



E-Star Power Development Co., Ltd. (E-STAR)
1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City
22069, Taiwan (R.O.C.)
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

60W LED Driver power supply < OWA-60U



(for 42V, 48V, 54V)



(except for 42V, 48V, 54V)



■ Features

- Universal AC input / Full range (up to 264VAC)
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Class II power unit, no FG
- Class 2 power unit
- Fully isolated plastic case
- Fanless design, cooling by free air convection
- No load power consumption <0.15W
- Comply with EISA 2007 DoE and NRCAN
- UL LISTED, suitable for dry and damp locations
- 5 years warranty

■ Applications

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

■ Description

OWA-60U is one 60W single-output external LED power supply series. Pairing the North American type of AC plug and the prevailing DC connectors, OWA-60U, 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-60U 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 91%, OWA-60U is cooled by free air convection; the working temperature ranges from -35°C to +70°C.

■ Model Encoding

OWA - 60U - 12

- Output voltage
- North American type of AC plug
- Output wattage
- Series name



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SPECIFICATION

MODEL		OWA-60U-12	OWA-60U-15	OWA-60U-20	OWA-60U-24	OWA-60U-30	OWA-60U-36	OWA-60U-42	OWA-60U-48	OWA-60U-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	CONSTANT CURRENT REGION	6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V	
	RATED CURRENT	5A	4A	3A	2.5A	2A	1.67A	1.5A	1.25A	1.12A	
	RATED POWER	60W	60W	60W	60W	60W	60.12W	63W	60W	60.48W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p	
	VOLTAGE TOLERANCE <small>Note.3</small>	±4.0%	±4.0%	±4.0%	±3.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	LOAD REGULATION	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	SETUP, RISE TIME <small>Note.4</small>	500ms, 80ms/230VAC 1000ms, 80ms/115VAC at 95% load									
	HOLD UP TIME (Typ.)	10ms at full load 115VAC / 230VAC									
INPUT	VOLTAGE RANGE		90 ~ 264VAC 127 ~ 370VDC								
	FREQUENCY RANGE		47 ~ 63Hz								
	EFFICIENCY (Typ.)	115VAC	87%	88%	88%	88.5%	88.5%	88.5%	88.5%	88.5%	89%
		230VAC	88%	89%	89%	90%	90%	90%	90%	91%	91%
	AC CURRENT (Typ.)		1.2A / 115VAC 0.7A / 230VAC								
	INRUSH CURRENT (Typ.)		COLD START 35A(twidth=750μs measured at 50% Ipeak) at 115VAC COLD START 65A(twidth=750μs measured at 50% Ipeak) at 230VAC								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER		2 units (circuit breaker of type B) / 4 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT		<0.25mA / 240VAC								
PROTECTION	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								
	OVER VOLTAGE		14 ~ 16V	17.5 ~ 23V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 50V	46 ~ 54V	53 ~ 62V	58 ~ 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									
ENVIRONMENT	WORKING TEMP.		-35 ~ +70°C (Refer to "Derating Curve")								
	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								
SAFETY & EMC	SAFETY STANDARDS		UL8750 listed; CSA C22.2 No.250.13-12(except for 42V,48V,54V); IP67 approved for power body								
	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								
OTHERS	MTBF		292.8K hrs min. MIL-HDBK-217F (25°C)								
	DIMENSION		130*53*35mm								
	PACKING		0.41Kg; 16pcs/9.5Kg/0.85CUFT								
NOTE	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.										



