



Наличие и актуальные цены на

**PLM-12-700**

<https://www.mean-well.ru/store/PLM-12-700/>



User's Manual



## Features

- 230VAC only or Full range (up to 295VAC) models available
- Built-in active PFC function
- Constant current design
- Protections: Short circuit
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- Class 2 power unit (Blank type only)
- No load power consumption <0.5W
- High reliability, low cost
- 2 years warranty

## Applications

- Indoor LED lighting
- LED office lighting
- LED commercial lighting
- LED decorative lighting

## GTIN CODE

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

## Description

PLM-12 is a 12W economical AC/DC LED power supply series. Incorporating a built-in active PFC design, PLM-12 provides a high Power Factor value greater than 0.9. In addition, with the low no load power consumption below 0.5W, and the setup time less than 500ms, PLM-12 is complied with the ErP regulation required by European Union for lighting fixtures.

PLM-12 is a class II (without FG pin) power unit housed with the UL 94V-0 rated flame retardant plastic case. The I/O terminals are designed with screw-less clamp style terminal block that greatly simplifies the wiring installation. Two types of models with different input voltage range are offered: PLM-12 series, which operates from 110~295VAC, and PLM-12E series, which operates from 180~295VAC. These two series are both constant current output design, supplying models with the current of 350mA, 500mA, 700mA and 1050mA, respectively.

## Model Encoding

PLM - 12 E - 350

↑ Output current  
 ↑ Blank: AC input range 110~295VAC  
 ↑ E: AC input range 180~295VAC  
 ↑ Output wattage  
 ↑ Series name



