



#### ■ Features

- Constant Power mode output
- Metal housing design with functional Ground
- Built-in active PFC function
- No load / Standby power consumption <math><0.5\text{W}</math>
- IP67 rating for indoor or outdoor installations
- Typical lifetime >50000 hours
- Made in PRC

#### ■ Applications

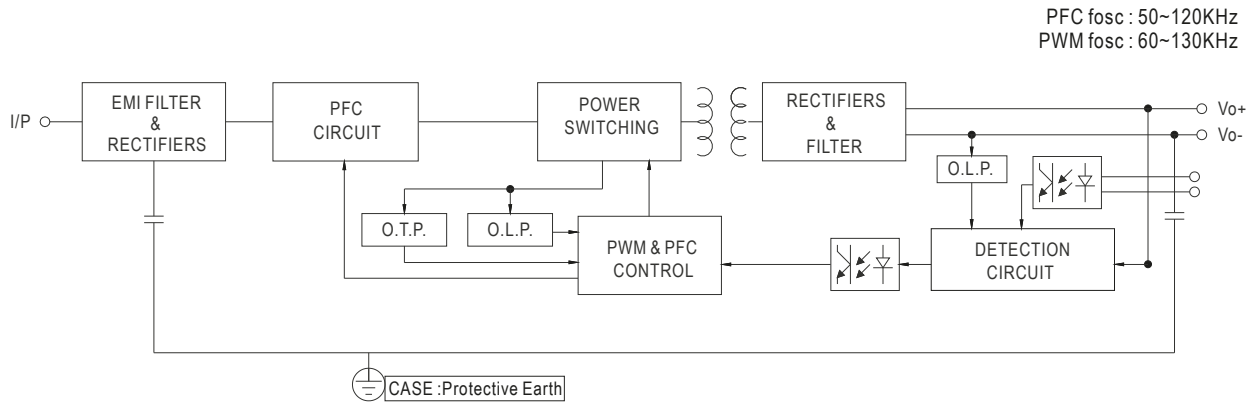
- LED street lighting
- LED architectural lighting
- LED bay lighting
- LED floodlighting
- Type "HL" for use in Class I, Division 2 hazardous (Classified) location.

