



■ Features :

- Universal AC input / Full range (up to 305VAC)
- Built-in active PFC function
- High efficiency up to 89%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- Fully encapsulated with IP67 level (Note.6)
- Class II power unit, no FG
- Built-in 3 in 1 dimming function (1~10Vdc or PWM signal or resistance)
- Suitable for LED lighting and moving sign applications
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp locations
- 3 years warranty

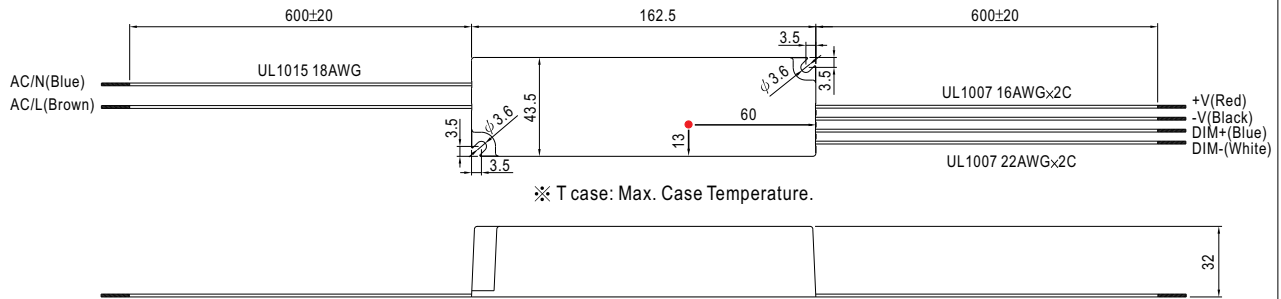
SPECIFICATION



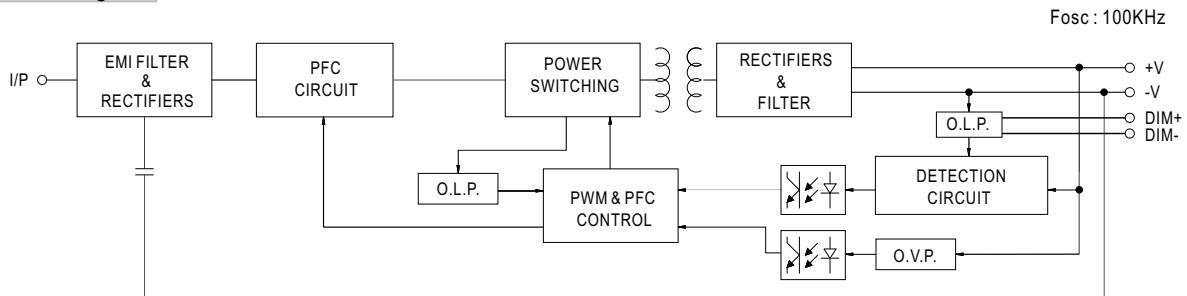
MODEL	LPF-40D-12	LPF-40D-15	LPF-40D-20	LPF-40D-24	LPF-40D-30	LPF-40D-36	LPF-40D-42	LPF-40D-48	LPF-40D-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION Note.4	7.2 ~ 12V	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V
	RATED CURRENT	3.34A	2.67A	2A	1.67A	1.34A	1.12A	0.96A	0.84A	0.76A
	RATED POWER	40.08W	40.08W	40W	40.08W	40.2W	40.32W	40.32W	40.32W	41.04W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE TOLERANCE Note.3	±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 Note.7	1000ms, 80ms / 115VAC at full load 1000ms, 80ms / 230VAC									
HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load									
INPUT	VOLTAGE RANGE Note.5	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%	87%	88%	88%	88.5%	89%	89%
	AC CURRENT (Typ.)	0.6A / 115VAC		0.3A / 230VAC						
	INRUSH CURRENT (Typ.)	COLD START 75A/230VAC								
LEAKAGE CURRENT	<0.75mA / 240VAC									
PROTECTION	OVER CURRENT Note.4	95 ~ 108%								
	SHORT CIRCUIT	Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	Hiccup mode, recovers automatically after fault condition is removed.								
	OVER TEMPERATURE	15 ~ 17V	17.5 ~ 21V	23 ~ 27V	28 ~ 35V	34 ~ 40V	41 ~ 49V	46 ~ 54V	54 ~ 63V	59 ~ 66V
ENVIRONMENT	WORKING TEMP.	Protection type : Shut down and latch off o/p voltage, re-power on to recover								
	WORKING HUMIDITY	90°C ±10°C (RTH2)								
	STORAGE TEMP., HUMIDITY	Protection type : Shut down o/p voltage, re-power on to recover								
	TEMP. COEFFICIENT	-40 ~ +70°C (Refer to "Derating Curve")								
	VIBRATION	20 ~ 95% RH non-condensing								
SAFETY & EMC	SAFETY STANDARDS Note.6	-40 ~ +80°C, 10 ~ 95% RH								
	WITHSTAND VOLTAGE	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
	ISOLATION RESISTANCE	UL8750, EN61347-1, EN61347-2-13 independent, IP67 approved ; Design refer to UL60950-1, TUV EN60950-1								
	EMC EMISSION	I/P-O/P:3.75KVAC								
OTHERS	EMC IMMUNITY	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH								
	MTBF	Compliance to EN55015, EN61000-3-2 Class C (≥ 60% load) ; EN61000-3-3								
	DIMENSION	Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, EN55024, light industry level(surge 2KV), criteria A								
NOTE	PACKING	394.9Khrs min. MIL-HDBK-217F (25°C)								
		162.5*43.5*32mm (L*W*H)								
		0.45Kg; 32pcs/15.4Kg/0.73CUFT								

