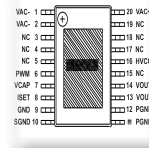
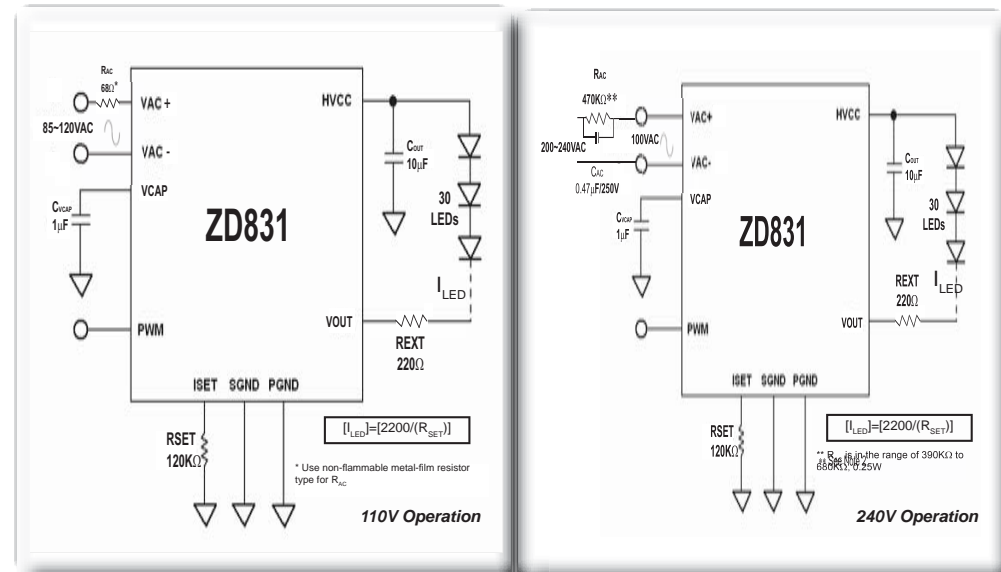


World Class TransformerFree™ AC-DC Constant Current LED Driver



...In The Smallest Footprint
For All Form-Factored LED Lamps And Lighting Systems

Typical Applications



Pin Description

Pin Number	Pin Name	Pin Function
1, 2	VAC-	High Voltage AC Input, from 85-120VAC.
20	VAC+	High Voltage AC Input, from 85-120VAC.
6	PWM	LED Dimming Control Pin. PWM signal with duty cycle or logic high/low input.
7	VCAP	Internal Regulator Output. Decouple this pin with a 1µF capacitor.
8	ISET	Output Current Level Resistor Input. Connecting a resistor RSET from this pin to ground sets the output current of the LED driver.
9	GND	Substrate Ground. Must be connected to SGND (Pin# 10).
10	SGND	Signal Ground. Connects all small signal components to this ground.
11, 12	PGND	Power Ground. Connects high voltage decoupling capacitor to this ground.
13, 14	VOUT	LED Driver Open-Drain Output. Constant current sinking output rated for 120V.
16	HVCC	High Voltage Rectified DC Output. Connects a 10µF decoupling capacitor from this pin to PGND. The power rating (P_{DC}) of the capacitor depends on the input VAC voltage.
3, 4, 5, 15, 17, 18, 19	NC	No Connect Pins. Must be left open and unconnected.

Ordering Information

Part Number	Temperature Range	Package Type
ZD831LEY	-40°C to +85°C	20-EP TSSOP
ZD831EV6	n/a	Evaluation Board

Assuming Vf of LEDs is at 1.8V at constant current over the supply voltage range of 85VAC-120VAC.

- No Transformer, No Bridge Rectifier
- 85VAC to 120VAC Input Voltage Range
- Programmable 30mA Constant Output Current
- Drives Up To 50 LEDs Per String#
- Digital PWM or Analog DC Voltage Dimming Control
- Over-Temperature/Voltage Protection
- Very Minimum External Components
- Complete Static Design With No EMI
- Thermally Enhanced 20-Pin Exposed TSSOP RoHS Green Package

