

44W —PPL44W230 Series

Mini. Size, High efficiency, No flicker, Constant current LED driver



Product family features

- Drive Mode: No Flicker Constant Current
- Technology: Boost + Flyback Technology
- Input Voltage: 220 to 240Vac (Max. Range: 198~264Vac)
- Output Frequency: 47-63Hz
- Output Power: 44Watt Max
- Output Voltage: 9Vdc to 42Vdc
- Output Voltage: 900mA to 1050mA (2 DIP,4 current outputs)
- Efficiency: Up to 91%
- Warranty: 3years
- No flicker constant current
- A rated lifetime of 30,000 hours @ Tc = 80 °C
- Safety isolation between primary and secondary
- Surge: AC Power Line: line to line 1KV/2Ω 8/20uS
- Accord to RoHS Standard
- IP20, Suitable for use in dry environment
- Suitable for Class I/II luminaries



Areas of application

- Education lighting
- Office lighting



Technical data

Electrical Parameter

| Product Modle | Max. output Power (W) | Output Voltage Range (Vdc) | output current (mA) | Current Accuracy (typ.) | Max Eff |
|---------------------|-----------------------|----------------------------|---------------------|-------------------------|---------|
| PPL44W-42-C1050-D-A | 44 | 9-42 | 1050 | ±5% | 91% |
| PPL44W-42-C1050-D-B | 44 | 9-42 | 1050 | ±5% | 91% |
| PPL44W-42-C1050-A | 44 | 9-42 | 1050 | ±5% | 91% |
| PPL44W-42-C1050-B | 44 | 9-42 | 1050 | ±5% | 91% |
| PPL42W-42-C1000-A | 42 | 9-42 | 1000 | ±5% | 91% |
| PPL42W-42-C1000-B | 42 | 9-42 | 1000 | ±5% | 91% |
| PPL40W-42-C0950-A | 40 | 9-42 | 950 | ±5% | 90.8% |
| PPL40W-42-C0950-B | 40 | 9-42 | 950 | ±5% | 90.8% |
| PPL38W-42-C0900-A | 38 | 9-42 | 900 | ±5% | 90.5% |
| PPL38W-42-C0900-B | 38 | 9-42 | 900 | ±5% | 90.5% |

Note: "-A": EMI uses Class I/Class II test - the product input has a common mode inductor, "-B": EMI uses Class II test, the product input lacks a common mode inductor
 "-D": The model with DIP switch to change the current, no "-D" is a constant current product

Product datasheet

Technical data

Programmable Output Parameters with DIP

| Product Modle | Output Voltage Range | output current (mA) | DIP1 | DIP2 | Current Accuracy | Output Power | Max Eff |
|--|----------------------|---------------------|------|------|------------------|--------------|---------|
| PPL44W-42-C1050-D-A PPL44W-42-C1050-D-B | 9-42V | 1050 | ON | ON | ±5% | 44W | 91% |
| | | 1000 | ON | OFF | ±5% | 42W | 91% |
| | | 950 | OFF | ON | ±5% | 39.9W | 90.8% |
| | | 900 | OFF | OFF | ±5% | 37.8W | 90.5% |

