

# ZPRODUCT SPECIFICATION

Product Model: 36 W—PPL36W

Version Number: V3.1

Created	Validated	Approved
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Version	Description of change	Date
V3.1	1.Output Voltage changed to 9-42V. 2.Minimum storage temperature (Ts) updated to -25 °C.	2023-05-16

## 36W —PPL36W V3.1 Mini. Size, High efficiency, No flicker, Constant current LED driver

PPL36W series drive is a high performance LED drive power supply, using constant current output control, Safety isolation, lowest output ripple.

### Key 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: 36Watt Max
- Output Voltage: 9Vdc to 42Vdc
- Output Current: 700mA to 850mA (2 DIP,4 current outputs)
- Output Current: 600mA to 850mA (Non-dial-up)
- Efficiency: Up to 90.5%
- Warranty: 3 years

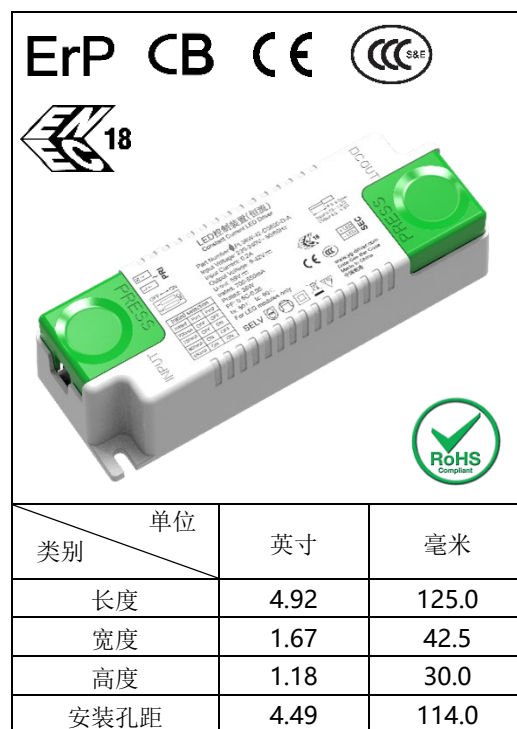
### Special Features

- No flicker constant current.
- A rated lifetime of 30,000 hours @ Tc = 80 °C.
- The primary side and secondary side are safely isolated, AC input DC output.
- 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.
- Programmed aging at 50 °C.

### Electrical Parameter

Model	Max. output Power	Output Voltage Range	Output Current	Current Accuracy	Max. Eff.
PPL36W-42-C0850-D-A	36W	9-42Vdc	850mA	±5%	90.5%
PPL36W-42-C0850-D-B	36W	9-42Vdc	850mA	±5%	90.5%
PPL36W-42-C0850-A	36W	9-42Vdc	850mA	±5%	90.5%
PPL36W-42-C0850-B	36W	9-42Vdc	850mA	±5%	90.5%
PPL34W-42-C0800-A	34W	9-42Vdc	800mA	±5%	89%
PPL34W-42-C0800-B	34W	9-42Vdc	800mA	±5%	89%
PPL32W-42-C0750-A	32W	9-42Vdc	750mA	±5%	87%
PPL32W-42-C0750-B	32W	9-42Vdc	750mA	±5%	87%
PPL29W-42-C0700-A	29W	9-42Vdc	700mA	±5%	86%
PPL29W-42-C0700-B	29W	9-42Vdc	700mA	±5%	86%
PPL27W-42-C0650-A	27W	9-42Vdc	650mA	±5%	86%
PPL27W-42-C0650-B	27W	9-42Vdc	650mA	±5%	86%
PPL25W-42-C0600-A	25W	9-42Vdc	600mA	±5%	86%
PPL25W-42-C0600-B	25W	9-42Vdc	600mA	±5%	86%

**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.



## Programmable Output Parameters with DIP

Model	Output Voltage Range	Output Current	DIP1	DIP2	Current Accuracy	Output Power	Max. Eff.
PPL36W-42-C0850-D-A PPL36W-42-C0850-D-B	9-42Vdc	850mA	ON	ON	±5%	36W	90.5%
		800mA	ON	OFF	±5%	34W	89%
		750mA	OFF	ON	±5%	32W	87%
		700mA	OFF	OFF	±5%	29W	86%
		650mA	ON	ON	±5%	27W	86%
		600mA	ON	OFF	±5%	25W	86%

