



## ■ Features

- Universal AC input / Full range
- Class II power unit, no FG
- Built-in active PFC function
- High efficiency up to 90.5%
- No load power consumption <0.15W
- Energy efficiency Level VI
- Comply with EISA 2007/DoE,NRCan
- Fully isolated plastic case
- Fanless design, cooling by free air convection
- Protections: Short circuit / Over current / Over voltage / Over temperature
- UL LISTED, suitable for dry and damp locations
- **Various DC plug quick adapter accessory available**  
(**Plug kit sold separately, please refer to : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf)**)
- 5 years warranty

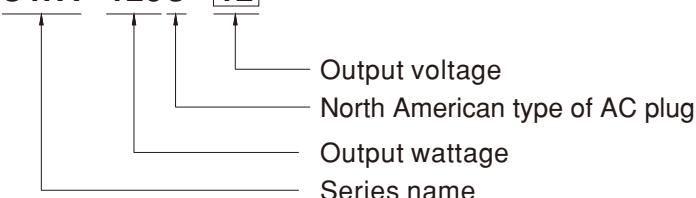
## ■ Description

OWA-120U is one 120W single-output external LED power supply series. Pairing the North American type of AC plug and the prevailing DC connectors, OWA-120U, working like an adaptor, simplifies the connection with LED lighting fixtures without extra wiring efforts. The entire series is certified with the "UL LISTED" for dry and damp locations.

As a class II (no FG) design, the enclosure of OWA-120U is a 94V-0 flame retardant plastic case. The interior is fully potted with silicone that enhances the heat dissipation. With the working efficiency up to 90.5%, OWA-120U is cooled by free air convection; the working temperature ranges from -40°C to +70°C.

## ■ Model Encoding

OWA - 120U - 12



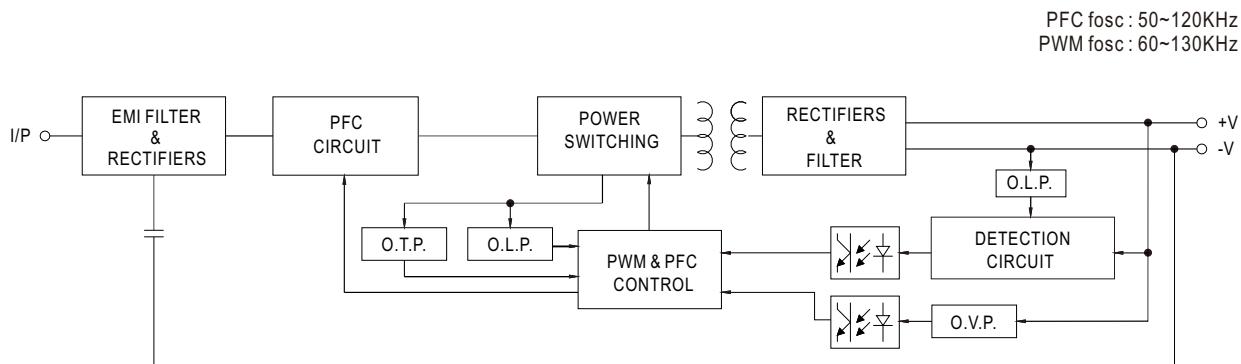
## ■ Applications

- Indoor LED lighting
- LED decorative lighting
- LED office lighting
- General electronic products in dusty or humid environment