Mechanical Specification

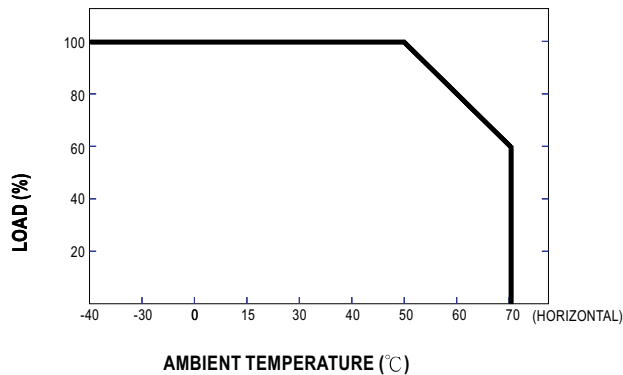
Case No. LPF60A Unit:mm



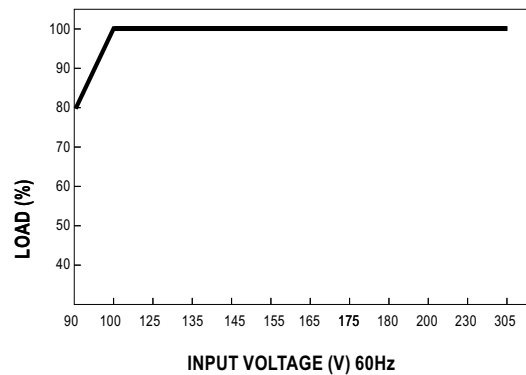
Block Diagram



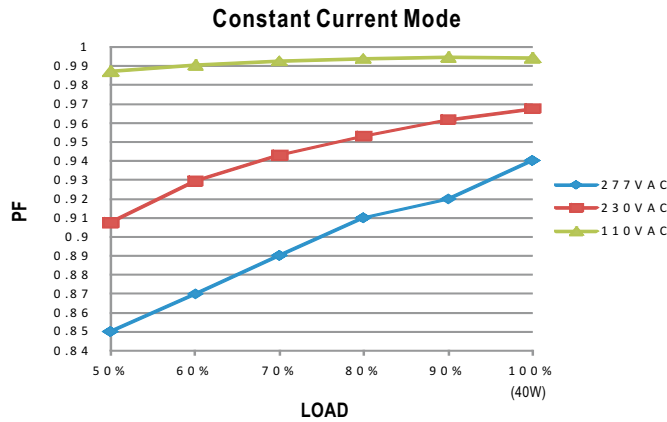
Derating Curve



Static Characteristics

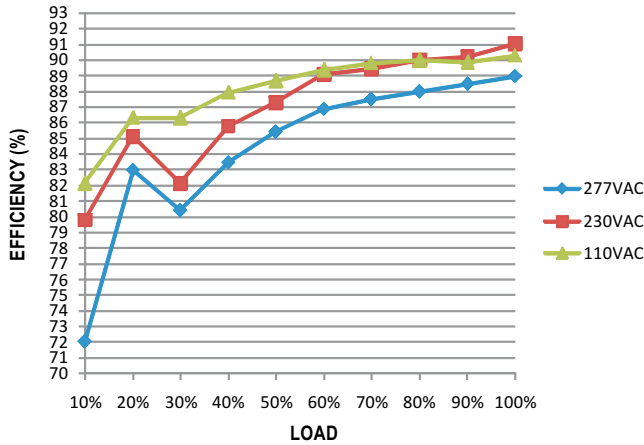


Power Factor Characteristic



EFFICIENCY vs LOAD (48V Model)

LPF-40 series possess superior working efficiency that up to 89% can be reached in field applications.

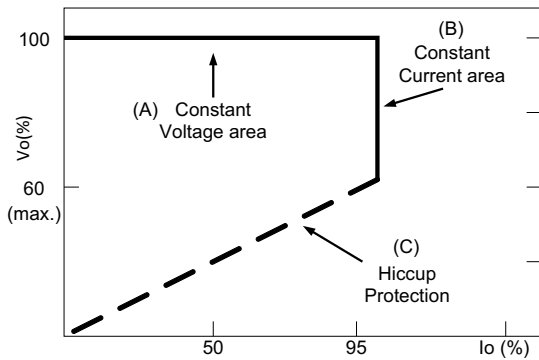


DRIVING METHODS OF LED MODULE

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

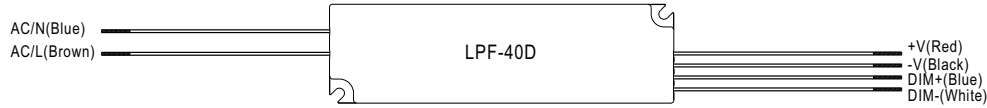
A typical LED power supply may either work in "constant voltage mode (CV) or constant current mode (CC)" to drive the LEDs.

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

■ DIMMING OPERATION



※ Built-in 3 in 1 dimming function, output constant current level can be adjusted through output cable by 1 ~ 10Vdc, 10V PWM signal or resistance between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-V".

※ Reference resistance value for output current adjustment (Typical)

Resistance value	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