Electrical Specifications

| | Parameter | Min | Typ | Max | Notes / Conditions | |
|------------------|--|-----------|-------------|-----------|--|---|
| Input | Input Voltage | 198V | | 264V | | |
| | Input Frequency | 47Hz | 50/60Hz | 63Hz | | |
| | Input AC Current | | | 0.25A | Measured at 230Vac 50Hz Input, Output Full Load | |
| | No-load power | | | 0.5W | No-load | |
| | Inrush Current (Peak) | | 25A / 350uS | | Measured at 50% Ipeak& 240Vac / 50Hz Input, Output Full Load | |
| | Leakage Current | | | 2mA | Measured at 230Vac 50Hz Input, Output Full Load | |
| | THD | | | 20% | Measured at 230Vac Input, Output Full Load | |
| | Power Factor (PF) | | | | Measured at 230Vac Input, Output Full Load | |
| Output | DC Output Voltage | Per Table | Per Table | Per Table | Per Tables on Page 1 | |
| | PPL44W-42-C1050-D-A PPL44W-42-C1050-D-B | -5% | 1050mA | | | Pin1-ON, Pin2-ON |
| | | | 1000mA | | +5% | Pin1-OFF, Pin2-ON |
| | | | 950mA | | | Pin1-ON, Pin2-OFF |
| | | | 900mA | | | Pin1-OFF, Pin2-OFF |
| | PPL44W-42-C1050-A | | 1050mA | | | "-D": The model with DIP switch to change the current, no "-D" is a constant current product. |
| | PPL44W-42-C1050-B | | 1050mA | | | |
| | PPL42W-42-C1000-A | | 1000mA | | | |
| | PPL42W-42-C1000-B | -5% | 1000mA | | +5% | |
| | PPL40W-42-C0950-A | | 950mA | | | |
| | PPL40W-42-C0950-B | | 950mA | | | |
| | PPL38W-42-C0900-A | | 900mA | | | |
| | PPL38W-42-C0900-B | | 900mA | | | |
| | Output Power | | | Per Table | Per Tables on Page 1 | |
| | Flickering Index (Vpk-pk) | | | 1% Vo | | Output Full Load. 20MHz BW, Full load output in parallel with 0.1uF & 10uF CAP Flickering Index is defined as $[(Y_{max}-Y_{min}) / (Y_{max}+Y_{min})] * 100\%$. Y may be V or I |
| | Flickering Index (Ipk-pk) | | | 1% Io | | |
| Line Regulation | -3% | | | +3% | Measured at 220, 230, 240Vac / 50Hz Input, Output Full Load | |
| Load Regulation | -4% | | | +4% | Measured at 220, 230, 240Vac / 50Hz Input, Output Full Load | |
| Start-up Time | | 420ms | | 500ms | Measured at 220, 230, 240Vac / 50Hz Input, Output Full Load | |
| Output Overshoot | -2% | | | +10% | Measured at 220, 230, 240 Vac Input, When power on or off | |

Product datasheet

Technical data

Electrical Specifications

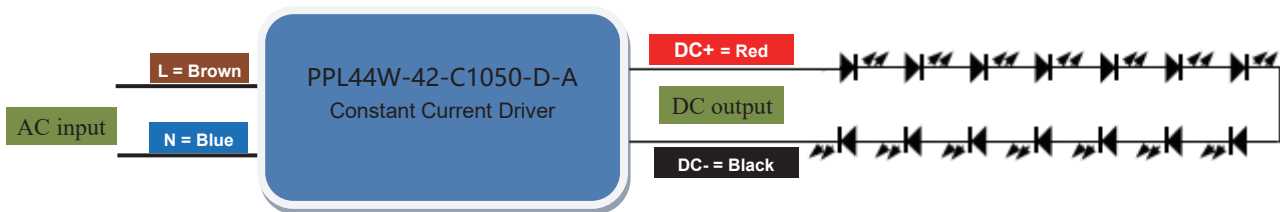
| | | | | |
|---------------|------------------------------|---|--|--|
| Protection | Output Short Circuit (SCP) | No Damage. Auto recovery after short is removed | | |
| | Output Over Current (OCP) | +10% I _O | Constant Current Limiting circuit | |
| | Output Over Voltage (OVP) | 120% V _O | No Damage. Auto recovery after the abnormal disappearance | |
| General | Cooling | Convection | | |
| | MTBF | 410,000 hours | Measured at 220Vac input, 100% Load and Ta=25°C(MIL-HDBK-217F) | |
| | Life Time | 30,000 hours | Measured at 220Vac input, 100% Load and TC=80°C | |
| | Noise | < 24dBA | Class A, no more than one meter away | |
| Environmental | Operating Temperature (Ta) | -20°C | +50°C | @230Vac. This is a reference range. Tc controls temperature range |
| | Case Temperature (Tc) | -20°C | +80°C | Case temperature |
| | Storage Temperature (Ts) | -25°C | +85°C | Non operating temperature range |
| | Operating Humidity | 5% RH | 95% RH | Relative Humidity. Non-condensing |
| | Vibration | 5Hz | 55Hz | 2G, 10 minutes / 1 cycle, period 30 minutes, each along X, Y, Z axis |

