MEAN WELL PLM-25 Series Single Output LED Power Supply User Guide

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MEAN WELL PLM-25 Series Single Output LED Power Supply

Product Information

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MODEL	OUTPUT	INPUT	PROTECTION
PLM-25-350	42 ~ 72V, 0.35A	110 ~ 295VAC, 47 ~ 63Hz	Short Circuit Protection
PLM-25-500	30 ~ 50V, 0.5A	110 ~ 295VAC, 47 ~ 63Hz	Short Circuit Protection
PLM-25-700	21 ~ 36V, 0.7A	110 ~ 295VAC, 47 ~ 63Hz	Short Circuit Protection
PLM-25-1050	14 ~ 24V, 1.05A	110 ~ 295VAC, 47 ~ 63Hz	Short Circuit Protection

Product Usage Instructions

- **Setting Up the Power Supply**
  1. Ensure the input voltage is within the specified range.
  2. Connect the output to the LED light fixture.
  3. Ensure proper ventilation around the power supply.
- **Powering On and Off**

  To power on the LED power supply, simply connect it to a power source within the specified voltage range. To power off, disconnect the power supply from the source.
- **Troubleshooting**

  In case of any issues, refer to the user manual for troubleshooting steps. For technical assistance, contact customer support.

FAQ

- **Q: What should I do if the LED light does not turn on?**

A: Check the connections between the power supply and the LED fixture. Ensure the input voltage is correct and within the specified range.

- **Q: Can I connect multiple LED fixtures to one power supply?**
  A: The maximum number of LED fixtures that can be connected depends on the total power consumption of the fixtures and the power supply's capacity. Refer to the manual for guidance.

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(for PLM-25-500/700/1050)
- No load power consumption <0.5W
- High reliability, low cost
- 2 years warranty

Description

- PLM-25 is a 25W economical AC/DC LED power supply series. Incorporating a built-in active PFC design, PLM-25 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 of less than 500ms, PLM-25 complies with the ErP regulation required by the European Union for lighting fixtures.
- PLM-25 is a class II (without FG pin) power unit housed with the UL 94V-0 rated flame retardant plastic case. The 1/O terminals are designed with a screw-less clamp-style terminal block that greatly simplifies the wiring installation. Two types of models with different input voltage ranges are offered: the PLM-25 series, which operates from 110~295VAC, and the PLM-25E series, which operates from 180~295VAC. These two series are both constant current output designs, supplying models with currents of 350mA, 500mA, 700mA, and 1050mA, respectively.

