



( Wall-Mounted EU type )



( Interchangeable type )



## ■ Features

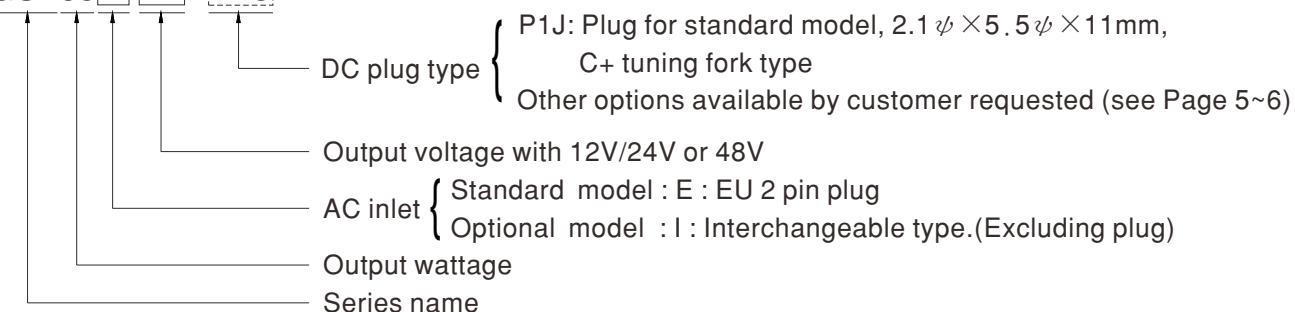
- AC 180~264V input
- Class II/2 power unit, no FG
- Built-in active PFC function with EN61347-1 regulation
- Constant voltage design
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- No load power consumption<0.5W
- Various DC plug quick adapter accessory available  
(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))
- 3 years warranty

## ■ Description

GSV60 series is a 60W external wall-mounted 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-Pole (Class II, no FG) standard plug, and the output side is equipped with the highly accepted DC connector (2.1x5.5x11mm) in the market. This product accepts 180~264VAC input and offers constant voltage output with 12V/24V or 48V. The design complies with the lighting requirements of EMI BS EN/EN55015 and the harmonic current demand according to BS EN/EN61000-3-2 Class C. In addition, the no load power consumption is less than 0.5W, making GSV60 conform to the ErP regulation required by European Union for lighting systems as well.