| | Category | Standards / Notes | |
|-------------------|----------------------|---|--|
| Safety Compliance | Withstand Voltage | Input to Output 3750Vac | |
| | Case – Output | 1.5kVac | |
| | Case - Input | 1.5kVac | |
| | Isolation Resistance | Input to Output >10MΩ, 500Vdc @25°C, 70% RH | |
| EMC Compliance | EMI | CCC | GB19510.14-2009, GB19510.1-2009 |
| | | CE | EN55015:2013+A1:2015, EN 61000-3-2:2014, EN 61000-3-3:2013. RED 2014/53/EU |
| | EMS | EN 61000-4-3 | Radio-Frequency Electromagnetic Field Susceptibility Test-RS |
| | | EN 61000-4-4 | Electrical Fast Transient / Burst-EFT |
| | | EN 61000-4-5 | Surge Immunity Test: AC Power Line: line to line 1.0 KV/2Ω |
| | | EN 61000-4-6 | Conducted Radio Frequency Disturbances Test-CS |
| | EN 61547 | Electromagnetic Immunity Requirements Applies to Lighting Equipment | |

Note: The above test data were carried out under the Ta=25°C except the labeled temperature

Product datasheet

Typical Applications



Order ID

1.P/N: PPL44W-42-C1050-D-A

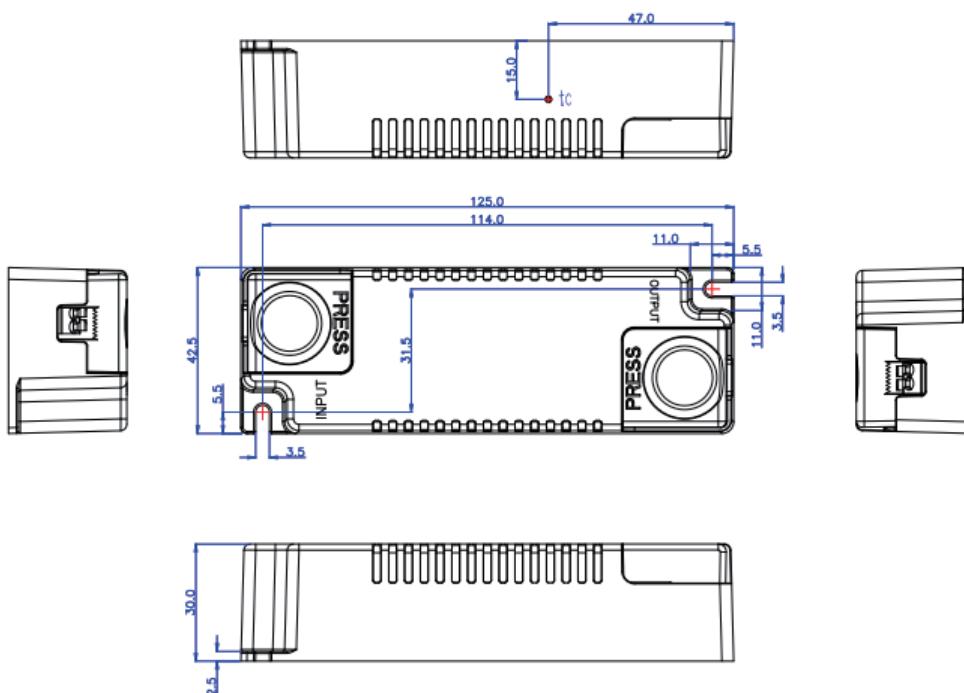
Description:44W, Max. 42Vdc, Constant current value is 1050mA, constant current mode

2.P/N: PPL44W-42-Cxxxx-x

Note: 44W, Max. 42Vdc, Constant current value is 900-1050mA, constant current mode

