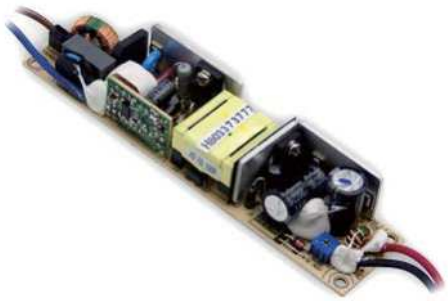
# 20W Single Output LED Power Supply

# PLP-20 series



## Features :

- Universal AC input / Full range(up to 277VAC)
- Protections:Short circuit/Over current/Over voltage/Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit with adjustable OCP level
- Built-in active PFC function
- Class Ⅱ power unit, no FG
- Class 2 power unit
- Small and compact size
- 100% full load burn-in test
- High reliability,low cost
- Suitable for built-in applications of LED lighting
- 2 years warranty

## SPECIFICATION

| MODEL | | PLP-20-12 | PLP-20-18 | PLP-20-24 | PLP-20-36 | PLP-20-48 |
|---|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 12V | 18V | 24V | 36V | 48V |
| | CONSTANT CURRENT REGION Note.5 | 9 ~ 12V | 13.5 ~ 18V | 18 ~ 24V | 27 ~ 36V | 36 ~ 48V |
| | RATED CURRENT | 1.6A | 1.1A | 0.8A | 0.55A | 0.42A |
| | CURRENT RANGE | 0 ~ 1.6A | 0 ~ 1.1A | 0 ~ 0.8A | 0 ~ 0.55A | 0 ~ 0.42A |
| | CURRENT ADJ. RANGE | 75% ~ 100% | | | | |
| | RATED POWER | 19.2W | 19.8W | 19.2W | 19.8W | 20.2W |
| | RIPPLE & NOISE (max.) Note.2 | 2.5Vp-p | 3.0Vp-p | 3.0Vp-p | 3.0Vp-p | 3.8Vp-p |
| | VOLTAGE TOLERANCE Note.3 | ±10% | | | | |
| | LINE REGULATION | ±3.0% | | | | |
| | LOAD REGULATION | ±10% | | | | |
| | SETUP, RISE TIME | 500ms / 230VAC 2000ms / 115VAC at full load | | | | |
| INPUT | VOLTAGE RANGE Note.4 | 90 ~ 277VAC 127~392VDC | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | |
| | POWER FACTOR | PF≥0.95/115VAC,PF>0.9/230VAC,PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve) | | | | |
| | TOTAL HARMONIC DISTORTION | THD< 20% when output loading≧75% at 115VAC/230VAC input and output loading≧75% at 277VAC input | | | | |
| | EFFICIENCY(Typ.) | 80% | 81% | 82% | 83% | 83.5% |
| | AC CURRENT | 0.4A/115VAC 0.2A/230VAC 0.15A/277VAC | | | | |
| | INRUSH CURRENT(Typ.) | COLD START 25A(twidth=60μs measured at 50% Ipeak) at 230VAC | | | | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 92 units (circuit breaker of type B) / 98 units (circuit breaker of type C) at 230VAC | | | | |
| | LEAKAGE CURRENT | 0.5mA / 240VAC | | | | |
| PROTECTION | OVER CURRENT Note.5 | 95 ~ 110% | | | | |
| | | Protection type : Constant current limiting, recovers automatically after fault condition is removed | | | | |
| | SHORT CIRCUIT | Hiccup mode, recovers automatically after fault condition is removed. | | | | |
| | OVER VOLTAGE | 14 ~ 16V | 19 ~ 22V | 27 ~ 34V | 41 ~ 46V | 54 ~ 60V |
| | | Protection type : Shut off o/p voltage, clamping by zener diode | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +60℃ (Refer to "Derating Curve") | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80℃, 10 ~ 95% RH | | | | |
| | TEMP. COEFFICIENT | ±0.06%/℃ (0 ~ 50℃) | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | | |
| SAFETY & EMC | SAFETY STANDARDS | TUV EN61347-1, EN61347-2-13, GB19510.14, GB19510.1, UL8750, CSA C22.2 No. 250.0-08,EAC TP TC 004 approved | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms/500VDC / 25℃/ 70%RH | | | | |
| | EMC EMISSION | Compliance to EN55015, GB17743, GB17625.1, EN61000-3-2 Class C(≧75% load); EN61000-3-3,EAC TP TC 020 | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level, criteria A,EAC TP TC 020 | | | | |
| OTHERS | MTBF | 643.6Khrs min. MIL-HDBK-217F (25℃) | | | | |
| | DIMENSION | 140*32*22(L*W*H) | | | | |
| | PACKING | 0.12kg;60pcs/9.2kg/0.62CUFT | | | | |

