

# PCD-25 series

## 25W single output AC dimmable LED power supply



### ■ Features :

- AC phase-cut dimming
- Work with leading edge and trailing edge dimmers
- 115VAC or 230VAC models available
- Fully isolated plastic case
- Constant current design
- Protections: Short circuit / Overload / Over temperature
- Built-in active PFC function
- Cooling by free air convection
- Suitable for indoor LED lighting applications
- 100% full load burn-in test
- Low cost
- High reliability
- 3 years warranty



PCD-25-350  A : With AC input 90~ 135VAC.  
 B : With AC input 180~ 295VAC.

### SPECIFICATION

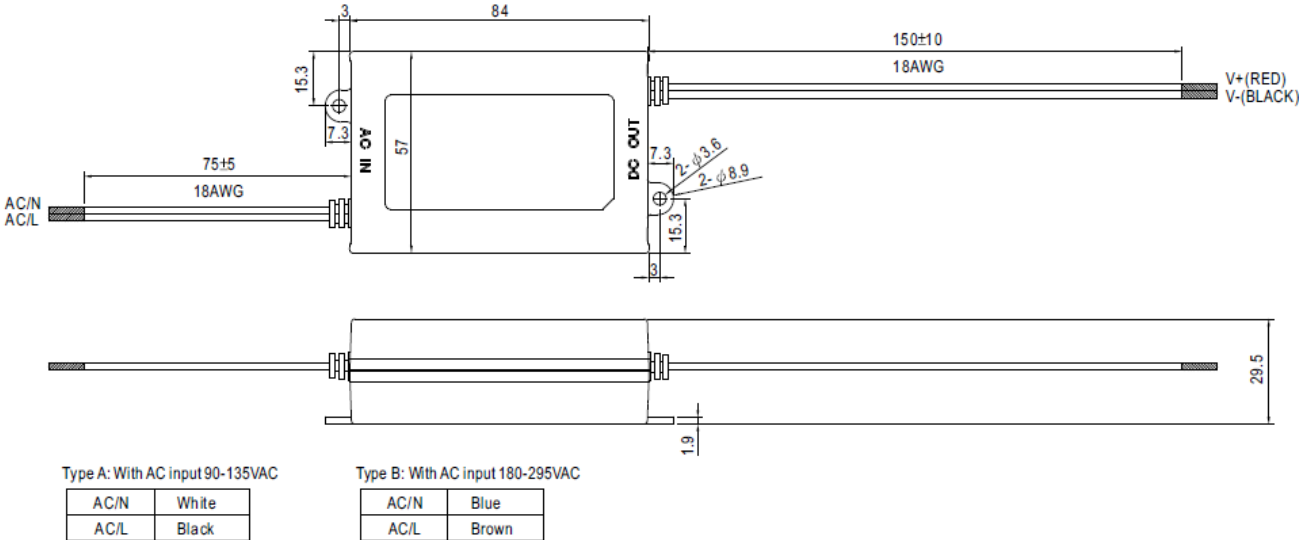
| MODEL        | PCD-25-350 <input type="checkbox"/>   | PCD-25-700 <input type="checkbox"/>   | PCD-25-1050 <input type="checkbox"/> | PCD-25-1400 <input type="checkbox"/> |            |
|--------------|---|---|--------------------------------------|--------------------------------------|------------|
| OUTPUT       | RATED CURRENT   | 350mA   | 700mA                                | 1050mA                               | 1400mA     |
|              | OPERATING VOLTAGE RANGE   | 40 ~ 58V  | 24 ~ 36V                             | 16 ~ 24V                             | 12 ~ 18V   |
|              | CURRENT RANGE   | 0 ~ 350mA   | 0 ~ 700mA                            | 0 ~ 1050mA                           | 0 ~ 1400mA |
|              | RATED POWER   | 20.3W   | 25.2W                                | 25.2W                                | 25.2W      |
|              | RIPPLE & NOISE (max.) Note.1  | 4.6Vp-p   | 2.7Vp-p                              | 2.2Vp-p                              | 2Vp-p      |
|              | NO LOAD OUTPUT VOLTAGE (max.)   | 63V   | 50V                                  | 35V                                  | 25V        |
|              | SETUP TIME  | 1000ms / 230VAC 2000ms / 115VAC at full load  |                                      |                                      |            |
| INPUT        | FREQUENCY RANGE   | 47 ~ 63Hz   |                                      |                                      |            |
|              | POWER FACTOR  | PF ≥ 0.9 at full load and rated output voltage  |                                      |                                      |            |
|              | EFFICIENCY(Typ.)  | 82%   | 81%                                  | 80.5%                                | 80%        |
|              | AC CURRENT  | 0.6A/115VAC 0.3A/230VAC   |                                      |                                      |            |
|              | INRUSH CURRENT(max.)  | 40A/230VAC  |                                      |                                      |            |
|              | LEAKAGE CURRENT   | <0.5mA / 240VAC   |                                      |                                      |            |
| PROTECTION   | OVER CURRENT  | 95 ~ 110%   |                                      |                                      |            |
|              | SHORT CIRCUIT   | Protection type : Constant current limiting, recovers automatically after fault condition is removed<br>Hiccup mode, recovers automatically after fault condition is removed. |                                      |                                      |            |
|              | OVER TEMPERATURE  | 95°C ±10°C (TSW1) detect on heatsink of power transistor<br>Protection type : Shut down o/p voltage   |                                      |                                      |            |
| ENVIRONMENT  | WORKING TEMP.   | -30 ~ +60°C (Refer to output load 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  | TUV EN61347-1, EN61347-2-13 approved ; Design refer to UL1310 Class 2   |                                      |                                      |            |
|              | WITHSTAND VOLTAGE   | I/P-O/P:3.75KVAC  |                                      |                                      |            |
|              | ISOLATION RESISTANCE  | I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH  |                                      |                                      |            |
|              | EMI CONDUCTION & RADIATION  | Compliance to EN55015 Class B (B type only), FCC part18 Class A (A type only)   |                                      |                                      |            |
|              | HARMONIC CURRENT  | Compliance to EN61000-3-2 Class C ; EN61000-3-3   |                                      |                                      |            |
| OTHERS       | EMS IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024,EN61547, light industry level, criteria A   |                                      |                                      |            |
|              | MTBF  | 906.5Khrs min. MIL-HDBK-217F (25°C)   |                                      |                                      |            |
|              | DIMENSION   | 84*57*29.5mm (L*W*H)  |                                      |                                      |            |
|              | PACKING   | 0.19Kg; 72pcs/14.7Kg/0.92CUFT   |                                      |                                      |            |
| 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.<br>2. Direct connecting to LEDs is not using additional drivers is highly recommended. |   |                                      |                                      |            |