## Input Specifications

Parameter	Min.	Typ.	Max.	Notes /Conditions
Input Voltage	198Vac	---	264Vac	
Input Frequency	47Hz	50/60 Hz	63Hz	
Input AC Current	---	---	0.25A	Measured at 230Vac 50Hz Input, Full load 850mA/42V output.
No-load power	---	---	0.5W	No-load.
Inrush Current (Peak)	---	20A / 350uS	---	Measured at 50% Ipeak & 240Vac / 50Hz Input, Full load 850mA/42V output.
Leakage Current	---	---	2mA	Measured at 230Vac 50Hz Input, Full load 850mA/42V output.
THD	---	---	20%	The minimum maximum load and 230Vac input are measured.
Power Factor (PF)	0.9	---	---	The minimum maximum load and 230Vac input are measured.

## Output Specifications

Parameter	Min.	Typ.	Max.	Notes /Conditions			
DC Output Voltage	Per Table	Per Table	Per Table	Per Tables on Page 1			
PPL36W-42-C0850-D-A PPL36W-42-C0850-D-B	-5%	850mA	+5%	Pin1-ON, Pin2-ON.			
		800mA		Pin1-OFF, Pin2-ON.			
		750mA		Pin1-ON, Pin2-OFF.			
		700mA		Pin1-OFF, Pin2-OFF.			
		650mA		Pin1-ON, Pin2-ON.			
		600mA		Pin1-OFF, Pin2-ON.			
PPL36W-42-C0850-A	-5%	850mA	+5%	"-D": The model with DIP switch to change the current, no "-D" is a constant current product.			
PPL36W-42-C0850-B		850mA					
PPL34W-42-C0800-A		800mA					
PPL34W-42-C0800-B		800mA					
PPL32W-42-C0750-A		750mA					
PPL32W-42-C0750-B		750mA					
PPL29W-42-C0700-A		700mA					
PPL29W-42-C0700-B		700mA					
PPL27W-42-C0650-A		650mA					
PPL27W-42-C0650-B		650mA					
PPL25W-42-C0600-A		600mA					
PPL25W-42-C0600-B		600mA					
Ripple (<120Hz)		---			5%	10%	20MHz BW, parallel 0.1uF & 10uF capacitors at test end
Flickering Index		PstLM<1, SVM<0.4			The ripple is defined as [(Ymax-Ymin)/Yavg] * 100%. Y or V or I.		

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.

### Protection Specifications

Parameter	Min.	Typ.	Max.	Notes /Conditions
Output Short Circuit ( SCP )	---	---	---	No Damage. Auto recovery after short is removed.
Output Over Current ( OCP )	---	---	+10% Io	Constant Current Limiting circuit.
Output Over Voltage (OVP )	---	---	120% Vo	No Damage. Auto recovery after the abnormal disappearance.

### General Specifications

Parameter	Typ.	Notes /Conditions
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 Specifications

Parameter	Min.	Typ.	Max.	Notes /Conditions
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.

### Safety Compliance

Safety Category	Standards / Notes
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

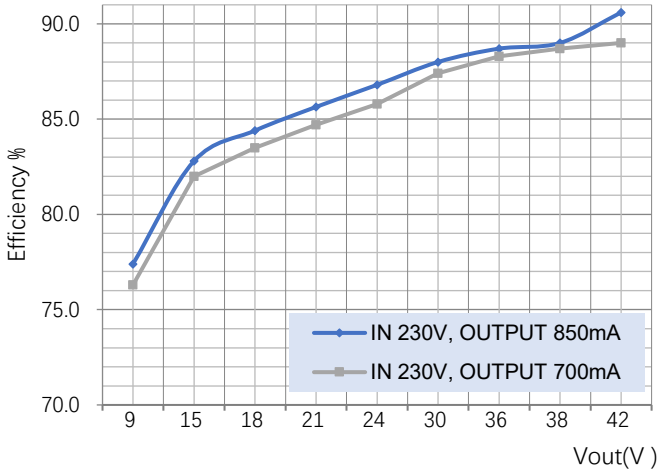
EMI Category	Standards
CE	EN55015:2013+A1:2015, EN 61000-3-2:2014, EN 61000-3-3:2013. RED 2014/53/EU.
CCC	GB19510.14-2009, GB19510.1-2009.
EMS Category	Notes
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS.
EN 61000-4-4	Electrical Fast Transient / Burst-EFT.