## ■ Model Encoding

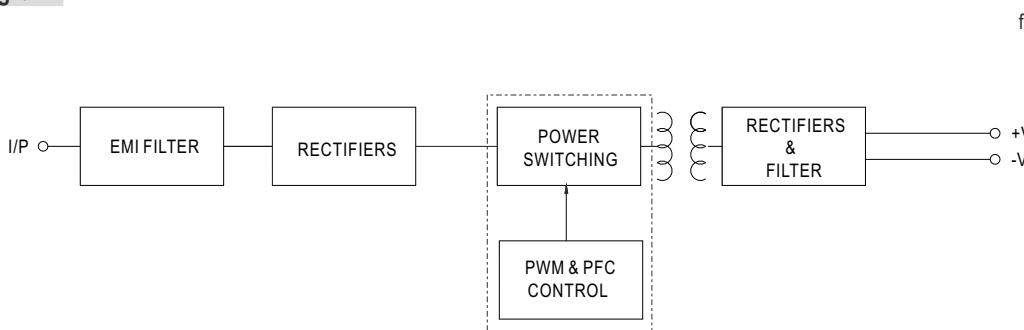
GSV60[E] 12 - P1J



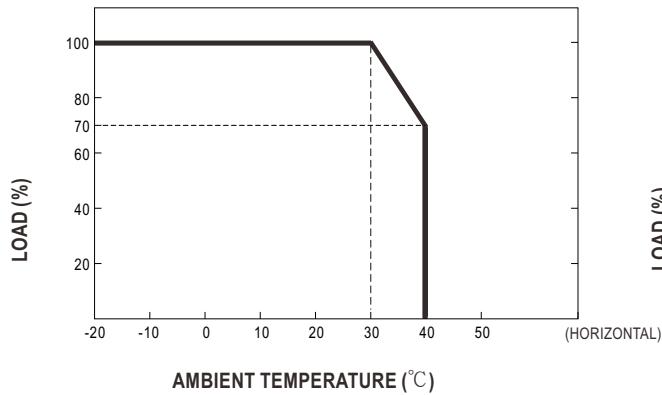
## SPECIFICATION

MODEL	GSV60[E] 12-P1J	GSV60[E] 24-P1J	GSV60[E] 48-P1J
OUTPUT	<b>DC VOLTAGE</b> 12V	24V	48V
	<b>OPEN CIRCUIT VOLTAGE</b> <15V	<28V	<57V
	<b>RATED CURRENT</b> 4.16A	2.5A	1.25A
	<b>RATED POWER</b> 50W	60W	60W
	<b>RIPPLE &amp; NOISE (max.) Note.2</b> 3Vp-p max.	4.5Vp-p max.	6.5Vp-p max.
	<b>VOLTAGE TOLERANCE Note.3</b> $\pm 1.5V$	$\pm 2.25V$	$\pm 4.5V$
	<b>LINE REGULATION</b> $\pm 2.0\%$	$\pm 2.0\%$	$\pm 2.0\%$
	<b>NO LOAD CONSUMPTION</b> 0.5W max.		
	<b>SETUP UP TIME</b> 500ms/230VAC at full load		
INPUT	<b>VOLTAGE RANGE</b> 180 ~ 264VAC 255 ~ 373VDC		
	<b>FREQUENCY RANGE</b> 47 ~ 63Hz		
	<b>POWER FACTOR (Typ.)</b> PF>0.92/230VAC at full load (Please refer to "Power Factor Characteristic" curve)		
	<b>TOTAL HARMONIC DISTORTION</b> <20%/230VAC @ full load		
	<b>EFFICIENCY (Typ.)</b> 85% min. @ 230VAC	86% min. @ 230VAC	89% min. @ 230VAC
	<b>AC CURRENT (Typ.)</b> 0.5A/230VAC		0.5A/230VAC
	<b>INRUSH CURRENT(max.)</b> COLD START 20A(twidth=200 $\mu$ s measured at 50% I <sub>peak</sub> ) at 230VAC		
PROTECTION	<b>LEAKAGE CURRENT</b> <0.25mA max. @ 230VAC		
	<b>OVER LOAD</b> 105 ~ 160% rated output power		
	Protection type : Hiccup mode, recovers automatically after fault condition is removed		
	<b>OVER VOLTAGE</b> 15.6V ~ 18V	28V ~ 32.4V	57.6V ~ 72V
ENVIRONMENT	Protection type : Clamp by zener diode, output short		
	<b>SHORT CIRCUIT</b>	Hiccup mode, recovers automatically after fault condition is removed	
	<b>WORKING TEMP.</b> -20 ~ +40°C (Refer to "Derating Curve")		
	<b>WORKING HUMIDITY</b> 20 ~ 95% RH non-condensing		
	<b>STORAGE TEMP., HUMIDITY</b> -30 ~ +80°C, 10 ~ 95% RH		
SAFETY & EMC	<b>TEMP. COEFFICIENT</b> $\pm 0.03\%/\text{°C}$ (-20 ~ 40°C)		
	<b>VIBRATION</b> 10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes		
	<b>SAFETY STANDARDS</b> LVD BS EN/EN61347-1, BS EN/EN61347-2-13 approved		
	<b>WITHSTAND VOLTAGE</b> I/P-O/P:3.75KVAC		
OTHERS	<b>ISOLATION RESISTANCE</b> I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH		
	<b>EMC EMISSION</b> Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (100% load) ; BS EN/EN61000-3-3		
	<b>EMC IMMUNITY</b> Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN61547, light industry level, criteria A		
	<b>MTBF</b> 450K hrs min. MIL-HDBK-217F (25°C)		
CONNECTOR	<b>DIMENSION</b> E : 75.5*32*47.5 mm(L*W*H) ; I : 75.5*39.1*56.2 mm(L*W*H)		
	<b>PACKING</b> E: 240g ; 60pcs / 15.5kg / CARTON ; I: 200g ; 60pcs / 13.5kg / CARTON		
NOTE	<b>PLUG</b> See page 5~6 ; Other type available by customer requested		
	<b>CABLE</b> See page 5~6 ; Other type available by customer requested		
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 104PF/50V ceramic capacitor and 47 $\mu$ F/50V electric capacitor between output terminals. 3. Tolerance:includes set up tolerance, line regulation and load regulation with minimum load 1% to maximum load 100% at 230VAC input condition. 4. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft) ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>			

