



## Features :

- Universal AC input / Full range (up to 305VAC)
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Built-in active PFC function
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level (Note.6)
- Class II power unit, no FG
- Class 2 power unit
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 3 years warranty

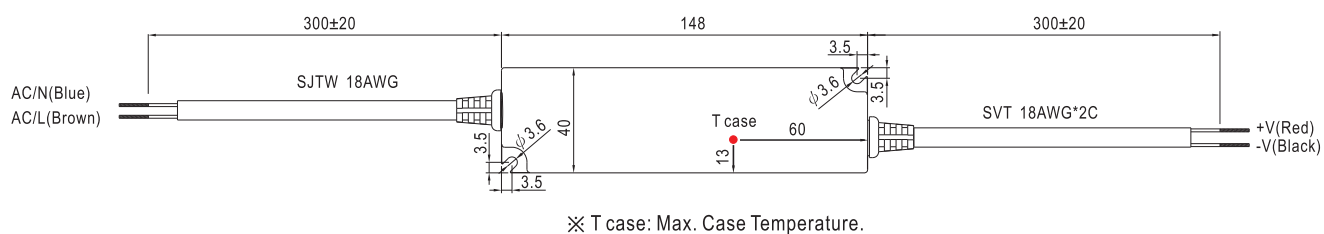


## SPECIFICATION

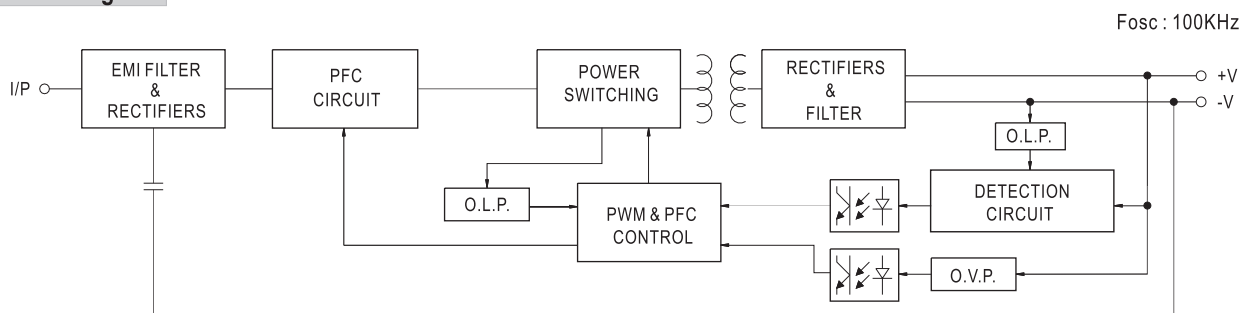
MODEL		LPF-25-12	LPF-25-15	LPF-25-20	LPF-25-24	LPF-25-30	LPF-25-36	LPF-25-42	LPF-25-48	LPF-25-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION <small>Note.4</small>	6.6 ~12V	8.25 ~ 15V	11 ~ 20V	13.2 ~ 24V	16.5 ~ 30V	19.8 ~ 36V	23.1 ~ 42V	26.4 ~ 48V	29.7 ~ 54V	
	RATED CURRENT	2.1A	1.67A	1.25A	1.05A	0.84A	0.7A	0.6A	0.53A	0.47A	
	RATED POWER	25.2W	25.05W	25W	25.2W	25.2W	25.2W	25.2W	25.44W	25.38W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p	
	VOLTAGE TOLERANCE <small>Note.3</small>	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	±4.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	SETUP, RISE TIME <small>Note.7</small>	1500ms, 80ms / 115VAC at full load    1500ms, 80ms / 230VAC									
HOLD UP TIME (Typ.)	16ms at full load    230VAC /115VAC										
INPUT	VOLTAGE RANGE <small>Note.5</small>	90 ~ 305VAC		127 ~ 431VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.97/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load (Please refer to "Power Factor Characteristic" curve)									
	EFFICIENCY (Typ.)	84%	85%	86%	86%	86%	86%	86%	87%	86.5%	
	AC CURRENT	0.4A / 115VAC		0.25A / 230VAC		0.2A/277VAC					
	INRUSH CURRENT (Typ.)	COLD START 50A/230VAC									
	LEAKAGE CURRENT	<0.75mA / 240VAC									
PROTECTION	OVER CURRENT <small>Note.4</small>	95 ~ 108% 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	15 ~ 18V	17.5 ~ 21V	23 ~ 27V	28 ~ 35V	34 ~ 40V	41 ~ 49V	46 ~ 54V	54 ~ 63V	59 ~ 66V	
	OVER TEMPERATURE	95℃ ± 5℃(TSW1) Detect on U2									
		Protection type : Shut down o/p voltage, re-power on to recover									
ENVIRONMENT	WORKING TEMP.	-35 ~ +70℃ (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
SAFETY & EMC	SAFETY STANDARDS <small>Note.6</small>	UL8750, CSA C22.2 No. 250.0-08 (except for 42V, 48V, 54V), EN61347-1, EN61347-2-13 independent, EN62384, IP67 approved ;Design refer to UL60950-1, TUV EN60950-1									
	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; EN61000-3-2 Class C (≥ 50% load) ; EN61000-3-3									
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547,light industry level(surge 2KV), criteria A									
OTHERS	MTBF	473.4Khrs min.    MIL-HDBK-217F (25℃)									
	DIMENSION	148*40*32mm (L*W*H)									
	PACKING	0.36Kg; 40pcs/ 15.4Kg/1.02CUFT									
NOTE	<div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.</div> <div>5. Derating may be needed under low input voltages. Please check the static characteristics for more details.</div> <div>6. Suitable for indoor use or outdoor use without direct sunlight exposure.Please avoid immerse in the water over 30 minutes.</div> <div>7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</div> <div>8. 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.</div>										