## SPECIFICATION

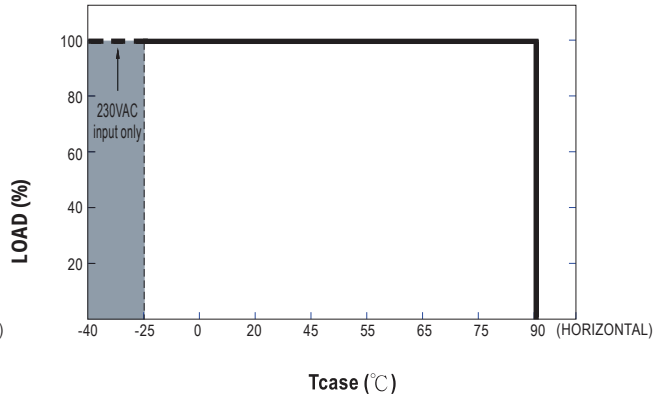
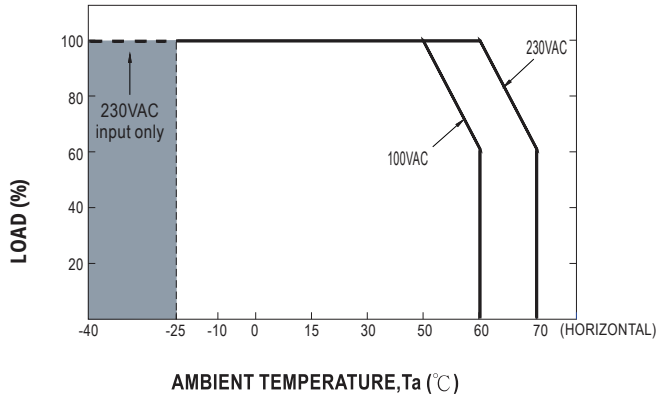
|                                |   |  |   |                        |
|--------------------------------|---|--|---|------------------------|
| <b>MODEL</b>                   |   | <b>DE105050</b>  |   |                        |
| <b>OUTPUT</b>                  | <b>RATED CURRENT</b>  | 1050 mA  |   |                        |
|                                | <b>CONSTANT CURRENT REGION</b> Note.2   | 22 ~54V  |   |                        |
|                                | <b>RATED POWER</b>  | 100VAC ~ 305VAC  |   |                        |
|                                |   | 50W  |   |                        |
|                                | <b>CURRENT RIPPLE</b>   | 5.0% max. @rated current   |   |                        |
|                                | <b>OPEN CIRCUIT VOLTAGE (max.)</b>  | 57V  |   |                        |
|                                | <b>CURRENT ADJ. RANGE</b>   | 0.53 ~ 2.1A  |   |                        |
|                                | <b>SETUP, RISE TIME</b> Note.2  | 500ms, 100ms/115VAC, 230VAC  |   |                        |
| <b>INPUT</b>                   | <b>VOLTAGE RANGE</b> Note.3   | 90 ~ 305VAC 127 ~ 431VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)  |   |                        |
|                                | <b>FREQUENCY RANGE</b>  | 47 ~ 63Hz  |   |                        |
|                                | <b>POWER FACTOR</b>   | PF 0.97/115VAC, PF 0.95/230VAC, PF 0.92/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)   |   |                        |
|                                | <b>TOTAL HARMONIC DISTORTION</b>  | THD < 10% (@load ≥ 50%/115V, 230VAC; @load ≥ 75%/277VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)  |   |                        |
|                                | <b>EFFICIENCY (Typ.)</b>  | 90%  |   |                        |
|                                | <b>AC CURRENT</b>   | 0.57A / 115VAC 0.29A / 230VAC 0.24A/277VAC   |   |                        |
|                                | <b>INRUSH CURRENT (Typ.)</b>  | COLD START 50A (twidh=350µs measured at 50% Ipeak) at 230VAC; Per NEMA 410   |   |                        |
|                                | <b>MAX. No. of PSUs on 16A CIRCUIT BREAKER</b>  | 5 units (circuit breaker of type B) / 8 units (circuit breaker of type C) at 230VAC  |   |                        |
|                                | <b>LEAKAGE CURRENT</b>  | <0.75mA / 277VAC   |   |                        |
|                                | <b>NO LOAD / STANDBY POWER CONSUMPTION</b>  | No load power consumption <0.5W  |   |                        |
| <b>PROTECTION</b>              | <b>OVER POWER</b>   | 110-150% Over Power Protection, recovers automatically after fault condition is removed  |   |                        |
|                                | <b>SHORT CIRCUIT</b>  | Constant current limiting, recovers automatically after fault condition is removed   |   |                        |
|                                | <b>OVER TEMPERATURE</b>   | Hiccup mode, recovers automatically after fault condition is removed   |   |                        |
| <b>ENVIRONMENT</b>             | <b>WORKING TEMP.</b>  | Tcase=-40 ~ +90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)   |   |                        |
|                                | <b>MAX. CASE TEMP.</b>  | Tcase=+90°C  |   |                        |
|                                | <b>WORKING HUMIDITY</b>   | 20 ~ 95%   |   |                        |
|                                | <b>STORAGE TEMP.</b>  | -40 ~ +80°C  |   |                        |
|                                | <b>TEMP. COEFFICIENT</b>  | ±0.03%/°C (0 ~ 60°C)   |   |                        |
|                                | <b>VIBRATION</b>  | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes  |   |                        |
| <b>SAFETY &amp; EMC</b>        | <b>SAFETY STANDARDS</b>   | UL8750(type"HL"), CSA C22.2 No. 250.13-12; ENEC AS/NZS IEC EN61347-1, AS/NZS EN61347-2-13 independent, EN62384; IP67; GB19510.1, GB19510.14, EAC TP TC 004, J61347-1(H29), J61347-2-13(H29), KC61347-1, KC61347-2-13, NOM-058-SCFI-2017 approved |   |                        |
|                                | <b>WITHSTAND VOLTAGE</b>  | I/P-O/P:3.75KVAC I/P-FG:2.0KVAC O/P-FG:1.5KVAC   |   |                        |
|                                | <b>ISOLATION RESISTANCE</b>   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH  |   |                        |
|                                | <b>EMC EMISSION</b>   | <b>Parameter</b>   | <b>Standard</b>                         | <b>Test Level/Note</b> |
|                                |   | Conducted  | EN55015(CISPR15), GB/T17743             | -----                  |
|                                |   | Radiated   | EN55015(CISPR15), GB/T17743             | -----                  |
|                                |   | Harmonic Current   | EN61000-3-2, GB/T17625.1                | Class C @load ≥ 50%    |
|                                | Voltage Flicker   | EN61000-3-3  | -----                                   |                        |
|                                | <b>EMC IMMUNITY</b>   | EN61547  |   |                        |
|                                |   | <b>Parameter</b>   | <b>Standard</b>                         | <b>Test Level/Note</b> |
| ESD                            |   | EN61000-4-2  | Level 3, 8KV air ; Level 2, 4KV contact |                        |
| Radiated                       |   | EN61000-4-3  | Level 3                                 |                        |
| EFT/Burst                      |   | EN61000-4-4  | Level 3                                 |                        |
| Surge                          |   | EN61000-4-5  | 4KV/Line-Line 6KV/Line-Earth            |                        |
| Conducted                      |   | EN61000-4-6  | Level 3                                 |                        |
| Magnetic Field                 |   | EN61000-4-8  | Level 4                                 |                        |
| Voltage Dips and Interruptions | EN61000-4-11  | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods   |   |                        |
| <b>OTHERS</b>                  | <b>MTBF</b>   | 1252.69 K hrs min. Telcordia SR-332 (Bellcore) 394.57Khrs min. MIL-HDBK-217F (25 )   |   |                        |
|                                | <b>DIMENSION</b>  | 105*63*30mm (L*W*H)  |   |                        |
|                                | <b>PACKING</b>  | 0.41Kg   |   |                        |
| <b>NOTE</b>                    | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25 of ambient temperature.</li> <li>Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</li> <li>This series meets the typical life expectancy of &gt;50,000 hours of operation when Tcase, particularly (Tc) point (or Tmp, per DLC), is about 80 or less.</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless models and of 5 /1000m with fan models for operating altitude higher than 2000m(6500ft).</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>To fulfill requirements of the latest ErP regulation for lighting fixture, this LED driver can only be used behind a switch without permanently connected to the mains.</li> </ol> |  |   |                        |