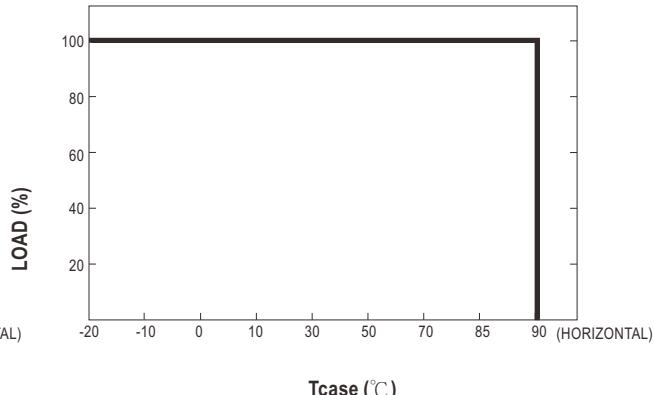
## ■ Block Diagram



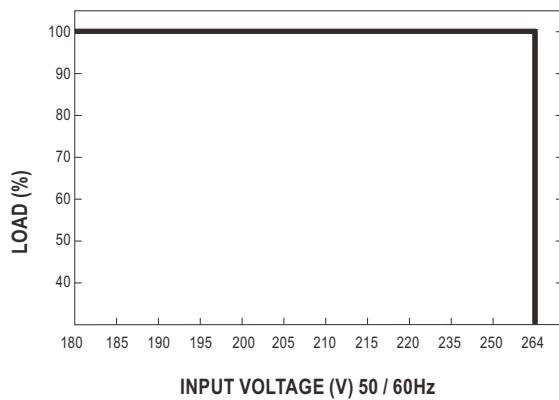
## ■ Derating Curve



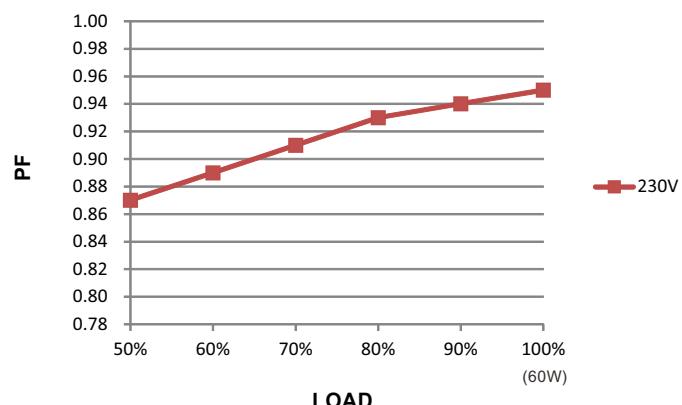
## ■ OUTPUT LOAD vs TEMPERATURE



## ■ Static Characteristics

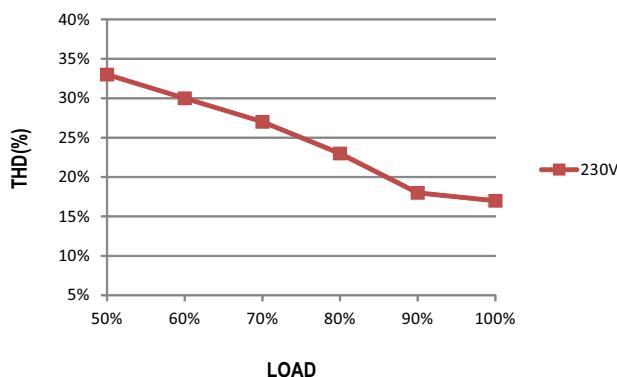


## ■ Power Factor Characteristic(24V)



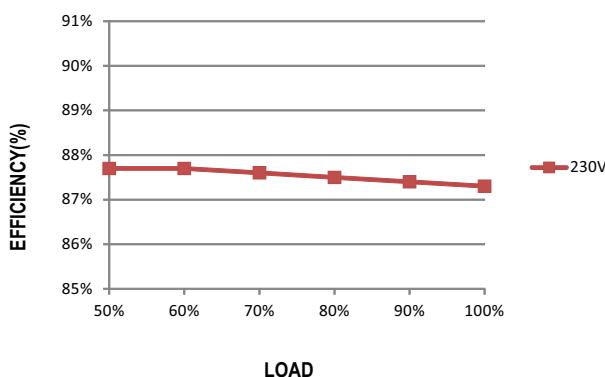
**TOTAL HARMONIC DISTORTION (THD)**

※ 24V Model, Tcase at 70°C


**EFFICIENCY vs LOAD**

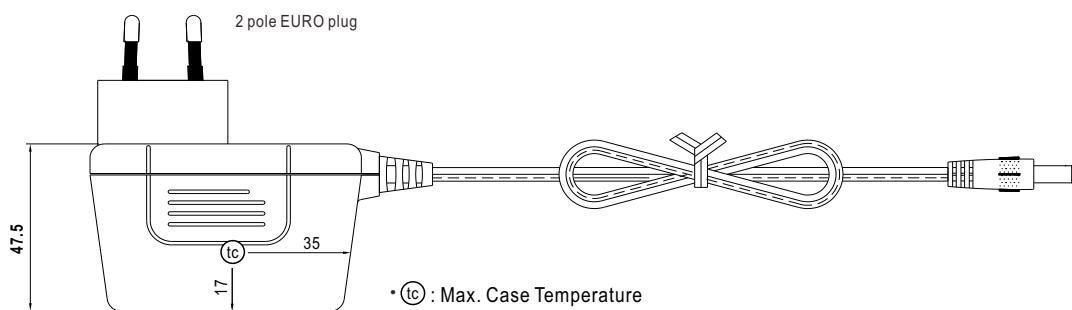
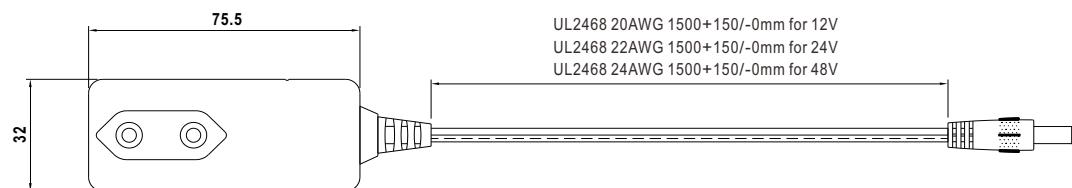
GSV60 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 24V Model, Tcase at 70°C


**Mechanical Specification**

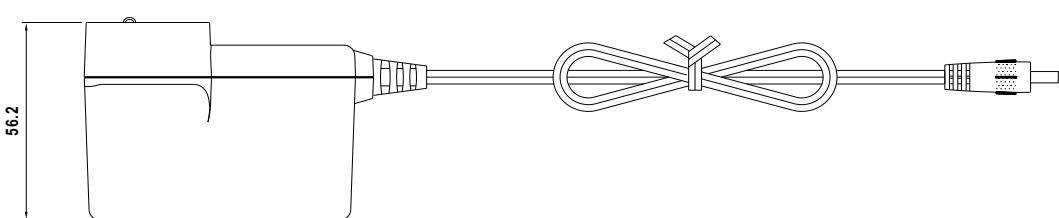
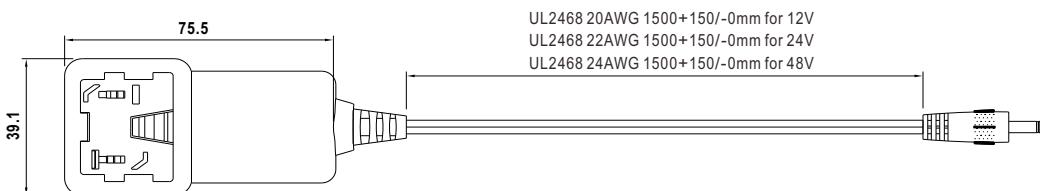
※ Standard

Unit:mm



※ Interchangeable AC plug Specifically for GSV30I/60I (order separately)

TYPE	U.K type	European type
	AC plug-UK2	AC plug-EU2
By optional (For AC interchangeable plug same as GEM06~60I accessory)		



