

PART NUMBER (型号) TPS92210DR

**DESCRIPTION**

TPS92210 is a Green mode flyback controller from Texas Instrument. It operates at peak current and frequency modulation for optimized efficiency. To further increase the efficiency of power converter, it operates resonant valley turn on for reduced EMI and switching loss. Meanwhile, cascaded configuration of this controller can further reduce the switching loss of the MOSFET.

**TARGET APPLICATION**

- TRIAC dimmable LED lighting designs
- Residential LED lighting drivers for retrofit A19 (E27/26, E14), PAR30/38, GU10, BR
- Drivers for down and architectural wall sconces, pathway and overhead lighting
- Commercial lighting and downlights

**IC FEATURES (IC特性)**

- Distinctive Features 特点：**
- Constant on-time enables single stage PFC 固定导通时间单级PFC
  - Cascoded MOSFET configuration 串联式MOSFET
  - Discontinuous conduction mode or transition mode operation 非连续导通模式
  - Open LED detection LED开路感测
- Topology 线路结构：** Single stage flyback PFC 单级反激PFC
- Protection 保护：**
- Advanced overcurrent protection 先进过流保护
  - Output overvoltage protection 输出过压保护
  - Internal over-temperature protection 内置过温保护
- Switching Frequency 开关频率：** Max. 130KHz 最大130KHz
- Driver Current 驱动电流：** Up to 1A 最高1A
- Package 封装：** S08

SUPPLIER (供应商)



**描述**

德州仪器TPS92210DR反激式控制器可于峰值电流及频率控制以达至最高效能。为增加电源的整体效能，TPS92210DR运作于谐振谷底，同时串联式连接可减少MOSFET的开关损耗。

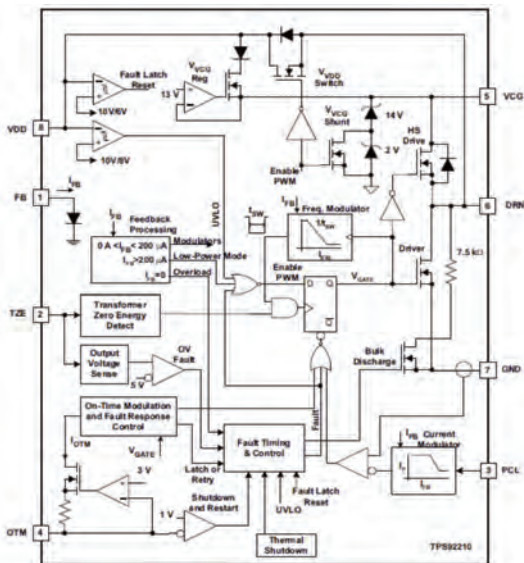
**目标应用**

- TRIAC调光LED照明设计
- 家用LED照明，传统灯泡替换A19 (E27/26，E14)，PAR30/38，GU10，BR
- 筒灯建筑照明，行人道照明，大功率照明
- 商用照明及筒灯

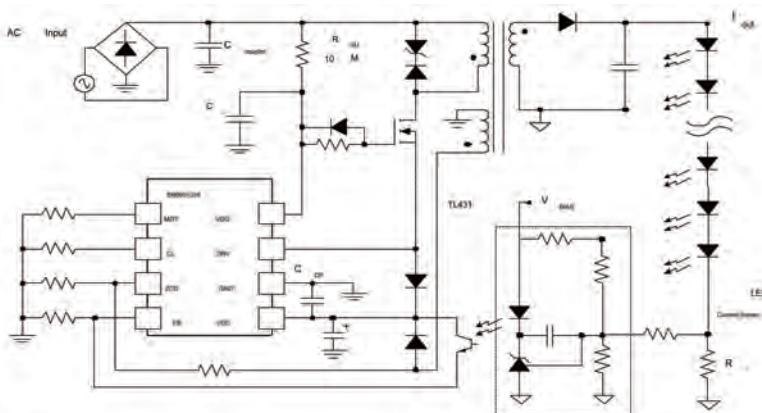
**APPLICATION CIRCUIT FEATURES (应用电路特性)**

- Peak Power 最大功率：** 90W (瓦)
- Input Voltage 输入电压：** 85 - 300Vac (伏)
- Output Voltage 输出电压：** 19V (伏)
- Estimated Efficiency 预计效率：** Up to 85% @220Vac input, 9Leds/700mA output 可达85% @220Vac (伏)，9Leds/700mA输出
- Regulation 校准：** Can regulate the output voltage or current 可以调节输出电压或电流
- Power Factor 功率因数：** > 0.95

