



12 Watt — LP12W Series

CONSTANT CURRENT LED DRIVER WITH ONE 12 Watt OUTPUT

Small & Efficient Series

US & CN LED DRIVER CLASS 2

Part Number: LP12W
Product mark: YG
Manufactory: Shenzhen YIGUANG technology co., Ltd
Driving mode: Constant current with safety isolation
Technology: Single-Stage PFC & PSR technology
Output Power: 12 Watt
Input voltages: 100 to 277 VAC (maximum : 90-305 VAC)
Efficiency: Up to 90%
Suitable: For LED lamp driver
Warranty: 5 years



Enclosure



Size \ Unit	Inch	Millimeter
Case Length	2.99	76.00
Case Width	1.23	31.30
Case Height	0.98	25.40

Special Features

1. UL8750, UL1310 Class 2, CSA22.2 safety compliant
2. FCC 47CFR PART 15 compliant
3. Meet the RoHs directive, IP65 compliant
4. Suitable for high-temperature, high-dust location
5. Inrush Current Limiting Circuitry: AC line to line 1.5 kV, eliminates circuit breaker tripping, switch arcing and relay failure
6. Single output, ranged from 7Vdc up to 200Vdc
7. Active PFC reduces power consumption
8. Isolation between primary and secondary

Environmental

1. Operating temperature: Tc 90°C (max), Reference Ta -40 to +60°C.
2. Storage temperature range: -40 to +85°C
3. Humidity (non-condensing): 5% - 95%RH
4. Cooling: free air cooling convection
5. Vibration frequency: 5-55Hz/2g, 30 minutes; impact resistance: 1g/s
6. MTBF @ 80°C (Tc): 620,000 hours @ full load per MIL-217F notice 2
7. LIFE @ 80°C (Tc): 50,000 hours @ full load

Electrical Specifications

- Input voltage range: 100 to 277 VAC (maximum voltage range: 90-305 VAC)
- Frequency: 47- 63Hz
- Power factor: > 0.90 at full load, total harmonic distortion(THD): <20% more than 80% load
- Inrush current: <10A at 25°C, 120V, cold start
- Input current: 0.18A at 120V
- Efficiency: 85% (typical), 88% (maximum), at full load, 220V
- Maximum output power: 12W
- Constant current regulation: $\pm 3\%$ over input line variation, load regulation accuracy: $\pm 4\%$
- Start-up time: <1 s, output overshoot: <10%
- Leakage current: 300uA (typical)
- Hold up time: half cycle
- Output over-voltage protection function
- Output over-current protection function
- Output short circuit protection: auto-recovery
- Energy star: no-load power consumption less than the fixed type constant current 0.5W (at 120V input);

12W Constant current versions

No.	Part Number	US Class 2	CN Class 2	Output Voltage Range	Output Constant Current	Current Accuracy	Power ⁽¹⁾ Factor	Output Power	Max. ⁽²⁾ Eff.
1	LP12W-150-C0080	No	No	100~150 V	80 mA	±5%	0.90	12 Watt	90%
2	LP12W-100-C0120	No	No	66~100 V	120 mA	±5%	0.90	12 Watt	90%
3	LP12W-48-C0250	Yes	Yes	32~48 V	250 mA	±5%	0.90	12 Watt	89%
4	LP12W-43-C0280	Yes	Yes	28~43 V	280 mA	±5%	0.90	12 Watt	88%
5	LP12W-36-C0350	Yes	Yes	24~36 V	350 mA	±5%	0.90	12 Watt	88%
6	LP12W-24-C0500	Yes	Yes	16~24 V	500 mA	±5%	0.90	12 Watt	87%
7	LP12W-18-C0660	Yes	Yes	12~18 V	660 mA	±5%	0.90	12 Watt	86%
8	LP12W-16-C0750	Yes	Yes	10~16 V	750 mA	±5%	0.90	12 Watt	85%
9	LP12W-12-C1000	Yes	Yes	8~12 V	1000 mA	±5%	0.90	12 Watt	85%

