



## 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 / Overload / 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
- Pass LPS
- Suitable for LED lighting and moving sign applications
- 100% full load burn-in test
- Low cost, high reliability
- 2 years warranty

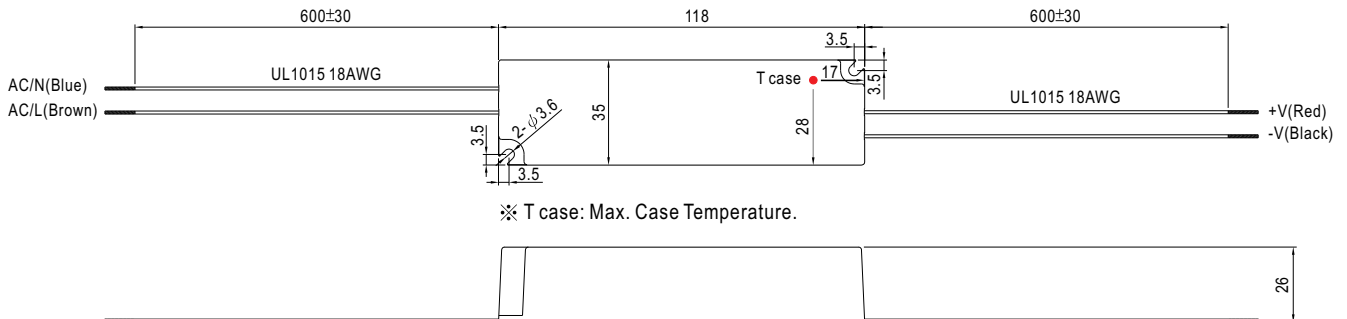
## SPECIFICATION



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.) <small>Note.2</small>	80mVp-p	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE TOLERANCE <small>Note.3</small>	±5.0%			
	LINE REGULATION	±1.0%			
	LOAD REGULATION	±2.0%			
	SETUP, RISE TIME <small>Note.6</small>	500ms, 20ms / 230VAC    500ms, 20ms / 115VAC at full load			
	HOLD UP TIME (Typ.)	50ms/230VAC    16ms/115VAC at full load			
INPUT	VOLTAGE RANGE <small>Note.4</small>	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	OVERLOAD	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 Class 2, CAN/CSA C22.2 No. 223-M91, IP67 approved ; design refer to TUV EN60950-1, EN61347-2-13			
	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.				

### Mechanical Specification

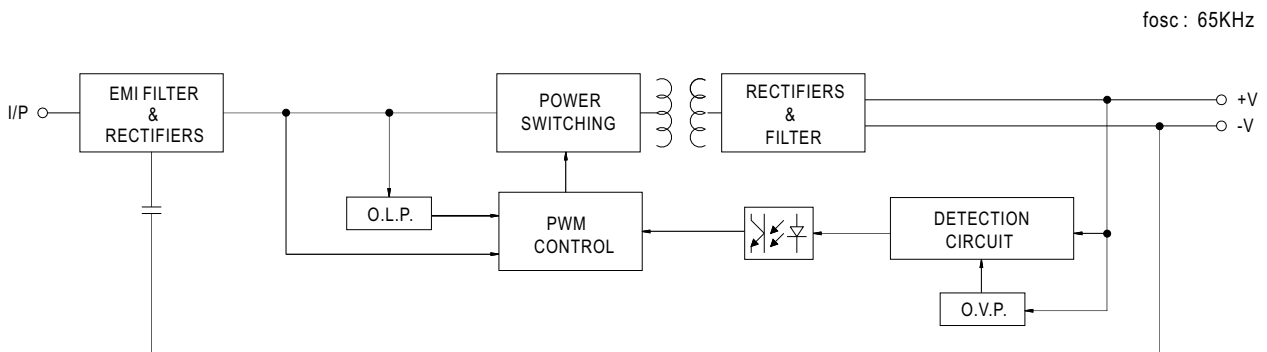
Case No. 972A Unit:mm



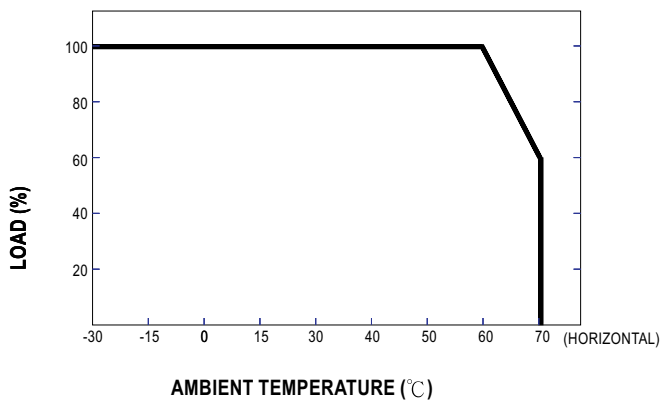
### Recommend Mounting Direction



### Block Diagram



### Derating Curve



### Static Characteristics