Output current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%~108%

※ 1 ~ 10V dimming function for output current adjustment (Typical)

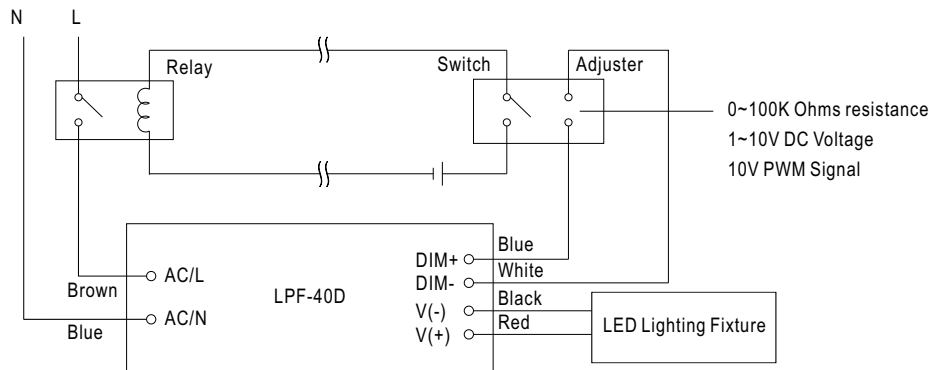
Dimming value	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Output current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%~108%

※ 10V PWM signal for output current adjustment (Typical): Frequency range : 100HZ ~ 3KHz

Duty value	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Output current	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%~108%

※ Using the built-in dimming function on LPF-40D can't turn the lighting fixture totally dark. Please refer to the connection method below to achieve 0% brightness of the lighting fixture connecting to the LED power supply unit.

Dimming connection diagram for turning the lighting fixture ON/OFF :



Using a switch and relay can turn ON/OFF the lighting fixture.

1. Output constant current level can be adjusted through output cable by connecting a resistor or 1~10Vdc or 10V PWM signal between DIM+ and DIM-.
2. The LED lighting fixture can be turned ON/OFF by the switch.