## 12W Single Output LED Power Supply

## PLM-12 series

### SPECIFICATION

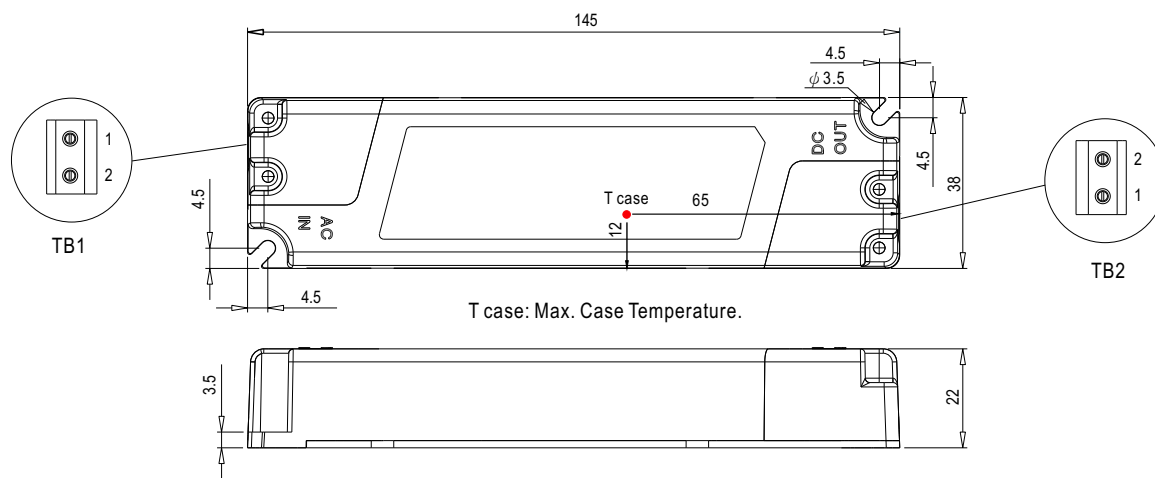
| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | PLM-12□-350                                                                                                                                                                     | PLM-12□-500                                                                                                    | PLM-12□-700 | PLM-12□-1050 |         |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------|--------------|---------|
| OUTPUT                                  | CONSTANT CURRENT REGION <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 22 ~ 36V                                                                                                                                                                        | 15 ~ 24V                                                                                                       | 11 ~ 18V    | 7 ~ 12V      |         |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.35A                                                                                                                                                                           | 0.5A                                                                                                           | 0.7A        | 1.05A        |         |
|                                         | NO LOAD OUTPUT VOLTAGE <sub>(max.)</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 42V                                                                                                                                                                             | 30V                                                                                                            | 22V         | 16V          |         |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 12.6W                                                                                                                                                                           | 12W                                                                                                            | 12.6W       | 12.6W        |         |
|                                         | RIPPLE & NOISE <sub>(max.)</sub> <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Blank type                                                                                                                                                                      | 3.6Vp-p                                                                                                        | 2.4Vp-p     | 2.4Vp-p      | 1.8Vp-p |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | E type                                                                                                                                                                          | 5.5Vp-p                                                                                                        | 3.6Vp-p     | 3.6Vp-p      | 2.7Vp-p |
|                                         | CURRENT ACCURACY <sub>Note.3</sub>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±5.0%                                                                                                                                                                           |                                                                                                                |             |              |         |
| SETUP TIME                              | Blank type: 500ms / 115VAC, 230VAC at full load;      E type: 500ms / 230VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                 |                                                                                                                |             |              |         |
| INPUT                                   | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Blank type: 110 ~ 295VAC      156 ~ 417VDC;    E type: 180 ~ 295VAC      254~ 417VDC                                                                                            |                                                                                                                |             |              |         |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 47 ~ 63Hz                                                                                                                                                                       |                                                                                                                |             |              |         |
|                                         | POWER FACTOR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Blank type                                                                                                                                                                      | PF≥0.97/115VAC,PF≥0.95/230VAC,PF>0.9/277VAC(at full load)(Please refer to "Power Factor Characteristic" curve) |             |              |         |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | E type                                                                                                                                                                          | PF≥0.95/230VAC,PF≥0.9/277VAC (at full load)(Please refer to "Power Factor Characteristic" curve)               |             |              |         |
|                                         | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Blank type                                                                                                                                                                      | THD< 20% when output loading≥60% at 115VAC/230VAC input and output loading≥75% at 277VAC input                 |             |              |         |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | E type                                                                                                                                                                          | THD< 20% when output loading≥60% at 230VAC input and output loading≥75% at 277VAC input                        |             |              |         |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Blank type                                                                                                                                                                      | 85%                                                                                                            | 84%         | 83%          | 81%     |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | E type                                                                                                                                                                          | 84%                                                                                                            | 83%         | 82%          | 78%     |
|                                         | AC CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Blank type: 0.15A/115VAC      0.08A/230VAC      0.07A/277VAC; E type: 0.08A/230VAC    0.07A/277VAC                                                                              |                                                                                                                |             |              |         |
|                                         | INRUSH CURRENT(Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | COLD START 15A(twidth=50μs measured at 50% Ipeak) at 230VAC                                                                                                                     |                                                                                                                |             |              |         |
| MAX. No. of PSUs on 16A CIRCUIT BREAKER | 160 units (circuit breaker of type B) / 160 units (circuit breaker of type C) at 230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                 |                                                                                                                |             |              |         |
| LEAKAGE CURRENT                         | 0.25mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                 |                                                                                                                |             |              |         |
| PROTECTION                              | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Hiccup mode, recovers automatically after fault condition is removed.                                                                                                           |                                                                                                                |             |              |         |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -30 ~ +50°C                                                                                                                                                                     |                                                                                                                |             |              |         |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20 ~ 90% RH non-condensing                                                                                                                                                      |                                                                                                                |             |              |         |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -40 ~ +80°C, 10 ~ 95% RH                                                                                                                                                        |                                                                                                                |             |              |         |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ±0.06%/°C (0 ~ 50°C)                                                                                                                                                            |                                                                                                                |             |              |         |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                         |                                                                                                                |             |              |         |
| SAFETY & EMC                            | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | UL8750, CSA C22.2 No. 250.13-12(for Blank type only); ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384,GB19510.14,GB19510.1(for E type only),EAC TP TC 004,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 BS EN/EN55015, GB/T 17743,GB17625.1(for E type only),BS EN/EN61000-3-2 Class C(≥60% load); 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, criteria B(surge 2KV),EAC TP TC 020                                                           |                                                                                                                |             |              |         |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 7872.3K hrs min.    Telcordia SR-332 (Bellcore) ;    598.9Khrs min.    MIL-HDBK-217F (25°C)                                                                                     |                                                                                                                |             |              |         |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 145*38*22mm (L*W*H)                                                                                                                                                             |                                                                                                                |             |              |         |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.126Kg;60pcs/8.6 Kg/0.48CUFT                                                                                                                                                   |                                                                                                                |             |              |         |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Please see "AC input voltage drop vs. output current characteristics" table.<br>4. Derating may be needed under low input voltage, please check the static characteristic for more details.<br>5. Constant current operation region is within 60% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.<br>6. The power supply 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. (as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )<br>7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.<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.PLM-25

