MEAN WELL

# 20W Single Output Switching Power Supply LPV-20 series



## Features :

- Constant voltage design
- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- Small and compact size
- Fully encapsulated with IP67 level (Note.7)
- Fully isolated plastic case
- Class Ⅱ power unit, no FG
- Class 2 power unit
- Pass LPS
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

## SPECIFICATION

LPS IP67

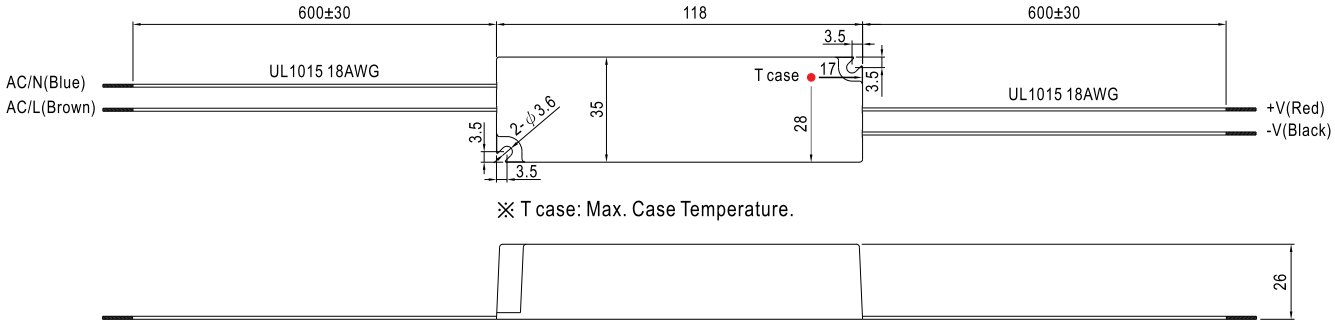
| MODEL | | LPV-20-5 | LPV-20-12 | LPV-20-15 | LPV-20-24 |
|---|---|---|---|---|---|
| OUTPUT | DC VOLTAGE | 5V | 12V | 15V | 24V |
| | RATED CURRENT | 3A | 1.67A | 1.33A | 0.84A |
| | CURRENT RANGE | 0 ~ 3A | 0 ~ 1.67A | 0 ~ 1.33A | 0 ~ 0.84A |
| | RATED POWER | 15W | 20W | 20W | 20.2W |
| | RIPPLE & NOISE (max.) Note.2 | 80mVp-p | 120mVp-p | 120mVp-p | 150mVp-p |
| | VOLTAGE TOLERANCE Note.3 | ±5.0% | | | |
| | LINE REGULATION | ±1.0% | | | |
| | LOAD REGULATION | ±2.0% | | | |
| | SETUP, RISE TIME Note.6 | 500ms, 20ms / 230VAC 500ms, 20ms / 115VAC at full load | | | |
| | HOLD UP TIME (Typ.) | 50ms/230VAC 16ms/115VAC at full load | | | |
| INPUT | VOLTAGE RANGE Note.4 | 90 ~ 264VAC 127 ~ 370VDC | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | |
| | EFFICIENCY (Typ.) | 77% | 81% | 83% | 83% |
| | AC CURRENT (Typ.) | 0.55A/115VAC 0.35A/230VAC | | | |
| | INRUSH CURRENT(max.) | COLD START 35A/115VAC 70A/230VAC | | | |
| | LEAKAGE CURRENT | 0.25mA / 240VAC | | | |
| PROTECTION | OVER LOAD | 110 ~ 150% rated output power | | | |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | |
| | OVER VOLTAGE | 5.75 ~ 6.75V | 13.8 ~ 16V | 17.5 ~ 21V | 28 ~ 32V |
| | | Protection type : Shut off o/p voltage, clamping by zener diode | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70℃ (Refer to "Derating Curve") | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80℃, 10 ~ 95% RH | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes | | | |
| SAFETY & EMC | SAFETY STANDARDS | UL879, UL1310, CSA C22.2 No. 207-M89,CAN/CSA C22.2 No. 223-M91, IP67 approved ; design refer to TUV EN60950-1 | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC | | | |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms / 500VDC / 25℃/ 70% RH | | | |
| | EMC EMISSION | Compliance to EN55022 (CISPR22) Class B, EN61000-3-2 Class A, EN61000-3-3 | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A | | | |
| OTHERS | MTBF | 786.5Khrs min. MIL-HDBK-217F (25℃) | | | |
| | DIMENSION | 118*35*26mm (L*W*H) | | | |
| | PACKING | 0.22Kg; 60pcs/14.2Kg/0.62CUFT | | | |

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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 characteristics for more details.
5. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
6. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time.
7. Suitable for indoor use or outdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minute.
8. The unit might not be suitable for lighting applications in EU countries. Please check with your local authorities for the possible use of the unit.

## ■ Mechanical Specification

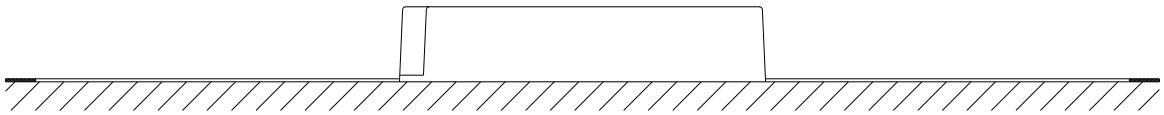
Case No. 972A Unit:mm




※ T case: Max. Case Temperature.

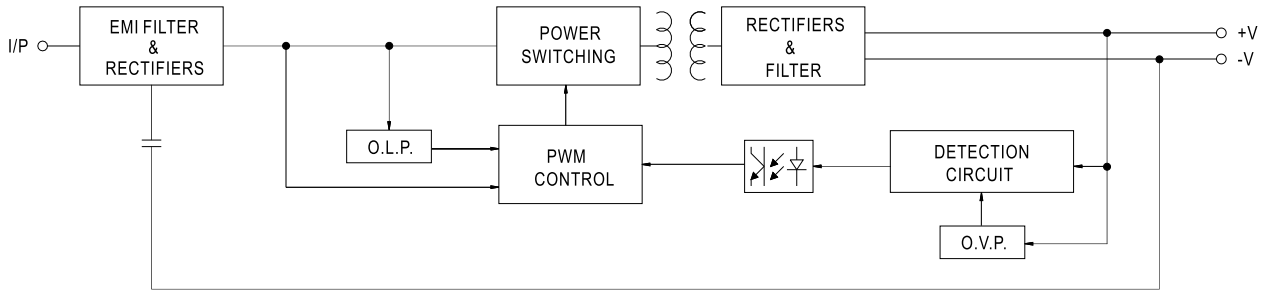



## ■ Recommend Mounting Direction

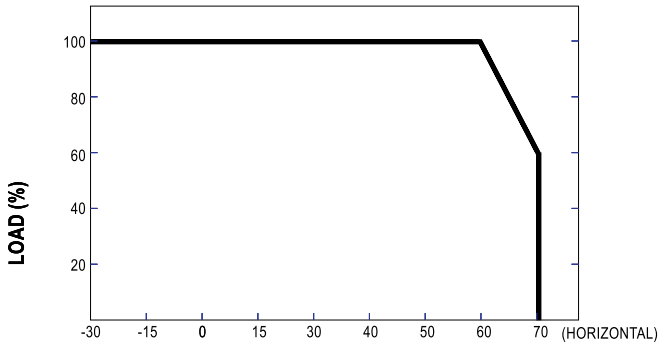


## ■ Block Diagram

fosc : 65KHz




## ■ Derating Curve




## ■ Static Characteristics

