MEAN WELL

25W Single Output LED Power Supply

GSV25B series

SELV IP30

Features

- Universal AC input / Full range (up to 277VAC)
- 2 pole AC inlet IEC320-C8
- Built-in active PFC function
- Constant voltage design
- Protections: Short circuit / Overload
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- No load power consumption<0.3W
- Low cost, high reliability
- 100% full load burn-in test
- 3 years warranty

Applications

- LED strip lighting
- Indoor LED lighting
- LED decorative lighting
- Architecture lighting
- Commercial lighting

Description

GSV25B series is an 25W external LED power supply with PFC function. The design of this product is based on the “plug and play' concept for adaptors. The AC input side exploits the 2-Pin (Class II, no FG) international standard inlet IEC320-C8, and the output side is equipped with the highly accepted DC connector (2.1x5.5x11mm) in the market. This product accepts 90~277VAC input and offers constant voltage output models with 12V/24V. The design complies with the lighting requirements of EMI EN55015 and the harmonic current demand per EN61000-3-2 Class C. In addition, the no load power consumption is less than 0.3W, and the setup time is less than 500ms, making GSV25B conform to the ErP regulation required by European Union for lighting systems as well.

Model Encoding

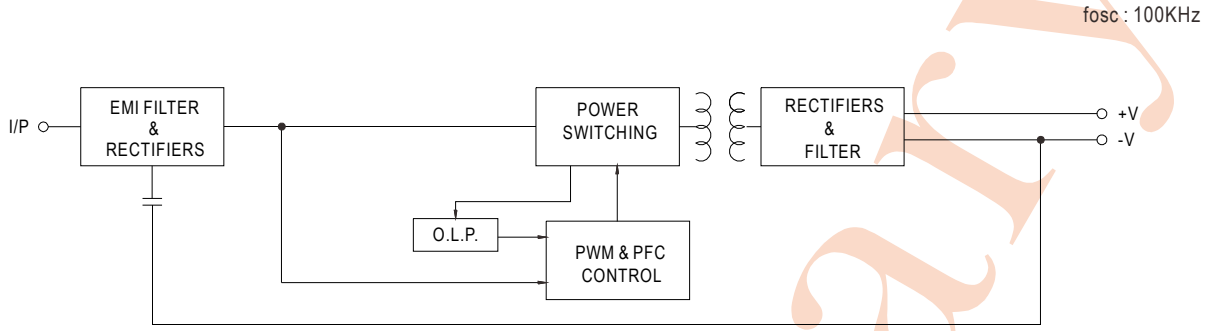
GSV 25 B - 12

- 12 — Output voltage
- B — IEC320-C8 AC inlet
- 25 — Output wattage
- GSV — Series name