Unit:mm

Tolerance:  $\pm 1$



NOTE: The input and output line for using UL1015 18AWG\*2C is suggested

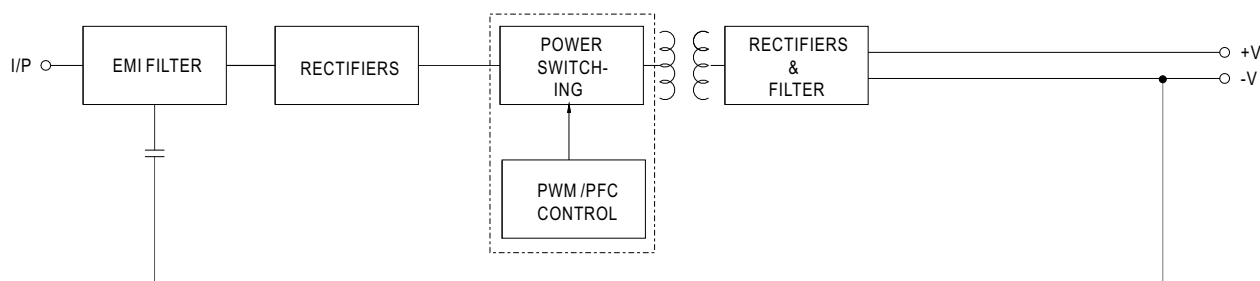
Terminal Pin No. Assignment (TB1):  
SWITCHLAB MWX201-75002EB(GRAY)

| Pin No. | Assignment |
|---------|------------|
| 1       | AC/L       |
| 2       | AC/N       |

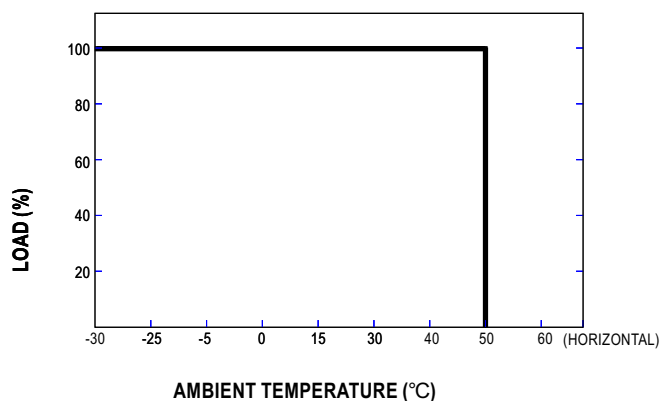
Terminal Pin No. Assignment (TB2) :  
SWITCHLAB MWX201-75002B(BLUE)

| Pin No. | Assignment |
|---------|------------|
| 1       | +V         |
| 2       | -V         |

