

# LPF-90 series



### Features :

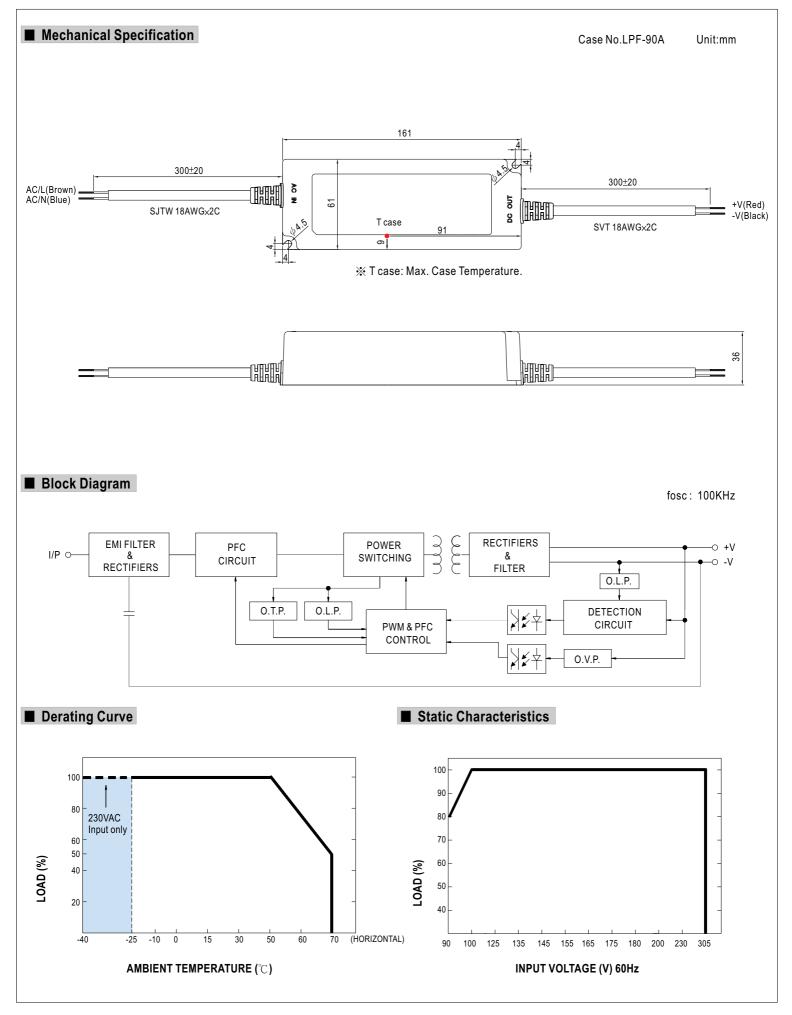
- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- · Fully isolated plastic case
- Fully encapsulated with IP67 level (Note.6)
- Class  ${\rm I\hspace{-0.1em}I}$  power unit, no FG
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations
- 3 years warranty

