



# 40W Single Output AC Dimmable LED Power Supply

# PCD-40 series

### ■ Features :

- AC phase-cut dimming
- Work with leading edge and trailing edge TRIAC dimmers
- 115VAC or 230VAC models available
- Built-in active PFC function
- Constant current design
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- IP30 design
- Class II power unit, no FG
- Class 2 power unit
- Suitable for indoor LED lighting applications
- 100% full load burn-in test
- Low cost
- High reliability
- 3 years warranty



PCD-40-350 **A** A : With AC input 90~ 135VAC.  
 B : With AC input 180~ 295VAC.

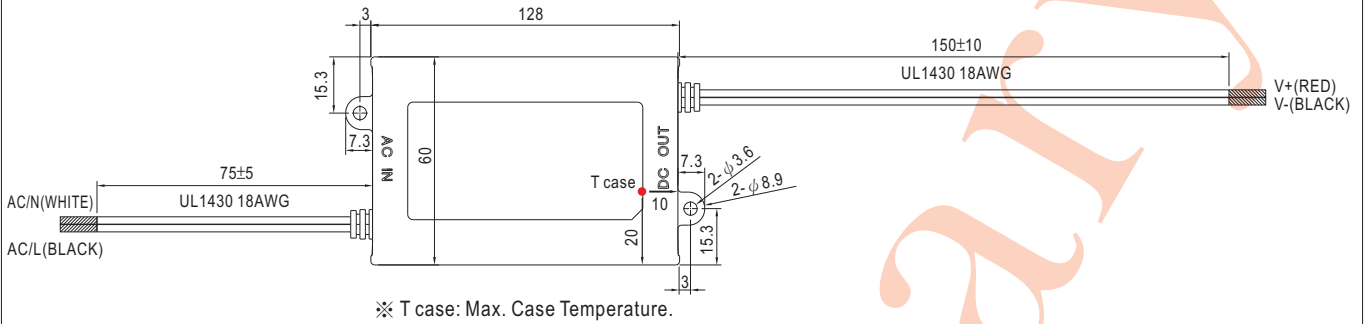
### SPECIFICATION

MODEL	PCD-40-350	PCD-40-500	PCD-40-700	PCD-40-1050	PCD-40-1400	PCD-40-1750	
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1750mA	
	OPERATING VOLTAGE RANGE	65 ~ 115V	45 ~ 80V	34 ~ 57V	22 ~ 38V	17 ~ 29V	13 ~ 23V
	CURRENT RANGE	0 ~ 350mA	0 ~ 500mA	0 ~ 700mA	0 ~ 1050mA	0 ~ 1400mA	0 ~ 1750mA
	CURRENT ACCURACY	±5.0%					
	RATED POWER	40.25W	40W	39.9W	39.9W	40.6W	40.25W
	RIPPLE & NOISE (max.) Note.1	4.6Vp-p	2.7Vp-p	2.7Vp-p	2.2Vp-p	2Vp-p	2Vp-p
	NO LOAD OUTPUT VOLTAGE (max.)	140V	100V	63V	50V	35V	35V
SETUP TIME	1000ms / 230VAC 2000ms / 115VAC at full load						
INPUT	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.9/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	EFFICIENCY (Typ.)	87%	87%	86%	86%	85%	85%
	AC CURRENT (Typ.)	0.7A/115VAC 0.35A/230VAC					
	INRUSH CURRENT(max.)	10A/230VAC					
LEAKAGE CURRENT	<0.5mA / 240VAC						
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.					
	OVER TEMPERATURE	95°C ±10°C (RTH1) Protection type : Shut down o/p voltage, re-power on to recover					
ENVIRONMENT	WORKING TEMP.	-30 ~ +60°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	UL8750, CSA C22.2 No. 250.0-08(except for PCD-40-350~700) ; ENEC EN613471, EN61347-2-13 independent(for B type only), IP30 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 EN55015 (B type only), EN61000-3-2 Class C ; EN61000-3-3, FCC part15 Class B (A type only)					
EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024,EN61547, light industry level, criteria A						
OTHERS	MTBF	Khrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	128*60*31.5mm (L*W*H)					
	PACKING	Kg					
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.						