Appearance information

Product Size



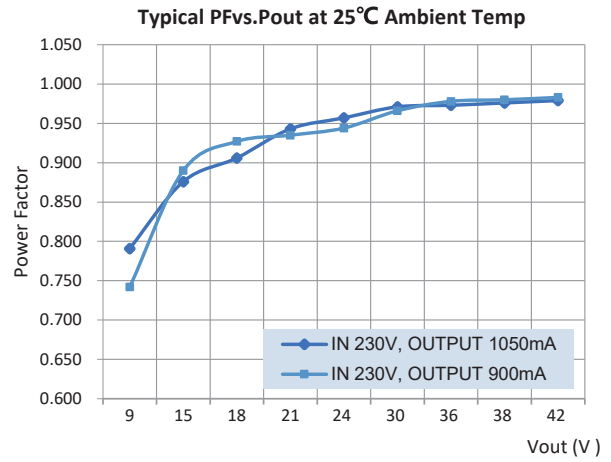
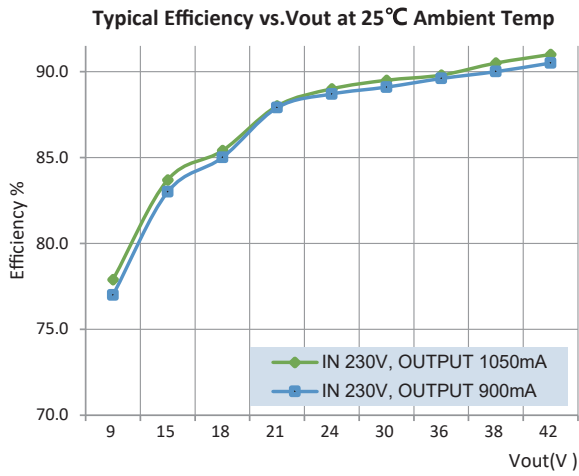
Note:

The independent LED drive conforms to the EMC standard. But it is not guaranteed to be qualified, when the drive is mounted in the LED fixture

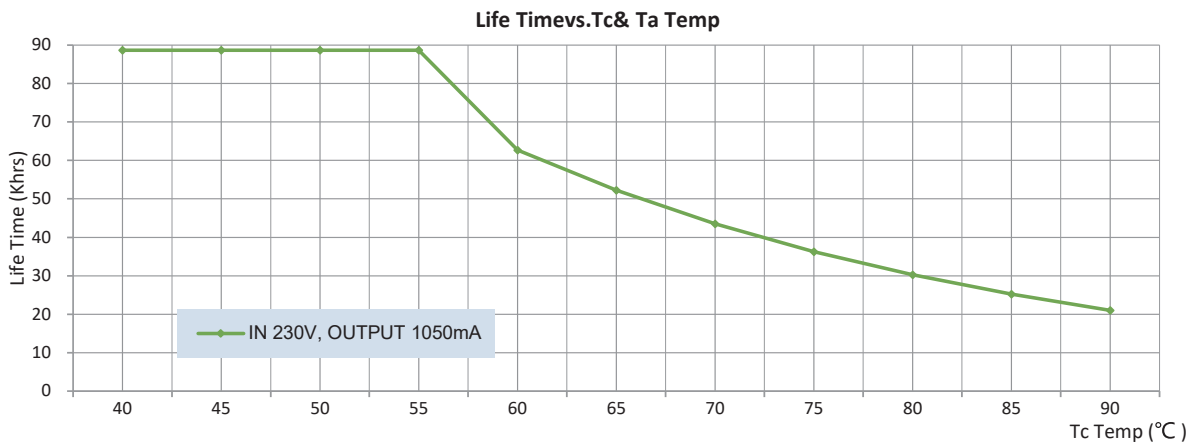
Please forgive us for any discrepancy due to the update of the specifications or the upgrade of the product. If you need the latest information, please contact our marketing department

Product datasheet

Characteristic Curve



Lifetime Curve



Installation

AC input wires cross section: 0.75-1.52

DC output wires cross section: 0.5-1.52

This product for indoor use only, it can be installed and fixed in the luminaires, connected with the wire. The max length of output line should be less than 2m.

Note: Since the DC output line is permanently connected and shorter than 3 m, therefore the disturbance voltage of local wired port shall not be required