## ■ Mechanical Specification

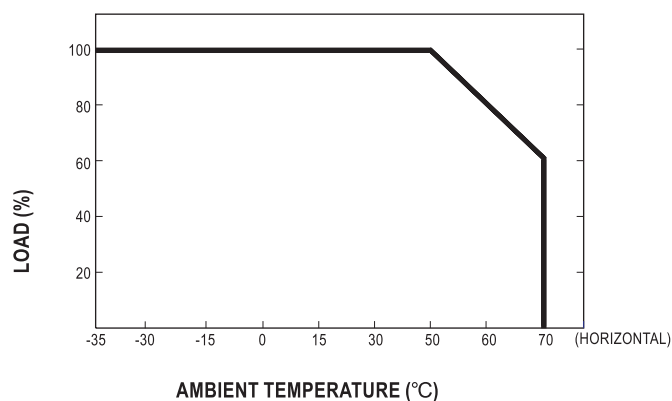
Case No.: LPF-16A      Unit:mm



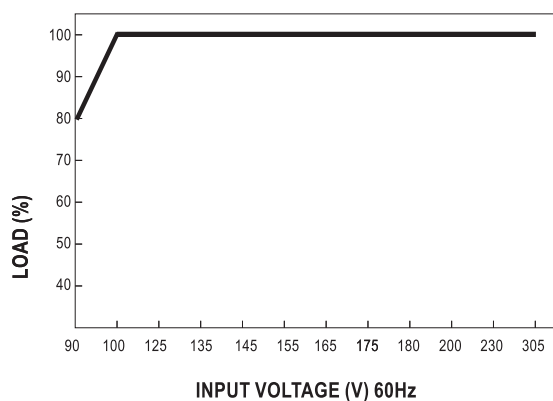
### ■ Block Diagram



### Derating Curve

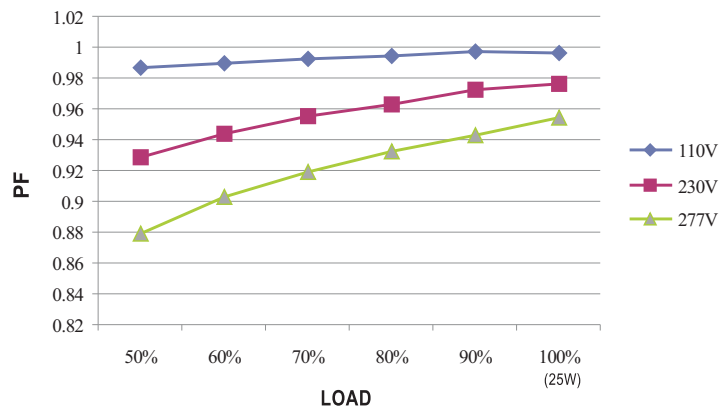


### ■ Static Characteristics



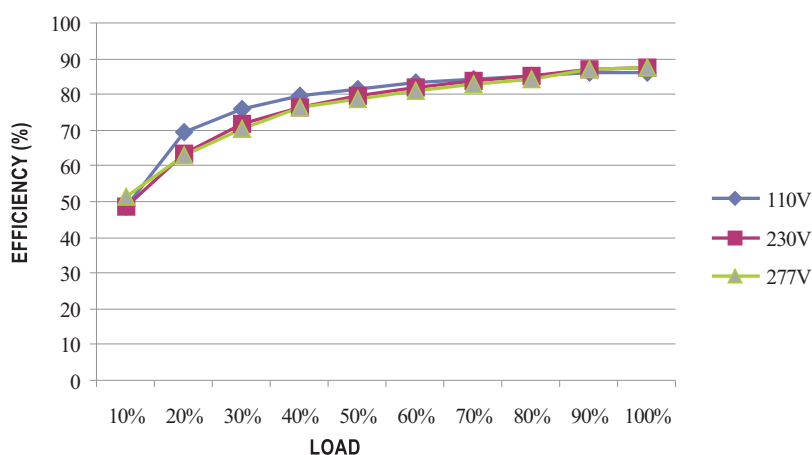
### Power Factor Characteristic

#### Constant Current Mode



### EFFICIENCY vs LOAD (48V Model)

LPF-25 series possess superior working efficiency that up to 87% can be reached in field applications.

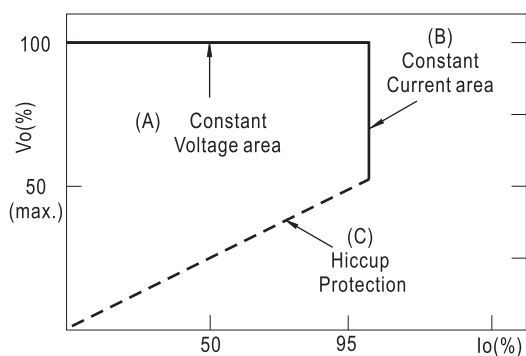


### DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B)).



Typical LED power supply I-V curve