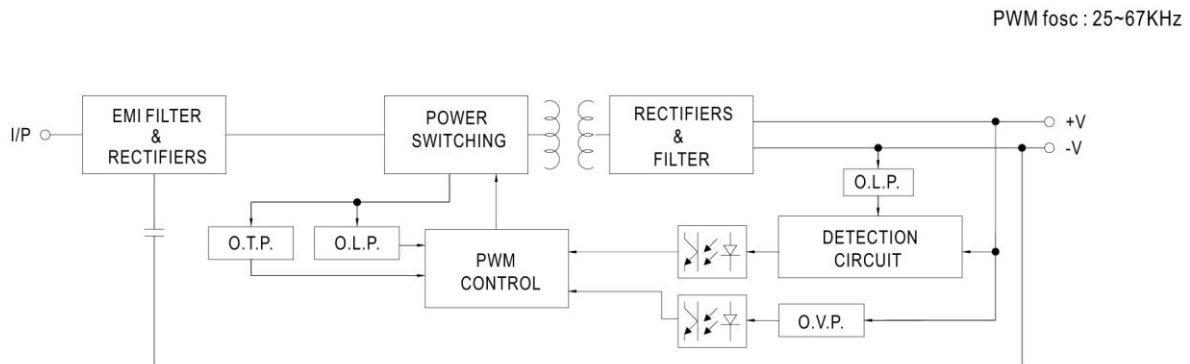
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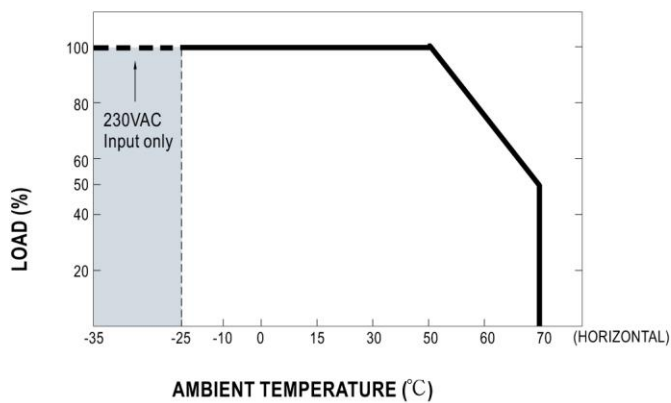
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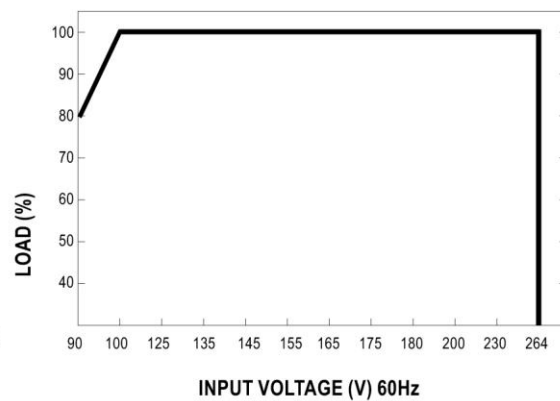
■ Block Diagram



■ Derating Curve



■ Static Characteristics



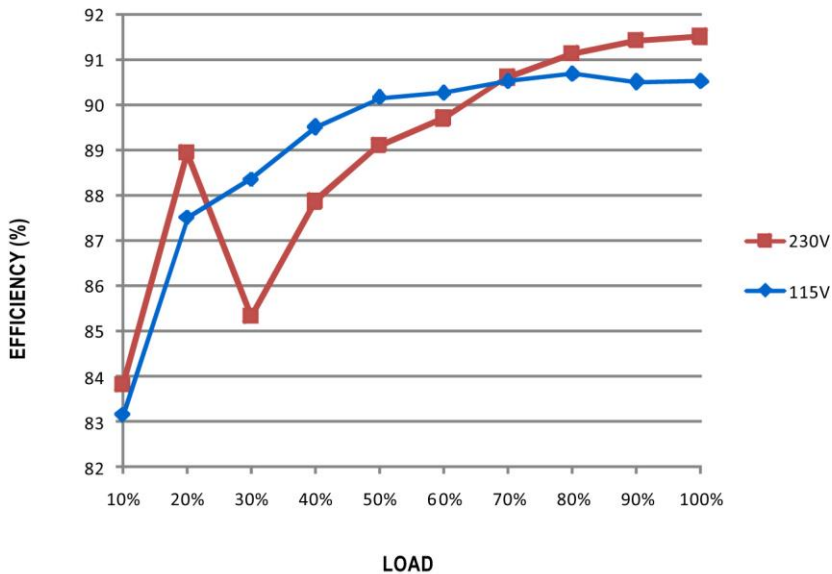


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■ EFFICIENCY vs LOAD (48V Model)

OWA-60U series possess superior working efficiency that up to 91% can be reached in field applications.