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.

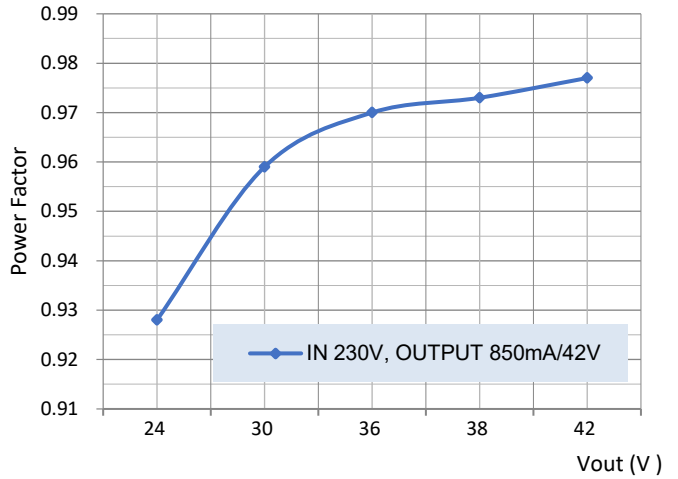
Note: The above test data were carried out under the  $T_a=25^\circ\text{C}$  except the labeled temperature.

### Characteristic Curve

Typical Efficiency vs. Vout at 25°C Ambient

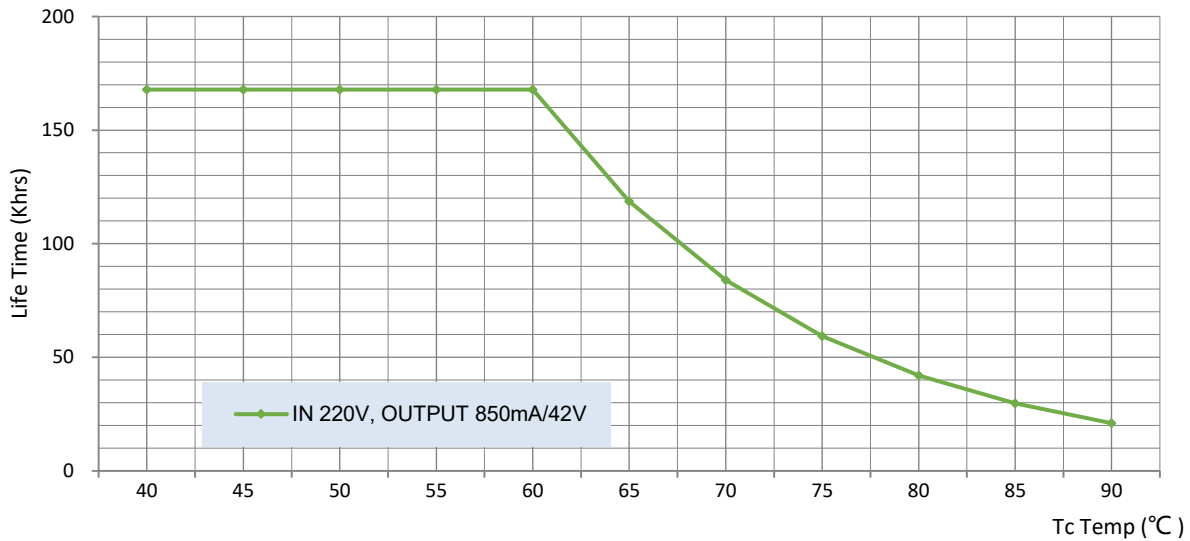


Typical PF vs. Vout at 25°C Ambient Temp



### Lifetime Curve

Life Time vs. Tc Temp



### Installation

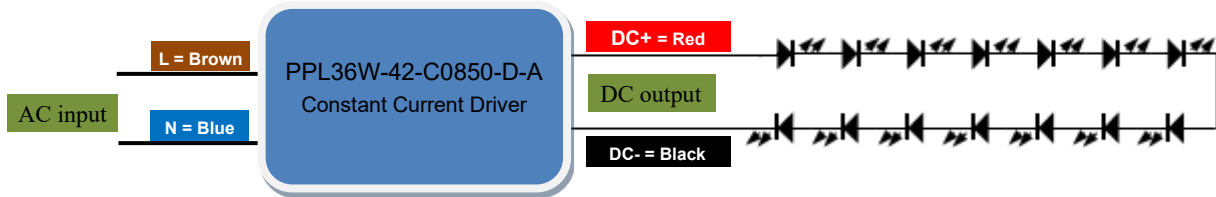
AC input wires cross section: 0.75-1.5<sup>2</sup>

DC output wires cross section: 0.5-1.5<sup>2</sup>

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.

