



12W Single Output LED Power Supply

PLM-12 series



■ Features :

- Universal AC input / Full range(up to 295VAC)
- Protections:Short circuit
- Cooling by free air convection
- Fully isolated plastic case
- Built-in active PFC function
- Small and compact size
- Class II power unit, no FG
- Class 2 power unit
- 100% full load burn-in test
- No load power consumption <0.5W
- High reliability,low cost
- Suitable for LED lighting and moving sign applications
- 2 years warranty

SPECIFICATION



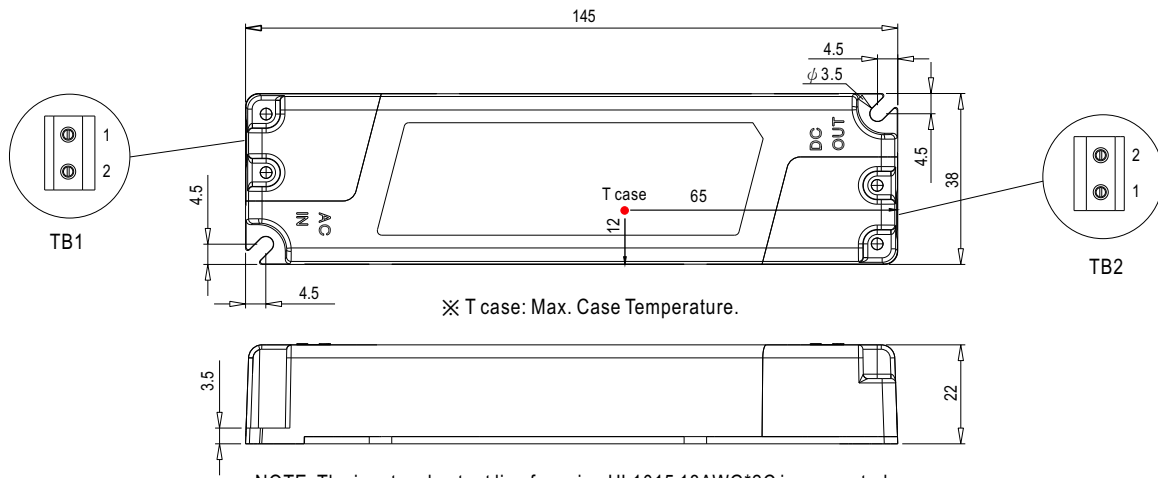
MODEL		PLM-12-350	PLM-12-500	PLM-12-700	PLM-12-1050
OUTPUT	LED OPERATION VOLTAGE <small>Note.5</small>	22 ~ 36V	15 ~ 24V	11 ~ 18V	7 ~ 12V
	RATED CURRENT	0.35A	0.5A	0.7A	1.05A
	NO-LOAD OUTPUT VOLTAGE(max.)	42V	30V	22V	16V
	RATED POWER	12.6W	12W	12.6W	12.6W
	RIPPLE & NOISE (max.) <small>Note.2</small>	3.6Vp-p	2.4Vp-p	2.4Vp-p	1.8Vp-p
	CURRENT ACCURACY <small>Note.3</small>	±5.0%			
INPUT	SETUP TIME	500ms / 115VAC, 230VAC at full load			
	VOLTAGE RANGE <small>Note.4</small>	110 ~ 295VAC	156 ~ 416VDC		
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR	PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF ≥ 0.9/277VAC (at full load) (Please refer to "Power Factor Characteristic" curve)			
	EFFICIENCY(Typ.)	85%	84%	83%	81%
	AC CURRENT	0.15A/115VAC	0.08A/230VAC	0.07A/277VAC	
PROTECTION	INRUSH CURRENT(Typ.)	COLD START 15A(twidth=50μs measured at 50% Ipeak) at 230VAC			
	LEAKAGE CURRENT	0.25mA / 240VAC			
ENVIRONMENT	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.			
SAFETY & EMC	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			
OTHERS	SAFETY STANDARDS	UL8750, CSA C22.2 No. 250.13-12, ENEC EN61347-1, EN61347-2-13, EN62384, 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 EN55015, EN61000-3-2 Class C (≥60% load); EN61000-3-3			
NOTE	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; EN61547, light industry level, criteria A(surge 2KV)			
	MTBF	808.162Khrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	145*38*22mm (L*W*H)			
	PACKING	0.126Kg; 60pcs/8.6 Kg/0.48CUFT			

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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 "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 design.
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.
7. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.