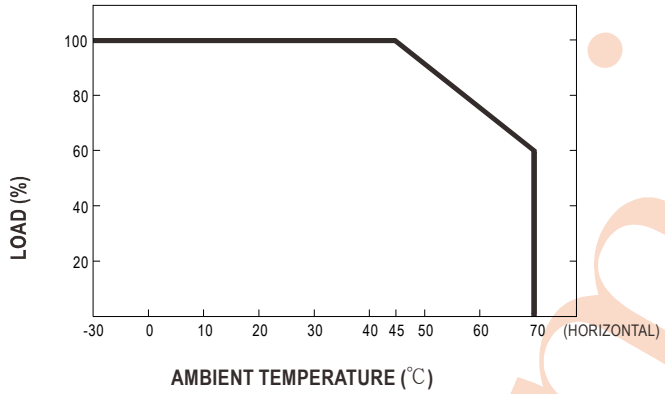
SPECIFICATION

MODEL		GSV25B-12	GSV25B-24
OUTPUT	DC VOLTAGE	12V	24V
	OPERATING VOLTAGE RANGE Note.4	6 ~ 12V	12 ~ 24V
	RATED CURRENT REGION Note.3	2.08A	1.04A
	RATED POWER	25W	25W
	RIPPLE & NOISE (max.) Note.2	1.2Vp-p	2.4Vp-p
	VOLTAGE TOLERANCE Note.3	±10%	
	LINE REGULATION	±2.0%	
	LOAD REGULATION	±5.0%	
	SETUP, RISE, HOLD UP TIME	500ms, 30ms/230VAC 1000ms, 50ms/115VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load	
INPUT	VOLTAGE RANGE	90 ~ 277VAC 127 ~ 392VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.92/230VAC, PF>0.91/277VAC at full load (Please refer to "Power Factor Characteristic" curve)	
	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 75% or higher	
	EFFICIENCY (Typ.)	84%	86%
	AC CURRENT (Typ.)	0.6A/115VAC 0.3A/230VAC 0.2A/277VAC	
	INRUSH CURRENT(max.)	COLD START 17A(t_{width}=75μs measured at 50% I_{peak}) at 230VAC	
	LEAKAGE CURRENT	<0.5mA / 240VAC	
PROTECTION	OVER LOAD	108 ~ 120% rated output power	
		Protection type : Shut down o/p voltage, re-power on to recover	
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.	
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +80℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 45℃)	
	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes	
SAFETY & EMC	SAFETY STANDARDS	TUV/ENEC EN61347-1, EN61347-2-13 listed, EN62384 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 EN55015, EN61000-3-2 Class C (≧50% load) ; EN61000-3-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024,EN61547, light industry level, criteria A	
OTHERS	MTBF	367.2K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	79*54*33mm (L*W*H)	
	PACKING	211g ; 60pcs / 13.7kg / CARTON	
CONNECTOR	PLUG	2.1ϕ * 5.5ϕ * 11mm, tuning fork type, center positive for stock	
	CABLE	See page 2 ; Other type available by customer requested	
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 "AC input voltage drop vs. output current characteristics" table. 4. Constant current operation region is within 50% ~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. 5. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.		