Applications

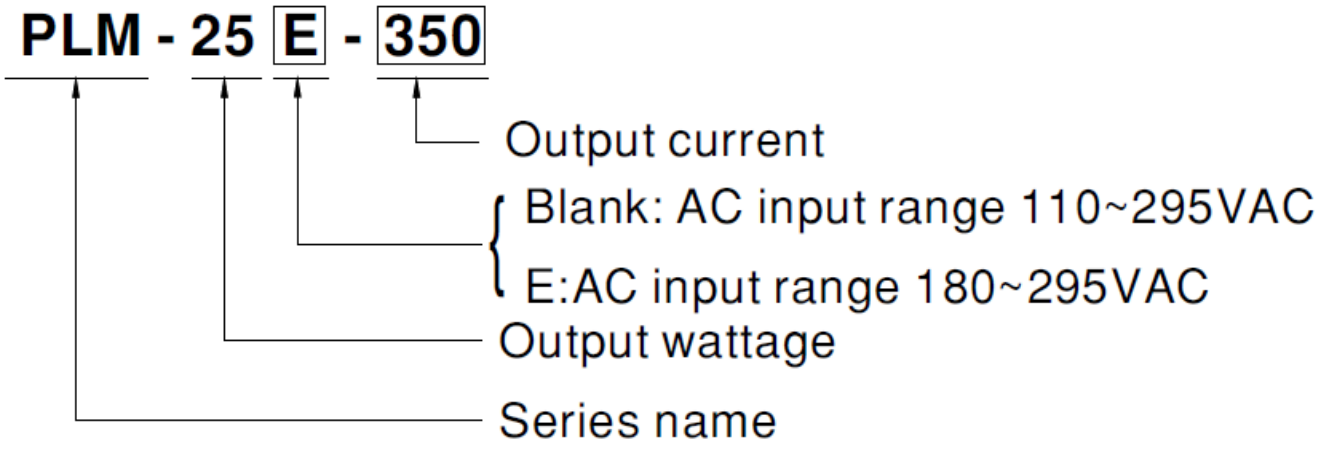
- Indoor LED lighting

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

GTIN CODE

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

Model Encoding



SPECIFICATION

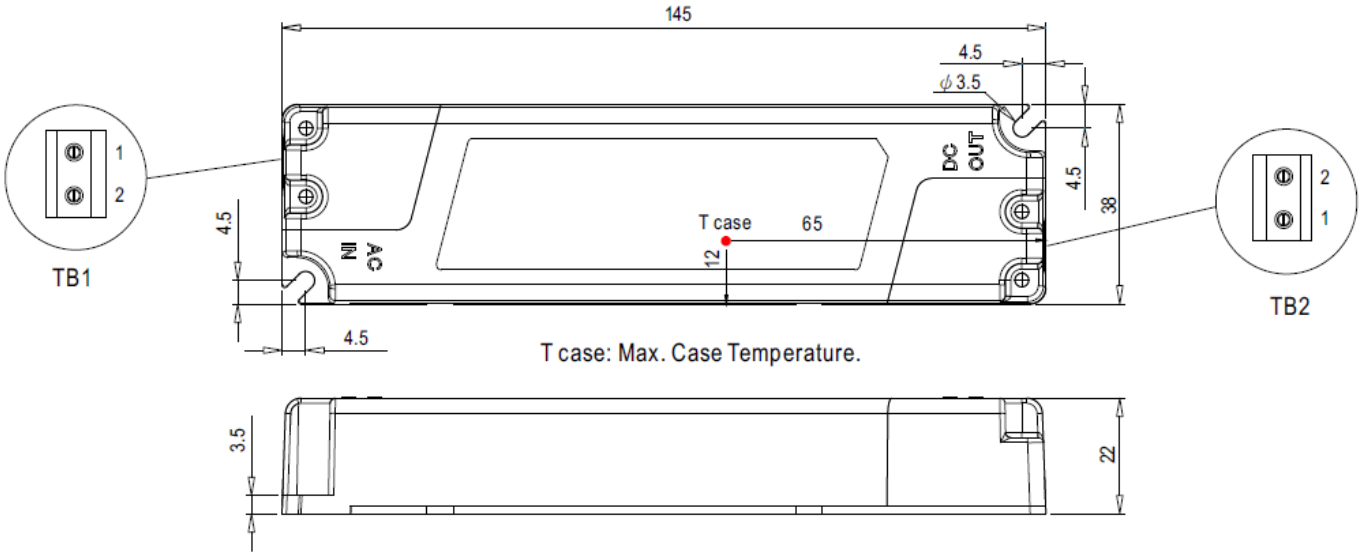
MODEL			PLM-25 -350	PLM-25 -500	PLM-25 -700	PLM-25 -1050
OUTPUT	CONSTANT CURRENT REGION Note.5		42 ~ 72V	30 ~ 50V	21 ~ 36V	14 ~ 24V
	RATED CURRENT		0.35A	0.5A	0.7A	1.05A
	NO LOAD OUTPUT VOLTAGE(max.)		80V	56V	42V	28V
	RATED POWER		25.2W	25W	25.2W	25.2W
	RIPPLE & NOISE (max.) Note.2	Blank type	7.2Vp-p	5.0Vp-p	3.6Vp-p	2.4Vp-p
		E type	9Vp-p	7.5Vp-p	5.4Vp-p	3.6Vp-p
	CURRENT ACCURACYNote.3		±5.0%			
	SETUP TIME		Blank Type: 500ms / 115VAC, 230VAC at full load; E type: 500ms / 230VAC at full load			
	VOLTAGE RANGE Note.4		Blank type: 110 ~ 295VAC 156 ~ 417VDC; E type: 180 ~ 295VAC 254~417VDC			