Mechanical Specification

Case No. PLM-25

Unit: mm



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

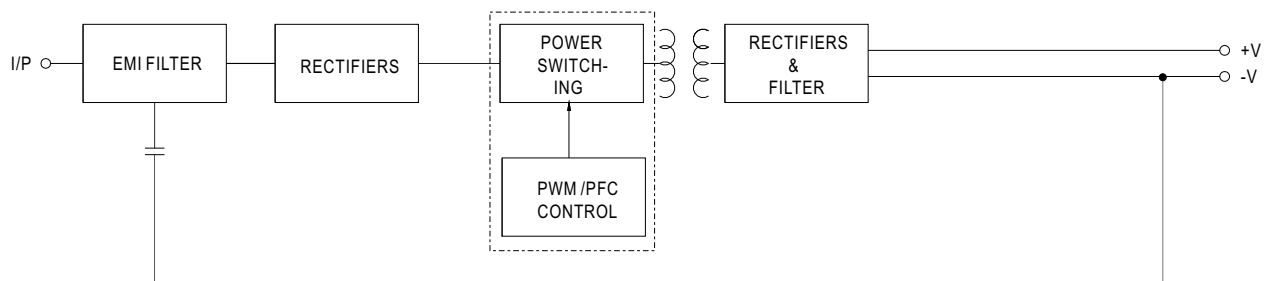
Terminal Pin No. Assignment (TB1):
SWITCHLAB MWX201-75002EB (GRAY)

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

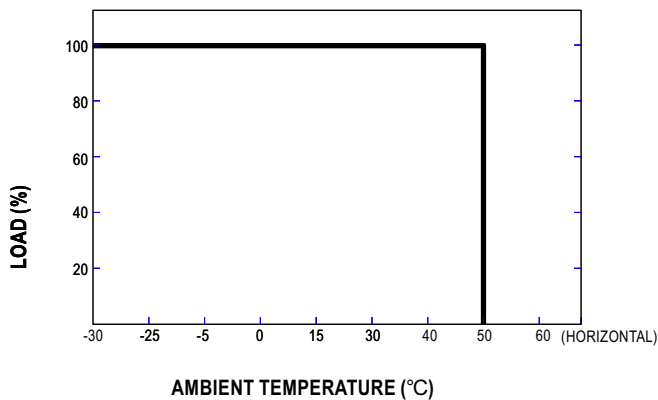
Terminal Pin No. Assignment (TB2):
SWITCHLAB MWX201-75002B (BLUE)

Pin No.	Assignment
1	+V
2	-V

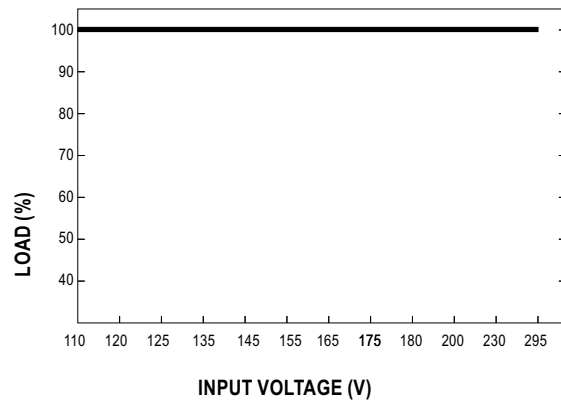
Block Diagram



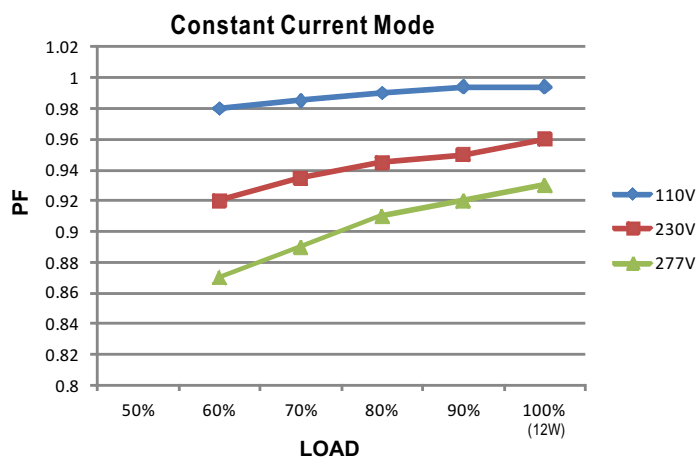
Derating Curve



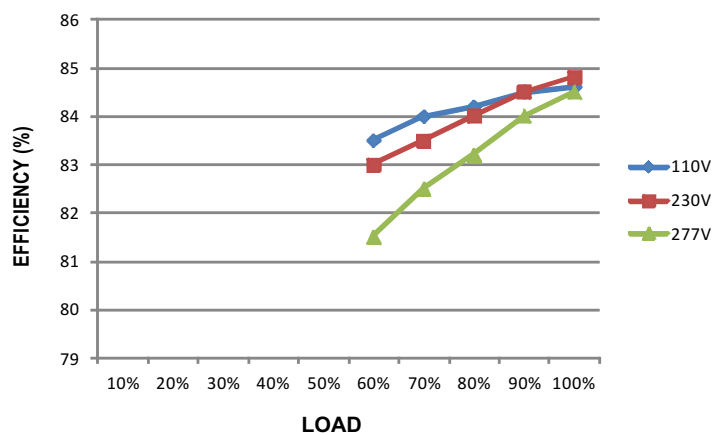
Static Characteristics



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