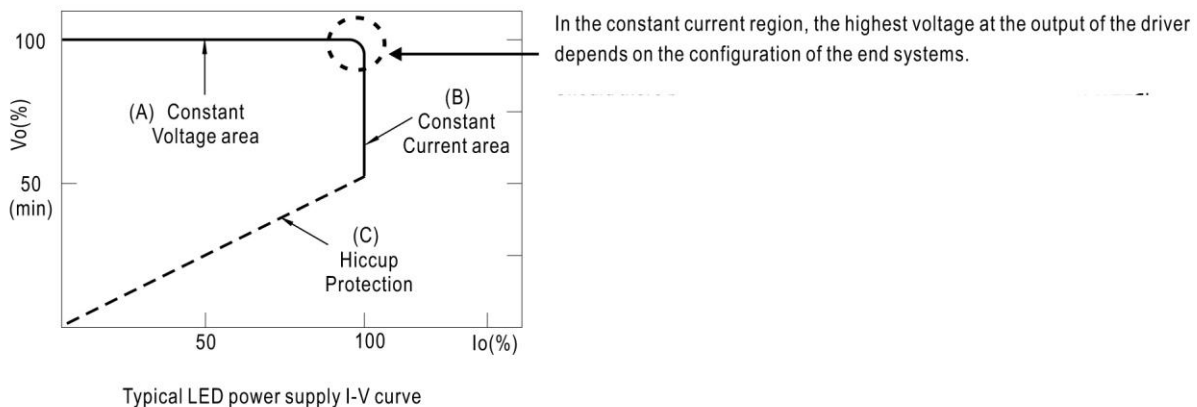


■ DRIVING METHODS OF LED MODULE

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)).



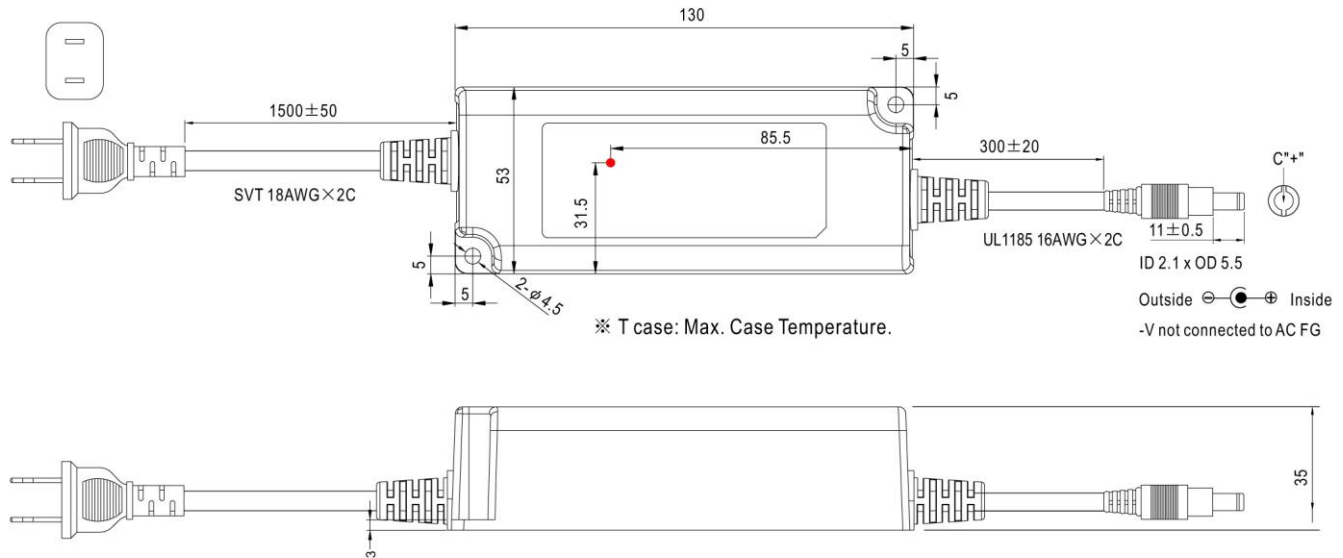


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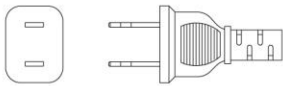
Mechanical Specification

CASE NO.: OWA-60 Unit:mm



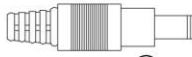
Input Plug Type

All models : NEMA 1-15p male plug



Output Plug Assignment

All models : 2.1φ x 5.5φ x 11 mm, center +,
tuning fork type

 Outside ⊖ ⊕ Inside	PIN NO.	OUTPUT
	CENTER	+V

Recommend Mounting Direction