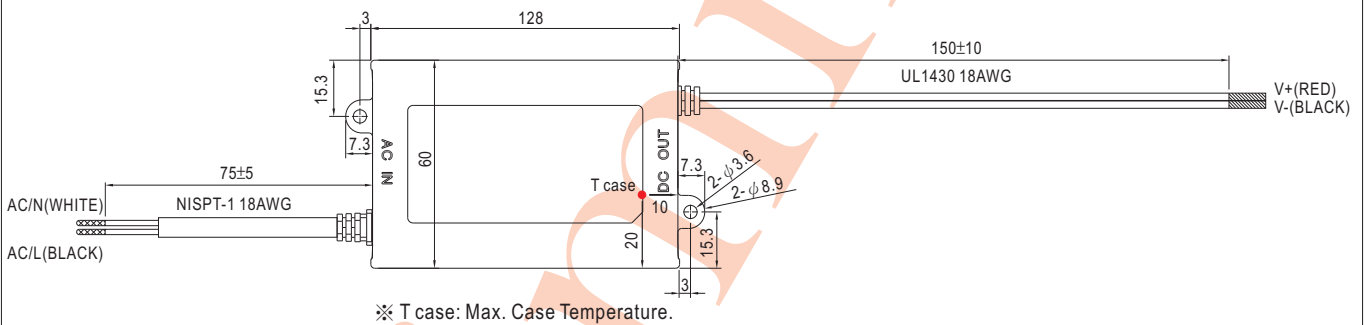
**Mechanical Specification**

Case No. Unit:mm

**A Type:(PCD-40\_A)**

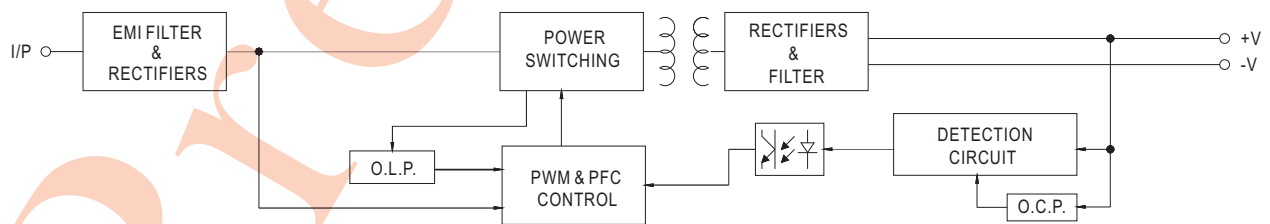


**B Type:(PCD-40\_B)**

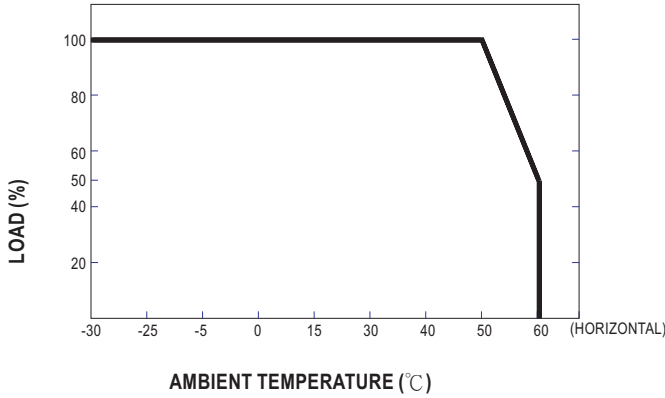


**Block Diagram**

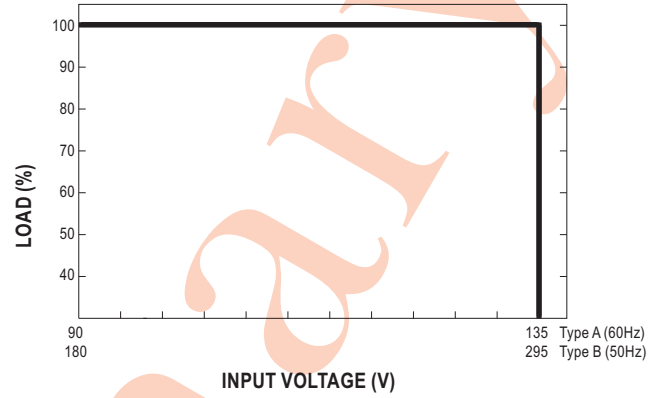
fosc : 90KHz(115VAC)  
120KHz(230VAC)



