



60W Single Output AC Dimmable LED Power Supply

PCD-60 series



## ■ Features :

- AC phase-cut dimming
- Work with leading edge and trailing edge TRIAC dimmers
- Built-in active PFC function
- Constant current design
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- IP42 design
- Class II power unit, no FG
- Suitable for LED related fixture or appliance (such as LED Decoration or Advertisement devices)
- 100% full load burn-in test
- Low cost
- High reliability
- 3 years warranty

User's Manual

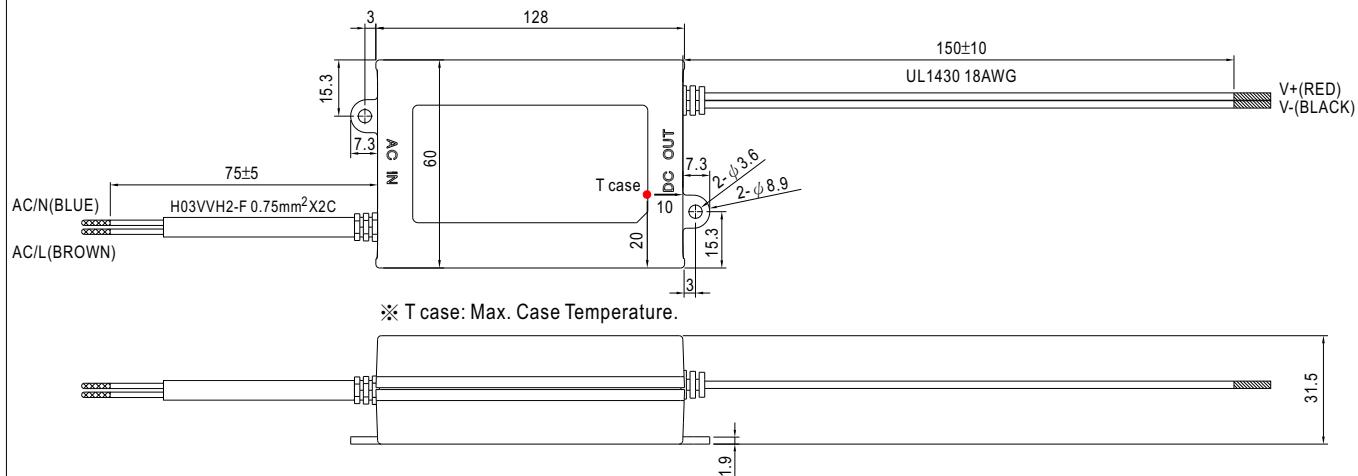


## SPECIFICATION

MODEL	PCD-60-500B	PCD-60-700B	PCD-60-1050B	PCD-60-1400B	PCD-60-1750B	PCD-60-2000B	PCD-60-2400B
OUTPUT	RATED CURRENT	500mA	700mA	1050mA	1400mA	1750mA	2000mA
	OPERATING VOLTAGE RANGE	70 ~ 108V	50 ~ 86V	34 ~ 57V	25 ~ 43V	20 ~ 34V	18 ~ 30V
	CURRENT ACCURACY	±5.0%					
	RATED POWER	54W	60.2W	59.85W	60.2W	59.5W	60W
	RISSLE & NOISE (max.) Note.1	10.2Vp-p	5.6Vp-p	3.8Vp-p	3.4Vp-p	3.3Vp-p	2.4Vp-p
	NO LOAD OUTPUT VOLTAGE (max.)	118V	100V	63V	50V	50V	35V
SETUP TIME		500ms / 230VAC at full load					
INPUT	VOLTAGE RANGE	180~295VAC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥60%(PCD-60-500B loading≥65%)at 230VAC input and output loading≥75% at 277VAC input					
	EFFICIENCY (Typ.)	87%	86%	86%	87%	87%	87%
	AC CURRENT (Typ.)	0.6A/230VAC	0.5A/277VAC				
	INRUSH CURRENT(Typ.)	COLD START 13A (width=50μs measured at 50% Ipeak) at 230VAC					
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	32 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC					
PROTECTION	LEAKAGE CURRENT	<0.5mA / 240VAC					
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.					
	OVER TEMPERATURE	Shut down o/p voltage, auto-recovery					
ENVIRONMENT	WORKING TEMP.	-30 ~ +45°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, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	ENEC BS EN/EN61347-1, BS EN/EN61347-2-13 independent, BS EN/EN62384, EAC TP TC 004, IP42 approved					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC					
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C ; BS EN/EN61000-3-3, EAC TP TC 020					
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level(Surge 2KV), criteria B, EAC TP TC 020					
OTHERS	MTBF	358.030Khrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	128*60*31.5mm (L*W*H)					
	PACKING	0.35Kg;30pcs/11.5Kg/0.58CUFT					
NOTE	1. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.						
	2. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.						
	3. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.						
	4. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).						
	5. For any application note and IP water proof function installation caution, please refer our user manual before using. <a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a>						
	※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>						