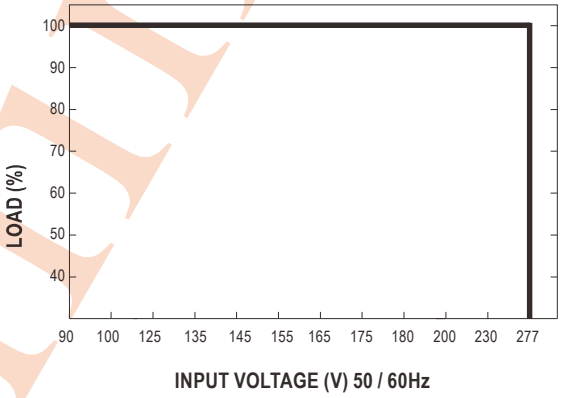
Block Diagram



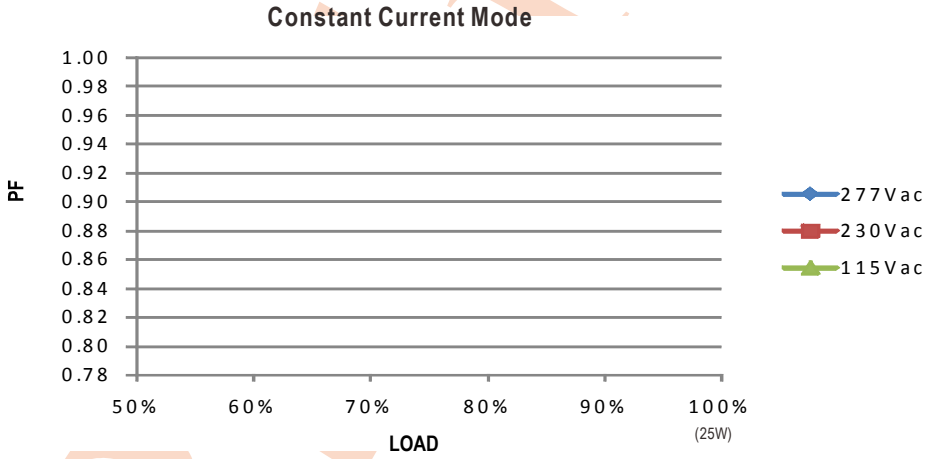
Derating Curve



Static Characteristics

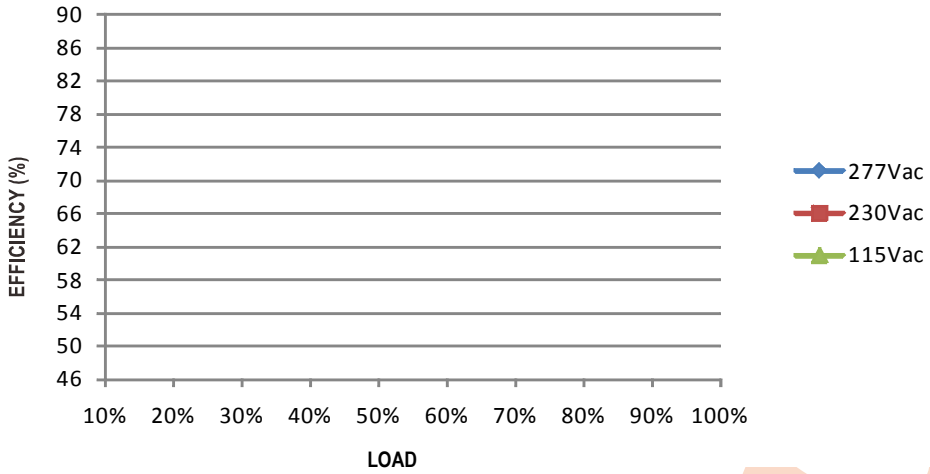


Power Factor Characteristic



■ EFFICIENCY vs LOAD (GSV25B-24)

GSV25B series possess superior working efficiency that up to 86% can be reached in field applications.



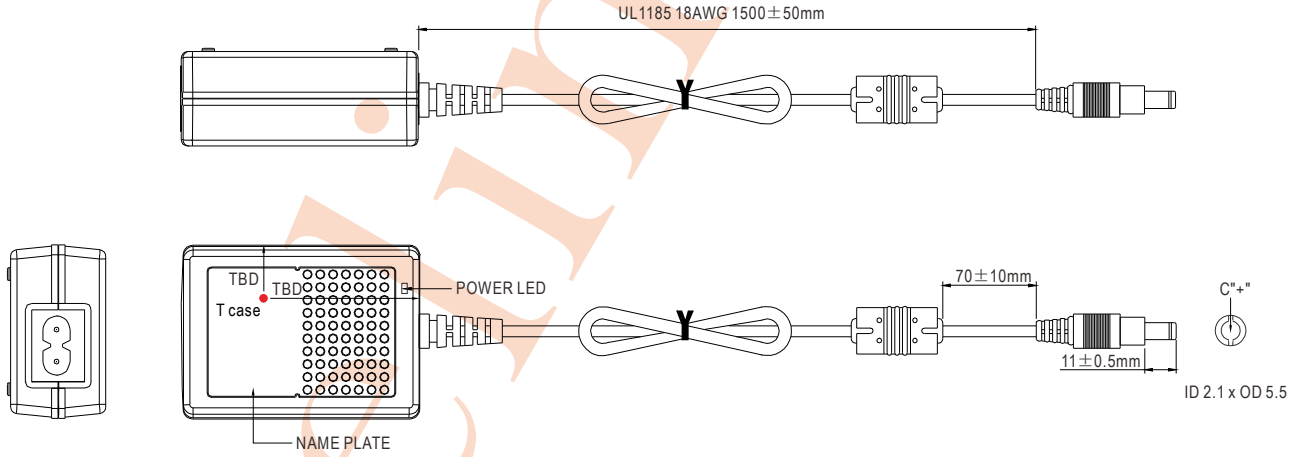
■ AC input voltage drop vs. Output current characteristics

AC input drop	10%	8%	5%	3%
Io drop	<25%	<23%	<15%	<10%

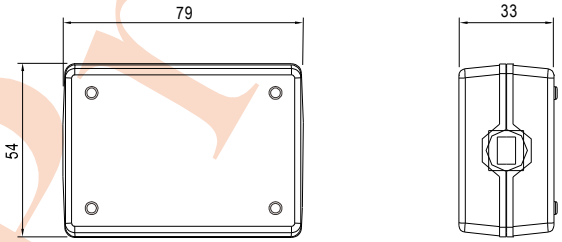
Note : Output current will return to the rated value within 80ms

■ Mechanical Specification

Unit:mm



※ T case: Max. Case Temperature.



■ Installation Manual

Please refer to : http://www.meanwell.com/webnet/search/InstallationSearch.html