INPUT	**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**	87%	86%	86%	85%
		E type	86%	85%	85%	82%
	AC CURRENT		Blank Type: 0.3A/115VAC 0.15A/230VAC 0.12A/277VAC; E type: 0.15A/230VAC 0.12A/277VAC			
	INRUSH CURRENT(Typ.)		COLD START 15A(twidth=50μs measured at 50% Ipeak) at 230VAC			
	MAX. No. of PSUs on 16A CIRCUIT BREAKER		80 units (circuit breaker of type B) / 80 units (circuit breaker of type C) at 230VAC			
	LEAKAGE CURRENT		0.25mA / 240VAC			
PROTECTION	**SHORT CIRCUIT**		Hiccup mode recovers automatically after the fault condition is removed.			
ENVIRONMENT	**WORKING TEMP.**		-30 ~ +45℃			
	WORKING HUMIDITY		20 ~ 90% RH non-condensing			
	STORAGE TEMP., HUMIDITY		-40 ~ +80℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT		±0.06%/℃ (0 ~ 50℃)			
	VIBRATION		10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, and 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℃/ 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**	7905.4K hrs min. Telcordia SR-332 (Bellcore); 608.9Khrs min. MIL-HDBK-217F (25℃)
	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℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12″ twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Please see the “AC input voltage drop vs. output current characteristics” table. 4. Derating may be needed under low input voltage, please check the static characteristic for more details. 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 designs. 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 the EMC Directive on the complete installation. (as available on **https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf**) 7. Direct connecting to LEDs is suggested but is not suitable for using additional drivers. ※ Product Liability Disclaimer: For detailed information, please refer to **https://www.meanwell.com/serviceDisclaimer.aspx**.

Mechanical Specification

Case No.PLM-25 Unit: mm Tolerance:±1



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

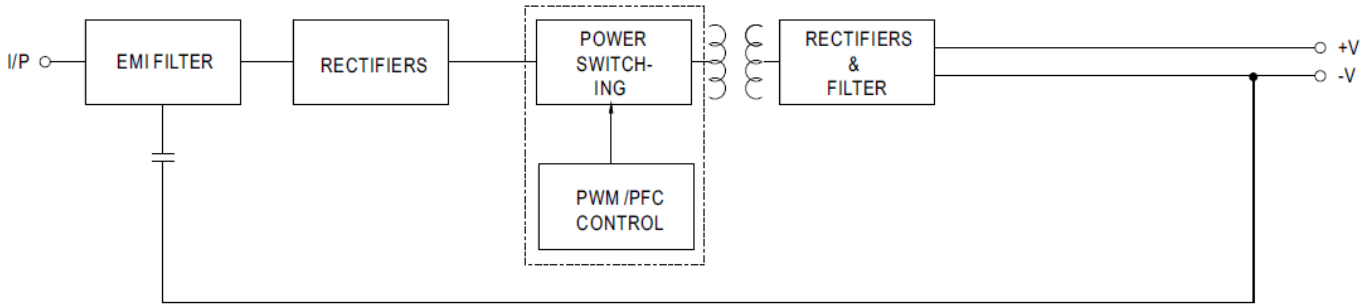
Terminal Pin No. Assignment (TB1):
SWITCHLAB MWX201-75002EB(GRAY)