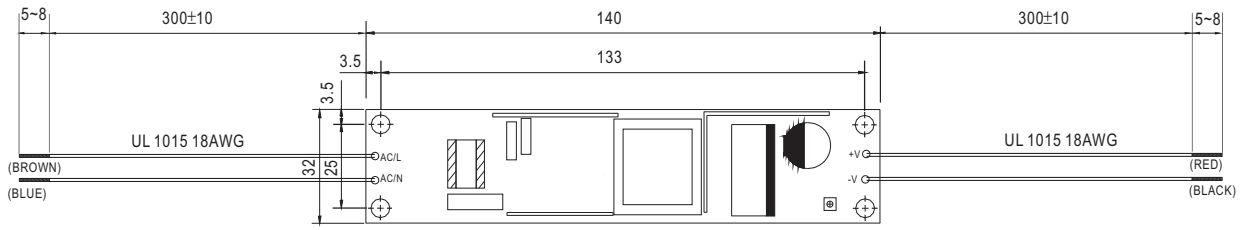
NOTE

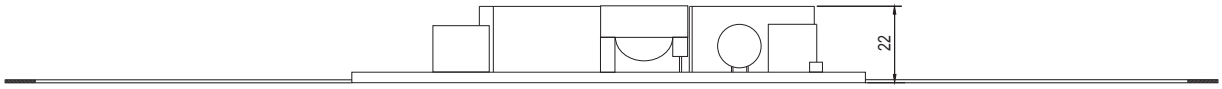
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltage, please check the static characteristic for more details.
5. Please refer to "DRIVING METHODS OF LED MODULE".
6. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)
7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.
8. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.

