with very low operating current, Patents of self power supply technology. the auxiliary winding for sensing the output and supplying the chip is therefore eliminated, resulting in low component counts and small system size.

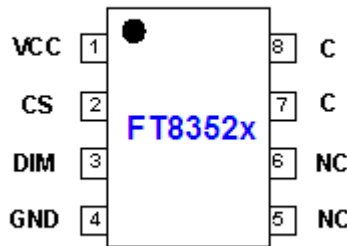
With its highly accurate current sense method, the FT8352x realizes  $\pm 3\%$  accuracy of LED current along with excellent line and load regulation.

The multi-protection function of FT8352x can greatly enhance the system reliability and safety. The FT8352x features LED open/short circuit protection, CS resistor short circuit protection, over temperature compensation and VCC UVLO protection. The industry leading OVP voltage accuracy ensures the best LED open circuit protection.

**TYPICAL APPLICATION CIRCUIT**



**Top View**



No.	PIN	FUNCTION
1	VCC	Power supply
2	CS	Current sense. This pin connects a current sense resistor to GND to detect the transformer primary current.
3	DIM	Dimming program PIN.,
4	GND	Ground
5,6	NC	No connection, don't connect to high voltage(pin7/8)
7,8	C	Internal high voltage NPN Collector

**Table 1**