	IP67 (for 48V,54V only) c US (except for 48V,54V)	
SPECIFICATION		

MODEL		LPF-90-15	LPF-90-20	LPF-90-24	LPF-90-30	LPF-90-36	LPF-90-42	LPF-90-48	LPF-90-54		
	DC VOLTAGE	15V	20V	24V	30V	36V	42V	48V	54V		
ουτρυτ	CONSTANT CURRENT REGION Note.4	9~15V	12 ~ 20V	14.4 ~ 24V	18~30V	21.6~36V	25.2 ~ 42V	28.8~48V	32.4 ~ 54V		
	RATED CURRENT	5A	4.5A	3.75A	3A	2.5A	2.15A	1.88A	1.67A		
	RATED POWER	75W	90W	90W	90W	90W	90.3W	90.24W	90.18W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p	200mVp-p		
	VOLTAGE TOLERANCE Note.3		±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%		
	LOAD REGULATION	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME Note.7	2000ms, 80ms / 115VAC at full load 1000ms, 80ms / 230VAC at full load									
	HOLD UP TIME (Typ.)	16ms/230VAC	16ms/115	VAC at full load							
	VOLTAGE RANGE Note.5	90 ~ 305VAC 127 ~ 431VDC									
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.97/115VA	.C, PF>0.96/230	VAC, PF>0.95/2	77VAC at full load	d (Please refer to	"Power Factor C	Characteristic" c	urve)		
INPUT	EFFICIENCY (Typ.)	89%	90%	90.5%	91%	91%	91%	91%	91%		
	AC CURRENT (Typ.)	0.95A / 115VAC	0.5A/230	VAC 0.4A/	277VAC		I				
	INRUSH CURRENT(Typ.)	COLD START	70A/230VAC								
	LEAKAGE CURRENT	<0.75mA/277	/AC								
PROTECTION	OVER CURRENT Note.4	95~108%									
		Protection type	: Constant curre	ent limiting, recov	ers automatically	y after fault condi	tion is removed				
	OVER VOLTAGE	18~21V	23 ~ 27V	28~34V	34 ~ 38V	41~46V	47 ~ 53V	54 ~ 60V	59~65V		
		Protection type	: Shut down o/p	voltage, re-powe	er on to recover						
	OVER TEMPERATURE	90°C ±10°C (RTH2)									
		Protection type : Shut down o/p voltage, re-power on to recover									
ENVIRONMENT	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C , 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
SAFETY & EMC	SAFETY STANDARDS	UL8750, EN613	47-1, EN61347-2	2-13 independent	J61347-1, J6134	17-2-13, IP67 app	roved ; Design re	fer to UL60950-1	, TUV EN6095		
	WITHSTAND VOLTAGE	I/P-O/P:3.75K	VAC								
	ISOLATION RESISTANCE	I/P-O/P:100M	Ohms / 500VDC	C/25℃/70% RH							
	EMC EMISSION	Compliance to	EN55015, EN61	000-3-2 Class C	$(\geq 60\%$ load); I	EN61000-3-3					
	EMC IMMUNITY	Compliance to	EN61000-4-2,3,	4,5,6,8,11; EN61	547, EN55024, li	ght industry leve	l(surge 2KV), cr	iteria A			
OTHERS	MTBF	301.6Khrs min.	MIL-HDBK-2	217F (25℃)							
	DIMENSION	161*61*36mm	(L*W*H)								
	PACKING	0.7Kg;20pcs/15	Kg/0.73CUFT								
NOTE	<ol> <li>Ripple &amp; noise are measure</li> <li>Tolerance : includes set up</li> <li>Constant current operation reconfirm special electrical in</li> <li>Derating may be needed ur</li> <li>Suitable for indoor use or or</li> <li>Length of set up time is me</li> <li>The power supply is consid</li> </ol>	y mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. d at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. tolerance, line regulation and load regulation. region is within 60% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please requirements for some specific system design. Ider low input voltages. Please check the static characteristics for more details. utdoor use without direct sunlight exposure. Please avoid immerse in the water over 30 minutes. asured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. ered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the al equipment manufacturers must re-qualify EMC Directive on the complete installation again.									

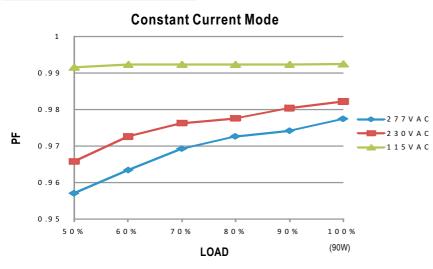


## LPF-90 series



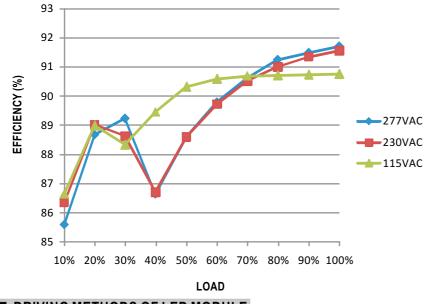


Power Factor Characteristic



### ■ EFFICIENCY vs LOAD (48V Model)

LPF-90 series possess superior working efficiency that up to 91% 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).