ZD831 Display Driver

 **ZYWYN CORPORATION**
www.zywyn.com



ZD831 Display Driver

 **ZYWYN CORPORATION**
www.zywyn.com

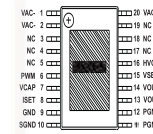
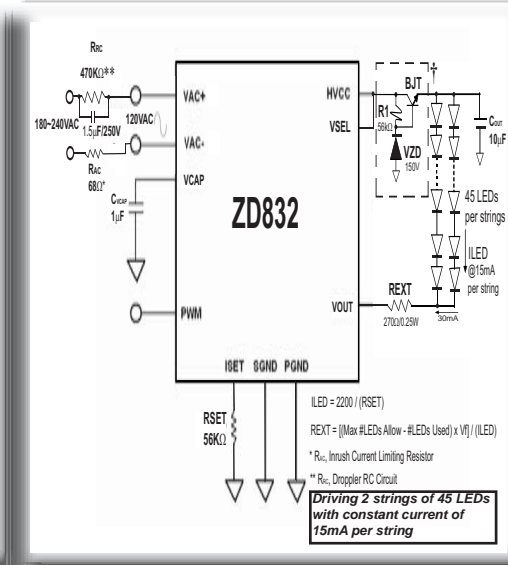
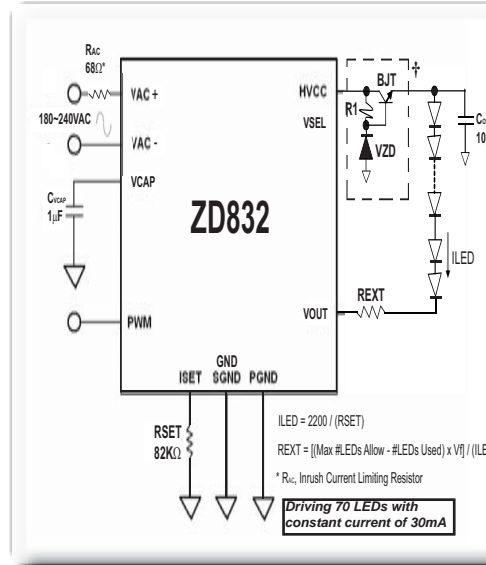
World Class Universal TransformerFree™ AC-DC Constant Current LED Driver



....In The Smallest Footprint

For All Form-Factored LED Lamps And Lighting Systems

Typical Applications



Pin Description

Pin Number	Pin Name	Pin Function
1, 2	VAC-	High Voltage AC Input, from 85-170VAC (VSEL=HVCC), or 170-240VAC (VSEL=OPEN)
20	VAC+	High Voltage AC Input, from 85-170VAC (VSEL=HVCC), or 170-240VAC (VSEL=OPEN)
6	PWM	LED Dimming Control Pin. PWM signal with duty cycle or logic high/low input.
7	VCAP	Internal Regulator Output. Bypass this pin with a 1μF capacitor to SGND.
8	ISET	Output Current Level Resistor Input. Connecting a resistor RSET from this pin to ground sets the output current of the LED driver.
9	GND	Substrate Ground. Must be connected to SGND (Pin# 10).
10	SGND	Signal Ground. Connects all small signal components to this ground.
11, 12	PGND	Power Ground. Connects high voltage decoupling capacitor to this ground.
13, 14	VOUT	LED Driver Open-Drain Output. Constant current sinking output rated for 100V.
15	VSEL	VSEL=OPEN when the device is to operate for 220VAC input. VSEL=HVCC (connects to HVCC pin) when the device is to operate for 110VAC input.
16	HVCC	High Voltage Rectified DC Output. Connects a 10μF decoupling capacitor from this pin to PGND. The power rating (V _{dc}) of the capacitor depends on the input VAC voltage.
3, 4, 5, 17, 18, 19	NC	No Connect Pins. Must be left open and unconnected.

Ordering Information

Part Number	Temperature Range	Package Type
ZD832LEY	-40°C to +85°C	20-EP TSSOP
ZD832EVB	n/a	Evaluation Board

Assuming Vf of LEDs is at 1.8V at constant current over the supply voltage range of 180VAC-240VAC.

† Optional circuit to maintain ILED at constant current of ±6% throughout the supply voltage range of 180VAC-240VAC.

0807

- No Transformer, No Bridge Rectifier
- 85VAC To 240VAC Input Voltage Range
- Programmable 30mA Constant Output Current
- Drives Up To 117 LEDs Per String*
- Digital PWM Or Analog Voltage Dimming Control
- Over-Temperature/Voltage Protection
- Very Minimum External Components
- Complete Static Design With No EMI
- Thermally Enhanced 20-Pin Exposed TSSOP RoHS Green Package

ZD832 Display Driver



ZYWYN CORPORATION
www.zywyn.com



ZD832 Display Driver



ZYWYN CORPORATION
www.zywyn.com