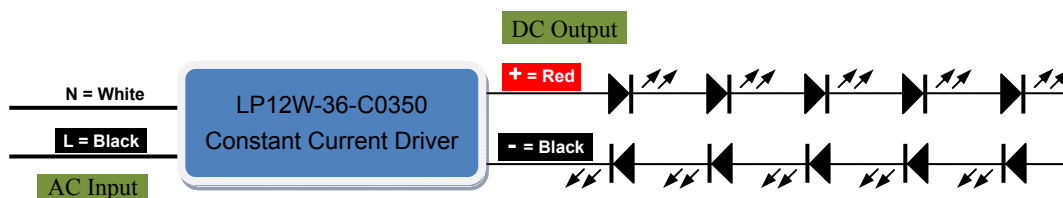
12W Constant voltage versions

No.	Part Number	US Class 2	CN Class 2	Output Voltage	Output Constant Current (max)	Current Accuracy	Power ⁽¹⁾ Factor	Output Power	Max. ⁽²⁾ Eff.
1	LP12W-24	Yes	Yes	24 V	500 mA	±5%	0.90	12 Watt	86%
2	LP12W-12	Yes	Yes	12 V	1000 mA	±5%	0.90	12 Watt	85%

Note:

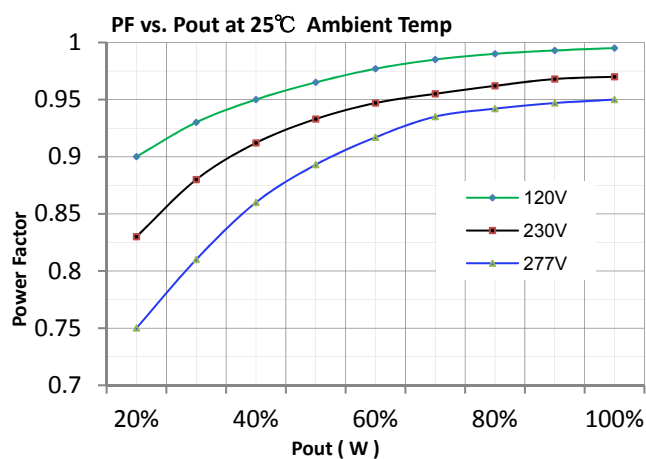
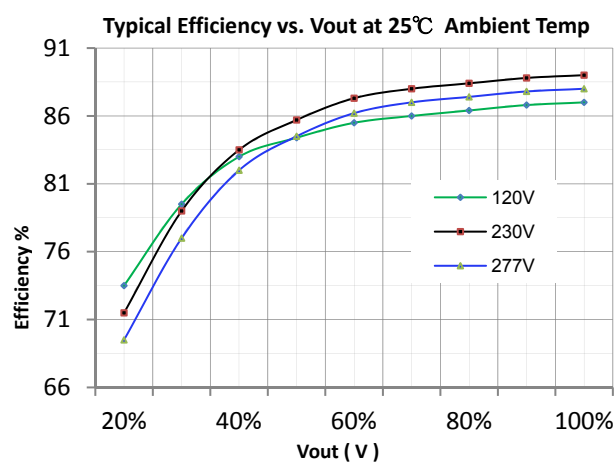
1. Typical power factor measured at 220VAC input, full load.
2. Maximum efficiency measured at 220VAC input, full load.

Typical Applications

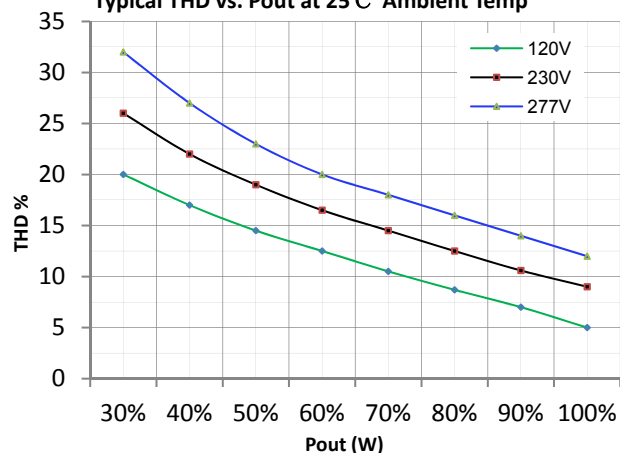


LED driver recommended application the following conditions.