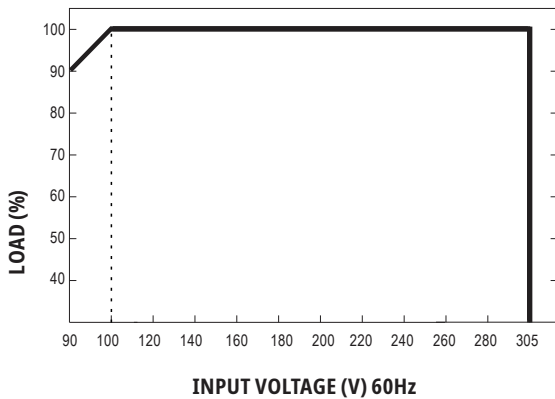
■ Block Diagram



### OUTPUT LOAD vs TEMPERATURE



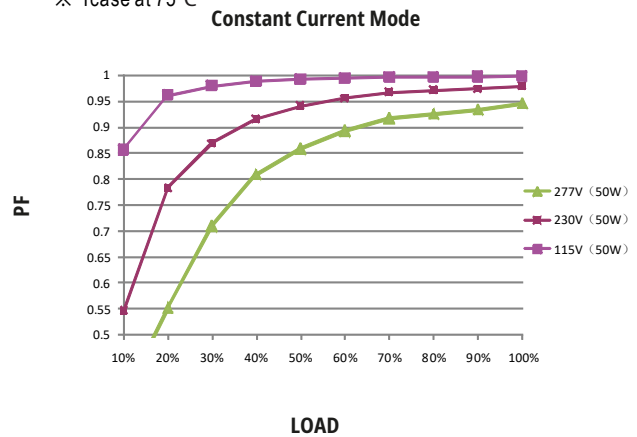
### STATIC CHARACTERISTIC



De-rating is needed under low input voltage.

