



50 Watt — LP50W Series Small & Efficient Series

CONSTANT CURRENT LED DRIVER WITH ONE 50 Watt OUTPUT

US & CN LED DRIVER CLASS 2

Part Number: LP50W Series
Product mark: YG
Manufactory: Shenzhen YIGUANG technology co., Ltd
Driving mode: Constant current & voltage with safety isolation
Technology: Single-Stage PFC & PSR technology
Output Power: 50 Watt
Input voltages: 100 to 277 VAC (maximum : 90-305 VAC)
Efficiency: Up to 92%
Suitable: For LED lamp driver
Warranty: 5 years



Enclosure



Size \ Unit	Inch	Millimeter
Case Length	5.44	138.30
Case Width	1.73	44.10
Case Height	0.98	26.00

Special Features:

1. UL8750, UL1310 Class 2, CSA22.2 safety compliant
2. FCC 47CFR PART 15 compliant
3. A rated lifetime of 50,000 hours @ Tc = 75°C
4. Meet the RoHs directive, IP65 compliant
5. Suitable for high-temperature, high-dust location
6. Inrush Current Limiting Circuitry: AC Power Line: line to line 1.5 kV eliminates circuit breaker tripping, switch arcing and relay failure.
7. Single output, ranged from 7Vdc up to 200Vdc
8. Active PFC reduces power consumption
9. Isolation between primary and secondary

Environmental:

1. Operating temperature: Tc 90°C (max), Reference Ta -40 to +50°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;
6. impact resistance: 1g/s
7. MTBF @ 75°C (Tc): 510,000 hours @ full load per MIL-217F notice 2
8. EMC:

Compliant to CISPR 22 CLASS B, CISPR 14-1 CLASS B, GB4343. 1-2003, GB17625.1-2003

- a. Continuous interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
- b. Intermittent interference voltage test conforming to GB4343-2003+A1, CISPR 14-1: 1997, EN55014-1:1997-5
- c. Interference power test conforming to GB4343-2003+A1, CISPR 14-1:1997, EN55014-1:1997-6
- d. Harmonic currents test conforming to GB4343-2003+A1, CISPR 14-1:EN 61000-3-2:1995
- e. RF Electromagnetic Field Immunity test conforming to GB/T13926.3, IEC61000-4-3, PrEN55014-2 Section 6.5
- f. Electrical fast transient/burst immunity test conforming to GB/T13926.4, IEC61000-4-4, PrEN55014-2 section 6.2
- g. Voltage dips and short interrupts immunity test conforming to IEC61000-4-11
- h. Voltage variations immunity test conforming to IEC61000-4-11
- i. Electrostatic discharge immunity test conforming to IEC61000-4-11

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: <40A at 25°C, 120V, cold start
- Input current: 0.56A at 120V
- Efficiency: 86% (typical), 92% (maximum), at full load, 220V
- Maximum output power: 50W
- 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

50W 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	LP50W-200-C0250	No	No	120~200Vdc	250mA	$\pm 5\%$	0.90	50W	92%
2	LP50W-142-C0350	No	No	85~142Vdc	350mA	$\pm 5\%$	0.90	50W	92%
3	LP50W-100-C0500	No	No	60~100Vdc	500mA	$\pm 5\%$	0.90	50W	92%
4	LP50W-72-C0700	No	No	43~72Vdc	700mA	$\pm 5\%$	0.90	50W	91%
5	LP50W-54-C0910	Yes	Yes	32~54Vdc	910mA	$\pm 5\%$	0.90	50W	91%
6	LP50W-48-C1040	Yes	Yes	29~48Vdc	1040mA	$\pm 5\%$	0.90	50W	90%
7	LP50W-42-C1250	Yes	Yes	25~42Vdc	1250mA	$\pm 5\%$	0.90	50W	89%
8	LP50W-36-C1400	Yes	Yes	21~36Vdc	1400mA	$\pm 5\%$	0.90	50W	88%
9	LP50W-28-C1750	Yes	Yes	17~28Vdc	1750mA	$\pm 5\%$	0.90	56W	87%
10	LP50W-26-C2100	Yes	Yes	16~26Vdc	2100mA	$\pm 5\%$	0.90	50W	86%
11	LP50W-12-C4200	Yes	Yes	7~12Vdc	4200mA	$\pm 5\%$	0.90	50W	85%

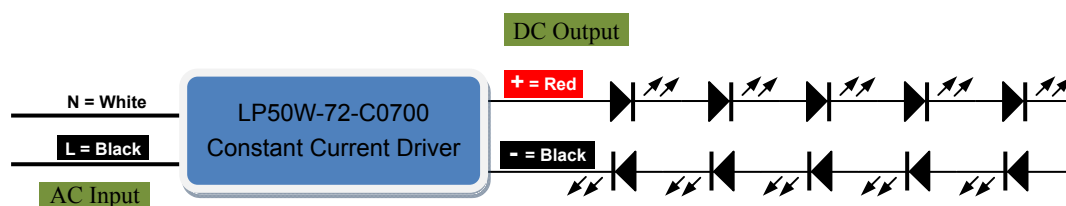
50W Constant Voltage versions:

No.	Part Number	US Class 2	CN Class 2	Output Voltage	Maximum Output Current	Voltage Accuracy	Power ⁽¹⁾ Factor	Output Power	Max. ⁽²⁾ Eff.
1	LP50W-48	Yes	Yes	48Vdc	1040mA	$\pm 5\%$	0.90	50W	90%
2	LP50W-36	Yes	Yes	36Vdc	1400mA	$\pm 5\%$	0.90	50W	88%
3	LP50W-24	Yes	Yes	26Vdc	2100mA	$\pm 5\%$	0.90	50W	86%
4	LP50W-12	Yes	Yes	12Vdc	4200mA	$\pm 5\%$	0.90	50W	85%

Note: 1. Typical power factor measured at 220VAC input, full load.

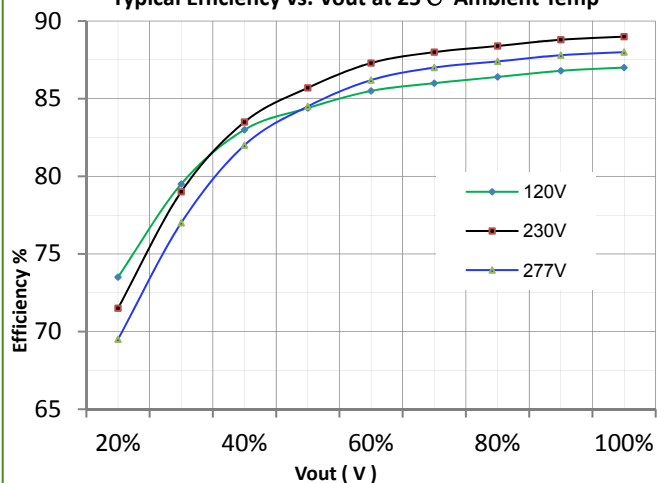
2. Maximum efficiency measured at 220VAC input, full load.

Typical Applications:

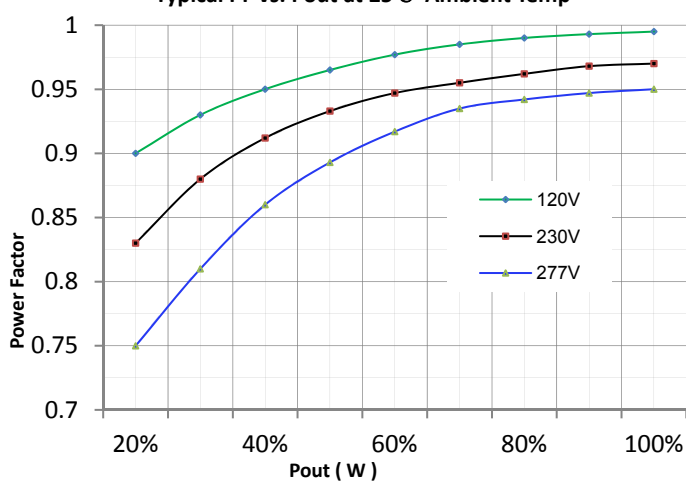


LED forward voltage: $V_F = 3.0V \sim 3.5V$, LED forward current $I_F = 700 \text{ mA}$

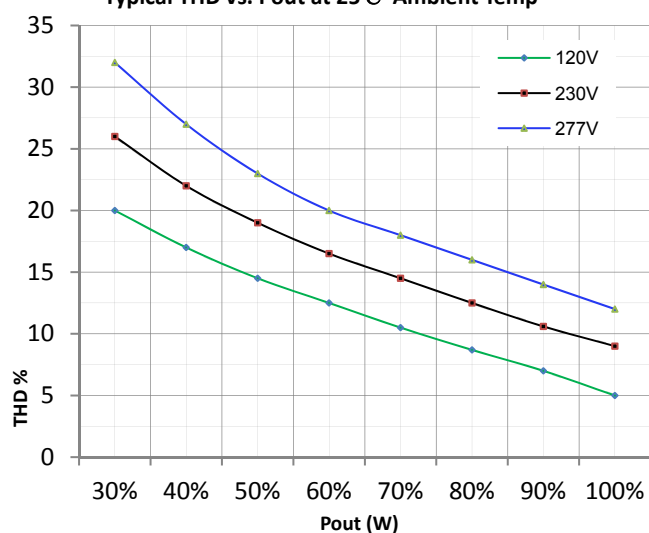
Typical Efficiency vs. Vout at 25°C Ambient Temp