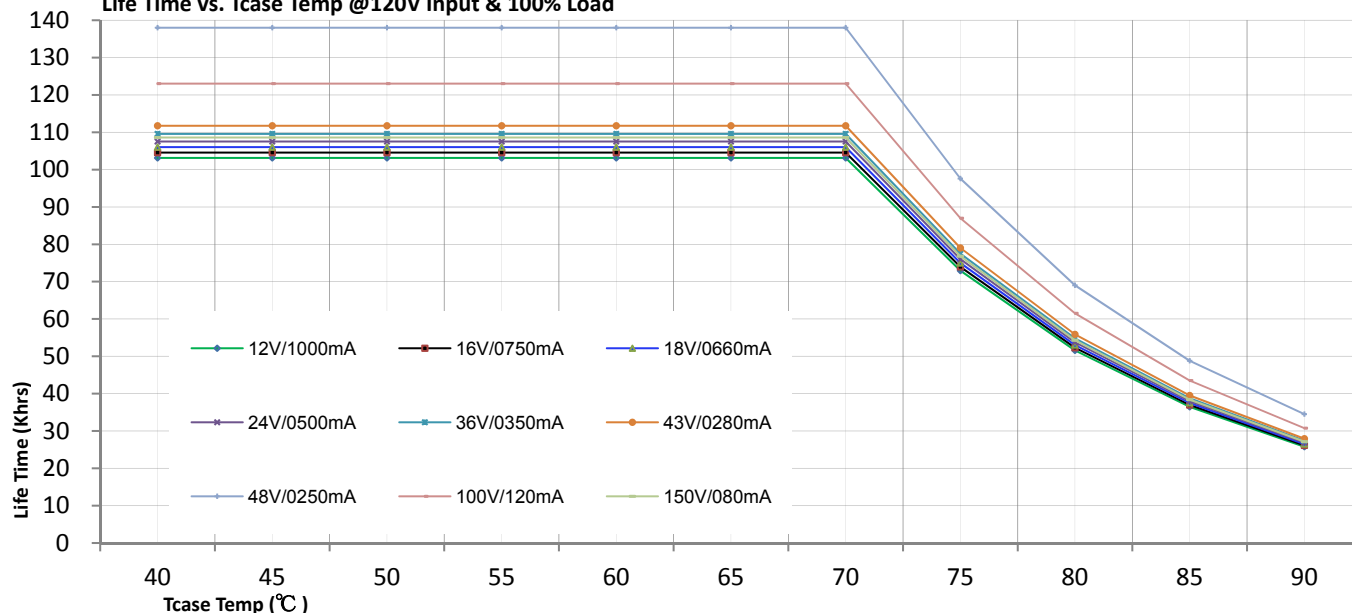
LED forward voltage: $V_F = 3.0V \sim 3.5V$, LED forward current $I_F = 350 \text{ mA}$.



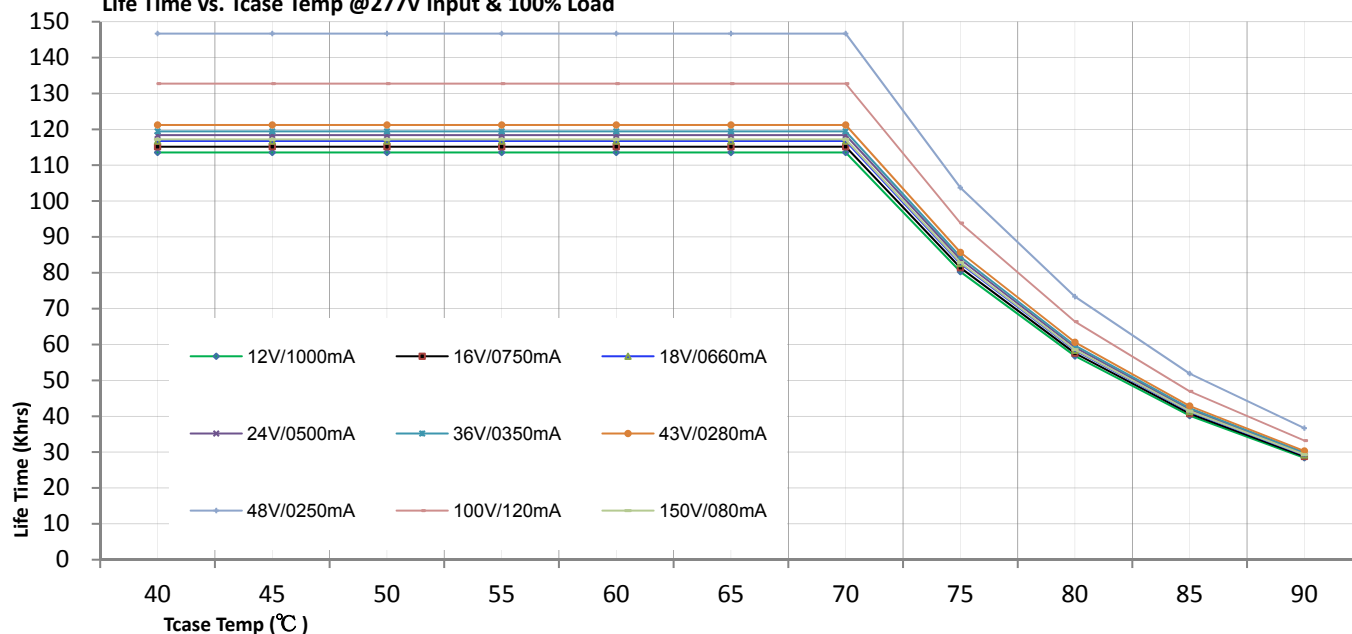
Typical THD vs. Pout at 25°C Ambient Temp



Life Time vs. Tcase Temp @120V Input & 100% Load



Life Time vs. Tcase Temp @277V Input & 100% Load



Installation

ABS + PC plastic shell;

Used with thermal conductivity and flame retardant glue potting;

AC input for connection the two cores ANSI/UL1015/AWG18 high temperature more than 105 °C wire;

Cable length: 150mm, stripping on the tin: 10mm.

Where: L — black wire, N — white wire;

DC output for connection the two cores ANSI/UL1569/AWG18 high temperature more than 105 °C wire;

Cable length: 150mm, stripping on the tin: 10mm.

Where: DC+ — red wire, DC- — black wire;

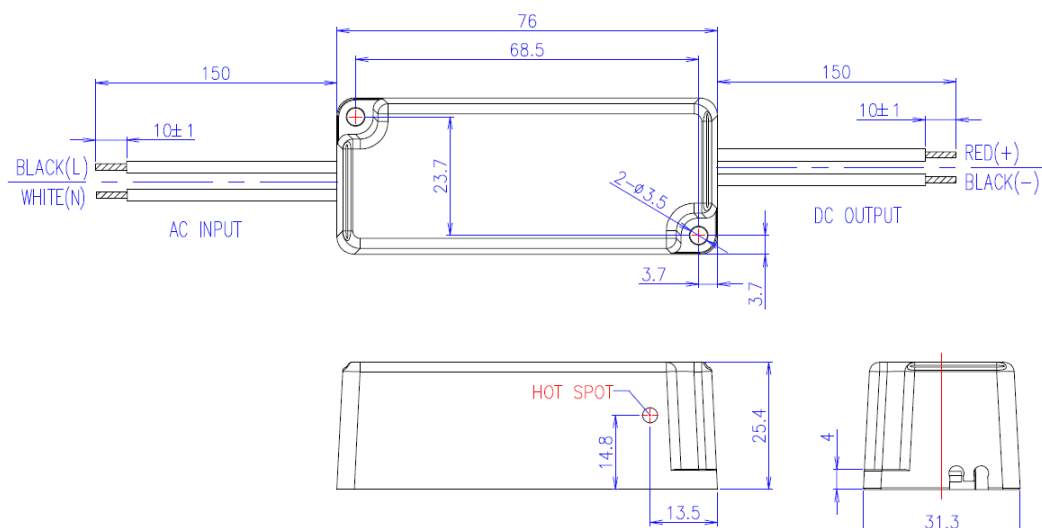
This product has two $\Phi 3.5$ mm mounting holes for the positioning of the products used to install.

Order ID

P/N: LP12W-36-C0350

Description: 12W, 36Vdc voltage max, constant current 350mA, constant current mode.

Product size



Note: may set your favorite parameter, but make sure the power is under limit.