## Typical Applications Connection diagram



## Order ID

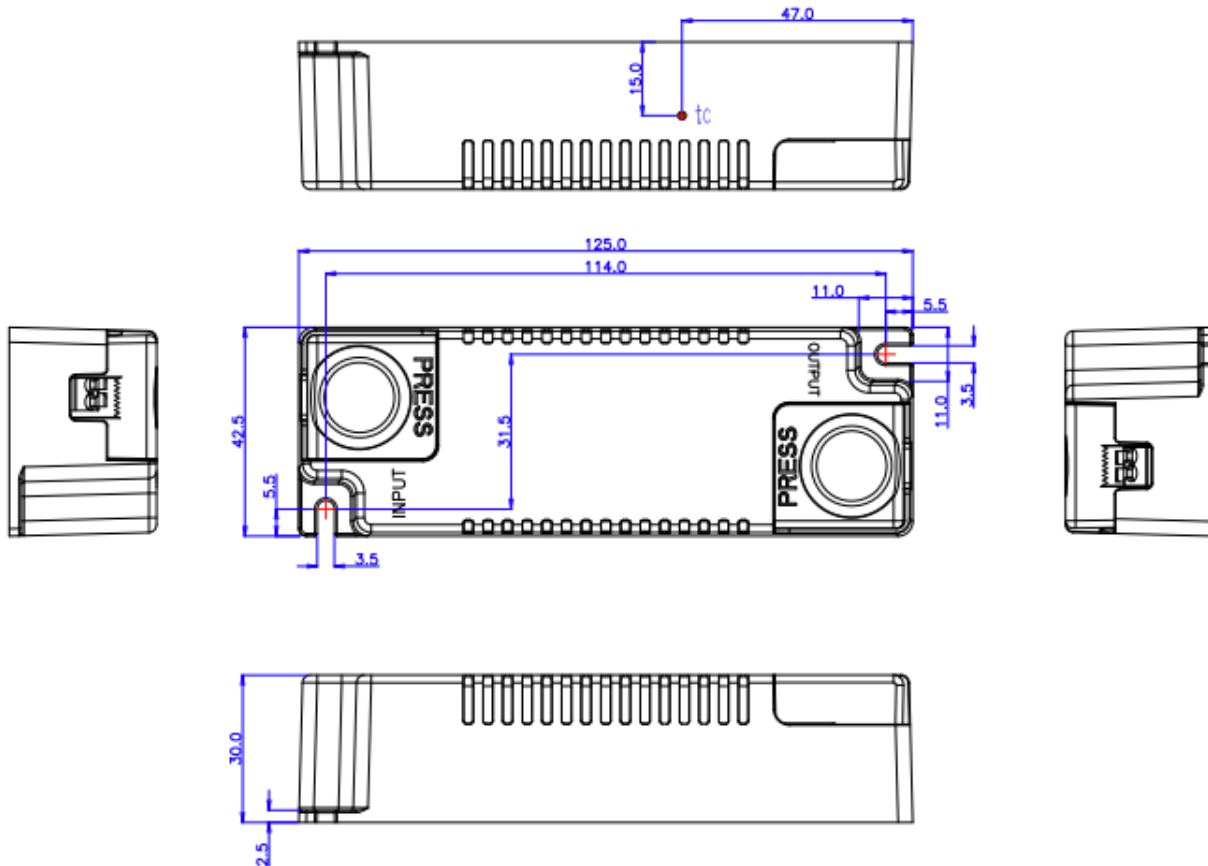
1.P/N: PPL36W-42-C0850-D-A

Description: 36W, Max. 42Vdc, constant current value is 850mA, constant current mode.

2.P/N: PPL36W-42-Cxxxx-x

Note: 36W, Max. 42Vdc, constant current value is 600-850mA, constant current mode.

## 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.