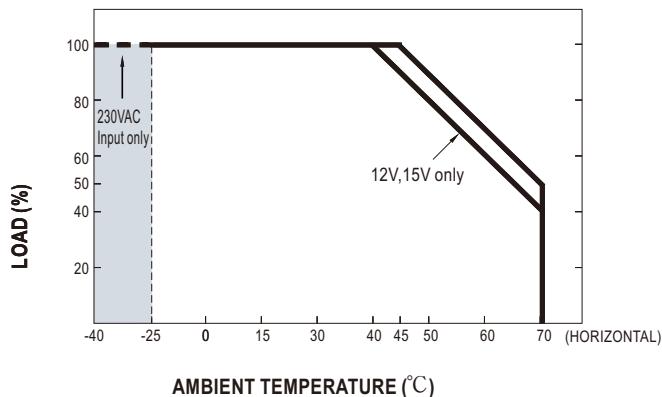
## SPECIFICATION

MODEL		OWA-120U-12	OWA-120U-15	OWA-120U-20	OWA-120U-24	OWA-120U-30	OWA-120U-36	OWA-120U-42	OWA-120U-48	OWA-120U-54		
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V		
	CONSTANT CURRENT REGION	7.2 ~ 12V	9 ~ 15V	12 ~ 20V	14.4 ~ 24V	18 ~ 30V	21.6 ~ 36V	25.2 ~ 42V	28.8 ~ 48V	32.4 ~ 54V		
	RATED CURRENT	10A	8A	6A	5A	4A	3.4A	2.9A	2.5A	2.3A		
	RATED POWER	120W	120W	120W	120W	120W	122.4W	121.8W	120W	124.2W		
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p		
	VOLTAGE TOLERANCE Note.3	±4.0%	±4.0%	±4.0%	±4.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%		
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%		
	SETUP, RISE TIME Note.4	500ms, 80ms at 95% load		230VAC / 115VAC								
INPUT	HOLD UP TIME (Typ.)	16ms at full load		230VAC / 115VAC								
	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz										
	POWER FACTOR (Typ.)	PF>0.97/115VAC, PF>0.96/230VAC at full load										
	TOTAL HARMONIC DISTORTION	THD<20% when output loading≥60% at 115VAC/230VAC										
	EFFICIENCY (Typ.)	115VAC	87%	88%	89%	89.5%	89%	89%	89.5%	89.5%		
		230VAC	87.5%	89%	90%	90.5%	90%	90%	90.5%	90.5%		
	AC CURRENT (Typ.)	1.3A / 115VAC		0.65A / 230VAC								
	INRUSH CURRENT (Typ.)	COLD START 30A(twidth=520μs measured at 50% Ipeak) at 115VAC		COLD START 60A(twidth=520μs measured at 50% Ipeak) at 230VAC								
PROTECTION	MAX. NO. of PSUs on 16A CIRCUIT BREAKER	4 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC										
	LEAKAGE CURRENT	<0.125mA / 120VAC		<0.25mA / 240VAC								
	OVER CURRENT	95 ~ 108%		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed										
ENVIRONMENT	OVER VOLTAGE	15 ~ 17V	17.5 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 46V	46 ~ 54V	54 ~ 60V	59 ~ 66V		
		Protection type : Shut down o/p voltage, re-power on to recover										
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover										
	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")										
SAFETY & EMC	WORKING HUMIDITY	20 ~ 95% RH non-condensing										
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH										
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)										
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes										
OTHERS	SAFETY STANDARDS	UL8750 listed, CSA C22.2 No. 250.13-12; IP67(for power body) 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 FCC Part15										
NOTE	MTBF	294.3K hrs min. MIL-HDBK-217F (25°C)										
	DIMENSION	191*63*37.5mm										
	PACKING	1.15Kg; 12pcs/13Kg/0.89CUFT										
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. Tolerance : includes set up tolerance, line regulation and load regulation.												
4. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.												
※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>												