■ Derating Curve

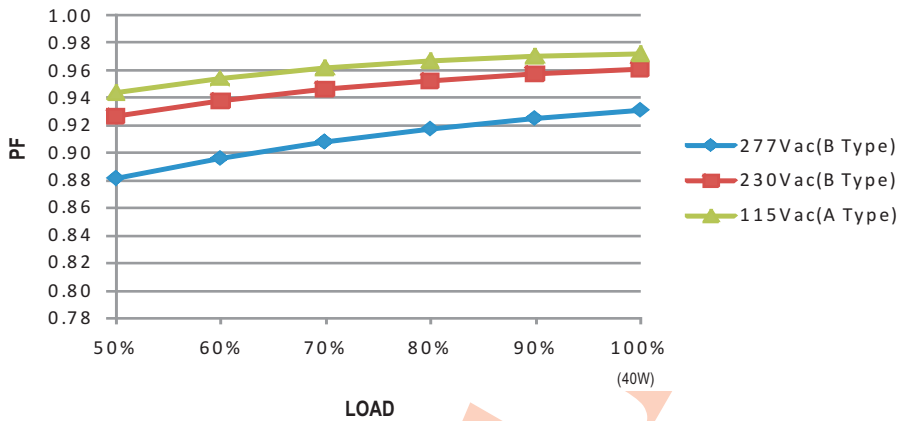


■ Static Characteristics



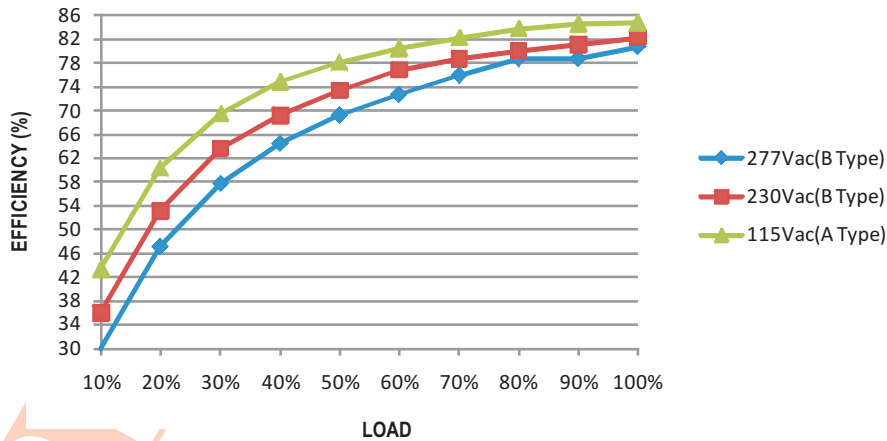
■ Power Factor Characteristic

Constant Current Mode



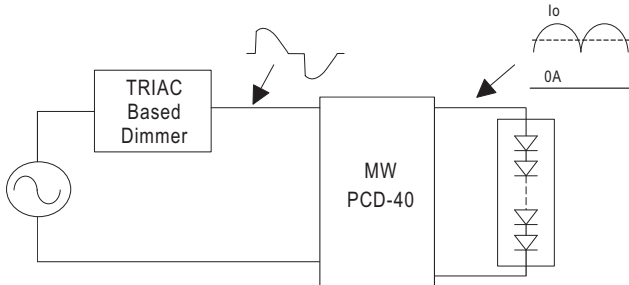
■ EFFICIENCY vs LOAD (PCD-40-350)

PCD-40 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-40 :



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<sub>F</sub>) of the LED strip.

⊙ Dimmer Compatibility Chart

Manufacturer	Dimmer Model	
MEAN WELL	ATD-150-110	(100-120VAC / 60Hz)
MEAN WELL	ATD-150-230	(220-240VAC / 50Hz)
MEAN WELL	ATD-150-277	(267-287VAC / 60Hz)
LUTRON	SKYLARK SF-12P-277	(277VAC / 60Hz)
LUTRON	DVF-103P-277	(277VAC / 60Hz)
LUTRON	SKYLARK SF-10P	(120VAC / 60Hz)
LUTRON	SKYLARK S-600P	(120VAC / 60Hz)
LUTRON	SKYLARK DVF-103P	(120VAC / 60Hz)
LEVITON	ILLUMATECH TM Cat.No.IP106	(120VAC / 60Hz)
LEVITON	SURESLIDE TM Cat.No.6633-P	(120VAC / 60Hz)
LEVITON	SURESLIDE TM Cat. NO.6615-P	(120VAC / 60Hz)
JUNG	Licht-Management 225 TDE	(230VAC / 50Hz)
JUNG	Licht-Management 225 NV DE	(230VAC / 50Hz)
BERKER	Tronic-Drehdimmer 286710	(230-240VAC / 50Hz)
Bodo Ehmann LICHTREGLER	T39.01	(230VAC / 50Hz)
CLIPSAL	32E45UDM	(220-240VAC / 50Hz)
CLIPSAL	NO 32E450TM	(220-240VAC / 50Hz)

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