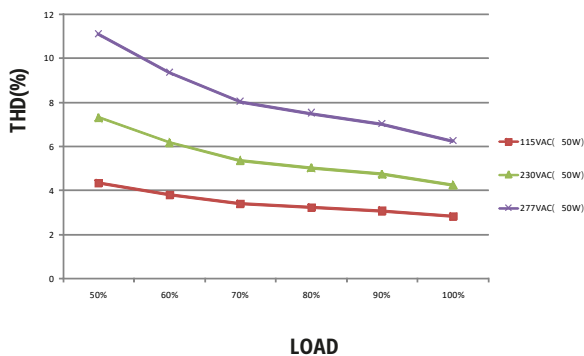
### POWER FACTOR (PF) CHARACTERISTIC

※ Tcase at 75°C



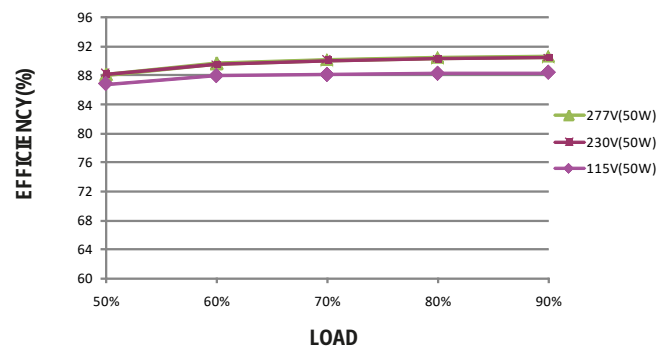
### TOTAL HARMONIC DISTORTION (THD)

※ 50V Model, Tcase at 75°C



### EFFICIENCY vs LOAD

※ 50V Model, Tcase at 75°C

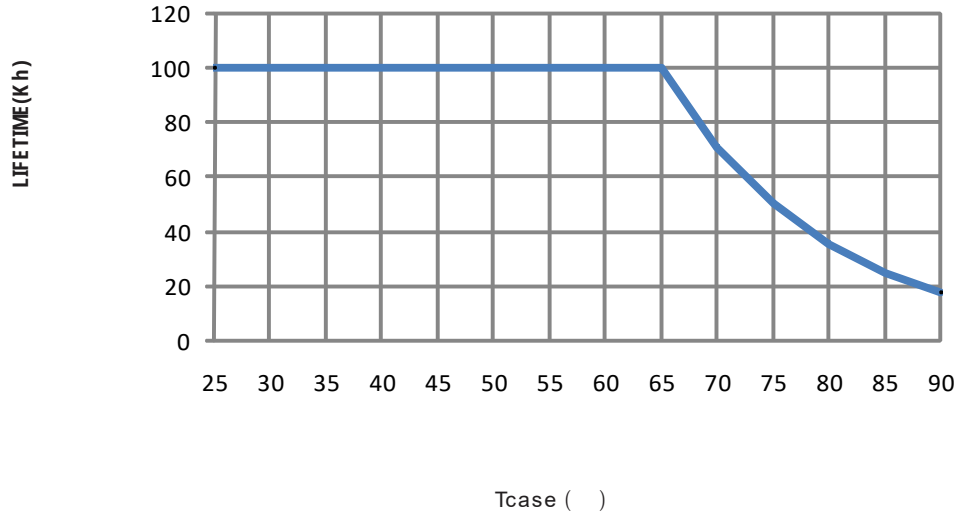




# DE105050

Series 1050mA C.C. Power Supply  
Alimentatori C.C. serie 1050mA

■ LIFE TIME





# DE105050

Series 1050mA C.C. Power Supply  
Alimentatori C.C. serie 1050mA

■ Mechanical Specification

Unit:mm