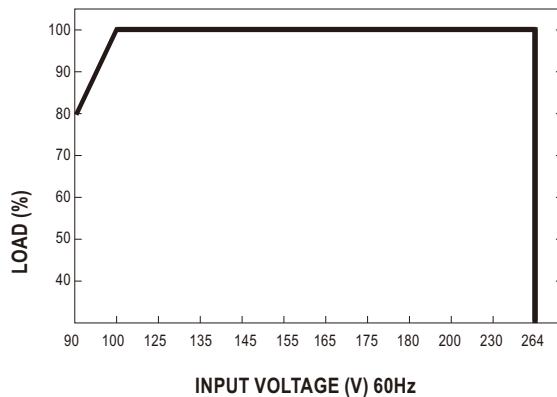
## ■ Block Diagram



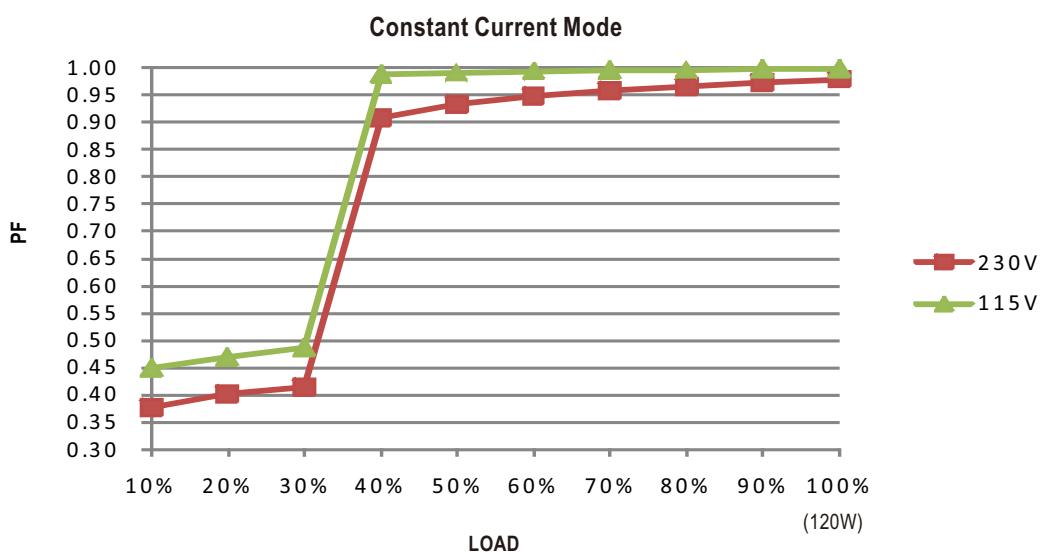
## ■ Derating Curve



## ■ Static Characteristics

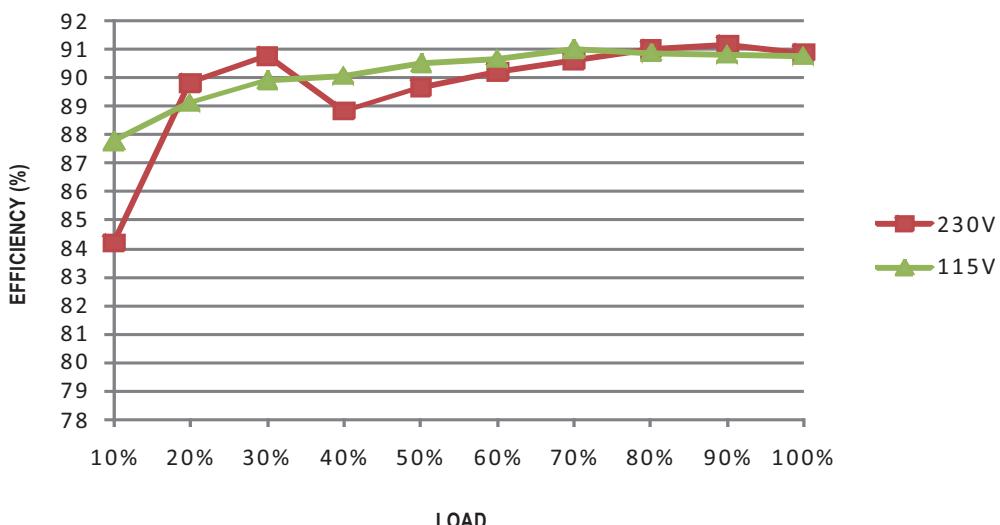


## ■ Power Factor Characteristic



### ■ EFFICIENCY vs LOAD (48V Model)

OWA-120U series possess superior working efficiency that up to 90.5% can be reached in field applications.