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

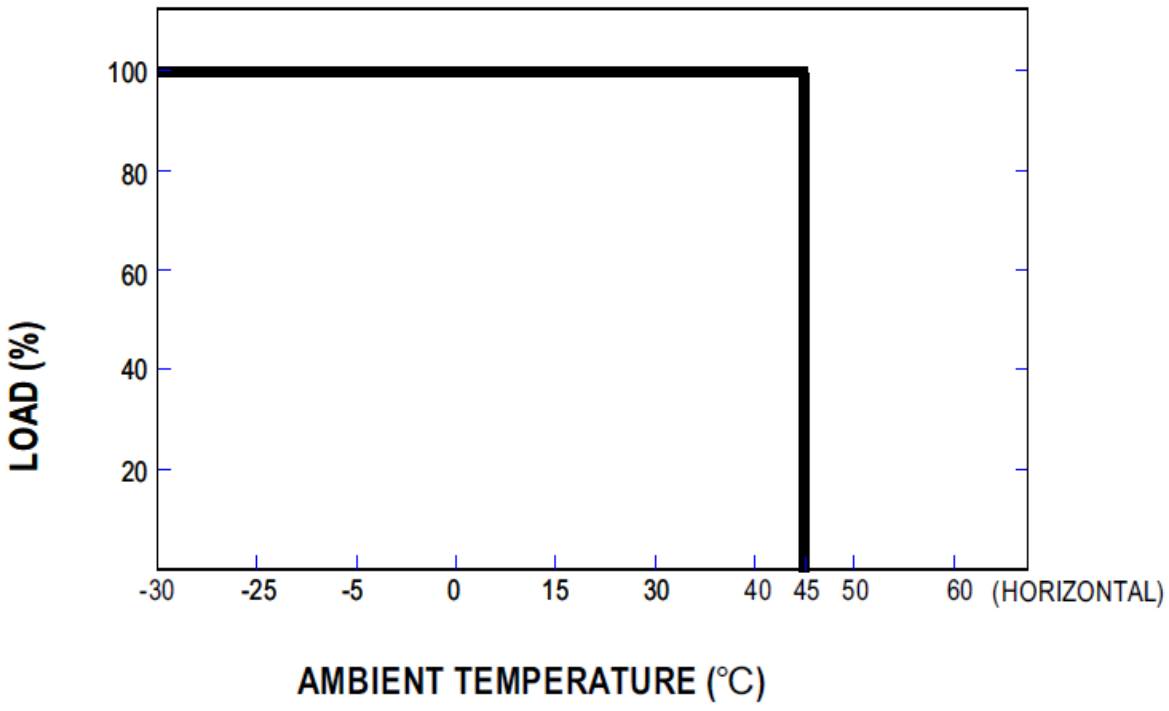
Terminal Pin No. Assignment (TB2):
SWITCHLAB MWX201-75002B(BLUE)