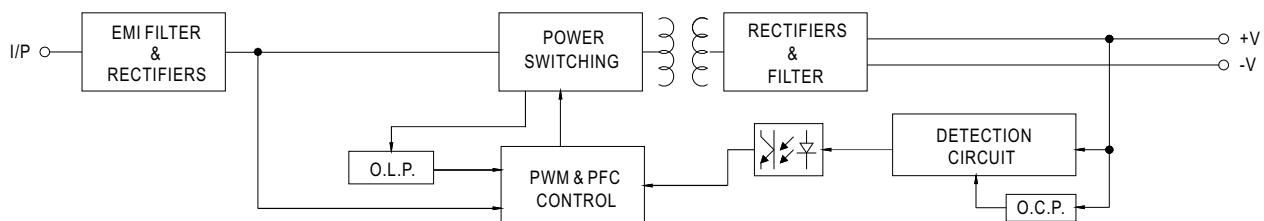
## ■ Mechanical Specification

Case No.:PCD40A Unit:mm

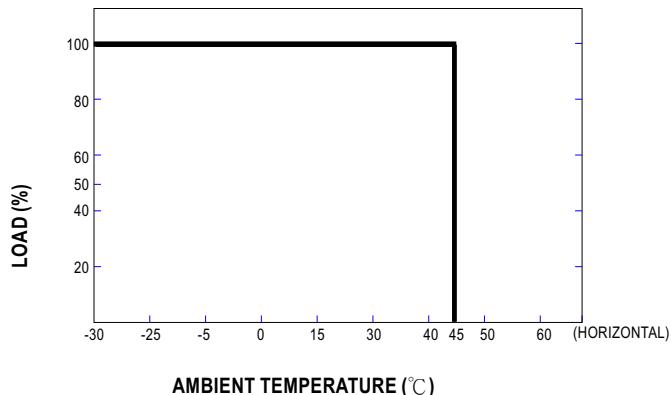


## ■ Block Diagram

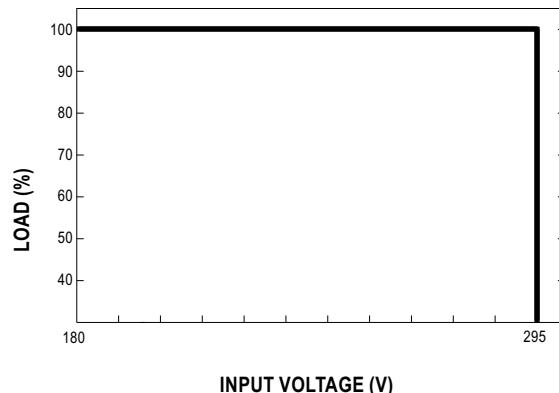
fosc : 60KHz(230VAC)