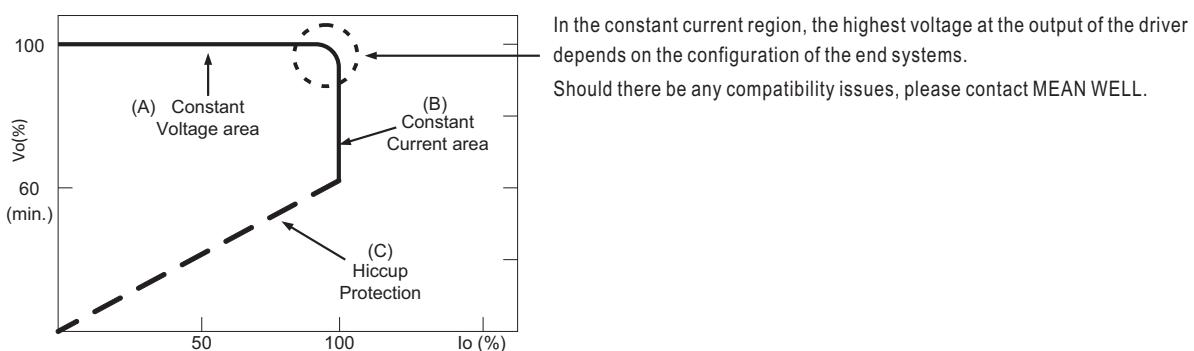


### ■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method, "direct drive" and "with LED driver".

A typical LED power supply may either work in "constant voltage mode (CV)" or "constant current mode (CC)" to drive the LEDs.

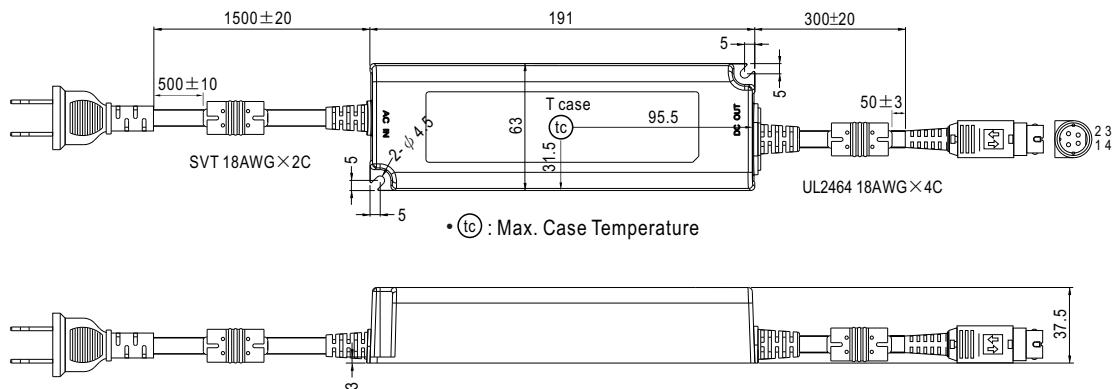
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



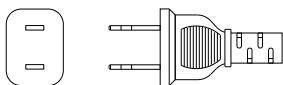
Typical LED power supply I-V curve

**■ Mechanical Specification**

Case No. PWM-120 Unit:mm

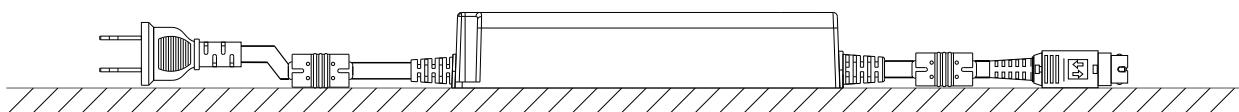

**■ Input Plug Type**

All models : NEMA 1-15p male plug


**■ Output Plug Assignment**

 All models : power DIN 4 pins with lock type,  
KYCON KPPX-4P, or equivalent

	PIN NO.	OUTPUT
2	1,4	+V
1	2,3	-V

**■ Recommend Mounting Direction**

**■ Installation Manual**

 Please refer to : <http://www.meanwell.com/manual.html>