Pin No.	Assignment
1	+V
2	-V

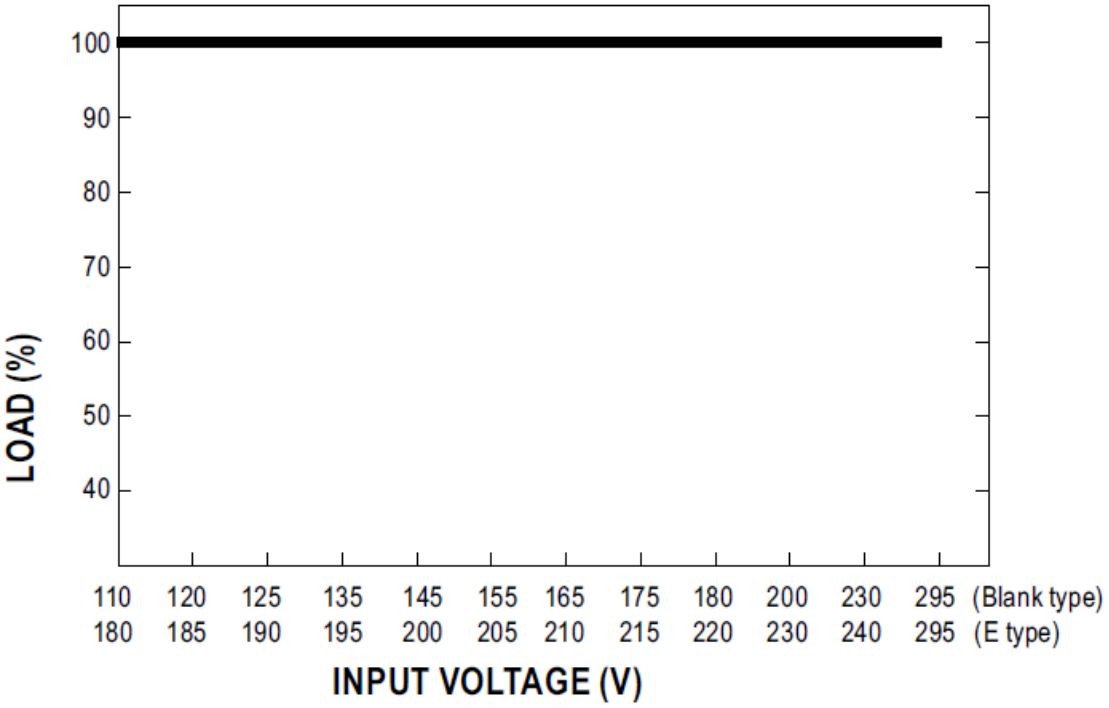
Block Diagram



Derating Curve

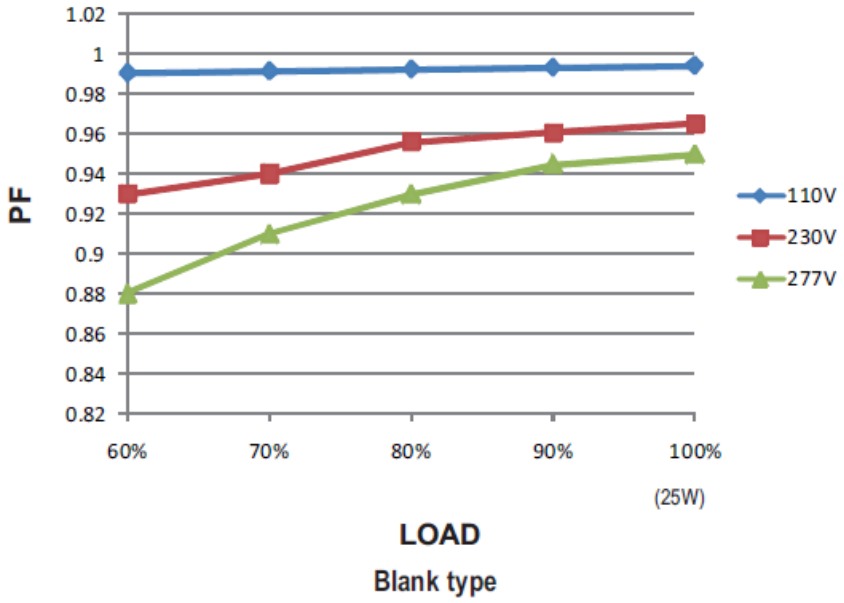


Static Characteristics

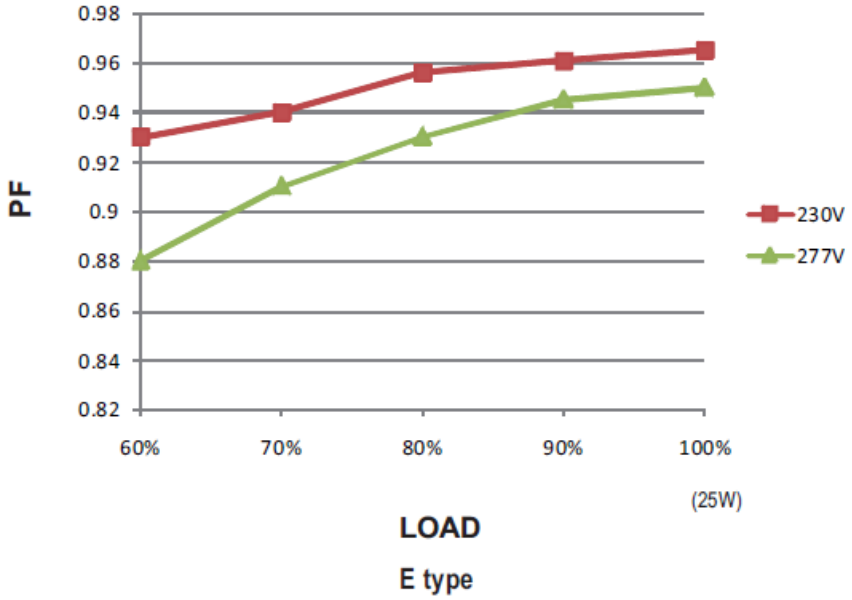


Power Factor Characteristic

Constant Current Mode

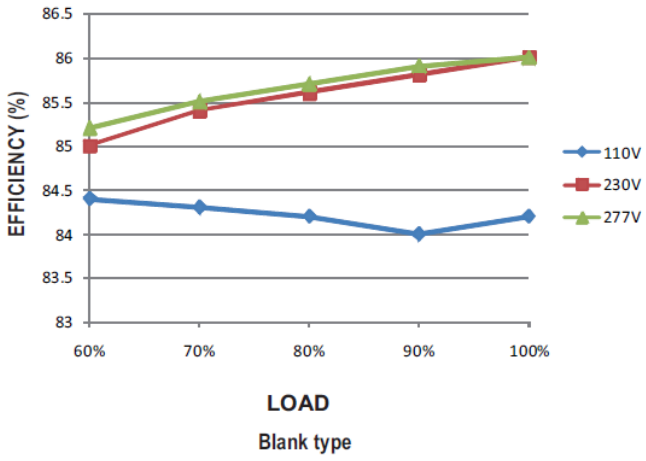


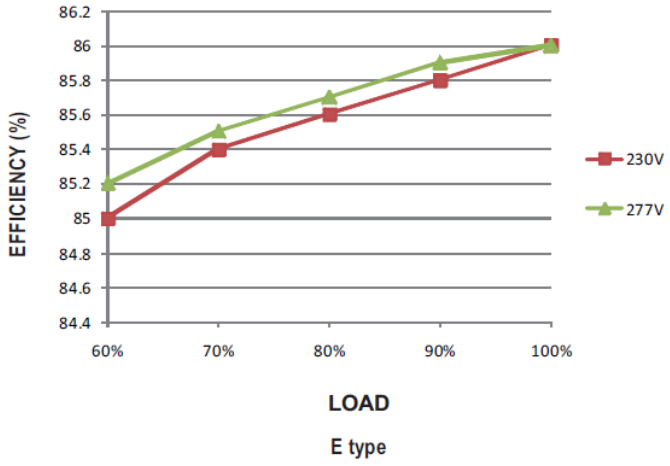
Constant Current Mode



EFFICIENCY vs LOAD

EFFICIENCY vs LOAD (500mA Model)





AC input voltage drop vs. output current characteristics

AC input drop	10%	8%	5%	3%
Io drop	<16%	<12%	<8%	<7%

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

Documents / Resources

	**MEAN WELL PLM-25 Series Single Output LED Power Supply** [pdf] User Guide PLM-25 Series Single Output LED Power Supply, PLM-25 Series, Single Output LED Power Supply, Output LED Power Supply, LED Power Supply, Power Supply, Supply

References

- **User Manual**