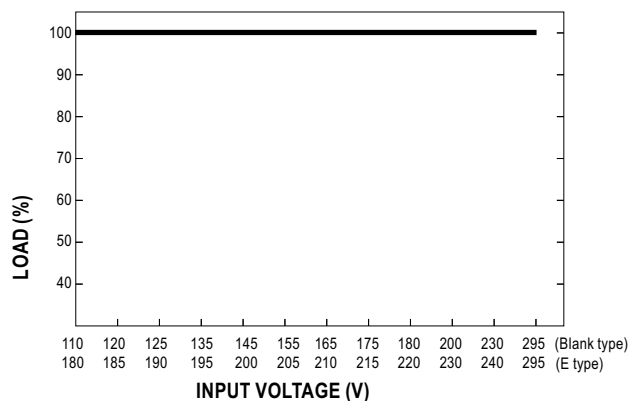
### ■ Block Diagram



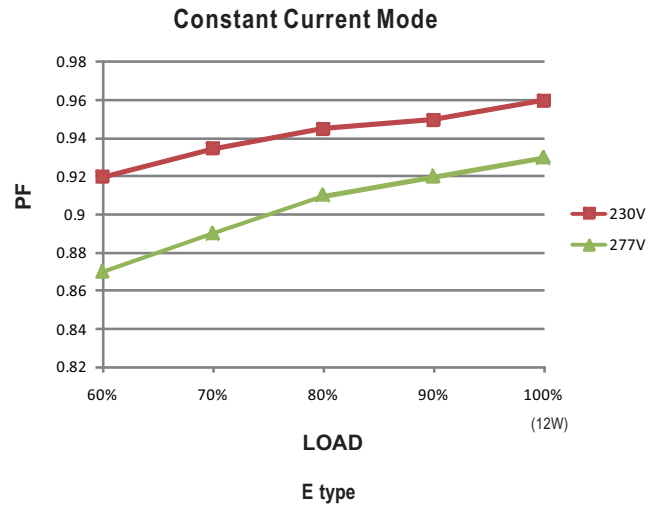
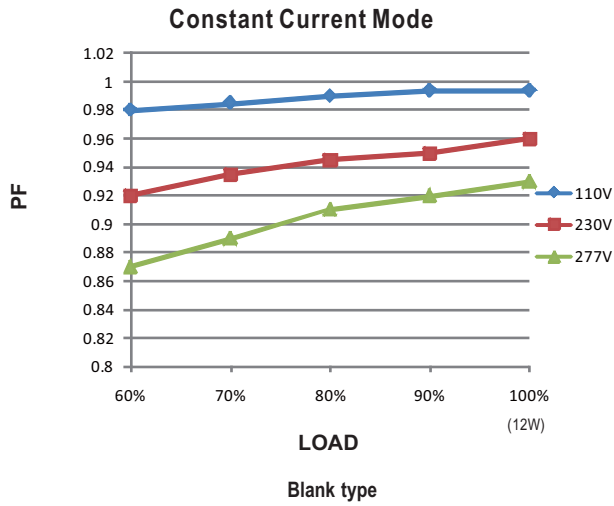
### Derating Curve



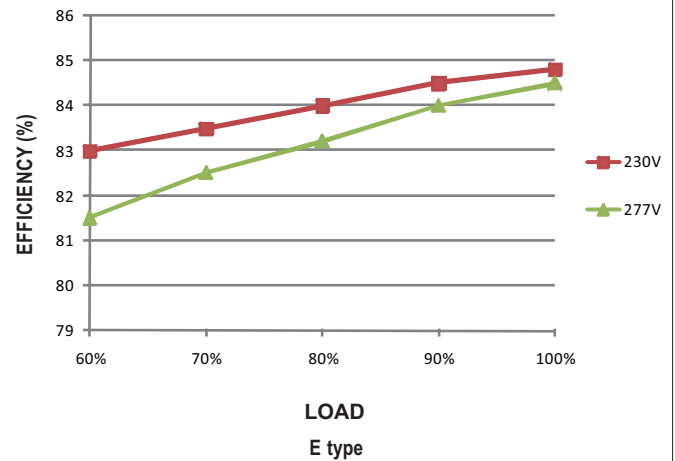
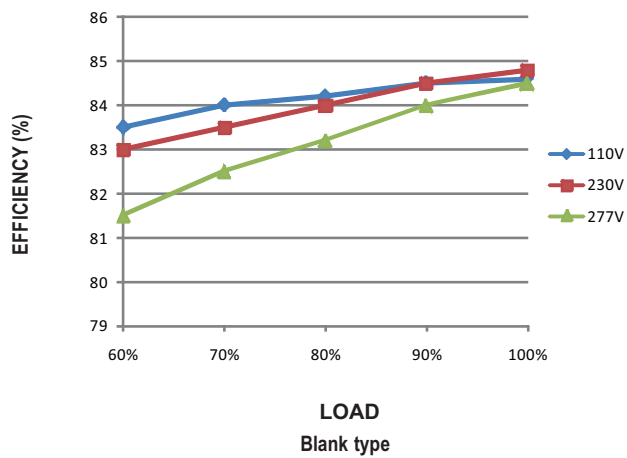
### ■ Static Characteristics



### Power Factor Characteristic



### EFFICIENCY vs LOAD (500mA Model)



### AC input voltage drop vs. output current characteristics

|               |      |      |     |     |
|---------------|------|------|-----|-----|
| AC input drop | 10%  | 8%   | 5%  | 3%  |
| Io drop       | <15% | <11% | <7% | <6% |

NOTE: Output current will return to the rated value within 50ms