



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
- IP30 design
- Class II power unit, no FG
- Suitable for indoor LED lighting applications
- 100% full load burn-in test
- Low cost
- High reliability
- 3 years warranty

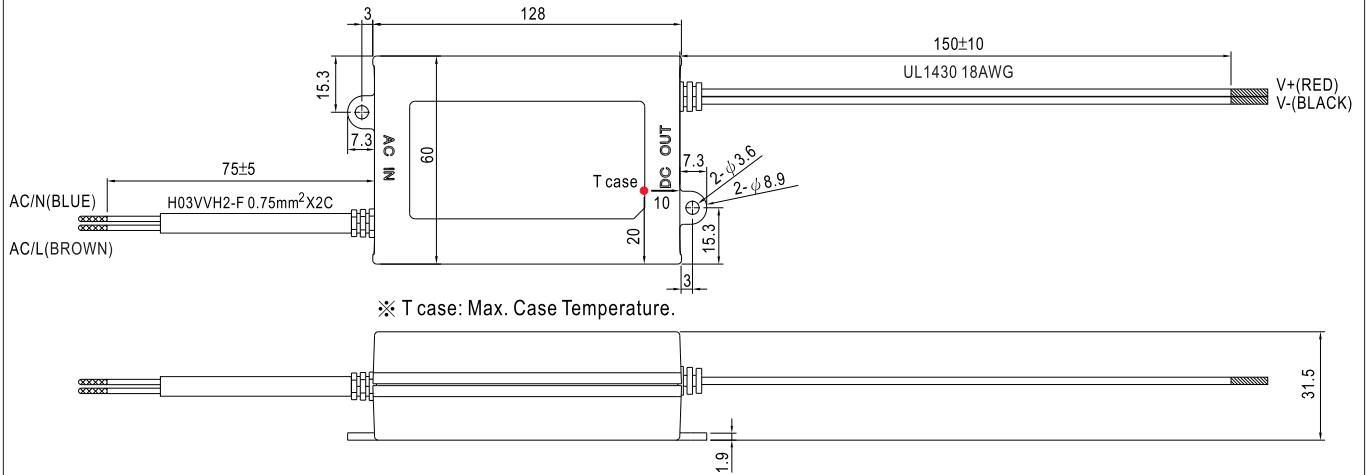


SPECIFICATION

| 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 | 2400mA |
| | OPERATING VOLTAGE RANGE | 70 ~ 108V | 50 ~ 86V | 34 ~ 57V | 25 ~ 43V | 20 ~ 34V | 18 ~ 30V | 15 ~ 25V |
| | CURRENT ACCURACY | ±5.0% | | | | | | |
| | RATED POWER | 54W | 60.2W | 59.85W | 60.2W | 59.5W | 60W | 60W |
| | RIPPLE & NOISE (max.) Note.1 | 10.2Vp-p | 5.6Vp-p | 3.8Vp-p | 3.4Vp-p | 3.3Vp-p | 2.4Vp-p | 2.4Vp-p |
| | NO LOAD OUTPUT VOLTAGE (max.) | 118V | 100V | 63V | 50V | 50V | 35V | 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% | 85% | 85% | 85% | 84% |
| | AC CURRENT (Typ.) | 0.6A/230VAC | | 0.5A/277VAC | | | | |
| | INRUSH CURRENT(Typ.) | COLD START 13A (twidth=50μs measured at 50% Ipeak) at 230VAC | | | | | | |
| | LEAKAGE CURRENT | <0.5mA / 240VAC | | | | | | |
| PROTECTION | 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℃ (Refer to "Derating Curve") | | | | | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80℃, 10 ~ 95% RH | | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes | | | | | | |
| SAFETY & EMC | SAFETY STANDARDS | ENEC EN61347-1, EN61347-2:13 independent, EN62384 approved | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH | | | | | | |
| | EMC EMISSION | Compliance to EN55015, EN61000-3-2 Class C ; EN61000-3-3 | | | | | | |
| | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61547, light industry level(Surge 2KV), criteria B | | | | | | |
| OTHERS | MTBF | 358.030Khrs min. MIL-HDBK-217F (25℃) | | | | | | |
| | 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. | | | | | | | |

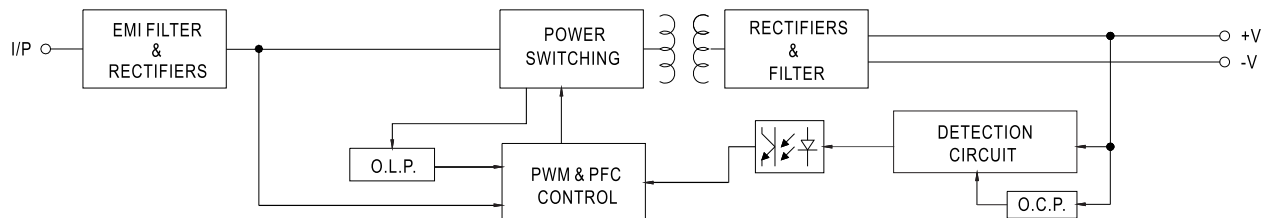
Mechanical Specification

Case No.:PCD40A Unit:mm

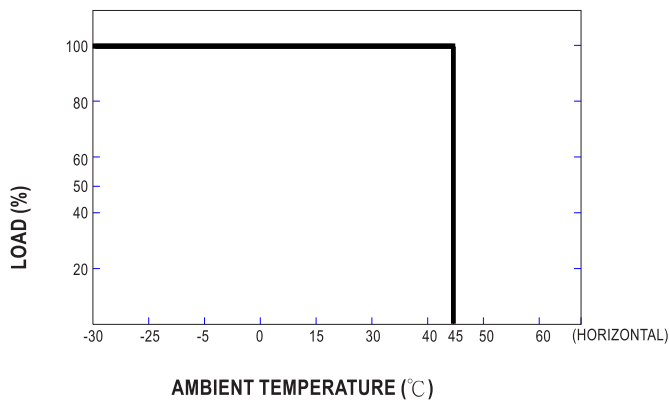


Block Diagram

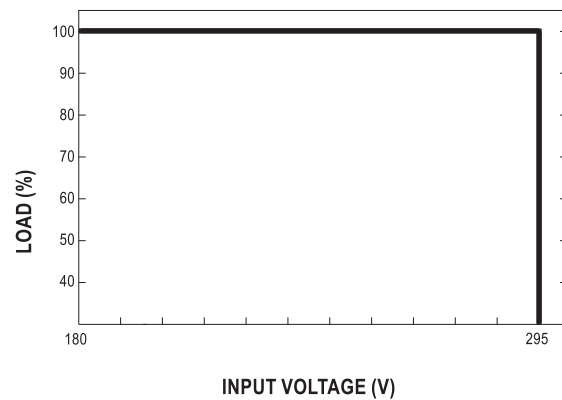
fosc :60KHz(230VAC)



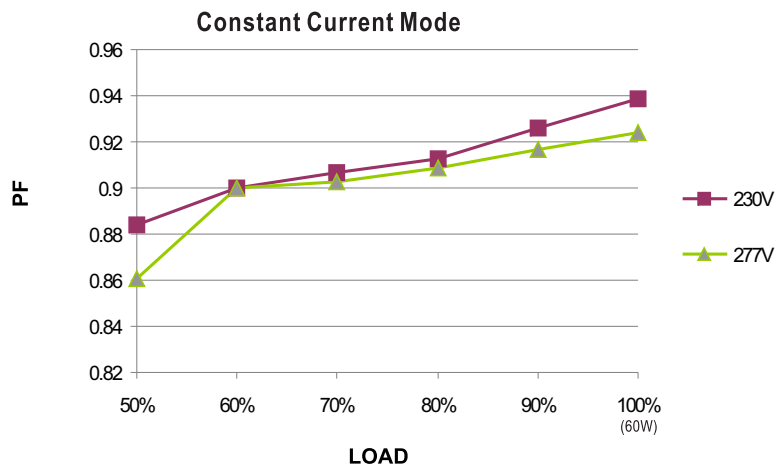
Derating Curve



Static Characteristics

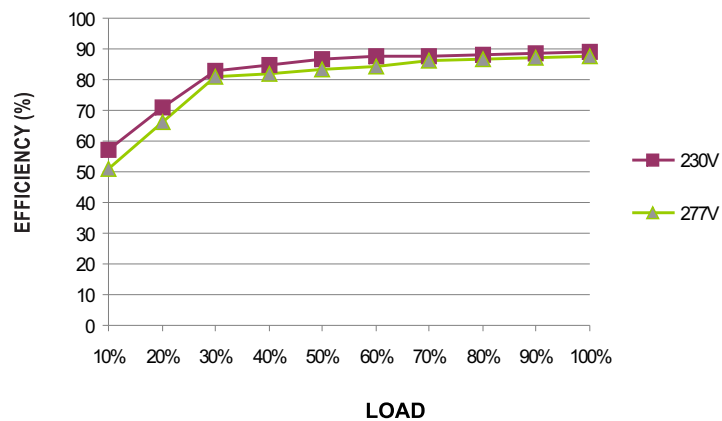


Power Factor Characteristic



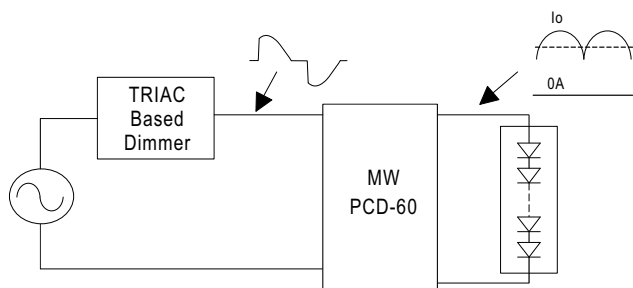
EFFICIENCY vs LOAD (PCD-60-500B)

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.)