

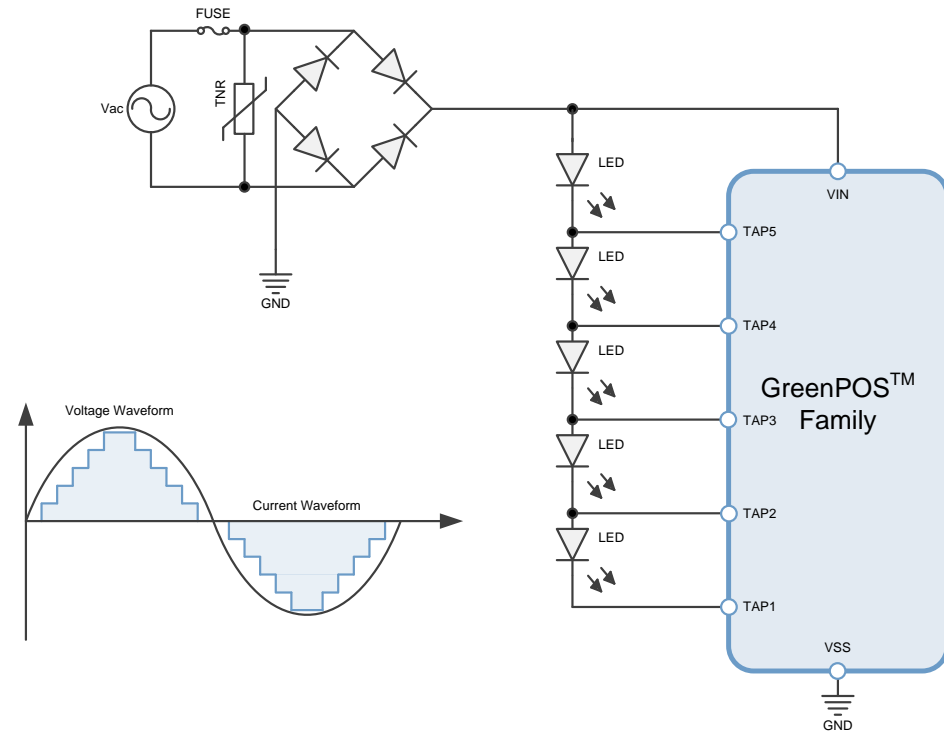
GreenPOS™ Family

AC Direct LED Driver Series

The new GreenPOS™ Family provides cost-effective integrated circuit solutions that enable AC voltage directly for the LED lighting system.

Key Features

- AC direct line
- Lower cost of ownership
- Wide input voltage range
- Low THD (Total Harmonic Distortion)
- High PF (Power Factor)
- Embedded various dimming solution
- High quality of light
- Thermal shutdown with hysteresis
- Temperature compensation
- Design flexibility
- Free from EMI Noise



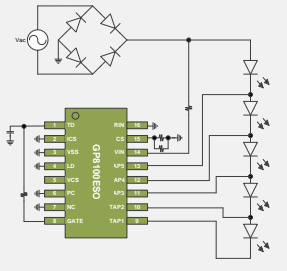
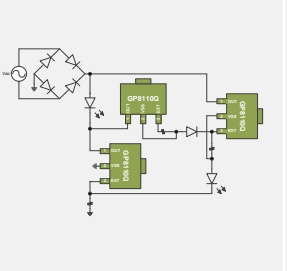
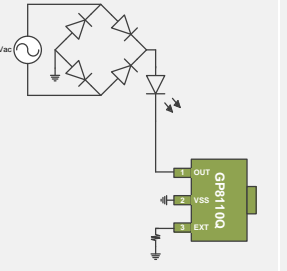
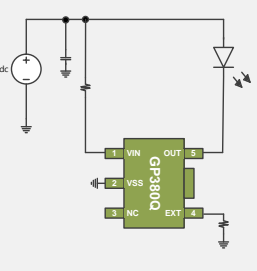
GREENCHIP INC.

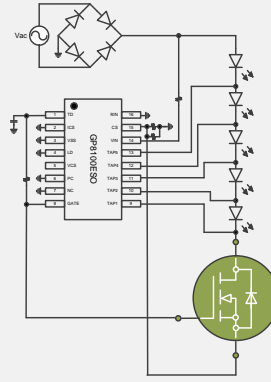
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LED DRIVER	GP8100ESO	GP8110Q		GP380Q
LED String	5 STEP	2 STEP	1 STEP	1 STEP
Input Current	80mA ~ 200mA	100mA	100mA	100mA
Input Power	25W (@220Vac)	12W (@220Vac)	12W (@220Vac)	12W (@220Vac)
Input Voltage	90 ~ 270Vac	90 ~ 270Vac	90 ~ 270Vac	8Vdc ~ 300Vdc
Operating Temperature	-40 ~ +125°C	-40 ~ +125°C	-40 ~ +125 °C	-40 ~ +125°C
Power Efficiency	90% (@220Vac)	85% (@220Vac)	90% (@220Vac)	90% (@220Vac)
Power Compensation	Yes	No	No	No
THD	15% ↓	15% ↓	50% ↓	50% ↓
PF(Power Factor)	0.97 ↑	0.97 ↑	0.85 ↑	0.85 ↑
Dimming (0V ~ 10Vdc, PWM)	0V ~ 10Vdc, PWM	-	-	PWM (@ External TR)
TRIAC Dimming	Good	Excellent	No	No
EMI	Free	Free	Free	Free
Flicker Percent	30% ↓ (@E-Cap)	30% ↓ (@E-Cap)	Free (@ E-Cap)	Free
Temperature Protection	Thermal Shut Down: 170°C	Thermal Trip: 130°C Thermal Shut Down: 170°C	Thermal Trip: 130°C Thermal Shut Down: 170°C	Thermal Trip: 130°C Thermal Shut Down: 170°C
Application	Factory / Flood / Room / Street Light	Bulb / Down light / L-Tube	Bulb / Down light / L-Tube	Sign Light
Package Type	ESOP-16L	SOT89-3L	SOT89-3L	SOT89-5L
Typical Application				

FET	GHV4502D
Drain-Source Voltage	450V
Drain Current	0.2A
Gate-Source Voltage	-0.5 ~ +16V
DS On Resistance (@V _{GS} = 10V)	45Ω
Operating Temperature	-40 ~ +125°C
Junction Temperature	150°C
Package Type	D-PAK
Typical Application	

Comparison Table (GREENCHIP vs. Others)

Down Light (15W)	Company A	Company B	GREENCHIP (GP8100ESO)
Power consumption	15W	15W	15W
PCB size	φ100mm	φ100mm	φ100mm
PCB material	Metal	Metal	CEM
PCB cost rate	100%	100%	37%
THD	Under 20%	Under 15%	Under 10%
IC temperature	92.5°C	91°C	69.9°C

* Remark: The measurement results at room temperature for 20°C when using the same illuminator.