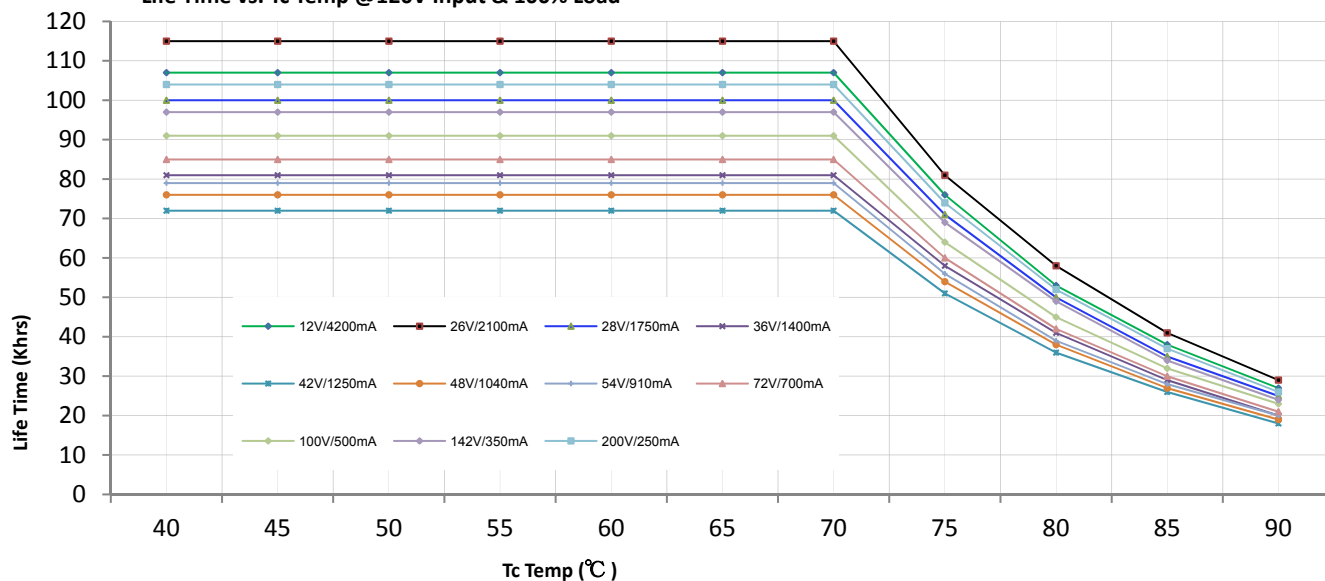
Typical PF vs. Pout at 25°C Ambient Temp

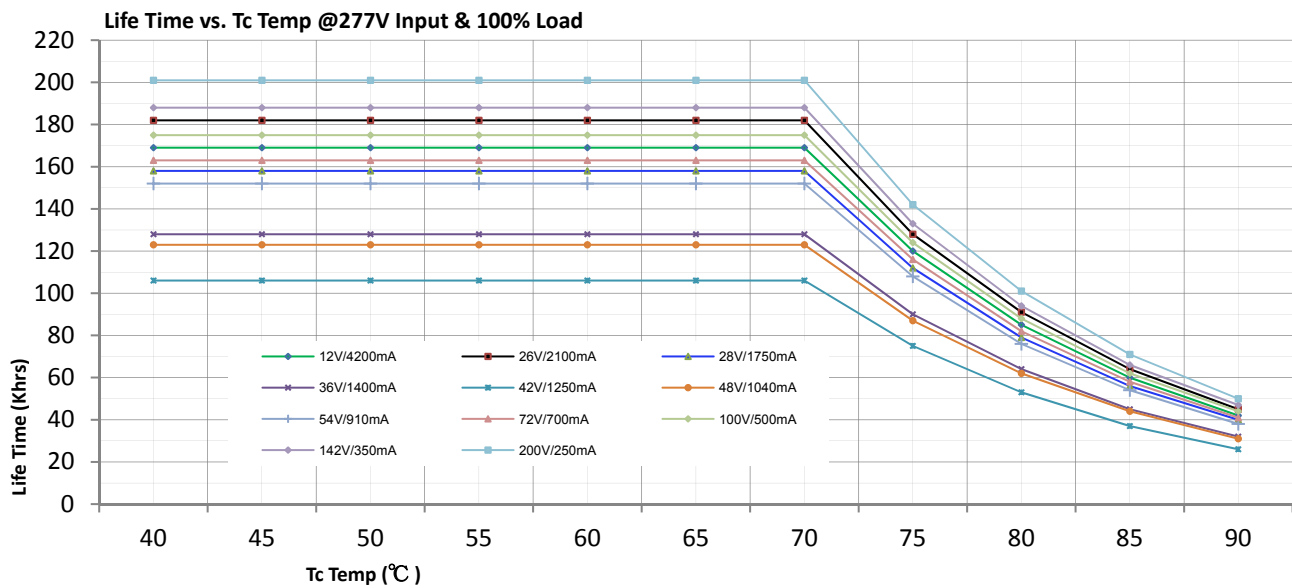


Typical THD vs. Pout at 25°C Ambient Temp



Life Time vs. Tc Temp @120V 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, DC- — black;

This product has two $\Phi 3.6$ mm mounting holes.

Order ID:

P/N: LP50W-72-C0700

Description: 50W, 72Vdc voltage max, constant current 700mA, constant current mode.

Product size:

