



#### ■ 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



#### ■ GTIN CODE

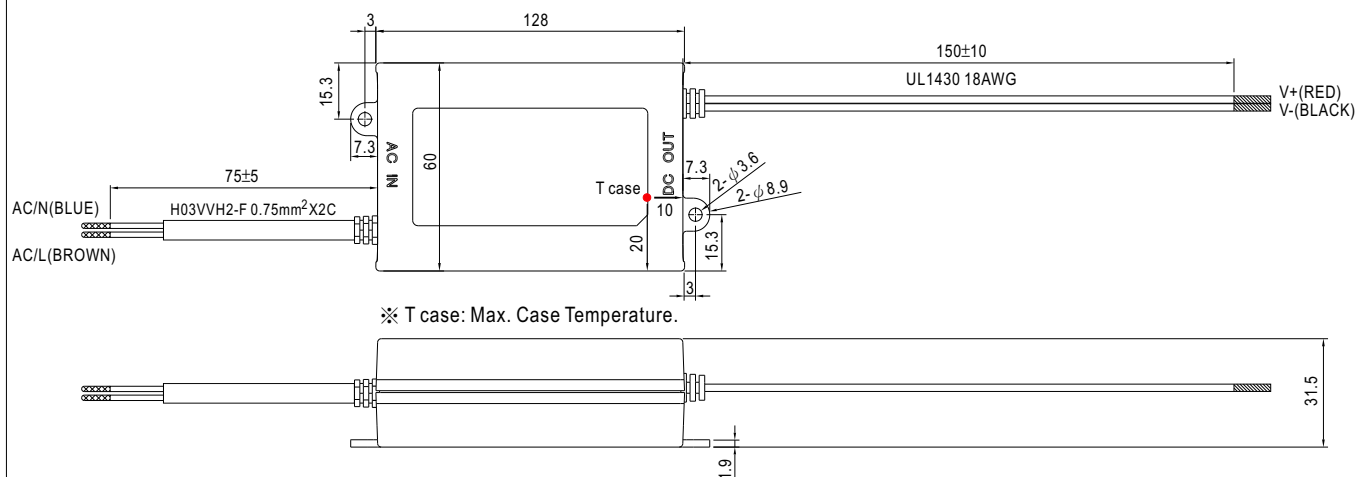
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>


#### 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%          | 87%            | 87%          | 87%                 | 86%          |
|              | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.6A/230VAC    0.5A/277VAC                                                                                              |             |              |                |              |                     |              |
|              | INRUSH CURRENT(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | COLD START    13A (twidth=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                                   |             |              |                |              |                     |              |
|              | 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 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℃ / 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3910.3K hrs min. Telcordia SR-332 (Bellcore)                                                                            |             |              | 358.0Khrs 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.<br>2. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.<br>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.<br>4. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>5. For any application note and IP water proof function installation caution, please refer our user manual before using.<br><a href="https://www.meanwell.com/Upload/PDF/LED_EN.pdf">https://www.meanwell.com/Upload/PDF/LED_EN.pdf</a><br>⊗ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                         |             |              |                |              |                     |              |

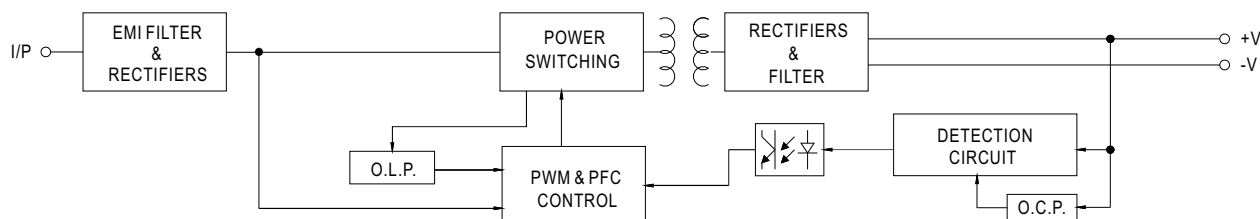
## Mechanical Specification

Case No.:PCD40A Unit:mm

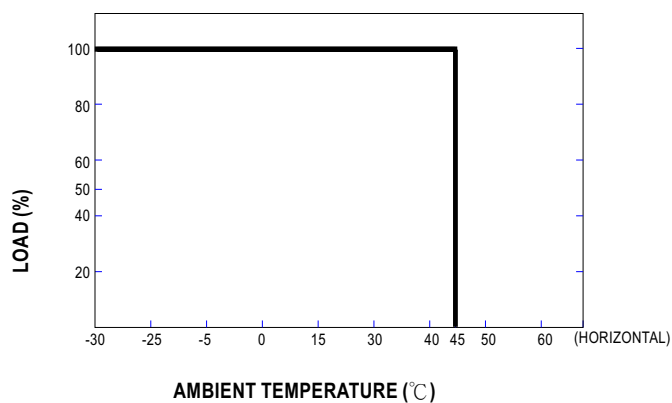


## Block Diagram

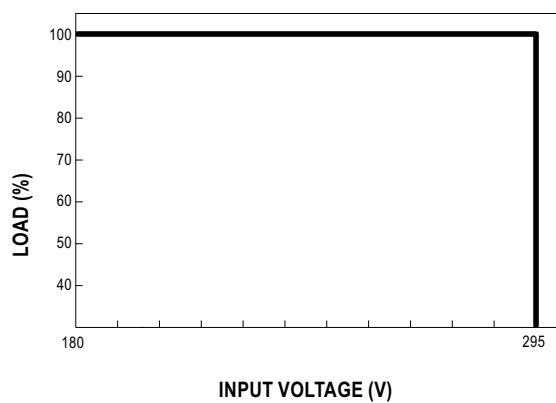
fosc :60KHz(230VAC)



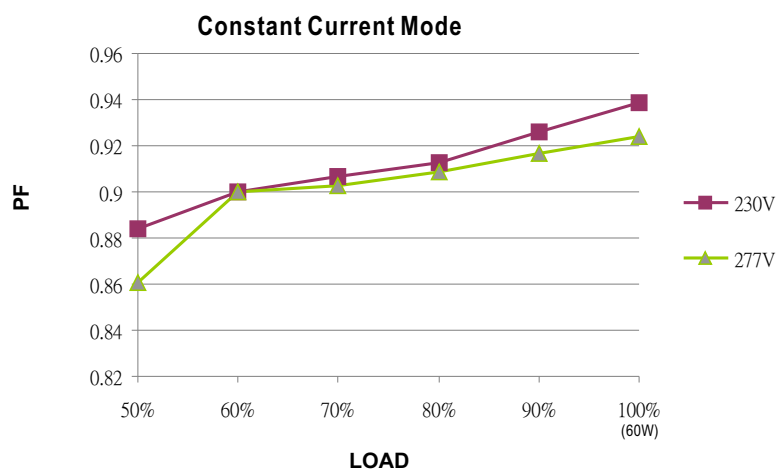
## Derating Curve



## Static Characteristics

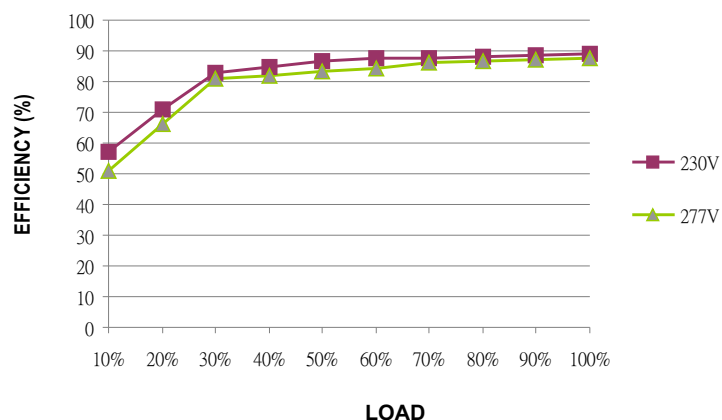


## Power Factor Characteristic



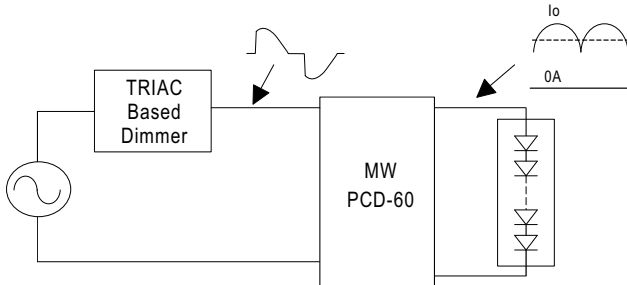
## EFFICIENCY vs LOAD (PCD-60-500B)

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.)