**■ DC output plug**

- ◎ Standard plug: P1J

Unit:mm

P1J	Pin Assignment
 	 Outside $\ominus$ $\oplus$ Inside

- ◎ DC plug changeable through:

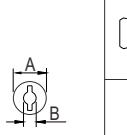
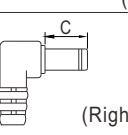
- (1) Customization of the standard part with an optional DC plug according to the table (MOQ applicable)
- (2) Quick adapter accessory (sold separately without MOQ)

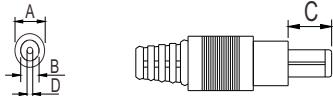
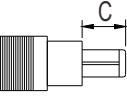
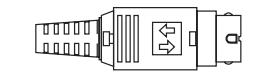
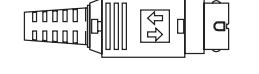
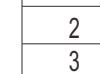
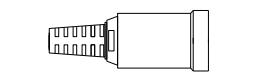
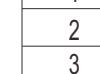
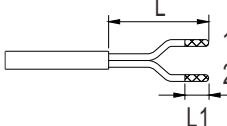
Please refer to below table and online selection guide : [https://www.meanwell.com/upload/pdf/DC\\_plug.pdf](https://www.meanwell.com/upload/pdf/DC_plug.pdf)