**CONTROLLER BLOCK DIAGRAM (控制器原理图)**



**APPLICATION CIRCUIT (应用电路图)**



**Testing Figures (测试数据)**

Input Power 输入功率	Output Voltage 输出电压	Output Current 输出电流	Efficiency 效能
8.57W	19V	370mA	82%

**Test Condition: Output 7W / 6 LEDs Series / 20V (7W / 6 LED系列 / 20V的测试数据)**

Vin 输入电压	PF 功率因数	Efficiency 效能	THD 谐波	Iout (mA) 输出电流
90V	0.996	78.1%	4.9%	361
110V	0.990	80.2%	6.2%	365
120V	0.986	81.1%	6.3%	365
140V	0.974	82.0%	7.9%	372

**PART NUMBER (型号)** UCC28811DR

**SUPPLIER (供应商)**



**DESCRIPTION**

The UCC28810 and UCC28811 are general lighting power controllers for low to medium power lumens applications requiring power factor correction and EMC compliance. It is designed for controlling a flyback, buck or boost converter operating in critical conduction mode. It features a transconductance voltage amplifier for feedback error processing, a simple current reference generator for generating a current-sense(PWM) comparator, PWM logic and a totem-pole driver for driving an external FET.

**描述**

UCC28810 和 UCC28811 是一个中小功率照明应用高功率因数电源控制器，适用于设计成flyback，buck或Boost电路模式，跨导电压误差放大器，简单的电流参考比较，

**TARGET APPLICATION**

- AC input general lighting application using HB LEDs
- Industrial, commercial and residential lighting fixtures
- Outdoor lighting: street, roadway, parking, construction and ornamental LED lighting fixtures

**目标应用**

- 交流输入照明应用
- 工业，商业，家居照明
- 户外照明：路灯，停车场等

**IC FEATURES (IC特性)**

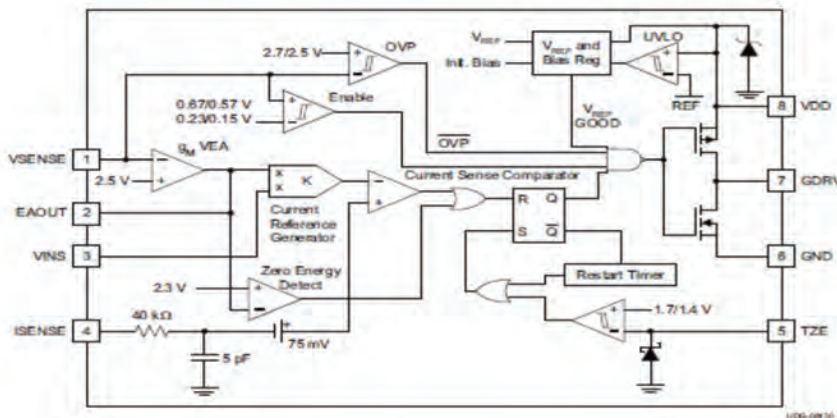
- Distinctive Features 特点：** Transition mode controller for low implementation cost of AC input LED lighting applications  
临界模式控制低成本AC输入LED照明应用
- Topology 线路结构：** Implements single stage power factor corrected LED driver  
单级反激PFC控制
- Protection 保护：** Two UVLO options/OVP/Open-feedback protection and enable circuits  
输入过欠压 / 输出过压 / 开环保护 / EN
- Switching Frequency 开关频率：** Regulate 根据需要设置
- Driver Current 驱动电流：** 750mA (毫安)
- Package 封装：** SO-8

**APPLICATION CIRCUIT FEATURES (应用电路特性)**

- Peak Power 最大功率：** 20W (瓦)
- Input Voltage 输入电压：** 85 - 265Vac (伏)
- Output Voltage 输出电压：** 40V (伏)
- Estimated Efficiency 预计效率：** 87%
- Regulation 校准：** Nil
- Power Factor 功率因数：** 0.99

Testing Figures (测试数据)			
Input Power 输入功率	Output Voltage 输出电压	Output Current 输出电流	Efficiency 效能
20.7W	40V	450mA	87%

**CONTROLLER BLOCK DIAGRAM (控制器原理图)**



**APPLICATION CIRCUIT (应用电路图)**