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## Mechanical Specification

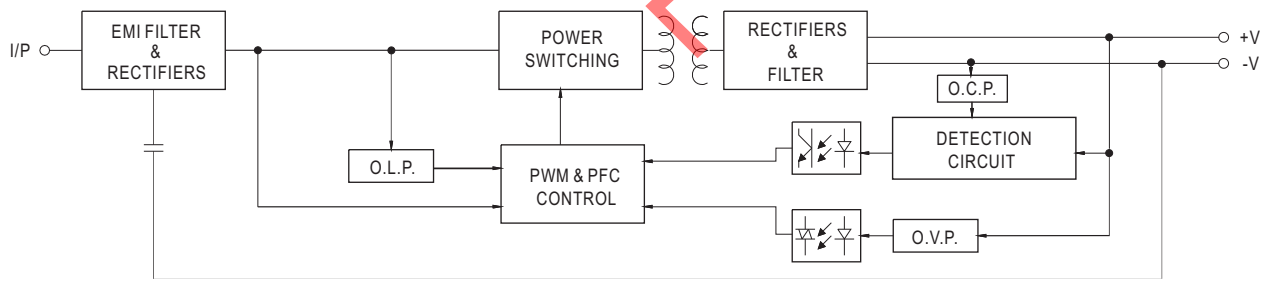
Unit:mm



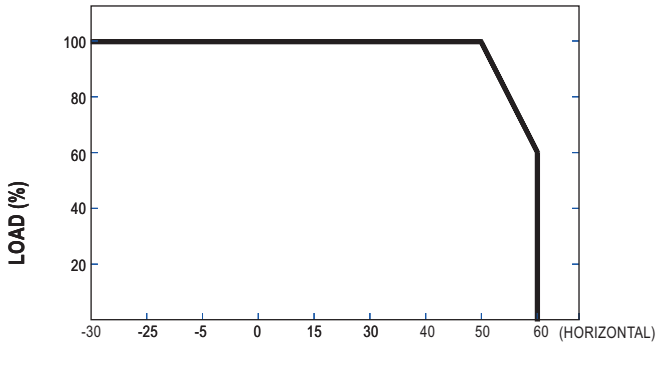




EOL

## Block Diagram

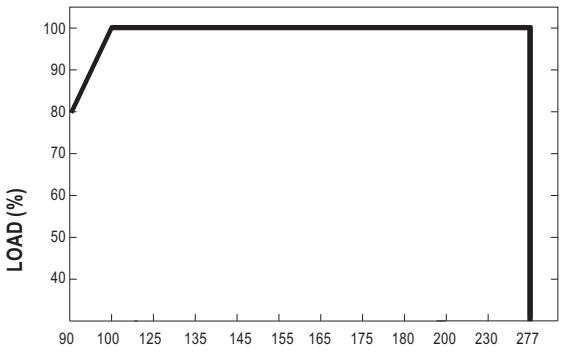



## Derating Curve




AMBIENT TEMPERATURE (℃)

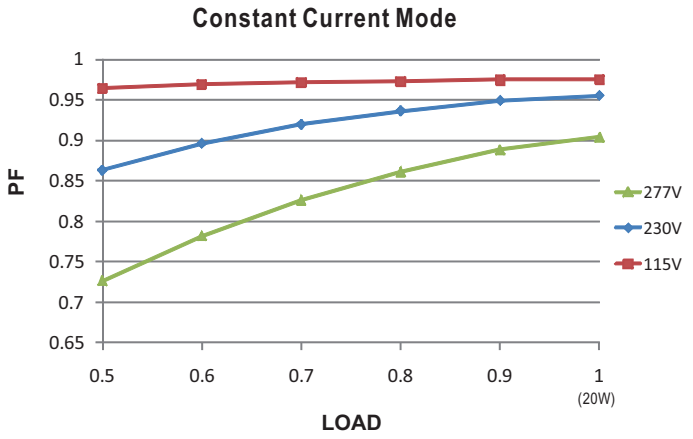
## Static Characteristics




INPUT VOLTAGE (V) 60Hz

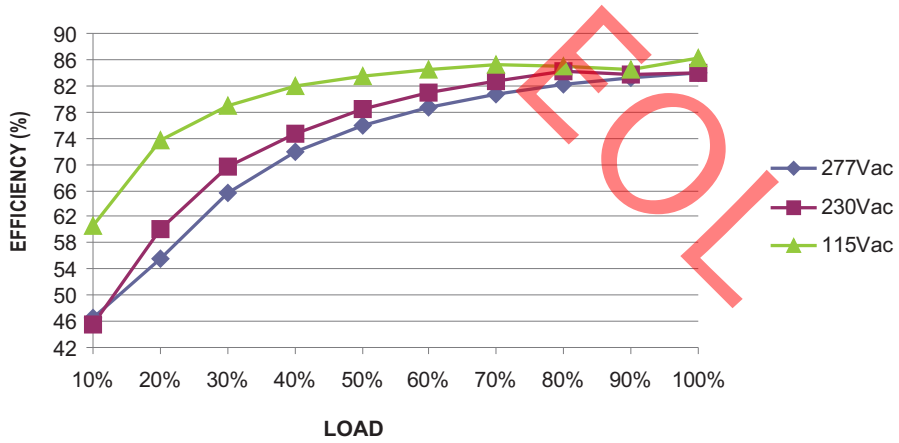
## ■ Power Factor Characteristic

Power factor will be higher than 0.9 when output loading is 75% or higher.



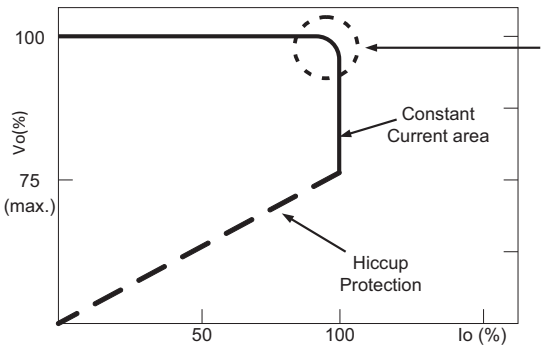

## ■ EFFICIENCY vs LOAD (48V Model)

PLP-20 series possess superior working efficiency that up to 83.5% can be reached in field applications.




## ■ DRIVING METHODS OF LED MODULE

This LED power supply is suggested to work in constant current mode area (CC) to drive the LEDs.




Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact MEAN WELL.