## ■ Derating Curve



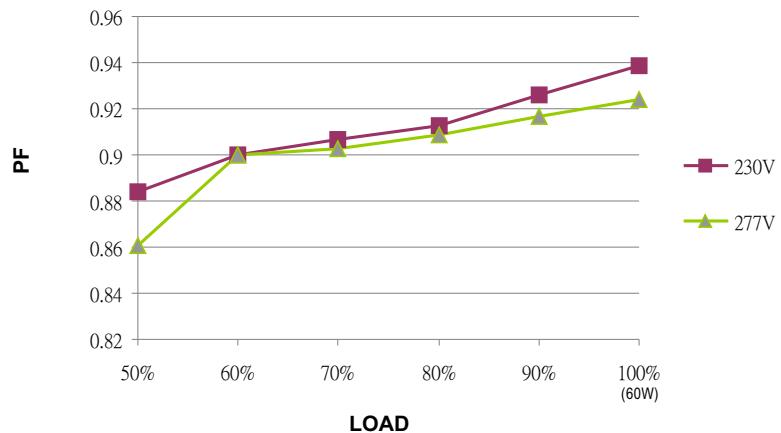
## ■ Static Characteristics



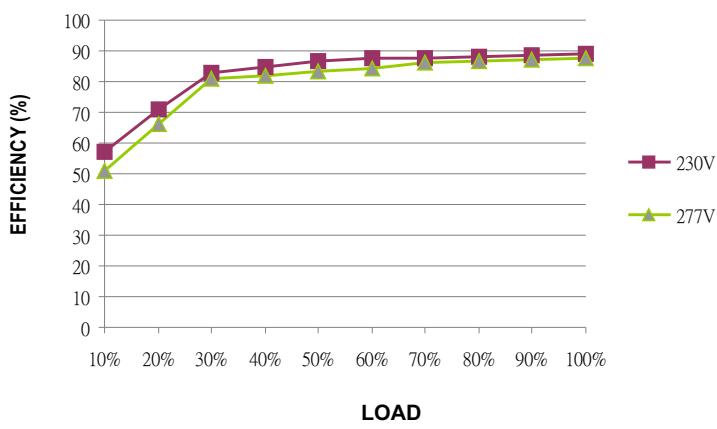


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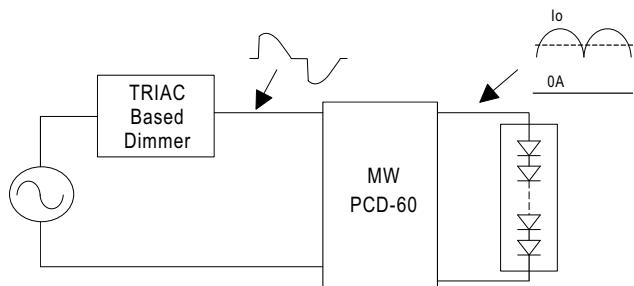
**■ Power Factor Characteristic****Constant Current Mode****■ EFFICIENCY vs LOAD (PCD-60-500B)**

PCD-60 series possess superior working efficiency that up to 87% can be reached in field applications.



### ■ AC Dimming Operation

◎ The following diagram depicts a typical installation utilizing the PCD-60 :



Under direct driving, the power supply will work in "constant current mode (CC)" and output voltage of the power supply will be clamped by sum of forward voltage ( $V_F$ ) of the LED strip.

◎ Dimmer Compatibility Chart

Manufacturer	Dimmer Model
LUTRON	SKYLARK SF-12P-277 (277VAC / 60Hz)
LUTRON	DVF-103P-277 (277VAC / 60Hz)
JUNG	Licht-Management 225 TDE (230VAC / 50Hz)
JUNG	Licht-Management 225 NV DE (230VAC / 50Hz)
BERKER	Tronic-Drehdimmer 286710 (230-240VAC / 50Hz)
CLIPSAL	32E450UDM (220-240VAC / 50Hz)
CLIPSAL	NO 32E450TM (220-240VAC / 50Hz)
CLIPSAL	NO 32E450LM (220-240VAC / 50Hz)
CLIPSAL	Cat 400T (230-240VAC / 50Hz)

Conduction angle: 30 degrees(min.) / 180 degrees(max.)