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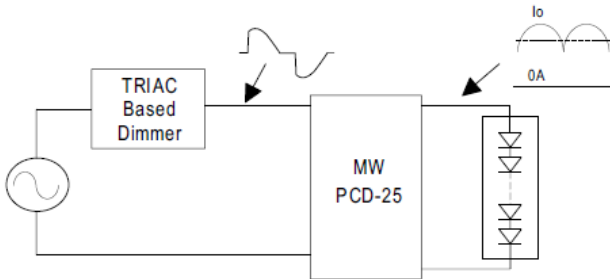
## Mechanical Specification

Case No.PCD16A Unit:mm



## AC Dimming Operation

The following diagram depicts a typical installation utilizing the PCD-25 :



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

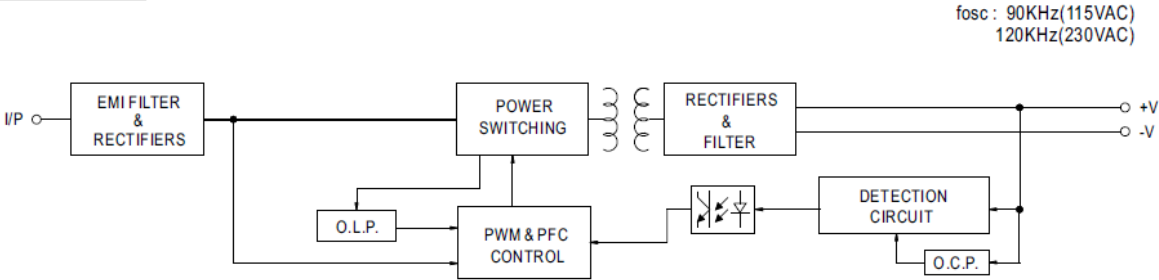
| Manufacturer  | Dimmer Model                |                     |
|---------------|-----------------------------|---------------------|
| LUTRON        | SKYLARK SF-12P-277          | (277VAC / 60Hz)     |
| LUTRON        | DVF-103P-277                | (277VAC / 60Hz)     |
| LUTRON        | SKYLARK 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-Management225 TMD     | (230VAC / 50Hz)     |
| JUNG          | Licht-Management225 NV DE   | (230VAC / 50Hz)     |
| BERKER        | Tronic-Drehdimmer 286710    | (230-240VAC / 50Hz) |
| BELICHTREGLER | T39.01                      | (230VAC / 50Hz)     |
| BELICHTREGLER | T46                         | (230VAC / 50Hz)     |
| CLIPSAL       | 32E450UDM                   | (220-240VAC / 50Hz) |
| CLIPSAL       | NO 32E450TM                 | (220-240VAC / 50Hz) |

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

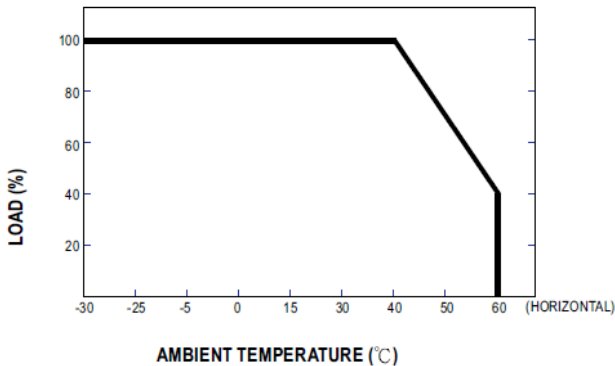
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### Block Diagram



### Derating Curve



### Static Characteristics