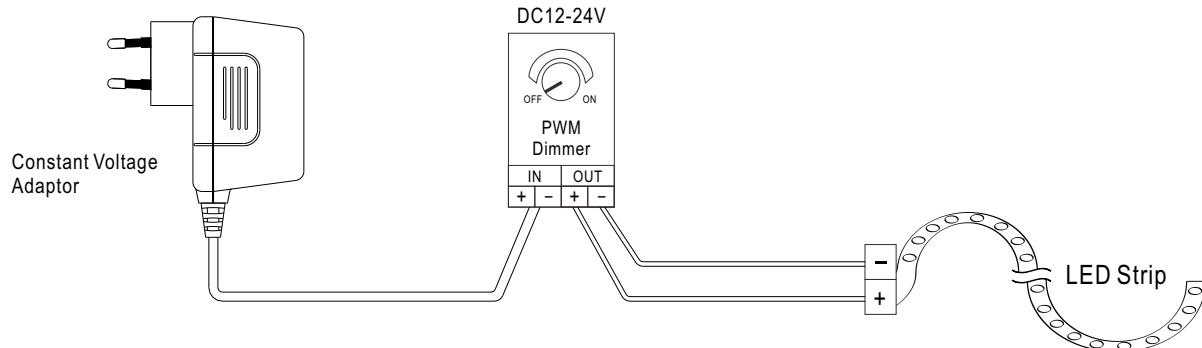
Example quick adapter accessory:



- ◎ Optional DC plug: (Available in customized cable or quick adapter)

Tuning Fork Style	Type No.	A	B	C	Quick Adapter Accessory
		OD	ID	L	
  	P1I	5.5	2.1	9.5	Available (Current rating: 7.5A max.)
	P1L	5.5	2.5	9.5	
	P1M	5.5	2.5	11.0	
	P1IR	5.5	2.1	9.5	
	P1JR	5.5	2.1	11.0	
	P1LR	5.5	2.5	9.5	
	P1MR	5.5	2.5	11.0	
Barrel Style	Type No.	A	B	C	None
		OD	ID	L	
	P2I	5.5	2.1	9.5	
	P2J	5.5	2.1	11.0	
	P2L	5.5	2.5	9.5	
	P2M	5.5	2.5	11.0	
	P2IR	5.5	2.1	9.5	
	P2JR	5.5	2.1	11.0	
	P2LR	5.5	2.5	9.5	
Lock Style	Type No.	A	B	C	None
		OD	ID	L	
	P2S(S761K)	5.53	2.03	12.06	
	P2K(761K)	5.53	2.54	12.06	
	P2C(S760K)	5.53	2.03	9.52	
	P2D(760K)	5.53	2.54	9.52	

Center Pin Style	Type No.	A	B	C	D	Quick Adapter Accessory	
		OD	ID	L	Center Pin		
	P4A	5.5	3.4	11.0	1.0	Available (Current rating: 7.5A max.)	
		6.5	4.4	11.0	1.4		
		7.4	5.1	11.0	0.6		
Min. DIN 3 Pin with Lock (male)	R6B	Pin Assignment				Available (Current rating: 7.5A max.)	
		PIN No.	Output				
		1	+Vo				
		2	-Vo				
		3	+Vo				
Min. DIN 4 Pin with Lock (male)	R7B	Pin Assignment				Available (Current rating: 7.5A max.)	
		PIN No.	Output				
		1	+Vo				
		2	-Vo				
		3	-Vo				
		4	+Vo				
Min. DIN 4 Pin with Lock (female)	R7BF	Pin Assignment				None	
		PIN No.	Output				
		1	+Vo				
		2	-Vo				
		3	-Vo				
		4	+Vo				
Stripped and tinned leads	by customer	Pin Assignment				None	
		PIN No.	Output				
		1 (Ribbed)	+Vo				
Length of Land L1 by request (MW's standard length, L: <u>25</u> mm, L1: <u>10</u> mm)		2 (Letter)	-Vo				

**■ Installation Manual****◎Connection****◎Cautions**

- Before commencing any installation or maintenance work, please disconnect the power supply from the utility. Ensure that it cannot be re-connected inadvertently!
- Mounting orientations other than standard orientation or operate under high ambient temperature may increase the internal component temperature and will require a de-rating in output current.
- Current rating of an approved primary /secondary cable should be greater than or equal to that of the unit. Please refer to its specification.
- For dimmable LED power supplies, make sure that your dimming controller is capable of driving these units.
- $T_c$  max. is identified on the product label. Please make sure that temperature of  $T_c$  point will not exceed limit.
- 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.
- For more information about installation, please refer to [https://www.meanwell.com/Upload/PDF/LED\\_EN.pdf](https://www.meanwell.com/Upload/PDF/LED_EN.pdf) for details.
- Please refer to : <http://www.meanwell.com/manual.html>